

A CLEAR CASE CASE FOR IOWA

Where The Dream Still Works!



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"Iowa is the America
you grew up believing in.
It is faith, hope and caring
for each other.
It is freedom,
bought through hard work
and integrity.
It is the belief
that the future will
be even better
than today ... if we
make it that way.
Iowa is a place where
the dream still works."

Iowa Ambassadors Program

A clear case for making Iowa home for your business

prepared by Iowa Department of Economic Development



Acknowledgment

"A Clear Case for Iowa" reflects one of the great things about the state: the ability of the private and public sectors to work together for the benefit of the entire state.

"A Clear Case for Iowa" is a consensus document authored by state government, with major contributions by the cities and towns of Iowa and private industry.

From the contributing cities and universities, special credit goes to Iowa State University, the University of Iowa, the Chambers of Commerce in Ames, Cedar Falls, Cedar Rapids, Council Bluffs, Davenport, Des Moines, Iowa City, Muscatine, Sioux City, and Waterloo. And from the private sector, to members of the Iowa Business Council, headed by Daniel Krumm, chairman and chief executive officer of the Maytag Corporation.



Foreword

"A Clear Case for Iowa" has been prepared to assist you in your evaluation of locations for your business. The information presented in this document is not limited to the use of statistics alone. It also provides an interpretation of the data...presenting a case for Iowa, both openly and honestly.

In March 1987, Iowa published its own strategic plan — Directions for Iowa's Economic Future. As part of that document, the Iowa situation was described as follows:

"The economic transition occurring today is profound. The growth of the non-manufacturing sector is transforming America into a service and information based economy. This requires a work force that is highly educated. It also signals the need to alter our thinking and emphasis so that we do not concentrate solely on industrial development, but rather on economic development.....

"World competition requires that we not only develop strategies to strengthen and diversify our economic position. We also need to recognize and take advantage of the new opportunities this arena will afford."

A thorough evaluation of your corporation's needs coupled with Iowa's assets points in one direction: your firm should give very serious consideration to the prospect of locating in Iowa. Iowa not only has a most viable product, but also has the kind of environment and people that will make such a decision even more profitable to your company than you might anticipate. Such has been the case with Greyhound, Amoco, Rockwell and others. And we honestly believe your firm will experience similar operating results.



Aggressive, progressive, forward-thinking firms are the personification of the new Iowa, an Iowa marked by brains, not brawn; an Iowa marked by the strong values of hard work derived from our midwestern heritage; an Iowa marked by livability; an Iowa marked by creativity, and most importantly, an Iowa marked by abounding new opportunity that isn't lost in a maze of government red tape and regulation.



Planning/Consultation Services

The Iowa Department of Economic Development serves as a central and confidential source of information for businesses considering expansion in our state. We welcome the opportunity to provide you with current, accurate information regarding all aspects of your location requirements.

We'll be pleased to show you how your business can profit from an Iowa location, and we're ready to help in any way we can. To provide the information you need. To save you time and money.

We understand the special requirements of executives who have been entrusted with the task of identifying and screening potential properties for expansion.

We can simplify and speed your decision process by supplying site screening and other support services at no cost.

Working with communities throughout Iowa, we maintain a comprehensive inventory of data on all available industrial sites and buildings over 10,000 square feet. Updated continuously, this data includes acreage, zoning, building specifications, utilities and transportation. Given your requirements, we can quickly locate suitable properties for your consideration.

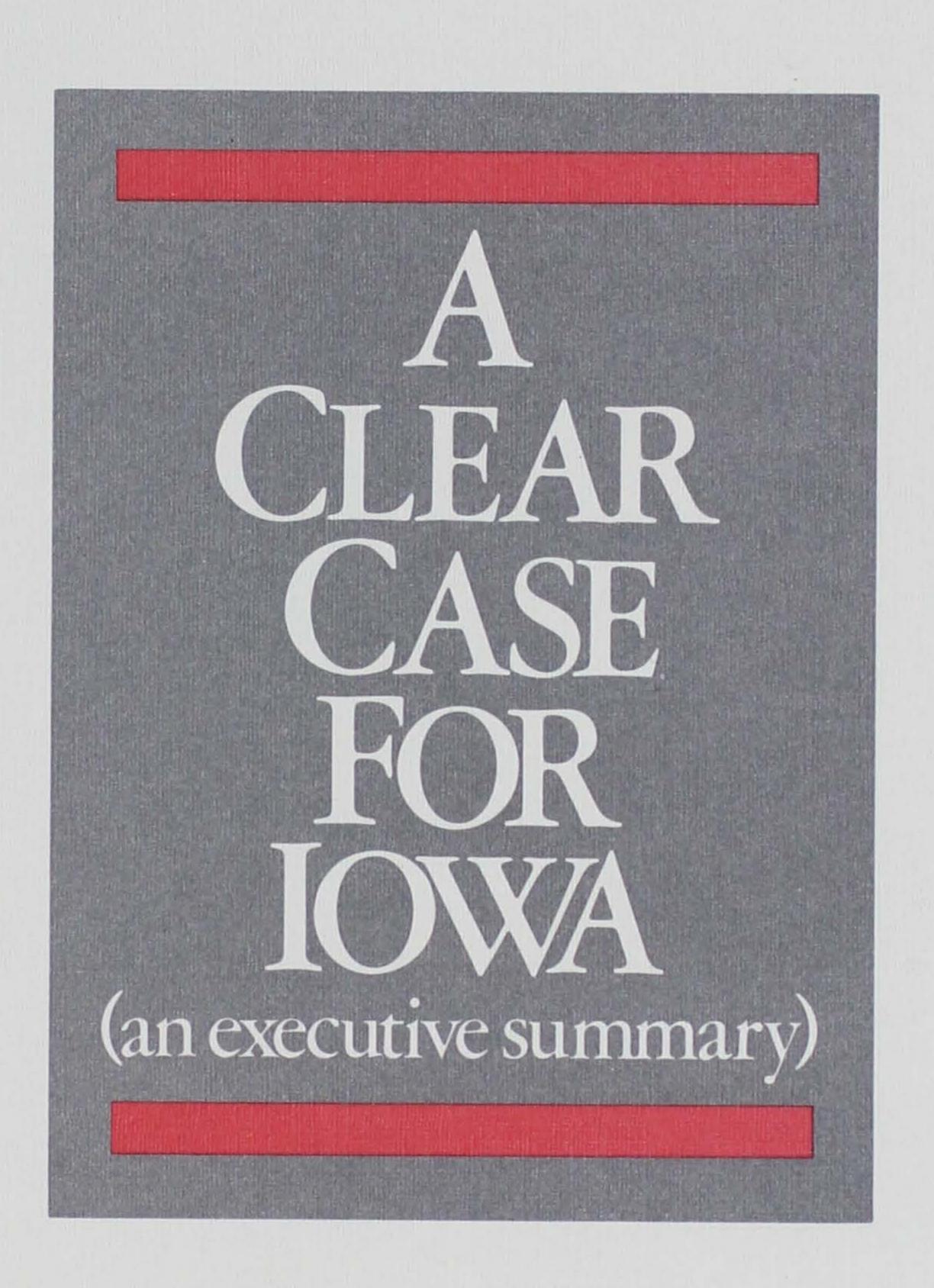
In addition, we will provide you with Quick Reference information on Iowa communities with available sites which meet your specifications. Included is a concise overview of each community's tax structure, municipal services, local manufacturing characteristics, utilities, transportation, population trends, labor and quality of life.

If there is an area of special interest to you, the research staff of the Iowa Department of Economic Development will work to provide you with any additional information you need in making your location decision. Call us today at (515) 281-3000 or write to Iowa Department of Economic Development, 200 East Grand Avenue, Des Moines, Iowa 50309.



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Why you should consider Iowa for the home of your business unit or corporation

Iowa has everything an aggressive, progressive and innovative corporation could ask for:

- · Access to two world class research universities;
- An ability to get to the four corners of the state or the corners of the world;
 - · A quality of life that is one of the best anywhere;
- An educational system that literally sets the standards for the rest of the nation;
- A business environment that nourishes entrepreneurial enterprise with private/public cooperation;
- And, finally, a home for further diversification and expansion as industry changes and competition and opportunity increase.

Iowa can be a comfortable, productive home for you

Iowa has a vigorous, thriving research and development community with two of the nation's major research universities helping academia and industry create the dream or make the vision a reality.

Iowans are in the forefront of developing information-intensive industries: insurance, finance, publishing, data processing, telecommunications, and related service industries. Companies like Microware Systems, developer of advanced microcomputer operating systems that expand the speed and capability of microcomputers, create a climate of innovation in Iowa.

Iowa offers a nourishing environment for the development of highly sophisticated entrepreneurial efforts in biotechnology, microelectronics, superconductivity, rare earth metals, lasers, and other fields.





Exploring new territory comes natural to Iowans. Pioneers include the likes of James Van Allen and Robert N. Noyce who in June 1987, were awarded the Medal of Science, this nation's highest honor for scientific achievement.

Van Allen, discoverer of radiation belts in space that were named for him, and Noyce, who played a leading role in the invention of integrated circuits and the establishment of the microprocessor — technological advances that ushered in the computer age — are but two of Iowa's more visible scientific pioneers.

Nobel Prize winner Norman Borlaug is recognized for the "green revolution" which transformed starving third world countries into self-sufficient agrarian economies.

There are thousands of other Iowans whose efforts are as vital to the health and well-being of this state. They are its pioneers.



Iowa universities and business... reaching for the stars

The best way to describe the relationship between Iowa universities and industry is to define it as a pioneering partnership that achieves distinguished results.

Iowa is one of only four states with *two world class research* universities. As a result, Iowa's state universities have a greater diversity of relationships, volume of affiliations and different areas of study than do the vast majority of single university states.

More than 100 scientists and engineers are developing new and better technology at the University of Iowa Laser Facility. At Iowa State University's Microelectronics Research Center scientists are developing film resonator technology to reduce the size and improve the quality of communications equipment. The center initiated the first research effort in the United States to evaluate the Ionized Cluster Beam, a promising new technique incorporating thin film deposits in an ultrahigh vacuum. And there's more.

It is said that the quality of a university is dependent on the quality of the faculty. If that's truly the case, Iowa universities take a back seat to no one.

\$100 million worth of research projects

Currently there are more than 350 research projects being conducted by Iowa universities in cooperation with industry. Telecommunications, computer technology, laser and superconductivity are but a few of the areas being researched.

The list of companies and institutions using Iowa universities as research resources is impressive: IBM, Honeywell, Rockwell, E.F. Johnson, NASA, U.S. Army, US WEST and others.

Iowa universities...where vision, theory and talent mean innovation

There's more to Iowa universities than ivory towers, great athletics and inspired teaching. There's a spirit of leadership and



invention. It drives the research and it drives the universities. It firmly places Iowa universities at the front, in leadership roles.

Iowa universities have a vision. The vision is a working and productive partnership with business. A vision that proves all things can be accomplished with a healthy amount of hard work and creativity.



Together the flyways and highways make Iowa's transportation system work business wonders

Let's face it. Transportation is a key question many businesses have about Iowa. Certainly, other states can offer bigger airports, more airlines, more direct flights to more places than can Iowa. They also can offer longer commutes, more waiting in airports, far less convenience and far more time away from the office...away from being productive.

One hundred ninety-four flights terminate in Iowa from major metropolitan areas throughout the country.

The fact of the matter is you can get anywhere in the world from Iowa. Without hour-long commutes to the airport. Without hour-long waits at the airport. And while you may have to make connections to make it to Brussels, you can get to the country's major metropolitan areas direct. In addition, Iowa's air travel facilities can keep your people working longer and more productively.

Sold-out flights common in other areas are uncommon in Iowa. If you want to get to Denver on Tuesday morning, you can get there Tuesday morning without compromising your schedule.

Company planes can land 30 minutes away from anywhere in Iowa.

Quality highways and interstates crisscross the state

Whether it's an interstate, state highway or county road, Iowa's ground transportation is a smooth ride. All you need to do is cross the state border to neighboring states to graphically discover Iowa's quality.

Our bridges are safe. Our highways are well planned and well maintained.



Iowa moves its most noted product by rail. Is it any wonder Iowa has such fine quality rail service?

Iowa's best known product is grain. A commodity moved by rail. And moving that product efficiently is vital to Iowa's economy. The rail system was built to be ultimately functional.

One thing Iowa doesn't have are commuter trains taking workers from the suburbs to downtown. The fact of the matter is, they're not needed. Iowa metropolitan areas have convenient mass transit systems. They also offer short commutes by car, car pool or bus. This leaves workers more time to work and more time to spend with their families.





Iowa ... a place to live life to its fullest, pursue your dreams and put first things first

If quality of life means providing an environment where your children can achieve great things, Iowa has it.

If quality of life means freedom to pursue a dream, to follow a vision and an environment that supports your endeavor, Iowa has it.

If quality of life means you can take a short drive to a lake, go to the symphony, enjoy an elegant dinner at a fine eating establishment, or take in the humor of talented stand-up comedians, Iowa has that, too.

If quality of life means you'd rather spend more time doing, than driving, Iowa is the place.

If quality of life means a midnight stroll without the worry of being mugged, you can do that here.

Iowa is a state with great diversity. And while it has no streets as famous as Broadway or Madison Avenue, it has things its citizens believe to be far more precious.

Iowa values its clean air and water, its children, its traditional values, its culture, its atmosphere, its diversity.

Iowans lack the cynicism so prevalent in today's world. We still believe success comes from hard work as well as from brilliant inspiration. We still believe people are limited only by their own ability, desire and drive.

Quality of life is not quantifiable. It's the whole package. To understand Iowa's quality of life and its value, all you have to do is live somewhere else for a while. You'll want to come home to Iowa.



In Iowa, it's not how much goes into the educational system, it's how much comes out

There's a great tendency in the United States to believe the more you spend on something the better that something will be. We disagree, especially when it comes to education.

Ninety-three percent of our schools rank *above* the national average in scholastic achievement. For the last five years, Iowa's high school students' ACT and SAT college entrance exams scores have ranked first or second nationally. Iowa high schools graduate 88% of their students in comparison to 71% nationally. Yet, Iowa's spending is comparable to the national norm.

Why do the results far exceed the investment? While it's not a simple question to answer, there are significant contributing factors: First, is the overall environment of the state. Family values count. Iowa creates an atmosphere of achievement, of setting goals and reaching them. Our values are proudly midwestern. Our teachers are committed to providing quality education. Juvenile delinquency is low. It all adds up.

Iowa is a leader in higher education. Iowa academia brings theory together with innovation. Iowa universities work in partnership with corporate America blazing new trails in laser, rare earth metals, communications, computer and superconductor technologies.

Some consider the possibilites to be science fiction. Iowa universities consider them only a matter of time.



In Iowa, you can take a product all the way from the incubator to the marketplace

Iowa is an incubator. A birthplace for the new, the needed, the unique.

It's a place where new ideas are cultivated right along with the world's richest farmland.

Where innovators have designed and built products to meet their own needs.

In fact, *Iowa is the home of the world's first digital computer*, built in 1939 by Iowa State University Professor John Vincent Atanasoff and graduate student Clifford E. Berry. Student and mentor. Youth and experience. Working side by side, combining in a single device features fundamental to the computer industry of today.

Today, the midnight oil still burns long and late across Iowa: With a Davenport innovator exploring with Audi of West Germany an all-aluminum car body;

With a University of Iowa physicist proposing a radical new theory suggesting the earth's oceans were filled with water by comets;

With Iowa's state universities developing research centers for high-technology exploration into non-destructive evaluation, microelectronics, advanced materials, image analysis, plasma physics, biomedical science, lasers and biotechnology, and more.

Iowa's Product Development Corporation has provided seed capital to some of the nation's newest and most innovative ideas. For example, Ames, Iowa is home to the only microchip manufacturer in the Midwest. Marion, Iowa is home to the most sophisticated emergency response system in the country. There are many more.

Iowa is indeed the perfect environment in which your firm can take an idea all the way from conception to manufacture to distribution to the consumer.



Iowa's business climate opens doors and opportunities

Government will do all it can to make sure you can do business efficiently and profitably.

Iowa has made bringing new jobs to the state extremely attractive with the most innovative Jobs Training Program in the country. One that could save your company millions of dollars. This unique program provides funds for:

- · Screening, skills assessment and testing
- Travel for new employees to training
- On-the-job training reimbursement of up to 50% of the new employees' wages and fringe benefits
- In-plant instruction by company instructors
- Costs for training facilities, equipment, materials and supplies.

Not only does Iowa government help train new employees, but it also provides a New Jobs Tax Credit of up to \$738 for each new job created.

Iowa was the first state in the country to deregulate services proven to be subject to competition

The Iowa Utilities Board became the first state regulatory agency to deregulate local services when it approved a plan developed by Northwestern Bell and the Office of the Consumer Advocate to deregulate Centrex, Centron, Caroline and Hi-Capacity Digital Private Line services in 1985. The Board currently is deciding on the deregulation of long distance services. The point is this: Iowa government is willing to listen and facilitate necessary changes and it does so annually.



Iowa provides significant tax advantages

- Non-operating personal property is exempt from state taxation.
- Commercial personal property is tax exempt.
- Iowa provides a way to accelerate depreciation in cases of abnormal obsolescence.
- Statewide assessment increases due to revaluation and new construction are limited to 8% in any one year for utilities.
- The assessment for equipment used in a manufacturing or assembly operation is limited to 30% of the net acquisition cost of the property.
- Original software is not taxed in the State of Iowa and it is not taxed as personal or real property.
- Inventory is exempt from taxation in Iowa.

All economic indicators are up

Unemployment is at a five year low of 4%. Housing starts, bank deposits, bank loans are at a five year high. Total employment is at an all-time high. Iowa's economy is healthy.

Iowa is prospering today because of action taken by state government to redefine its goals. Iowa's strategic plan calls for the recruitment of high tech companies. Iowa has the plan and the resources to keep moving ahead.

Universities and Business...an innovative partnership

As we've noted, Iowa is one of only four states in the country with two world class research universities. Currently those universities are working in partnership with business on \$100 million worth of research projects. Laser technology, rare earth metals, microelectronics, computer technology and superconductors are only a few of the areas of research in which the University of Iowa



and Iowa State University are involved.

It's safe to say Iowa universities are eager to expand their work to develop tomorrow's technology.

The 35% competitive advantage

Just think of it, if the average worker makes \$1,000 a day for your company, the Iowa worker makes \$1,350 a day. That's a big advantage to any profit oriented corporation.

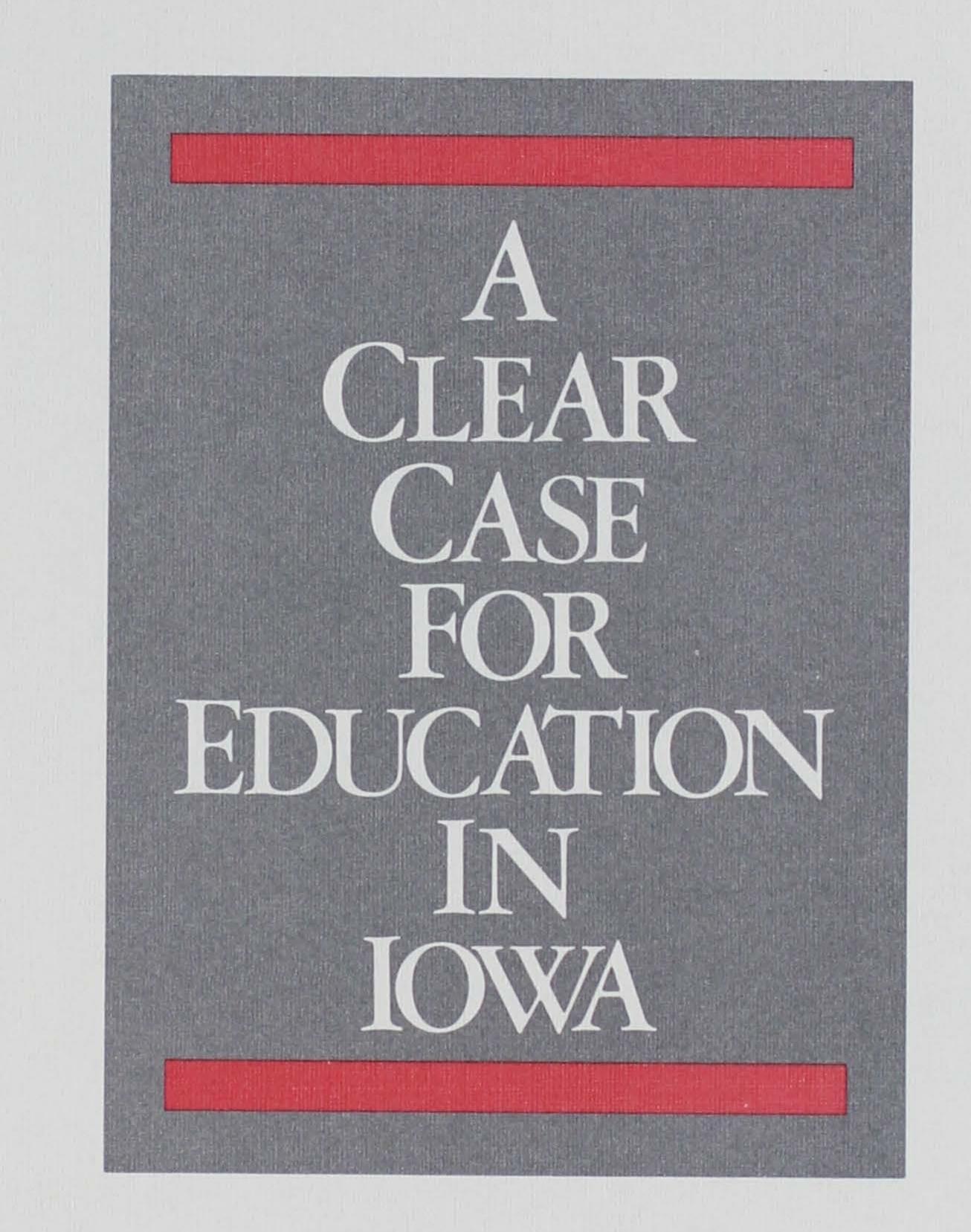
The 35% advantage is like adding 18.7 weeks to the year. That's how much more Iowa workers accomplish for companies located here.

We call that the 35% competitive advantage and it means profit dollars to your firm.

Iowa wants you

Iowa wants you to locate here. We're united in our desire. We have the training program to save you millions. We have the tax climate with which you can live and work. We have skilled workers. We have the higher education facilities accustomed to working with America's industry and eager to work with you. We have the location and transportation facilities that will make conducting your business easy and efficient.

In short we have the type of business climate in which you can prosper. There's a clear case for Iowa. The dream still works here. And it's a dream of a profitable and innovative future and it ought to include you.





WHAT IS THE STATE'S PER CAPITA EXPENDITURE ON K-12 EDUCATION? (5 YEARS?)

In Iowa, the real measure of quality education is results

93% of Iowa's schools rank above national norms in student achievement

The Iowa per capita expenditure on education, K-12, for the five year period from 1979 to 1984 is as shown below:

1979-80	\$465
1980-81	\$467
1981-82	\$479
1982-83	\$503
1983-84	\$522

These figures exceed the national average.

In the spring of 1987, Governor Branstad introduced a professional performance pay plan for teachers. The \$92.5 million plan which not only significantly increased teacher salaries, but also substantially increased the amount spent per pupil - which is even more important when measuring the state's financial

commitment to education.

In fiscal year 1988, Iowa will spend \$3,881 per pupil which is 6% above the amount forecasted for the national average.

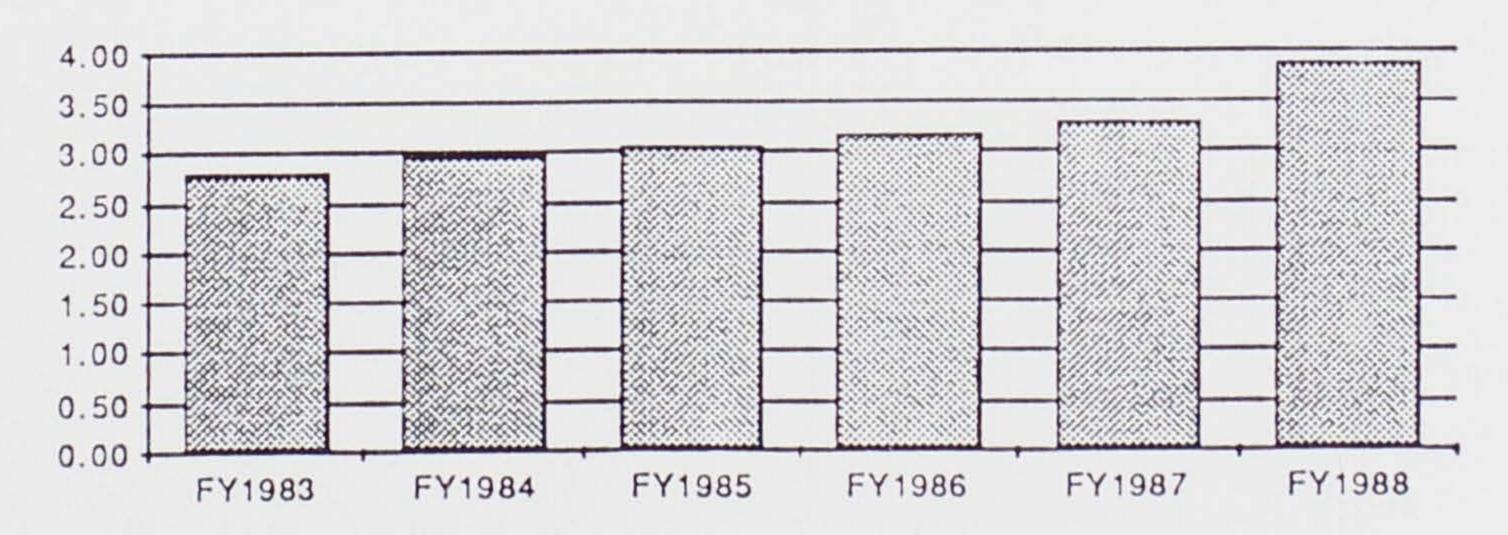
The state is rightfully proud of its reputation of high educational standards and achievements. Overall, nearly 93% of all Iowa schools rank *above* the national median on nationally normed achievement tests.

How does Iowa accomplish this? With the help and support of its families and its communities, educational partnerships with business, and the fiscal responsibility of its school administrations.

Iowa not only sets high standards for itself, but also provides the standards by which other states evaluate their students' achievement. Iowa is the home of the Iowa Test of Basic Skills and the American College Testing (ACT) examination.

Iowa truly is a leader, a leader in setting the standards and a leader in achieving those standards.

Per Pupil Expenditures K-12 (in thousands of dollars)







WHAT IS THE STATE'S PER CAPITA EXPENDITURE ON HIGHER EDUCATION? (5 YEARS)

Iowa sets high standards for higher education

Iowa one of only four states with two world-class research universities

Iowa's per capita expenditure for higher education again is comparable to the national average.

The state's expenditures per capita for higher education for the past five years are as shown:

1981-82	\$117
1982-83	\$131
1983-84	\$128
1984-85	\$135
1985-86	\$132

In 1985, Iowa's per pupil expenditure in higher education was \$3,461. This is significantly higher than the per pupil expenditures in many other states.

More importantly, Iowa is one of only four states in the nation where there are two major universities with world-class research centers.

Iowa's universities are leaders in the liberal arts as well as science and technology, as evidenced by the world famous Writer's Workshop whose alumni include such distinguished authors as Kurt Vonnegut, John Irving, Gail Godwin, Eudora Welty and many others. It is the only program of its kind where writers from around the world come to exchange ideas on writing and culture.



HOW DOES THE STATE RANK NATIONALLY ON PER CAPITA EXPENDITURES?

Given the quality of Iowa's educational system, you'd think it would cost more . . . it doesn't

Iowa spends less yet graduates 23% more students than the national average

Iowa's ranking on per capita expenditures for K-12 are as listed:

1979-80 11th 1980-81 15th 1981-82 23rd 1982-83 20th 1983-84 21st

Iowa's ranking on per capita expenditures for higher education is as follows:

1981-82 16th 1982-83 9th 1983-84 14th 1984-85 14th 1985-86 22nd

Although Iowa has not been spending as much as some other states on a per capita basis, Iowa has proved it can provide the highest caliber education for fewer tax dollars.

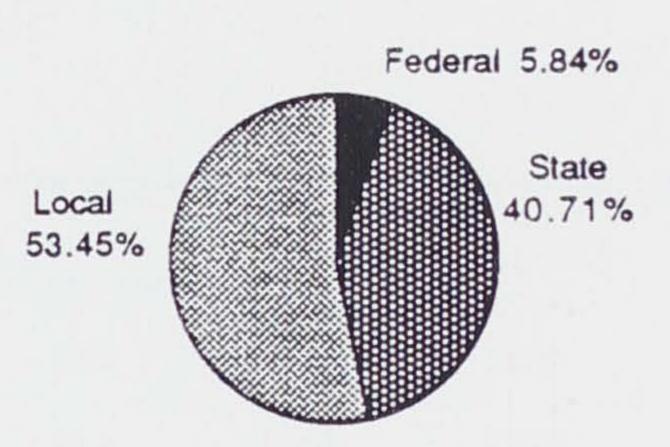
One measure? Graduation rates. Iowa ranks high nationally. In fact, nearly 88% of Iowa's students graduate from high school as compared with the national average of only 71%.



WHATISTHESOURCEOFPUBLICSCHOOLFUNDING AT THE ELEMENTARY AND SECONDARY LEVELS?

The state puts its money where young minds are

lowa Public School Funding Sources



Quality education available to all students thanks to Iowa's equalization of funding

Iowa's funding mix is comparable to the national average. Of the total, local funding accounts for 53.45%, state funding for 40.71%, while federal funding accounts for only 5.84% of the total.

Because Iowa equalizes funding to each school district, quality education is available to all students in Iowa no matter where they live. There are no imbalances caused by disparities in local tax bases as there are in some states. Iowa was a leader in the nation in equalization of funding to education.



WHATISTHESTATE'S AVERAGESATSCORE AND RANKING? (5 YEARS)

Iowa hates to come in second in education, that's why it's usually first

State Average Scores and Rankings on Aptitude Tests

1982	1983	1984	1985	1986
1086	1093	1084	1097	1095
1	1	2	2	2
20.3	20.2	20.2	20.3	20.6
2	*	2(T)	1(T)	1
	1086	1086 1093 1 1 20.3 20.2	1086 1093 1084 1 1 2 20.3 20.2 20.2	1086 1093 1084 1097 1 1 2 2 20.3 20.2 20.2 20.3

^{*} no national ranking was compiled in 1983.

Iowa SAT and ACT scores climb; Iowa students rank 1st/2nd for past five years

During the past five years Iowa's average SAT score has climbed from 1086 to 1095.

More significantly Iowa SAT scores have ranked in either first or second place nationally in each of those years.

In addition to this achievement, the state's ACT ranking also has been first or second nationally during the same period.

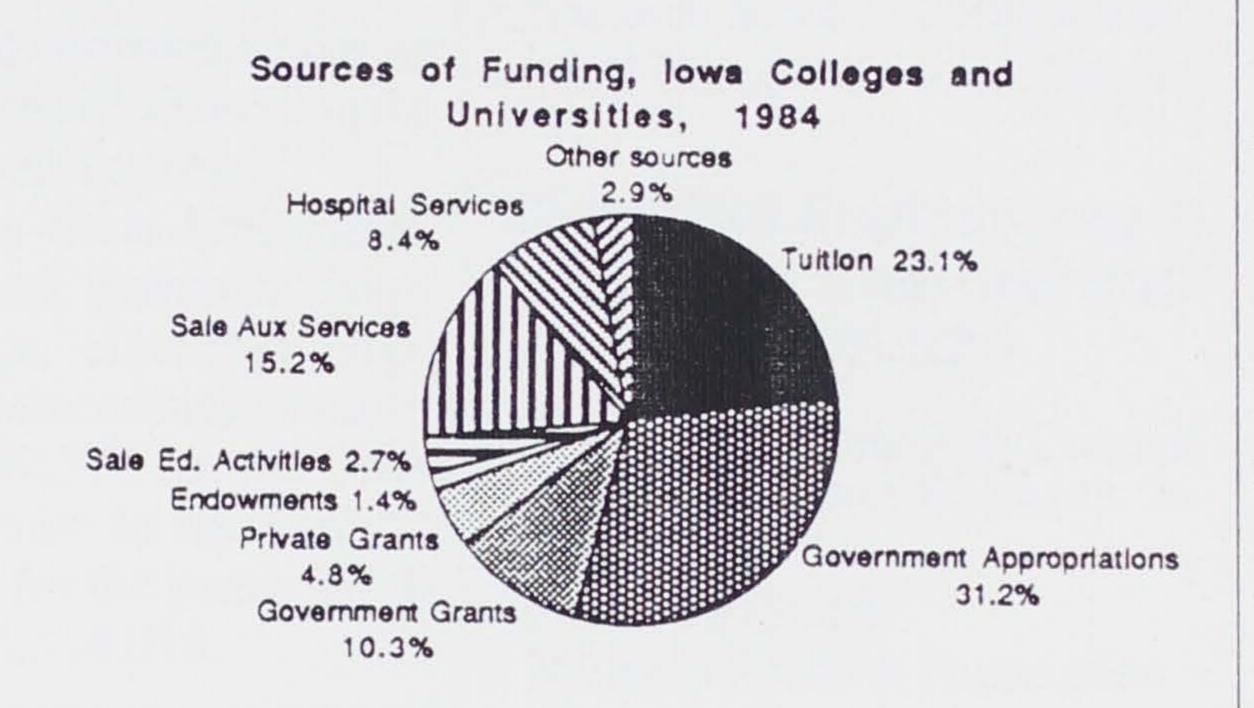
The Iowa average score on the ACT, 20.6, is considerably higher than the U.S. average of 18.8. Proof that Iowa's students consistently perform at the highest levels of achievement

⁽T) denotes a tie for this position.



SOURCEOFFUNDING BREAKDOWN FOR COLLEGES AND UNIVERSITIES WITHIN THE STATE

Iowa offers higher education at lower cost



Non-tuition sources account for 76.9% of Iowa college and university funding

Non-tuition sources of funding for higher education in Iowa are indeed substantial at a whooping 76.9%.

In 1984, tuition accounted for 23.1% of the funding, government appropriations for 31.2%, grants and contracts for 15.1%, endowments for 1.4% and sales of services for 26.3%. Other sources accounted for 2.9% of the funding.

Resident tuition at Iowa's state universities generally is 10% lower than that for comparable institutions in other states. For example, undergraduate tuition at the University of Iowa for Iowa residents and non-residents is the lowest in the Big 10.



OTHER SOURCES OF FUNDING INCLUDING GRANTS, MAJOR RESEARCH GRANTS, ETC.

Blazing new trails, funding new minds

Research grants total more than 15% of Iowa universities' funding

Grants and contracts make up more than 15% of the funding for Iowa higher education.

At Iowa State University, major research grants in computer science, electrical engineering and telecommunications totaled \$5,892,777 for the years 1982-87. Grants to the University of Iowa, for the years, 1984-87 totaled \$3,314,018.

Telecommunications, Materials & Related Disciplines \$3,139,527

- John Deere Component Works
- · U. S. Department of Air Force
- Rockwell International
- National Science Foundation
- Corporation for Public Broadcasting
- Iowa High Technology Council
- U.S. Department of Energy
- U.S. Department of Army
- U.S. Department of Transportation
- Honeywell Corporation
- VTC Incorporated
- Sandia National Laboratories

Computer Science \$374,330

- Burroughs Corp.
- National Science Foundation
- Shell Companies Foundation

Electrical Engineering & Computer Engineering \$2,378,920

- Iowa High Technology Council
- Electrical Power Research Institute
- Power Affiliates
- National Science Foundation
- Honeywell
- Corn Belt Cooperative
- Control Data Corporation
- Sandia National Laboratories
- Rockwell International
- Department of Transportation
- Ontario Hydro
- International Business Machines Corporation
- Various Utilities
- Various Power Affiliate Members

Computer Science \$432,480

- Hewlett Packard Corporation
- National Science Foundation
- Norand Corporation

Electrical & Computer Engineering \$1,585,677

- U.S. PHS National Institute of Health
- National Science Foundation
- U.S. Department of Army
- Rockwell Intl/Collins Avionics
- · U.S. Department of Navy
- Shell Companies Foundation
- Mobile Research & Development Corporation
- Norand Corporation
- US WEST Advanced Technologies
- · Semiconductor Research Corp.
- Whitaker Foundation
- Texas Instruments

Management Sciences \$1,294,861

- Burroughs Wellcome Fund
- U.S. Department of Air Force
- Hewlett Packard Corporation
- U.S. Department of Navy
- US WEST Advanced Technologies
- National Science Foundation
- U.S. Department of Army
- Iowa Department of Corrections
- Iowa Public Relations Board



HOW MANY INSTITUTIONS OFFER POST-GRAD COURSES IN TECHNICAL & SCIENTIFIC DISCIPLINES?

More opportunities to learn more

Five Iowa universities offer technical and scientific postgraduate degree programs

Five colleges and universities throughout Iowa offer post-graduate programs in the technical and scientific (non-medical) disciplines.

Iowa State University Ames

- Agricultural Sciences
- Computer Sciences
- Engineering
- Chemistry
- Biological Sciences
- Mathematics
- Physics

University of Iowa Iowa City

- Audiology
- Computer Sciences
- Engineering
- Biological Sciences
- Mathematics
- Physical Sciences
- Speech Pathology

University of Northern Iowa Cedar Falls

- Industrial Technology
- Biological Sciences
- Mathematics

Drake University Des Moines

Biological Sciences

Marycrest College Davenport

• Computer Sciences



HOW MANY UNDERGRAD/ADVANCED DEGREES AWARDED IN TECHNICAL AND SCIENTIFIC DISCIPLINES?

Iowa universities: where theory meets innovative practice

Undergraduate Degrees Conferred at lowa Colleges and Universities

	Academic Years		72 1 212			Tatala	
Discipline	79-80	80-81	81-82	82-83	83-84	Totals	
						0470	
Agricultural Sciences	628	711	645	258	236	2478	
Communication Tech.				1.1	3	14	
Computer/							
Info. Sciences	160	216	314	387	525	1602	
Engineering	777	1015	933	937	980	4642	
Engineering Tech.				88	87	175	
Biological Sciences	620	558	585	588	566	2917	
Mathematics	169	138	134	177	153	771	
Physical Sciences	255	258	246	373	280	1412	
Totals	2609	2896	2857	2819	2830	14011	

Graduate Degrees Conferred at lowa Colleges and Universities

	Academic Years					
Discipline	79-80	80-81	81-82	82-83	83-84	Totals
Agricultural Sciences	116	151	120	70	91	548
Computer/				Satern		
Info. Sciences	38	24	31	35	44	172
Engineering	243	221	259	216	266	1205
Engineering Tech.				7	6	13
Biological Sciences	109	105	115	101	124	554
Mathematics	65	73	72	56	82	348
Physical Sciences	105	107	111	119	120	562
Totals	676	681	708	604	733	3402

14,000 technical and scientific undergraduate degrees awarded

From 1979 through 1984, 14,011 undergraduate degrees were awarded at Iowa colleges and universities in technical and scientific disciplines.

During this same period, an additional 3,402 advanced degrees in these disciplines were awarded.

It is estimated that 50% of the scientific and technical graduates remain in the state and that a majority of those leaving the state would prefer to live in Iowa but are unable to find appropriate employment.

Iowa offers a pool of scientific and technical graduates who would be readily available for employment.

For specific information about the number of degrees awarded, both undergraduate and advanced, in the various disciplines, refer to the accompanying charts.



DESCRIBE & QUANTIFY PROGRAMS FOR WOMEN, MINORITIES IN TECH & SCIENTIFIC DISCIPLINES

In Iowa, a mind is a mind is a mind

Women and minority participation in Iowa technical/scientific disciplines substantially higher than 10 years ago

The mark of a truly literate state such as Iowa is the guarantee of equal access to education for all.

Iowa's reputation for promoting equal rights in education is longstanding.

In fact, the University of Iowa was the first university west of the Mississippi to admit women on an equal status with men in 1855.

Women comprise 20% of enrollment in engineering; 40% in math and statistics

Today, at the University of Iowa, women comprise 20% of the undergraduate enrollment in the College of Engineering and 39% in the College of Business Administration.

In the College of Liberal Arts, the percentage of women majoring in the sciences is illustrated by 47% in biology, 46% in botany, 28% in chemistry, 27% in general science, 25% in geology, 23% in computer science, 40% in mathematics and statistics, and 18% in physics and astronomy. These percentages are substantially

higher than they were a decade ago.

Programs to attract and retain women and minorities begin in Iowa high schools

Iowa universities and community colleges have implemented programs designed to attract, retain and encourage minority and women students.

These programs begin by serving junior/senior high school students, preparing and encouraging them to major in science and technology. At the college level, academic and career counseling, as well as scholarships, support women and minorities in their educational pursuits.

In 1984, at the University of Iowa, an Undergraduate Scholar Assistantship program was established to provide opportunities for outstanding undergraduate students to work with full-time tenured and tenure-track faculty.

Students in this program work primarily with faculty in the sciences and technical area.

Approximately 200 students have assistantships during the current year, and these are divided nearly equally between male and female students. Ten assistantships are specifically designated for outstanding minority students.

Minority students at the University of Iowa have organized

formal groups for mutual support. These groups include: the Black Students in Engineering and the Minority Business Students Associations.

Visiting Scholars Program designed to attract high-ability minority students

At Iowa State University the Visiting Scholars Program is designed to attract high-ability minority students. Many of these students are likely to major in the sciences or engineering.

The Minority Graduate Program assists in the identification, recruitment, admission, graduation and placement of minority graduate students, focusing primarily on the graduates of the the nation's 104 historically black colleges. Those admitted are provided with an academic advisor, a counselor and a graduate assistantship.

The Women in Science and Engineering program was established to encourage women students to major in science and engineering, and to support faculty and staff members working in these fields.



SPECIAL EDUCATION CLASSES FOR THE HANDICAPPED AND GIFTED.

Iowa programs for the handicapped and talented and gifted unsurpassed in the U.S.

Iowa educational services to handi-capped unsurpassed

Iowa provides an educational service to handicapped students that is unequaled in the nation.

The underlying philosophy behind Iowa's success is that special education be delivered in the least restrictive environment.

In 1975, Iowa brought about this special education program with progressive legislation that provided funding assuring education for every handicapped student. The mandate also required Iowa schools to serve all handicapped children from age 0 to 21, and created a structure responsible to carry out that mandate. Iowa legislation provides for an even broader scope of services than the federal requirement.

Specialists employed regionally to serve multiple school districts

The specialists who serve these children are employed on a regional basis rather than by individual school districts. Support services also are provided for special classes and instructional services are provided by local school districts.

Close inter-agency cooperation between the University of Iowa Hospitals and Iowa's Department of Human Services and Health enables families to successfully deal with student health problems and family adjustment difficulties that relate to handicapped children.

Iowa TAG programs among the best funded in the U.S.

Programs for the gifted and talented are among the highest-funded programs in the nation on a per-pupil cost basis.

These programs are determined at the local level in order to best serve the students in each particular district. This has re-

sulted in the development of a variety of programs to meet individual student needs.

Des Moines invested nearly \$1 million on TAG last year

In 1986, Des Moines Schools served 819 talented and gifted students with an operative budget of nearly one million dollars.

In Iowa City, the talented and gifted program currently assists 25% of the elementary students.

The Ames school district works with Iowa State University to identify students for early enrollment in university-level course work.

In Cedar Rapids, an estimated \$530 per student was invested in 1986 for programs for the talented and gifted.



HOW MANY SCIENTIFIC AND TECHNICAL GRADUATES STAY IN THE STATE?

Iowa is the place where more grads want to stay

Half of Iowa's scientific grads remain in state, half of the other half want to

About 50% of Iowa's scientific and technical students remain in the state to take jobs following graduation.

A recent study found that a majority of college graduates in the scientific areas prefer to find jobs in Iowa because they enjoy the state's quality of life. However, at this point, there are more graduates than jobs in the scientific and technical fields, so young people are forced to take advantage of jobs in other states.

This means there is a generous pool of scientific and technical graduates in Iowa for companies to choose from.

Nearly 81% of the vocational technical graduates from Iowa institutions have stayed in Iowa, according to surveys over the past five years.



WHAT TECHNICAL AND VOCATIONAL PROGRAMS ARE OFFERED IN THE STATE?

Iowans enjoy convenient access to continuing education

74 tech, vocational programs available through 280 Iowa schools, colleges

There are 74 specific vocational and technical programs offered in more than 280 secondary schools and area colleges in Iowa.

Not surprisingly, agribusiness, agriculture and natural resource programs head the list. These programs are available in 271 school districts and 15 area colleges.

Marketing and distribution programs are found in 48 school districts and colleges; mechanics and repairs in 43 school districts and 15 colleges; precision production programs in 16 districts, 15 area colleges; and business and office specialties in 72 school districts and 15 area colleges.

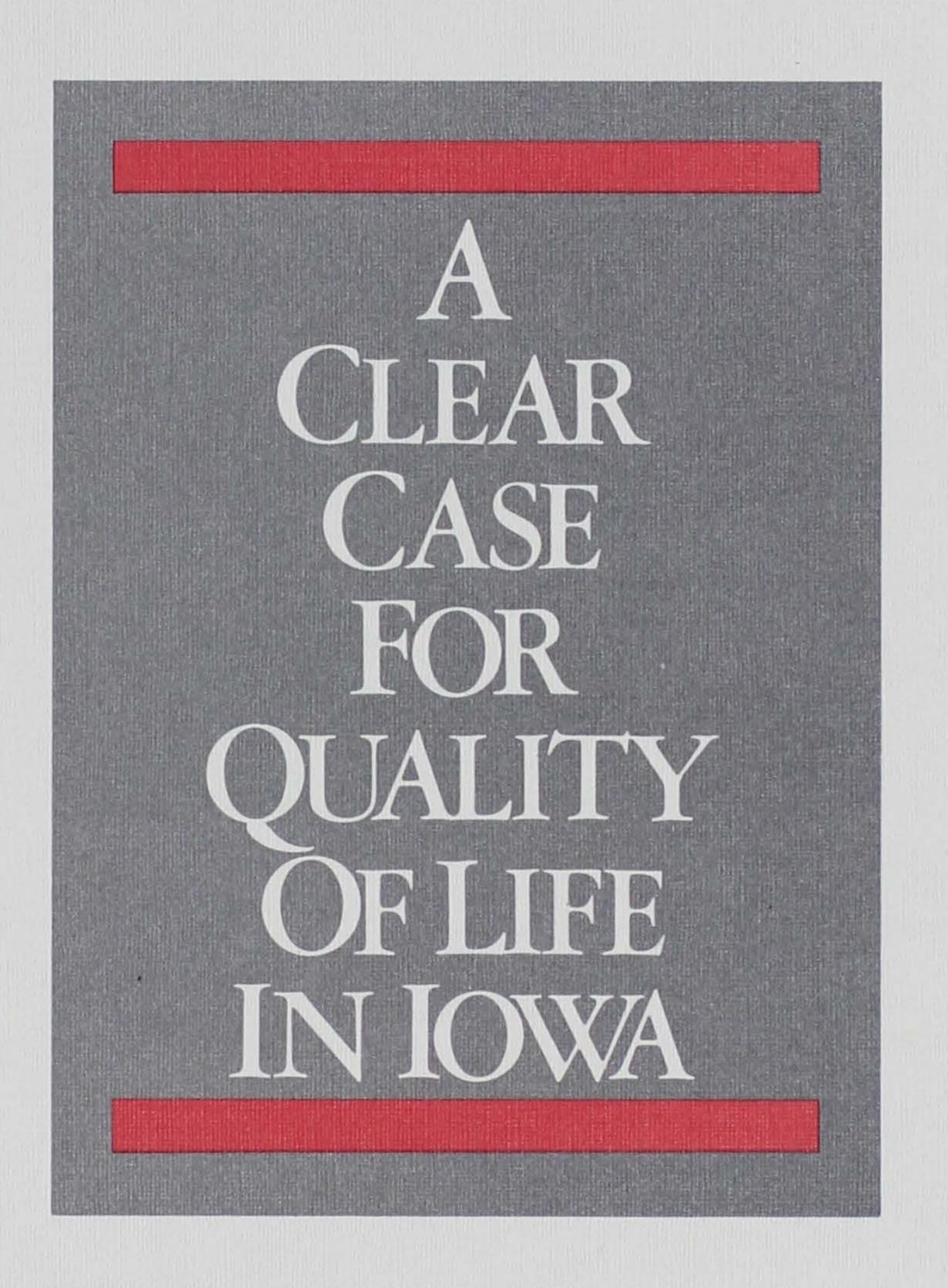
The 74 specific technical and vocational areas are widely represented in these programs. A sampling includes systems efficient analysis, sound recording technology, computer programming, data processing, drafting and design, laser electro-optics technology, robotics, chemical manufacturing technology, quality control, communication electronics, and urban planning.

Iowa introducing first telemarketing curriculum

The first community college telemarketing curriculum in the nation will be introduced in Iowa this fall. Developed by a consortium of educators and representatives from the private sector, the program is expected to serve as a model for the midwest region conference of community colleges.

Technical and Vocational Programs Offered in Iowa Schools

Occupational Area	Available in School Districts	Area Colleges
Agribus./Agric./Natural Resources	271	15
Business and Management		3
Business and Office	72	15
Marketing and Distribution	35	13
Communication Technologies	5	1
Engineering-related Technologies		14
Allied Health	29	15
Cons. and Homemaking	270	15
Industrial Arts	1	
Protective Services		4
Construction Trades	25	13
Mechanics and Repairs	43	15
Precision Production	16	15
Transportation		7





WHAT FACTORS WEIGH MOST HEAVILY IN FAVOR OF LOCATING IN THE STATE?

All things considered, Iowa is the right choice

Iowa makes recruiting employees easy
— with a robust
business climate,
outstanding quality
of life, national leadership in education,
unmatched technical
access, and easy
access to the world

Iowa offers educational excellence, an unsurpassed quality of life, an invigorating business climate, outstanding technical access via two major research universities, and easy access to national transportation.

Iowa has always excelled in the quality of education it has provided its citizens. Iowa has the highest literacy rate in the nation. Iowa students consistently rank highest in the nation on ACT and SAT scores — placing either first or second nationally for the past five years! Iowa universities and colleges offer unique centers for study and research. These include the Ames Laboratory, an energy and mineral resources research institute which has provided research in rare earth metals and super conductivity. The University of Iowa Laser facility, Microelectronics Research Center, and the Non-Destructive Evaluation Center also place Iowa on the leading edge of research. Our commitment to education is the foundation of life in Iowa.

Iowa has an unsurpassed quality of life. Iowa has moderate living costs, a relaxed suburban environment, an extremely low crime rate, good air and water, affordable housing, excellent recreational facilities and an abundance of cultural opportunities all within easy access. Iowa offers clean, uncongested cities and towns within a short distance from the state's two major research universities. Iowa taxes are lower than most other states, but more importantly, Iowa taxes buy more than taxes in most other states. The reason? Iowa government is responsive and efficient and Iowa priorities favor quality education and quality of life.

Iowa has easy access to national transportation. The state is served by six major airlines and five regional airlines. The major airports are busy, yet uncrowded, and are within a few minutes' drive of residential and business centers. The airports afford ready access to other cities with a number of non-stop and direct flights to Denver and Chicago. Iowa is bisected by Interstate 80, the nation's foremost transcontinental highway link. Ready north-south access to Minneapolis, Kansas City, and other metropolitan areas is provided by Interstates 35, 29 and 380.

Iowa is truly a wonderful place to live and do business. There is a camaraderie among the people here that is richly productive for business and deeply satisfying to its citizens.



COST OF LIVING, TAXES, COST OF HOUSING, QUALITY OF LIFE, CRIME RATE, AIR & WATER QUALITY?

All things considered, Iowa is a great place to live...for less

People moving into Iowa report they can "live better for less"

Although no state-level costof-living measure is available, when out-of-staters move to Iowa they generally respond that they can live better for less in Iowa (including metropolitan areas) than they can live elsewhere.

Fair and moderate taxes support a high level of government

Iowa is about "in the middle" when analyzing overall taxes in comparison with other states. When analyzing both state and local taxes, Iowa ranks 31st on a

per capita basis.

Considering the quality of life, the citizens of Iowa are getting a "bargain."



COST OF LIVING, TAXES, COST OF HOUSING, QUALITY OF LIFE, CRIME RATE, AIR & WATER QUALITY?

It costs less to live better in Iowa

According to the Cost-of-Living Index compiled by the American Chamber of Commerce Researchers Association, many Iowa cities are below the U.S. average in the Total Cost Index for the fourth quarter of 1986. Cost-of-Living Index
American Chamber of Commerce
Researchers Association (ACCRA)

ACCHA		
Total		
Cost Index		
1986:Q4		
100.0		
105.1		
98.8		
93.0		
100.1		
105.4		
100.3		

Excellent availability and wide range of housing styles in Iowa

The availability of housing in Iowa is excellent. Apartment complexes, condominium and townhouse developers have aggressively pursued the growing suburban population.

Bucking the national trend, the number of housing starts remains high, providing a ready reserve of new and existing private residences.

Iowa's housing styles range

from Victorian mansions to comfortable bungalows.

Iowa residents enjoy larger and higher quality homes than people in comparable markets because of lower market values.

Rental vacancy rates of 5% or greater and sale vacancy rates of 1% or greater are generally accepted indicators of housing availability. In 1980, a statewide survey indicated the rental vacancy rate across the state was 7.3%, 7.4% in the metropolitan areas. In that same survey, the statewide average sale vacancy rate was 1.6%.



COST OF LIVING, TAXES, COST OF HOUSING, QUALITY OF LIFE, CRIME RATE, AIR & WATER QUALITY.

a new house in Iowa: only \$73,105

Since the median home values are determined from census data, the 1980 values of \$48,000 in Des Moines and \$46,500 in Cedar Rapids are the most current figures for median prices. However, according to Better Homes & Gardens, the price of a new 1,600 square foot home in a desirable neighborhood varies

The average price for from \$75,000 in Davenport, to \$80,000 in Des Moines, to \$129,500 in Seattle, to \$200,000 in Minneapolis. The difference in the costs of resale homes of comparable size is also dramatic, ranging from \$65,000 in Des Moines to \$115,000 in Denver.

> As is the case with most other costs in Iowa, you get more for less.

Median Price for a House

	Median Value	Monthly	Average
	Exist. Stock	Owner	Value New
	1980	Costs*	Construction
Community	Census	1980	May, 1987
U.S.	\$47,200	365	\$76,829
lowa	\$40,600	348	\$73,105

^{*}Includes mortgage payment, taxes, insurance and utilities.



COSTOFLIVING, TAXES, COSTOFHOUSING, QUALITY OF LIFE, CRIME RATE, AIR & WATER QUALITY.

Iowa violent crime 64% lower than national average

The violent crime rate in Iowa is 64% lower than the national average and is lower than in every other state except for North and South Dakota.

Reported Crime Ra	te per 100,000 Po	pulation, Vio	lent		
	1980				
Community	Pop.	1982	1983	1984	1985
U.S. Avg.		663	627	539	658
lowa per 100,000 (sel	ected cities)	289	286	299	335
Ames	45,775	244	247	260	293
Cedar Rapids	110,243	185	187	191	177
Council Bluffs	56,449	432	384	318	422
Davenport	103,264	503	580	572	699
Des Moines	191,003	345	358	409	424
Dubuque	62,321	107	79	99	109
lowa City	50,508	339	285	292	297
Sioux City	82,003	215	240	329	367
Waterloo	75,985	233	217	222	232

Violent Crime Rate Per 100,000 Population 1984-85		Reported Crime Rates Per 100,000 Population 1985		
U.S.	539.2	U.S.	5,207	
Iowa	198.7	Iowa	3,943	



COSTOFLIVING, TAXES, COSTOFHOUSING, QUALITY OF LIFE, CRIME RATE, AIR & WATER QUALITY.

Clean air, water abundant in Iowa

Just as our nation's natural resources have made the U.S. a rich nation, Iowa's natural resources have made Iowa a rich state.

The state is committed to preserving these resources as demonstrated by the massive groundwater protection bill that took effect in July. This bill allocates \$64.5 million during the next five years.

General quality of water in

Iowa cities is good. It is estimated that 91% of Iowa's 18,000 miles of streams are partially or fully supporting their designated uses. Iowa's cities and industries are complying with pollution standards.

The general air quality in Iowa cities also is good. All but three very small geographic areas of the state are in full compliance with federal health-related air quality standards. These remaining areas are expected to be in compliance in the near future.

Iowans share without expecting any acknowledgment of their generosity

United Way contributions are representative of Iowa's giving. Charitable giving to the United Way averaged \$14.23 per capita in Iowa during 1982-1986.

Iowa is known for its generosity. The state opened its arms

to thousands of Southeast Asian refugees during the past several years. Privately, the citizens of Iowa helped these newcomers to help themselves, without expecting any acknowledgement of their help.

Iowans helped two drought stricken southern states in 1986 with a massive hay lift to those areas.

These examples are symbolic of Iowa's approach to giving.

6



In Iowa, art is experienced, not just appreciated

More citizens "experience" the arts in Iowa

The citizens of Iowa support the arts in Iowa. Cultural activities abound and because they are close and easy to get to, a larger percentage of Iowans experience the arts than in most states. Iowa has many resident symphonies as well as theatre and dance companies who perform not only in their home cities, but who travel around the state and region.

Because of its superb facilities, such as the Civic Center of Des Moines, Hancher Auditorium in Iowa City, C.Y. Stephens Auditorium in Ames, and the Adler Theatre in Davenport, many touring companies and artists perform in Iowa. And at less expensive prices.

World famous symphony orchestras "play" Iowa every year

Each year for the past 15 years, the Ames International Orchestra Association has brought major orchestras, such as the Chicago Symphony and the New York Philharmonic to Ames.

The Des Moines Metro Opera has performed at Blank Performing Arts Center (with a world premiere of an opera by nationally acclaimed composer Lee Hoiby performed in 1986), and in communities throughout the state.

Two Joffrey world openings bow in Iowa

Since 1974, The Joffrey Ballet has performed at Hancher Auditorium in Iowa City 23 times and presented two world premieres there in 1986.

World renowned artists including Mikhail Baryshnikov, Rudolf Nureyev, Itzhak Perlman, Wynton Marsalis, and Iowa native Simon Estes regularly perform for Iowa audiences.

The Des Moines Metro Iowa museums artful inside and out

Iowa's museums are equally impressive and varied.

The Cedar Rapids Museum of Art has the world's largest collection of Grant Wood paintings. The University of Iowa Museum of Art contains a permanent collection of more than 5,000 selections including an outstanding collection of African art. The Putnam Museum in Davenport, the oldest regional museum west of the Mississippi, is noted for its zoological and Egyptian collections as well as its local history exhibit.

The Des Moines Art Center is known for its fine collection of 20th century works of art from America and Europe and its distinctive structure designed by noted architects Eliel Saarinen, I.M. Pei and Richard Meier. The Brunnier Gallery and Museum at Iowa State University has one of the finest collections of decorative arts in the midwest with pieces dating from ancient cultures to the 20th century.

Support for the Arts 1987 (000's of dollars)

	Cedar Rapids Totals	Des Moines Totals
Admissions		
Admissions	480	783
Other Revenue	419	829
Corporate Support	1105	586
Foundation Support	11	401
Private Support	209	1506
Fed. Gov't. Support	25	50
State Gov't. Support	16	68
Local Gov't Support	109	10
	2374	4233



WHAT IS THE PER CAPITA GIVING; WHAT IS NATIONAL RANKING FOR SUPPORT OF THE ARTS?

Iowa and Iowans give for art's sake

Private support of the arts in Iowa

In Iowa, state support of 25.4¢ per capita is supplemented perform. The arts community is by extensive private and local vibrant and is considered both a support. This results in a large private and public resource.

number of resident companies in dance, theatre and music and the excellent facilities in which they

Iowa funding for arts doubles in past year

Iowa Arts Council has approxi- National Assembly of State Arts mately doubled from 1986 to Agencies. This figure is based 1987. As a result, Iowa's ranking, which had been 47th in Iowa's private support is impres-1986, will be significantly

The state funding for the higher in the 1987 report by the solely on state appropriations. sive.



Lots to do the year 'round

Iowa a recreational wonderland

It is easy for Iowans to experience a diverse array of recreational activities. Opportunities and facilities are many and varied, from cross country skiing and snowmobiling in 111 state parks across Iowa to sailing on Iowa's many lakes.

Iowa's extensive road and highway network make areas throughout the state readily accessible yet facilities are seldom overcrowded.

Thousands of Iowans enjoy crosscountry biking

Bike trails have been developed in the scenic river valleys throughout Iowa and many of them are within a few miles of metropolitan areas. Thousands of people throughout the country participate each year in a unique Iowa activity, RAGBRAI (the Des Moines Register's Annual Great Bike Ride Across Iowa). Starting with their back wheel in the Missouri River on Sunday, cyclists journey across the countryside enjoying Iowa's friendly hospitality for a week. They end the ride by dipping the front wheel of their bicycles into the Mississippi River on Saturday.

Iowa is a hunting and fishing paradise. Deer, turkey, waterfowl and particularly pheasant

are prime hunting in Iowa. Annually some 69 million trout, pike, perch, bass, walleye, and other fish are pulled from Iowa's well-stocked lakes, streams, rivers and ponds. U.S. Fish and Wildlife Service refuge and public use areas preserve and interpret the wildlife resources of resident and migratory wildlife on the east and west borders of Iowa.

Iowa's 111 state parks provide picknicking, nature trails, camping, cross-country skiing, sledding, ice skating and snow-mobiling.

Effigy Mounds National Monument, situated on the high bluffs of the Mississippi, contains outstanding Indian burial mound groups dating from 1000 B.C. to 1500 A.D.

Iowa is bordered by two major rivers — the Mississippi and the Missouri. Day-long cruises are available May through October. Many river communities plan their festivities around water activities such as Burlington Steamboat Days, Clinton Riverboat Days and Sioux City Rivercade.

Tulips to polka

Ethnic diversity is celebrated in many Iowa communities. Festivals highlight Czech traditions in Cedar Rapids, Dutch in Pella and Orange City, Danish in Elk Horn and Kimballton, Nor-

wegian in Decorah, Swedish in Stanton and Amish in Kalona.

The Amana Colonies provide German hospitality featuring family-style dining. Tours of the seven villages highlight custommade furniture, distinctive woolens, wineries, meat smoking plants, bakeries, arts and crafts.

Iowa's big on sports

Iowa's spectators and participants find Iowa bursting with sports. Avid fans have Big 10 (Iowa), Big 8 (Iowa State) and Missouri Valley (Drake) athletic conferences represented here. Few states can boast of three major college athletic conferences. And college track and field stars from across the nation come to Des Moines for the prestigious Drake Relays in April. Iowa has AAA professional baseball with the Iowa Cubs and a nationally recognized golf tournament, the Amana V.I.P. Open. There are 350 golf courses in Iowa, and ample tennis facilities.

There are special activities all summer long at Living History Farms, a unique museum where people are actually working the farms and visitors can take part in the activities. In 1979, when Pope John Paul II visited the U.S., he came to Living History Farms to deliver a sermon on the bounty of Lowa

— the bounty of Iowa.



Wild rides, country times and a thrill a minute

And who could forget the Iowa State Fair? It's the biggest and best of them all — a great American classic. Or America's largest continuous rodeo in Sidney, the National Hot Air Balloon Championship in Indianola, or the Bix Beiderbecke Memorial Jazz Festival in Davenport, or the sprint car races in Knoxville.

Adventureland Park draws people from hundreds of miles around with some of the most exciting amusement park rides you'll find anywhere.

Kangaroos to rabbits

Iowa's wildlife community isn't limited to the wild. The all new Blank Park Zoo offers a variety of animals that belies the name. People of all ages go to the zoo for enjoyable days of watching, touching and listening to the animals.

Yes, we have it all in Iowa. And it's close and easy to get to. Recreation is a vital component of the quality of life for Iowans.



WHAT IS THE STATE'S NATIONAL RANKING FOR SALES AND INCOME TAXES?

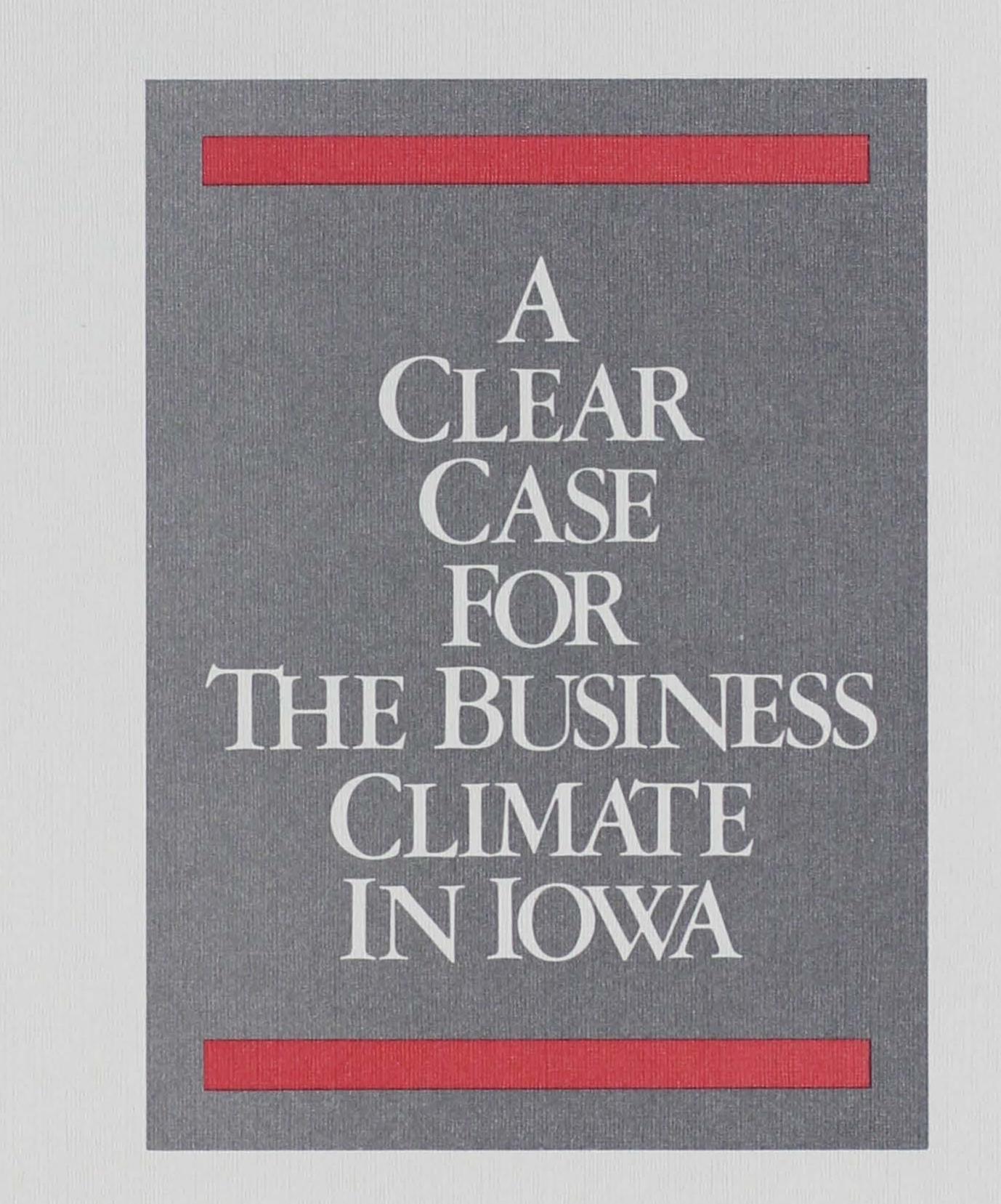
Iowa's tax structure strives for a balance of cost vs. quality

Iowans pay less in local and state taxes than the average U.S. citizen

Iowa tax receipts per capita are 9% below the national average and on the basis of all taxes combined, Iowa ranks 27th. Iowans pay less in local and state taxes than the average U.S. resident.

Iowa's sales tax rate is 4% on retail items excluding food, medication, and some services. Iowa ranks 28th in per capita sales tax receipts. Iowa's individual income tax, which pays for its superlative educational system, is ranked 14th nationally. It has a rate structure from a low of 0.5% to a top bracket of 13% on net incomes exceeding \$76,725--after deduction of federal taxes and 60% of capital gain income. Iowa's effective top rate would be less than 8% after allowable deductions which are unavailable in other states.

In order to make the state more competitive, Governor Branstad is making a major effort to reduce the top corporate income tax rate.





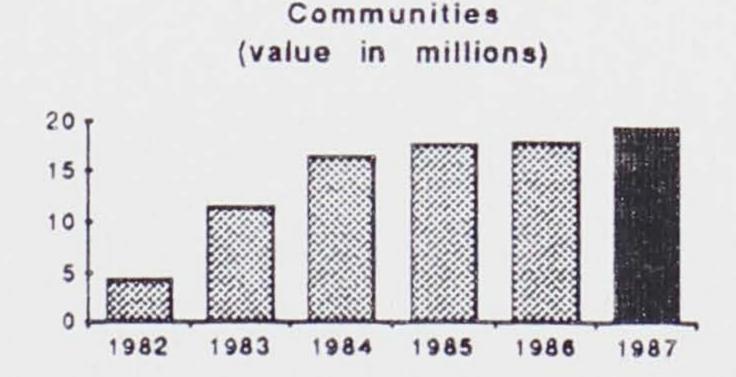
WHAT IS THE ECONOMIC CLIMATE IN IOWA?

Iowa's economic skies sunny









Housing Permits in Major

Iowa's economic climate heating up

Since late 1986, Iowa's economy has been on the upswing. This year's most dramatic gains are in employment and higher commodities prices for farmers.

For the first time in seven years, the number of working Iowans topped 1.4 million this May. The month's employment was up 22,300 from April and 45,000 higher than during May 1986. At the same time unemployment was 4%, down from 6.6% a year ago.

Tax receipts received in the first quarter of 1987, indicate an increase of \$21 million in farm profits, up 47% over the past year.

Iowa producing more with fewer workers

Currently, Iowa's manufacturing employment is at 95% of its 1979 peak. That means the state's economy is producing more real output with fewer workers. The number of hours worked per week in manufacturing is up 1%.

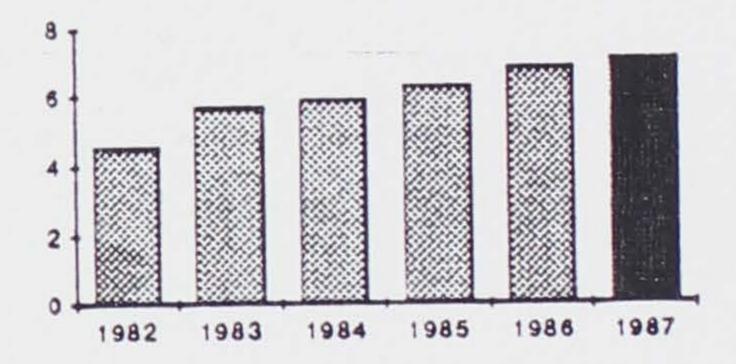
Gains in both output and employment have taken place in the high tech industries, most of which are in the durable goods manufacturing sectors.

Personal income grows faster than national rate

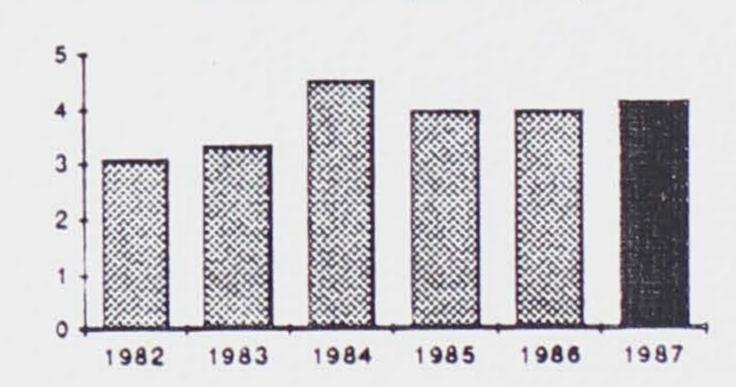
In 1986, Iowa's per capita personal income grew at a rate of 4.9% compared to a national growth rate of 4.3%. Consumer spending has been running 6% above levels measured July 1, 1986.

Housing permits issued in May were up 1.5% from a year ago.





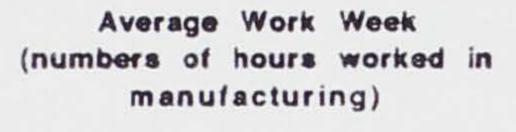
Bank Loans (in billions)

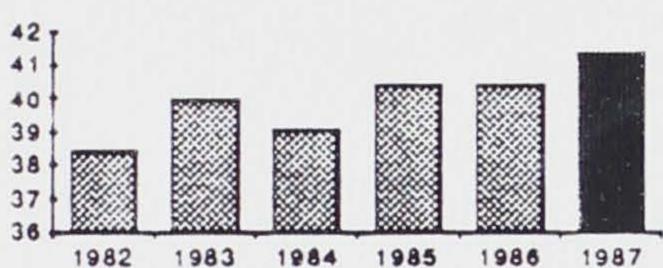




HOW IS IOWA'S LABOR FORCE DISPERSED?

Iowa's work force delivers more hours per work day





Iowa labor force expands by 28%; is 35% more productive than nation

Between 1970 and 1980, the Iowa labor force expanded by 28.5% (321,600), while the number of residents climbed 3.2% (99,887).

The reason? During that decade nearly 219,000 non-agricultural jobs were created and the labor force grew to meet new job demands. Population growth by itself was not sufficient to fulfill the need. The entry of large numbers of women and young persons helped provide Iowa employers with their most important source of vitally needed additional workers.

Service industries characterize Iowa non-agricultural sector

Eighty-two percent of Iowa's workforce is in the non-agricultural sector. Of this number, 24% are in finance and services, 22% in trade, and 16% in manufacturing.

Productivity hallmark of Iowa work force

The Iowa work force has expanded considerably, but perhaps more importantly, Iowa workers have proved to be significantly more productive than workers elsewhere in the U.S. In fact, according to U.S. census Bureau figures, Iowa workers are 35% more productive than workers in any other state in the country.



HOWMANYNEWJOBSHAVEBEENCREATED?

The state, entrepreneurs, and business leaders join forces for 40,000 job net gain

40,000 new jobs added in Iowa

Iowa experienced a net gain of about 40,000 jobs in the period from 1982 through 1986.

Of that number, employment gains in services totalled 27,100. Nearly 10,000 were added in business services, particularly in computer software companies and consulting firms.

Medical services, the insurance industry and real estate accounted for other gains, and retailing has added 11,200 new employees since 1982.

Entrepreneurial spirit builds new business throughout the state

A recent study reports that nearly 20,000 businesses have been created in Iowa between 1980 and 1986 and all were continuing to operate in late 1986.

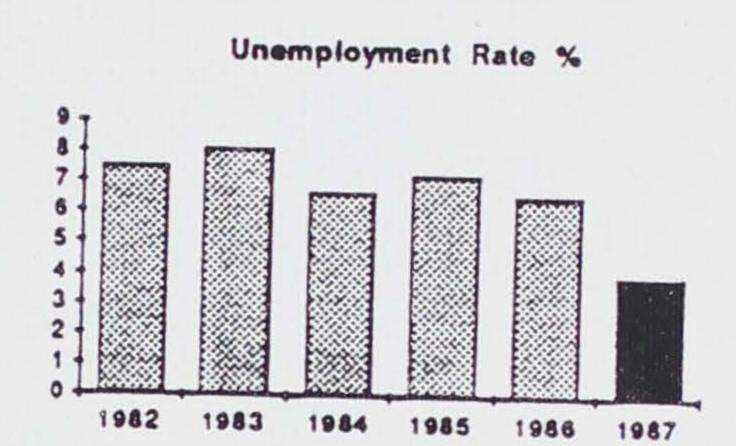
These new enterprises have generated more than 108,000 jobs. Most are in trade or service areas and some 40% of the owners are women.

Recognizing this vital component of the economy, Iowa has committed \$500,000 in state funds to faculty positions in entrepreneurship at both Iowa State University and the University of Northern Iowa.



WHAT IS THE UNEMPLOYMENT RATE? (5 YEARS)

Unemployment falls to near all-time low of 4%



Unemployment dips to near-record low

For the first time in seven years, the number of working Iowans topped 1.4 million in May 1987.

Employment was up 23,000 from the previous month, and up 45,000 from the previous May. And growth is in areas unrelated to the farm sector.

Unemployment in Iowa hit a low of just 4.0% for the months of January through May.

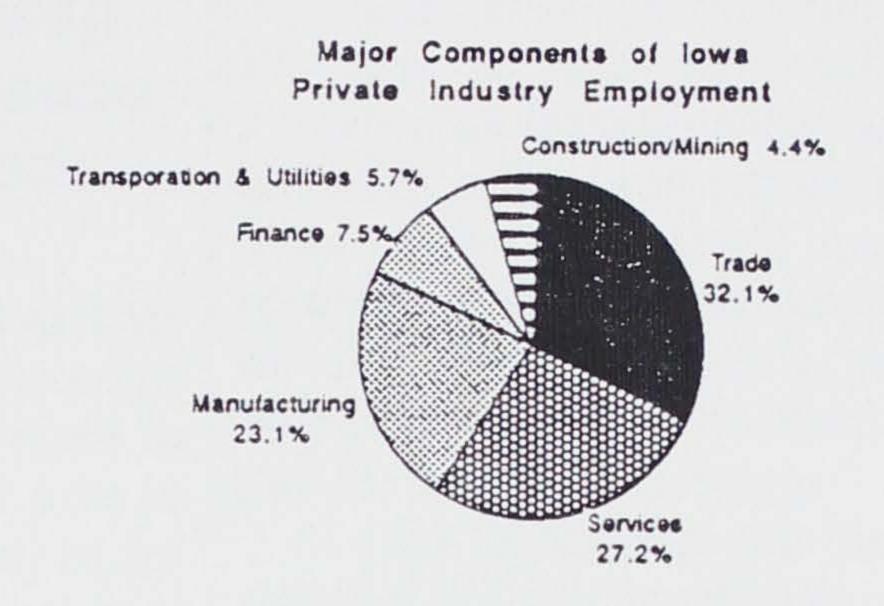
Before that time unemployment in the state had been running at 7% or greater since 1982.

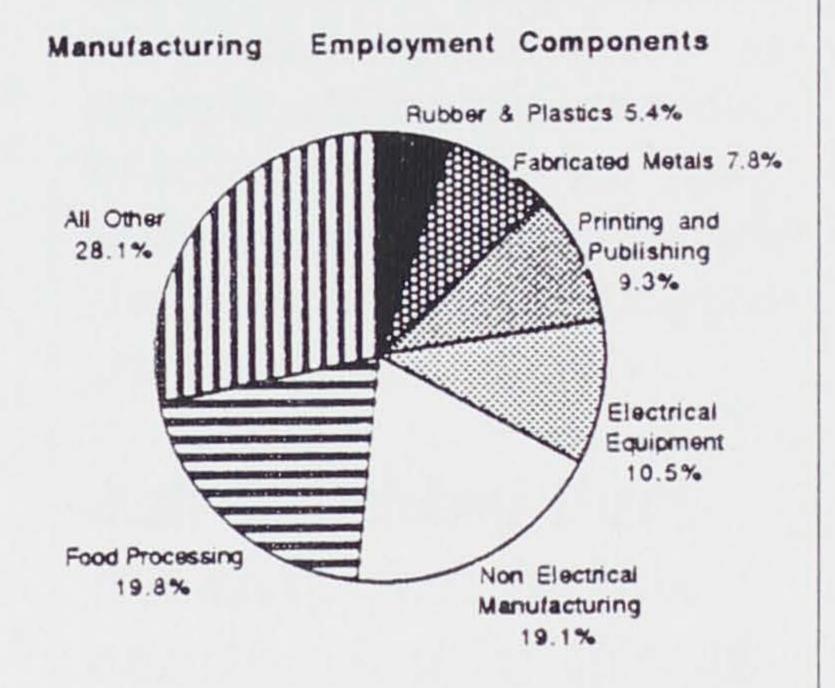
Credit for this substantial drop in unemployment is given to the significant improvement in Iowa's economic climate during 1986 and the early months of 1987.



WHAT INDUSTRIES ARE PREVALENT WITHIN THE STATE?

Iowa offers economic diversity





Service businesses dominate Iowa's non-agricultural sector

Nearly 60% of Iowa's jobs in the private non-agricultural sector are found in trade and services.

These include finance, real estate, insurance, transportation and public utilities. In fact it may be surprising to outsiders to learn that, as noted by economist Claire Asklund in a New York Times interview, "The Des Moines metropolitan area has the highest concentration of employees working in finance, insurance and real estate of any metropolitan area in the country except New York."

More than 18% of private sector jobs are in manufacturing. Included in this number are food production (19%), printing and publishing (9%), electrical equipment (10%) and machinery (19%).

Iowa has made a concerted effort to diversify its industry by encouraging entrepreneurs, promoting new technology and establishing new national and international markets for Iowa companies.



PLEASE DESCRIBE THE GENERAL AVAILABILITY OF WORKER TRAINING PROGRAMS

You hire them - we'll help train them

Iowa Jobs Training Program could save your firm millions of dollars

The Jobs Training Program is unique to Iowa and designed to provide job training services to companies that add new jobs in the state. Companies may be reimbursed up to 50% of new employees' wages and fringe benefits for up to a year.

"We chose to expand in Iowa because of the dependability and stability of the Iowa workforce. The Iowa Jobs Training Program enhanced that decision. In my opinion, this is the most comprehensive offering in the country. I spent three years—two of them on the road—looking for the best plant location. I didn't find anything that could match this program."

Ron Schleder, Plant Manager, Rockwell International

At the end of April 1987, over 13,000 people had enrolled in training programs through IJTP, with more than \$43 million invested in giving them new knowledge and skills.

Funds can be used for screening, skills assessment and testing, travel for new employees to training, in-plant instruction, and costs of training facilities, equipment, materials and supplies.

The Iowa Jobs Training
Program is self supporting.
Funds come from revenues generated by a firm's investment in
Iowa. The company's incremental property tax and a portion
of the new employee's state
witholding tax are diverted to
pay for initial job training.

In addition to the direct training dollars, companies are eligible for a New Jobs Tax Credit of up to \$738 for each new job created. There also is an exemption from sales and use tax on industrial machinery, equipment and computers for companies who enter into training program agreements.

Job Training Partnership Act helps economically disadvantaged join work force

JTPA is a federal job training program to prepare economically disadvantaged individuals and dislocated workers to enter the labor force.

Iowa is divided into 16 service delivery areas, and in each, local officials work with private industry to formulate local policy, plan training programs and designate organizations that will administer the programs.

Iowa's Department of Economic Development helps provide technical assistance to local officials and also helps monitor programs in Iowa to assure compliance with state and federal regulations.

Iowa Conservation Corps offers work/ volunteer experience

Iowa's Conservation Corps has been established to provide meaningful work/volunteer experiences for young people between the ages of 14 and 24 and for people over the age of 60. Its emphasis is on the state's human and natural resources.

The Corps has five programs:

- The Summer Conservation program employs young people in conservation work in schools, for cities and counties. Part of each work week is devoted to environmental education.
- A Young Adult Program gives people from ages 19-24 full-time work in conservation.
- In-School Program makes available part-time employment during the school year for handicapped and disadvantaged youths.
- The Corps' Volunteer Program gives grants of up to \$4,000 to encourage youth participation and enhance career development.
- The Green Thumb Program provides conservation related work experiences for people over 60.



ADJUSTMENTS TO FEDERAL TAXABLE INCOME; TAX CREDIT INCENTIVES FOR INVESTMENT IN STATE?

Adjustments allowed for net operating losses

Iowa uses single factor corporate income tax

In Iowa, adjustments for net operating losses and other federal tax benefits are allowed.

The state uses a single sales factor for corporate income tax and allows a 50% deduction for

federal income taxes that have been accrued or paid.

Small businesses can take additional deductions for 50% of wages paid to new employees who are handicapped or who are parolees.

Iowa gives tax credit incentives for investment in Iowa

Iowa is committed to providing tax incentives for companies that invest in the state.

The state allows a tax credit of 6-1/2% of the Iowa share of federal qualifying expenditures for increasing research activities in Iowa.

Employers who enter into training agreements under the Iowa Jobs Training Act and who have increased their base employment level by 10% can earn a tax credit totaling as much as \$738 per employee.

This results from Iowa's new jobs tax credit that is equal to 6% of qualifying wages for those employers involved in the training agreement.



POSITION ON UNITARY TAXATION; METHOD OF APPORTIONMENT?

Consolidated return commonplace for companies with common ownership

Iowa applies "consolidated return" concept for corporations with common ownership

Iowa applies a "consolidated return" where a group of corporations with common ownership chooses or is required to file a consolidated return.

The concept of consolidated

filing is applicable if the corporation is treated as consolidated for federal tax purposes. This normally requires an 80% stock ownership among affiliated members and the members of the group are unitary or are doing business in Iowa.

Iowa does not require or allow the use of worldwide combined reports.

Iowa single factor formula for apportionment

Iowa's portion of net income from sales or manufacturing is determined by a single factor formula which is a ratio of sales within Iowa to gross sales.

It is worth noting that most states use a three factor formula (payroll, property and sales) which results in a greater nu-

merator and, therefore, higher apportionment.

Sales within Iowa are regarded as gross sales delivered or shipped to a purchaser within the state.

For service industries and transportation, communications and certain utility corporations, special rules apply. Special guidelines may apply to a company if sales cannot be used as the determinant.



TAX STUDIES DETERMINE FUTURE POLICY; FOUR WAYS LOCAL JURISDICTIONS LEVY TAXES

In Iowa, business gets down to business to improve tax policy

Iowa conducts tax studies regularly, giving business an opportunity to affect policy

Government and business representatives come together on a routine basis to review taxes and to make recommendations to the Iowa Legislature. This gives business a real opportunity to influence tax policy in Iowa.

The last study was completed in 1984 with the assistance of the accounting firm of Coopers and Lybrand. That study, for example, recommended tax incentives for operating machinery and equipment. A bill was drafted and legislation passed in 1985.

A new study currently is under consideration and copies of the Coopers and Lybrand report are available for in-depth review.

Four local option taxes authorized by general assembly

The Iowa General Assembly has authorized four different ways by which local jurisdictions may levy taxes.

These include an income surtax imposed on individual income by local school districts; a hotel/motel tax; local sales taxes, and a wheel tax based on vehicles registered in the county.

These taxes cannot be imposed without voter approval.

No assessment on non-operating utility properties

The state of Iowa does not assess a utility's non-operating property.

That real property would be assessed by the local assessor. Non-operating personal property is tax exempt.



TECH AND ECONOMIC OBSOLESCENCE REGOCOGNIZED BEYOND STANDARD DEPRECIATION?

Iowa recognizes economic obsolescence beyond normal functional obsolescence

Technological and economic obsoles-cence formally recognized by Iowa beyond standard depreciation tables

Normal obsolescence is incorporated in Iowa's depreciation schedules.

But the state also recognizes there are times when a plant

experiences abnormal economic obsolescence beyond normal functional obsolescence.

At this point, the burden of proof rests on the manufacturer, however the state gives every consideration to the manufacturer.

Commercial personal property is tax exempt, so additional obsolescence does not apply in this case.

Utility property assessment increases limited to 8% annually

Real property assessment increases for utilities are limited to 8% in any one year. These are based on revaluation and new construction and, therefore, may

vary for different classes of property in a given year.

For all classes of property (agricultural, residential, commercial or industrial), statewide assessment increases due to revaluation, but excluding new construction, are limited to 4% in any one year.



WHAT IS IOWA'S TAX CLIMATE FOR BUSINESS?

Iowa believes in helping business

Tax abatements available at discretion of Iowa's local governing bodies

Real and personal property tax abatements are available in nearly all major population centers in Iowa.

A city council or county board of supervisors may pass an ordinance for a partial abatement from property taxation of the actual value added to real estate. This happens in the case of new construction of industrial real estate, research facilities, warehouses and distribution centers.

The maximum amount of actual value added which is eligible for tax exempt status is 75% the first year; 60% the second year; 45% the third year; 30% the fourth year, and 15% in year five.

City councils may designate property owner self-improvement areas in their cities. These are entitled to tax abatement based on improvements to the property. An owner can take a 100% abatement on value added for three years or a partial abatement for 10 years.

30% exemption available for machinery and equipment

The assessment used for existing equipment. equipment in a manufacturing or

assembly operation is limited to 30% of the net acquisition cost of the property. This applies to

Only 'Canned' software subject to Iowa sales tax

Software is not taxed as real property in Iowa.

"Canned" programs, those that are prewritten and developed moved to extend ad valorem for general sale, are subject to taxation to software. sales and use taxes.

Software not taxed as personal or real property in Iowa

The state of Iowa does not tax software as personal or real property. Nor has the legislature





Single facility subject to one property assessment

Iowa uses assessment districts, but a company is not subject to multiple assessments.

There are 113 assessing jurisdictions in the state made up of 99 counties and 14 cities.

There is only one assessment for real property. Personal property is tax exempt.

Inventory and commercial personal property tax exempt

In Iowa, both commercial personal property and inventories are exempt from taxation.

State sales and use tax applies to 60 services

Iowa's sales and use tax applies to approximately 60 services. In communications services, intrastate telephone calls are subject to state sales tax.

Tax due on all sales between companies; communications companies free of sales tax under certain conditions

Iowa's sales tax is a transaction tax and when an exchange occurs for consideration, tax is due unless some other exemption applies.

This applies to all companies, even those within the same corporation.

However, commercial communication companies can utilize the communication services and facilities of another company free of sales tax under certain conditions.

State Regulation 18.20(4) reads: When one commercial communication company furnishes another commercial communication company services or facilities which are used by the second company in furnishing communication service to its customers, such services or facilities furnished to the second company are in the nature of a sale for resale; and the charges, including any carrier access charges, shall be exempt from sales tax. The charges for services or facilities initally purchased for resale and subsequently used or consumed by the second company shall be subject to tax, and the tax shall be collected and paid by the seller un-



WHAT IS IOWA'S TAX CLIMATE FOR BUSINESS?

exemption certificate in good are met. faithfrom the purchaser and other

less the seller has taken a valid requirements of subrule 15.3(2)

Local taxes administered by state to assure uniformity

Iowa administers all local taxes to insure uniformity throughout the state. Local jurisdictions cannot provide an exemption that does not exist

under state law. Also, there are no special local reporting requirements.

There are a limited number of items subject to state sales tax that are not subject to local option taxes. These include lottery tickets.

Iowa special exemption for leased property minimizes double taxation

Iowa has passed a special statutory exemption to minimize double taxation on leased property.

Three criteria must be met in order to qualify for the exemption:

- The person purchasing the property must be regularly engaged in the leasing business;
- The lease period must be for more than one year;
- Lease or rental receipts must be subject to sales tax.



THE STATUS OF THE STATE'S UNEMPLOYMENT FUND?

Iowa's employment rate goes up; employer tax rate goes down

State Unemployment Insurance Trust Fund Balances December 31, 1986 (000's)

	Balance 12/31/86	Balance 5/18/87	Ending Net Change
lowa	\$142,571	\$195,700	\$53,129

Iowa's unemployment fund at near all-time high; new 2.1% employer tax rate nation's second lowest in '88

Iowa's unemployment compensation fund is near an all-time high, with a \$195.7 million balance recorded on May 18, 1987.

A law enacted in 1987 changed Iowa's tax compensation system from a reserve ratio to a benefit ratio array system. This means Iowa's taxable wage base will be reduced from \$12,600 to \$11,000 in 1988.

Tax rates for many employers will be lower as a result of the switch to the benefit ratio array system.

More importantly the new employer tax rate at 2.1% in 1988 will be the second lowest in the United States.

A CLEAR CASE FOR ACCESS TO TECHNOLOGY IN IOWA



PROGRAMSOF UNIVERSITY-BUSINESS COOPERATION IN TECHNICAL, SCIENTIFIC AREAS

Iowa's major universities work with U.S. firms on advanced technological programs

More than 350 national and international firms bask in Iowa's invigorating scientific climate

Iowa's three major universities and its community college system are fertile ground for some of the most advanced technological research being conducted in the U.S. today.

The University of Iowa cooperates in four different ways: Referrals of those in the business community to faculty experts utilizing a computerized index of faculty interests and capabilities; consultative exchanges; licensing agreements with those companies prepared to carry results of academic research into the marketplace; and delivery of onsite instruction of televised courses to Iowa and industry via a communications uplink and microwave.

Laser, other facilities at University of Iowa

The University of Iowa sustains clusters of state-of-the-art research equipment for use by academic and industry researchers.

These include: The Laser Facility which develops new laser applications and conducts photo optics studies.

The Weeg Computation Center provides comprehensive computer service to university and corporate users and also is the national headquarters for CONDUIT, an organization that packages and distributes computer-based instructional materials.

Eight other facilities provide sophisticated equipment for image analysis, high speed computation, fermentation and flow cytometry.

Image analysis for digitization, analysis, placement

The Image Analysis facility at the University of Iowa provides a unique combination of software, computer-based hardware, and technical expertise in image digitization, digital image analysis and placement.

The University's High-Field Nuclear Magnetic Resonance facility employs a pulsed spectrometer for proton observation. Essentially all modern multipulse experiments are possible using this equipment.

The University of Iowa also is home to a High-Resolution Mass Spectometry facility as well as a High Speed Computational facility which fills the gap between conventional computing services and those provided by super-computers at national centers.

The Universitiy's Large-Scale Fermentation facility makes possible the growth and recovery of microorganisms.

Other University of Iowa facilities include instrumentation and expertise to assist in the study of proteins and peptides; a flow cytometry facility housing an advanced flourescence-activated cell sorters; and an electron microscopy facility.

ISIS incubator assists tech-driven businesses

The Iowa State Innovation System (ISIS) is a small business incubator designed to assist and strengthen new technology-driven business. The program offers entrepreneurs an environment in which to do research and development, to complete prototype design, conduct pilot production runs, and oversee product assembly and distribution.

Iowa State working with 50 major national firms

Iowa State University has been involved with major national firms. Some of their cooperative efforts include research for Thermomass Technolog Inc.; networking and distributing system studies with AT&T; developing software and engineering laboratories for Rockwell International; a manufacturing internship program for 3M; and turbine design for Borg-Warner Research.



PROGRAMS OF UNIVERSITY-BUSINESS COOPERATION IN TECHNICAL, SCIENTIFIC AREAS

Iowa State home to 200-acre research park

The Iowa State Research Park has been established to develop a 200-acre technological setting adjacent to the University's Ames campus. Already in place are a new hotel and conference center located near the Ames airport and an interstate highway system.

Ames Lab Rare-Earth Information Center for nation

The Ames Laboratory is a 40-year-old national research and development lab of the U.S. Department of Energy operated by ISU. Among its divisions is the Rare-Earth Information Center (RIC). Supported by more than 30 firms, RIC collects, stores, evaluates and disseminates unique data from various sources.

Microelectronics Research Center makes strides in thin film resonator technology

Established in 1984, the Center has made exceptional strides in the development of thin film resonator technology; and it initiated the first research effort in the United States to evaluate Ionized Cluster Beam, a promising new technique incorporating thin film deposits in an ultrahigh vacuum.

ISU's Center for Non-Destructive Evaluation (NDE)

This national center was established at Iowa State University through a grant from the National Science Foundation.

Significant technologies employed at the center include the use of ultrasonics, electromagnetic techniques, acoustic emissions, computer tomography, radiography, thermal imaging, and testing with liquid penetrants.

Community colleges involved with special programs

Iowa's community colleges are in the forefront of developing and delivering customized training programs to business and industry throughout the state. For instance, the Eastern Iowa Community College District in Davenport developed and administers the model for nationwide curriculum on hazardous materials. The colleges also cooperate in a statewide effort to improve productivity through quality management and statistical process control training programs.



PROGRAMS OF SUPPORT TRAINING FOR HIGH TECHNOLOGY INNOVATION

Iowa offers high powered support for high tech achievement

Iowa's educational environment incubates innovative technology

Several innovative training programs underscore the commitment to technological leadership by Iowa's colleges and universities.

ISIS (Iowa State Innovation System), the small business incubator at Iowa State University, offers several training opportunities to its fledgling companies. There are roundtable sessions that help entrepreneurs address operations needs for their business. Conferences and seminars are scheduled for ISIS-sponsored companies as well as the public. These deal with a wide range of topics and often feature guest speakers from the public and private sectors. ISIS also arranges formal and informal meetings as a forum for technical discussion between tenant companies, ISU faculty and scientists from the private sector. These are aimed at developing scientific input for new product development.

Technology Center fosters high tech new ventures

The University of Iowa Technology Innovation Center (TIC) offers a variety of services to foster the development of new business ventures, particularly those who use advanced technology. The strength of TIC lies in its ability to match the scientific and technical capabilities of the university with the business community's needs. TIC offers ready access to the university's computing facilities, research equipment, and instruments. It also has a battery of counseling services available to business.

Institute for Entrepreneurs offers intense training

The University of Iowa also strongly believes that training entrepreneurs can speed the innovative process. So, it has established the new Institute for Entrepreneurial Management. Here, people beginning a new business can get formal coursework and intensive seminars tailored to the needs of a start-up situation.

The University of Northern Iowa also has an endowed chair in entrepreneurial studies.

Of course, Iowa schools also offer technical and vocational training programs throughout the state. Video technology, computer programming, electronic and laser electro-optics technology, robotics, quality control, communication electronics and mechanical drafting are just a few of the curricula available.



ARE INDUSTRIES DOING RESEARCH IN IOWA?

If you are doing research, you'll have a lot of company

588 research facilities employ 65,000 in Iowa

The state of Iowa is rich in research and development. There are 588 firms with research facilities in this state, and 18 of those companies employ some 65,000 people.

Following is a list of representative Iowa companies involved in research and development within the state, their location, the type of industry and the number of employees:

Rockwell International Avionics Group

Electronic communication equipment, circuit boards, navigation equipment, aircraft control.

1,000+ employees

UTICOR Technology,

Inc. Logic controllers, timers, logic cards, welding and stamping controls.

51 - 100 employees

Sundstrand Hydro-Transmission Divi-

sion Hydraulics. 251 - 500 employees

Doerfer Engineering

An affiliate of Jefferson Smurfit Corp. Machinery, systems integration.

101 - 250 employees

Stanley Consultants

Airports, dams. 101 -250 employees

Fort Dodge Laboratories, Inc. Veterinary pharmaceuticals, biologicals.

251 - 500 employees

Pioneer Hi-Bred International, Inc.

Agriculture-related. 501 - 1,000 employees

John Deere & Company, Inc. Engines,

agricultural tractors, transmissions, hydraulics, electric components

900+ employees

Chamberlain Manufacturing Ordnance

products.
76-101 employees.



GOVERNMENT OR FOUNDATION-FUNDED RESEARCH

With two research universities, opportunities are endless

\$100 million committed to research projects in Iowa in past two years

More than \$100 million in federal funds and grants and foundation funds has been committed to research projects in Iowa during the past two years.

The Chronicle of Higher Education reported earlier this year that the University of Iowa received some \$55 million and Iowa State University received more than \$14 million for research in fiscal 1985 alone.

In addition the Legislature has created the Education, Agriculture, Research and Development Awards (EARDA), where \$10 million has been committed in grants to Iowa's colleges and universitites.

100 scientists, researchers using University of Iowa Laser Facility

The University of Iowa Laser Facility is a 3,000 square-foot central research facility housing state-of-the-art laser and laser-related instruments valued at more than a million and a half dollars.

The facility offers convenient and cost-effective use of laser technology. There are more than 100 scientists and engineers now using lasers.

Over the past few years, the facility has been assigned 24 industrial projects, 13 from Iowa and 11 from the United States and foreign countries.

The Iowa Legislature has been very supportive of the University Laser Facility. Education, Agriculture, Research and Development Awards (EARDA) grants from lottery funds have provided \$1.5 million toward the \$3 million endowed chair established last year.

During the 1987 session, the legislature voted another approximately \$25 million to the laser facility.

Microelectronics Research Center makes strides in thin film resonator techonology

The Iowa State University Microelectronics Research Center was established in 1984 and since its inception has made exceptional strides in the development of thin film resonator technology.

Thin film resonators have the potential to reduce the size and improve the quality of communications equipment.

The center also has initiated the first research effort in the

United States to evaluate Ionized Cluster Beam, a promising new technique incorporating thin film deposits in an ultrahigh vacuum.

Funding for the Microelectronics Research Center has come from such diverse organizations as IBM, Rockwell, Honeywell, E.F. Johnson, the Department of Defense and others. The state of Iowa has just committed \$1 million to the Center.

Ames Laboratory a national r&d lab operated by ISU

The Ames Laboratory is the national research and development laboratory of the U.S. Department of Energy.

Iowa State University operates the laboratory through the Energy and Mineral Resources Research Institute (EMRRI).

The Rare Earth Information Center (RIC) serves the scientific community by collecting and disseminating rare earth information. The center's support comes from grants overseen by EMRRI. More than 30 companies currently provide grants to RIC.

Although the Department of Energy and Iowa State have worked closely together in the Ames Laboratory, no mechanism existed to create new re-



GOVERNMENT OR FOUNDATION-FUNDED RESEARCH

search and theories in the materials sciences until 1987.

Iowa State proposed the establishment of the Center for New Industrial Materials to fill this need. Funding from the Department of Commerce, the Department of Energy and Iowa State University is now making the center a reality.

The center is designed to focus on three areas: an applied research and technology transfer program to develop new materials; materials processing research in an effort to produce new materials; and a materials reliability program.

Center for Computer Aided Design (CCAD) develops industrial software forerunner

The Center for Computer Aided Design (CCAD) was founded in 1982 as an independent research unit in the College of Engineering at the University of Iowa.

The center's first product was a software package on large scale machine kinematic and dynamic analysis. It was the forerunner for the development of other industrial oriented software packages.

Major funding for basic research was provided by the National Science Foundation.

Other funds for CCAD come

from NASA, the U.S. Army Research Office and the U.S. Army Tank-Automotive Command.

NSF, GE, Chrysler and others support ISU Center for Non-Destructive Evaluation (NDE)

This national center was established at Iowa State University through a grant from the National Science Foundation.

Essentially, the center deals with the research of flaws.

Significant technologies employed at the center include the use of ultrasonics, electromagnetic techniques, acoustic emissions, computer tomography, radiography, thermal imaging, and testing with liquid penetrants.

The center acts in a consulting role and/or provides direct assistance to a variety of companies. It also does applied research.

A number of private corporations also support NDE. These include Atlantic Richfield, Chrysler Corporation, General Dynamics, General Electric Company, Sandia National Laboratories, United Technologies Corporation and Westinghouse Electric.

U of I Institute of Hydraulic Research recognized as one of world's premier research and engineering labs

The Iowa Institute of Hydraulic Research located at the University of Iowa is one of the nation's premier fluid research and engineering laboratories.

Established in 1928, it is recognized as one of the world's leading engineering hydraulics/fluid mechanics research laboratories.

Fundamental research and advanced design and analysis programs are conducted on environmental pollution, hydraulic structures, bioengineering, water resources, fluid mechanics and more.

EARDA grants have provided \$600,000 toward the endowment of a \$1 million chair at the Institute.



ANY PROGRAMS TO FOSTER NEW HIGH-TECH BUSINESS DEVELOPMENT WITHIN THE STATE?

Iowa wants it and has a strategic plan to get it.

Two major programs foster high tech business development in Iowa

The Iowa High Technology Council (IHTC) and the Iowa Product Development Corporation (IPDC) have been established by the state of Iowa to encourage and underwrite unconventional new product development.

Both IHTC and the Product Development Corporation were set up in 1983, when the legislature recognized that exploring new technology holds great promise for creating new industries. Lack of available funding was the problem, since these projects would be in the category classified as risk capital.

The High Technology Council has provided funds for research and the Product Development Corporation, seed money for unique projects. Nearly \$4 million is earmarked for new ventures in fiscal year 1987.

One of the interesting projects funded by IPDC is an emergency response telephone that permits two way conversation. The phone is a product of One Touch America in Marion, Iowa.

Other ventures include a foreign television information system, level measurement devices based on microwave technology and an industrial cleaning and deburring process.

A CLEAR CASE FOR TRANSPORTATION IN IOWA



WHATISTHEQUALITY OF AIR SERVICE?

Getting anywhere in the world by air is a breeze

Seven major airlines and nine commuter airlines serve Iowa daily; company jets able to land within 30 miles of any location in the state

Major airlines:
America West
American Airlines
Continental Airlines
Midway Airlines
Northwest Airlines

TWA United Airlines

Commuter airlines:

American Eagle
Britt
Continental Express
Eastern Air/Midwest
Express
Great Lakes Aviation
Iowa Airways
Northwest AirLink
Transworld Express
United Express

251 direct flights from major cities terminate in Iowa every weekday

Two hundred fifty one direct flights to major U.S. cities terminate weekdays at five Iowa airports. The airports are located in Des Moines, Cedar Rapids, Sioux City, Waterloo and the Quad Cities. There are 20 direct flights from Des Moines, Cedar Rapids, the Quad Cities and Sioux City to Denver. All five airports serve Minneapolis with 15 flights daily. Many flights to Chicago are available daily and there are direct flights to major cities including New York, Washington, Los Angeles, and San Francisco.



HIGHWAY SURFACE CONDITIONS AND FUNDING LEVELS?

Iowa highways keep travel and transport easy going

Iowa highways in good condition

Although it's only 25th in terms of area, Iowa has more pavements are in better condition miles of roads than 40 other states.

The state has nearly 10,200 miles of primary highways. Included in this network are a number of major U.S. highways serving north-south and east-west traffic throughout the midwest.

A 1985 report by the U.S. Secretary of Transportation shows that Iowa's rural interstate than the national average. Only 2.3% of Iowa's rural interstate roads had a pavement serviceability rating of less than 2.5%. Seven percent of the nation's rural highways are rated at less than that.

Iowa spent \$1 billion New highway proon highways in 1986

More than \$1 billion was spent for construction, maintenance and administration of Iowa's highways in 1986.

Major sources of revenue for highway funding are the Iowa Road Use Tax Fund, federal highway dollars, and resources from local and county governments.

Income from the Iowa Road Use Tax Fund was about \$498 million. This includes revenues from state fuel taxes, motor vehicle registration fees, use tax on new and used vehicle sales and driver license fees. Revenue from this fund is shared by the state, counties and cities.

Federal Aid Highway funds contributed about \$205 million to Iowa in 1986, and the balance was raised by local county and city governments through property taxes, bonds and other sources.

grams

In 1986, Iowa instituted RISE (Revitalize Iowa's Sound Economy), a program allocating 2 cents per gallon of fuel tax to highway improvements.

Annual funds for RISE, estimated at \$30 million, may be used for purposes including highway access improvements to serve new commercial sites.

Iowa Transportation 2000, was introduced by Governor Terry Branstad in the 1987 session of the General Assembly. The proposal recommends a fuel tax rate of 4 cents a gallon with revenue to be used to modernize 2,000 miles of primary highways to supplement Iowa's interstate system, particularly for commercial traffic. The program includes additional funding for Iowa airports, railroad lines and waterway terminals.



HIGHWAY SURFACE CONDITIONS AND FUNDING LEVELS?

Mass transit available in all Iowa cities with more than 20,000 population

Currently there are 35 public transit systems operating in Iowa.

16 are regional and serve the Iowa cities. state's rural areas.

In 1985, the transit systems transported an estimated 23.7 million passengers at a cost of approximately \$29.2 million.

At present, Iowa's transit network includes 11 private intercity bus carriers and 67 taxi compa-Nineteen of these are urban, nies transporting people in 57

Mass transit well funded in Iowa

During 1987, Iowa will spend nearly \$36 million on transit. This figure will rise almost \$2

million for fiscal year 1988.

Funding sources include the state, federal government, local taxes, and user fees.

No rush to commuting in Iowa

to ballyhoo "The Rush Minute," Iowa City. their term for morning and evening traffic.

In reality, Iowa has eight none experiences any significant commuting problems or traffic congestion.

Commuting times range from five to 20 minutes depending on proximity of residential neighborhoods to work centers and where people choose to live.

Each of the major cities has four-lane facilities which easily accommodate daily commuters.

For example, I-380 is a new freeway through central Cedar People who have moved to Rapids that provides swift, easy Iowa from major metro areas like access from nearby Waterloo and

In Des Moines there are two main employment centers, the downtown central business dismajor metropolitan areas and trict and a rapidly expanding office park along I-235 in West Des Moines. Both are easy to get to from all parts of Des Moines, West Des Moines and surrounding suburbs.

> The Davenport/Bettendorf metropolitan area is characterized by three major employment centers. These are served by I-80 on the north, I-280 on the west, and I-74 through east Davenport and



HIGHWAY SURFACE CONDITIONS AND FUNDING LEVELS

west Bettendorf. They are part of a beltway around and through the Iowa-Illinois Quad City area.

Business areas in Council Bluffs, Dubuque, Iowa City and Sioux City are also easily accessed via interstates, expressways and city arteries.



AVAILABILITY OF RAIL AND MOTOR CARRIER SHIPPING IN IOWA?

Accessible, efficient and economical rail and motor transportation

Iowa is central in nation's railroad network

Iowa occupies a central position in the nation's railroad network. Major east-west and north-south lines pass through Iowa, providing access to Chicago, St. Louis, Kansas City, Omaha, the Twin Cities and points beyond.

The state is served by several railroad carriers that provide all levels of service.

There are six Class I railroads that serve Iowa. They are: the Atchison, Topeka and Santa Fe; Burlington Northern; Ohio & North Western; Norfolk Southern Railway; SOO Line; and the Union Pacific.

In addition, 13 short line and regional railroads operate 30% of Iowa's track miles, offering low cost, customized switching, feeder and line haul service.

Mainlines offer excellent shipper service on a daily or six-day-a-week schedule with overnight delivery to surrounding rail gateways.

The Iowa Rail Assistance Program has contributed more than \$46 million to upgrade 1,450 miles of Iowa's major trunklines.

Intermodal facilities are available in 12 cities throughout the state.

State assistance is available

for up to 80% of the cost of rail construction or rehabilitation to create or preserve jobs.

Motor carriers serve every Iowa community

Iowa has 34 interstate motor carriers, 184 interstate liquid carriers and 106 household goods movers.

Bus companies also transport goods in Iowa and every community in the state is adequately served by motor carrier

Amtrak offers convenient rail passenger service daily

Amtrak operates the San Francisco Zephyr every day in each direction across Iowa. It travels on Burlington Northern tracks between Chicago and Omaha and makes stops in four Iowa cities.



Iowa's strategic central location lets you reach markets at less cost.

