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A STUDY OF THE AGGREGATE ECONOMIC CONTRIBUTION OF
MINOT AIR FORCE BASE TO THE METROPOLITAN
COMMUNITY OF MINOT, NORTH DAKOTA

By

Joel S. Gill

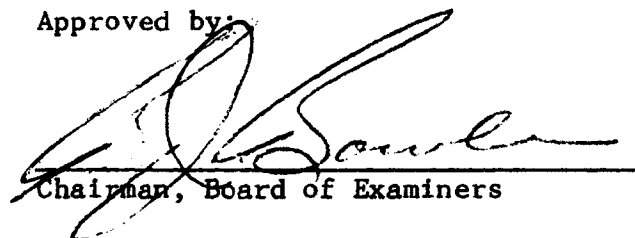
B.S., U.S. Naval Academy, 1958


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requirements for the degree of
Master of Business Administration

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLES	v
LIST OF ILLUSTRATIONS	vi
RATIONALE	vii
 Chapter	
I. INTRODUCTION	1
II. MINOT--THE MAGIC CITY	7
III. DEVELOPMENT OF MINOT AIR FORCE BASE	16
IV. THE ECONOMIC IMPACT IN PERSPECTIVE	26
Population and Housing	
Payroll and Expenditures	
Base Procurement	
Base Assets	
Community Affairs	
V. REGIONAL ECONOMIC GROWTH	41
VI. CONCLUSION	47
APPENDIX	50
BIBLIOGRAPHY	54

LIST OF TABLES

Table	Page
1. Population, City of Minot, North Dakota, 1910-1970	8
2. Population by Age Group	9
3. Population, Counties and Cities of North Dakota, 1970 and 1960	10
4. Employment Analysis, 1960	12
5. Financial Institutions, 1969	13
6. Retail Sales and Bank Debits, Minot, North Dakota, 1960-1969	14
7. Analysis of Payroll Expenditures by Category, 1970	30
8. Local Area Impact Data, July 1, 1969 - June 30, 1970 . . .	33

LIST OF ILLUSTRATIONS

Figure	Page
1. Minot Air Force Base Population 1962-1971	28
2. Percentage Allocation of Disposable Income by Category by Minot Air Force Base Military and Civilian Employees, 1970	31

RATIONALE

The economic contribution of a nearby and sizeable military installation to the growth of the civilian community of Minot is unquestionable. Paradoxically, only a limited amount of statistical evidence has been available, heretofore, to quantify the significance of this economic contribution. Thus, while accruing considerable and continuing benefits through its association with the military complex, local business interests, as well as the populace in general, are afforded scant information concerning a prime contributor to this affluence--Minot Air Force Base.

The hypothesis of this study was that the presence of a military installation, Minot Air Force Base specifically, exerts a significant economic influence on the local community. This hypothesis was explored to substantiate the degree and scope of the economic impact of the base on the metropolitan area of Minot.

Through this study, the aggregate economic contribution of the base to the Minot business community was analyzed. Determinants, which together comprised this total contribution, included expenditures made by the base for the procurement of supplies, utilities, equipment, base exchange and commissary purchases, education expenses, and the allocation of disposable income of military and civilian employees.

The value of these determinants will vary, as well as their total impact, depending on the particular base-community situation under study. The selection of Minot Air Force Base and the local

Minot community as the subject of this study represented several unique features. First, the base is one of the largest in the United States, therefore a substantial impact would be expected. Second, the base does not contribute materially to any other metropolitan community, thus the economic benefits accrue chiefly to the city of Minot. Third, this joint military-community complex represents one of the two largest industrial centers in the state of North Dakota. Although a comprehensive quantitative analysis was beyond the scope of this study, this feature was explored to the extent that the concepts and effects of regional economics were introduced to further demonstrate the impact of the base.

As an introduction to this study, the transcendent importance of defense spending on our national economy and national character was considered. Second, the relationship of the military image to national defense and the resultant community relations program was also explored.

In succeeding chapters, the history and growth of Minot was reviewed as was the role of the city in assuring the presence of the base and assisting in its expansion. The history and progress of the air base, as developed in later chapters, attest to escalating national defense priorities and the increased mission capabilities of the assigned strategic forces. This continuing expansion accelerated population growth and economic development to the extent that Minot Air Force Base is currently one of the largest communities in North Dakota. The evidence of the economic contribution of the base to the local community was material and conclusive. Moreover, the economic impact on the aggregate regional development of Minot has been manifest and substantial.

In focusing upon the aggregate economic contribution of this military installation to the city of Minot, this study should be of value to the local business interests and the civilian community, as well as the base members of this military-industrial complex. The results to be achieved are: first, a greater mutual respect and understanding and second, the enhancement of base-community relations.

CHAPTER I

INTRODUCTION

As an introductory to the core of this study, it is important that fundamental and related issues be considered. Essentially, the military image as a determinant of national defense appropriations, and the community relations programs as a means of achieving a favorable military image should be considered in context with the creation and development of the base and the continuing economic impact of the base on regional affluence. As corollaries to this latter and central theme, defense spending, the military image, and the community relations program are briefly explored in this chapter.

Defense Spending

In these inflationary times, the American taxpayer has become increasingly price conscious, and rightfully so. This concern could also be translated in terms of the continuing drain on our national resources through inflationary defense spending. In 1960, military spending was pegged at \$44 billion, and in 1964 it grew to \$51 billion, a peacetime record. With the advent of the Vietnam war, military spending made quantum jumps to \$55 billion in 1966, \$69 billion in 1967, \$79 billion in 1969, and \$77 billion in 1970.¹

¹Richard F. Kaufman, "The 80-Billion-Dollar Defense System," The New Information Please Almanac, 1971, p. 96.

A de-escalation in American involvement in the Vietnam war and a reshaping of the U.S. military machine are expected to permit defense department spending in the 1971 fiscal year to be cut to \$71.8 billion--down \$5.2 billion from fiscal year 1970.² The well-publicized efforts to curtail defense appropriations in general and reduce U.S. personnel and fiscal commitments in Vietnam have mirrored the sentiments of public opinion. In a survey of 6,300 families conducted by a New York advertising firm, 31 percent "placed the blame for high prices" on high government spending. In this same survey, another 21 percent attributed the inflationary economy to the cost of supporting the war in Vietnam.³ The announced withdrawal of American forces in Vietnam, at the rate of 14,300 men per month will reduce U.S. involvement to 25,000 troops by Election Day 1972.⁴ Of equal importance, the withdrawal would sharply reduce the cost of the war, though there would still be considerable expenditures in the continuing support of Vietnamese independence.

Americans have become increasingly cost conscious indeed. They have become so by necessity. As taxpayers, Americans are called upon to support the most ambitious domestic programs in the war against disease, malnutrition and poverty, and with these same resources, to provide the means for our own national defense and the financial assistance necessary to guarantee the defense of freedom throughout

²"Pentagon is Seeking Its Smallest Share of Budget Since Fiscal 1950," The Wall Street Journal (February 3, 1970), p. 6.

³"Government and Labor Get Top Inflation Blame," The Minot Daily News (August 3, 1970), p. 2.

⁴"The President Digs in on Vietnam," Time (April 19, 1971), p. 11.

the world.

The Military Image

The image which the American public has of the military and the man in uniform is of new-found and special significance in our modern society, not only to the military but also to the entire American way of life. In the past decade, trying issues concerning the moral and legal tenability of Vietnam, controversies involving draft inequities and conscientious objectors, and the continuing diseconomies of financing an unpopular war in the face of recognized domestic priorities, have all reflected on the credibility of the military image. These issues which have polarized the nation have also served to lessen the stature of the military in the minds of some segments of the American public. Thus, through the years and especially in recent years, every echelon of the military, from the Department of Defense to the smallest military installation, has become necessarily concerned with the development of a favorable military image.

In a democracy, public opinion assumes a role of paramount importance in the support and advancement of the military mission. With the pyramiding costs of developing sophisticated weapon systems, defense priorities have required greater commitments of all Americans in support of this mission. These commitments continue to be expressed in terms of tax dollars, valuable resource materials, and our most valuable commodity--manpower.

Of increasing importance is the concurrent commitment to ensure that these escalating expenditures in military hardware are mission essential and that the public is continuously assured of this essentiality. Additionally, it is the responsibility of all Department

of Defense agencies to create a public understanding of the military mission and engender a continuing appreciation for the role which the military is called upon to perform. The abdication of this responsibility or the failure to develop a requisite degree of understanding and appreciation can neutralize the support required for future weapons systems developments, jeopardize the existing balance of power and imperil the freedom of all democratic systems throughout the world.

The Community Relations Program

The Armed Services have developed numerous programs which are designed to enhance the military image. Specifically, the Air Force has established a community relations program in regulation form. In essence, it states program objectives and identifies procedures for attaining these objectives.⁵

Succinctly stated, the prime objective of the community relations program is to integrate the Air Force into community life, both at home and abroad, and to create a climate of mutual understanding between a military installation and its surrounding community. This program is further designed:

To encourage members of the Air Force to participate as private citizens in community affairs (e.g., religious, educational, fraternal, civic, youth, health, recreational, and welfare activities).

To help improve community services and facilities and to promote community welfare. However, the Air Force will not participate in or support any commercial advertising, publicity, promotional activity or event that would benefit - or appear to benefit - or favor any private individual, commercial venture, sect or political or fraternal group.⁶

⁵U.S. Air Force, Community Relations Program, AFR 190-20, May 19, 1966, p. 1.

⁶Ibid.

In summary, the program is devised to create a greater sense of awareness among the military such that each individual is capable and sufficiently motivated to fulfill his civic responsibilities as a private citizen. In so doing, the base and community will co-exist in an environment which will promote mutual understanding, cooperation and the development of amicable relations.

An assessment of the means whereby these objectives are fulfilled and the degree to which they are satisfied requires an interdisciplinary approach to include the religious, political, economic and cultural contributions of the military. These are recognizable through a multitude of community activities, which serve to enhance the community relations program. Although ascribing to the validity of each of these disciplines as a legitimate contribution, this study perforce, is confined to an investigation of but one--the significance of the economic contribution of the base to the local community. Although seemingly arbitrary, this selection possesses considerable merit, for the economic impact is legitimately characterized as a prime factor, if not the most important contribution to base-community relations. Further, the economic contributions are such that the results are quantifiable and thus, are inclined to substantially advance the potentialities of these other activities. Moreover, because these contributions are quantifiable, they portray all the more vividly the aggregate economic impact on the community.

In the succeeding chapter, the underlying factors for the very existence of Minot Air Force Base are explored. A historical synopsis of the city of Minot is first presented, followed by a review of the more pertinent business and financial information to

substantiate its growth and reflect its current status. The success of this community as statistically highlighted, together with the perseverance and dedication of the business and civic leaders of Minot, as is seen, constituted the catalytic force to bring the air base to this location.

CHAPTER II

MINOT--THE MAGIC CITY

From the era of arrows through the age of aerospace, Minot has been a magic five-letter word synonymous with all that spells pride and progress. Inhabited by a hearty people whose ancestors were pioneers and predominantly natives of northwestern Europe, "Minot is the largest center of culture, industry and trade between the Red River Valley and central Montana."⁷

Minot, located in a tree framed valley embracing the wandering Souris River, was chartered in 1887. Its origin and growth, which was spurred by the westward expansion of the Great Northern Railway, is spiced with the rugged individualism and pioneer spirit which has come to be Americana.⁸

Named for Henry D. Minot, a pioneer Great Northern railroader, the city is situated fifty miles from the Canadian border. It serves as a retail, wholesale, culture and service center for an area extending approximately 600 miles east to west and 350 miles north to south. Included in the area are parts of the Canadian provinces of Saskatchewan and Manitoba and eastern Montana.⁹

⁷Minot Chamber of Commerce Bulletin, Minot Story, Minot, N. D., 1970.

⁸The Magic City Salutes Minot AFB, Unofficial Guide for 1970 (Lubbock, Texas: Boone Publications Inc.), p. 13.

⁹Ibid.

Minot has long been known as the "Magic City," a reputation acquired as a result of the fantastic growth it experienced from 1910 to 1930. From a hastily platted railroad town of tarpaper shacks, Minot has expanded in the relatively short time span of eight decades into one of the principal service centers in the Great Plains area. Its early growth served as a catalyst for continued progress into the mid-twentieth century as the population nearly doubled between 1940 and 1960 (Table 1).¹⁰

TABLE 1
POPULATION, CITY OF MINOT, NORTH DAKOTA
1910-1970

Year	Population
1910	6,188
1920	10,476
1930	16,099
1940	16,577
1958*	22,032
1960	30,604
1962**	33,477
1970	35,000

*Period 1957-1958--Activation of Minot Air Force Base

**Period 1961-1963--SAC assumed command of base and the 91st Missile Wing was activated

SOURCE: Chamber of Commerce, Minot, North Dakota

Analyzed from another perspective, the population increases of various age groups also reflect the dynamic growth rate (Table 2).¹¹

¹⁰Minot Chamber of Commerce Bulletin, Population and Manpower, Minot, N. D., n.d.

¹¹Ibid.

TABLE 2
POPULATION BY AGE GROUP

Age Group	1940	1950	1960
Under 14 years of age	4,268	6,037	8,114
15 to 19 years of age	1,579	1,885	2,665
20 to 45 years of age	6,851	8,531	11,748
45 to 65 years of age	3,087	3,869	5,390
Over 65 years of age	792	1,710	2,360

SOURCE: Chamber of Commerce, Minot, North Dakota

To further develop the profile, it is necessary to consider the growth of Minot with respect to national and state growth rates as reflected by the 1970 census. This report indicated that the national rate since 1960 was 13 percent while North Dakota was one of the states which actually lost population. The rate of change for the state was a negative 2.3 percent, second only to the 6.2 percent loss experienced by West Virginia. The significance of North Dakota's decline in population is further magnified by the resultant loss of a Congressional seat, effective in 1974.¹²

As opposed to the negative growth rate for the state, Minot has achieved a growth in excess of 16 percent since the 1960 census and the five thousand increase in population was approximately 38 percent of that experienced by the county (Ward) in which Minot is located (Table 3).

¹²"'70 Census: The Final Figures," U.S. News & World Report, December 14, 1970, p. 31.

TABLE 3
 POPULATION, COUNTIES AND CITIES OF NORTH DAKOTA
 1970 and 1960

Counties*	1970 (Preliminary)	1960	Percent Change 1960 to 1970
Cass	72,710	66,947	9
Grand Forks	60,445	46,677	24
Ward	61,123	47,072	28
Burleigh	39,531	34,016	16
Stutsman	23,173	25,137	-8
<hr/>			
Cities**			
Fargo	52,697	46,662	13
Grand Forks	38,626	34,451	12
Minot	35,000	30,604	16
Bismarck	33,572	27,670	21
Jamestown	15,178	15,163	0
(Minot Air Force Base)***			

*Most populous 5 of 53 counties in North Dakota. Forty-seven experienced population losses between 1960 and 1970.

**Most populous 5 of 60 cities (incorporated places) in North Dakota. Thirty-six experienced population losses between 1960 and 1970.

***Although not tabulated as a city because it is not incorporated, Minot Air Force Base is unofficially ranked as the 5th most populous "city" in North Dakota. The population of 16,250 as reflected in the 1970 census, includes only base residents. Off-base military residents, civilian employees and dependents are included in the population statistics for the respective communities in which they reside.

SOURCES: Bureau of Census Reports and Chamber of Commerce, Minot, North Dakota

In 1970 the Minot labor force exceeded 13,500 and, based on the survey conducted by the North Dakota State Employment Service, almost 50 percent of Minot's total population was in the 20 to 45 years age grouping. The State Employment Service reflects firms in

13 industries, not including various federal, state, and local government agencies, having 100 or more employees (Table 4).¹³

Minot lies in the center of a vast agricultural area and serves as a grain shipping center, as well as a distribution center for farm equipment. There are a total of 1,503 farms in the home county, and the 1969 gross farm income was \$31.5 million. A variety of raw materials and mineral resources, including the largest supply of low cost fuel (lignite) in the Western Hemisphere, as well as one of the nation's most prolific oil basins, all combine to offer attractive incentives for certain types of chemicals, petro-chemicals, and fertilizer industries.¹⁴

Minot is the only city in North Dakota west of the Red River Valley to be served by three Federal all-weather transcontinental highways (U.S. 2, U.S. 52, and U.S. 83) and two mainline railway companies--Burlington Northern and the Soo Line. A key rail center, 1,090 of Minot's populace are employed by these companies. The Burlington Northern maintains a giant division headquarters at Minot and has also selected Minot as the site of its \$6,000,000 Gavin Yards. These facilities, which represent one of the nation's newest all-electronic railway classification centers, speed transcontinental freight shipments in either direction from Minot. (Both the Burlington Northern and the Soo Line maintain industrial-development departments at Minot to assist in the location of suitable sites.)¹⁵

¹³Minot Chamber of Commerce Bulletin, Manufacturing & Industrial Opportunities, Minot, N. D. 1970, p. 1.

¹⁴Branham-Moloney, Inc., National Division Newspaper Market Data, Minot Daily News, Minot, N. D., 1970.

¹⁵Minot Chamber of Commerce Bulletin, Communication and Transportation, Minot, N. D., 1970, p. 1.

TABLE 4
EMPLOYMENT ANALYSIS
1960

MAJOR FIRMS:		
Name	Products	Employees
Interstate Brands Corp. Bakery Division	Bakery Products	120
Sears	Department Store	198
Ellison's	Department Store	124
Lockheed California Co.	Aircraft	100
Northern States Power Co.	Electric Service	152
Burlington Northern/Soo Line	Railroads	1,090
Local Government	Public Schools, City and County	1,104
State Government	Miscellaneous Services	314
Federal Government	Miscellaneous Services	1,079
FIRMS HAVING MORE THAN 100 EMPLOYEES:		
Industry		Number
Manufacturing		2
Retail Trade		2
Rail Transportation		2
Communications		1
Insurance		0
Wholesale Grocery		0
Publishing		1
Hostelry		1
Public Utilities		1
Hospital and Clinics		3

SOURCE: Chamber of Commerce, Minot, North Dakota

Minot's bustling International Airport is served with 12 flights daily in all directions by Frontier Airlines and North Central Airlines. Daily airline commuter service is available to other major points within the state as well as to the metropolitan terminals of Minneapolis-St. Paul, Omaha, and Denver. Two bus companies provide the city of Minot with excellent service throughout the city seven days a week, while intra-state and transcontinental bus service is available daily at two bus depots in the city. Minot is also a major terminus for 14 motor freight carriers.¹⁶

As of 1969, the city of Minot was serviced by four banks with assets totaling in excess of \$110 million and two savings and loan associations whose assets exceeded \$67 million (Table 5).¹⁷

TABLE 5
FINANCIAL INSTITUTIONS
1969

BANKS:	
Number	4
Capital	\$2,556,000
Deposits	\$102,452,628
Surplus	\$2,778,500
Total Assets	\$114,810,953
SAVINGS AND LOAN ASSOCIATIONS:	
Number	2
Reserve	\$3,870,183
Deposits	\$57,886,291
Total Assets	\$67,918,296

SOURCE: Montana-Dakota Utilities Co., Minot, North Dakota

¹⁶Ibid.

¹⁷Montana-Dakota Utilities Co., Community Analysis, Minot, N. D., 1970.

With respect to retail sales, Minot has ranked second in the state for 23 of the past 24 years. As the nucleus of a ten county retail trade area, Minot's retail sales in 1969 exceeded \$85 million and have increased by more than 30 percent in the eight year period since 1961 (Table 6). The retail base resulting from sales to Minot residents is substantially augmented by Minot Air Force Base families, area farmers, and Canadian residents of the two provinces just fifty miles to the north. With approximately 800 retail establishments, the downtown area has been supplemented by four shopping centers and extensive developments along the highways and main thoroughfares which lace Minot--to the extent that the city has captured nearly 50 percent of the business of ten counties. These factors also generated considerable appreciation in bank debits for the same time period (Table 6).¹⁸

TABLE 6

RETAIL SALES AND BANK DEBITS
MINOT, NORTH DAKOTA, 1960-1969

Year	Retail Sales	Bank Debits
1960	64,225,875	426,677,000
1961	65,035,779	434,471,000
1962	70,394,450	476,321,000
1963	93,019,609	520,076,000
1964	93,097,080	543,457,000
1965	95,216,403	583,063,000
1966	96,270,005	590,918,000
1967*	73,165,000	610,574,000
1968*	78,543,000	653,993,000
1969*	85,321,000	694,987,000

*The decrease in retail sales between 1966 and 1967 reflects a change in statistical methods of analysis as employed by the new agency, The Marketing Magazine, and not a reduction in retail sales.

SOURCE: Chamber of Commerce, Minot, North Dakota

¹⁸Minot Chamber of Commerce Bulletin, Minot, North Dakota (Chicago: Windsor Publications, 1968).

The distinguished history of the base organizations and their mission contributions to national defense and the Air Force might have been well nigh impossible had not Minot been made available as an operating location. Accordingly, the resources of the city of Minot and the dedication of civic and business elements are to be credited for the selection of the present site. The following chapter is devoted to a historical synopsis of the more meaningful contributions of these Minot residents, the economic considerations involved in establishing a military community, and a review of the base in progressing through its embryonic period of growth.

CHAPTER III

DEVELOPMENT OF MINOT AIR FORCE BASE

In February 1954, it was announced that North Dakota was to get a new Air Force base and that a former installation would be reactivated. In a front page news story, the Minot Daily News announced that, "As part of the Air Force program to expand to 137 wings, a new base will be established at Fargo and the Bismarck base will be reopened." The announcement declared that the use of the bases would depend upon satisfactory agreements with local communities for use of existing airport facilities. In conferring with the Air Force, officials from Fargo and Bismarck learned that each of these fighter-interceptor bases would involve the assignment of 1,000 men and require some 400 homes in the city to accommodate them.¹⁹

In concluding this article, it was parenthetically mentioned that, "Minot was under consideration as the location for the base to be established at Bismarck. . . ." ²⁰

As the lobbying of the cities intensified in an effort to establish one of the two North Dakota bases in their respective areas, a contingent of Air Force and Army Corps of Engineers representatives noted that there was land near Minot that would be suitable for use as

¹⁹Minot Daily News, February 11, 1954, p. 1.

²⁰Ibid.

a base. They also reported that the existing airport facilities in Bismarck, Fargo, and Minot were no longer being considered because of their proximity to the cities. The Air Force had decided because of sound disturbances and potential safety hazards, that it would not be desirable to locate a fighter interceptor base too close to a city. Preferably, it would be located not less than seven nor more than 15 miles from a city.²¹

It was estimated that between \$10 and \$12 million would be required for the construction of the base facilities and that the monthly payroll would approximate \$225,000. Additionally, 150 children of Air Force families would require school facilities and about 250 housing units would be needed for the married personnel who would live in the city while the single men would be billeted on base. It was also noted that the construction of the base would require between 3,000 and 4,000 acres. Government officials stated that, "If the land needed for the base could be provided cost free for the government, it would make the problem of establishing the base easier, but this is not a prerequisite to a selection of a site and establishment of a base"²²

Importantly, the Air Force at this early stage publicly emphasized the importance of a community relations program and the responsibilities of assigned military personnel to actively participate in community affairs.²³

With the continuing brisk competition with Bismarck, the city of Minot passed a resolution pledging its cooperation with the Air

²¹Minot Daily News, May 13, 1954, p. 2.

²²Ibid.

²³Ibid.

Force for the utilization of certain lands for the establishment of a military reservation. The covenants were particularly comprehensive in resolving:

1. That the City of Minot will do all that is possible to secure for the use of the United States Air Force, approximately 4,000 acres located in an area from 7' to 15 miles from the city limits or such other lands as may be designated.

2. That the City of Minot will cooperate insofar as possible to provide adequate aviation easements as indicated in Air Force Regulation 86-30 and, more specifically, promises to cooperate in providing adequate easements in the area adjacent to the above described lands as requested by the United States Air Force.

3. That the City of Minot will cooperate insofar as possible to have the respective companies furnish gas, electricity, telephone and telegraph services to the above described area as requested by the United States Air Force.

4. That the City of Minot will cooperate insofar as possible in assisting the Air Force in securing additional water supplies and an adequate sewer system for the Air Force facilities, as well as for the personnel who are assigned to said airport.

5. That the City of Minot will cooperate insofar as possible in making transportation by bus, air and railroad to and from Minot and the airport in order to meet the needs of assigned personnel.

6. That the City of Minot will cooperate with the Air Force in securing the necessary construction materials and supplies and in finding housing as necessary.

7. That the City of Minot will cooperate insofar as possible in providing the necessary school facilities for dependents of military personnel who are stationed at the Air Force base.

8. That the City of Minot will cooperate insofar as possible in providing necessary medical facilities for dependents of personnel stationed at the Air Force Base.

9. That the City of Minot will cooperate insofar as possible with churches of all denominations and that the City of Minot will welcome the military personnel and their dependents in the city churches.

10. That the City of Minot will cooperate insofar as possible with military personnel stationed at the Air Force base and their families, in having them accepted for participation in recreational activities in the surrounding area.²⁴

The Minot Chamber of Commerce, in a move which appeared to weigh the scales in favor of Minot, pledged \$50,000 to be used by the Air Force for the acquisition of land and other expenses related to the construction of an installation in the proximity of the city. It was learned that more than 400 business and civic leaders participated in this pledge and that several of the business interests in the community contributed as much as a thousand dollars each.²⁵

With the July, 1954 selection of Minot and Grand Forks as the sites for the two air bases to be constructed in North Dakota, a sum of \$6,436,000 was approved for construction of the Minot base while a housing bill was proposed in Congress to provide for an appropriation of \$1,028,300 to construct 71 housing units.²⁶

In the intervening period prior to commencing the initial construction, meetings of Air Force and government officials with Chamber of Commerce and civic representatives continued. Considerable time and effort were expended in the coordination and planning of all the activities which were presently in the formulative stages.

In a July, 1955 article, the Minot Daily News described the eventful ground-breaking ceremony at Minot and noted that more than \$20 million in construction had already been allocated or was under

²⁴Resolution Passed by City Commission, Minot, N. D., May 17, 1954.

²⁵Interview with A. R. Weinhandl, Pres. of the Minot Chamber of Commerce, in 1955, April 16, 1971.

²⁶Minot Daily News, July 16, 1954, p. 1.

consideration for North Dakota's first major military installation. The ceremony, which was held at the site of the new Air Force base, some eleven miles north of the city, marked the official start of construction work. It was also announced that the base was slated to be in full operation by the Spring of 1957 and ready for the first F-102A jet interceptor planes by late 1956.²⁷

In representing the Minot Chamber of Commerce, Director A. L. Cameron observed that the Chamber had been looking forward to the ground-breaking ceremony for more than a year and that, "In our country's buildup of air power, we are proud to have our city and community become an important site and link along the northern border." Dr. Cameron also remarked that the Chamber of Commerce and the community of Minot welcomed the opportunity which the base affords, "To reveal our spirit of loyalty in every way possible by timely and unstinted cooperation in the construction and establishment of this great military base."²⁸

Thus, in the sprawling wheat fields of the North Dakota prairie, there has appeared a city, an Air Force city. In addition to the 2,300 acres made available for the base in 1955, another 3,300 acres were purchased in 1956.²⁹

The first buildings on the base were accepted by the Air Force in January, 1957, and included the chapel, a concrete block dining hall, several dormitories, communications and operations buildings, an

²⁷Ibid., July 12, 1955, p. 1.

²⁸Ibid.

²⁹North Dakota Salutes Minot Air Force Base (Lubbock, Texas: Boone Publications Inc.), 1965.

aircraft maintenance hangar, a community center, and a non-commissioned officers' open mess.³⁰

Since the initial construction in 1955, 36 projects were completed by 1959 with an estimated total cost exceeding \$50 million. Additional new buildings and additions were scheduled for construction in FY 1960, for which an additional \$2 million had been allocated.³¹

The 4136th Strategic Wing was activated in the summer of 1959 with control of the 906th Air Refueling Squadron. The unit received its first aircraft, a Boeing KC-135 Stratotanker, in October, 1959. Other 1959 achievements included the Air Force assuming control of the Veterans Administration Hospital in Minot, North Dakota, the opening of the commissary, social clubs (open messes), dental clinic, and the post office.³²

Wives clubs were formed, a weather detachment was activated, a central civilian personnel office was relocated from Minneapolis-St. Paul, Minnesota, and a base newspaper began publication. Approval also was received for the construction of a 25 classroom elementary school on base. Federal funds totaling \$730,000 were allocated, without requiring the availability of any matching funds from the local school board in Minot. An additional \$1.7 million was also allocated for the construction of a new weapons calibration, fire control, and navigation facility, a new addition to the heating plant and additional dormitory facilities.³³

³⁰Ibid.

³¹Jet Gazette, Minot AFB, N. D., October 2, 1959, p. 7.

³²North Dakota Salutes Minot Air Force Base (Lubbock, Texas: Boone Publications Inc.), 1965.

³³Ibid.

In completing the base exchange, the Jet Gazette observed that, on a national scale, the exchange system represents a billion dollars of business for the banks of the United States and pours some \$500 million annually into United States manufacturing, insurance, and other activities. This system also employs 65,000 civilians and provides income for 6,000 concessionaires.³⁴ Although base expenditures are analyzed in considerable detail in the following chapter, it might be of interest to note that more than \$3 million was expended in fiscal year 1970 for base exchange and concession purchases and salaries.

Capehart housing units opened in October 1960, when 40 units were accepted and made available for occupancy as enlisted mens' housing. The abse also received its first Convair Delta Dart Fighter-Interceptor in January 1960, and the 5th Fighter-Interceptor Squadron, whose personnel now fly the aircraft, was relocated from Suffolk County AFB, New York, in the same month.³⁵

Also appearing on the landscape of Minot Air Force Base was a huge concrete structure without windows extending three stories above ground and another below. This building, started in 1958, was built to house the Minot Air Defense Sector, a unit destined to become operational in June 1961, only to be declared surplus and ordered to cease operations in May 1962. The first Boeing B-52 Stratofortress arrived at Minot in July 1961. In addition, construction on an intercontinental ballistic missile complex began in the fall of 1961.³⁶

³⁴Jet Gazette, Minot AFB, N. D., November 2, 1959, p. 4.

³⁵North Dakota Salutes Minot Air Force Base (Lubbock, Texas: Boone Publications, Inc.), 1965.

³⁶Ibid.

With the continuing work on base facilities and the accelerated improvement in weapons systems development, the commitment to an active community relations program was also being fulfilled. Base personnel were reminded of the various restrictions which govern off-duty employment. Specifically, military were prohibited from off-duty work if:

1. The location of employment has been designated as an area having an overage of the particular labor involved.
2. The part-time work will adversely affect the performance of the individual's military duty.
3. Any expense to the military is involved.
4. The concern offering the employment is not a reputable firm or the employment would reflect discredit on the military.³⁷

In another area which also related to the community relations development, a team from Minot Air Force Base presented a briefing in an effort to locate new sources of procurement, encourage local suppliers to consider Air Force needs and accelerate competition among North Dakotans doing business with the Air Force. It was noted that:

Minot Air Force Base prefers to buy in North Dakota and the dollar value of goods and services bought and paid for by authority of the Minot base commander approaches \$8 million annually. About \$1.5 million worth of base supply re-issue stock items, of the \$14 million in total items stocked, could be procured locally if the (supply) sources were available.

The briefers welcomed businessmen to visit the base procurement office, advised them to get on the office's source list of suppliers, and to keep procurement continuously advised of the goods and services which they have to offer, and emphasized that Air Force procurement policies are the same as those employed by big business anywhere.³⁸

During 1962, building activity on Minot Air Force Base hit a

³⁷Jet Gazette, Minot AFB, N. D., September 28, 1962, p. 5.

³⁸Jet Gazette, Minot AFB, N. D., May 10, 1963, p. 5.

new high with the construction of a missile wing headquarters building, missile off-load facility, missile maintenance facility, munitions storage facility, plus smaller support facilities.³⁹

In constructing these missile sites and support facilities, more than 450 military and civilian personnel were assigned to the Site Alteration Task Force (SATAF). Construction contractor and sub-contractor personnel exceeded 6,000 and the monthly construction payroll was approximately \$2.5 million. The Boeing Company and its sub-contractors were expected to exceed 3,000 personnel by the fall of 1963. In addition to the major SATAF operation headquartered at Minot Air Force Base, dispatch areas or field offices had been established in nearby Max, Parshall, and Kenmare, to monitor the field activities within the three missile squadrons under construction.⁴⁰

Upon completion of the construction, the Minot Minuteman Wing will consist of 150 launch facilities (silos) and 15 launch control facilities. There will be practically nothing above ground to indicate the complexity and scope of the Minot Minuteman installation. Ironic though it may be, one of the greatest military construction and installation feats in history will be hidden from sight for all time.⁴¹

With the continuing development of all base functions, the Jet Gazette announced in March 1962 that the 1962 utilities payment of \$1,076,900 was the most expensive single type bill that was yet to be paid by the base. Such would offset the expenses incurred for electricity, water, gas and coal made available through local utilities.⁴²

³⁹Ibid.

⁴⁰Ibid.

⁴¹Ibid.

⁴²Jet Gazette, Minot AFB, N. D., March 24, 1962, p. 1.

As the base was continuing to grow at an accelerated rate, the cost of various support systems increased dramatically. Of greatest significance, however, was the cost of the sophisticated Minuteman missile complex at Minot Air Force Base which, from a planning stage through reality, had become a \$135 million project.⁴³

Utilities and hardware are vital necessities and the evidence has acutely demonstrated that they have become increasingly expensive. Although not accorded the same degree of publicity, the value of the medical and dental care afforded eligible military and civilian in-patients and out-patients by the local USAF Regional Hospital is also substantial. The magnitude of this entitlement dispensed to the military, their dependents and veterans exceeded \$2.1 million in fiscal year 1964.⁴⁴

This chapter has portrayed, in capsule summary, the significant events surrounding the development of the base, the deployment of complex and modern weapon systems dictated by national defense, and the introduction and expansion of various support areas to accommodate the assigned personnel. A historical summary of those base organizations whose expansion played such a dominant role in the accelerated growth of all sectors of the base and contributed significantly to the economic progress of Minot is included as an appendix to this study. In the following chapter, a more detailed economic analysis of the base is developed to demonstrate the impact of the base on the local community.

⁴³The Sentry, Minot AFB, N. D., October 31, 1962, p. 6.

⁴⁴Ibid., September 17, 1964, pp. 6-7.

CHAPTER IV

THE ECONOMIC IMPACT IN PERSPECTIVE

In this chapter, attention is focused on a recapitulation of those base developments treated incrementally in the foregoing chapters, together with additional statistical analyses, to present a multi-dimensional insight into the aggregate economic contribution of the base to the metropolitan area of Minot.

The related statistical information as made available by the Management Analysis Division, 862nd Combat Support Group, and through other sources as noted, reflects data through fiscal year 1970. The unavailability of data for this period is reported by exception; the currency of such data is noted. These reports contain a historical summary pertinent to base population, a summary of funds expended for base operations and services, and gross payroll figures for military and civilian employees of Minot Air Force Base. Also included is an estimate of the disposable income which is added to the local economy of Minot. Local purchases by the base exchange and Open Mess facilities are included as well as those initiated by other sectors which are responsible for the procurement of required goods and services for various Minot activities. Although considered in greater detail in the following sections of this chapter, it might be of interest to note at this time that approximately 40 percent of the Minot customers are base military and civilian employees.

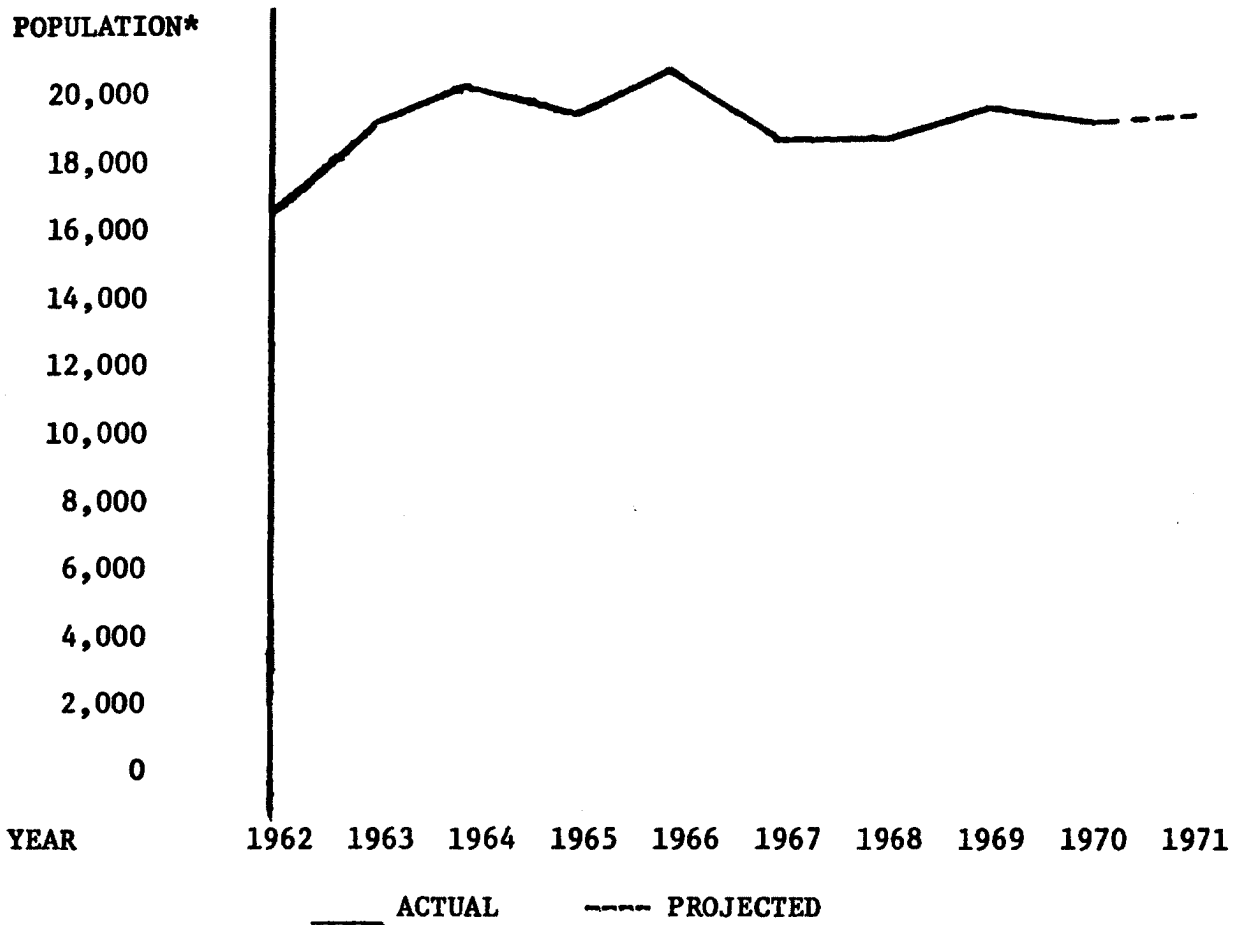
POPULATION AND HOUSING

The nucleus and prime resource of any organization, albeit civilian or military, is people. Accordingly, the economic importance of Minot Air Force Base to the local community is also centered on people, the military and civilian employees and dependents who either reside on the military installation or live in the metropolitan area of Minot. Their economic contributions to community development are expressed in terms of their earnings, their demands and the resultant attempts of the local economy to supply these demands. The permanency of the base thus assures the Minot merchants and businessmen of a continuous demand for a variety of products and services and a resultant stream of air base dollars into the local economy.

The housing of assigned married and single residents continues to be of paramount importance to the Air Force. The number of homes on the base including 2,470 family units, 179 trailers, and 24 dormitory buildings for bachelor officers, non-commissioned officers and airmen, now appears sufficient to meet the requirements of assigned personnel.⁴⁵

The community which is Minot Air Force Base comprises a population of 17,405 personnel. This total includes some 5,746 military, 8,377 dependents and 3,079 service and contractor employees and their dependents residing in the Minot area. Also included are 203 military and civilian personnel and their dependents assigned to units remote from the base, yet who receive logistical support from the base. A history of the base population is illustrated in Figure 1, to reflect

⁴⁵Interview with personnel of Management Analysis Division, 862nd Combat Support Group, Minot AFB, N. D., April 20, 1971.



*Population totals include military and civilian employees, on and off-base residents and their dependents.

SOURCE: Management Analysis Division, 862nd Combat Support Group, Minot Air Force Base, North Dakota,

Fig. 1.--Minot Air Force Base population 1962-1971.

trends as well as the 1966 variation generated as a result of an increase in contractor employees affiliated with the Minuteman construction program. The slight increase projected for 1971 reflects the continuation of the Minuteman III missile transition program and the associated gains in military and contractor personnel.⁴⁶

⁴⁶ Ibid.

PAYROLL AND EXPENDITURES

The fiscal year 1970 income for all personnel associated with Minot Air Force Base exceeds \$41 million. The payroll for military personnel and civil service employees was \$33.1 million; military personnel accounted for \$28.1 million, while the remaining increment of \$5 million was paid to civil service employees.⁴⁷

In addition to the Department of Defense (DOD) payroll, the base employs a considerable number of civilians in the Base Exchange, Non-Commissioned Officers' and Officers' Open Messes, and contractor and construction activities engaged in building various base facilities. The payroll for this group, which also includes concessionaire activities, amounted to \$8.1 million for fiscal year 1970. Thus, coupled with the DOD payroll, the Minot Air Force Base total payrolls amounted to over \$41 million. Of this total, over \$20 million was distributed throughout the economy of the local community.⁴⁸

An analysis conducted by the Management Analysis Division, 862nd Combat Support Group, Minot Air Force Base, of the military and civilian payroll, reflects actual expenditures by category in the local area (Table 7). The percentage allocation of disposable income by category is included (Figure 2).⁴⁹

The millions of dollars in income earned by the military and civilians employed at Minot Air Force Base flow into the local economy through expenditures for food, housing, clothing, household appliances,

⁴⁷Ibid.

⁴⁸Ibid.

⁴⁹Ibid.

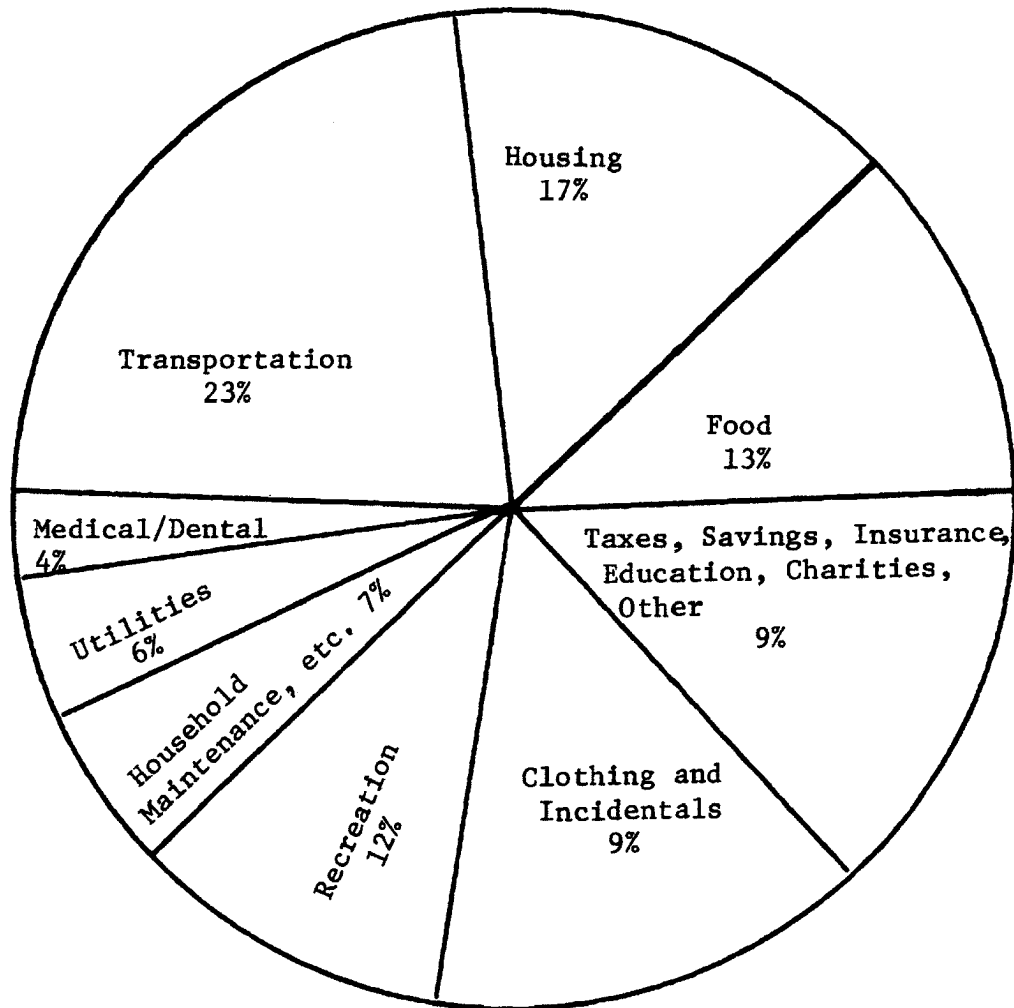
TABLE 7
ANALYSIS OF PAYROLL EXPENDITURES BY CATEGORY
1970

Category	LOCAL MONTHLY EXPENDITURES*			Annual Total
	Military	Civilian	Total	
Housing/Rent	\$ 175,460	\$ 59,870	\$ 235,330	\$ 2,823,925
Food	119,313	61,542	180,855	2,170,260
Utilities	60,826	18,839	79,665	995,980
Household Maintenance, Appliances and Furnishings	53,808	17,584	71,392	856,704
Clothing/ Incidentals	109,955	17,165	127,120	1,525,440
Medical/ Dental	37,431	13,816	51,247	614,964
Transportation	276,058	46,889	322,947	3,875,354
Recreation	142,707	18,002	160,709	1,928,508
Taxes, Savings, Insurance, Education, Charities, Other	112,943	28,050	140,993	1,691,916
TOTAL**	\$1,088,501	\$281,757	\$1,370,258	\$16,443,061
GROSS PAY	\$2,339,463	\$418,653	\$2,758,116	\$33,097,392

*These amounts flow directly into the local economy of Minot and do not reflect on-base expenditures.

**The differences in disposable income expended in the local economy and the gross income, reflect disposable income allocated for on-base savings, on-base spending in the commissary, base exchange and clubs, federal and state taxes, and payments for purchases occurring external to the Minot area.

SOURCE: Management Analysis Division, 862nd Combat Support Group, Minot Air Force Base, North Dakota



SOURCE: Management Analysis Division, 862nd Combat Support Group, Minot Air Force Base, North Dakota.

Fig. 2.--Percentage allocation of disposable income by category by Minot Air Force Base military and civilian employees, 1970.

recreation and other needs which were supplied by area merchants. The Minot Air Force Base population of 17,405 represents more than 40 percent of the people who shop in metropolitan Minot. Further, of the total Minot retail sales of some \$85 million, approximately 25 percent is represented by payroll expenditures of military and civilian base employees.⁵⁰

BASE PROCUREMENT

In addition to the \$20 million in disposable income, Minot Air Force Base expended nearly \$16 million in fiscal year 1970 for materials and services and various other activities which are related to the functions of the base and its residents. A recapitulation of all expenditures is included in the table concluding this section (Table 8). The following analysis indicates the distribution of these \$16 million.

Supplies and Equipment

In excess of \$2.9 million was expended for supplies and equipment necessary to operate the many activities centralized at Minot Air Force Base. These purchases include a wide variety of items such as automotive parts, building materials, paper products, office supplies, and bench stock equipment.⁵¹

Local Purchases for Clubs and Base Exchange

In excess of \$2.5 million was spent locally by the Officers' Club, NCO Club and the Base Exchange in fiscal year 1970. These

⁵⁰Ibid.

⁵¹Ibid.

TABLE 8

LOCAL AREA IMPACT DATA

LOCAL EXPENDITURES BY AND FOR MINOT AIR FORCE BASE
July 1, 1969 - June 30, 1970

Supplies and Equipment	\$ 2,932,227
Utilities	1,491,146
Subsistence Items (Commissary)	4,399,641
Maintenance and Services	775,000
Construction	480,300
Fuels and Lubricants	692,296
Clubs (Officer and Enlisted)	1,194,051
BX Facilities	1,564,212
Federal Impact Expenditures	1,330,056
Base Sponsored Education Programs	250,759
Transportation to Local Sectarian Schools	250,410
Yearly Payrolls of Military, Concession, Contractor and Civilian Employees	20,500,000
Automobile Registration and North Dakota Gasoline Tax	283,490
Property Damage Claims	12,500
Combined Federal Campaign Contribution	50,000
TOTAL IMPACT	<u>\$35,981,088</u>

SOURCE: Management Analysis Division, 862nd Combat Support Group,
Minot Air Force Base, North Dakota.

purchases included food and beverages, services and equipment for the clubs, plus services and retail inventory for the Base Exchange. Supplies and equipment for base gym, craft and hobby shops, and library were also included.⁵²

⁵²Ibid.

Utilities

Approximately \$1.5 million was expended by the base in fiscal year 1970 for utilities and communications which were used by on-base facilities.⁵³

Local Commissary Purchases

The base spent approximately \$1.5 million in local purchases for the commissary. These items were procured for use in dining halls and for the operation of the commissary. Included were dairy products, North Dakota beef, eggs, vegetables and bakery goods purchased in the Minot area.⁵⁴

Other Commissary Purchases

Minot Air Force Base spent \$2.9 million on other commissary and subsistence type items which were not purchased locally. These were predominantly foodstuffs and household items provided for dining halls and the commissary. Most of these items were purchased through DOD procurement agencies on a national level.⁵⁵

Real Property Maintenance

Minot Air Force Base spent nearly \$225,000 in 1970 to maintain buildings, roads, and grounds. This maintenance was accomplished by

⁵³Ibid.

⁵⁴Interview with personnel of Commissary, 862nd Combat Support Group, Minot AFB, N. D., April 22, 1971.

⁵⁵Ibid.

soliciting bids from interested local contractors. Contracts awarded to out-of-town bidders were usually accomplished through the employment of local craftsmen.⁵⁶

Private Automobile Registrations

For calendar year 1970, 2,625 automobiles owned by base personnel were licensed in the state of North Dakota. At an average fee of \$30 per automobile, some \$78,740 was realized by the state.⁵⁷

State Gasoline Tax

Some 6,500 private automobiles bear Minot Air Force Base decals. An estimated 9,000 miles traveled per year, at an average of 15 miles per gallon, indicates an annual gasoline consumption of approximately 3.9 million gallons. Assuming that 75 percent was purchased in North Dakota, the seven cent state gasoline sales tax yields the state about \$275,000 yearly. All told, the military and civilian personnel assigned to or working at Minot Air Force Base, contribute a total of about \$353,740 annually to the state of North Dakota through payment of license fees and gasoline tax in the operation of their private vehicles.⁵⁸

Facilities Construction

During fiscal year 1970, about \$480 thousand was spent for construction and modification of buildings on the base. These projects

⁵⁶Interview with personnel of 862nd Civil Engineering Squadron, 862nd Combat Support Group, Minot AFB, N. D., April 23, 1971.

⁵⁷Interview with personnel of Management Analysis Division, 862nd Combat Support Group, Minot AFB, N. D., April 20, 1971.

⁵⁸Ibid.

these projects included construction of a missile payload transporter, heating plant, computer and heated auto storage facilities.⁵⁹

Federal Impact Funds

During fiscal year 1970, the Federal Government returned \$1.3 million to the Minot Public School system for the education of about three thousand military dependents. Cost of transportation afforded dependent students to local sectarian schools was an additional \$25,410. These impact funds, as well as the government funded transportation program, continued to add to the expanding local economy of Minot.⁶⁰

Education Programs

During 1970, the base provided a total of \$68,259 in the form of military tuition assistance and group study programs conducted for military, civilian and dependent personnel. The major portion of these funds was expended in the form of tuition assistance for various graduate and undergraduate programs conducted at the Universities of North Dakota and Oklahoma, Minot State College and Bismarck Junior College, group study classes conducted by Minot College of Business and in associated non-credit courses.⁶¹

⁵⁹Interview with personnel of 862nd Civil Engineering Squadron, 862nd Combat Support Group, Minot AFB, N. D., April 23, 1971.

⁶⁰Interview with personnel of Base Education Office, 862nd Combat Support Group, Minot AFB, N. D., April 23, 1971.

⁶¹Interview with personnel of Base Education Office, 862nd Combat Support Group, Minot AFB, N. D., April 23, 1971.

In fiscal year 1970, the Minuteman Education Program at Minot Air Force Base, under the joint auspices of the Air Force and the University of North Dakota, conducted a graduate studies program in Industrial Management. The funds expended by the Air Force for fulfillment of contract obligations to the University, book reimbursements, and the local purchase of supplies and equipment, totaled \$182,500. The majority of these funds were expended for salaries of the faculty as well as administration and clerical personnel, and thus added to the local economy.⁶²

Services

Minot Air Force Base spent \$550,000 in fiscal year 1970 for contract maintenance, laundry, office machine rental, and various other services furnished the base by local resources.⁶³

The base is also involved in the adjudication of property damage claims which are filed against the Air Force by nearby landowners. In fiscal year 1970, the base assisted in the settlement of \$12,500 in claims against the government, most of which resulted from sonic boom damage to property owned by neighboring farmers and ranchers.⁶⁴

A recapitulation of the statistical analyses reflects \$20 million in disposable payroll income which is made available to the local economy. An additional \$16 million was also expended by Minot Air Force Base agencies and activities for the procurement of military

⁶²Interview with personnel of AFIT Detachment 7 (AU), Minot AFB, N. D., April 22, 1971.

⁶³Interview with personnel of Management Analysis Division, 862nd Combat Support Group, Minot AFB, N. D., April 20, 1971.

⁶⁴Interview with personnel of Claims Section, Base Judge Advocate, 862nd Combat Support Group, Minot AFB, N. D., April 22, 1971.

supplies and equipment, consumer oriented merchandise and mission essential hardware. In combining these two sectors, the total annual economic contribution of the base is determined to be approximately \$36 million (Table 8).

The Management Analysis Division, 91st Strategic Missile Wing has employed the concept of the economic multiplier in analyzing the true significance of the combined expenditures of \$20 million in disposable income and \$16 million in local procurement expenditures. Essentially, the effective multiplier represents the ratio of the increase in total income to an increase in investment and emphasizes the marginal propensity to consume as being the active factor in the determination of a multiplier. The application of the estimated multiplier of two to these \$36 million, as infusions of consumption into the regional economy, yields an aggregate impact of \$72 million per annum. The additional \$36 million represents the sum total of the investment which is incrementally induced into the economy.⁶⁵

BASE ASSETS

The United States Government, in supporting the assigned mission of the units located at Minot Air Force Base, has a capital investment of \$992.8 million.⁶⁶

The combined Minuteman I and Minuteman III missile weapon systems represents an investment of \$300 million. Associated missile support equipment and facilities constitutes an additional \$112.5 million. The asset valuation of missile hardware and facilities together

⁶⁵Interview with personnel of Management Analysis Division, 91st Strategic Missile Wing, Minot AFB, N. D., May 18, 1971.

⁶⁶Interview with personnel of Management Analysis Division, 862nd Combat Support Group, Minot AFB, N. D., April 20, 1971.

represent the major portion, \$412.5 million or 41 percent of the total investment.⁶⁷

A fleet of multi-million dollar B-52 bombers, KC-135 strato-tankers, helicopters and support aircraft, which comprise 30 percent of the total investment, is valued at \$304 million.⁶⁸

Currently, Minot Air Force Base has 2,730 structures including base housing, located on 4,297 acres of land. Required easements have been obtained on an additional 19,819 acres for Air Force utilization. These fixed assets are valued at a total of \$129.9 million and amount to 13 percent of the total assets.⁶⁹

Base equipment, another critical asset, comprises 15 percent of the total assets, and includes some 14,000 types of equipment. This equipment ranges from office furniture and refueling vehicles to expensive tool kits. The final asset, supply inventory, includes in excess of 35,000 line items and represents one percent of base assets. This inventory has a turnover rate of nine times per year and is critical to the operation of the base and fulfillment of all missions assigned to this installation.⁷⁰

COMMUNITY AFFAIRS

As one of the world's greatest military organizations, the attendant responsibilities of its members are demanding; however, they have not been deterred from accepting their responsibilities as citizens of the community in which they presently reside. They have welcomed the opportunity to participate in all civic responsibilities and community affairs.

⁶⁷Ibid.

⁶⁸Ibid.

⁶⁹Ibid.

⁷⁰Ibid.

Military personnel actively participate in the activities of the Chamber of Commerce, Kiwanis, Masons, Lions, Toastmasters, PTA, Knights of Columbus, and veterans organizations throughout the local community. Many have joined churches in the community and regularly participate in religious and charitable activities.

In fiscal year 1970, Minot Air Force Base military and civilian personnel contributed a total of \$50,000 toward the Combined Federal Campaign. These funds were allocated to a host of charitable agencies functioning in the metropolitan area of Minot for the benefit of all residents in the community.⁷¹

The following chapter considers the impact of the base in contributing to the economic growth of the region consisting of the base-community as the nucleus and the surrounding rural areas. Specific illustrations reflect the qualitative dividends which are accrued to both the regional nucleus and adjacent communities and which result in further economic growth.

⁷¹Ibid.

CHAPTER V

REGIONAL ECONOMIC GROWTH

The concept of regionalism, also identified as the study of regional economics, is highly pertinent to the central theme of this study. As such, selected portions of the preceding chapters are reintroduced to illustrate the dynamics of regional economics and the contributions of the base to the aggregate development of the Minot region. This section also describes briefly the characteristics of a region and demonstrates certain qualitative dividends accruing to the region whose nucleus constitutes the base-community complex. The quantitative aspects, theoretical in nature, yet of considerable value in an analysis of present and future growth potential of the region, will remain as a subject for future study.

By definition, regional economics is the study of the spatial order of the economy. That is, the study of the geographic allocation of an array of economic assets. Accordingly, households, factories, schools, banks and hospitals reflect orderly and patterned locations. Studies indicate that households, businesses and other similar assets are established at locations which provide profit optimization, marketing advantages and increased production efficiency. The ultimate objective, it must be concluded, is profit maximization.⁷²

⁷²Hugh O. Nourse, Regional Economics (New York: McGraw-Hill Book Company, 1968), p. 4.

With the availability of transportation networks, waterways, suitable topography, and natural resources to achieve this objective, Minot rapidly grew as a city region. These factors of economic growth also generated changes in the geographic structure of the city economy. Increasing population, rising per capita income and more efficient agricultural production, which have characterized the Minot community, would be expected to substantially affect the number, size and spacing of nearby cities as well as surrounding rural patterns. This causal relation can also be reversed to demonstrate the resulting accelerated economic progress of the rural areas surrounding this regional nucleus. Historically, this process of development has characterized the growth of Minot and the rural communities which are adjacent to this city region.⁷³

As one of several means for isolating the economic regions of the United States, Nourse offers the "functional integration principle" which assigns all areas tied to the same controlling nucleus to a network called a region. The Standard Metropolitan Statistical Area (SMSA), as used by the Bureau of the Census, is a standard definition for metropolitan areas and is defined by the functional integration principle. Essentially, the SMSA is specifically defined as a county or group of contiguous counties which comprise at least one city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000. In North Dakota only the Fargo-Moorhead area is identified as an SMSA as of 1967, whereas at present, the base-city complex of Minot would qualify under the twin cities criterion. As reflected in Chapter II of this study, Minot serves as a retail,

⁷³Ibid., p. 6.

wholesale, culture and service center for an area extending approximately 600 miles east to west and 350 miles north to south. Included in the area are the Canadian provinces of Saskatchewan and Manitoba and eastern Montana.⁷⁴

In the further development of this profile, it is again observed that the 50,000 plus population of the base-community is consistent with the foregoing criterion. Moreover, the success of the regional nucleus is evidenced by Minot's 16 percent growth rate in population, as contrasted with the state's negative growth rate of 2.3 percent since 1960.⁷⁵

To further substantiate this success, it was mentioned in Chapter II of this study, that Minot has ranked second in the state for 23 of the past 24 years with respect to retail sales. As the nucleus of a ten county retail trade area, Minot's retail sales in 1969 exceeded \$85 million and have increased by more than 30 percent between 1961 and 1969. In addition, it has been estimated that the city has captured nearly 50 percent of the business of these ten counties.

Lösch observes that in rare and particularly fortunate cases these economic centers are the same cultural and political ones, thus becoming the true nucleus of the region.⁷⁶ As the location of the county seat and cultural center of the region, Minot and its citizens are indeed fortunate.

⁷⁴Ibid., p. 130.

⁷⁵Ibid.

⁷⁶August Lösch, "The Nature of Economic Regions," in Regional Development and Planning, p. 114, edited by John Friedman and William Alonso, Cambridge, Mass.: The MIT Press, 1964.

In analyzing certain areas serviced by a project or service of extraordinary proportions, it becomes imperative to define the boundaries of the area. As an example, in the case of a region serviced by a hydroelectric plant, the region must be defined as to incorporate the major areas impacted by this facility. Despite various statistical limitations, Nourse suggests that the boundaries of urban regions be defined on the basis of the labor market areas instead of along county lines. These geographic regions are designated Functional Economic Areas and are considered more useful than the current SMSA approach for the analysis of the impact on the area of a plant relocation, the loss of a key government contract or the acquisition of a military installation--such as Minot Air Force Base.⁷⁷

In a labor market analysis of Minot, as a regional nucleus, it has been observed that the city is the center of a vast agricultural area and serves as a grain shipping center, as well as a distribution center for farm equipment. A variety of raw materials and mineral resources, including the largest supply of low-cost fuel (lignite) in the Western Hemisphere, as well as one of the nation's most prolific oil basins, all combine to offer attractive incentives for certain types of chemicals, petro-chemicals and fertilizer industries in the Minot area. The continuing development of these industries continue to contribute to the growth of Minot as the regional nucleus and to the growth of the surrounding communities as well. Thus, the reversibility of this causal relation is defined.⁷⁸

⁷⁷Ibid., p. 136.

⁷⁸Ibid.

In concluding this chapter it would be pertinent to reflect several graphic illustrations of the regional impact of the \$72 million per annum which is infused into the economy by Minot Air Force Base. In the context of regional economics, the concentrated population of some 50,000 is observed as affording a greater array of opportunities with respect to per capita income, as well as a host of cultural and health benefits. Conversely, these same benefits and opportunities might not be available to any of these people if they were located in 25 towns of 2,000 people each, ten towns of 5,000 each, or five towns of 10,000 people each. As an illustration, the city has firms of 13 industries having 100 or more employees. If the Minot population were 10,000, it is highly conceivable that several of these industries would find it economically infeasible to locate in Minot. Similarly, the Minot International Airport would be located elsewhere were it not for the degree of passenger and freight revenue realized at its present location. Consistent with this rationale, art museums, specialized medical services, and professional entertainment are identifiable with population concentrations which are regional centers. The location of the military base adds to this concentration index and thus contributes to the entire range of fringe benefits made available to the regional population. In a narrower context, the base has also afforded tangible benefits for the military personnel assigned to the base. As one illustration among many, were it not for the size of the base, the Air Force Regional Hospital might well have been located elsewhere.

The foregoing represent but a few illustrations of the dynamics of regional economics, the wide-ranging benefits which are accrued to the residents of the region and especially the regional

nucleus. The \$72 million economic impact of the base on the regional complex conclusively and significantly benefits community residents, the military personnel assigned to Minot Air Force Base and residents of nearby rural areas.

CHAPTER VI

CONCLUSION

Americans exercise their continuing commitments to democracy and the democratic systems throughout the free world. All Americans should also be vitally concerned for the continuing drain on the nation's resources on which the support of these democratic systems is predicated. Necessarily, the military places considerable emphasis on the establishment of a favorable public image--to assist in obtaining the required appropriations for mission essential materials and to enhance community relations in the multitude of military-community complexes in the United States and abroad. In fulfilling these objectives, the Air Force has provided definitive guidance for the development of a viable community relations program. These guidelines provide the means for assisting the base integration into community life and for creating a climate of mutual understanding between the military installation and its surrounding community.

The relations between the military establishment of Minot Air Force Base and the civilian community have been highly satisfactory and for good reason. The dedication of business representatives, civic officials and citizens of Minot played a major role in assuring the present location of the air base. Originally designed as a fighter-interceptor location, the mission capability of the base has expanded well beyond original plans. Moreover, the economic growth

has paralleled this expansion to the extent that the base currently maintains an asset inventory valued at approximately one billion dollars and contributes more than \$72 million to the Minot economy in the form of disposable income and procurement of equipment and supplies (Table 7). The base, with a population exceeding 17,000, is considered the fifth largest city in the state (Table 3). Considering the multiplier effect, the quantification of the economic contributions yields an aggregate impact of some \$72 million per annum which has benefitted the entire region. The base, in augmenting the concentration of the base-community nucleus, has afforded a host of qualitative dividends which were realized by the regional nucleus as well as the adjacent rural communities.

The city of Minot has also experienced substantial growth since its inception in 1887 as a railroad town and, today, Minot is the third largest city in the state of North Dakota (Table 3). Although not widely publicized, of greater significance is the combined economic power of the military-industrial complex which is represented by the base and the city of Minot. The economic impact of Minot Air Force Base has played a highly influential role in the structure and extent of this complex. As previously documented, 40 percent of the Minot shoppers are base residents and employees whose spending comprises between 20 and 40 percent of the annual retail sales volume (Tables 6, 7 and 8).

The economic contributions of the base to the community are all the more meaningful in light of the reduced population throughout the state. The progressive growth in the Minot area continues as a prime exception to this trend (Table 3). The conclusion, patently

obvious but equally unpublicized, is that the base has been a key determinant in the growth and prosperity of Minot, to the extent that this community has effectively countered this statewide trend.

For the future, it is reasonable to assume that the economic prosperity of metropolitan Minot will continue to receive strong support from Minot Air Force Base. The air base population has stabilized and will continue to require food, clothing and assorted other products and services which are provided locally. Therefore, Minot and the surrounding region will continue to benefit materially from the \$72 million annual impact which Minot Air Force Base represents. In quantifying the economic significance of the base to the local community, the basic objectives of this study have been satisfied and the original hypothesis validated. The question which is most important and that which will remain as a subject for further study, is whether the continuing economic contributions to regional and community affluence will assist in achieving a greater mutual respect and understanding between the civilian community and the military of Minot Air Force Base. These then, are the ultimate objectives to be achieved.

APPENDIX

MINOT AIR FORCE BASE ORGANIZATIONS

The 91st Strategic Missile Wing (SMW) was originally constituted as the 91st Bombardment Group on January 28, 1942, and activated on April 15, 1942, at Harding Field, Louisiana. It was at this location that the group began training in B-17 Flying Fortresses, the aircraft they were to fly throughout World War II. During this period the group witnessed numerous changes in designation, activations, and inactivations and added a host of awards to its banner.⁷⁸

During the history of the new 91st Bombardment Wing from February 1953 through June 1958, the unit had added a list of exceptional achievements by winning two additional Air Force Outstanding Unit Awards. The first award was for overall meritorious performance from June 1965 through July 1966; the second citation was presented for the outstanding success of its air operations in Southeast Asia from June 1966 through July 1967. This was the first time that a Boeing B-52 Stratofortress unit had won consecutive Outstanding Unit citations.⁷⁹

After its deactivation on June 25, 1968, the 91st Bombardment Wing was redesignated the 91st Strategic Missile Wing at Minot Air

⁷⁸The Sentry (Minot AFB), March 19, 1971, p. 2.

⁷⁹Ibid.

Force Base. The 91SMW no longer flew bombers but had transitioned into a dynamically different deterrent force composed of 150 Minuteman missiles. The Minuteman missiles belonged to the 455th Strategic Missile Wing prior to its redesignation to the 91st Strategic Missile Wing in 1968.⁸⁰

The latest achievement of the new 91SMW was its selection as the first wing in the United States Air Force to receive one of the free world's newest weapon systems, the Minuteman III missile. The installation of this new weapon system began in January 1970 and is expected to be completed in early 1972.

The Fifth Pursuit Squadron was activated January 16, 1941, at Selfridge Field, Michigan. The squadron's first months were spent flying the Curtiss P-40 War Hawk and Bell P-39 Air Cobra. World War II found the unit deployed to a Royal Air Force Base where they trained in the British Spitfire and acquired their nickname, "Spittin' Kittens," and the emblem they use today. During World War II, the squadron saw action in England, North Africa, Italy, France, Germany, Rumania, and the Balkan countries, for which it was twice awarded the Distinguished Unit Citation.⁸¹

After the victory in Europe and a series of short moves, the 5th was deactivated and then reactivated in 1946. In October 1949, the squadron moved to McGuire AFB, New Jersey, to fly the F-82, F-94 and North American F-86. Later moves were to Suffolk County AFB, New York, in August, 1955, to fly the first supersonic interceptor, the F-102 Delta Dagger, and then to Minot, North Dakota, in February

⁸⁰Ibid.

⁸¹Ibid.

1960. At its present location, the 5th Fighter-Interceptor Squadron acquired the Convair F-106 Delta Dart and became the first interceptor squadron in the nation to become operationally ready in this Delta aircraft.⁸²

The history and traditions of the Fifth Bombardment Wing have been long and noteworthy. The Second Group, the predecessor of the Fifth, was activated August 15, 1919, at Luke Field, on the island of Oahu, Hawaii, and was later moved to Hickam Field, Hawaii. Hickam Field remained the home of the redesignated 5th Group until 1942.⁸³

Prior to the attack on Pearl Harbor, personnel of the 5th Group spent most of their time in practice bombing, navigation, tracking and aerial gunnery training missions. They also performed various services for the territorial forestry division in the Hawaiian Islands. In 1935, the unit bombed a lava flow from the Mano Loa volcano to divert the molten rock from destroying the city of Hilo. The 23rd Bombardment Squadron adopted as their insignia an emblem showing six bombs falling into the mouth of a volcano.⁸⁴

In 1968, the 5th Bombardment Wing moved from Travis AFB, California, to Minot AFB, North Dakota. The aircraft model changed with the movement from the B-52G to the B-52H. The "H" model Stratofortress is the latest and most advanced version of the Boeing-built global bomber. The 196th Air Refueling Squadron remained at Travis, while the 906th Air Refueling Squadron and the 23rd Bomb Squadron became the

⁸²Ibid.

⁸³Ibid.

⁸⁴Ibid.

wing's tactical squadrons at Minot Air Force Base.⁸⁵

The Air Force is also responsible for operation of the completely modern \$5,000,000 Veterans' Hospital in Minot which is designated the USAF Regional Hospital. This hospital, which also continues to provide in-patient care to veterans of the area is staffed by 17 physicians as well as specialists in radiology, laboratory and other ancillary services. This joint military-veteran medical facility has 100 beds with a capacity for expansion to 140.⁸⁶

⁸⁵Ibid.

⁸⁶Minot Chamber of Commerce Bulletin, Medical Facilities, Minot, N. D., 1970, p. 1.

BIBLIOGRAPHY

Books

- Air Officer's Guide. Harrisburg, Pa.: The Stackpole Company, 1968.
- Hauser, Philip M., and Leonard, William R. Government Statistics for Business Use. New York: John Wiley and Sons, Inc., 1967.
- Kaufman, Richard F. "The 80-Billion Dollar Defense System," The New Information Please Almanac. New York: 1970.
- Kazeck, Melvin E. North Dakota, A Human and Economic Geography. Minneapolis: Lund Press, Inc., 1956.
- Lösch, August, "The Nature of Economic Regions," in Regional Development and Planning, edited by John Friedman and William Alonso. Cambridge, Mass.: The MIT Press, 1964.
- McGuire, Joseph W. Business and Society. New York: McGraw-Hill Book Company, Inc., 1963.
- Nourse, Hugh O. Regional Economics. New York: McGraw-Hill Book Company, Inc., 1968.

Public Documents

- U.S. Bureau of the Census. Census of Manufacturers - 1963.
- U.S. Bureau of the Census. County Business Patterns - 1966.
- U.S. Bureau of the Census. County Business Patterns - 1969.
- U.S. Bureau of the Census. 1967 Census of Business, Retail Trade Line Sales for North Dakota.
- U.S. Bureau of the Census. 1967 Census of Manufacturers, North Dakota.
- U.S. Bureau of the Census. United States Census of Population, 1960, North Dakota.
- U.S. Department of Labor. Employment and Earnings Statistics for the U.S., 1909-1966.
- U.S. Air Force. Community Relations Program, AFR 190-20, May 19, 1966.

Articles and Periodicals

- "AF Rules Govern Off-Duty Employment," Jet Gazette (Minot AFB, N. D.), September 28, 1962.
- "Base Construction Exceeds 50 Million," Jet Gazette (Minot AFB, N. D.), October 2, 1959.
- "Base Utilities Bill Exceeds One Million," Jet Gazette (Minot AFB, N. D.), March 24, 1962.
- "Government and Labor Get Top Inflation Blame," The Minot Daily News (Minot, N.D.), August 3, 1970.
- "Inflation's Stubborn Resistance," Time (New York), December 14, 1970.
- "Minot AFB 'Alert' Units Add Color to Command History," The Sentry (Minot AFB, N. D.), March 19, 1971.
- "Minot Jet Base Grant Approved," Minot Daily News (Minot, N. D.), July 16, 1954.
- "Minot Land Suitable for Base Location," Minot Daily News (Minot, N. D.), May 13, 1954.
- "Minuteman to Cost 135 Million," The Sentry (Minot AFB, N. D.), October 31, 1962.
- "North Dakota to Get Two Air Bases," Minot Daily News (Minot, N. D.), February 11, 1954.
- "Pentagon is Seeking its Smallest Share of Budget Since Fiscal 1950," The Wall Street Journal (New York), February 3, 1970.
- "SATAF Gets the Minuteman Silos," Jet Gazette (Minot AFB, N. D.), May 10, 1963.
- "School Construction Approved," Jet Gazette (Minot AFB, N.D.), November 2, 1959.
- "Survey of Buying Power," Sales Management, The Marketing Magazine (New York), June 10, 1970.
- "The President Digs in on Vietnam," Time (New York), April 19, 1971.
- "The Unhappy Americans," U.S. News and World Report (New York), April 21, 1971.
- "Value of Medical Care High; 862nd Spends Two Million," The Sentry (Minot AFB, N. D.), September 17, 1964.
- "Vets Facing Job Squeeze," Air Force Times (Washington, D. C.), April 21, 1971.

" '70 Census: The Final Figures," U.S. News and World Report (New York), December 14, 1970.

Unpublished Material

- Minot Chamber of Commerce Bulletin. "Communication and Transportation." Minot, N. D., 1970.
- Minot Chamber of Commerce Bulletin. "Manufacturing and Industrial Opportunities." Minot, N. D., 1970.
- Minot Chamber of Commerce Bulletin. "Medical Facilities." Minot, N. D., 1970.
- Minot Chamber of Commerce Bulletin. "Minot, North Dakota." Chicago: Windsor Publications, 1968.
- Minot Chamber of Commerce Bulletin. "Minot Story." Minot, N.D., 1968.
- Minot Chamber of Commerce Bulletin. "Population and Manpower." Minot, N. D., n.d.
- Minot Chamber of Commerce Unofficial Guide. "The Magic City Salutes Minot AFB." Lubbock, Texas: Boone Publications, Inc., 1970.
- Montana-Dakota Utilities Company. "Community Analysis." Minot, N. D., 1970.
- Project North Dakota Reference Resource, Dept. of Public Instruction, M. F. Peterson, Supt. of Public Instruction, 1969.

Other Sources

- AFIT Detachment 7 (Air University), Minot AFB, N. D. Personal interview on April 22, 1971.
- Base Education Office (862nd Combat Support Group), Minot AFB, N. D. Personal interview on April 23, 1971.
- Base Judge Advocate (862nd Combat Support Group), Minot AFB, N. D. Personal interview with Claims Section on April 22, 1971.
- Chamber of Commerce, Minot, N. D. Personal interview with A. R. Weinhandl, President of the Minot Chamber of Commerce in 1955, April 16, 1971.
- Civil Engineering Squadron (862nd Combat Support Group), Minot AFB, N. D. Personal interview on April 23, 1971.
- Commissary (862nd Combat Support Group), Minot AFB, N. D. Personal interview on April 22, 1971.

Management Analysis Division (862nd Combat Support Group), Minot AFB,
N. D. Personal interview with Thomas J. Melton, Chief,
on April 20, 1971.

Management Analysis Division (91st Strategic Missile Wing), Minot AFB,
N. D. Personal interview with Captain William Madden, May 18,
1970.

Resolution Passed by City Commission, Minot, N. D., May 17, 1954.