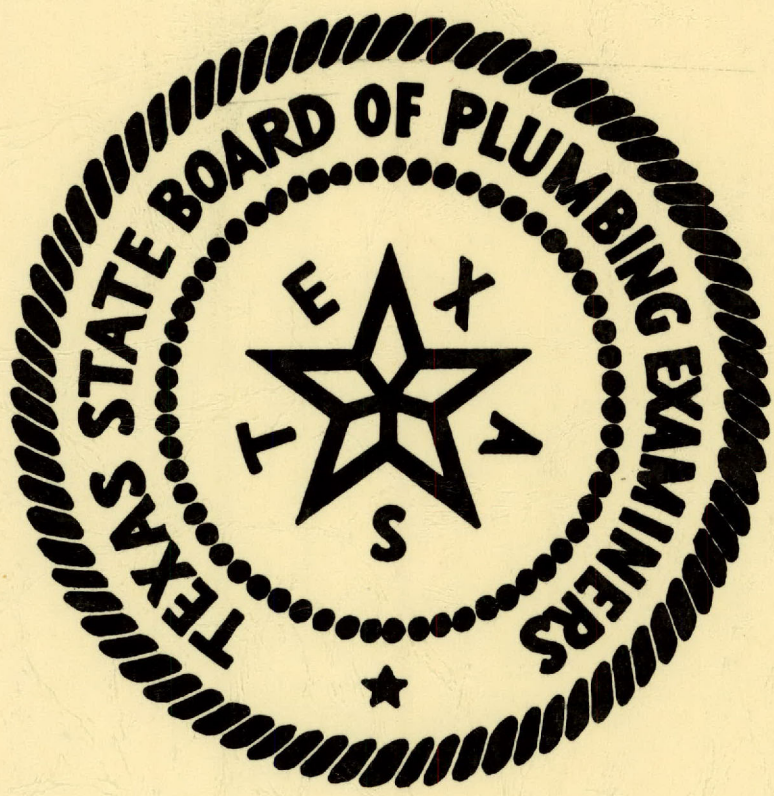


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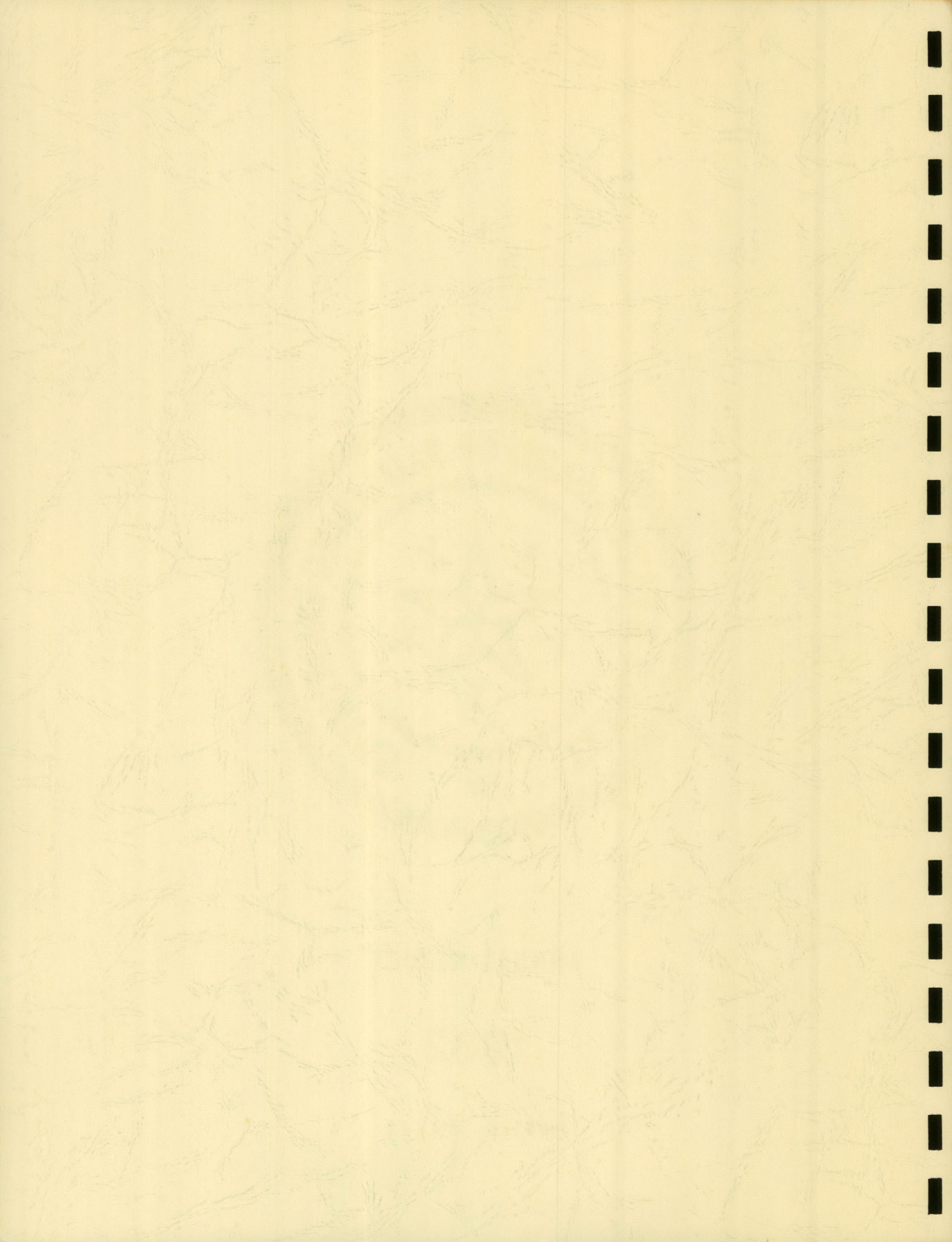


ANNUAL REPORT

1982

Austin, Texas

Government Publications
APR 22 1983 *pl*
Dallas Public Library



ANNUAL REPORT

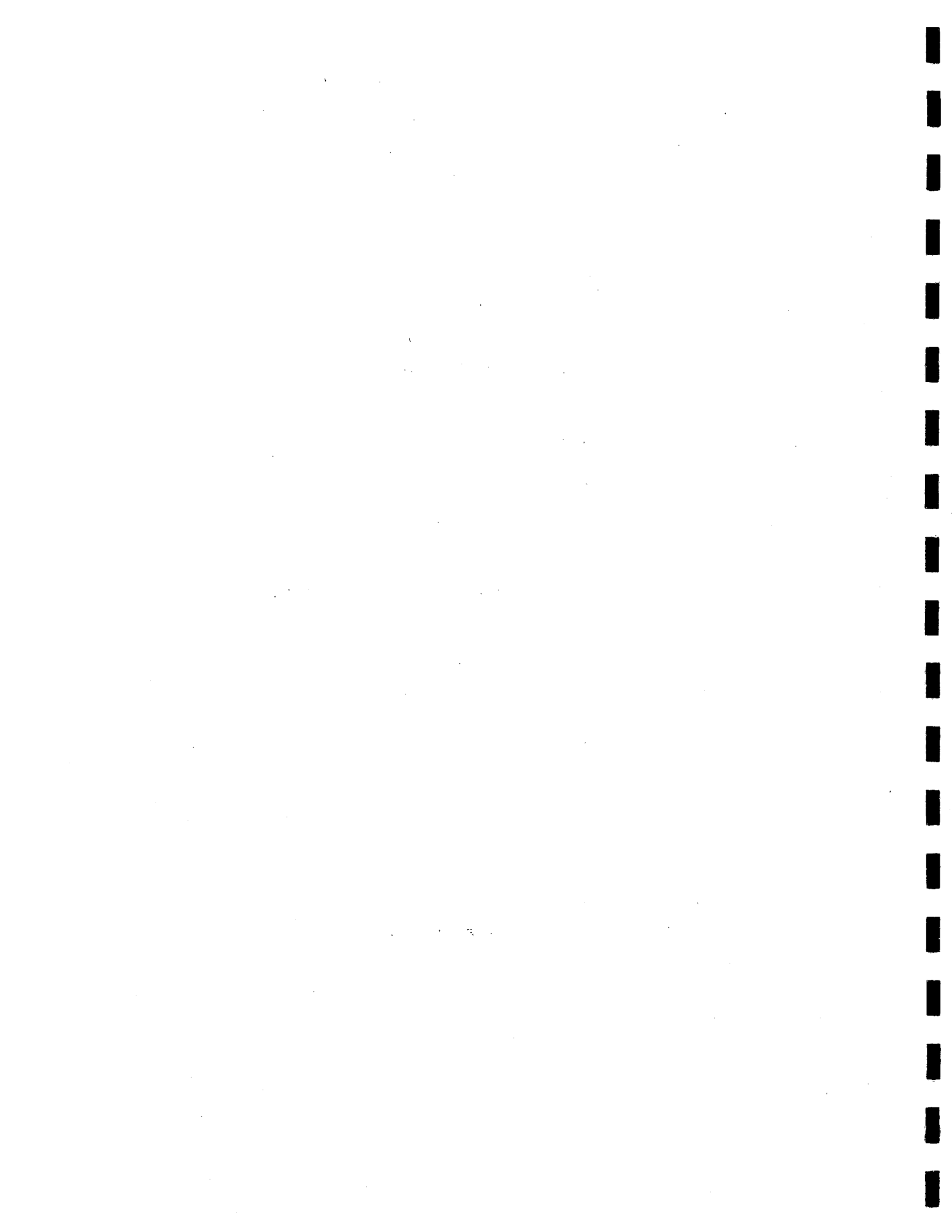
TEXAS STATE BOARD

OF

PLUMBING EXAMINERS

1982

Austin, Texas



B O A R D M E M B E R S

<u>NAME</u>	<u>TITLE</u>	<u>CITY</u>
STANLEY J. BRIERS	CHAIRMAN	SEABROOK
E. L. SMITH	VICE-CHAIRMAN	SAN ANTONIO
MAURICE S. BATISTE	SECRETARY	HOUSTON
J. L. DRYMALLA	MEMBER	COLUMBUS
J. P. FRANZEN	MEMBER	CARROLLTON
EDWARD A. TSCHOEPE	MEMBER	SAN ANTONIO
WILLIAM G. WHEELER	MEMBER	VICTORIA
LYNN BROWN	ADMINISTRATOR	

STAFF MEMBERS

DONALD A. NELSON	CHIEF EXAMINER
DARRELL HARDING	CHIEF FIELD REPRESENTATIVE
VIOLA EKENSTAM	ACCOUNTANT

1912	1913	1914
1915	1916	1917
1918	1919	1920
1921	1922	1923
1924	1925	1926
1927	1928	1929
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2083	2084	2085
2086	2087	2088
2089	2090	2091
2092	2093	2094
2095	2096	2097
2098	2099	2100

1912-1913

1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
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ADMINISTRATION

The Texas State Board of Plumbing Examiners was created by the 50th Legislature, Regular Session and became effective 90 days after June 6, 1947. It was amended by the 67th Legislature, Regular Session, as a result of the Sunset Review process and continued in existence until 1993. It may be cited as "The Plumbing License Law".

The Board's purpose is twofold: (1) to protect the public health through an efficient and equitable system of licensing; (2) to administer a uniform examination to all persons who qualify and desire to be plumbers by providing a fair and equal opportunity to practice their trade.

Today it is common knowledge that diseases can be transmitted and spread by water. Public health officials have strongly supported licensing and minimum plumbing codes as a deterrent to the spread of water borne diseases such as typhoid fever, diarrhea, cholera, amoebic and bacillary dysentery. The relationship between properly designed and installed plumbing systems and the public health is an established fact.

The Board is composed of nine members, all appointed by the Governor and confirmed by the Senate. Membership consists of one Plumbing Contractor; one Master Plumber; one Journeyman Plumber; one Plumbing Inspector; one Sanitary Engineer; one Home Builder; one Commercial Builder; and two Public Members.

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<u>NAME</u>	<u>CITY</u>	<u>REPRESENTATION</u>	<u>TERM EXPIRES SEPTEMBER 5</u>
Stanley J. Briers Chairman	Seabrook	Plumbing Contractor	1985
Edward Lee Smith Vice-Chairman	San Antonio	Master Plumber	1987
Maurice S. Batiste Secretary	Houston	Journeyman Plumber	1985
J. L. Drymalla	Columbus	Commercial Builder Contractor	1983
J. P. Franzen	Dallas	Home Builder Contractor	1983
Edward A. Tschoepe	San Antonio	Sanitary Engineer	1987
William G. Wheeler	Victoria	Plumbing Inspector	1987

Section 6 of the Plumbing License Law provides that each member of the Board is entitled to per diem as set by legislative appropriations for each day that the member engages in business of the Board. The appropriation for the Plumbing Board sets the rate of per diem at \$75 per day. Attorney General's Opinion No. MW-388 further provides that members are entitled to reimbursement for travel, meals and lodging.

The Board is a policy making body and delegates the actual administration of the examinations to a full time staff. Examinations are conducted daily at its office in Austin.

Insurance

An insurance policy on the Board's six vehicles provided the Board protection in the amount of \$100,000.00-\$300,000.00 for bodily injury liability and \$10,000.00 for property damage liability.

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A special-coverage policy with the Trinity Universal Insurance Company insured the Board against the loss of money and securities, up to \$1,500.00, both inside and outside the premises.

Each of the Board's employees was covered by a public employees' honesty blanket position bond with the Trinity Company to the extent of \$10,000.00. The following employees are bonded:

Lynn Brown	Administrator
Brett Bretches	Stock Clerk II
William C. Damerau	Occupational Education Specialist II
Viola M. Ekenstam	Accountant II
Raymond G. Fullerton	Occupational Education Specialist II
Darrell Harding	Director of Special Program
Yolanda Hernandez	Administrative Secretary
Mary B. Lane	Secretary III
C. W. Lindley	Occupational Education Specialist II
William J. Marks	Occupational Education Specialist II
Don A. Nelson	Director of Special Program
Johnny G. Reyes	Translator, Spanish
Patsy M. Russell	Administrative Technician III
Mary Jo Sewell	Secretary III
Paul R. Slater	Occupational Education Specialist II
J. H. Walker	Occupational Education Specialist II
Bertha L. Wilson	Secretary III
Larry D. Wilson	Occupational Education Specialist II

The balance of local funds invested in certificates of deposit were transferred to the State Treasury during the period of this report.

No requests for destruction of obsolete or unnecessary records were made during the reporting period.

This Board occupies 15,477 square feet of space at 929 East 41st Street in Austin, Texas. This space is divided as follows: office 5,787 sq.ft.; storage 1,247 sq.ft.; and 8,443 sq.ft. for examination facilities. This space costs 55.31¢ per sq.ft.; \$8,560.53 per month; or \$102,726.36 per year. The space is leased under the terms of Lease and

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the collected information.

3. The third part of the document focuses on the implementation of data-driven decision-making processes. It describes how the organization utilizes the insights gained from data analysis to inform strategic planning and operational decisions, leading to improved performance and efficiency.

4. The fourth part of the document addresses the challenges associated with data management and security. It discusses the importance of implementing robust security measures to protect sensitive information and ensure the integrity of the data used in the organization's operations.

5. The fifth part of the document discusses the role of technology in enhancing data collection and analysis capabilities. It highlights the use of various software tools and platforms to streamline data processing and improve the accuracy and reliability of the resulting insights.

6. The sixth part of the document focuses on the importance of data governance and compliance. It emphasizes the need for clear policies and procedures to govern the use of data, ensuring that the organization remains compliant with relevant regulations and standards.

7. The seventh part of the document discusses the benefits of a data-driven culture. It highlights how fostering a culture of data literacy and evidence-based decision-making can lead to improved organizational performance and a competitive advantage in the market.

8. The eighth part of the document addresses the future of data management and analysis. It discusses emerging trends and technologies that are expected to shape the data landscape in the coming years, such as artificial intelligence and machine learning.

9. The ninth part of the document provides a summary of the key findings and recommendations. It emphasizes the need for continued investment in data management and analysis capabilities to ensure the organization's long-term success and growth.

10. The tenth part of the document concludes with a call to action, encouraging all employees to embrace a data-driven mindset and contribute to the organization's overall success through their commitment to accurate record-keeping and data analysis.

Rental contract PE 7925-E-Austin on file with the State Purchasing and General Services Commission. The space is leased from Ausland Construction Company, 601 West Sixth Street, Austin, Texas. The Board does not occupy any space in State owned buildings.

In 1982 the total number of licenses, of all categories, decreased by 2.88%. A breakdown of this figure is shown in the License Activity Report under General Information.

A statement of Receipts and Disbursements, as required by law, is shown on page 15.

Under Field Service Activity it is seen that 396 cities were visited during 1982, resulting in 3,943 field visits. A total of 2,350 plumbers were challenged on the job for licenses; approximately 80.0% were in compliance with the law. A total of 197 registered apprentices were also contacted on the job and 309 apprentice application forms were given to those not previously registered. A complete breakdown is shown under Field Service Activity.

During the year the Board participated in numerous conferences, seminars, training sessions and industry meetings. The Field Service Department and the Chief Examiner were directly involved in this activity. Our participation was by invitation from cities, trade associations, A&M Extension Service, individual Plumbing Inspectors, State Plumbing Inspectors Association and Building Officials Association of Texas.

The danger of cross connections in plumbing systems has been

[The text in this block is extremely faint and illegible. It appears to be a multi-paragraph document, possibly a letter or a report, but the specific content cannot be discerned.]

graphically revealed in the two films produced for the Board by the University of Texas at Austin. These films depict the various ways in which the public water supply can be contaminated by back siphonage and back flow. Cross connections in plumbing systems are wide spread and occur at an unbelievable rate.

Another film produced by the University of Texas at Austin shows the Board's facilities for administering the examination. A typical applicant is followed through each phase of the day long examination.

All of these films have received wide circulation and viewing both in and out of the State. Probably more than 10,000 persons have viewed them.

Representatives of the Board have attended 35 conferences, seminars, and other meetings where more than 3,012 persons were in attendance.

The Board has continued its service to small towns in the State encouraging them to adopt a modern, adequate plumbing code. The Texas League of Municipalities has continued to participate in a cooperative effort with the Board to make copies of the model code available to any city needing such service.

Apprentice permit cards are available to any person learning the trade. A total of 801 apprentice plumbers were registered in 1982 bringing the total to 10,550 since the inception of registration in 1972.

All applicants for examination must certify that they have three

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and analysis processes, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document discusses the importance of data governance and the role of various stakeholders in ensuring that data is used ethically and in compliance with relevant regulations and standards.

6. The sixth part of the document provides a detailed overview of the data lifecycle, from data collection and storage to data analysis and reporting. It outlines the key steps and best practices for each stage of the process.

7. The seventh part of the document discusses the role of data in decision-making and the importance of providing timely and accurate information to management and other stakeholders.

8. The eighth part of the document provides a summary of the key findings and recommendations of the study. It emphasizes the need for a data-driven approach to organizational management and the importance of investing in data management capabilities.

9. The ninth part of the document includes a list of references and a list of figures and tables. The references cite various academic and industry sources that provide additional context and support for the findings of the study.

10. The tenth part of the document includes a list of appendices and a list of abbreviations. The appendices provide additional details and data that are not included in the main body of the document, while the abbreviations list provides a key for the acronyms used throughout the document.

years of experience working at the trade or a combination of work experience and academic training in plumbing to equal three years. In addition, the Board requires a one year waiting period between journeyman licensure and the master examination.

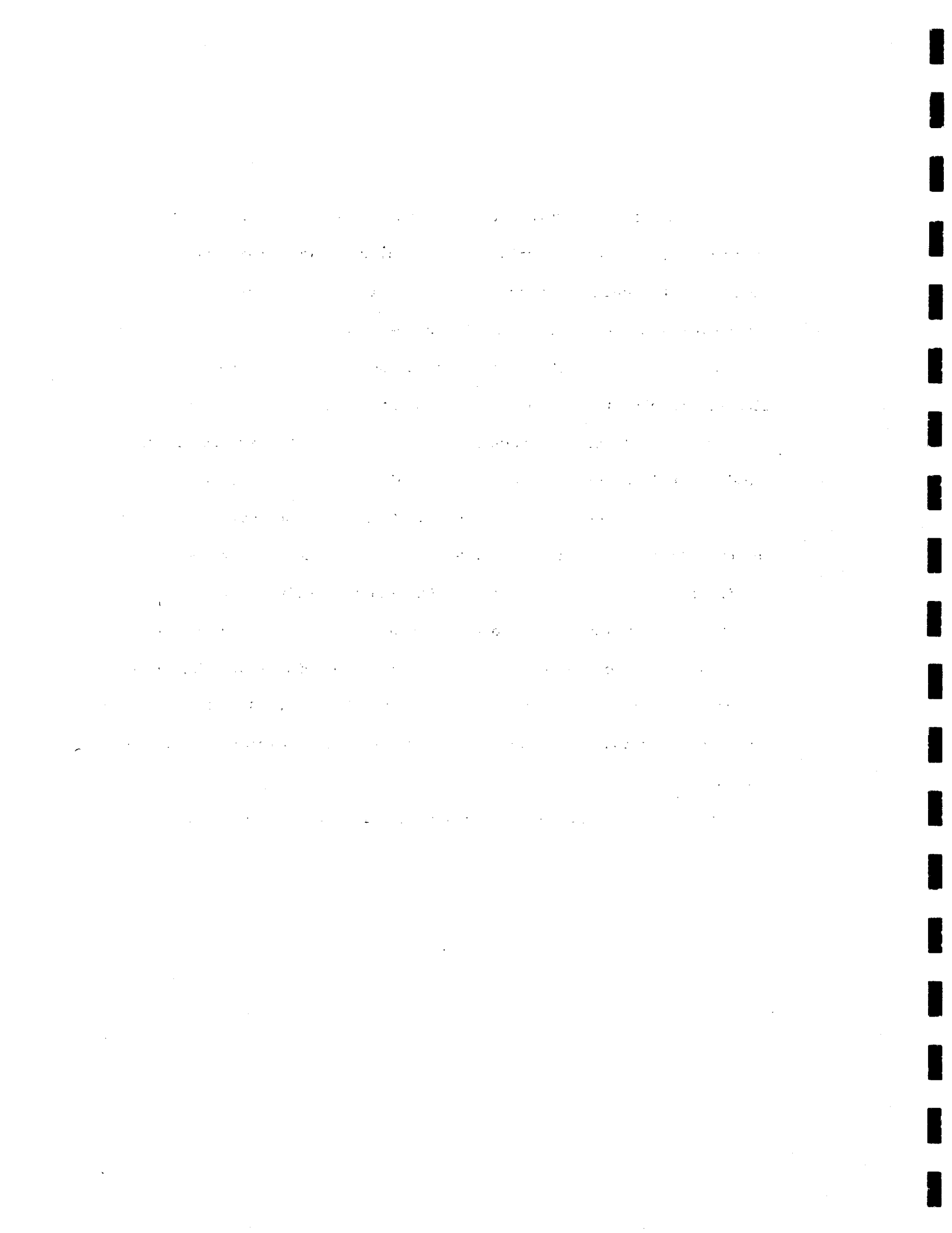
A minimum age of 18 has been established for the master plumber license and also the plumbing inspector license.

The city plumbing inspector must pass a comprehensive qualifying examination in order to obtain his plumbing inspector's license.

The Board conducted a total of 2,406 examinations during the year. The overall failure rate was 22.2%. A further breakdown of the examination figures is shown in the Examination Activity section.

The Board maintains a library of plumbing reference books which are available to persons needing to study for the examination. This Film and Book Library is used extensively during the year. See the applicable section in the body of the report for a complete listing of this activity.

Six Board meetings were held during this reporting period.



GENERAL INFORMATION

License Activity Report

A total of 19,876 licenses were issued by the Board during the year; 8,875 of these were master licenses; 10,183 were journeyman licenses; and 818 were plumbing inspector licenses. This represented a total decrease of 589 licenses for the year, or 2.88%. Broken down by category, the master licenses increased 5.72%; journeyman licenses decreased 9.62%; and plumbing inspector licenses decreased 1.56%.

Licenses are granted by renewal of a previously held license or by successful completion of the examination. Table I shows the manner in which the 19,876 licenses issued in 1982 were obtained.

TABLE I

Number of 1982 Plumbing Licenses
Issued by the State Plumbing Board

	<u>By Renewal</u>	<u>By Examination</u>	<u>Total</u>
Master	8,313	562	8,875
Journeyman	9,528	655	10,183
Inspector	<u>744</u>	<u>74</u>	<u>818</u>
Total	18,585	1,291	19,876

MEMORANDUM

TO : SAC, NEW YORK

FROM : SAC, NEW YORK (100-100000)

SUBJECT: [REDACTED] (100-100000)

[REDACTED]

DATE: [REDACTED]

[REDACTED]

Table II shows the total number of licenses issued annually since the creation of the Board. The yearly total is broken down according to classification of license issued.

TABLE II
Comparative Summary of Licenses
Issued Annually by
State Plumbing Board

	<u>Masters</u>	<u>Journeyman</u>	<u>Inspectors</u>	<u>Total</u>
1948	2,875	4,491	354	7,720
1949	3,001	4,891	383	8,275
1950	3,239	5,269	422	8,930
1951	3,232	5,382	440	9,054
1952	3,383	5,564	450	9,397
1953	3,519	5,679	436	9,634
1954	3,556	5,746	431	9,733
1955	3,711	5,996	450	10,157
1956	3,794	6,073	462	10,329
1957	3,835	6,093	457	10,385
1958	3,878	6,222	481	10,581
1959	3,986	6,457	500	10,943
1960	4,120	6,516	506	11,142
1961	4,147	6,510	512	11,169
1962	4,223	6,596	518	11,337
1963	4,322	6,794	554	11,670
1964	4,447	7,023	559	12,029

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TABLE II - continued

	<u>Masters</u>	<u>Journeyman</u>	<u>Inspectors</u>	<u>Total</u>
1965	4,561	7,048	581	12,190
1966	4,605	7,050	610	12,265
1967	4,612	7,187	633	12,432
1968	4,718	7,489	650	12,857
1969	4,892	7,902	654	13,448
1970	5,036	8,177	662	13,875
1971	5,268	8,623	677	14,568
1972	5,687	9,204	756	15,647
1973	6,034	9,506	779	16,319
1974	6,271	9,687	754	16,712
1975	6,459	9,952	747	17,158
1976	6,735	10,010	756	17,501
1977	7,027	10,232	758	18,017
1978	7,487	10,574	776	18,837
1979	7,932	11,229	796	19,957
1980	8,247	11,382	817	20,446
1981	8,367	11,267	831	20,465
1982	8,875	10,183	818	19,876

PROCESSES OF THE

Process	Start	End	Duration	Frequency
1.00	0000	0000	0000	0000
1.01	0000	0000	0000	0000
1.02	0000	0000	0000	0000
1.03	0000	0000	0000	0000
1.04	0000	0000	0000	0000
1.05	0000	0000	0000	0000
1.06	0000	0000	0000	0000
1.07	0000	0000	0000	0000
1.08	0000	0000	0000	0000
1.09	0000	0000	0000	0000
1.10	0000	0000	0000	0000
1.11	0000	0000	0000	0000
1.12	0000	0000	0000	0000
1.13	0000	0000	0000	0000
1.14	0000	0000	0000	0000
1.15	0000	0000	0000	0000
1.16	0000	0000	0000	0000
1.17	0000	0000	0000	0000
1.18	0000	0000	0000	0000
1.19	0000	0000	0000	0000
1.20	0000	0000	0000	0000

TEXAS STATE BOARD OF PLUMBING EXAMINERS
Austin, Texas

10

EXHIBIT I
Balance Sheet
August 31, 1982

	<u>August 31, 1982</u>			<u>Totals (Memorandum Only)</u>
	<u>General Fund</u>	<u>General Fixed Assets</u>	<u>General Long Term Debt</u>	
	\$	\$	\$	\$
<u>ASSETS</u>				
<u>Current Assets</u>				
Cash in State Treasury	438,263.74			438,263.74
Petty Cash	100.00			100.00
Cash in Bank	458.00			458.00
Suspense Account	9,975.00			9,975.00
Inventory of Postage and Supplies	<u>6,884.10</u>			<u>6,884.10</u>
Total Current Assets	455,680.84			455,680.84
<u>General Fixed Assets</u>				
Furniture and Equipment		<u>204,015.19</u>		<u>204,015.19</u>
<u>Other Assets</u>				
Amount to be Provided for Retirement of General Long Term Debt			<u>83,397.29</u>	<u>83,397.29</u>
Total Assets	<u>455,680.84</u>	<u>204,105.19</u>	<u>83,397.29</u>	<u>743,093.32</u>
<u>LIABILITIES AND FUND EQUITY</u>				
<u>Current Liabilities</u>				
Accounts Payable	1,901.34			1,901.34
Reserve for Suspense in State Treasury	9,975.00			9,975.00
	<u>11,876.34</u>			<u>11,876.34</u>
<u>Other Liabilities</u>				
Compensable Leave Balance of Employees			<u>83,397.29</u>	<u>83,397.29</u>
<u>Fund Equity</u>				
Investment in General Fixed Assets		<u>204,015.19</u>		<u>204,015.19</u>
<u>Fund Balance</u>				
Reserved for Inventory of Postage/Supplies	6,884.10			6,884.10
Reserved for Encumbrances (Exh. III)	561.51			561.51
Reserved for Transfer/Plumbing Examiners Fund	458.00			458.00
Unreserved Fund Balances:				
Unencumbered Appropriations (Exh. III)	120,358.35			120,358.35
Unappropriated Balance	<u>315,542.54</u>			<u>315,542.54</u>
Total Fund Balances (Exh. II)	<u>443,804.50</u>			<u>443,804.50</u>
Total Fund Equity	<u>443,804.50</u>	<u>204,015.19</u>		<u>647,819.69</u>
Total Liabilities and Fund Equity	<u>455,680.84</u>	<u>204,015.19</u>	<u>83,397.29</u>	<u>743,093.32</u>

The accompanying Notes to the Financial Statements are an integral part of this exhibit.

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TEXAS STATE BOARD OF PLUMBING EXAMINERS

Exhibit II

Statement of Revenues, Expenditures and
Changes In Fund Balance
Year Ended August 31, 1982

	<u>Year Ended</u> <u>August 31, 1982</u> \$
<u>Revenues</u>	
Licenses:	
Master	459,800.00
Journeyman	257,270.00
Inspector	20,585.00
Total License Fee	<u>737,655.00</u>
Examination Fees:	
Master	63,300.00
Journeyman	52,270.00
Inspector	2,110.00
Total Examination Fee	<u>117,680.00</u>
Late Fees	57,854.00
Sale of Scrap Metal	436.51
Other	<u>10,134.01</u>
Total Revenues	<u>923,759.52</u>
<u>Expenditures</u>	
Current Operating Expenditures:	
Salaries and Wages	420,263.68
Salaries - Contract	26,462.42
Per Diem - Board Members	3,150.00
Printing, Office Supplies and Services	20,738.16
Telephone and Telegraph	5,621.22
Postage	13,533.13
Rent - Office	101,490.66
Utilities and Janitorial Services	25,356.14
Travel Expense - Administrative	20,715.06
Travel Expense - Board Members	2,990.26
Travel Expense - Automobiles	8,856.96
Materials - Examination	4,790.79
Supplies - Examination	6,659.62
Insurance	3,007.00
Employer's Retirement Contributions	32,797.96
Employer's Group Insurance Contributions	31,089.44
Social Security	<u>43,538.11</u>
Total Current Operating Expenditures	<u>771,060.61</u>

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TEXAS STATE BOARD OF PLUMBING EXAMINERS

Exhibit II

Statement of Revenues, Expenditures and Changes in Fund Balance Year Ended August 31, 1982 (concluded)

Year Ended August 31, 1982 \$

Expenditures (concluded)

Capital Outlay:

Purchases of Furniture and Equipment

41,281.28

Total Expenditures (Exh. III)

812,341.89

Excess of Revenues Over Expenditures

111,417.63

Fund Balance - Beginning

333,671.77

Restoration of Outstanding Checks to Bank Balance

458.00

Decrease in Inventory of Postage and Supplies

(1,742.90)

Fund Balance - Ending (Exh. I)

443,804.50

The accompanying notes to the Financial Statement are an integral part of this exhibit.

TEXAS STATE BOARD OF PLUMBING EXAMINERS

EXHIBIT III

STATEMENT OF FUNDS BUDGETED VS.
FUNDS APPLIED AND ENCUMBERED
Year Ended August 31, 1982

	<u>Funds Budgeted</u>	<u>Additions to</u> <u>Appropriations</u>
	<u>Legislative</u> <u>Appropriations</u>	<u>Appropriations</u>
	\$	\$
<u>Year Ended August 31, 1982</u>		
Current Year Appropriations:		
Per Diem of Board Members	16,875.00	
Administrator	45,000.00	
Other Administration	729,222.00	1,383.40
Total Current Year Appropriations	<u>791,097.00</u>	<u>1,383.40</u>
Prior Year Budget	33,917.35	
Total Appropriations	<u>825,014.35</u>	<u>1,383.40</u>
Other Appropriations:		
Social Security	43,538.11	
Retirement	32,797.96	
Insurance	31,089.44	
Total Appropriations	<u>932,439.86</u>	<u>1,383.40</u>

Funds Applied and Encumbered

<u>Expenditures</u>	<u>Encumbrances</u>	Variance Favorable <u>(Unfavorable)</u>
\$	\$	\$
3,150.00		13,725.00
45,000.00		
<u>622,849.03</u>	<u>561.51</u>	<u>107,194.86</u>
670,999.03	561.51	<u>120,919.86</u>
33,917.35		
<u>704,916.38</u>	<u>561.51</u>	<u>120,919.86</u>
43,538.11		
32,797.96		
31,089.44		
<u>812,341.89</u>	<u>561.51</u>	<u>120,919.86</u>
(Exh. II)	(Exh. I)	(Exh. I)

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2023-2024
2024-2025

TEXAS STATE BOARD OF PLUMBING EXAMINERS

SUPPLEMENTARY SCHEDULE

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
Year Ended August 31, 1982

	Year Ended August 31, 1982 \$
<u>Receipts</u>	
Licenses:	
Master	459,800.00
Journeyman	257,275.00
Inspector	20,585.00
	737,660.00
Less Amount Placed in Escrow	(716.26)
Total License Fees	736,943.74
Examination Fees:	
Master	63,300.00
Journeyman	52,270.00
Inspector	2,110.00
	117,680.00
Less Amount Placed in Escrow	(5,983.50)
Total Examination Fee	111,696.50
Late Fees	57,864.00
Sale of Scrap Metal	436.51
Other	17,312.43
Total Receipts	924,253.18
<u>Disbursements</u>	
Salaries and Wages	420,263.68
Salaries - Contract	26,462.42
Per Diem - Board Members	3,000.00
Printing, Office Supplies and Services	20,853.09
Telephone and Telegraph	5,094.88
Postage	13,533.13
Rent - Office	101,490.66
Utilities and Janitorial Services	25,105.35
Travel Expense - Administrative	20,715.06
Travel Expense - Board Members	2,990.26
Travel Expense - Automobiles	8,621.38
Materials - Examination	4,550.79
Supplies - Examination	6,626.37
Insurance	3,007.00
Employer's Retirement Contributions	32,797.96
Employer's Group Insurance Contributions	31,089.44
Social Security	43,538.11
Total Disbursements	769,739.58

MEMORANDUM FOR THE RECORD

DATE: 10/10/2000
SUBJECT: [Illegible]

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TEXAS STATE BOARD OF PLUMBING EXAMINERS

SUPPLEMENTARY SCHEDULE

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
Year Ended August 31, 1982

	Year Ended August 31, 1982
	\$
Disbursements (concluded)	
Purchases of Fixed Assets:	
Furniture and Equipment	<u>41,638.79</u>
Total Disbursements	<u>811,378.37</u>
Excess of Receipts over Disbursements	<u><u>112,874.81</u></u>

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TEXAS STATE BOARD OF PLUMBING EXAMINERSNOTES TO THE FINANCIAL STATEMENTSNOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Board's accounting records are maintained in accordance with the principles of fund accounting to assure compliance with statutory limitations placed upon the use of its funds. The Board's operations are financed out of the Plumbing Examiner's Fund in accordance with H.B. 656. The costs of fixed assets and prepaid expenses have been recognized as expenditures of the period in which acquired. Fixed assets are reported at cost without provision being made for depreciation or obsolescence. An inventory of postage and supplies on hand was reported as of August 31, 1982.

The accompanying financial statements have been prepared on a modified accrual basis of accounting except for the accounting treatment employed in reporting prepaid expenses. The Expenditures and Balances statement of financial activity is not intended to show the results of operations, net income or loss as would a conventional statement of income and expenses.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support effective decision-making and strategic planning.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and reporting, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides recommendations for mitigating these risks and ensuring that data is handled in a responsible and compliant manner.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It reiterates the importance of a robust data management strategy and encourages the organization to continue to refine its processes and tools to stay competitive in the market.

6. The final part of the document provides a list of references and resources used in the research. It also includes a section for future research, suggesting areas where further investigation is needed to advance the field of data management and analysis.

NOTE 2 - OTHER OPERATING COSTS

In addition to the expenditures reflected in Exhibit II, which were charged to appropriations of the Texas State Board of Plumbing Examiners, certain additional benefit costs relating to the Board were appropriated directly to other administering state agencies.

These costs were as follows:

	<u>Year Ended August 31, 1982</u>
Retirement Contributions	\$ 32,607.96
Employees Retirement System Annual Membership Dues	190.00
Social Security Contributions	43,538.11
State Insurance Contribution	<u>31,089.44</u>
Totals	\$ <u><u>107,425.51</u></u>

NOTE 3 - EMPLOYEES' RETIREMENT PLAN

The Texas State Board of Plumbing Examiners participates in a joint contributory retirement plan for its employees administered by the Employees Retirement System of Texas. The retirement expense to the Board is limited to statutorily-defined state contributions at the rate of eight percent of employees salaries. Each employee also contributes six percent of salary each month, through payroll deductions. Retirement expense to the Board during the period covered by this report, as reflected in the preceding note entitled "Other Operating Costs", was \$32,607.96 for the year ended August 31, 1982.

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NOTE 4 - CHANGES IN LONG-TERM DEBT

The following is a summary of changes in employees' compensable leave balance, which reflect employee's accrued rights to future compensated absences. Changes and balances are stated in terms of hours.

	<u>Annual Leave</u>	<u>Sick Leave</u>	<u>Compen- satory Time</u>	<u>Totals</u>
Compensable Leave Hours -				
September 1, 1981	3481.3	7274.5		10755.8
Leave Hours Earned	2197.0	1664.0		3861.0
Leave Hours Compensated:				
By Time Off	1917.8	727.0		2644.8
By Monetary Payment including Accounts Payable	-0-			-0-
Leave Hours Lost or Cancelled:				
Accumulated Hours in Excess Of Maximum Balances	-0-	1,178.0		1,178.0
Sick Leave Balances Cancelled by Employee Terminations				
Other Changes or Adjustments	_____	_____	_____	_____
Compensable Leave Hours August 31, 1982	<u>3760.5</u>	<u>7033.5</u>	<u>-0-</u>	<u>10,794.0</u>

The Texas State Board of Plumbing Examiners, monetary liabilities for compensable future absences as of August 31, 1982, as computed by multiplying the above ending balance times the year - end average hourly salary rate for all employees, were as follows:

Annual Leave	\$ 43,095.33
Sick Leave (One-Half Compensable)	40,301.96
Compensatory Time	-0-
Total (Exh. I)	<u>\$ 83,397.29</u>

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for the proper management of the organization's finances and for ensuring compliance with relevant laws and regulations.

2. The second part of the document outlines the specific procedures that should be followed when recording transactions. This includes details on how to handle receipts, invoices, and other financial documents, as well as the frequency and timing of record-keeping activities.

3. The third part of the document provides a detailed overview of the various types of transactions that must be recorded. This includes sales, purchases, transfers, and other financial activities, and explains how each type should be properly documented and categorized.

4. The fourth part of the document discusses the role of the accounting department in the overall record-keeping process. It highlights the importance of clear communication and collaboration between the accounting team and other departments, as well as the need for regular audits and reviews to ensure the accuracy and integrity of the records.

5. The fifth part of the document provides a summary of the key points discussed in the previous sections and offers some final thoughts on the importance of maintaining accurate records. It concludes by stating that this is a critical component of any successful organization's financial management strategy.

6. The sixth part of the document provides a detailed overview of the various types of transactions that must be recorded. This includes sales, purchases, transfers, and other financial activities, and explains how each type should be properly documented and categorized.

7. The seventh part of the document discusses the role of the accounting department in the overall record-keeping process. It highlights the importance of clear communication and collaboration between the accounting team and other departments, as well as the need for regular audits and reviews to ensure the accuracy and integrity of the records.

8. The eighth part of the document provides a summary of the key points discussed in the previous sections and offers some final thoughts on the importance of maintaining accurate records. It concludes by stating that this is a critical component of any successful organization's financial management strategy.

NOTE 5 - EXPENDITURES

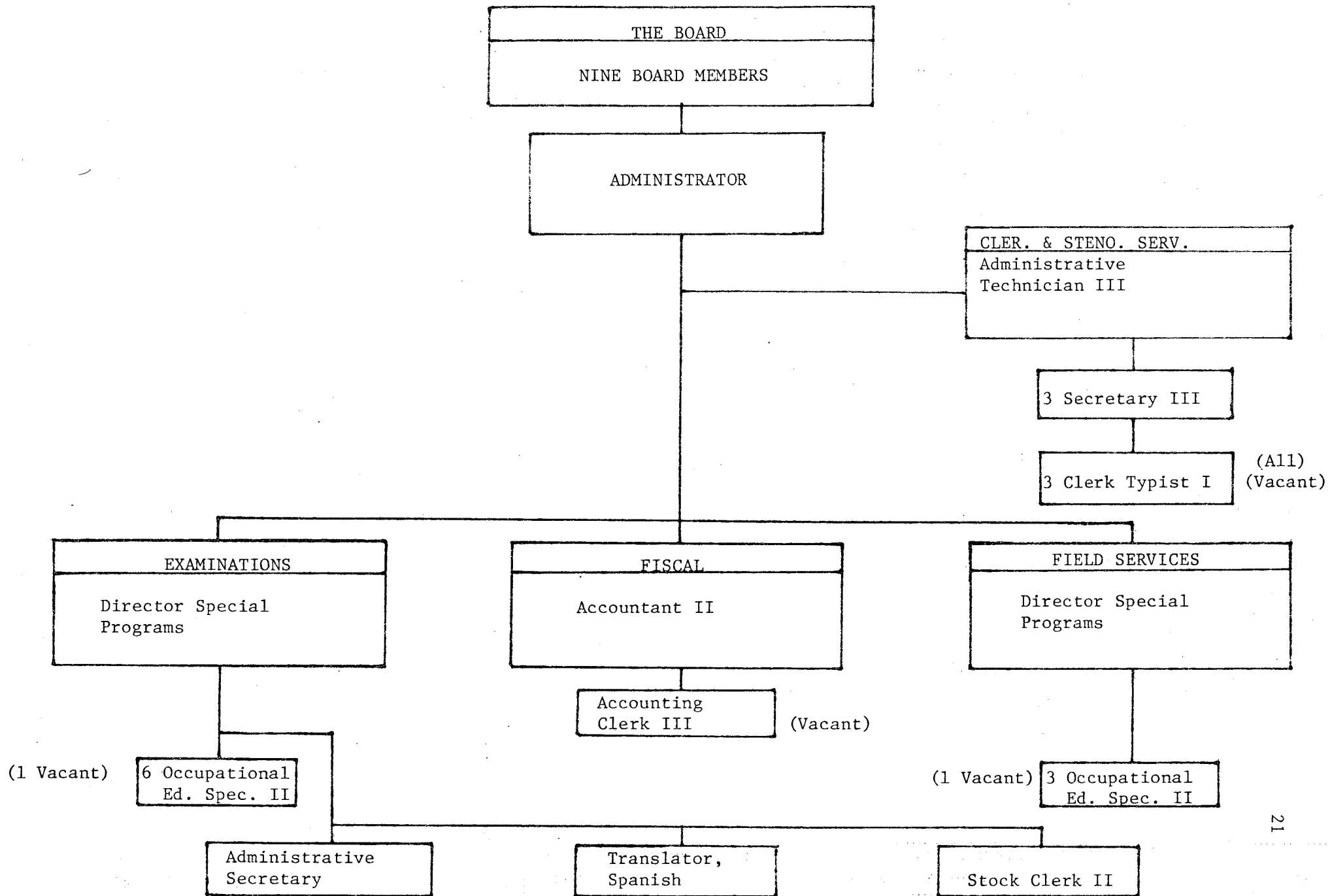
The expenditure classification "Salaries - Contract" includes payments to temporary employment agencies during the peak renewal period. Professional and/or consultant services are also included within this classification. A summary of payments follows:

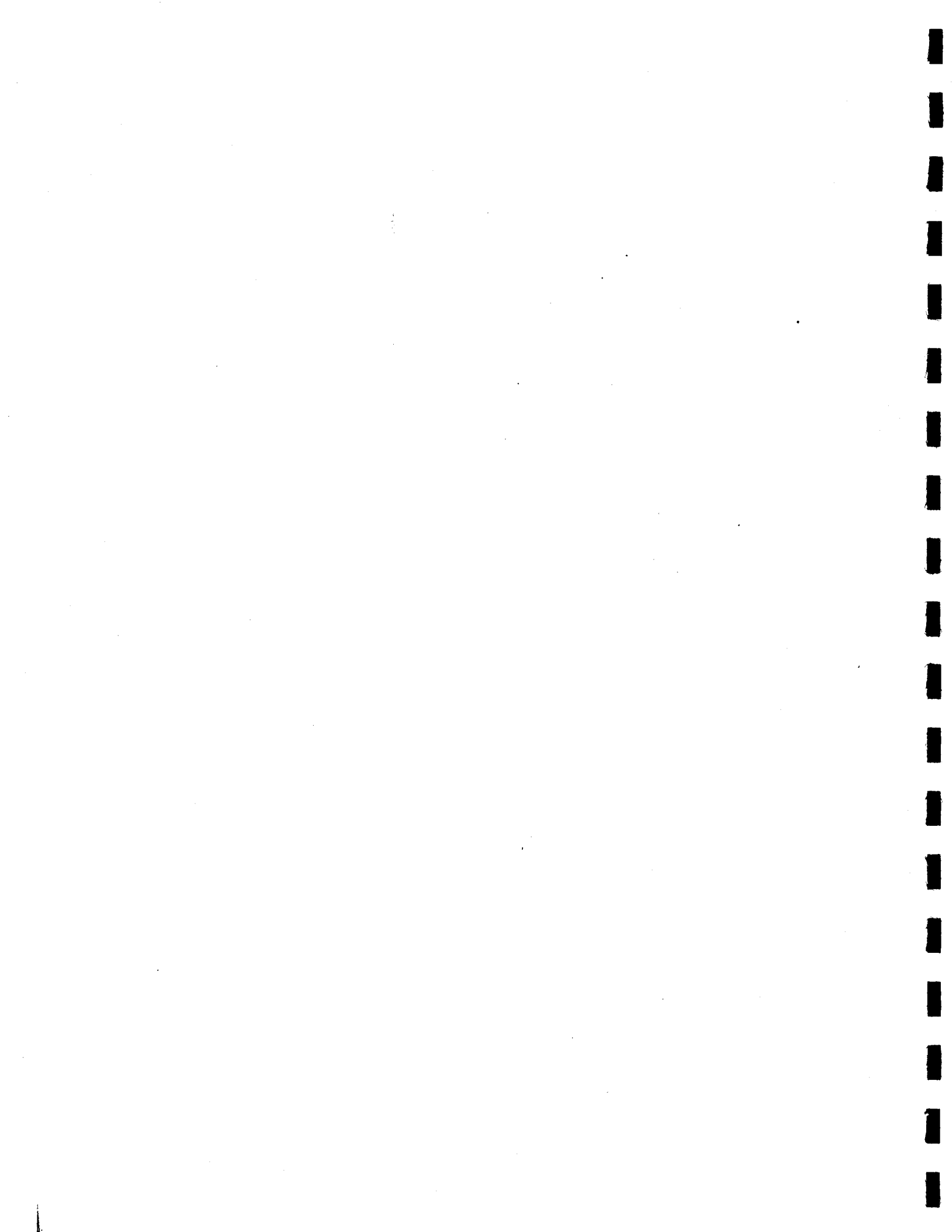
	<u>Year Ended August 31, 1982</u>
Charles L. Davis - consultant services	\$ 1,800.00
William H. Lalla - consultant services	7,348.50
Judi C. L. Hewett - displaywriter instruction	5,720.75
Carrie Reyes - master license statistical research	475.00
Olsten of Austin - displaywriter instruction	946.40
Interglobal Temporary Service - temporary help	10,004.27
F. R. Moerke - lettering for official resolution	125.00
Country Store Gallery - framing for official resolution	<u>42.50</u>
Total (Exh. II)	<u>\$ 26,462.42</u>

NOTE 6 - CHANGES IN FIXED ASSETS

A summary of changes in General Fixed Assets follows:

	<u>Year Ended August 31, 1982</u>
<u>Balances</u> - Beginning	\$ 198,445.58
Changes:	
Less Adjustments	(33,337.04)
Purchases of Furniture and Equipment (Exh. II)	41,281.28
Trade in Allowance	240.00
Deletions	<u>(2,614.63)</u>
Balances - Ended (Exh. I)	<u>\$ 204,015.19</u>





Requests for Information

Each year the Board receives requests from other states concerning its operations, examinations and other procedures. The Board is happy to supply any helpful information to another state or political subdivision concerning its licensing or examining procedures.

MISSOURI

Inquiry from Paula F. Boyd, Secretary, Board of Plumbing Examiners, requesting information on Wolford Skiles and his plumbing experience.

NEW MEXICO

Request from Campbell McMordie, Staff Assistant, Southern Union Company, for a copy of a Texas Code Survey.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text also notes that clear and concise reporting is necessary for effective decision-making by management and regulatory bodies.

2. The second part of the document outlines the various methods used to collect and analyze data. It describes the process of gathering information from different sources, such as internal systems and external databases, and how this data is then processed and analyzed to identify trends and anomalies. The text highlights the importance of using reliable and validated data sources to ensure the accuracy of the results.

3. The third part of the document discusses the challenges associated with data collection and analysis. It identifies several key issues, including data quality, data security, and the complexity of the data itself. The text also discusses the importance of having a clear understanding of the data and the methods used to analyze it, as well as the need for ongoing monitoring and evaluation of the data collection process.

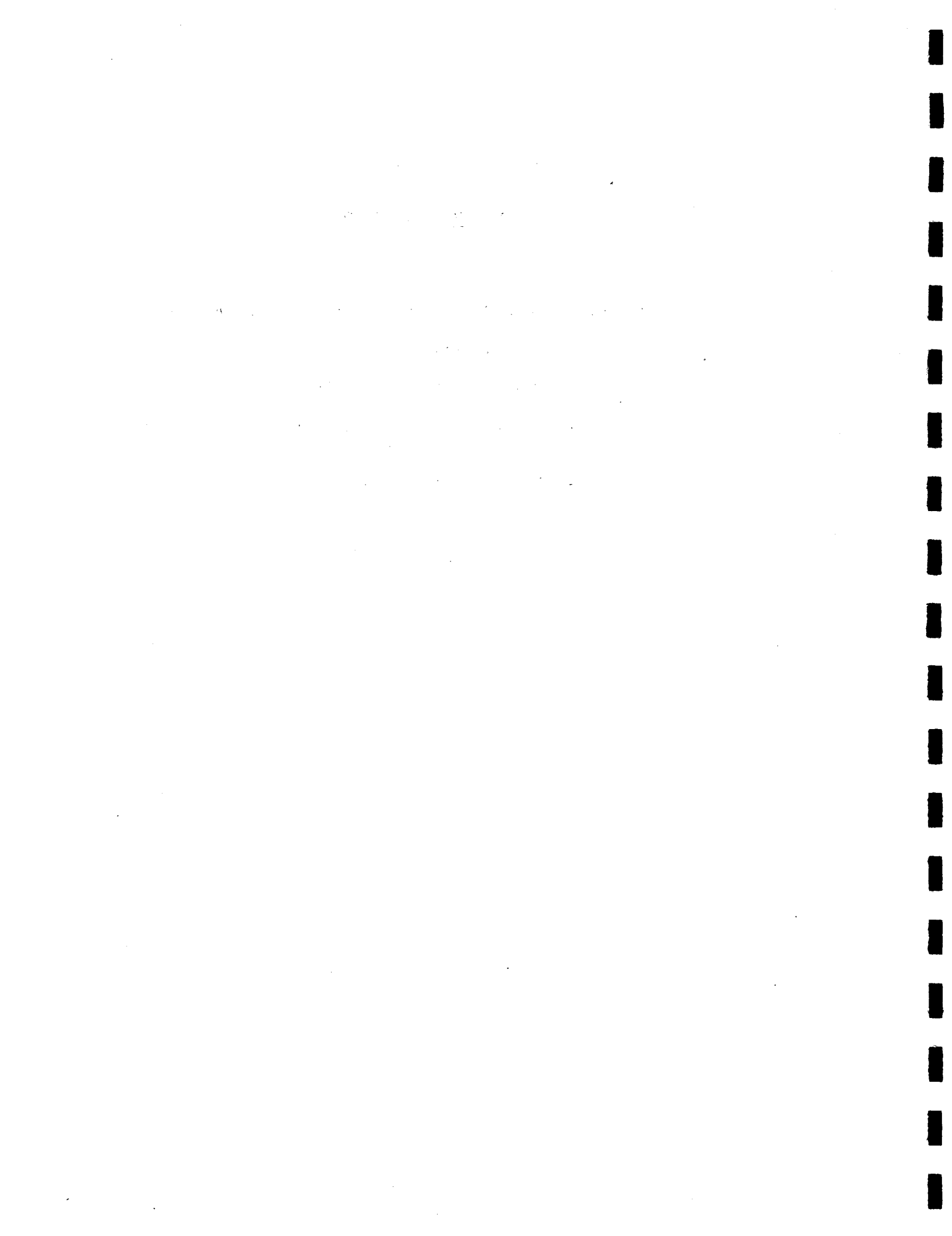
4. The fourth part of the document provides a summary of the key findings and conclusions. It reiterates the importance of accurate record-keeping and data collection, and the need for clear and concise reporting. The text also discusses the implications of the findings for the financial system and for the ability to detect and prevent fraud. Finally, the text offers some recommendations for improving the data collection and analysis process.

5. The fifth part of the document discusses the future of data collection and analysis. It identifies several emerging trends, such as the use of artificial intelligence and machine learning, and the increasing importance of data security. The text also discusses the need for ongoing research and development in this area, and the importance of staying up-to-date on the latest developments. Finally, the text offers some thoughts on the future of the financial system and the role of data in this context.

FIELD SERVICE ACTIVITY

The Field Service Activities are grouped as follows:

1. Field Visits
2. License Compliance Checks
3. Meetings, Conferences, Seminars, and Training Seminars
4. Plumbing Code Activity



Field Visits

396 cities and towns were visited during 1982. As a result of these 396 trips, 3,943 field visits were made. The visits included license compliance checks; contacts with plumbing inspectors; contacts with master and journeyman plumbers; association officials; contacts with city councils and city officials, such as city managers and city attorneys. In the course of investigating complaints, many contacts were made with consumers. Board representatives attended and participated at other meetings and short schools.

License Compliance Checks

A total of 243 license compliance checks were made in 143 cities at least one or more times during the year. A total of 2,350 plumbers were found working on jobs and 469 were found to be unlicensed. 80.0% of the plumbers contacted were in compliance with the Licensing Law. 198 of the 469 found to be unlicensed subsequently obtained their license. 258 have been or will be scheduled for examination. 13 failed the examination and will be re-scheduled for examination after the expiration of the prescribed waiting period. Also, a total of 197 registered apprentice plumbers were found working on jobs and a total of 309 applications for registration as an apprentice plumber were given to apprentices.

CHAPTER III

The first part of the chapter discusses the importance of maintaining accurate records of all transactions. It is essential for the business to have a clear and concise record of its financial activities. This record should be kept in a safe and secure place, and it should be available to all authorized personnel. The records should be updated regularly, and any changes should be noted and explained.

The second part of the chapter discusses the importance of maintaining accurate records of all transactions. It is essential for the business to have a clear and concise record of its financial activities. This record should be kept in a safe and secure place, and it should be available to all authorized personnel. The records should be updated regularly, and any changes should be noted and explained.

CHAPTER IV

The first part of the chapter discusses the importance of maintaining accurate records of all transactions. It is essential for the business to have a clear and concise record of its financial activities. This record should be kept in a safe and secure place, and it should be available to all authorized personnel. The records should be updated regularly, and any changes should be noted and explained.

The second part of the chapter discusses the importance of maintaining accurate records of all transactions. It is essential for the business to have a clear and concise record of its financial activities. This record should be kept in a safe and secure place, and it should be available to all authorized personnel. The records should be updated regularly, and any changes should be noted and explained.

Most cities of 5,000 or more population were visited one or more times during the year. Every city, regardless of size, requesting assistance was visited and offered the full services of the Board.

The following table shows the frequency of visits to the 13 larger cities, number of plumbers contacted on jobs and the number who were unlicensed. In each of the cities listed below one, two, or three representatives were assigned for one week to conduct a license compliance check.

TABLE III

Compliance Checks

City	Number Visits	Number Persons Contacted	Number Persons Unlicensed	Percent Unlicensed
Abilene	1	10	2	20.0
Amarillo	3	35	11	31.4
Austin	3	179	28	15.6
Beaumont	2	27	6	22.2
Corpus Christi	2	79	13	16.5
Dallas	5	230	67	29.1
El Paso	2	62	18	29.0
Fort Worth	3	67	18	26.9
Houston	5	304	53	17.4
Lubbock	2	24	12	50.0
San Antonio	5	121	15	12.4
Waco	2	22	4	18.2
Wichita Falls	1	7	2	28.6

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COMPLAINTS

Eighty-four complaints and requests for assistance were received during the reporting period. All but three were resolved. The three unresolved complaints are on appeal in the courts or the defendant cannot be located.

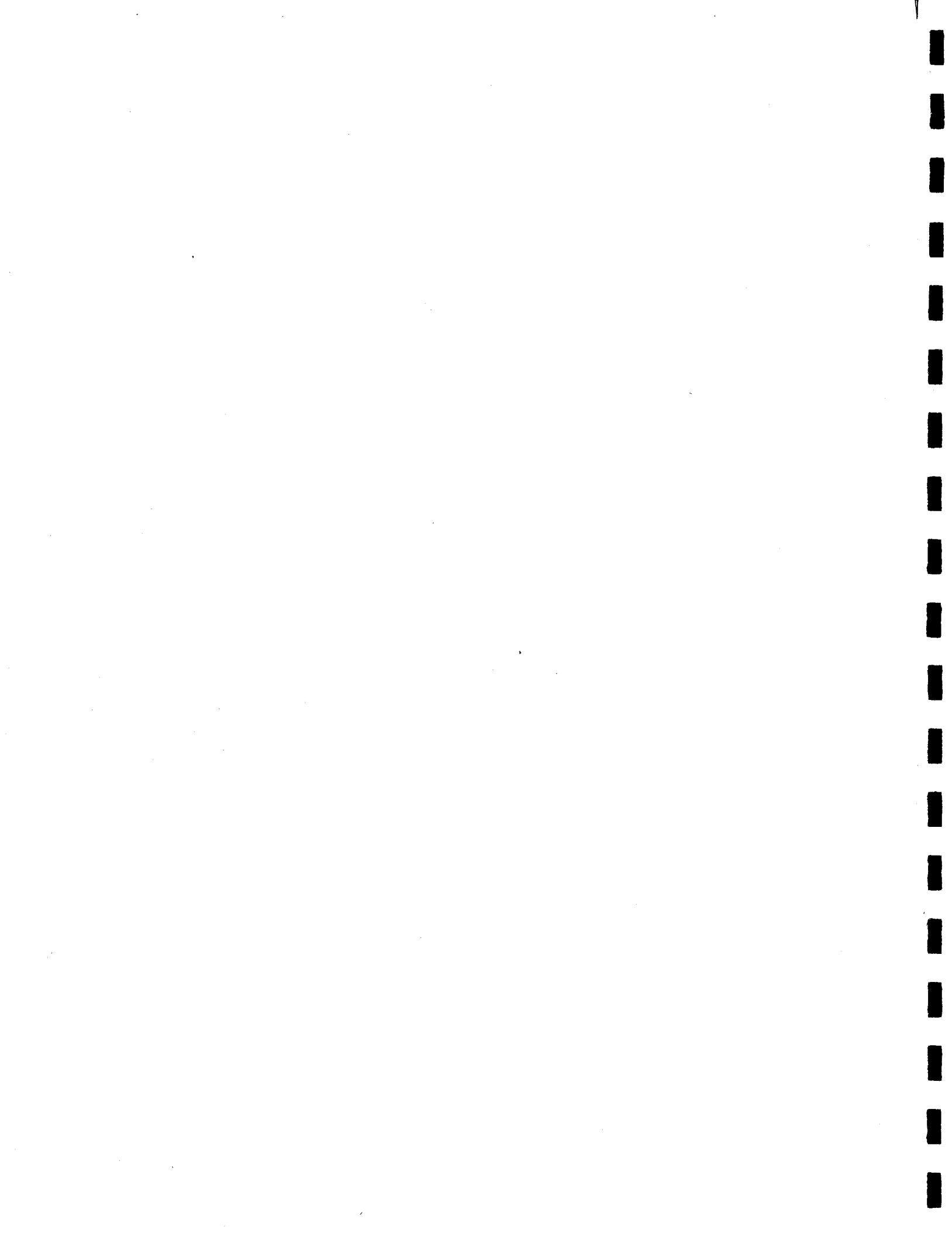
Most of the complaints involved alleged overcharges or inferior workmanship.

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MEETINGS, CONFERENCES, SEMINARS, AND TRAINING SEMINARS

Date	Location	Type of Meeting	Purpose/Subject	Participants and No. Attended				
				Trade Ass'n	Consumer	Gen'l Public	Agency	Number
1981 10/21	Corpus Christi	Training seminar	Training to plumbing apprentice class. Show cross connection films, discuss proper plumbing installation.				Del Mar College	13
10/22	Austin	Seminar	Training, present lecture on cross connection exhibit to maintenance employees		Martine Properties			15
10/25	Orlando, Florida	Meeting and seminar	Participated in annual plumbing code changes. Attended seminar on plumbing.	Southern Bldg. Code Conference				360
11/11	Bellaire	Training seminar	Conduct training on proper waste and venting. Show 2 cross connection films.					21
11/11	Reno, Nevada	Meeting and training seminar	Participated in annual plumbing code changes. Attended sessions on plumbing code workshop.	Intl. Assn. of Plumbing and Mechanical Officials Annual Bus. and Edu. Conf..				420
11/18	Austin	Seminar	Lecture on cross connection exhibit, discuss what are good, acceptable plumbing installations.	Members of Plumbing Local #268, Austin				22
11/24	Harlingen	Seminar for City Plumbing Inspectors	Conduct training on good and acceptable plumbing installations, show two films on cross connections.				A&M University	15



MEETINGS, CONFERENCES, SEMINARS, AND TRAINING SEMINARS

Date	Location	Type of Meeting	Purpose/Subject	Participants and No. Attended				
				Trade Ass'n	Consumer	Gen'l Public	Agency	Number
12/8	Austin	Training seminar	Lecture on Cross connection exhibit and general plumbing information to plumbing apprentice class.				St. Phillip College	25
12/8	Denison	Training	Conduct training on cross connection, discuss good plumbing installations and procedure to take examination to city plumbing inspectors, officials and public.		Public		City	30
1982 1/18	Beford	Training meeting, city inspectors and officials, plumbers, and general contractors.	Conduct training on interpretation of plumbing code, discuss waste and vents. Show cross connection films.				City	21
1/12	Gilmer	Training Seminar, city plumbing inspectors and officials and plumbers	Interpretation of plumbing ordinance, license law and procedure to follow to take plumbing exam.				City	11
3/5	Austin	Conduct plumbing examination for plumber apprentices.	Design plumbing examination for student apprentices, give examination and grade enrollees to state plumbing contest.	Area Five VICO				5
4/14	Dallas	Training Conference	Attend meeting, manned booth, explain various plumbing installation. Hand out copies of license law and answer questions.	Assoc. Plumbing, Heating, Cooling Contractors of Texas				250

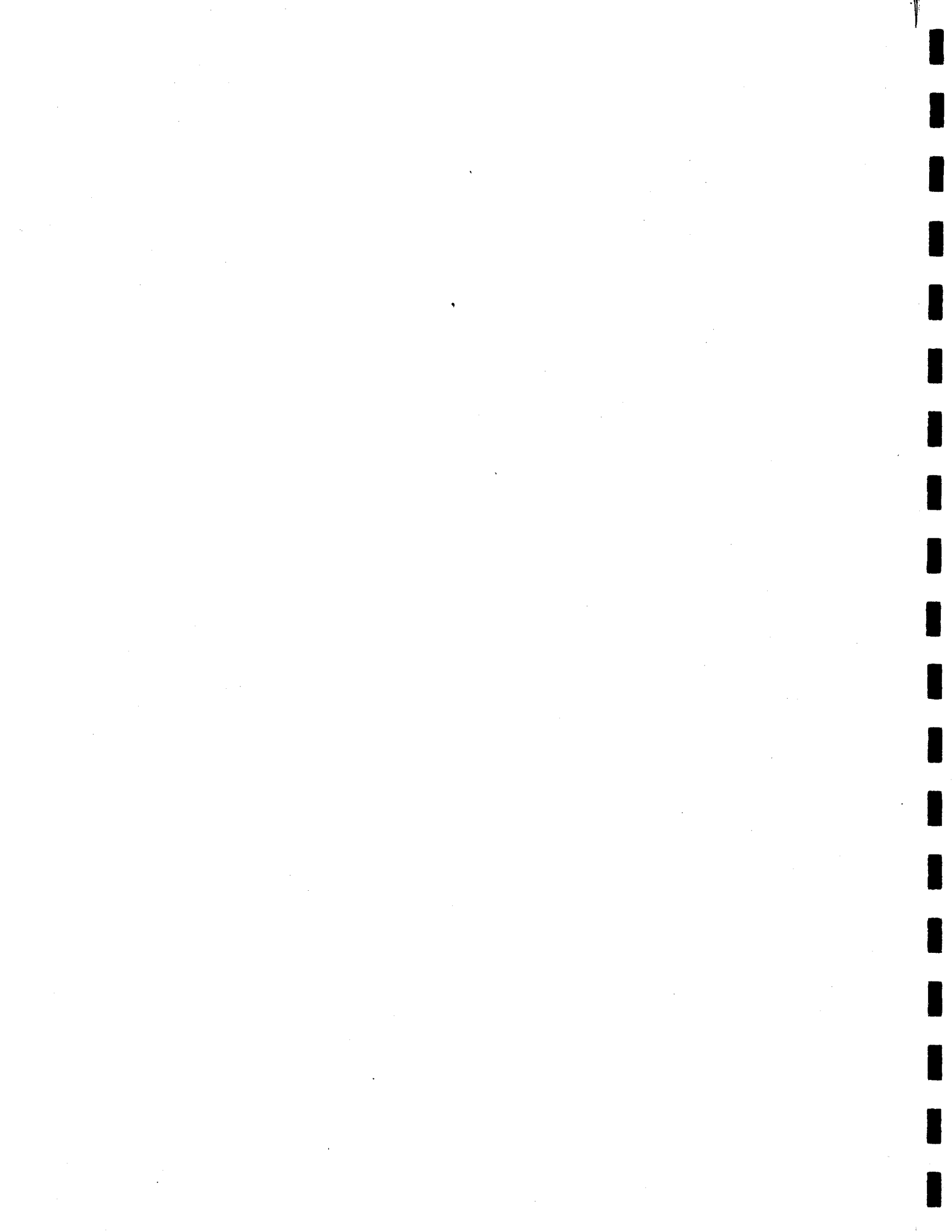


MEETINGS, CONFERENCES, SEMINARS, AND TRAINING SEMINARS

Date	Location	Type of Meeting	Purpose/Subject	Participants and No. Attended				
				Trade Ass'n	Consumer	Gen'l Public	Agency	Number
5/6	Cedar Park	Meeting city plumbing Inspector and manager.	Discuss license law enforcement and City plumbing ordinance.				City	2
5/14	South Padre Island	Training seminar, city bldg. officials	Conduct training on waste and vent installations in multi-story bldgs.				City	23
5/25	Grand Prairie	Training seminar, city plumbing inspectors.	Conduct training on drain, waste and vents and good plumbing installations, show two cross connection films.				A&M University	20
6/2	College Station	Training seminar, city plumbing inspectors.	Conduct training on waste, vents and proper and acceptable plumbing installations, show cross connection films.				A&M University	11
6/7	Las Vegas, Nevada	Exposition and conference.	Manned booth with four story model with various plumbing designs and installations, show cross connection films.	Natl. Plumbing, Heating and Cooling Contractors				1,500
6/14	Austin	Training seminar, conference city inspectors.	Conduct training on all aspects of plumbing installations. discuss license law and enforcement.				City	148
6/28	Lubbock	Training seminar, city plumbing inspectors.	Conduct training on drain, waste and vents also on good and proper installations, show two cross connection films.				A&M	16



Date	Location	Type of Meeting	Purpose/Subject	Participants and No. Attended				
				Trade Ass'n	Consumer	Gen'l Public	Agency	Number
7/12	San Antonio	Training seminar for city plumbing inspectors.	Conduct training on drain, waste and vents. General discussion on good and accepted plumbing installations. Show two films on cross connection.				A&M University	20
7/29	Austin	Training seminar for plumbing school instructors.	Presented cross connection lecture and discussed requirements for apprentices to take journeyman exam.				Texas Department of Education	14
8/20	Austin	Meeting of officials of New Mexico Dept. of Labor, License Div.	Presented cross connection lecture, reviewed examination procedures				State	4
8/9	College Station	Training seminar, city plumbing inspectors and bldg. officials.	Conducted training on one and two story family housing codes. Show cross connection films.				A&M University	40
8/23	Pittsburg	Meeting city plumbing inspector and city officials and plumbers.	Conduct discussion on new plumbing ordinance. Interpretation on enforcement, also license law.				City	6



Plumbing Code Activity

The Board has continued its assistance and encouragement to small cities in adopting adequate plumbing codes. During the year numerous cities have adopted the Texas Municipal League Plumbing Code. The Board's representatives have favored the adoption of this code and a large number of cities have requested copies. Many of them are currently in the process of adopting the code while others are considering minor changes or revision before its adoption. This code is gradually becoming the standard code for the smaller cities. The Texas Municipal League is to be commended for publishing this code for its member cities.

STATE OF MICHIGAN

IN SENATE,
January 11, 1906.
REPORT
OF THE
COMMISSIONERS OF THE
SCHOOL DIVISION,
FOR THE YEAR ENDING
JUNE 30, 1905.

LANSING:

W. H. RAYBURN, STATE PRINTER.



EXAMINATION ACTIVITY

Examination Report

The Board conducted 2,406 examination in 1981. 899 were Master examinations, 1,401 were Journeyman examinations, and 106 were Inspector's examinations. Of the 2,406 examined, a total of 1,872, or 77.8 percent, qualified for their licenses.

A breakdown by category shows that 899 Master Plumber candidates were examined and of that number 789, or 87.8 percent, passed. 1,401 Journeyman Plumber candidates were examined and 990, or 70.7 percent, passed. 106 Inspector candidates were examined and 93, or 87.7 percent, passed.

The monthly breakdown of the Master examinations, showing the number given and the number passing or failing, is shown in Table IV.

The monthly breakdown of Journeyman examinations is shown in Table V.

Table VI shows the number of examinations given by month for the reporting period by category. The passing and failure rate for each is also shown.

Table VII shows the number of Master examinations conducted each year since the Board's inception. It also reveals the number passing and failing along with the percentage of passes and failures.

Table VIII is the same information shown in the same manner on the Journeyman examinations since 1947.

Table IX shows the number of examinations given by category for each year of the Board's operation.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to ensure the validity of the results.

3. The third part of the document describes the different types of data that are collected and how they are used to inform decision-making. It notes that a combination of quantitative and qualitative data is often used to provide a comprehensive view of the organization's performance.

4. The fourth part of the document discusses the challenges associated with data collection and analysis. It identifies common issues such as data quality, consistency, and availability, and provides strategies to address these challenges.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that the data collection and analysis processes remain effective and relevant over time.

6. The sixth part of the document provides a detailed overview of the data collection and analysis process, including the specific steps and tools used. It also includes a list of references to support the findings and recommendations.

7. The seventh part of the document discusses the implications of the findings and recommendations for the organization's future operations. It suggests ways in which the data can be used to improve performance and achieve the organization's goals.

8. The eighth part of the document provides a detailed overview of the data collection and analysis process, including the specific steps and tools used. It also includes a list of references to support the findings and recommendations.

9. The ninth part of the document discusses the implications of the findings and recommendations for the organization's future operations. It suggests ways in which the data can be used to improve performance and achieve the organization's goals.

10. The tenth part of the document provides a detailed overview of the data collection and analysis process, including the specific steps and tools used. It also includes a list of references to support the findings and recommendations.

TABLE IVMonthly Distribution of
Master Examinations for 1982

	<u>No. Exams</u>	<u>Passed</u>	<u>Failed</u>
September	90	79	11
October	58	54	4
November	56	46	10
December	49	40	9
January	76	63	13
February	63	57	6
March	89	80	9
April	101	91	10
May	97	80	17
June	71	63	8
July	79	69	10
August	<u>70</u>	<u>67</u>	<u>3</u>
Total	899	789	110

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TABLE VMonthly Distribution of
Journeyman Examinations for 1982

	<u>No. Exams</u>	<u>Passed</u>	<u>Failed</u>
September	188	140	48
October	165	114	51
November	91	68	23
December	72	51	21
January	92	67	25
February	64	48	16
March	127	92	35
April	147	94	53
May	137	96	41
June	129	87	42
July	93	65	28
August	<u>96</u>	<u>68</u>	<u>28</u>
Total	1,401	990	411

Faint, illegible text, possibly bleed-through from the reverse side of the page. The text is arranged in several columns and appears to be a list or a series of entries.



TABLE VI

Monthly Distribution of
Master and Journeyman Examinations
for 1982

	<u>No.</u> <u>Exam'd</u>	<u>Passed</u>	<u>Percent</u>	<u>Failed</u>	<u>Percent</u>
September	278	219	78.8	59	21.2
October	223	168	75.3	55	24.7
November	147	114	77.6	33	22.4
December	121	91	75.2	30	24.8
January	168	130	77.4	38	22.6
February	127	105	82.7	22	17.3
March	216	172	79.6	44	20.4
April	248	185	74.6	63	25.4
May	234	176	75.2	58	24.8
June	200	150	75.0	50	25.0
July	172	134	77.9	38	22.1
August	<u>166</u>	<u>135</u>	<u>81.3</u>	<u>31</u>	<u>18.7</u>
Total	2,300	1,779	77.3	521	22.7

Table 1

Table 1. Summary of the data used in the analysis. The table shows the number of subjects in each group, the mean age, and the range of ages.

Group	Number of Subjects	Mean Age (Years)	Age Range (Years)	Gender (M/F)	Education Level
Group 1	15	25.5	20-35	10/5	High School
Group 2	15	25.5	20-35	10/5	High School
Group 3	15	25.5	20-35	10/5	High School
Group 4	15	25.5	20-35	10/5	High School
Group 5	15	25.5	20-35	10/5	High School
Group 6	15	25.5	20-35	10/5	High School
Group 7	15	25.5	20-35	10/5	High School
Group 8	15	25.5	20-35	10/5	High School
Group 9	15	25.5	20-35	10/5	High School
Group 10	15	25.5	20-35	10/5	High School
Group 11	15	25.5	20-35	10/5	High School
Group 12	15	25.5	20-35	10/5	High School
Group 13	15	25.5	20-35	10/5	High School
Group 14	15	25.5	20-35	10/5	High School
Group 15	15	25.5	20-35	10/5	High School
Group 16	15	25.5	20-35	10/5	High School
Group 17	15	25.5	20-35	10/5	High School
Group 18	15	25.5	20-35	10/5	High School
Group 19	15	25.5	20-35	10/5	High School
Group 20	15	25.5	20-35	10/5	High School

TABLE VII

Comparative Analysis of Master Examinations
Given Annually by State Plumbing Board

	<u>Examined</u>	<u>Passed</u>	<u>Percent Passed</u>	<u>Failed</u>	<u>Percent Failed</u>	<u>Total Examined</u>
1947	35	32	91.4	3	8.6	35
1948	338	313	92.6	25	7.4	373
1949	429	370	86.2	59	13.8	802
1950	426	374	87.7	52	12.3	1,228
1951	278	176	63.6	102	36.4	1,506
1952	419	293	69.9	126	30.1	1,925
1953	356	292	82.0	64	18.0	2,281
1954	311	234	75.3	77	24.7	2,592
1955	345	268	77.8	77	22.2	2,937
1956	331	259	78.0	72	22.0	3,268
1957	308	240	77.8	68	22.2	3,576
1958	303	238	78.5	65	21.5	3,879
1959	354	248	70.0	106	30.0	4,233
1960	389	291	74.8	98	25.2	4,622
1961	332	248	74.4	84	25.6	4,954
1962	349	270	77.3	79	22.7	5,303
1963	353	262	74.2	91	25.8	5,656
1964	424	310	73.1	114	26.9	6,080
1965	419	299	71.4	120	28.6	6,499
1966	307	223	72.7	84	27.3	6,806
1967	311	225	72.4	86	27.6	7,117

The following table shows the results of the experiment. The first column is the number of trials, the second column is the number of correct responses, the third column is the number of incorrect responses, the fourth column is the number of omissions, and the fifth column is the number of commissions. The sixth column is the percentage of correct responses, the seventh column is the percentage of incorrect responses, the eighth column is the percentage of omissions, and the ninth column is the percentage of commissions.

Trial	Correct	Incorrect	Omissions	Commissions	% Correct	% Incorrect	% Omissions	% Commissions
1	1	0	0	0	100	0	0	0
2	1	0	0	0	100	0	0	0
3	1	0	0	0	100	0	0	0
4	1	0	0	0	100	0	0	0
5	1	0	0	0	100	0	0	0
6	1	0	0	0	100	0	0	0
7	1	0	0	0	100	0	0	0
8	1	0	0	0	100	0	0	0
9	1	0	0	0	100	0	0	0
10	1	0	0	0	100	0	0	0
11	1	0	0	0	100	0	0	0
12	1	0	0	0	100	0	0	0
13	1	0	0	0	100	0	0	0
14	1	0	0	0	100	0	0	0
15	1	0	0	0	100	0	0	0
16	1	0	0	0	100	0	0	0
17	1	0	0	0	100	0	0	0
18	1	0	0	0	100	0	0	0
19	1	0	0	0	100	0	0	0
20	1	0	0	0	100	0	0	0
21	1	0	0	0	100	0	0	0
22	1	0	0	0	100	0	0	0
23	1	0	0	0	100	0	0	0
24	1	0	0	0	100	0	0	0
25	1	0	0	0	100	0	0	0
26	1	0	0	0	100	0	0	0
27	1	0	0	0	100	0	0	0
28	1	0	0	0	100	0	0	0
29	1	0	0	0	100	0	0	0
30	1	0	0	0	100	0	0	0
31	1	0	0	0	100	0	0	0
32	1	0	0	0	100	0	0	0
33	1	0	0	0	100	0	0	0
34	1	0	0	0	100	0	0	0
35	1	0	0	0	100	0	0	0
36	1	0	0	0	100	0	0	0
37	1	0	0	0	100	0	0	0
38	1	0	0	0	100	0	0	0
39	1	0	0	0	100	0	0	0
40	1	0	0	0	100	0	0	0
41	1	0	0	0	100	0	0	0
42	1	0	0	0	100	0	0	0
43	1	0	0	0	100	0	0	0
44	1	0	0	0	100	0	0	0
45	1	0	0	0	100	0	0	0
46	1	0	0	0	100	0	0	0
47	1	0	0	0	100	0	0	0
48	1	0	0	0	100	0	0	0
49	1	0	0	0	100	0	0	0
50	1	0	0	0	100	0	0	0
51	1	0	0	0	100	0	0	0
52	1	0	0	0	100	0	0	0
53	1	0	0	0	100	0	0	0
54	1	0	0	0	100	0	0	0
55	1	0	0	0	100	0	0	0
56	1	0	0	0	100	0	0	0
57	1	0	0	0	100	0	0	0
58	1	0	0	0	100	0	0	0
59	1	0	0	0	100	0	0	0
60	1	0	0	0	100	0	0	0
61	1	0	0	0	100	0	0	0
62	1	0	0	0	100	0	0	0
63	1	0	0	0	100	0	0	0
64	1	0	0	0	100	0	0	0
65	1	0	0	0	100	0	0	0
66	1	0	0	0	100	0	0	0
67	1	0	0	0	100	0	0	0
68	1	0	0	0	100	0	0	0
69	1	0	0	0	100	0	0	0
70	1	0	0	0	100	0	0	0
71	1	0	0	0	100	0	0	0
72	1	0	0	0	100	0	0	0
73	1	0	0	0	100	0	0	0
74	1	0	0	0	100	0	0	0
75	1	0	0	0	100	0	0	0
76	1	0	0	0	100	0	0	0
77	1	0	0	0	100	0	0	0
78	1	0	0	0	100	0	0	0
79	1	0	0	0	100	0	0	0
80	1	0	0	0	100	0	0	0
81	1	0	0	0	100	0	0	0
82	1	0	0	0	100	0	0	0
83	1	0	0	0	100	0	0	0
84	1	0	0	0	100	0	0	0
85	1	0	0	0	100	0	0	0
86	1	0	0	0	100	0	0	0
87	1	0	0	0	100	0	0	0
88	1	0	0	0	100	0	0	0
89	1	0	0	0	100	0	0	0
90	1	0	0	0	100	0	0	0
91	1	0	0	0	100	0	0	0
92	1	0	0	0	100	0	0	0
93	1	0	0	0	100	0	0	0
94	1	0	0	0	100	0	0	0
95	1	0	0	0	100	0	0	0
96	1	0	0	0	100	0	0	0
97	1	0	0	0	100	0	0	0
98	1	0	0	0	100	0	0	0
99	1	0	0	0	100	0	0	0
100	1	0	0	0	100	0	0	0

TABLE VII - continued

	<u>Examined</u>	<u>Passed</u>	<u>Percent Passed</u>	<u>Failed</u>	<u>Percent Failed</u>	<u>Total Examined</u>
1968	354	264	74.6	90	25.4	7,471
1969	424	316	74.5	108	25.5	7,895
1970	412	300	73.0	112	27.0	8,307
1971	501	386	77.1	115	22.9	8,808
1972	726	557	76.6	169	23.4	9,534
1973	623	505	81.0	118	19.0	10,157
1974	543	454	83.6	89	16.4	10,700
1975	500	431	86.2	69	13.8	11,200
1976	544	472	86.8	72	13.2	11,744
1977	679	590	86.9	89	13.1	12,423
1978	780	680	87.2	100	12.8	13,203
1979	816	722	88.5	94	11.5	14,019
1980	716	629	87.8	87	12.2	14,735
1981	616	540	87.7	76	12.3	15,351
1982	899	789	87.8	110	12.2	16,250

Item	Description	Quantity	Unit	Price	Total	Notes
1001	Item 1	10	kg	100	1000	
1002	Item 2	5	kg	200	1000	
1003	Item 3	20	kg	50	1000	
1004	Item 4	15	kg	66.67	1000	
1005	Item 5	30	kg	33.33	1000	
1006	Item 6	10	kg	100	1000	
1007	Item 7	5	kg	200	1000	
1008	Item 8	20	kg	50	1000	
1009	Item 9	15	kg	66.67	1000	
1010	Item 10	30	kg	33.33	1000	
1011	Item 11	10	kg	100	1000	
1012	Item 12	5	kg	200	1000	
1013	Item 13	20	kg	50	1000	
1014	Item 14	15	kg	66.67	1000	
1015	Item 15	30	kg	33.33	1000	

TABLE VIII

Comparative Analysis of Journeyman Examinations
Given Annually by State Plumbing Board

	<u>Examined</u>	<u>Passed</u>	<u>Percent Passed</u>	<u>Failed</u>	<u>Percent Failed</u>	<u>Total Examined</u>
1947	86	68	79.0	18	21.0	86
1948	1,196	926	77.4	270	22.6	1,282
1949	936	751	80.2	185	19.8	2,218
1950	1,051	690	65.6	361	34.4	3,269
1951	751	421	56.0	330	44.0	4,020
1952	725	415	57.3	310	42.7	4,745
1953	625	414	66.2	211	33.8	5,370
1954	664	410	61.7	254	38.3	6,034
1955	760	544	71.6	216	28.4	6,794
1956	605	417	69.0	188	31.0	7,399
1957	455	323	71.0	132	29.0	7,854
1958	623	432	69.3	191	30.7	8,477
1959	757	528	69.9	229	30.1	9,234
1960	579	413	71.3	166	28.7	9,813
1961	500	379	75.9	121	24.1	10,313
1962	615	463	75.3	152	24.7	10,928
1963	751	585	77.9	166	22.1	11,679
1964	780	588	75.4	192	24.6	12,459
1965	728	442	60.7	286	39.3	13,187
1966	640	390	61.0	250	39.0	13,827
1967	696	459	65.8	237	34.2	14,523

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TABLE VIII - continued

	<u>Examined</u>	<u>Passed</u>	<u>Percent Passed</u>	<u>Failed</u>	<u>Percent Failed</u>	<u>Total Examined</u>
1968	956	550	57.5	406	42.5	15,479
1969	1,161	757	65.2	404	34.8	16,640
1970	979	626	64.0	353	36.0	17,619
1971	1,122	817	72.8	305	27.2	18,741
1972	1,568	1,030	65.7	538	34.3	20,309
1973	1,221	861	70.5	360	29.5	21,530
1974	1,128	863	76.5	265	23.5	22,658
1975	987	857	86.8	130	13.2	23,645
1976	1,137	909	80.0	228	20.0	24,782
1977	1,419	1,062	74.8	357	25.2	26,201
1978	1,558	1,164	74.7	394	25.3	27,759
1979	1,900	1,460	76.8	440	23.2	29,659
1980	1,740	1,188	68.3	552	31.7	31,399
1981	1,210	894	73.9	316	26.1	32,609
1982	1,401	990	70.7	411	29.3	34,010

TABLE IX

Comparative Summary of Examinations
Given Annually by State Plumbing Board

	<u>Master</u>	<u>Journeyman</u>	<u>Inspector</u>	<u>Total</u>
1947	35	86	0	121
1948	338	1,196	37	1,571
1949	429	936	66	1,431
1950	426	1,051	45	1,522
1951	278	751	55	1,084
1952	419	725	49	1,193
1953	356	625	58	1,039
1954	311	664	48	1,023
1955	345	760	46	1,151
1956	331	605	58	994
1957	308	455	54	817
1958	303	623	64	990
1959	354	757	53	1,164
1960	389	579	59	1,027
1961	332	500	52	884
1962	349	615	29	993
1963	353	751	78	1,182
1964	424	780	62	1,266
1965	419	728	63	1,210
1966	307	640	83	1,030
1967	311	696	80	1,087

The following table shows the results of the survey conducted in the year 2000. The data is presented in a tabular format, with columns representing different categories and rows representing individual data points. The table is organized into several sections, each corresponding to a different aspect of the survey.

Category	Sub-category	Value 1	Value 2	Value 3	Value 4
Section 1	Item 1	10	20	30	40
	Item 2	15	25	35	45
	Item 3	20	30	40	50
	Item 4	25	35	45	55
	Item 5	30	40	50	60
	Item 6	35	45	55	65
	Item 7	40	50	60	70
	Item 8	45	55	65	75
	Item 9	50	60	70	80
	Item 10	55	65	75	85
Section 2	Item 1	12	22	32	42
	Item 2	17	27	37	47
	Item 3	22	32	42	52
	Item 4	27	37	47	57
	Item 5	32	42	52	62
	Item 6	37	47	57	67
	Item 7	42	52	62	72
	Item 8	47	57	67	77
	Item 9	52	62	72	82
	Item 10	57	67	77	87
Section 3	Item 1	14	24	34	44
	Item 2	19	29	39	49
	Item 3	24	34	44	54
	Item 4	29	39	49	59
	Item 5	34	44	54	64
	Item 6	39	49	59	69
	Item 7	44	54	64	74
	Item 8	49	59	69	79
	Item 9	54	64	74	84
	Item 10	59	69	79	89
Section 4	Item 1	16	26	36	46
	Item 2	21	31	41	51
	Item 3	26	36	46	56
	Item 4	31	41	51	61
	Item 5	36	46	56	66
	Item 6	41	51	61	71
	Item 7	46	56	66	76
	Item 8	51	61	71	81
	Item 9	56	66	76	86
	Item 10	61	71	81	91

The data indicates a clear upward trend in the values across all sections, with the highest values observed in the final row of each section. The overall pattern suggests a consistent increase in the measured variables over the course of the survey.

TABLE IX - continued

	<u>Master</u>	<u>Journeyman</u>	<u>Inspector</u>	<u>Total</u>
1968	354	956	82	1,392
1969	424	1,161	68	1,653
1970	412	979	65	1,456
1971	501	1,122	80	1,703
1972	726	1,568	129	2,423
1973	623	1,221	105	1,949
1974	543	1,128	93	1,764
1975	500	987	77	1,564
1976	544	1,137	95	1,776
1977	679	1,419	123	2,221
1978	780	1,558	123	2,461
1979	816	1,900	108	2,824
1980	716	1,740	105	2,561
1981	616	1,210	79	1,905
1982	899	1,401	106	2,406

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and processing, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of a data-driven approach in decision-making and the need for continuous monitoring and improvement of data management practices.

EDUCATIONAL FACILITIES
OF
THE EXAMINATION CENTER

The Examination Center is visited each year by several groups of students, health officers, inspectors and others. Among the visiting groups this year were Members of the St. Philip's College (San Antonio), Texas Department of Education (Austin), Texas Railroad Commission (Austin), Texas Department of Education (School Instructors) (Austin), New Mexico Department of Labor (License Division) (New Mexico), Plumbing Local #286 (Austin), and Martine Properties (Austin).

The Director of Special Programs attended and conducted Seminars for the Valley Building Officials Association (South Padre Island), Texas A & M Mechanical Seminar (College Station), Texas State Association of Plumbing Inspector's Seminar (Austin), National Plumbing-Heating-Cooling Contractors Association Exposition Meeting (Las Vegas, Nevada), Southern Building Code Conference (Orlando, Florida), and International Association of Plumbing and Mechanical Officials 52nd Annual Education and Business Conference (Reno, Nevada).

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Book Library Activity

The Board maintains a library of technical books on sanitary plumbing practices which it loans, upon request, to persons wishing to study for the examination.

There were 111 copies of the Model Code sent to applicants for the examination who had requested them as well as to other parties who manifested an interest. A total of 149 copies of the Model Code were sent to City Plumbing Inspectors at various times. Three of our other books were loaned to plumbers and inspectors who requested additional information.

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Film Library Activity

The Board also maintains a library of educational films for use by schools, trade groups, inspection meetings, and other public institutions.

Seven different films were used 105 times for various types of meetings. The following tabulation shows the use of the films:

1. Cross-Connections: The Unseen Hazard

Mr. Ray Brown	El Paso
Mr. Charlie J. Hall	Garland
H & G Air Conditioning and Heating, Inc.	Garland
Mr. David Bailey	Midlothian
Mr. Joseph Lorenz, Chief Plumbing Inspector	San Antonio
Mr. Asher Tapper, Operations Division	Ft. Carson, CO
Mr. Ray Piret, Mostek	Carrollton
Mr. Robert T. Coursey	Dallas
Mr. Rod Doughty, TD Mechanical	Dallas
Houston Area J.A.C.	Houston
Mr. Weldon Roe	Waco
Plumber's Local No. 93 UA	Waukegan, IL
Texas Public Health Association	Garland
Mr. Randy Green, Building Official	Denison
Mr. Robert Robertson	Houston
Mr. Ronald Brossman, City of Schulenburg	Schulenburg
Mr. Elmer D. Lazure	Helena, MT
Mr. Richard W. Sprang	Perrysville, OH
Patton Plumbing	Amarillo
Mr. Graham Moore, TD Mechanical	Dallas
Sam P. Wallace Company	Houston
Mr. John C. Rose, Plumbing Inspector	Irving
Mr. Emilio Garza, Jr., Plumbing Inspector	Kingsville
Mr. Jerry Mullenbach	St. Paul, MN
Oklahoma State Department of Health	Oklahoma City, OK
Plumbers & Pipefitters Local Union No. 654	Abilene
Mr. Arnold Villarreal, McAllen ISD	McAllen
Mr. Leonard Dwoskin	New York City, NY

THE PROBLEM

The problem is to determine the value of the function $f(x)$ for $x > 0$, given that $f(0) = 1$ and $f'(x) = -f(x)$. The function $f(x)$ is assumed to be continuous and differentiable on $[0, \infty)$.

SOLUTION

The differential equation $f'(x) = -f(x)$ is a first-order linear homogeneous equation. The general solution is $f(x) = Ce^{-x}$, where C is an arbitrary constant. Using the initial condition $f(0) = 1$, we find $C = 1$. Therefore, the solution is $f(x) = e^{-x}$ for $x \geq 0$.

Alternatively, we can solve the equation by separation of variables. We rewrite the equation as $\frac{f'(x)}{f(x)} = -1$. Integrating both sides from 0 to x , we get $\ln|f(x)| - \ln|f(0)| = -x$. Since $f(0) = 1$, this simplifies to $\ln|f(x)| = -x$. Exponentiating both sides, we obtain $|f(x)| = e^{-x}$. Because $f(x)$ is continuous and $f(0) = 1$, we have $f(x) = e^{-x}$ for $x \geq 0$.

Uses by Plumbing Board Field Men and Chief Examiner:

Plumbing Apprenticeship Class	Corpus Christi
Building Officials Association of Texas	Bellaire
Plumbing Code #286	Austin
A & M Mechanical Seminar	Harlingen
Plumbing Apprentice Class, St. Philip's College	Austin
City Plumbing Inspectors and Officials, Plumber Apprentice and Public	Denison
City Plumbing Inspectors and Official Plumbers	Bedford
City Plumbing Inspectors and Official Plumbers and Public	Gilmer
Texas Railroad Commision, LP Gas Division	Austin
City Plumbing Inspectors and Building Officials	Grand Prairie
City Plumbing Inspectors and Building Officials	College Station
National Plumbing-Heating-Cooling Contractors	Las Vegas, NV
Texas A & M Mechanical Seminar	Lubbock
Texas A & M Station	San Antonio
Texas Department of Education, Plumbing School Instructors	Austin
New Mexico Department of Labor, License Division	Austin
City Plumbing Inspectors and Building Officials	College Station

2. Anybody Can Do It?

Plumbers and Pipefitters Local Union No. 654	Abilene
Mr. Weldon Roe	Waco
Mr. Ray Brown, Local Union No. 231	El Paso
Charlie Hall & Associates, Inc.	Garland
H & G Air Conditioning	Garland
Houston Area J.A.C.	Houston
Mr. David Bailey	Midlothian
Mr. Ray Piret, Mostek	Carrollton
Mr. Randy Green, Building Official	Denison
Houston Area J.A.C. Local #68	Houston
Mr. Joseph Lorenz, Chief Plumbing Inspector	San Antonio
Plumbers Local No. 93 UA	Waukegan, IL
Mr. Richard W. Sprang	Perrysville, OH
Mr. Rod Doughty, TD Mechanical	Dallas
Mr. Graham Moore, TD Mechanical	Dallas
Mr. Leonard Dwoskin, Department of Education	New York, NY

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support informed decision-making.

3. The third part of the document focuses on the role of technology in modern data management. It discusses how advanced software solutions can streamline data collection, storage, and analysis, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data security and privacy. It stresses the importance of implementing robust security measures to protect sensitive information from unauthorized access and breaches.

5. The fifth part of the document provides a detailed overview of the data analysis process. It describes how statistical and analytical techniques are used to identify trends, patterns, and insights from the collected data.

6. The sixth part of the document discusses the importance of data visualization in communicating complex information. It explains how charts, graphs, and dashboards can be used to present data in a clear and accessible manner, facilitating better understanding and decision-making.

7. The seventh part of the document explores the role of data in strategic planning and forecasting. It highlights how historical data and predictive analytics can be used to anticipate future trends and make data-driven decisions.

8. The eighth part of the document concludes by summarizing the key findings and recommendations. It emphasizes the need for a continuous and iterative approach to data management and analysis to stay competitive in a rapidly changing environment.

9. The document also includes a section on data governance, which outlines the policies and procedures for managing data throughout its lifecycle. This includes defining data ownership, access rights, and retention periods to ensure data is used responsibly and in compliance with relevant regulations.

10. Additionally, the document discusses the importance of data quality and how to ensure the accuracy and integrity of the data. It provides guidelines for identifying and addressing data quality issues, such as missing values, duplicates, and inconsistencies.

11. The document also touches upon the ethical considerations of data collection and analysis. It emphasizes the need to be transparent about data collection practices and to respect the privacy and rights of individuals whose data is being collected.

12. Finally, the document provides a list of resources and references for further reading and research. This includes books, articles, and online resources that provide more in-depth information on the topics discussed in the document.

13. The document is intended for a wide range of stakeholders, including management, data analysts, and IT professionals. It provides a comprehensive overview of the data management process and offers practical advice and best practices for implementing effective data management strategies.

14. The document is structured to be easy to read and understand, with clear headings and sub-headings. It includes numerous examples and case studies to illustrate the concepts and techniques discussed.

15. The document is a valuable resource for anyone interested in data management and analysis. It provides a solid foundation of knowledge and offers practical guidance for implementing data-driven strategies in the organization.

Mr. John W. Lingo, Apprentice Coordinator, for Local Union No. 286	Austin
Mr. Charlie Hall	Garland
Mr. Emilio Garza, Jr., Plumbing Inspector	Kingsville
Mr. Arnold Villarreal, McAllen ISD	McAllen
Mr. Jerry Mullenbach	St. Paul, MN

Uses by Plumbing Board Field Men and Chief Examiner:

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Building Officials Association of Texas	Bellaire
City Plumbing Inspectors and Building Officials	Harlingen
City Plumbing Inspectors and Officials Plumbers and Public	Gilmer
City Plumbing Inspectors and Building Officials	Grand Prairie
City Plumbing Inspectors and Building Officials	College Station
National Plumbing-Heating-Cooling Contractors	Las Vegas, NV
City Plumbing Inspectors and Building Officials	San Antonio
City Plumbing Inspectors and Building Officials	College Station

3. All In A Day's Work

Mr. Leonard Dvoskin Plumbers & Pipefitters Local Union No. 654	New York, NY Abilene
Mr. John W. Lingo, Apprentice Coordinator for Local Union No. 286	Austin
Mr. Larry Nelson, Mechanical Bureau Houston Area J.A.C.	Santa Fe, NM Houston
Mr. Richard W. Lisle	Santa Fe, NM
Mr. H. W. Holder	Garland
Mr. Jerry Mullenbach	St. Paul NM
Mr. Bob Coursey	Dallas
Mr. Randy Green, Building Official	Denison
Mr. J. J. Keefe, Plumbers Local No. 93 UA	Waukegan, IL
Mr. James Cummings	Lansing, MI
Mr. Richard W. Sprang	Perrysville, OH

Uses by Plumbing Board Field Men and Chief Examiner:

Building Officials Association of Texas	Bellaire
City Plumbing Inspectors and Officials, Plumbers Apprentices and Public	Denison

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

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3. The third part of the document focuses on the role of technology in modern data management. It discusses how advanced software solutions can streamline data collection, storage, and analysis, leading to more efficient and accurate results.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that data is used responsibly and ethically.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and up-to-date.

6. The sixth part of the document provides a detailed overview of the data collection process, including the selection of data sources, the design of data collection instruments, and the implementation of data collection procedures. It also discusses the importance of pilot testing and validation to ensure the reliability of the data.

7. The seventh part of the document discusses the various methods used to analyze data, including descriptive statistics, inferential statistics, and qualitative analysis. It highlights the need for appropriate statistical techniques to be used based on the nature of the data and the research objectives.

8. The eighth part of the document focuses on the interpretation and communication of data. It discusses the importance of presenting data in a clear and concise manner, using appropriate visual aids and tables to facilitate understanding. It also emphasizes the need to provide context and interpretation for the data findings.

9. The ninth part of the document discusses the ethical considerations surrounding data management. It highlights the importance of obtaining informed consent from participants, ensuring data confidentiality, and using data for legitimate purposes only. It also discusses the role of data protection regulations in governing data management practices.

10. The tenth part of the document provides a final summary and conclusion. It reiterates the key findings and recommendations, and emphasizes the importance of data management in supporting organizational success and growth.

11. The eleventh part of the document discusses the future of data management. It highlights the potential of emerging technologies, such as artificial intelligence and machine learning, to revolutionize data management practices. It also discusses the need for ongoing research and innovation to address the challenges of data management in the future.

12. The twelfth part of the document provides a final summary and conclusion. It reiterates the key findings and recommendations, and emphasizes the importance of data management in supporting organizational success and growth.

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| City Plumbing Inspectors and Officials,
Plumbers and Public | Gilmer |
| City Plumbing Inspectors and Building
Officials | College Station |
| National Plumbing-Heating-Cooling
Contractors | Las Vegas, NV |
| City Plumbing Inspectors and Building
Officials | San Antonio |
| City Plumbing Inspectors and Building
Officials | College Station |
| City Plumbing Inspectors and Officials
Plumbers and Public | Pittsburg |
| 4. <u>Explosion - Danger Lurks</u> | |
| Mr. John Lingo, Apprentice Coordinator for
Local Union No. 286 | Austin |
| Mr. John C. Rose, Instructor, Irving, ISD | Irving |
| Mr. Fred Flores, St. Philip's College | San Antonio |
| 5. <u>Health and The Cycle of Water</u> | |
| Mr. Jack Thrasher, Building Official | Henderson |
| 6. <u>Piping Safety</u> | |
| Mr. Ernest L. Pinckard | Beaumont |
| Mr. Fred Flores, St. Philip's College | San Antonio |
| 7. <u>Sins of Sanitation</u> | |
| Mr. Jack Thrasher, Building Official | Henderson |

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