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# Determining if Development Capacity Leads to the Attainment of Redevelopment Goals for Six Communities Affected by Base Realignment and Closure (1988, 1991, and 1993)

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**DETERMINING IF DEVELOPMENT CAPACITY LEADS TO THE  
ATTAINMENT OF REDEVELOPMENT GOALS FOR SIX  
COMMUNITIES AFFECTED BY BASE REALIGNMENT AND  
CLOSURE (1988, 1991, AND 1993)**

by

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
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## **ABSTRACT**

### **DETERMINING IF DEVELOPMENT CAPACITY LEADS TO THE ATTAINMENT OF REDEVELOPMENT GOALS FOR SIX BASES CLOSED UNDER BASE REALIGNMENT AND CLOSURE (1988, 1991, and 1993)**

**Paula J. Loomis  
Old Dominion University, 2015  
Director: Dr. John C. Morris**

The McGuire et al. model (1994) showed that development of a strategic plan led to higher development capacity, but did not address the relationship between development capacity and redevelopment success. This study examined the link between development capacity and redevelopment success.

This study examined six base realignment and closure communities. Following the Yin Multiple Case Study Method, each community was evaluated on its own merits before being compared with other communities. In this study the McGuire et al. model was expanded to fourteen variables in three categories; citizen participation, community structure, and development instruments. Redevelopment success was measured by attainment of the communities' redevelopment goals and indices used by other development agencies.

The results show that higher development capacity leads to higher redevelopment success when measured by indices used by other agencies and attainment of community redevelopment goals. The most significant category is development instruments. The most significant variables are lead agency, an appropriate development focus, and investing in institutional infrastructure.

## ACKNOWLEDGEMENTS

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## CHAPTER I

### INTRODUCTION

Local governments and communities are often the primary entities responsible for economic growth and survival. For many communities, locally based development, redevelopment, or self-development has become an objective. Many believe that the development capacity of communities becomes a prime determinant of economic, and thus government, performance. Low capacity to encourage development projects probably means that a community will have difficulty realizing economic development goals (Hall 2008, 112). Research has shown that the development of a strategic plan leads to higher development capacity (McGuire et al. 1994). McGuire et al. developed a Development Capacity Model that links the existence of a development plan to higher development capacity. Their model, however, did not show a relationship between development capacity and the achievement of development/redevelopment goals. The objective of this study was to determine if there is a link between higher levels of development capacity and the achievement of redevelopment goals.

This study is a multiple-case study employing cross-case analysis (replication logic), using qualitative variables to examine the relationship between development capacity and attainment of redevelopment goals. This study used six communities associated with bases closed under the 1988, 1991, and 1993 Base Realignment and Closure (BRAC) rounds as case studies. This study used the Yin Multiple Case Replication Study Method (2009) to study and compare the cases. Chapter one lays out the purpose, background, settings, problem statement, and research questions. Chapter

two provides the literature review. Chapter three outlines the methodology. Chapter four reviews the analysis and results. Chapter five presents conclusions.

### **Purpose Statement**

The purpose of this research study was to examine the link between development capacity and the attainment of local redevelopment goals to help local communities determine whether or not they should adopt policies/programs to improve their development capacity. This study is based on development capacity research by McGuire et al. (1994). Their model used the existence/non-existence of a development plan as the independent variable and development capacity with 13 variables as the dependent variable to show that the existence of a development plan is related to greater development capacity. Although the McGuire et al. research successfully showed that the existence of a development plan was positively related to increased development capacity—it did not tie development capacity to development or redevelopment results.

Tying development capacity to the achievement of development goals is important information for communities trying to reach development goals while also deciding where to allocate limited funds. If there is no tie between increased development capacity and development/redevelopment results, then there is no need for communities to pursue increased development capacity. This study examined the link between development capacity as measured by McGuire et al. (1994) and the attainment of local redevelopment goals as defined by community local redevelopment plans (LRPs) and indices used by other agencies using six communities affected by the 1988, 1991, and 1993 BRAC

rounds. This study was a multiple-case study employing cross-case analysis that used qualitative indicators to examine the relationship between development capacity and attainment of redevelopment goals. The term redevelopment is used because the base land was previously developed. The analysis of this link will help other communities determine whether to undertake policies or programs to increase development capacity.

### **Background**

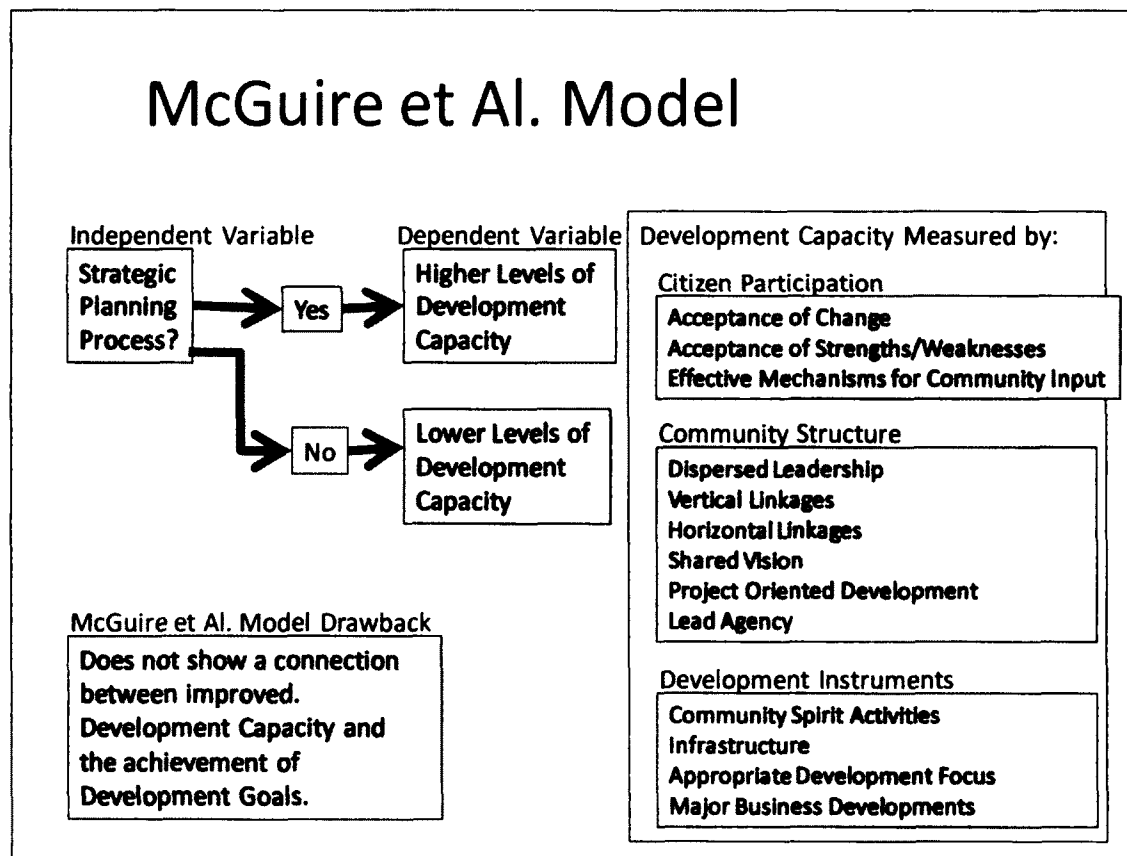
McGuire et al. (1994) tested the model using a paired study of rural communities in the Midwest. The study showed that the existence of a development plan was positively related to increased development capacity. The development capacity model developed by McGuire uses the existence/non-existence of a development plan as the independent binary variable and development capacity as the dependent variable (figure 1-1).

Development capacity in the McGuire et al. model is made of 13 variables from three categories: citizen participation, community structure, and development instruments.

Citizen participation includes the community acceptance of change variable, particularly for economic/social change; the acceptance of community strengths/weaknesses, which measures whether the community had accepted their strengths and weaknesses; and effective mechanisms for community input, which is measured by the existence of community meetings that are part of the normal community political process.

Community structure includes dispersed development leadership, vertical development linkages between the community and state and federal agencies, horizontal linkages between the community and other communities, a shared community

development vision, project-oriented development measures, and whether there is a lead agency coordinating and implementing development (McGuire et al. 1994).



*Figure 1-1. McGuire et Al. Model (McGuire et al. 1994)*

Development instruments include the existence of community spirit activities such as annual festivals, infrastructure investment including physical (sewers, roads, etc.) and institutional (hospitals, schools, etc.) infrastructure, an appropriate development focus highlighting attracting development with quality communities versus expensive, tax-based industrial attraction, and major business developments, which measures recent business/job expansion. The drawback to the McGuire et al. study (1994) is that it did not tie development capacity to development/redevelopment results.

## **Research Problem and Questions**

The research problem for this study is whether or not the local communities should adopt policies/programs to improve their development capacity. To answer this question, the communities need to know whether improvement in development capacity leads to an increase in the achievement of development/redevelopment goals and whether an increase in certain development capacity variables leads to a greater increase in the attainment of redevelopment goals. If that information is known, and the relative cost (both monetary and other resources) of obtaining the variables is known, then the community can determine whether they want to attempt to improve specific development capacity variables, which variables to pursue, and how to prioritize those variables. This study concentrated on whether the increase in development capacity or specific development capacity variables, as defined by the McGuire et al. study (1994) and this study, led to a greater increase in the attainment of redevelopment goals for six BRAC communities/installations. The study left the relative cost of obtaining specific development capacity variables for future research and the communities themselves.

The research questions to answer for this study are:

1. Is there a positive relationship between development capacity and the attainment of redevelopment goals? In other words, does improvement in development capacity lead to the attainment of a higher percentage or more redevelopment goals?
2. If the answer to question one is “yes”, is there a positive relationship between each development capacity category (citizen participation, community structure, and

development instruments) and the attainment of redevelopment goals, as well as which category has the greatest positive relationship?

3. Is there a positive relationship between each variable and the attainment of redevelopment goals, as well as which variable has the greatest positive relationship?

4. For each development capacity category, which variable is the most significant?

For this study, six non-metropolitan communities affected by the 1988, 1991, and 1993 Base Realignment and Closure (BRAC) process were used. This study was a series of case studies containing qualitative assessments with replication logic. The independent variables that made up development capacity included qualitative assessments. Since this study examined only six case studies, quantitative assessments would not provide as much information as such assessments would for a larger population. There were some variables that could be described in more detail, but not all variables so a quantitative method was not used. Further, the detailed information for the variables that could be expressed quantitatively was not available. Prior to the measurement of the achievement of development goals, qualitative assessments were used to evaluate the quality of the LRPs and the implementation of the LRPs to provide insight into how the quality of the LRPs and their execution may have affected the achievement of development goals. Qualitative assessments were used to determine if there is a relationship between development capacity and the attainment of redevelopment goals. At the very end of the study, a cross-comparison of the six cases was conducted to provide better insight into all the variables and to provide insight into the relationship between development capacity and the attainment of redevelopment goals.



The following sections provide a history of the BRAC process and closures; a description of the 1988, 1991, and 1993 BRAC redevelopment process that local communities undertook following a BRAC closure announcement; and an overview of the communities affected by the 1988, 1991, 1993, and 1995 BRAC rounds from which the six communities/installations used for this study were selected. Further details on the communities selected and the reasons for those selections are in chapter two as part of the framework for this study.

### **Base Realignment and Closure History**

BRAC actions have occurred since the formation of the United States (U.S.) military. The military has opened and closed hundreds of installations (U.S. Congress 1993). Before the 1980s, the closure of bases was a defense function handled primarily by the individual services (Army, Navy, or Air Force [AF]). The buildup and closure of installations was generally tied to a new mission, a change in mission, or a change in the number of personnel in the service. As an example, since 1930 the U.S. has had four buildup/installation expansion periods: World War II (WWII) (1943-1946), three years during the Korean War (1952-1954), four years during the Vietnam War (1967-1970), and six years during the Reagan/Bush buildup (1985-1990). During the 1960s and 1970s, Congress became displeased with the way the Department of Defense (DoD) handled closures, in particular the impact on communities and the political impact on individual Congressional members. Thus, in the 1980s Congress became involved in the decision-making process that identified installations to close or realign (Hawkins 2005).

## **BRAC Before the 1960s**

From 1776 to 1913, the U.S. generally fought wars on U.S. territory and in U.S. waters. Installations were constructed and dismantled based upon whether there was a conflict and where the conflict was located, as well as to provide general security. The U.S. did not maintain a large standing Army or Navy.

World War I (WWI) (1913 to 1917) was characterized by a buildup of bases. The number of installations increased from the onset of U.S. involvement and continued until the end of the war. Then, within five years of the WWI armistice, the number of installations dropped significantly. This ebb and flow was facilitated by the use of temporary facilities. The service could quickly build temporary structures to accommodate rapidly increasing numbers of personnel and easily abandon them when the current emergency ceased (Shaw 2004). During this time period, the services only concentrated permanent facilities at installations they wanted to keep for an extended period of time.

During WWII (1941-1945) the number of installations again expanded significantly. At the end of WWII, the U.S. military maintained over 5,600 installations stateside and around the world and possessed over 24 million acres in the U.S. (an area larger in size than Maryland, Massachusetts, Connecticut, New Jersey, and Rhode Island combined). However, the military's response at the end of WWII was different than the base drawdown following WWI. At the end of WWII and into the Cold War period, the U.S. Government believed it needed this military infrastructure in anticipation of a quick war with the Soviet Union so it did not decrease the number of bases significantly. However, during this same period, the number of troops and the size of the DoD budget

decreased dramatically. Between 1945 and 1947 the number of American forces dropped from around ten million people to just 1.4 million (this was a combination of troops stationed both stateside and overseas), completing the most rapid demobilization in the history of the world. Commensurate with this massive troop reduction was a significant drop in the DoD budget. As a percentage of the gross domestic product (GDP), the DoD budget shrank from about 37.5 percent at the end of WWII to just 3.5 percent by 1948. Yet the infrastructure supporting the military remained fairly intact. This infrastructure-forces gap was the largest it would likely ever be, at 1.4 million troops to 5,600 installations (Schwalbe 2006). For the Korean War (1952-1957), a large increase in the number of installations was not required since the DoD infrastructure had not decreased significantly following WWII.

#### **BRAC During the 1960s and Early 1970s**

In the early 1960s, Secretary of Defense McNamara, at the direction of President Kennedy, initiated a concentrated effort to close a large number of bases (Boles 1996). McNamara realigned or closed more than 950 military installations to include 60 major installations<sup>1</sup> in 1961, followed by 30 more during that decade (Schwalbe 2006). This was the most extensive base closure program in U.S. history (U.S. Congress 1988). During this period and into the early 1970s, DoD chose the bases targeted for closure and oversaw the conversion of those bases from military to civilian use with no congressional or community comment and minimal consultation with the Service Departments (McMillen 2002). To minimize the impact on local communities, Secretary McNamara established the Office of Economic Adjustment (OEA), which assisted (and still assists) communities with the redevelopment process. Despite OEA's assistance, Congress found

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<sup>1</sup> A major installation is an installation with at least 300 civilian employees.

this arrangement—of having no control in the closure of military facilities that provided a sizable economic impact to their districts and constituents—unacceptable. Many politicians had to withstand substantial political pressure from their constituents for actions over which they had little or no control. For some, the impact of these closures on their personal political future was tantamount to disaster (Boles 1996). In fact, some members of Congress felt the closures were punishment for partisan voting or their lack of support for the military (Schwalbe 2006).

This situation resulted in legislation proposed in 1965 requiring DoD to report to Congress regarding any base realignments or closures. However, President Johnson vetoed this legislation and Congress lacked the votes to override the veto, further increasing the tension between the executive and legislative branches of government over this issue. The conflict between the two branches and DoD carried on through the remainder of the 1960s. The congressional debates about military base closures became highly partisan and were rarely related to DoD security requirements (Schwalbe 2006).

During the Vietnam conflict (1967–1972), few if any military facilities were closed. Toward the end of 1972, however, support for our efforts in Vietnam waned and the focus shifted again to the nationwide closure of inefficient, unneeded bases. On September 30, 1976, President Gerald Ford approved the O’Neill-Cohen Act requiring that all closing military installations meet the standards of the National Environmental Policy Act (NEPA) of 1969. Also, the House and Senate Armed Services Committees were both empowered to review all DoD closure decisions, thereby giving them the final closure authority. In 1976 another attempt was made for Congress to be involved in the base realignment and closure process via the Military Construction Authorization Bill.

Congress included a provision that prohibited DoD from closing or realigning any facility with more than 250 civilian employees until (1) Congress had been notified of the proposed action, (2) an assessment of the personnel and economic impacts of the action was made, (3) DoD complied with the NEPA provisions, and (4) nine months had passed (to allow for full investigation by Congress). This bill was vetoed by President Ford, and Congress could not override it. However, later in 1976, President Carter approved legislation Section 2187 of Title 10, United States Code, requiring DoD to (1) notify Congress of a base's candidacy for closure or realignment, (2) prepare documents evaluating the economic, environmental, and strategic impact of the proposal, and (3) wait 60 days for a response from Congress (which had to approve any closure affecting more than 300 civilian employees). This action effectively halted the BRAC process, resulting in a dramatic impact on force readiness as individual Services attempted to operate and maintain inefficient and unneeded bases (Boles 1996).

### **BRAC During the Late 1970s**

In 1977, Congress amended the process by enacting legislation as part of the Military Construction Authorization Act of 1978 (U.S. Congress 1978). The proposed legislation required DoD to seek Congressional review of its selections. The law required that those military installations recommended for closure employing over five hundred civilian personnel and installations recommended for realignment involving a reduction of more than one thousand, or more than 50 percent of the number of civilian personnel to be reviewed by Congress. An exception to the process was available if the President certified to Congress that such closure or realignment must be implemented for reasons of national security or a military emergency. The law also described the process by which

congressional approval of the closure list could be obtained. Either the Secretary of Defense or the Secretary of the military department affected had to notify the Committee on Armed Services of the Senate and the Committee on National Security of the House of Representatives of the proposed bases for closure or realignment (U.S. Congress 1978). Supporting its request, the respective Secretary must then include “an evaluation of the fiscal, local economic budgetary, environmental, strategic, and operational consequences” of the proposed closure or realignment. While waiting on a congressional response, no irrevocable action could be taken by the military.

As a result of this legislation, between 1977 and 1988 no military bases were approved for closure. In several instances, in fact, individual legislators inserted language into omnibus legislation that specifically prohibited expenditures of funds necessary to close bases in their districts. By fighting to save these bases, the legislators protected themselves against the possibility that the challenger in their next election could point to a base closure and argue that the incumbent was ineffective or uninterested in protecting local interests (Hadwiger 1993).

### **BRAC During the 1980s**

By the early 1980s, the services struggled to maintain a modern defense force while maintaining more infrastructure than was required to support that force. Also by the 1980s Congress was willing to allow DoD to close bases to recoup lost money. President Reagan was convinced that DoD had too much infrastructure and chartered the Grace Commission to produce the President’s Private Sector Survey on Cost Control. Its 1983 report determined that as much as two billion dollars per year could be saved by realigning our domestic military bases. It recommended that a non-partisan, independent

commission be established to study further the base closure problem, and then submit a list of base closure recommendations to Congress (Schwalbe 2006; Boles 1996).

Congress accepted the findings of the Grace Commission and established an independent commission. A key reason for the establishment of a BRAC independent commission was to ensure that partisan politics had as little influence as possible on the process of downsizing the military infrastructure (Schwalbe, 2006).

In 1988 Secretary of Defense Frank Carlucci, in close cooperation with Congress, proposed base closure legislation that would allow Congress to participate in the BRAC process, ending the stalemate between the Legislative and Executive branches (Boles 1996). Representative Dick Arney proposed an amendment to the 1988 defense authorization bill that created an independent commission, analogous to the Social Security Commission, to facilitate the selection and closing of military bases with minimal political influence. After a protracted struggle, Congress authorized the Secretary of Defense's Commission on BRAC. Subsequently, PL 100-526, the "Defense Savings Act," established a special independent commission under that secretary of defense to identify bases for realignment and closure (Schwalbe 2006). The Pentagon would implement the Commission's recommendations, unless Congress passed a resolution to reject the entire list of proposed closures. PL 100-526 also required the secretary of defense to include as part of the annual budget request, a schedule of the closure and realignment actions to be taken for that fiscal year and an estimate of the costs to be incurred and the amounts to be saved. It further required compliance with the Federal Property and Administrative Services Act of 1949 and the Surplus Property Act of 1944 (Wozniak 1999).

The 1988 BRAC commission process began with the appointment of 12 volunteer commissioners. The even number was politically motivated to ensure an equal number of Democrats and Republicans were represented on the Commission. There were even two Chairmen, one from each political party (Schwalbe 2006). Once established, the Commission conducted research to determine which military bases should be closed or realigned based on the Defense Secretary's issued criteria. Its proceedings were conducted mostly in secrecy. Once it had prepared a list of recommended bases for closure or realignment, the commission forwarded the list to the Secretary of Defense for his approval. Once approved, the list was forwarded to Congress for final approval. Congress did not have the option to change anything on the list. It had to accept or reject the entire list. With this arrangement, the 1988 BRAC Commission made recommendations on December 29, 1988, affecting 145 installations (86 closures and realignments—15 major closures, 5 partial closures, and 54 realignments). These closures were about three percent of the Defense infrastructure. Implementing these recommendations was projected to save close to \$700 million per year (Boles 1994), far short of the two-billion-dollar savings DoD desired (Schwalbe 2006).

After a decade of no base closures, DoD was satisfied with the BRAC process and supported the establishment of more BRAC commissions as soon as possible. On the other hand, Congress and many private citizens were not pleased with the outcomes of the 1988 BRAC commission. In early 1989, their testimony during hearings before the House Armed Services Committee (HASC) highlighted the key flaws in the first BRAC process, especially regarding the recommendation to close Fort Dix in New Jersey. The elected officials from New Jersey attacked the 1988 BRAC Commission and its process



during open hearings. Senator Bill Bradley noted that the Commission received little information from DoD, did not properly consider all the costs involved, failed to recognize all the missions and functions performed at the installation, failed to consider all the documentation and studies to include a key Army audit favorable of Fort Dix, and refused to submit its documentation for independent review. Representative James Saxton testified that: "The Commission took deliberate efforts to try to hide the information that we [Congress] needed to evaluate what they did" (Schwalbe 2006). Representative Frank McCloskey explained further that "members of Congress must resort to filing Freedom of Information Act requests and must introduce legislation to force DoD to provide pertinent information with respect to a process which Congress created" (Schwalbe 2006). Representative Chris Smith pointed out that no member or staff of the commission even took the time to visit Fort Dix. These issues caused Congress to incorporate many lessons learned into the follow-on BRAC legislation in 1990 (Schwalbe 2006).

### **BRAC During the 1990s**

With the dissolution of the Warsaw Pact in 1989 and the fall of the Berlin Wall, the Cold War was essentially over (Boles 1996). Following the largest military buildup during peacetime, it was now time to cut infrastructure further to match military force reductions (Schwalbe 2006). On November 5, 1990, Congress and the President signed into law the independent five-year Defense Base Closure and Realignment Act (DBCRA-90) and its associated Commission with the passage of public law (PL) 101-510 under Title 29. The Commission had guidance to cut the military infrastructure by 25 percent. The law authorized \$13 million for three BRAC commissions to occur in odd years from

1991 through 1995. Unlike the 1988 Commission, specific procedural guidelines were imposed to ensure public involvement, empower the Commission to independently review and analyze the Secretary of Defense's recommendations, and ultimately make recommendations to the President. These guidelines included: (1) having the President and Congress rather than the Secretary of Defense nominate the commissioners, who were to be paid for their services; (2) using clearly articulated, published criteria and certified data for decision-making; (3) requiring both the President and Congress to accept or reject in their entirety the lists of closures adopted by the BRAC commission; (4) creating tight timeframes to force the process to reach decisions in a timely manner; and (5) having Congress's GAO assess the Commission's process, data, and recommendations (Schwalbe 2006). The DBCRA-90 required the Secretary of Defense to create "a force-structure plan" for the Armed Forces to meet the assessed threat submitted to Congress and to develop and publish in the *Federal Register* proposed selection criteria for recommending the closure or realignment of military bases. After a public comment period of thirty days, the final selection criteria would be published in the *Federal Register*. DoD published eight final selection criteria, giving priority consideration to the first four criteria, which reflected military value. The eight criteria were in three categories: (1) military value, with four criteria, (2) return on investment, with one criteria, and (3) impacts, with three criteria (Boles 1996).

Congress also decided that the 12 commissioners of the first BRAC commission were too many. It reduced the number of commissioners to eight. Those members are appointed by the President after consultation with leaders of Congress, and the appointments are subject to the advice and consent of the Senate (Wozniak 1999).

The process then begins with the Service Secretaries analyzing their own force structures and comparing them against the force structure plan and selection criteria. Then the list of bases to be recommended for closure or realignment that supports that force structure are created by DoD and transmitted to the Commission (U.S. Congress 1990). The Commission reviews the Secretary of Defense's recommendations to ensure they were developed according to the approved criteria. If there are any significant deviations, then the commission can change the recommendations.<sup>2</sup> The Commission also conducts public hearings. Within five months the Commission has to transmit to the President its report containing its findings, conclusions, and recommendations for closures and realignments (Wozniak 1999). No later than July 15th of each year in which recommendations were made, the President must transmit a report containing his approval or disapproval of the list to the Commission and Congress. He can make no changes, although he can send the list back to the BRAC Commission for reconsideration.<sup>3</sup> Failure by the President to approve and certify the list by September 1<sup>st</sup> of that year terminates the process for that year. After 45 days of the Presidential approval, or if both chambers of Congress do not disapprove the BRAC list, the recommendations are implemented (Schwalbe 2006).

The DBCRA-90 also required compliance with the Federal Property and Administrative Services Act of 1949 and the Surplus Property Act of 1944, but authorized the military to dispose of surplus property without going through the General Services Administration (GSA). Congress determined that the mandate to recover the

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<sup>2</sup> About fifteen percent of the time during the 1990s the commissioners voted to change a previous commission's recommendations. Typical deviations included underestimating closure or realignment costs, not accurately characterizing community impact, or underestimating environmental clean-up costs (Wozniak 1999).

<sup>3</sup> Congress doesn't have this option (Schwalbe 2006).

cost of closing a military base within six years was too restrictive and had prevented the closing of several obsolete installations. It dropped this provision. Further, the technical amendments of the DBCRA-90 brought space leased by DoD activities into the closure or realignment process for consideration (Wozniak 1999). Finally, DoD improved its decision-making process for the 1990 BRAC rounds by improving its computer modeling and approach to data gathering (Schwalbe 2006).

### **BRAC Rounds During the 1990s**

There were three rounds of BRAC during the 1990s. The 1991 BRAC Commission conducted 29 public hearings in Washington D.C. and across the country, and one commissioner visited every installation that made the list. The Commission recommended that 34 bases be closed (26 major) and another 48 realigned, for a projected cost savings of \$2.3 billion over five years and \$1.5 billion each year thereafter. This represented a 5.4 percent reduction of the military infrastructure (Schwalbe 2006).

The 1993 BRAC Commission conducted 33 public hearings—many broadcast on national television—and visited 125 installations. The base closure selection criteria for 1993 and 1995 remained unchanged from the 1991 closure round (DoD 1992). The Commission recommended that 45 bases be closed (36 major) and 130 realigned, for a projected cost savings of \$3.8 billion after five years and \$2.3 billion each year after that. This represented a reduction of military infrastructure of around 6.2 percent.

In July 1993, President Bill Clinton announced major program changes.

1. He instituted job-centered property disposal where DoD can convey property to redevelopment agencies at reduced or no cost based on the level of economic

impact suffered as a result of the base closure. Also, DoD cannot remove personal property from the installation.<sup>4</sup>

2. He instituted easier access to OEA transition and redevelopment assistance.
3. He instituted fast-track environmental clean-up.
4. He positioned transition coordinators at closing bases (paid by DoD funds).
5. He offered larger economic development OEA planning grants (Boles 1994).

The 1995 BRAC Commission conducted 16 regional hearings which were televised and visited 167 installations. The Commission recommended that 28 installations be closed (18 major) and 104 realigned, for a projected cost savings of \$1.6 billion per year. This represented a reduction of military infrastructure of around 5.9 percent—not enough to close the infrastructure-forces gap, but more successful than the 1970s stalemate between Congress and the administration (Schwalbe 2006).

All together, the first four BRAC commissions generated 499 military installation recommendations, including 95 major base closures. As a result of these actions, DoD estimated that it had reduced its domestic infrastructure by around 21 percent, still not enough to close the infrastructure-force gap. Between 1989 and 1996, the defense budget declined by more than \$100 billion in 1996 dollars, and the size of the force was slashed by more than 100,000 uniformed personnel and 45,000 civilian workers. By the end of the decade, the Defense Department was planning for an active force of 1.5 million troops, down from 2.2 million in the early 1980s. GAO did a BRAC cost savings study

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<sup>4</sup> In DoD personal property is defined as property assigned to personnel, but not permanently affixed. It can include fire trucks, generators, and other items useful to communities (Boles 1994).

and determined that DoD had accrued an estimated \$16.7 billion in savings through fiscal year 2001, with \$6.6 billion in annual recurring savings.<sup>5</sup>

These closures were generally successful from the communities' point of view. Despite transition costs, such as improving base facilities and removing contamination, nearly three-quarters of the communities that underwent major base closures had unemployment rates that were below the national average in 2001. Business Executives for National Security researcher, Erik Pages, found that 120,000 jobs were lost by the four rounds of base closures ending in 1995. He compared that to America's Fortune 500 companies announced layoffs of 250,000 workers in the first six months of 1996. Mark Hooker and Michael Knetter, using a new dataset to analyze county-level employment and personal income effects from 1971-1994, discovered that, on average, base closures had not caused significant economic damage to local communities (Schwalbe 2006).

Most efforts to reverse closures failed as a result of ineffective defenses and caused further frustration and alienation in the community. There were only four successful reversals: Naval Training Center Orlando, Florida; Naval Air Station (NAS) Whidbey Island, Washington; Moody Air Force Base (AFB), Georgia; and Fort McClellan, California (Boles 1994). Most were like Brookley AFB near Mobile, Alabama, where the local community fought hard to keep the base open, but was not successful.

### **BRAC After 2000**

With George W. Bush's election in 2000, the Republican-controlled Congress passed PL 107-107 that amended the 1990 legislation to authorize one round of BRAC. Secretary of Defense Rumsfeld certified the need for another round due to a continued

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<sup>5</sup> These estimates do not include a cumulative \$1.5 billion cost incurred by the federal government to assist communities affected by the closure process or the \$3.5 billion spent through 2006 for environmental cleanup costs (Schwalbe 2006).

excess capacity in DoD of 24 percent. This began the BRAC 2005 process. The BRAC 2005 process was based on the 1990 legislation as well as a new piece of legislation called the National Defense Authorization Act for Fiscal Year 1997 (NDAA97). Section 334 of NDAA97 amended the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 120(h)(3), which created a mechanism to defer the land transfer covenants until clean-up was complete, while still allowing the transfer of title in the contaminated property. This mechanism was enacted to allow easier transfer of contaminated land with clean-up after the transfer. The deferral did not change any rights or obligation of a federal agency existing prior to transfer. To be eligible for the pre-clean-up transfer procedure, it must be determined that:

1. The property is suitable for the transferee's intended use, and such use is consistent with the protection of human health and the environment.
2. The deed or other agreement contains specific response assurances.
3. The federal agency requesting deferral provides notice in the local newspaper and a period of 30 days for public comment.
4. The deferral and the transfer of the property will not substantially delay any necessary response action at the property.

The deed or other property transfer agreement must provide:

1. For the necessary restrictions on the use of the property to ensure the protection of human health and the environment.

2. Restrictions on use to ensure required remedial investigations, response, action, and oversight activities will not be disrupted.
3. That all necessary response actions will be taken and schedules for investigation and completion of all approved response actions will be identified.
4. That the federal agency responsible for the property will submit a budget request that adequately addresses schedules for investigation and completion of all necessary response actions, subject to congressional authorizations and appropriations (Wozniak 1999).

The 2005 BRAC process added Joint Cross Service Groups (JCSG), which looked at issues and recommended closures across DoD. Examples of JCSGs were medical, technical (laboratories), and administrative. The 2005 BRAC Commission recommended 190 installations be closed for a projected cost savings of five billion dollars each year after closure. This represented a five percent reduction of military infrastructure.

### **The BRAC Redevelopment Process**

Once an installation has been approved by Congress for closure, the conversion process begins. Closing a base involves the cooperation of DoD, other federal agencies, state and local governments, regulators, and the local community. First, a local redevelopment authority (LRA) is formed by the community and recognized by DoD. The LRA is the single entity responsible for installation reuse planning and implementation activities. It provides leadership and builds consensus. It is responsible



for creating development capacity and redevelopment. It serves as the community's point of contact with DoD for all closure matters. DoD supports the LRAs' planning efforts through OEA. This assistance consists of funding for planning documents and can include personnel and funds to keep the buildings in a "warm" status until the buildings can be reused. Through this assistance all BRAC communities create local reuse plans (LRP). The 1995 base closure timeline is shown in Figure 1-2. The military has up to six years from the time the BRAC list is approved to relocate their functions and close the installation. This time period can be shorter but is typically three years.

The community may take as many years as it likes to accomplish planning and redevelopment. The ideal situation is to complete planning and begin to attract new tenants before the military leaves, with the first tenants moving in soon after the military leaves. Many milestones may be extended or shortened by mutual agreement between DoD and the LRA to accommodate specific community circumstances.

If the installation requires extensive environmental clean-up, the installation may be closed, with environmental clean-up continuing after closure. Section 334 of NDAA97 was enacted for BRAC 2005 to allow transfer of title before the completion of environmental clean-up, but was not in place for BRAC 1988, 1991, 1993, and 1995. Thus, some environmental clean-up could have caused redevelopment delays. This was noted in this study when it occurred.

### **Phase One: Installation-wide Reuse Planning**

This phase includes activities that occur while the LRA identifies local reuse needs and conceives a comprehensive LRP. The planning challenge is to assess the redevelopment potential offered by the base in the context of ongoing local

development efforts and to integrate the base property with the surrounding community (OEA n.d. b).

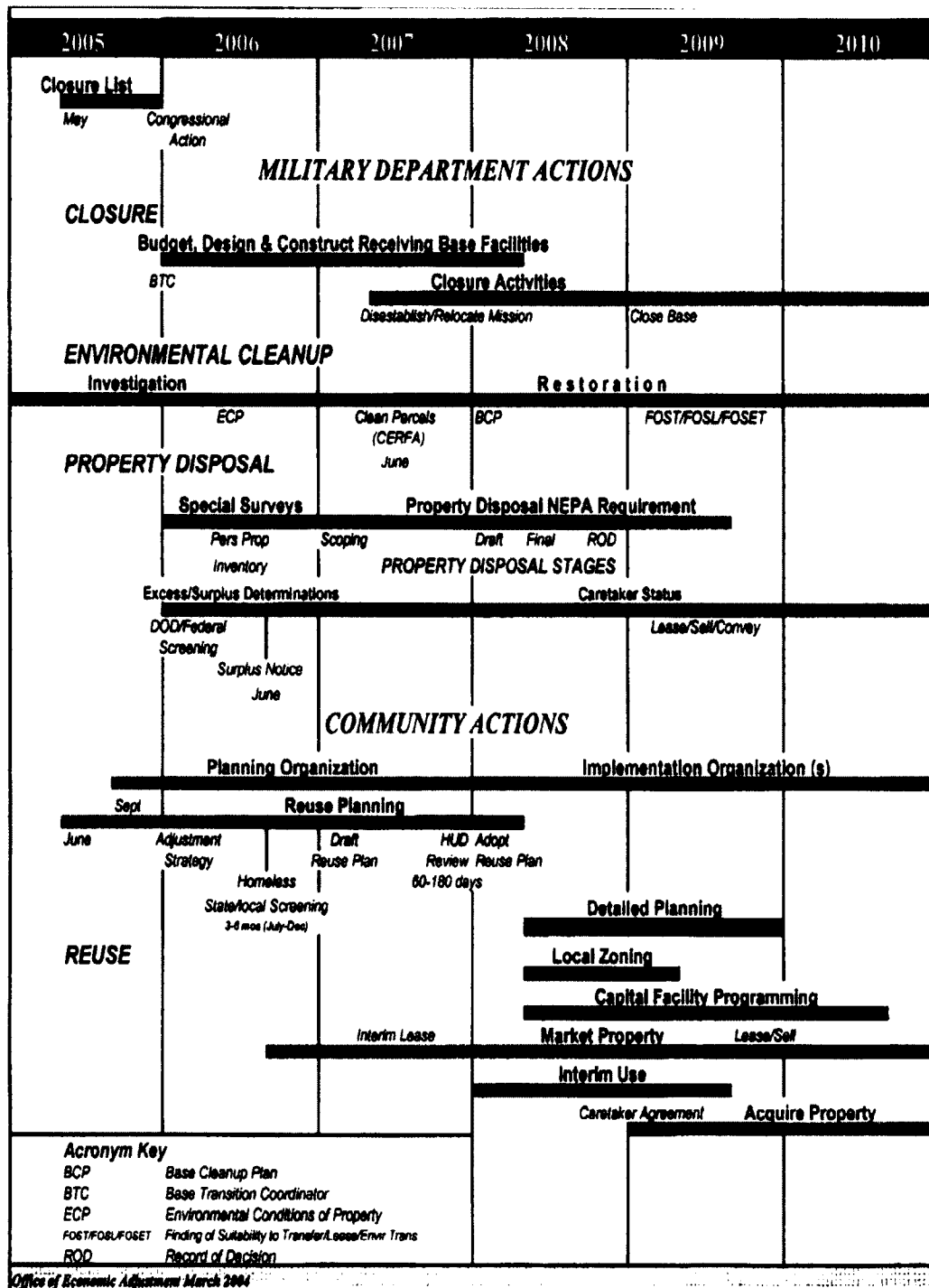


Figure 1-2. Illustrative Base Closure and Reuse Actions

The LRA's redevelopment planning process also includes local outreach and accommodation of homeless assistance needs in cooperation with the Department of Housing and Urban Development (HUD). Concurrently with the LRA's reuse planning, DoD undertakes base-wide disposal planning. These activities include:

1. Identifying real property (land and buildings) not needed by the federal government and available for reuse.
2. Inventorying and identifying, in consultation with the LRA, personal property (such as equipment and vehicles) available for reuse.
3. Performing an environmental impact analysis of potential property disposal.
4. Identifying protected natural and cultural resources (such as wetlands and historic properties) in consultation with state or federal officials.
5. Determining the environmental condition of installation property, including identifying uncontaminated property.
6. Continuing ongoing environmental clean-up and compliance activities in partnership with federal and state environmental regulators, and refocusing clean-up strategies to support reuse whenever possible.
7. Supporting interim leasing of property to provide for speedy reuse, especially for property requiring environmental clean-up.
8. Developing strategies for the protection and management of installation assets needed for reuse after the military mission has departed.

This phase generally lasts from two to three years after the closure decision.

### **Phase Two: Disposal Decision–Making**

In this phase, the LRA redevelopment plan is submitted to DoD and HUD. DoD makes final property disposal decisions and publishes them in a disposal record of decision (ROD) or similar decision document. DoD then makes sure its decisions dovetail with the LRA plan. DoD cannot quickly change its decisions, so it is important that the LRA plan submitted to DoD be well thought out with any required community approvals and remain stable. This is difficult for the community and DoD when redevelopment opportunities change. Phase Two activities include the review and approval of applications, submitted by the LRA or others, to receive property through certain conveyance methods (e.g., property conveyances for public airports, economic development, homeless assistance, and other public purposes).

### **Phase Three: Parcel-by-Parcel Decision Implementation**

Phase three lasts until all property available for reuse has been conveyed in accordance with DoD's disposal decisions. This phase also includes any environmental activities that must be completed before deed transfer of property can occur. When environmental restrictions prevent immediate deed transfer, DoD can foster reuse and redevelopment by entering into long term leasing agreements with property recipients (Air Force Real Property Agency [AFRPA] 2004).

The OEA provides some assistance to state and local governments during BRAC redevelopment in the form of technical advice and financial assistance to development local redevelopment plans (LRPs) and studies, as well as staffing and operating expenses for a limited time (OEA 2009). Grants in the 1988 and 1991 BRAC rounds averaged \$70,000 (Atkinson 1992). OEA can assist in facilitating discounted property conveyance

and federal-to-federal agency transfers (where federal base property is transferred to another federal agency such as the Federal Aviation Administration (FAA), when a base is transformed into a municipal airport). However, as clearly stated in OEA's website, "the primary mission of the DoD is defense of the United States" and OEA strives to "help communities help themselves" (OEA 2009). Thus, OEA does not provide extensive community assistance in making decisions regarding redevelopment.

There are over 150 private firms to help communities, such as those that are a part of the National Association of Installation Developers (NAID), formerly the Association of Defense Communities (ADC), an organization that specializes in providing assistance to communities affected by BRAC. These firms and NAID offer some free assistance, such as a website and pamphlets. However, any extensive assistance requires the community to contract with one of the private firms.

### **Settings for This Study**

The settings for this study are six communities/installations affected by the 1988, 1991, and 1993 BRAC rounds. The six communities/installations selected are Rantoul, (Champaign County) Illinois, near Chanute AFB; Peru (Miami County), Indiana, near Grissom AFB; Marquette (Marquette County), Michigan, near K. I. Sawyer AFB; Oscoda (Iosco County), Michigan, near Wurtsmith AFB; Plattsburgh (Clinton County), New York, near Plattsburgh AFB; and Rome (Oneida County), New York, near Griffiss AFB. These six communities/installations were selected from the total of 385 communities/installations affected by the 1988, 1991, 1993, and 1995 BRAC rounds.

This section describes in general terms the BRAC 1988, 1991, 1993, and 1995 population (i.e. the installations affected by the four BRAC rounds). Details on the selection of the six installations are provided in chapter two.

Of the 385 communities/installations affected by the four BRAC rounds, there were 95 major closures, 55 major realignments, and 235 minor actions. This study concentrates on the major closures because they had the largest impact on their communities. Most of the major closures occurred in the 1991 and 1993 BRAC rounds with 15 in the 1988 round, 26 in the 1991 round, 36 in the 1993 round, and 18 in the 1995 round.

Some BRAC major closure communities/installations are near major metropolitan areas such as Alexandria, Virginia/Cameron Station near Washington, DC, and Brooklyn, New York/Naval Station Brooklyn, near New York City. Some are near small communities such as Limestone, Maine/Loring AFB (near the Maine/Canadian border) and Oscoda/Wurtsmith AFB (among farmland in northern Michigan). Seventy-three installations are from metropolitan areas and 22 are from rural. Some installation lost as few as 250 civilian employees such as NAS Memphis<sup>6</sup> when it closed. Others, such as Kelly AFB in San Antonio, Texas, lost as many as 10,912 civilian employees.

The 95 major installations closed during the 1988, 1991, 1993, and 1995 BRAC rounds were from across the U.S., with 30 from the West, 15 from the Midwest, 31 from the South, and 19 from the Northeast.<sup>7</sup> Of the closed installations during the 1988, 1991, 1993, and 1995 BRAC rounds, 21 were Army, 38 Navy, 29 Air Force, and seven DoD

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<sup>6</sup> In accordance with Public Law 101-510, if DoD proposed to close an installation that affects more than 300 civilian employees, then the closure must go through the BRAC process. DoD can close installations which affect less than 300 civilian employees without going through the BRAC process. Thus most closures will affect 300 or more civilian employees. The closure of NAS Memphis was a direct request of the 1993 BRAC Commission.

<sup>7</sup> These areas of the country are defined in the same manner as the U.S. Census.

agency installations. The bases closed had various types of missions which left various infrastructure including facilities for large aircraft, facilities for small aircraft, depots, ports, research labs, and administrative complexes. Examples include the Jefferson Army Proving Ground where they tested munitions, NAS Cecil Field which supported small aircraft, Philadelphia Naval Hospital, Gentile Air Force Station (AFS) which had predominantly offices and warehouses, and Newark AFS which had all laboratories.

The type of previous mission can have a large impact on the acreage, facilities and infrastructure left behind once an installation is closed. Acreages ranged from as small as 165 acres at Gentile AFS to as large as 56,000 acres at Jefferson Proving Grounds. The type of mission can also affect the environmental clean-up required at an installation. There is typically some environmental clean-up at every installation such as munitions clean-up at ranges and petroleum clean-up around petroleum dispensing facilities. Some clean-up was accomplished by the time the base closed and other installations will take until 2050 to complete their clean-up.

### **Why This Research Is Important**

In 2005, President Bush approved BRAC 2005, which affected over 800 installations and the communities near them (Miles 2005). As part of the BRAC process local community leaders are charged with redevelopment of the former bases, including establishment of the LRAs, development of the LRPs, and reaching redevelopment goals. The local communities affected by BRAC can change very little about their geographic location or the installation that they “inherit.” They do have the ability to influence

development capacity decisions/variables as defined by McGuire et al. (1994). This study will help the community leaders and their LRAs understand if higher development capacity as defined by McGuire et al. leads to higher attainment of redevelopment goals and, in particular, which development capacity variables lead to higher attainment of redevelopment goals. BRAC communities typically do not have large amounts of funding for redevelopment, so ensuring that resources devoted to redevelopment lead to successful economic redevelopment is critical. This study will allow community leaders and their LRAs to understand any connection between development capacity and the attainment of redevelopment goals so that they can better dedicate any resources they have to redevelopment.

Second, with the anticipated drawdown in military funding over the next twenty years, the possibility exists for another BRAC round. This study will help any communities, community leaders, and LRAs who may be affected by future BRAC rounds better prepare for potential rounds.

Finally, non-BRAC communities may be faced with the loss of major employers and could be faced with a situation similar to a BRAC closure where they must assist in redevelopment. This study will allow these communities to understand the link between development capacity and successful redevelopment.

Thus, lessons learned from this study—including information on past closures, the link between development capacity and attainment of redevelopment goals, and information about specific development capacity variables—can be applied to future BRAC and non-BRAC communities.



## **CHAPTER II**

### **LITERATURE REVIEW AND THEORETICAL MODEL**

This literature review provides a brief introduction to the local governments' and federal government's roles in local economic redevelopment. It is followed by a discussion of economic development capacity prior to the McGuire et al. study (1994), the McGuire et al. model, and economic development capacity after the McGuire et al. study, which will provide a basis for this study's independent variables. Then follows a discussion of the Base Realignment and Closure (BRAC) redevelopment articles, starting with the economic impact of base closure and redevelopment with an emphasis on rural locations. Next, a discussion of the BRAC literature is provided showing how the literature relates to the variables used for the independent variables. Then a discussion of economic development indicators used by other organizations and their relationship to the dependent variables in this study is provided as a basis for the dependent variables. Finally, the theoretical framework for this study and this study's model are presented.

#### **Introduction**

Throughout American history there has been a tension between those advocating for increased national responsibilities and those advocating for state responsibilities and local initiatives across a wide range of public topics. Prior to the New Deal, local economic development was left to either the local business community or the local government. From the New Deal through the Carter administration, a substantial amount

of decision-making in regard to the local economic development was gradually transferred to the national government (Bingham and Blair 1984, 7). Local governments provided less funding for economic development and sometimes had less of a say in economic development policies than before the federalization of economic development.

In the 1980s, President Reagan's administration inherited economic development programs in three federal agencies: the Economic Development Administration (EDA), the Appalachian Regional Commission (ARC), and the Department of Housing and Urban Development (HUD). EDA and ARC administered a variety of grants, loans, and loan guarantees for community and economic development projects, infrastructure improvements, and direct assistance to firms. HUD administered the Urban Development Action Grant (UDAG) program, which provided competitive economic development grants to local governments (Bingham and Blair 1984, 7-8).

Reagan came to office declaring his intention "to curb the size and influence of the federal establishment and to demand recognition of the distinction between the powers granted to the federal government and those reserved to the states or to the people." During the 1980s, President Reagan proposed to increasingly rely on state and local governments to restore economic growth and was successful in reducing funds for the EDA, ARC, and HUD programs. This was a major shift in American federalism (Bingham and Blair 1984, 7). This shift was accompanied in the 1980s by slow economic growth and rising deficits (Clarke and Gaile 1989; Wolman 1996, 119).

This shift of primary responsibility for economic growth and survival from the federal to the state and local communities/governments during the 1980s increased the recognition of three needs: for local community self-development initiatives, for the

public and private sectors at the local level to work together to expand the economic base, and for local communities and their governments to develop some internal capacity to conduct economic development. This shift also raised the questions of what capacity communities possessed to conduct economic development and what variables were key to increasing a community's economic development capacity. During the 1980s, the development capacity of communities came to be seen as a prime determinant of economic, and thus government, performance (McGuire et al. 1994, 426).

### **Economic Development and Development Capacity**

In *American College Dictionary* (Barnhart and Stein 1960), capacity is defined as the power of receiving or containing the power, ability, or possibility of something. Also, as noted by Bowman and Kearney (1988, 343), capacity should be defined in relation to its application, so that its meaning will vary depending on "the institution, organization, or individual under consideration." In relation to local economic redevelopment, capacity has been defined in several ways. Honadle (1981, 577) states that it is a stock of resources—a measure of organizational potential; the "ability to anticipate and influence change, to make intelligent policy decisions, to develop and implement programs and policy, to attract and absorb resources, or to evaluate current activities and plan for the future." Hall (2008, 110) notes that staffing and spending, leadership and vision, management and planning, fiscal planning, and practice and operations support as well as the ability to attract resources defines development capacity. Gargan (1981) notes that the social, economic, and political contexts determine the level of capacity and that capacity

levels can change over time. Hall (2008, 112) notes that capacity is difficult to measure. This study will use the Honadle definition of development capacity which is the ability to attract and absorb resources or to evaluate current activities and plan for the future.

The 1980s were the real beginning of the discussion of development capacity. Regional development theories prior to 1980 did not directly discuss community development capacity or highlight variables that contributed to economic development capacity, but implicit within each economic development theory were steps that if followed should lead to more economic development. In other words, if the local communities took certain steps or gained certain attributes, then they would have higher development capacity that would, in turn, lead to more economic development.

During the 1980s a “new wave” of economic development policies became popular. These policies encouraged various forms of innovation, such as applied research, industrial modernization, entrepreneurship, and business expansion. They also exhibited a push to involve government much more in business decisions (Bartik 1993, 5). In the 1980s, authors began to discuss and define development capacity.

Bingham and Blair (1984, 240) identified characteristics and strategies that affect economic development while comparing economic development efforts in Baltimore, Maryland and Joliet, Illinois. They divided those characteristics into three categories: characteristics in common (available land, good transportation access, an available labor pool, and a capable city administrator), characteristics at variance, including characteristics of the city (a skilled work force, support for economic development, and solid infrastructure), capacity of the city government (a stable political environment, the ability to spend money on development, a dialog between government and industry, and a

political structure dedicated to economic development), and development strategies (an area-wide development strategy, vocational, and manpower training; and a one-stop center) (Bingham and Blair 1984, 240) (Table 2-1).

**Table 2-1. Characteristics/Strategies That Affect Economic Development (Bingham and Blair 1984)**

<b>Characteristics and Strategies that Affect Economic Development: A Comparison of Joliet and Baltimore</b>		
<u>Characteristics in Common</u>		
Land Available for Development		
Good Transportation Access		
Available Labor Pool		
Capable City Administrator		
<u>Characteristics at Variance</u> (What Joliet Lacks and		
<u>Characteristics of the City</u>	Baltimore Has)	<u>Capacity of City Government</u>
Skilled, Productive Work Pool		Stable, Consistent Political Environment
Public Trust in Government		Ability to Spend Money on Economic Development (Good Credit Rating)
Support for Economic Development Activities		Assume Dollar Risks for Economic Development
Solid Infrastructure to Support New Development		Ongoing Dialogue Between Government and Industry Risk to Undertake New Programs
Attractive Appearance		Expertise to Develop Funding Packages for Leverage
Cultural Amenities		Political Structure Dedicated to Economic Development
<u>Development Strategies</u>		
Area-Wide Development Strategy		
One-Stop Center for Development Information		
Comprehensive Downtown Development Strategy (Office, Retail, Housing)		
Vocational and Manpower Training Component for Long-Term Strategy		

Bingham and Blair highlighted that cities with some development potential, but not all the areas identified by Bingham and Blair, are in serious trouble. From the absence of these characteristics one can predict economic failures.

By the 1990s, development capacity had been identified as an important correlate of effective local governance (McGuire et al. 1994, 426). Blakely (1994, 106) identified

economic development capacity as subjective judgments about the institutions and willingness of the community to take necessary actions to alter the community's material conditions. He said that in order to make a serious assessment of the capacity of a community, assessments of the following subareas are needed: community-based institutions (including service clubs, voluntary organizations, neighborhood/community groups, churches, and social organizations), economic structures (including chambers of commerce, merchant associations, local development corporations, labor organizations, and state development agencies), political institutions (including local government, boards, commissions, and agencies), financial institutions (including banks, building societies, venture capital groups, local development corporations, community development corporations, and small business assistance groups), and educational institutions (particularly higher education and training institutions). Also according to him, to engage in economic development a community must have the capability to perform five development functions: (1) economic planning, (2) social and community resource development, (3) physical and land use planning, (4) commercial and industrial targeted marketing, and (5) local finance capacity. These five capabilities define Blakely's development capacity. His research supports the concept that a development preparedness study is a fundamental step in local economic planning. According to him, successful local economic development efforts ensure that the correct institutional systems are in place rather than using gimmicks to produce or purchase economic improvements (Blakely 1994, 106-8).

Blakely went further to say that physical development requires the implementation of aggressive policies on land use, housing, and community beautification. Economic

development opportunities, as well as community and household services, should optimize existing human and physical resources, integrate existing industries, and improve the capacity of the community to attract complementary enterprises. Jobs need to fit the population, rather than making the people fit the jobs. Technical and higher education resources should be focused on developing intellectual resources. Communities should feature identifiable community themes, focused tourism strategies, and identifiable industrial and commercial plans. Communities should be willing to take calculated risks (1994, 108-109).

### **McGuire Et Al. Model**

The McGuire et al. (1994) study went further than Bingham, Blair, and Blakely by developing a development capacity model and testing the model. The McGuire et al. model addressed development capacity with an evaluation of a strategic development planning program implemented in 12 small, nonmetropolitan communities in the Midwestern U.S. The model focused on assessing the effectiveness of strategic planning as a capacity-building instrument. In the article and model, development capacity is viewed as an intermediate and direct outcome of the development planning process. The objective of the research was to determine whether strategic development planning contributes to building the kind of development capacity that development theory posits is necessary for implementing a self-development effort. The primary question addressed was whether differences exist in the level of capacity present in communities that have undertaken a community-wide strategic development planning effort compared to

communities that have not and whether any such differences that do exist can be attributed to these strategic development planning efforts (McGuire et al. 1994, 427).

The McGuire et al. study used a matched paired evaluation design with 12 communities that had undergone a community-wide strategic development planning effort matched with 12 similar communities that had not undergone such an effort. The study model used the existence of a community-wide strategic development planning effort as the independent bi-nominal variable (with the value coded as a “yes” if the community had undergone such an effort or “no” if the community had not).

The model (figure 1-1) measured development capacity as 13 variables divided into three categories: citizen participation, community structure, and development instruments. Citizen participation included acceptance of change, controversy, and conflict, which measures how well the community accepts the potential need for economic or social change; acceptance of community strengths and weaknesses, which measures whether the community has assessed its strengths and weaknesses; and effective mechanisms for direct community input to the development process, which is measured by the existence of community development meetings that are a normal part of the community political process.

Community structure included six elements: dispersed development leadership measured positively if leadership roles are divided among different persons in the community; vertical development linkages between the local, state, and federal governments, which are measured positively if the community seeks resources from state and federal agencies; horizontal development linkages between the community and other communities, which are measured positively if the community partners with or seeks



knowledge from other successful communities; a shared vision or direction, which measures if the community has one shared vision; project-oriented involvement, which measures if the community has several groups working on development issues; and a lead agency to coordinate and implement the development, which is measured positively if there is one core organization for coordinating and implementing development.

Development instruments included community spirit activities measured by the existence of regular community appreciation activities such as festivals and other annual events; infrastructure measured by the financial resources and effort the community dedicates to improving the physical (such as roads and sewers) and institutional (such as schools and medical facilities) infrastructure; appropriate development focus, which measures if the community avoids expensive industrial attraction and concentrates on indigenous development; and major business developments, which measures if the community experienced major expansions in jobs or businesses in the recent past.

For the McGuire et al. (1994) study, each of the 13 variables was reduced to a binominal (yes/no) variable and the 13 variables were combined with each weighted equally into a measure of development capacity. Data for the study was collected using a survey instrument and followed up with phone or in-person interviews as required. After the development capacity was calculated, analysis compared the existence or non-existence of a strategic planning process to the calculated development capacity.

The McGuire et al. study (1994) showed substantial differences between the planning communities and the control communities. Six of the twelve planning communities possessed at least 10 of the 13 capacity indicators. Eleven of the planning communities had effective means for community input. Half of the planning communities reoriented

their political environment to concentrate on public participation in development. In the majority of the control communities, participation was noticeably absent. Many of the planning communities scored well on community structure indicators. For instance, nine of the planning communities had dispersed leadership for development issues. The majority of the planning communities had also developed a shared vision. In the control communities, factional (rather than consensual) development processes were the norm. The majority of the planning communities had horizontal linkages with other communities. Only four of the control communities had horizontal linkages. Finally, residents in the planning communities appeared to be aware of the futility of spending large amounts of community resources to attract large factories, whereas those in control communities did not (McGuire et al. 1994, 430).

Summarizing, the McGuire et al. study showed that the process of strategic development planning is an effective capacity-building instrument for meeting the demands of self-development (McGuire et al. 1994, 430). This finding is consistent with the potential benefits of strategic planning described in literature. The McGuire et al. study also specifically mentions that their study does not investigate the correlation between the level of community development capacity and the subsequent amount of development activity in the community (McGuire et al. 1994, 427), which provides an additional area for future research and this study.

### **Economic Development and Development Capacity After McGuire et Al.**

After McGuire et al. (1994), Erickcek and McKinney (2006) looked at small metro areas and cities to identify public policies that have the potential to increase the economic viability of smaller metropolitan areas and cities. They identified characteristics associated with smaller metro areas that performed better than expected (“winners”) and worse than expected (“losers”) during the 1990s. They then looked for evidence that public policy choices may have enhanced a metro area’s ability to succeed by examining whether winners and losers are qualitatively different in ways that may indicate the consequences of policy choices. According to the authors, the growth of a metro area depends on its economic structure, human capital resources, quality of life factors, historical trends, and location. The study showed that the industrial composition of a metro area’s economy and entrepreneurship capacity does matter. Also important is human capital. The education achievement level of residents ages 25 and older had a significant effect on the personal income of the areas. Quality of life climate variables were significant, but in the opposite direction than anticipated. The study concluded that weather had little impact on location decisions.

Development performance relates to capacity, but the presence of capacity is not a guarantee of high performance; rather, it represents potential for success (Bowman and Kearney 1998; Hall 2008). In affordable housing delivery, Frederickson and London (2000) found results that suggest a relationship between capacity and performance, which they believe emphasizes the importance of measuring capacity. Gargan (1981) suggests that strong performance is tied to strong capacity. More recent studies (Hou, Moyihan

and Ingraham 2003) acknowledge that moderating factors such as motivation, politics, and the operating environment also play a role in determining performance success.

Jeremy Hall's study (2008) is based partly on the McGuire et al. (1994) model, and Hall also references Rubin and Zorn (1985). Hall's study examined the capacity of regional economic districts to apply for and leverage federal grant funds in pursuit of economic development goals in the Kentucky counties they serve. He used regional economic development districts as his unit of study. His results indicate that regional economic development districts demonstrate varied but significant capacity to leverage federal grant funds in the counties they serve. The results suggest that similarity in the purpose and structure of regional economic development districts within a state are not enough; resources within the organization must be understood and the mission must drive how the resources are applied.

### **BRAC Literature and the Economic Impact of BRAC Closures**

This section reviews literature that investigates the economic impact of BRAC closures. It starts with the earliest known study by John Lynch (1970) that looked at the effect of BRAC on installations closed during the 1960s. Next it moves on to more contemporary research that is based primarily on the 1988, 1991, 1993, and 1995 closures. Lastly it narrows its look to two articles by Matwiczak (2004:2006) on the rural economic impact of BRAC closures.

One of the earliest BRAC studies found was a set of case studies conducted by John Lynch (1970) on redevelopment efforts for communities affected by the 1960s BRAC

closures. Lessons from these case studies include: (1) a substantial military establishment has a rather limited impact on the general local economy, (2) businesses that were hardest hit were services and construction, especially those that served the base directly, (3) the quality of jobs created is as important as the number of jobs created, and (4) economic diversification is important.

More recent studies addressed the economic impact of base closure on the local community. All found that although the initial impacts may be felt strongly and are often felt by a small number of businesses and homes directly associated with the base, in the long run the community succeeds. Most felt that the multiplier effect of a base was significantly less than a typical industry and significantly less than initially estimated.

GAO (n.d.) analyzed all 95 major closures from the 1988, 1991, 1993, and 1995 BRAC rounds. As of September 2004, 72 percent (about 364,000 acres) of the 504,000 acres of prior BRAC round property had been transferred to other federal and nonfederal entities. When leased acreage is added, the total rises to 90 percent. The closures generated \$29 billion through fiscal year 2004 and GAO expects to save \$7 billion annually thereafter. As of September 30, 2004, 52 percent of the property had been transferred to nonfederal entities, 20 percent had been transferred to other federal agencies, 18 percent had been leased but not transferred, and ten percent was not transferred and was awaiting future disposition. Also two key economic indicators—the unemployment rate and the average annual real per capita income growth rate—showed that BRAC communities are doing well when compared with average U.S. rates.

In a separate report, GAO (2005) analyzed data at 62 BRAC sites where 300 or more jobs were lost and compared it to national averages. It found that 69 percent of the

sample communities had unemployment rates equal to or less than the national average in 2003. Forty-eight percent of these communities had annual per capita income growth rates equal to or exceeding the national average from 1999-2001. Only three communities had per capita income growth rates equal to or less than 1.5 percent. The analysis highlighted the Department of Defense's (DoD) Office of Economic Adjustment (OEA) statistics that show 93,000 new jobs have been created in 75 sampled BRAC communities from the 1988, 1991, 1993, and 1995 BRAC rounds as of October 2003.

The GAO (2004) article's recommendations include the following advice to communities facing a BRAC closure: "Don't panic—confident, competent communities come together and develop a plan of action." They also recommend to:

1. Select an appropriate vision.
2. Select diverse stakeholders.
3. Develop reliable, accurate, and timely information.
4. Manage intergovernmental complexities (local, state and federal).
5. Accommodate delays in the redevelopment process.
6. Harness resources in less diversified (and often rural) communities.
7. Manage potentially large social impacts.
8. Do not waste resources resisting a base closure.
9. Involve all stakeholders in the redevelopment planning process.
10. Conduct a thorough strengths, weaknesses, opportunities, and threats analysis.
11. Provide proactive, unified leadership.
12. Promote public confidence.
13. Plan immediately after the closing announcement.
14. Be patient.
15. Invest in infrastructure improvements.
16. Take full advantage of federal, state, and local assistance.
17. Pursue opportunities to cheaply acquire or lease BRAC property.
18. Meet employment and retraining needs.
19. Respond to relocation needs of private companies.

Atkinson (1992) provided a summary of the research "After the Cold War: Living with Lower Defense Spending" by the U.S. Office of Technology Assessment (OTA).

This overall research found that the BRAC 1991, 1993, and 1995 cuts (about \$12 billion, 1991 dollars, a year for ten years) would not be large compared to the overall U.S. economy (about \$5.5 to \$6 trillion). The negative side of those BRAC cuts would be that defense employment losses would occur evenly and would affect certain communities more than others. In the study Atkinson (1992) proposed that even though compensating growth due to BRAC closures takes time and some segments of the population will suffer reduced incomes during the period of adjustment, most military base closings would have lower local multiplier effects from base closure than for other types of industry losses, such as defense industry cutbacks. This is because many military personnel shop and use other services on base. Also, during a closure most military personnel and many civilians are transferred to other bases and jobs vacated by military family members are available for civilians who have lost their jobs. Finally, communities have a long lead time to prepare for the base closure (compared with plant closings) and are left with valuable real estate (although disposal can be cumbersome).

A Rand study (Dardia et al. 1996) study looked at three BRAC communities in the California area (George Air Force Base (AFB), Castle AFB, and Fort Ord). These bases were selected because of their large presence in the local community and because the communities were sufficiently isolated geographically. The research looked at changes in the communities' populations, school enrollments, and employment. It also monitored the communities' tax revenues and housing market changes. The study compared them to three benchmarks: (1) expert projections, (2) experience of a matched set of California bases/communities that had not closed, and (3) experience in the broader region.

It found that the affected communities fared better than state and local authorities had predicted. The communities surrounding George and Castle AFBs witnessed growth in their populations, labor forces, retail sales, housing markets, and school enrollments. Their real estate vacancy rates and unemployment levels increased only slightly. Monterey County (Fort Ord) had a slight drop in population and a modest drop in school enrollment. Its labor forces and retail sales grew. Their unemployment rates were stable. Fort Ord's closure was predicted to cause a 15 percent drop in population, and the real drop was three percent. Unemployment in the Fort Ord area was expected to jump by seven percent, yet the actual increase was one percent. Retail sales were forecasted to plummet by 25 percent and they rose by two percent. Overall, the study found that the effects of job loss and revenue loss tended to fall disproportionately on individual people and firms rather than on the community at large. Rand suggests that policymakers' decisions to render assistance should be based on current and continual evaluations of the effects of closures in specific communities.

Reimer (1996) used five base case studies. At Sacramento Army Depot economic revitalization goals were particularly well met. Virtually the entire 400-acre site and 1.8 million square feet of buildings are now leased to Packard Bell Electronics. At the Glenview Naval Air Station in the Chicago metropolitan area, a high level of developer interest has generated reuse success. Redevelopment at the former Bergstrom AFB has worked well because the base became a municipal airport. Reimer found that proposals for the early involvement of private development interests by means of "pass-throughs" from the LRAs have been rejected at most bases, with the Hamilton Navy Housing in Novato, California, and Orlando Recruit Training Station in Florida serving as examples.



Bradshaw (1999) found that the fact that the impacts of a base closure are not greater than they are, is an anomaly that needs analysis. Bradshaw looked at how base closures affected markets, discussed changes in employment and population, and discussed multiplier effects and community organizational capacity. Bradshaw used a case study of Castle AFB. He looked at local markets such as local retail sales, military purchases, new housing sales, resale housing prices, hospital services, and health care services. He also looked at civilian employment losses, job vacancies due to military spouses leaving, unemployment rates, and job and income multipliers.

Bradshaw found that fears based on industrial dislocation experiences are not applicable to base closures. His analysis does not suggest that base closures are benign or positive for every community; rather, the consequences are unevenly borne by both individuals and communities. Small towns without a diversified economy recover more slowly. Persons who lose jobs are generally not the ones reemployed. When laid-off workers do find other work, their incomes are well below what they had been receiving. Potential reuse of military facilities is limited and administrative rules are complicated.

In summary, closure of a military base is not catastrophic to its local community, because even fully operating bases have weak links to the community, and compensating factors mitigate some of the losses. One mitigating factor is retail sales. Military personnel generally shop at the Commissary and Exchange. When a base closes military retirees shift spending to private stores in the local community, which generally makes up for any shopping military personnel did in the local community prior to the closure. Also, bases purchase few items from local retailers. Instead most base purchases are done on national contracts. New housing construction is not affected by base closure in growing

regions, because base housing generally needs rehabilitation and therefore does not compete with local housing. When a base closes, medical services previously provided to retirees on base shifts to local doctors. Also, base hospitals and clinics become available (if that type of infrastructure is needed by the local community). All military and many civilian general services (GS) workers relocate, and local jobs previously held by military spouses become open for any GS employees that remain. Unemployment rates do not escalate because the overall economy does not decline. County immigration patterns continue similar to before the closure. Current residents do not relocate because the economy remains strong. Income and employment multipliers are low and DoD planning strengthens community organizations.

Watson and Buss (2004) debunked earlier base closure impact studies to give community leaders more confidence in the economic recovery prospects. When the article was written, DoD was targeting 24 percent of its base infrastructure for closure in BRAC 2005 as well as considering integrating and realigning cross-service functions such as industrial supply, storage, technical, training, headquarters, medical, and intelligence. The article maintains that past closure studies estimated negative impacts based on incorrect assumptions and faulty methodologies. Community impacts were often inflated. Sunk costs were incorrectly counted as BRAC expenses. Opportunity costs were not factored into the BRAC account, such as the opportunity cost to the community for more fruitful development and the opportunity cost to DoD to consolidate into more efficient, effective facilities and operations. Watson and Buss contend that studies often abused multiplier effects associated with base closings. Similar to Bradshaw and Atkinson, they found that bases are "closed environments." This lessens the impact that

base closings have on retail sales in the local community. Also, job markets may not suffer as much as initially expected if a large number of military spouses leave their civilian jobs and local residents can fill the vacuum. The authors believe local economies are much more resilient to economic shocks than most people think. The article offers practical solutions for base closure recovery. The article used a case study of Gentile AFB in Kettering, Ohio; interviews with Kettering Mayor Richard Hartmann; findings from the Rand study of California communities; the GAO analysis of six BRAC-affected bases; a GAO analysis of 62 BRAC-affected bases; and the Frieden Massachusetts Institute of Technology (MIT) study.

Spencer (2005) analyzed the per capita income for counties in the U.S. that had a base close in the 1988, 1991, 1993, and 1995 BRAC rounds. It looked at the years before and after the BRAC rounds. It looked at three clusters—an urban Navy cluster on the west coast, an AF cluster in Indiana, and a rural Army cluster in Alabama. It found that after a small decrease, nearly all communities continue to experience growth in per capita income. Communities with post-BRAC revitalization plans and strong local leadership experienced strong economic growth. BRAC creates opportunities for private economic development. Clearly, the first few years after a base closure or realignment can be extremely difficult. The article recommended that it is vital for communities to act proactively. They should not wait for the Pentagon, the federal government, or any other agency. They should develop their own plans. The article listed ten innovative communities: Phoenix, Arizona (Williams AFB); Deven, Massachusetts (Fort Devens); Charleston, South Carolina (Charleston Naval Shipyard [NS]); Glenview, Illinois (Glenview NAS); Portsmouth, New Hampshire (Pease AFB); Alexandria, Louisiana

(England AFB); Austin, Texas (Bergstrom AFB); San Antonio, Texas (Kelly AFB); Lubbock, Texas (Reese AFB); and Alameda, California (Alameda Naval Facilities).

Matwiczak (2004) made the assumption that rural areas feel the shocks—economic and other—of a closure to a greater extent than urban or suburban regions, due to such characteristics as having a less diversified local economy and fewer resources to dedicate to job training and attracting new employers. His research is qualitative, using surveys, site visits, and interviews. His study classified bases based on whether the base was rural or non-rural per the 1993 Urban Influence Code (UIC). The 1993 UIC was selected because it represented the period closest to the majority of BRAC rounds. Matwiczak then conducted research in three main areas: economic development, environmental clean-up, and property transfer. He looked at federal, state, and private sources of support. There were initially 54 indicators that represented these three areas that were narrowed to 37. Those 37 were divided into general demographic data (from U.S. Bureau of the Census) and base specific data (military population, redevelopment data, and environmental clean-up data). For these indicators 1990 was chosen as the base year and 2000 as the comparison year. The survey questions were designed using the indicators that were determined to be important to BRAC recovery and redevelopment. The survey helped determine which bases would serve as representative for interviews. The interview questions gathered general information as well as in-depth information to provide a framework for the case study.

The research (Matwiczak 2004) showed that the two most crucial ingredients for a successful recovery were the formation of a realistic and appropriate redevelopment plan and an effective and efficient LRA. Recovery plans should match the realistic

environmental condition of the base, the regional and local economic resources, and the consensus of community stakeholders. The primary goals of the reuse plan are to recover jobs lost by current community members, attract new workers to the community, and eventually rejuvenate the local economy. Communities need to strike a balance between quantity and quality of jobs. Fighting or resisting BRAC before the release of the final base list can be an effective tool to organize and unify the community. However, interviewees also noted the importance of a two-track process—one to resist BRAC and one to plan for base redevelopment.

Crucial elements were community buy-in for the reuse effort, a professionally staffed and independent LRA, and securing expedient property transfer. LRAs that operate independently from other community organizations or political parties are able to make nonpartisan decisions focused on redevelopment. The LRAs' ability to raise revenues ensures its long-term stability and provides some distance from political decisions. The role of the LRA is to balance various redevelopment voices in the community (Matwiczak 2004). The LRA's effectiveness is likely to be dependent on its leadership. Communities noted that a clear line of authority for the head of the LRA is key for promoting effective leadership. Professional LRA staffs assist the communities in receiving fair treatment in negotiations with entities involved in the BRAC process such as the military, the U.S. Environmental Protection Agency (EPA), and state regulatory and environmental agencies. They also assist in designing a successful land reuse plan. Expertise for redevelopment includes legal, environmental, business, economic development, the BRAC process, military, and real estate (Matwiczak 2004). Great importance was placed on having a thorough assessment of the total environmental

condition of the property, as well as using multiple strategies to transfer and redevelop parcels as they became ready. Communities that move on more than one front, cleaning up needed property while developing other parts that have been remediated, were the most successful in tackling environmental challenges.

The study recommendations encourage communities to seek financial and educational support from Congressional representatives and to utilize other federal support. The report notes the important liaison and advocate role of Congressional representatives. The report also details support from the OEA and expert advice from state agencies (especially environmental and economic development). The report notes the importance of taking a long-term view. Communities having a multi-layered redevelopment strategy that was not contingent on the success of any one project were in a stronger position. In the end, patience, optimism, planning, consensus-building, strong leadership, and flexibility were key attributes. No two communities will handle closure or significant realignment in the same way.

Matwiczak's second article, "Rural Base Realignment and Closure" (2005), found that BRAC closures would have a bigger impact at rural bases because rural location economies were less diversified, had fewer development resources, and often affected multiple jurisdictions. The study looked at 36 bases. They looked at no hospitals, duplicates, non-CONUS locations, or bases with a UIC equal to one (the UIC is set by the USDA Economics Research Service). Matwiczak and his researchers also removed any "outlier" data. They wanted diverse rural bases (in terms of previous mission types) as well as communities that had been successes and failures. A limitation of the study was that they based their selection of bases on a limited research budget (i.e., ones they could

reach easily). The economic indicators used to determine economic success were (1) population, (2) household income, (3) poverty rate, (4) civilian unemployment, (5) non-farm employment, (6) non-farm wages, and (7) civilian jobs regained.

The research found that (1) no one size fits all, (2) there is no magic bullet for redevelopment, (3) it is better to start the redevelopment and planning early, and (4) the best processes included (a) planning and implementation, (b) clean-up and transfer, and (c) external support. It is important to organize an efficient and effective LRA that represents all stakeholders and jurisdictions, has clear decision-making authority, and includes professional expertise and effective leadership. It is also important to garner community support with open communication channels, a combined effort to resist BRAC incorporating all stakeholders, and showing early success. The LRA should plan for "appropriate" reuses that consider the competitive advantages and disadvantages of the base. The local redevelopment plan (LRP) should include interim and long-term transfer options as well as diverse options. It should use all available financial resources and incorporate expert advice. The clean-up and transfer plan should assess and document all property conditions, align clean-up with planned reuse, and use conveyance methods that allow local flexibility and streamline the process. The LRAs should get help from federal, state, private, and non-profit groups (Matwiczak 2006).

### **BRAC Literature and Development Capacity Variables**

Previous BRAC research falls into four broad categories: case or small geographic area studies, government reports, broader academic studies, and non-academic articles.

Most BRAC research studies are case studies or multi-base studies of small geographic areas. Many of the BRAC studies identified factors similar to those identified in the McGuire et al. model as being important for redevelopment following a BRAC closure. Their work provides confirmation for the variables used by McGuire et al. to define development capacity and a foundation for the variables used in this study. In the discussion of BRAC literature that follows, non-academic BRAC articles will be highlighted to show where they support or do not support any BRAC research. No prior BRAC research has attempted to measure development capacity or relate development capacity to redevelopment success. This study researched in depth 36 studies (table 2-2).

Twenty-seven of them are qualitative studies, four are quantitative studies, and five are mixed quantitative/qualitative studies. Thirty-one are based on the last four BRAC rounds (1988, 1991, 1993, and 1995). Five of them are based on base closures during the 1960s. Fifteen of them looked at redevelopment after a BRAC closure from an overall perspective, ten primarily looked at economic development, four at planning documents, three at the Local Redevelopment Authority (LRA) structure, two at marketing, one at leadership, and one at community involvement. Sixteen are related directly to development capacity or redevelopment success and are discussed below. Table 2-2 shows the relationship between the sixteen studies that relate to development capacity and the variables used by the McGuire et al. model to define development capacity.

### **Citizen Participation Category**

Citizen participation and citizen buy-in are important for any community undertaking, especially economic development. The citizen participation category in the McGuire et al. model includes three variables: acceptance of change, acceptance of



strengths and weaknesses, and effective mechanisms for community input. These variables measure the strength of local government entities in regard to whether they can accept change and whether they understand their own strengths and weaknesses as well as the effectiveness of their community input mechanisms.

**Table 2-2. BRAC Research That References McGuire Et Al. Variables**

Capacity Indicator	Bartik	Frieden and Baxter	Dahl	GAO	Hansen Skopek and Somma	ICMA Study	Jurgen	Lynch	Matwiczak	OEA	Rand Study	Reimer	Renaissance	Spencer	Thomas, Spillane & Keige	Yahn
Acceptance of Change/Controversy/Conflict		X					X	X	X		X			X		
Acceptance of Community Strengths and Weaknesses					X			X			X					
Effective Mechanisms for Direct Community Input	X	X			X			X	X		X	X			X	X
Dispersed Leadership Roles						X		X								
Vertical Linkages		X						X	X		X					
Horizontal Linkages									X	X						
Shared Vision or Direction				X				X	X	X		X				
Project Oriented Development								X								
Lead Agency									X		X	X	X	X		
Community Spirit Activities																
Infrastructure											X					
Appropriate Development Focus								X				X				
Major Business Developments			X						X	X		X				

### *Acceptance of Change/Controversy/Conflict*

The first of the McGuire variables that help to measure community development capacity is the community's proactive response to change, controversy, or conflict. Communities that respond positively and quickly to change are assumed to have greater development capacity. Researchers who studied redevelopment following BRAC closures also emphasize that a positive approach to change helps the communities build consensus and speeds the redevelopment process.

Lynch (1970) notes that when a base was identified for closure, there was a tendency to resort to political persuasion or even political pressure to stop the closure. Such fighting of the closure process has generally been unsuccessful. The Rand (n.d.) study recommended not wasting resources resisting a base closure. Two of Lynch's case studies highlight this point. At Brookley AFB in Mobile, Alabama, the community fought the closure decision and was unsuccessful. At Amarillo AFB, Texas, the community did not fight the closure decision, but embraced it to move ahead quickly with redevelopment. Their redevelopment was more successful than Mobile's redevelopment. Thus, the lesson learned is that communities should not fight the closure decision but develop a redevelopment plan quickly (Lynch 2002).

These studies are supported by Frieden and Baxter (2000) and Spencer (2005), who highlight the importance for communities to act proactively. Matwiczak (2006) says it is better to start the redevelopment and planning early. McCutcheon (1998) says bases should be closed over a short period rather than a slow withdrawal process. Brauers and Tepper (1992) recommend that communities "take the bull by the horns." Matwiczak (2004) said that fighting or resisting of BRAC before the release of the final base list can

be an effective tool to organize and unify the community. However, once the BRAC decision is released the community should concentrate on redevelopment.

### ***Acceptance of Community Strengths and Weaknesses***

McGuire's second variable recommends that each community conduct a thorough community strengths, weaknesses, opportunities, and threats (SWOT) analysis. This recommendation is in line with traditional community planning and strategic planning theory. The International City/County Management Association (ICMA) (1999, 26) emphasizes in their "Practice of Local Government Planning" that strategic planners should conduct an environmental scan and SWOT analysis, studying the external factors (opportunities and threats) and the internal factors (strengths and weaknesses). Levy (1990) outlines a systematic approach to economic development planning. His second step is a market evaluation that takes an objective look at the community's strengths and weaknesses from the view of either a firm looking to locate to the area or a firm already in the community that is thinking about whether to remain or relocate. In Levy's later edition he emphasizes planning-related research early in the development of any plan (Levy 2000). In "Best of Planning" So (American Planning Association 1991) outlines a strategic planning process whose first four steps equate to a WOTS analysis, which is the same as a SWOT analysis with the acronym changed. In the strategic planning rubric outlined by Brooks (2002), a strengths, weaknesses, opportunities, and threats analysis is the second step. This variable is also supported by BRAC research. Rand (2004) and Hansen, Skopek, and Somma (1997) note that strategic planning involves the evaluation of strengths, weaknesses, opportunities, and threats in pursuit of short, mid- and long-

term goals. Lynch (2002) points out that consultants can help with one of the hardest problems—to evaluate, without sentiment or reservation, the assets of the community.

### ***Effective Mechanisms for Direct Community Input***

McGuire et al.'s (1994) third variable used to define development capacity is for the communities to provide effective mechanisms for direct community input. For McGuire et al. this includes holding town hall meetings, community wide meetings, or discussions as a normal part of the political process. BRAC literature expands this definition of community input to two groups. First, that the LRA include all jurisdictions within the regional impact area. The second (similar to McGuire et al.) that all citizens and community groups within the regional impact area be included in development of the local redevelopment plan (LRP). BRAC literature cites many instances where development was delayed due to the lack of effective mechanisms for community input or specific entities being left out of the redevelopment planning process.

BRAC literature points out that disagreements between community groups often caused delays in the transfer of base property during a closure. That is because the local community must be in agreement on the LRP before the federal government will transfer the property. OEA pointed out that in some cases homeless providers, Indian groups, and other local community interests were not included in the LRAs (OEA n.d.), which meant they were left out of LRP decisions. George AFB in California failed to be developed because of a failed interference between federal politicians and local political conflicts. The City of Adelanto, which is located next to George AFB, sued the member institutions of the Victor Valley Economic Development Authority (VVEDA), the LRA, 14 times over five years due to representation issues (Hansen, Skopek, and Somma 1997). Hansen,

Skopek, and Somma point out that often redevelopment failure following a BRAC closure wasn't the failure of the availability of funds, but rather the failure of local communities to organize and implement conversion planning and operations effectively. Well-organized inclusive communities have the most successful outcomes.

Hansen, Skopek, and Somma (1997) note that the federal government mandates that localities engage all affected segments of the community within the LRA before they become eligible for OEA planning grants. In many cases this means that the LRAs should be multi-jurisdictional (OEA n.d.). Freiden and Baxter (2000) point out that more astute leaders use a policy of inclusion including multiple jurisdictions and interest groups, even if it is not required by federal mandate, to assure political support. Matwiczak (2004) notes that to ensure a smooth redevelopment process, it is important to organize an efficient and effective LRA that represents all stakeholders and jurisdictions. Communities should not be afraid to reorganize community organizations if required (Lynch 1970). Further, the role of the LRA is to balance the various voices for redevelopment within the community (Matwiczak 2004). LRAs must be prepared to manage the complexities of intergovernmental relations among local, state, and federal governments (Rand 2004). Redevelopment success depends on cooperation and unity in local organizing (Hansen, Skopek, and Somma 1997).

BRAC literature points out that the redevelopment plan must be developed through a community process that involves all stakeholders. Diverse stakeholders often have divergent visions that, if not incorporated, should at least be considered in the planning process (Rand 2004). It is important to conduct outreach early so that no group feels left out (OEA n.d.). Coordination of economic development programs must involve the

groups that benefit and the groups that provide services (Bartik 1993). A study by Yahn (2005) looks at both community involvement in general and community involvement in connection with closed military bases. The study finds that community satisfaction depended not on the community involvement tool, but upon the amount of representation and time of representation (Yahn 2005). BRAC literature highlights that the LRA should learn to listen to the site, the market, and the community, strategically balancing site characteristics, market strengths, and community needs (Thomas, Spillane and Kaye 1990). Recovery plans should match the realistic condition of the base, the regional and local economic resources, and the consensus of stakeholders (Matwiczak 2004).

### **Community Structure Category**

The community governance structure is also important for successful, efficient, economic development. The community structure category variables include dispersed leadership roles, vertical linkages, horizontal linkages, shared vision or direction, project-oriented involvement, and lead agency. These variables focus on the ideas of administrative capacity common in historic public administration literature, such as a theory that high administrative capacity in local governments is important for development success (Honadle 1981; Mead 1981), there should be one responsible lead agency, and the community should have a shared community vision.

### ***Dispersed Leadership Roles***

The role of leadership is key to a community's development and is often mentioned in the development and BRAC/redevelopment literature. The McGuire et al. model (1994) points out that it is important to have both a lead organization and dispersed leadership throughout the community that will advocate for the redevelopment plan. This

dispersed leadership provides a “built-in” promotion team that can reach out to possible companies that might want to relocate or expand. In his study of bases closed during the 1960s, John Lynch (1970) noted that economic growth is not solely an economic problem. It is also a social problem, a political problem, an environmental problem, a psychological problem, and, most of all, a leadership problem. Lynch noted that in some cases the base closure announcement permitted business and political leaders to overcome long-standing community and personal barriers and work toward effective cooperation. Lynch further mentions that good leadership may reorganize community organizations if required by the redevelopment (Lynch 2002). OEA literature, specifically directed at LRA organizations, states that LRAs should have a cross-section of public and private sector leadership in their LRA and that community members need to be knowledgeable and engaged (OEA n.d.). An ICMA Survey investigated LRA membership from the 1988, 1991, 1993, and 1995 BRAC rounds. It found that 77 percent of the members were also members of their Chambers of Commerce, 55 percent were from private business, 50 percent were on local citizen advisory boards, 41 percent were part of a public/private partnership, 30 percent were connected to their state government, 29 percent were connected to the local utility companies, and 22 percent were part of a private economic development foundations (ICMA 1999; Bartik 2003).

### ***Vertical Linkages***

In their next variable, McGuire et al. (1994) consider it important for the community to actively and aggressively seek out resources from state and federal governments. BRAC literature also believes that for redevelopment to be successful, communities need to take advantage of state and federal government assistance (Lynch

2006), use all available financial resources, and incorporate all available expert advice (Matwiczak 2006). Matwiczak (2004) encourages communities to seek financial and educational support from their Congressional representatives and notes the important liaison and advocate role that can be played by Congressional representatives. Lynch (2006) points out that an LRA's ability to raise revenues ensures its long-term stability and provides some distance from politically oriented decisions. Frieden and Baxter (2000) point out that each LRA needs a supply of "patient money"—money that either does not have to be repaid or can be repaid far in the future. State and federal governments often provide that type of money.

All 1988, 1991, 1993, and 1995 LRAs used government grants, government appropriations, debt, and project revenues. OEA, as part of the DoD, was specifically established to provide assistance to the BRAC communities. During the 1988, 1991, 1993, and 1995 closures OEA provided overall guidance, expertise, base reuse planning assistance, organizational support, and coordination of federal support. The LRAs also received OEA planning grants for up to 75 percent of the consultant costs and core staff (Frieden and Baxter 2000).

Following the 1988, 1991, 1993, and 1995 BRAC closures, OEA conducted four focus groups to determine what the BRAC communities thought of their assistance. These focus groups characterized OEA's assistance as "essential" and identified \$210 million in planning and redevelopment assistance provided by OEA (2006). These groups said that the role of the OEA Project Manager was widely viewed as being an "honest broker." The focus group participants believed OEA assistance was fundamentally



critical to a community's ability to accept a BRAC decision, to organize and plan, and to carry out transitional and implementation activities (OEA 2006).

During the 1988, 1991, 1993, and 1995 BRAC rounds, the LRAs also used Economic Development Administration (EDA) grants and FAA grants. EDA has several programs that award competitive grants. First, the Public Works Program awards grants to communities experiencing economic decline and distress. These grants can be used toward projects that revitalize, expand, and upgrade physical infrastructure in order to attract new industry. Second, EDA's Economic Adjustment Program may be used to finance the construction of public infrastructure and fund infrastructure-related technical and planning assistance. These grants also can be used to cover revolving loans to small businesses. Third, EDA's Credit Enhancement Grant can be made to LRAs, states, counties, municipalities, and authorities state infrastructure banks. EDA grants have frequently been the critical early dollars invested in defense adjustment infrastructure projects (Carahasen 2006).

The Department of Transportation's (DoT) Military Airport Program (MAP) addresses the redevelopment of former military and joint-use military bases. MAP grants fund certain capital improvements that are not allowed under DoT's Airport Improvement Program, such as building or rebuilding surface parking lots, fuel storage, hangars, utility systems (on and off the airport), access roads, and cargo buildings.

Federal public benefit conveyances (PBC) and flexible economic development conveyances are also significant as BRAC community funding mechanisms. The conveyances often include marketable revenue-producing properties such as golf courses, housing units, buildings, and infrastructure upgrades (OEA n.d. a.). Tax-increment

financing arrangements allow a locality to collect from businesses in a pre-designated tax district the incremental tax revenue associated with increasing property values. This revenue can then be used to repay tax-increment bonds (Carahasen 2006). Through 1999 federal agencies had provided over \$1.1 billion in financial help for planning, infrastructure development, labor force assistance, and the development of civilian airports to BRAC communities (Freiden and Baxter 2000).

LRAs can also secure credit enhancements to make their bonds more marketable. Direct federal and state grants can be used to fund LRA debt reserve or supplemental funds to ensure there is money available. State and local full faith and credit guarantees and state and local double-barreled revenue pledges can be obtained from state or local government. State and Local Moral Obligation Pledges can enhance credit, although the pledge is not legally binding (Carahasen 2006).

Aside from direct assistance to the LRAs, there were statistically significant employment-change effects in regard to the number of AFDC and food stamp cases in five BRAC communities/counties studied. Again the transfer payment employment effects were stronger for smaller counties than for larger counties. Changes in non-pension transfer payments were related to changes in employment (and unemployment). The transfer payments were relatively more important for smaller counties than for larger counties (OEA n.d. a.).

During the 1988, 1991, 1993, and 1995 BRAC rounds, states provided almost three times as much as local communities to local redevelopment efforts. Local communities worked closely with state officials to mobilize state political, technical, and financial resources (Frieden and Baxter 2000). State financing strategies can be used to address

planning, infrastructure development, business development, and workforce development. State support includes cash grants and debt financing through bonds. To assist infrastructure development, states can issue general obligation bonds to finance infrastructure projects. These kinds of financing mechanisms can be used to leverage support from the private sector. LRA-issued bonds are often rated below investment grade by credit agencies, so the state bonds are more secure. Most LRA infrastructure projects are financed through a combination of LRA bonds and federal, state, and local government financing mechanisms (Carahasen 2006).

States have provided support by sending a representative to serve as a resource to the LRA, helping organize the LRA, providing the LRA with the necessary land-use authority, becoming the LRA, or having the LRA serve as a temporary political subdivision of a state or local government. The state can also assist LRA business development by designating Foreign Trade Zones (FTZ) through the Department of Commerce's Import Administration (Carahasen 2006). Hansen, Skopek, and Somma (1997) maintain that state governments work best as conversion partners when they assume supportive but secondary roles.

Finally, local public authorities, including joint powers authorities, can assist LRAs by issuing revenue bonds and tax increment bonds. Cities can issue general obligation, revenue, or tax increment bonds (Frieden and Baxter 2000). Managing the complexities of intergovernmental relations among local, state, and federal governments is difficult, but necessary for redevelopment (Rand 2004).

### ***Horizontal Linkages***

Learning and research are important for any organization. McGuire et al. (1994) highlights the importance of horizontal linkages such as learning from other LRAs, government entities, and other communities. In his “Tips for Rookie Planning Directors,” Meek (1983) highlights the requirement for every planning office to develop an in-house research capacity that includes reaching out to other planning offices/officials for knowledge, experience, and insight. The ICMA manual highlights that experienced, competent planners provide an invaluable resource and that part of this knowledge is gained through direct experience and information-sharing with other professionals (Hoch 2000, 28). For the BRAC communities, in addition to providing a great deal of vertical linkage support, OEA also facilitates horizontal linkages amongst the communities. OEA’s report (n.d. d.) details support from the OEA and other communities, especially environmental and economic development advice. OEA also provides conferences that help communities get to know each other and share experiences.

### ***Shared Vision of Direction***

During the 1988, 1991, 1993, and 1995 BRAC rounds, base redevelopment plans were sometimes delayed because of disagreements over reuse alternatives (OEA 2006). Hansen, Skopek, and Somma (1997) note that it is not the lack of possibilities or funds that undercut successful base conversions; rather, it is the failure of local communities to organize and implement conversion planning and operations effectively. A crucial element identified for the reuse effort by Matwiczak (2004) was community buy-in. A lack of community consensus is usually due to a failure of communication and

organizational development (Dahl 1971). Competent communities come together and develop a plan of action (GAO 1995).

The LRA must provide leadership and build consensus as well as set future development direction and vision through a balanced base redevelopment plan that provides a reasonable mix of public and private uses (OEA 2006). A key to reuse is in the conveyance protocol and the emergence of common goals among the public entities that surround the base (Reimer 1996). Another key to consensus and shared vision is understanding. The reuse planner needs to broaden LRA members' understanding of all the issues (Thomas, Spillane and Kaye 1999). Success depends on cooperation and unity in local organizing (Hansen, Skopek and Somma 1997). Lynch (1970) points out that there are often community and personal barriers toward effective cooperation.

### ***Project Oriented Involvement***

In its eighth variable, McGuire et al. (1994) highlights that it is important for the community to have project-oriented involvement. In other words, there should be many groups within the community working on development projects and all these groups should have the same shared vision for the development. Levy (1990) points out that because planning is a collective activity and because no planning agency will be very successful without a broad political base, planning agencies must link to community advisory and lay groups (1991). Cullingworth (1997) notes that part of the planning process consists of negotiating with organizations—not only because wide participation is a hallmark of a democratic society, but also because it is efficient to bring in those that will be affected early and to gain their cooperation. Organizations that might be affected include planning districts, universities, nonprofits, state governments, federal agencies,

utility companies, transportation agencies, and others (Watson and Morris 2008). Similar to McGuire et al., the ICMA encourages extensive involvement of a variety of groups and encourages planners to seek the involvement of any group that is essential to making the development plan work (Hoch 2000, 24-26). Brooks (2002) highlights that at every stage it is important to get feedback from relevant groups such as clients, peers, superiors, elected officials, and influence-wielders. Florida (2002, 302) provides examples of development success and the importance of groups working together. In his Pittsburgh example from the 1980s and 1990s, he notes that the CEOs of the big Pittsburgh firms were also the leadership of the nonprofit Allegheny Conference on Community Development, which in terms of urban development functioned almost as a de facto government alongside the elected one. Over the years the Allegheny Conference spearheaded some of the nation's most massive experiments in urban renewal.

The project-oriented involvement variable is related to dispersed leadership because if there are multiple groups working on development, then there are most likely several community leaders addressing development issues and, thus, dispersed leadership. Project-oriented involvement is further related to a shared vision, because if many local organizations are included in the redevelopment process, each with their own leadership, then to achieve redevelopment success it is imperative that there be a shared vision.

Finally, BRAC literature highlights that long-term development solutions can only be found through a "bread and butter" approach of finding job-producing industries. This approach does not try to entice businesses with tax advantages, but rather with improving the transportation facilities, community educational opportunities, and the total community environment (Lynch 1970). In other words, for redevelopment to be

successful it requires that each sector of the community (transportation, education, economic development, etc.) work toward the same goal and involve the whole community in improving the community, so that the community can attract development.

### ***Lead Agency***

Despite the need to include many groups, jurisdictions, and citizens, it is also important to have one agency leading the redevelopment process. McGuire et al.'s (1994) ninth variable addresses this issue with a "yes" coded to the variable if there is one clear lead agency. For redevelopment following a BRAC closure, the LRA should be the lead agency. This organization was developed and identified by the community governments to OEA as the agency to lead the redevelopment. Based on the community's recommendation, it is the organization appointed by OEA to be OEA's main point of contact during the redevelopment. Cullingworth (1997) notes that development plans, which are often crafted by planning entities such as the LRA, are legislative acts that are the responsibility of elected legislative bodies. So it is appropriate that the lead agency for redevelopment be the entity formally recognized by the community government and OEA. Hoch (2000, 6) also found that leadership for planning is often located in the municipal or county government. So it makes sense that the agency appointed by these bodies to lead development would be the lead agency for development.

Brauers and Tepper (1992) emphasize the importance of having strong leadership in economic development processes. Their article asks how specific communities react to military cuts and what are some determinants of their reaction? Their observations found that communities, firms, and labor seldom set about reducing their military dependence in the absence of actual or imminent military cuts. These groups then fight the cuts, lay off

people, and finally find transformative solutions. Without lead time and planning, forced conversion and acute layoffs cannot be handled in other than in emergency fashion. The authors found that the most successful communities had strong leadership that "took the bull by the horns." Intensive involvement of management and early economic planning was required for a successful redevelopment.

Matwiczak (2006) notes that the LRA's effectiveness in planning and implementation is likely to be dependent on its leadership. Communities in Matwiczak's study noted that a clear line of authority for the head of the LRA is key for promoting effective leadership. Rand (2004) notes that LRAs must provide proactive, unified leadership, and Matwiczak (2006) states that those LRAs must have clear decision-making authority. Spencer (2005) found that LRAs with strong local leadership experienced economic strong growth.

#### **Development Instruments Variable Category**

The development instrument variables determine what quality of life improvements have been made in the community, what economic development tools the local community possesses, and what experience in economic development the community has had. Development instruments are based in both economic and noneconomic sectors of the community. The community spirit activities and infrastructure variables measure the quality of life improvements. Appropriate development focus and major business developments variables measure the economic development tools. It is important for communities to have quality of life improvements in place that support their economic development goals and to have the economic development tools ready to use at the appropriate time (McGuire et al. 1994).



### ***Community Spirit Activities***

McGuire et al.'s (1994) tenth variable measures whether the community holds regular community appreciation activities such as festivals and other annual events. There was no BRAC literature found that addressed the McGuire variable of community spirit activities. However, the measurement of community spirit activities is related to the vitality or spirit of the community, and there is literature that addresses vitality and points out its importance in creating communities that are alive and functioning both socially and economically. Edmund Bacon, one of the most significant city planners of the twentieth century, when asked to describe his concept of an ideal city said first that it must be a "vital place"—a place that people identify with and find meaningful (Bacon 1974). Florida says that cities that "get it" have a vibrant, varied life. Cities that "get it" don't close down early, but have cultural attractions, coffee shops open, and other activities throughout the day (Florida 2002, 225). Kostof (1991, 222) points out the vibrancy that takes place in city streets and squares. He says these places serve to stage spectacles in which citizen are both the players and the audience. James Rouse created "festival marketplaces" to try and create vitality in a city and perhaps turn cities around. So vibrancy is important for communities as an indicator of social and economic health. Further, it is important that there be vitality throughout the day.

How does this vitality relate to festivals, and can festivals be a good measure of vibrancy? *The Planner's Dictionary* describes festivals as "recreational, social, educational, or cultural activities open to the public" (Davidson 2004, 180). Since these festivals happen occasionally, but not continuously, festivals are not a direct measurement of daily, 24-hour vitality similar to that mentioned by Bacon, Kostof, and

Florida. However, the festivals do represent a powerful surge of vitality that would not be possible if the community had no vitality at all. So the festivals do measure a portion of the community's vitality, and one could make an argument that if the community has a certain number of festivals, then this is an indication of the community's vitality, vibrancy, and spirit similar to that mentioned by Bacon, Kostof, and Florida. This concept and the issue of how many festivals can be related to what level of community vitality will be further explored later in this chapter in the discussion of the independent variable and in chapter three, Methodology. However, it is clear that community vitality is important for communities and the community spirit activities is the only variable in the McGuire et al. model (1994) that seeks to measure community vitality.

### ***Provision of Infrastructure***

Good infrastructure, both physical infrastructure (land, utilities, roads, etc.) and institutional infrastructure (schools, hospitals, etc.), is important for development and redevelopment (Rand 2004). Prepared land brings more than five times the price per acre than other land. Normalization includes developing parcels that are of manageable size with full utility service and clear title so they can be sold or leased more readily (Frieden and Baxter 2000).

Communities that received installations as a result of BRAC receive a large volume of physical infrastructure, some in good condition but much in need of repair.<sup>8</sup> Some of the infrastructure does not meet local building codes or the Americans with Disabilities Act (similar to older buildings in many communities). During the 1988, 1991, 1993, and 1995 BRAC closures, BRAC communities received 218,000 acres of land and base-related equipment. In spite of the disrepair, many of these installations were in desirable

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<sup>8</sup> There is little incentive for the military to repair infrastructure that they will soon give to the community.

locations on waterfronts or near major highways or had airports, which made them valuable in spite of their disrepair (Frieden and Baxter 2000). Thus, overall the infrastructure transferred to the communities was a benefit. BRAC communities sought the PBCs of readily marketable properties, such as military golf courses, and asked DoD to renovate buildings and upgrade gas, water, and sewage systems (OEA n.d.).

BRAC literature points out that it is in the community's best interest to have the property transferred quickly so the property can be used productively (McCutcheon 1998). Other BRAC literature points out that this quick reuse needs to be balanced with the long term prospects for the property. Lynch (2004) points out that community leaders may assume that creating employment that capitalizes on existing infrastructure and facilities that were left behind is the most logical choice. However, the ability to attract and maintain private sector investment should be the ultimate driver of the plan and infrastructure plans should be tailored to meet the long-term plan. If the land use plan depends too heavily on interim uses, it can cause the markets to have a negative view of the facilities and former base.

Many BRAC installations had environmental contamination (Frieden and Baxter 2000). The implementation of reuse plans is often delayed due to environmental clean-up (OEA 2006). It is important to identify sites with the least amount of contamination early and make them available for redevelopment (Thomas, Spillane and Kaye 1999). A thorough assessment of the total environmental condition of the property is required (Matwiczak 2004). It is also important to have a realistic outlook regarding base contamination (Hansen, Skopek and Somma 1997). DoD has implemented the Fast Track clean-up program to better prioritize funds for clean-up. The environmental impact

statements for this prioritization and scope of the environmental clean-up projects depend on the reuse plans submitted by the communities, so it is important to get LRPs done quickly (Bartik 1993). CERCLA authorizes early transfer (without all the environmental clean-up being complete) under certain conditions (such as industrial to industrial use). For bases on the National Priorities List (NPL), early transfer requires the concurrence of DoD, EPA, and the governor (Bartik 1993).

Finally, from the physical infrastructure perspective, BRAC literature points out that BRAC communities receive extra infrastructure that non-BRAC communities facing development challenges normally do not receive. The BRAC communities/LRAs can use this infrastructure to attract businesses as a direct enticement (such as when facilities or infrastructure are provided either free or at a reduced rate to businesses) or as a general incentive (where the installation is seen as having quality infrastructure).

Personal property that is left behind by the military when a base is closed can also be used as an enticement. Personal property, in the government definition, is not associated with an individual person, but rather property used by personnel while they perform their work duties. Personal property can be as small as hammers or as large as fire trucks. Beginning with the 1990 BRAC rounds communities could keep large amounts of personal property when the bases were closing. The value of the personal property kept by the communities can be significant. The disposition of personal property and whether the government will keep the personal property or transfer the personal property to the LRA has been contentious in recent closures (McCutcheon 1998). DoD often wants to use the personal property at other installations and the BRAC communities want to keep the personal property at the closing installation.

Training and economic development go hand-in-hand (Bartik 1993) and thus institutional infrastructure is part of the McGuire et al. (1994) variables that define development capacity. BRAC literature points out that a source of manpower training is one of the best possible inducements for private firms (OEA 2006). Communities have successfully adopted this vocational institute concept as a means of attracting new industry and incorporating educational opportunities for the local work force in redevelopment plans (Lynch 2002). Lynch points out that effective long-term redevelopment solutions can only be found through a “bread and butter” attitude that enhances education opportunities to help stem population emigration (Lynch 1970). Many BRAC communities incorporate colleges, community colleges, and other training into their LRPs (Rand 2004).

Programs targeting displaced workers can use OEA, EDA, state, and local government grants (Carahsen 2006). During the 1988, 1991, 1993, and 1995 BRAC rounds, OEA coordinated over \$1.1 billion in other Federal Agency support to assist worker and community recovery efforts (OEA 2006). The DoL Employment and Training Administration provides guidance and financial support in planning and developing worker adjustment strategies. The Installation-Finding Opportunities Resources Careers and Employable Skills Centers are funded by DoL grants (Carahsen 2006). Institutional infrastructure, similar to physical infrastructure, is important because quality institutional infrastructure can be used to entice businesses and workers to an area. However, unlike physical infrastructure, institutional infrastructure normally helps the community at large and not individual businesses directly.

In summary, infrastructure—both physical and institutional—is important to BRAC literature and redevelopment. Quality physical infrastructure can be used as either a general incentive or a direct incentive to specific businesses or industries. Quality institutional infrastructure is normally a general incentive. Both types of infrastructure are supported as variables by both the BRAC and general literature.

### *Appropriate Development Focus*

The McGuire et al. model (1994) contends that development should focus on non-industry development. Lynch (1970), who studied BRAC closures during the 1960s, highlights that long-term development solutions can only be found through a "bread and butter" attitude of finding job-producing industries. This approach includes community educational opportunities. The American Planning Association (APA) (1989, 410) echoes this concept. They point out that "development agencies have come to realize that there are "few large plants circling the U.S. looking for a place to land." Rather, development officials should turn their attention to encouraging homegrown enterprises. APA notes that high-technology firms seek out locations where related businesses are situated, labor is highly skilled, public schools are good, and amenities abound.

Later BRAC literature contends that the LRA should plan for "appropriate" reuses that consider the competitive advantages and disadvantages of the base, include diverse options, and include interim and long-term transfer options (Matwiczak 2004). Thomas, Spillane, and Kaye (1999) point out that the LRA should listen to the site, the market, and the community and strategically balance site characteristics, market strengths, and community needs. Also, planners must identify multiple markets (not one) to create early momentum and provide a buffer against real estate and economic cycles. They should

look for niche markets or different types of activities that are a good match for the economy and the real estate (Thomas, Spillane and Kaye 1999).

Frieden and Baxter (2000) note that during implementation, LRAs sometimes had issues with the LRPs that did not reflect market realities or provide a detailed strategy. Florida (2002, 283) points out what should be good news for LRAs: communities don't have to underwrite big-box retailers or subsidize malls to be successful. Companies remain important for economic development. The most important thing is for the company to be somewhere that has a pool of qualified people. It's the combination of those persons' experience, skill sets, raw intelligence, and energy that attracts companies. Following base closures, LRAs have a base of people with skills and expertise. The LRAs need to determine what businesses can take advantage of those skill sets and attract those to the community. The LRAs also want those qualified, talented people to stay in the community. Florida points out that what attracts people (or in the BRAC case encourages them to stay) is a community that invests in a diverse range of lifestyle amenities that people want and use, such as parks, education opportunities, nightlife, amenities for children, and fitness. Many BRAC installations offered parks, educational opportunities, amenities for fitness, and child facilities before they closed. LRAs need to ensure those amenities are available in the community after redevelopment.

### ***Major Business Developments***

The McGuire et al. study (1994) proposes that communities with development experience in the recent past will have greater development capacity than those communities that have not had any recent development experience. BRAC literature aligns with this concept. The OEA bulletin (n.d. d.) states that LRA staffs should have

pre-established relationships with elected officials and senior management. It finds that members of the LRA (their staff, consultants, or in-house experts) and community representatives need to have expert knowledge of development. Reimer (1996) says it is necessary for a well-honed economic development organization to be able to target users, have ready access to the private development industry, and exhibit an understanding of the deal packaging necessary to ensure developer interest. Friedman and Baxter (2000) in their study of BRAC base closures looked at other entities (public agencies and private firms) that owned large amounts of land and found evidence that knowledge of development is important. They looked at Ford Land that used multiple specialists specializing in market research, financial and analytical consulting, econometric forecasting, locational consulting, and site acquisition services to develop their property.

Required development experience includes strategic planning, grant writing, and community organizing experience (Hansen, Skopek and Somma 1997), as well as expertise in legal, environmental, business, economic development, the BRAC process, military, and real estate matters (Matwiczak 2004). Development expertise includes the ability to develop a broad portfolio that includes business attraction, business solicitation, business screening, business retention, bond structure issues, new business start-ups, infrastructure evaluation, utility operation, and environmental remediation. Expertise for redevelopment further includes the normalization of property, i.e., developing parcels that are of manageable size with full utility service and clear title (Frieden and Baxter 2000). Lynch (2004) points out that the most demanding task for many smaller communities is the necessity to deal with the lack of basic local organizational understanding and self-confidence in regard to economic growth.



Reimer (1996) says that a missing ingredient for many communities is the lack of entrepreneurial instincts that a private developer has and the innovative response to land development opportunities brought to the process by that instinct. He contends that a key to reuse is in the recruitment of people with that instinct (often private developers).

If local communities do not have development experience, there are three options: use services from OEA, hire a professional consultant, or hire a developer with professional consultants. OEA provides a wealth of relevant information, such as examples of redevelopment plans, property conveyance documents, model leases, deeds, and redevelopment authority organizational structure templates, as well as case studies of closures (OEA 2006). They also provide a program manager in Washington DC for each installation. This information and assistance is provided at no cost to the community. During the 1988, 1991, 1993, and 1995 BRAC rounds, OEA also hired base transition coordinators located at each installation to assist the communities in understanding and navigating federal processes.

If local communities do not have development experience and want assistance beyond that provided by OEA, they can hire experts. NAID contractors offer a variety of development professionals. OEA provides some funds for planning purposes and development of the LRP. During the 1988, 1991, 1993, and 1995 BRAC rounds, OEA provided roughly \$200,000 per installation. These professional consultants can help the communities develop realistic LRPs as well as implementation plans (OEA 2006).

The LRAs can hire private developers that not only develop property but have access to development professionals. By hiring a private developer, LRAs have access to professionals they might not otherwise be able to hire. If the communities do use a

developer, they can make the process smooth by anticipating the needs of private developers and end-users and streamlining any approval processes. Master developer costs ranged from \$36 to \$277 million (most funds come from development profits). The Frieden and Baxter (2000) report recommends using responsiveness to reuse plan goals, financial capacity, development experience, team composition, and public involvement skills as master developer selection criteria. No private developer/ community relationship during the 1980 and 1990 BRAC closures were at totally “arms-length.” Successful communities, developers, and consultants need to be continuously interacting.

BRAC literature further notes that BRAC communities that do not have development experience are in a better position than non-BRAC communities that do not have development experience because of the expertise and funding provided by OEA. This is because the military, which is a patient seller, can carry land costs out to a 15-year-horizon—an obvious advantage in attracting private developers (Reimer 1996).

### **Summary for the Independent Variables**

In summary, the BRAC literature strongly supports the McGuire et al. (1994) model and most of its variables measuring development capacity. One variable, community spirit activities, is not directly supported by the BRAC literature, and another, infrastructure, could be split into two variables based on the BRAC literature.

The BRAC literature does not provide support for the McGuire et al. (1994) variable, community spirit activities; however, there is literature that supports the concept that communities need to be vital and vibrant (Bacon 1974, Florida 2002, and Kostov 1991). The fact that local communities hold festivals can be tied to that vibrancy, and the number of festivals can be used to indicate the level of community spirit. A further reason

for using this variable is that no literature, either BRAC or general, provides any evidence against using the community spirit activities variable.

Both BRAC and general literature provide strong support for using infrastructure, both physical and institutional, as a variable. The literature provides a good reason to separate physical infrastructure from institutional infrastructure. The fact that physical infrastructure can be used as either a direct incentive for economic development (to specific businesses/industries) or as a general incentive for economic development (as in general infrastructure) and institutional infrastructure is normally only used as a general incentive for economic development is a good reason to split the variable into two variables; physical infrastructure and institutional infrastructure. The physical infrastructure would measure the community's dedication of financial resources and effort to improving the roads, sewers, etc., and normalize the property and represent the community's ability to either generally attract businesses or its ability to attract specific businesses with this variable. The institutional infrastructure would measure the community's dedication of financial resources and effort to schools, medical facilities, etc., and represent the community's ability to generally attract businesses with this variable. The next section provides a literature review of how different agencies measure the attainment of development goals and compares them to the LRP goals, which is what this study uses as a basis to measure the attainment of development goals. Following that discussion the model for this study will be presented.

## **Variables Used To Evaluate the Attainment of Redevelopment Goals**

For our model the dependent variables evaluating redevelopment success were evaluated three times. First, evaluation of the redevelopment goals as outlined in the community's initial LRP within the time period specified in the LRP were used. Attainment of the goals were evaluated for each individual goal and then the attainments were added together with each goal being weighed equally. Second, the same evaluation was made, except that the evaluation was made through December 2010. Third, if the community could not reach one hundred percent of their LRP goals in the first two evaluations, then select indicators from other research organizations were used to see if the community had reached those select indicators. The following section outlines indicators used by other research organizations and compares them to the LRP goals to provide the basis for the select indicators used for the third evaluation with this model.

### **Economic Development Indicators**

This section identifies determinants and indices used by other research organizations to measure redevelopment. HUD's Urban Development Action Grant (UDAG), Title I, and Title IX Programs place cities or communities either "above" or "below" a line according to HUD's UDAG Weighted Rank Index. The Brookings Institution's Intrametropolitan Hardship and Intercity Hardship Index, the Congressional Budget Office's Urban Need Index, HUD's Community Need Index, the U. S. Department of the Treasury's Fiscal Strain Index, and the Urban Institute's Economic Performance Index rank cities and provide a detailed picture of the city or community's

economic health. These indices use many of the same variables found in the LRPs: unemployment, per capita income, and population change.

The HUD Community Development Block Grant's (CDBG) Relative Community Need Index compares communities to determine the allocation of CDBGs. Indicators include population, poverty (number of persons below the poverty level), overcrowded housing (number of houses with more than one person per room), growth lag (number of persons who would have been residents in a metropolitan city in excess of the current population if such a city had a growth rate equal to the population growth rate for the same time period for all metropolitan cities), and the age of the housing (number of existing year-round housing units constructed before 1939). Each indicator is expressed as a ratio between the metropolitan city value and the sum of the values for all metropolitan areas. A dual formula approach is used. The first formula distributes funds by considering population (weighted .25), poverty (weighted .50), and overcrowded housing (weighted .25). The second formula distributes funds by considering growth lag (weighted .20), poverty (weighted .30), and age of housing (weighted .50). These factors are summed and applied against the overall CDBG dollar allocation according to the formulas below (Burchell and Listokin 1981). When compared to the LRP, population change is related to LRP goals.

Formula One:

$$(.25 (POP_j/POP_{smsa}) + .50 (POV_j/POV_{smsa}) + .25(OVERCRWD_j/OVERCRWD_{smsa})) \times G_{smsa}$$

Formula Two:

$$(.20*(GLAG_j/GLAG_{mc}) + (.30*(POV_j/POV_{smsa}) + (.50*(AGE_j/AGE_{smsa}))) * G_{smsa}$$

J = indicates jth entitlement or city                      POP = population  
Smsa = indicates variable defined for all cities      POV = poverty

MC = indicates that the subscribed variable is defined for all metropolitan cities  
 Gmsa = total CDBG dollar allocation to all

OVDNRWD = overcrowded housing  
 AGE = age of housing  
 GLAG = growth lag

The Brookings Institute's Intrametropolitan Hardship Index measures intercity socioeconomic hardship. It uses unemployment, dependency (persons under 18 and over 64), education (less than 12th grade), income level (per capita income), crowded housing, and poverty (percent of families below 125 percent of low-income level) as indicators. The variables are standardized according to their procedures (details not provided). The six standardized values for each city are then summed and the total divided by six to establish an overall average. The cities were then ranked according to their scores (Burchell and Listokin 1981). The Brookings Institute no longer uses the Intrametropolitan Hardship Index. No reason was given for no longer using it. The Brookings Institute Intrametropolitan Hardship Index used several of the LRP goals (unemployment, per capita income, and education/training). The dependent population and crowded housing are not goals, but rather conditions to avoid. Dependent populations are not mentioned in the LRPs. LRPs try to avoid crowded housing. When compared to the LRP goals, unemployment, per capita income and education are related to LRP goals.

The Congressional Budget Office's Urban Need Index was used to determine city need. It used indicators in three categories: (1) social need, (2) economic need, and (3) fiscal need. Social need indicators include hardship, unemployment, and per capita income. Economic need indicators include employment change, population change, per capita income change, density, and aged housing. Fiscal need indicators include tax effort, property tax base, and service needs. The composite indices of social, economic and fiscal need were created by combining individual measures using a method designed

to assign equal importance to each component. First, the individual measures were standardized by assigning a value of 100 to the range of variation among cities using the formula below. For each measure, the city with the greatest need was assigned a score of 100 and the city with the lowest need a score of 0. Then the composite measure of need for each city was determined by calculating the average score received on the standardized component measures. The Congressional Budget Office no longer uses the Urban Need Index. No reason was given for no longer using it (Burchell and Listokin 1981). When compared to the LRP goals, unemployment, per capita income, and population change are related to LRP goals. When compared to the LRP goals, unemployment, per capita income, and tax base are related to LRP goals. The Urban Need Index formula is:

$$x = (y - y_a) / (y_b - y_a) \text{ where}$$

x = standardized score to be created for each city  
y = value on a specific measure of urban need for each city  
y<sub>a</sub> = value of y indicating least need  
y<sub>b</sub> = value of y indicating greatest need

The HUD Community Need Index uses indicators in three categories: (1) age and decline, (2) density, and (3) poverty. Age and decline indicators include percent change in population, pre-1939 housing, percentage of the population over 65, and percent change in retail sales establishments. Density indicators include crime (number of violent crimes per 10,000 of the population), density (population per square mile), percent of housing occupied by renters, change in the percentage of Negro population, percent of the population that is non-white, and unemployment. Poverty indicators include percent of poor under 18, percent of the population with incomes below the poverty level, percent of

the population that is non-white, percent of the population that occupies housing with more than one person per room, percent of houses without adequate plumbing, percent of housing with a female head, and percent of population without a high school education. The 20 quantifiable indicators were grouped via factor analysis into the three categories. For each category, factor analysis provided a city score measuring relative per capita need among cities. A city generally received a high score on the three dimensions if it had a high percentage of most of the variables that defined that factor. A single or composite of community need was derived by combining and weighting the three categories with the formula below (Burchell, 1981). The Community Need Index is no longer used. No reason was given. The HUD Community formula is:

$$\text{Need} = .40 (\text{poverty}) + .35 (\text{age and decline}) + .35 (\text{density}).$$

The U.S. Department of the Treasury's Fiscal Strain Index compares cities using population change, per capita income change, and property change. Statistical z scores were developed for each city for each indicator by comparing the value for each city decided by the standard deviation from the mean of the 48 largest cities. Each of the five fiscal strain x scores were then weighted as follows: population change (.37), per capita income change (.27), own source revenue burden change (.12), long term debt burden change (.12), and change in full market value (.12). The weighted z scores were then summed for each city to obtain a Total Fiscal Strain Value. The cities were then ranked according to their scores (Bruchell 182-184). My research indicates that the Department of the Treasury no longer uses the Fiscal Strain Index. No reason was given for no longer using it. When compared to the LRP goals, per capita is related to LRP goals (Table 2-3).



**Table 2-3. Comparison of Development Indices and Often Used LRP Variables**

<u>Indices</u>	Urban Institute Economic Performance	Urban Development Assistance Grant Rank Weight	Brookings Institute Intercity	Congressional Budget Office Economic	Housing and Urban Studies Need	Treasury Department's Fiscal Stress	Times Used
<b>Variables</b>							
<b><u>Employment/Income Related:</u></b>							
Unemployment	X	X	X	X	X		5
Per Capita Income	X	X	X	X	X	X	6
Poverty		X	X		X		3
Employment Change		X		X			2
<b><u>Population Related:</u></b>							
Population Change (Percent)	X	X		X	X	X	5
Population Over 65 (Percent)					X		1
Population Under 18 (Percent)					X		1
Non-White					X		1
Negro Percentage Change					X		1
Female Headed Households					X		1
Dependency			X				1
<b><u>Education Related:</u></b>							
Education			X				1
Population Over 25 Years w/o HS Education					X		1
<b><u>Housing Related:</u></b>							
Crowded Housing			X				1
Density				X	X		2
Aged Housing		X		X	X		3
Houses w/o Plumbing					X		1
Property Change						X	1
Renter					X		1
<b><u>Community Related:</u></b>							
Crime					X		1
Tax Effort				X			1
Property Base Tax				X			1
Service Need				X			1
Percent Difference in Retail Sales					X		1
Own Source Revenue Burden Share						X	1
Long Term Debt Burden Share						X	1

Table 2-3 provides a synopsis of agency indices and compares their variables to the goals selected by the LRA's LRPs. This chart shows the LRP goals are similar to the variables used in agency indices. In particular the per capita income, unemployment, and population change are strongly related to LRP goals. For this study these three measurements were used in conjunction with OEA's measurements of jobs created on the former installation and land transferred (or placed in long term lease) as a third measurement for the dependent variable.

Two of the frequent other organization measurements were refined before use—the unemployment rate and per capita income for the local reuse area were compared to the state figures, and any changes in the differences between the two were noted.

### **Review of the Local Redevelopment Plans**

Studies on planning documents developed for redevelopment emphasize certain types of data that needs to be collected, analysis that needs to be conducted, and specific component plans that should be included in the LRP. The following section describes the recommended items for inclusion in the LRPs and LRP execution. These were used to develop variables to evaluate LRPs. Recommended data includes installation facility, utility, and environmental data plus private sector market data. Recommended analysis includes analysis of the installation data as well as analysis of market data. Plans need to include targeted markets, a plan for the homeless, and a financial plan. The literature highlighted includes the "Community Base Reuse Planning Process, A Layman's Guide" by OEA; "Streamlining Base Reuse" by Stephen Thomas, David Spillane, and Robert

Kaye; the OEA Engineering Technical Bulletin Three entitled “Changes at Military Bases, Community Planning Challenge”; and the GAO pamphlet, “Military Bases: Challenges in Identifying and Implementing Closure Recommendations.”

The Layman’s Guide (2004) lists six information components needed to compile the overall redevelopment plan, four related to existing data and two to component plans: (1) environmental conditions, (2) market setting conditions, (3) utility conditions, (4) homeless needs, (5) plan financial plan, and (6) zoning and development conditions.

Community leaders may assume that creating employment that capitalizes on infrastructure and facilities left behind is the most logical choice. However, the ability to attract and maintain private sector investment should be the ultimate driver of the plan. If the land use plan depends too heavily on interim uses, the plan can cause the markets to have a negative view of the facility. A critical element is the involvement of the local citizens. According to the guide, the seven Ss of a successful land use plan include: (1) site sensitivity, (2) structure, (3) smart streets, (4) small sections, (5) spaciousness, (6) scope and signage, and (7) sell, sell, sell.

Thomas, Spillane, and Kaye (1999) identify that there are two keys to success in redeveloping a military base: Learning to listen to the site, the market, and the community as well as strategically balancing site characteristics, market strengths, and community needs, while creating a flexible development plan. To investigate these ideas the authors used case studies at the Naval Air Warfare Center in Bucks County, Pennsylvania, which showed that knowing a site's assets and liabilities is a big plus. Pease AFB is an example of using multiple niches. Fort Devens and U. S. Navy property at Quonset Point in North Kingston, Rhode Island, were examples of being flexible.

The study found that military bases take longer to redevelop than most private sites. Other findings include that the key to consensus in the LRA is understanding. The reuse planner needs to broaden committee members' understanding of all the issues. Once this is done committee members can be big resources. Second planners must identify multiple markets to create early momentum and provide a buffer against real estate and economic cycles. Ideally the project will recruit both private and public interests. Planning should look for niche markets or types of activities that are a good match for the economy and the base real estate. Third, it is important to identify sites with the least amount of contamination early and make them available for development. Lastly, the development plan must be realistic and flexible, able to accommodate many different types of users, and adapt to long-term changes.

The OEA Engineering Technical Bulletin (n.d.) looked at the planning challenge to assess the redevelopment potential offered by the base in the context of ongoing local development efforts and to integrate the base property and facilities with the surrounding community. It identified that the major goal of most redevelopment is job creation. Other goals may be economic feasibility of the redevelopment, tax base expansion, diversification of the local economy, maintenance of certain environmental quality, creating affordable housing, or a certain redevelopment theme.

Typical uses on former bases include (1) industrial and office parks (75 percent), (2) educational (60 percent), (3) public airports (40 percent), (4) public recreation (30 percent), and (5) health-related activities (20 percent). The OEA Bulletin identified that if one of the major objectives is to minimize public costs, a balance of public benefit (no

cost) acquisition, and private sector redevelopment is wise. Public benefit has strings attached. It is also important to establish a "new civilian look" early in the process.

The GAO pamphlet (1995) provides a brief historical account of the BRAC process and makes some preliminary observations about BRAC issues that the authors hope extend beyond the life of the 1995 BRAC round. Most of these observations were about the BRAC installation selection process; however, a few dealt with redevelopment of bases following base closures.

The pamphlet noted that as of January 1995, 51 percent of the 70 major closing actions of the prior three rounds had been implemented. About 88 percent of the property was being retained by DoD or transferred at no cost to other federal, state, or local agencies. About 140,000 acres have not been transferred due to environmental clean-up. The pamphlet noted that communities are seeking the PBC of readily marketable properties, such as military golf courses. Communities are also asking DoD to renovate buildings and upgrade gas, water, and sewage systems. Finally, reuse plans are being delayed for several reasons, including (1) disagreements over reuse alternatives, (2) changing laws and regulations, and (3) environmental clean-up of contaminated properties. DoD has the discretion to determine the final use of the property. Some of the sites are prohibitively expensive to clean up and some methods of clean-up are unsure.

### **Theoretical Framework for This Study**

The model for this study is based on the McGuire et al. (1994) study model and the Yin (2009) Case Study Method. The McGuire et al. model was used to define

development capacity and show any link to the achievement of redevelopment goals or indices used by other agencies. The Yin method provided a framework for the study and a methodology to use case studies. The Yin method also helped to determine if other factors (such as the quality of the LPR or execution of the LRP) influenced the link between development capacity and the achievement of redevelopment goals.

This study is a multiple-case study that employs cross-case analysis using qualitative indicators to examine the relationship between development capacity and attainment of redevelopment goals or indices used by other agencies. The McGuire et al. model defines development capacity and shows that the existence of a strategic plan is related to higher development capacity. What the McGuire study does not do is show if the higher development capacity is related to higher achievement of development goals. This study examined whether higher development capacity is linked to the higher achievement of redevelopment goals or indices used by other agencies.

The Yin (2009) multiple case replication study model provided the framework to conduct that analysis. This type of case study is used when the phenomenon of interest and its context yield such a large number of potentially relevant variables that to use sampling logic would require an impossibly large number of cases. In this case it would probably require more cases than BRAC closures that exist. Yin's model then requires that each case be carefully selected so that it either (1) predicts similar results or (2) predicts contrasting results but for anticipatable reasons. For this study the cases have been selected so they are as similar as possible to predict similar results. The cases, in aggregate, provided compelling support for the proposition that higher development capacity is linked to the higher achievement of redevelopment goals.

## **Research Problem, Questions and Hypotheses**

The research problem for this study was whether or not the local communities should adopt policies/programs to improve their development capacity. To answer this question, the communities needed to know whether the improvement in development capacity, as measured by McGuire et al. (1994) and this study, led to an increase in the achievement of redevelopment goals. If the improvement in development capacity did not lead to an improvement in the achievement of redevelopment goals, then it does not make sense for the community to try to improve development capacity, to achieve any of the development capacity variables that they do not already possess, or to continue to support any of the variables they currently possess (unless achieving/maintaining those variables are for goals apart from economic development). It would also be helpful for the communities to know whether certain variables lead to a greater increase in the attainment of development goals than other variables. If that information is known and the relative cost (both monetary and other resources) of obtaining the variable is known, then the community can prioritize which variables that they want to pursue.

The McGuire et al. (1994) model uses 13 variables divided into three categories to measure development capacity. Based on this model, it would further be helpful for communities to know if a category leads to higher achievement of development goals.

The research questions for this study to answer were:

1. Is there a positive relationship between development capacity and the attainment of redevelopment goals? In other words, did improvement in development capacity lead to the attainment of a higher percentage of redevelopment goals?

2. If the answer to question one is “yes”, is there a positive relationship between each development capacity category (citizen participation, community structure, and development instruments) and the attainment of redevelopment goals? Which category had the greatest positive relationship?

3. Is there a positive relationship between each variable and the attainment of redevelopment goals? Which variable had the greatest positive relationship?

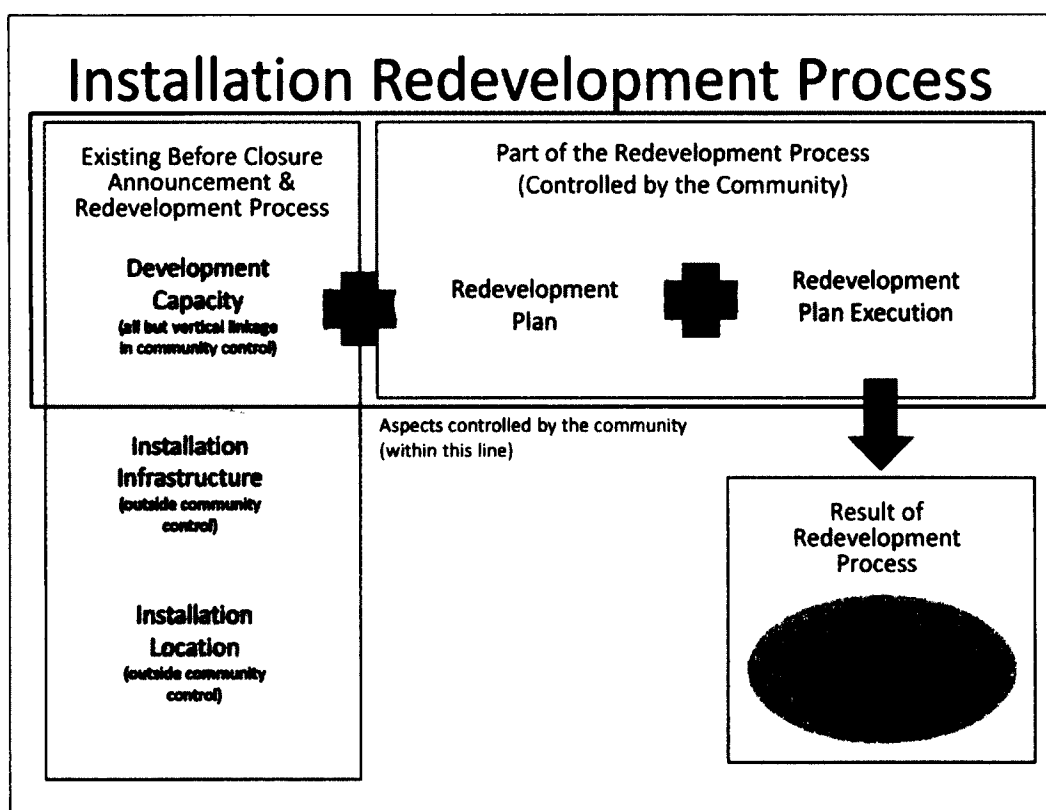
4. For each development capacity category, which variable is the most significant?

To answer these questions it is important to know if the redevelopment goals were achieved within the time period established. The research question to answer this problem was “What percentage of the redevelopment goals were accomplished within the time period established by the LRP?” In case the redevelopment goals were not achieved in the time period established in the LRP this study asked, “Were the redevelopment goals achieved by December 2010?” Lastly, if the redevelopment goals were not achieved at by 2010, then OEA indicators (the percentage of jobs established at the former installations and percentage of land transferred or in long-term lease) were used along with frequent indicators from other organizations (the change in the unemployment rate and the change in the per capita income in the local reuse area compared to the state along with the population change in the local reuse area) to give an indication of whether the LRP goals were too aggressive. After the answers to these questions were determined, the McGuire et al. (1994) model and this study’s model were evaluated to determine if either model needed refinement.



## Model to be Used

With any redevelopment there a wide variety of variables that can influence redevelopment success; some are within the control of the local community/government and others are not. When looking at BRAC closures and redevelopment following a closure, there are variables that are within the control of the local community/government and others that are not (figure 2-1).



**Figure 2-1. Installation Redevelopment Process**

Variables that are within the local BRAC community's control are development capacity (except for federal/state funds provided to the local community as part of the vertical linkage variable), the redevelopment plan, and execution of the redevelopment

plan. The local community/government does not have control over the installation location and the installation infrastructure that is left as a part of the BRAC process.

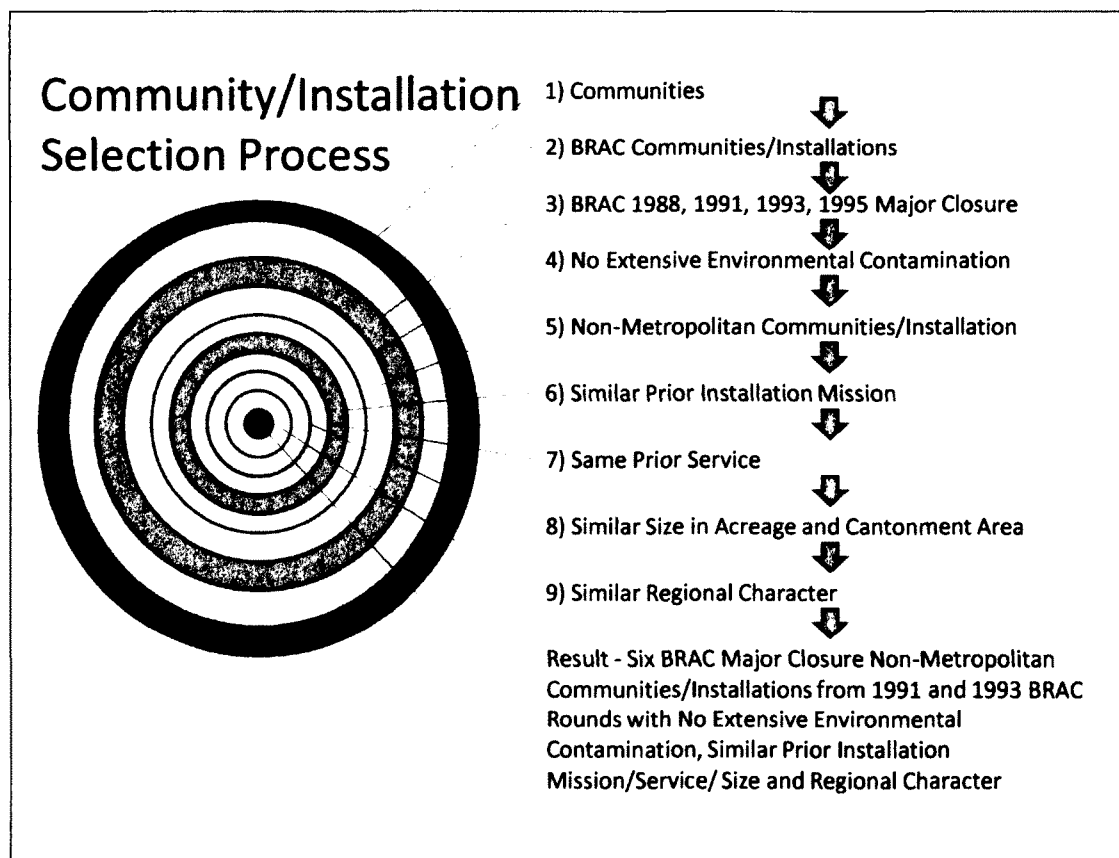
This study controlled for variables that were not within the control of the local community or government by carefully selecting the communities and installations to be studied. The study attempted to isolate development capacity by conducting a qualitative analysis of each community's LRP and LRP execution. The Yin Case Study Method (2009) provided the framework for conducting and applying that analysis.

Careful installation selection was used in this study to ensure that the installations selected were as similar as possible and to control for the fact that the local community did not have control over the installations' infrastructure and location. (The details for the community/installation selection are provided later in this chapter.) This left development capacity as the only significant variable for this study existing before the base closure announcement that was not controlled for by the selection of the installations. A detailed qualitative case study (using the Yin Case Study Method, 2009) that examined the quality of the LRPs and their execution identified if any of the findings were affected by the quality of the redevelopment plan or its execution, thus not controlling for the LRP or its execution, but providing further explanations for redevelopment outcomes.

### **Research Settings**

The settings for this study were six installations/communities affected by the 1988, 1991, and 1993 BRAC rounds: Chanute AFB in Rantoul, Illinois; Grissom AFB in Peru, Indiana; Plattsburgh and Griffiss AFBs in Plattsburgh and Rome, New York; and Wurtsmith and K. I. Sawyer AFBs in Oscoda and Marquette, Michigan (figure 2-2). The process to select these communities/installations started with a broad look at communities

and narrowed down the selection of communities to attain a relatively small number of installations and communities with similar features both in the community and on the installation as well as similar redevelopment processes.



**Figure 2-2. Selection Process for Communities/Installations**

First, communities were selected as the unit of analysis because economic redevelopment is primarily a local issue. Second, BRAC communities were chosen because, due to the BRAC process, each community followed a similar redevelopment process. Similarities in the redevelopment process included that each community lost a major employer (with a loss of at least 300 civilian employees). Each community was

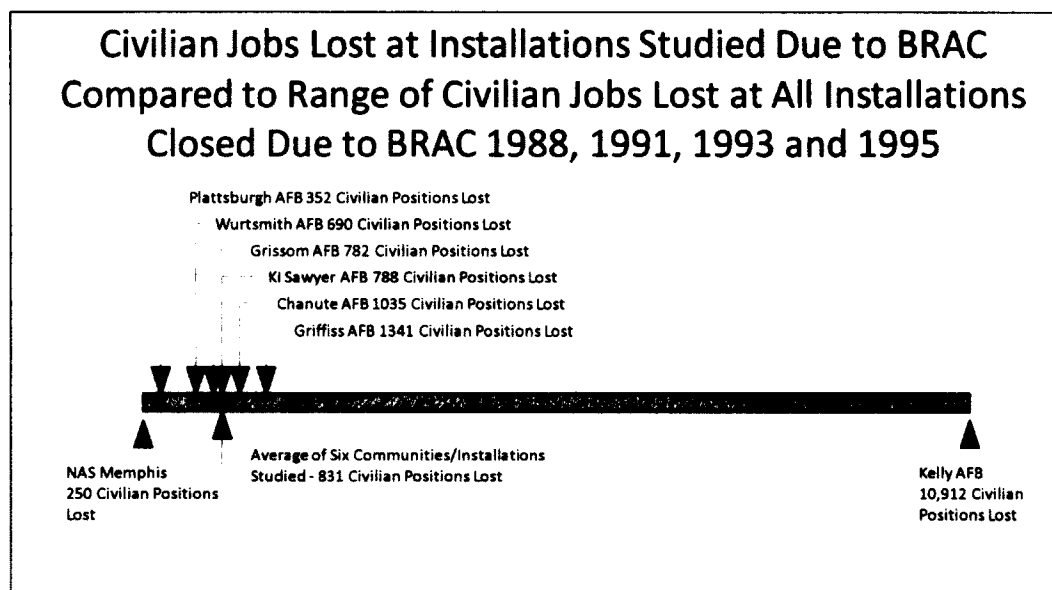
notified of the loss by congressional notification. Before the congressional notification, each community knew that the BRAC decision process was taking place, but none had advanced knowledge that the installation would be closed. Therefore, each community could only do so much potential planning ahead of the notification. Each community was required to establish an LRA to oversee redevelopment and was given similar advice from OEA in how to structure the LRA.

Each community was required to develop an LRP which identified the communities' strengths and weaknesses, outlined its goals, and developed a plan to help the community obtain those goals. Each community received similar LRP assistance from OEA and similar grant amounts from OEA to fund their LRP. For each installation DoD hired a BRAC transition coordinator that helped the community navigate through the DoD system to learn information about the base. The transition coordinator was physically located at the base. The BRAC transition coordinator kept the community informed on base closure actions such as when units would leave the installation, personal property that would be left at the installation when the military left, the condition of facilities that would be left, and when those facilities would be available. Thus, all the communities in this study went through a very similar closure and redevelopment planning process.

Third, major closures from the 1988, 1991, 1993, and 1995 BRAC rounds were selected because they are the most recent rounds (except for the 2005 round, which began implementation in 2011 and therefore would not have made redevelopment data to analyze). It is anticipated that future BRAC rounds will follow a similar process to the 1988, 1991, 1993, and 1995 BRAC rounds, so lessons learned from these rounds will be

more transferable to future rounds than previous BRAC closures (due both to time factors and anticipated process similarities). Major closures were selected from these rounds because a major closure typically affects at least 300 civilian employees (figure 2-3) and makes large amounts of land and facilities available to the community. Minor closures would not affect as many people and typically provide less land and facilities.

The communities selected lost approximately the same number of civilian jobs—between 352 at Plattsburgh AFB and 1341 at Griffiss AFB, with the six communities falling in the bottom percentile of civilian jobs lost. The range for all 1988, 1991, 1993, and 1995 BRAC installations was from 250 at Memphis Naval Air Station to 10,912 at Kelly AFB, so the six communities selected lost a small number of jobs compared to the total range of civilian positions lost across all bases closed by the four BRAC rounds.



**Figure 2-3. Civilian Jobs Lost at Installations in This Study Compared to Civilian Jobs Lost at All Bases Closed Due to BRAC Rounds 1988, 1991, 1993 and 1995**

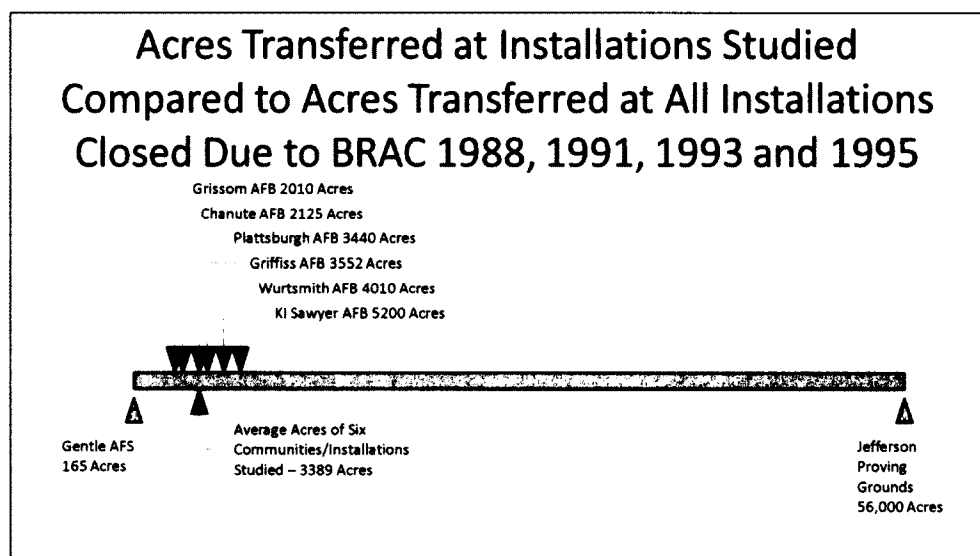
Fourth, it is difficult to redevelop an installation when extensive environmental contamination is being cleaned up. So installations with extensive environmental contamination and significant clean-up occurring after the base closure were avoided.

Fifth, communities/installations from non-metropolitan areas (as defined by the 1993 UIC) were selected. Installations from major metropolitan areas were not selected because installations near major metropolitan areas can have other factors in the local area—such as other major plant closings or openings—affect redevelopment.

Seventh the six communities/installations were selected amongst the 1988, 1991, 1993, and 1995 major BRAC closures because they had similar previous missions (large aircraft) and therefore the communities inherited similar facilities and infrastructure. Each installation had similar runway configurations, hangars, and aircraft maintenance facilities, as well as typical office, dining, commercial, dormitories, fitness, recreation, and housing facilities. Also, since the installations were from the same service, the Air Force (AF), the AF typically standardizes the sizes of their flying units, meaning that the quantities of the facilities and infrastructure left behind were similar at each installation. Being from the AF also meant that the installations followed similar closure processes beyond the standardized DoD closure processes. The Air Force Real Property Agency (AFRPA) oversaw the transition of the base once it had closed until the land was turned over to the LRA. AFPRA followed very similar procedures at each installation, including review of projects and approval processes.

Eighth, the six installations had similar sizes in terms of overall acreage and cantonment areas. Overall the acreages ranged from 2010 to 5250 acres, with an average of 3889 acres. Cantonment areas were approximately 800 acres (see figure 2-4). The

range for all 1988, 1991, 1993, and 1995 BRAC installations was from 165 acres at Gentile Air Force Station near Dayton, Ohio, to 56,000 acres at Jefferson Proving Grounds in Indiana. The six installations selected are at the smaller end of the spectrum.



***Figure 2-4. Acres Transferred at Installations Studied Compared to Acres Transferred at All Installations Closed Due to BRAC 1988, 1991, 1993 and 1995***

Next, the six installations were from similar regions of the country with a similar character (the Midwest and the Midwest/New England border). None of the installations were from the California, the Southwest, or the Southeast—regions of the country that were growing in the 1980s and 1990s. This study tried to get installations from the same area of the country to limit the influence of geographic differences. However, when taking into consideration factors three through eight (which were considered more important due to their more direct impact on the community/installation), there were too few communities/installations meeting criteria two to eight to use just one geographic area. Installations were paired by state, if possible, to try and identify the influence of

state laws and assistance programs. Chanute AFB in Illinois and Grissom AFB in Indiana are the exceptions and they are from neighboring states.

In conclusion, although the six installations are different in some respects, they provide a group of research locations with more similarities than many other communities/sites would provide.

#### **The McGuire et Al. Model (1994)**

This study used the McGuire et al. study (1994) as the model with development capacity, the development capacity category, or one of the development capacity variables serving as the independent variable (this was the dependent variable in the McGuire et al. model [1994]). For this study, the dependent variable was first a combination of the attainment of redevelopment goals within the time period established by the LRP; second, attainment of redevelopment goals through December 2010; and third, the attainment of the Office of Economic Development (OEA) goals (jobs created at the former installation compared to the civilian jobs lost due to base closure and the percentage of installation property transferred or placed in long-term lease compared to the land transferred to the LRA) and frequent local indicators used by other organizations (the change in the unemployment rate in the local reuse area compared to the state prior to the base closure announcement (1990) and in 2010, the per capita income in the local reuse area compare to the state prior to the base closure announcement (1990) and in 2010, and the change in the local population from prior to the base closure announcement (1990) to 2010).

The McGuire et al. study (1994) was appropriate to use because it is one of the few studies that defines development capacity. The McGuire et al. study also recommends



that additional research into the linkage between development capacity and the attainment of development goals be conducted. The attainment of redevelopment goals was appropriate to use because the redevelopment goals are the goals selected by the local community. OEA goals were appropriate to use because they are the measures the federal government, both OEA and the Government Accountability Office/General Accounting Office, has used throughout all BRAC rounds to measure redevelopment. Finally, frequently used local indicators by other organizations such as unemployment, per capita income, and change in the local population were appropriate to use because they are used by research organizations such as the Urban Institute, the Brookings Institute, and the U.S. Treasury.

### **Independent Variables**

All variables from the McGuire et al. model (1994) are appropriate to use because each variable addresses a different aspect of development capacity with little overlap between the variables, and the local communities have some, if not total, control over each variable. Most of the McGuire et al. (1994) variables are related to previous research such as Bingham and Blair (1984); Blakely (1994); Frieden and Baxter (2000); Lynch (1970 and 2002); and Hansen, Skopek, and Somma (1997).

The only variable not mentioned in previous BRAC research is the Community Spirit Activities variable, which is mentioned in other research that discusses the vitality/spirit of communities. It makes sense to keep this variable, since the vitality/spirit of communities is mentioned in other research and the vitality/spirit of communities is related to festivals, which is used by McGuire et al. (1994) to measure community spirit.

There is no research which brings up evidence against the use of community spirit activities as a variable.

Finally, this study broke apart the McGuire et al.'s (1994) infrastructure variable into two variables: physical infrastructure and institutional infrastructure. This was done for two reasons. First, even though local governments often provide both types of infrastructure, the programs that are supported by that infrastructure are different. Physical infrastructure, such as roads and utilities, provide the physical backbone for other infrastructure, including a wide range of building types and uses that include housing, commercial, recreational, schools, and medical facilities. This infrastructure can be oriented to the public in general, but it can also assist specific land owners (as is often done in BRAC redevelopment). Institutional infrastructure provides buildings and infrastructure, but only for specific programs such as educational and medical programs. These programs are generally open to the public. Therefore, the two types of infrastructure can be used differently. Also, both kinds of infrastructure can be used to attract businesses and development, but are different in the manner in which they attract businesses. Good physical infrastructure of a community can attract development by its general good condition, but it can also be provided directly to targeted businesses such as the provision of utility lines or roads for a specific plant or commercial park. Institutional infrastructure, in conjunction with its associated programs, provides services to the community, such as trained personnel or medical care, but cannot generally be targeted to a specific business. For example, even though specific training programs (aviation training) can be targeted toward specific types of businesses (aviation maintenance), graduates from an aviation training program could work for many different companies.

Thus, institutional infrastructure and the programs it is associated with provide general benefits to the community that cannot be targeted to specific businesses, and physical infrastructure can provide a general benefit as well as a targeted benefit. So even though physical and institutional infrastructure both provide built projects, their use in economic development and the attraction of firms can be different.

So for this model the independent variable was development capacity measured by fourteen variables—the 13 variables used by the McGuire et al. model (1994) with infrastructure split into physical and institutional infrastructure.

### **Dependent Variables**

The percentage of redevelopment goals attained in the time period established in the LRP was selected as the measure of redevelopment, because these are the goals that the BRAC communities used to define success. Job creation, reuse of existing infrastructure, and low unemployment are the LRPs' major goals. The goals also included providing open space, educational uses, and connecting to the local community. Besides being the goals selected by the LRAs, these goals appear to be an appropriate way to measure redevelopment success for three reasons.

First, these goals align with the indicators that OEA tracks: job creation and the percentage of land deeded or in long-term lease. Job creation is a natural measure to select because the loss of civilian jobs was one of the most direct impacts of the BRAC closure. Unused land is the second most direct impact of a BRAC closure for the local community. The deeding of land or placing land in a long-term lease addresses this impact and is thus a logical measurement of closure redevelopment. Thus, these LRP goals align with the OEA indicators.

Second, these goals are similar to definitions of redevelopment success as defined by other government and research agencies. Five agency indices in the literature review include unemployment: the Urban Institute's Economic Performance Index, the Congressional Budget Office's Economic Index, HUD's Urban Development Assistance Grant Ranking Weighted Index, the Brookings Institute's Intrametropolitan Hardship and Intercity Hardship Index, and the HUD Community Need Index. Thus, job creation is important. Many LRP goals include variables such as the property tax base and the tax effect of property that refer to the importance of keeping property in use and creating a local tax base.

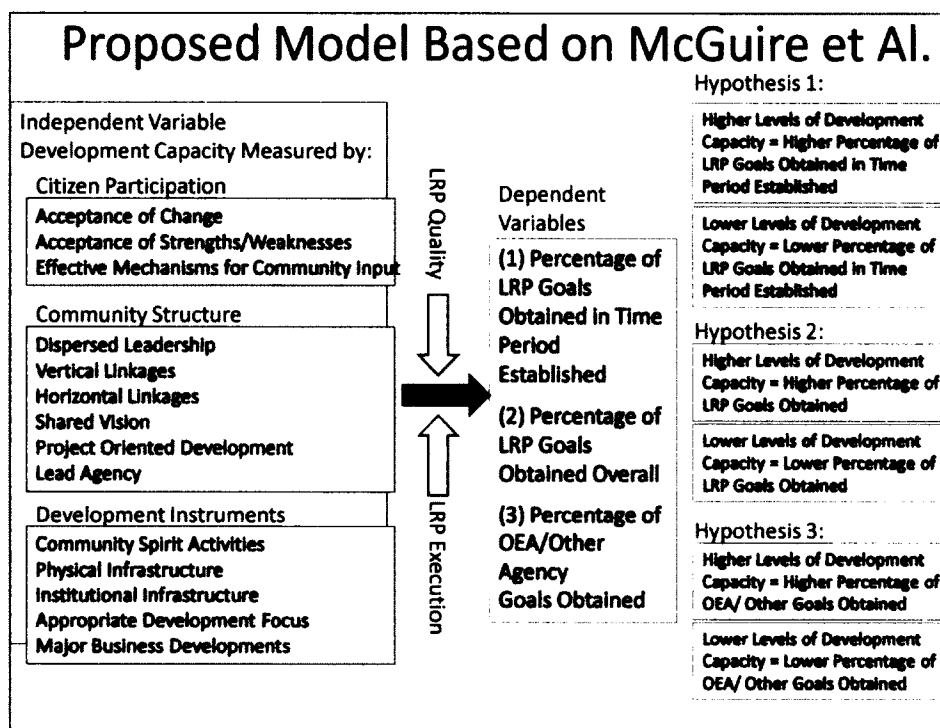
Third, these development goals are mentioned in development literature. Bingham and Blair (1984), Blakely (1994), Frieden and Baxter (2000), Lynch (1970, 2002, 2004), Matwiczak (2004, 2006), McCutcheon (1998), Reimer (1996), Spencer (2005), and Hansen, Skopek, and Somma (1997) mention job creation and the reuse of base property.

Finally, it is important to measure whether the local community attained these goals within the time period it set forth in the LRP. This study initially measured whether the percentage of LRP goals were attained within the time periods they established. Many communities were late in achieving their goals, so a second calculation was made to determine the percentage of LRP goals attained by December 2010. Still many communities did not achieve one hundred percent of their goals so a third dependent set of variables based on the OEA goals (the percentage of jobs created at the former installation compared to the civilian jobs lost due to base closure and the percentage of installation property transferred or placed in long-term lease compared to the land transferred to the LRA) and frequent indicators used by other organizations (the change

in the unemployment rate in the local reuse area between just prior to the base closure announcement (1990) and 2010 compared to the state's unemployment rate for the same period, the change in the per capita income in the local reuse area between just prior to the base closure announcement (1990) and 2010 compared to the state's per capita income for the same period, and the change in the local population from just prior to the base closure announcement (1990) and 2010) was used to provide an indication of whether the LRP goals were too aggressive or not.

The percentage of attainment of community development goals were evaluated as a combination of the LRP redevelopment goals with each goal weighted equally. The dependent variable was calculated three times: at the completion time period established in the LRP, through 2010, and through 2010 using OEA and other organization indicators. Chapter three, Methodology, explains how the OEA goals and other organization indicators were combined. Figure 2-5 shows the adapted model.

It shows development capacity as the independent variable and the achievement of development goals, within the time period established and through December 2010, as the dependent variable as well as with OEA/other organization goals. It also shows where the LRP quality and LRP execution were examined to determine any impact. Each development capacity category also served as the independent variable and the achievement of development goals within the time period established and through December 2010 as the dependent variable as well as the OEA and other organization goals as the dependent variable. Finally, each variable served as an independent variable.



**Figure 2-5. Proposed Model With Development Capacity as the Independent Variable and Percentage of LRP Goals Achieved Either Within the Time Period Established or Without (or OEA/Other Organization Goals) as the Dependent Variable**

The hypotheses for each situation are below. The study was run three times. First, measuring the achievement of LRP development goals within the time period established in the LRP using the development capacity, development capacity categories, and development capacity variables as the independent variables; second, measuring the achievement of development goals established in the LRP through December 2010 using the development capacity, development capacity categories, and development capacity variables as the independent variables; and third, measuring the achievement of redevelopment with the OEA and other organization indicators using the development capacity, development capacity categories, and redevelopment capacity variables as the independent variables.

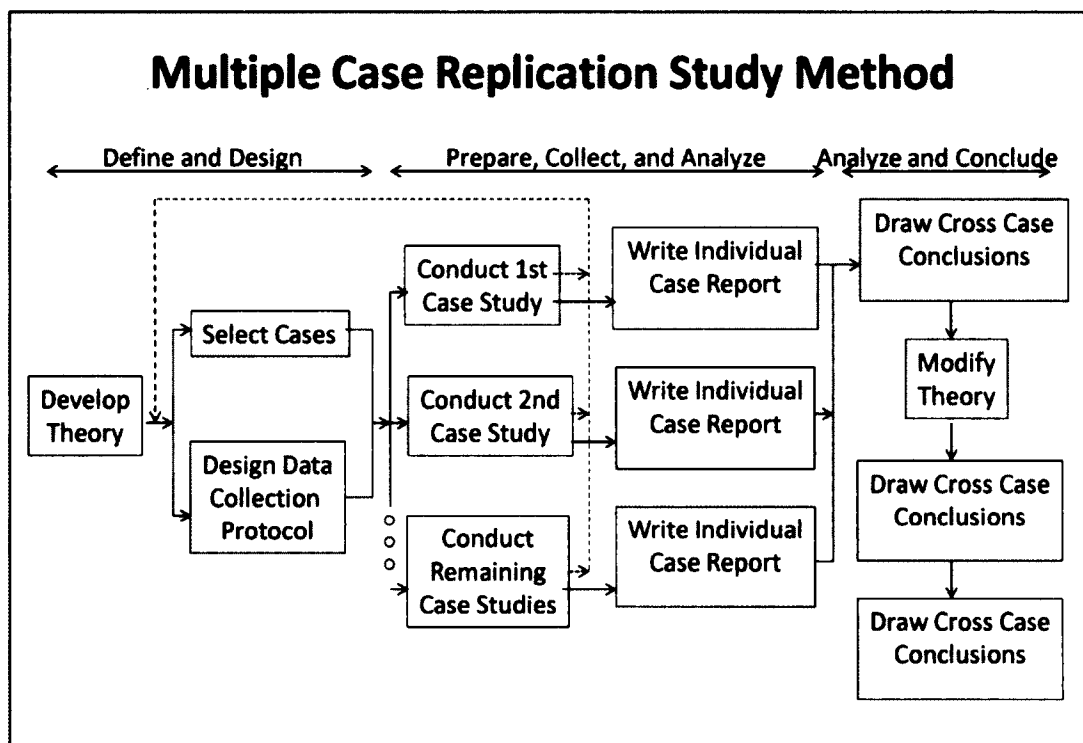
H1: The higher the development capacity, the more redevelopment goals will be obtained within the time period established by the initial approved LRP.

H2: The higher the Community Structure category, the more redevelopment goals will be obtained within the time period established by the initial approved LRP.

H3: The higher the shared vision variable, the more redevelopment goals will be obtained within the time period established by the initial approved LRP.

In addition to the analysis described above, the Yin Multiple Case Replication Study Method (2009) was used (figure 2-6). This type of study is used when both the phenomenon of interest and its context yield a large number of potentially relevant variables that if considered under a sampling logic would require an impossibly large number of cases. In a community development capacity model using sampling logic, the number of communities required would be very large. In the BRAC example, sampling logic could potentially require more cases than exist.

The Yin framework selects a smaller number of cases to either predict similar results or contrasting results. For this study the cases were selected to provide similar results. Any differences indicate the potential for the impact of development capacity on the attainment of redevelopment goals. In the Yin framework the cases in aggregate provide compelling support for the initial proposition and the theoretical framework which then becomes a vehicle for generalizing to new cases (Yin 2009). In this study, the cases turned out as predicted (higher development capacity was linked to higher attainment of redevelopment goals), and this theory becomes a framework to test new cases.



*Figure 2-6 – Multiple Case Study Method From Case Study Research by Robert K. Yin (2009)*

In the Yin framework, theory development is the first step. In this study, that framework is the McGuire et al. model (1994) modified with 14 variables as the independent variables to measure development capacity and the attainment of redevelopment goals as the dependent variable. In the Yin framework, each individual case study consists of a “whole” study, in which convergent evidence is sought regarding the facts and conclusions for the case and then each case’s conclusions are considered to be the information needing replication by other individual cases. Both the individual cases and the multiple-case study results are the focus of a summary report. For this study, the report indicates how and why higher development capacity was linked to the attainment of redevelopment goals with emphasis both on particular points from the individual cases and a synopsis of the overall findings. In the Yin model, the dashed feedback loop represents the situation where an important discovery occurs during the



conduct of one case and may require the reconsideration of the study's original theoretical propositions. This situation did not occur in this study.

Referring back to figure 2-1 there could be a number of outcomes for this study. If development capacity was the same for all six communities/installations and the redevelopment outcomes were different, then the reason for the differences between the communities would be in their redevelopment plan, in the execution of that plan, or in both. This was not the situation in this study.

The second outcome could be that development capacity was different and the redevelopment outcomes were the same. This would show that the redevelopment plan, its execution or both made up for any differences in development capacity or that development capacity does not affect the redevelopment outcome. This was not the situation for this study. Lastly, development capacity could be different and the redevelopment outcomes could be different. In this case, if the quality of the LRPs and their execution are essentially the same, then the differences in development capacity could account for the differences in the attainment of redevelopment goals. This was the case in this study.

In conclusion, the model used was based on the McGuire et al. model (1994) with development capacity serving as the independent indicator composed of 14 variables and the attainment of LRP goals served as the dependent variable. The percentage of LRP goals attained was measured at the completion time period defined in the LRP to see if the community met their goals and also by December 2010 to see in total what percentage of goals were obtained. In each comparison the two were compared to see if there is any relationship between development capacity, development categories,

development variables, and the attainment of redevelopment goals. In all comparisons the quality of the LRPs and their execution were used to help explain the results.

Since the communities did not achieve one hundred percent of the redevelopment goals by December 2010, then a third measurement was done using the OEA goals<sup>9</sup> and frequent local indicators used by other organizations<sup>10</sup> to provide an indication of whether the LRP goals were too aggressive or not. Finally, all the data gathered was reviewed to determine if there are any other indications of why redevelopment goals were achieved and the impact of development capacity variables on that achievement.

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<sup>9</sup> Percentage of jobs created at the former installation compared to the civilian jobs lost due to base closure and the percentage of installation property transferred or placed in long term lease compared to the land transferred to the LRA.

<sup>10</sup> The change in the unemployment rate in the local reuse area from prior to the base closure announcement (1990) and 2010 compared to the change in the unemployment rate in the state for the same time period, the change in the per capita income in the local reuse area from prior to the base closure announcement (1990) and 2010 compared to the change in the per capita income in the state over the same time period, and the change in the local population from prior to the base closure announcement (1990) to 2010.

## **CHAPTER III**

### **METHODOLOGY**

This chapter outlines the research methodology that was used for this study. It includes the research problem, questions, and setting; model and hypotheses; research plan; populations of interest and units of analysis; data sources; analysis method including data collection, data differentiation, data limitation, collection limitations, analysis procedures, and results; assumptions, limitations, threats to validity, and Institution Research Board (IRB) concerns.

#### **Research Problem, Questions and Setting**

The research problem for this study was whether or not the local communities should adopt policies or programs to improve their development capacity. To answer this question, the communities needed to know (1) whether the improvement in development capacity led to an increase in the achievement of redevelopment goals, and (2) whether certain variables within development capacity led to a greater increase in the attainment of redevelopment goals than other variables. If that information was known and the relative cost (both monetary and other resources) of obtaining the variables was known, then the community could prioritize which variables the community wanted to pursue and how to prioritize those variables. This study concentrated on whether the increase in development capacity or specific development capacity variables, as defined by the McGuire et al. study (1994) and this study, led to a greater increase in the attainment of redevelopment goals. (This study concentrated on redevelopment goals as opposed to

development goals because this study used case studies where the land being studied was previously developed.) This study leaves the relative cost of obtaining specific development capacity variables for future research and the communities themselves.

The research questions answered by this study were:

1. Is there a positive relationship between development capacity and the attainment of redevelopment goals? In other words, did improvement in development capacity lead to the attainment of a higher percentage of redevelopment goals?

2. If the answer to question one is “yes,” is there a positive relationship between each development capacity category (citizen participation, community structure, and development instruments) and the attainment of redevelopment goals? Which category had the greatest positive relationship?

3. Is there a positive relationship between each variable and the attainment of redevelopment goals? Which variable had the greatest positive relationship?

4. For each development capacity category, which variable is most significant?

For this study it was important to know if redevelopment goals were achieved within the time period established by the community. Therefore, each research question was evaluated for the achievement of goals during the time period established by the community and achievement of goals through December 2010. For this study, community redevelopment goals were the local reuse plan (LRP) goals at the time period established in the first approved LRP. In this study, if the initial approved LRP goals were not achieved within the time period approved in the first LRP, then the calculations

were rerun with the results through December 2010. If the initial LRP goals were not achieved through December 2010, then the OEA/other organization goals from chapter two were used to see if the community was successful according to the Office of Economic Adjustment (OEA) and other organization goals. If the OEA/other organization goals were achieved then perhaps the initial LRP goals were overly ambitious. Finally, when these answers were determined, the McGuire et al. (1994) and this study's models were evaluated to determine if either model needed to be refined.

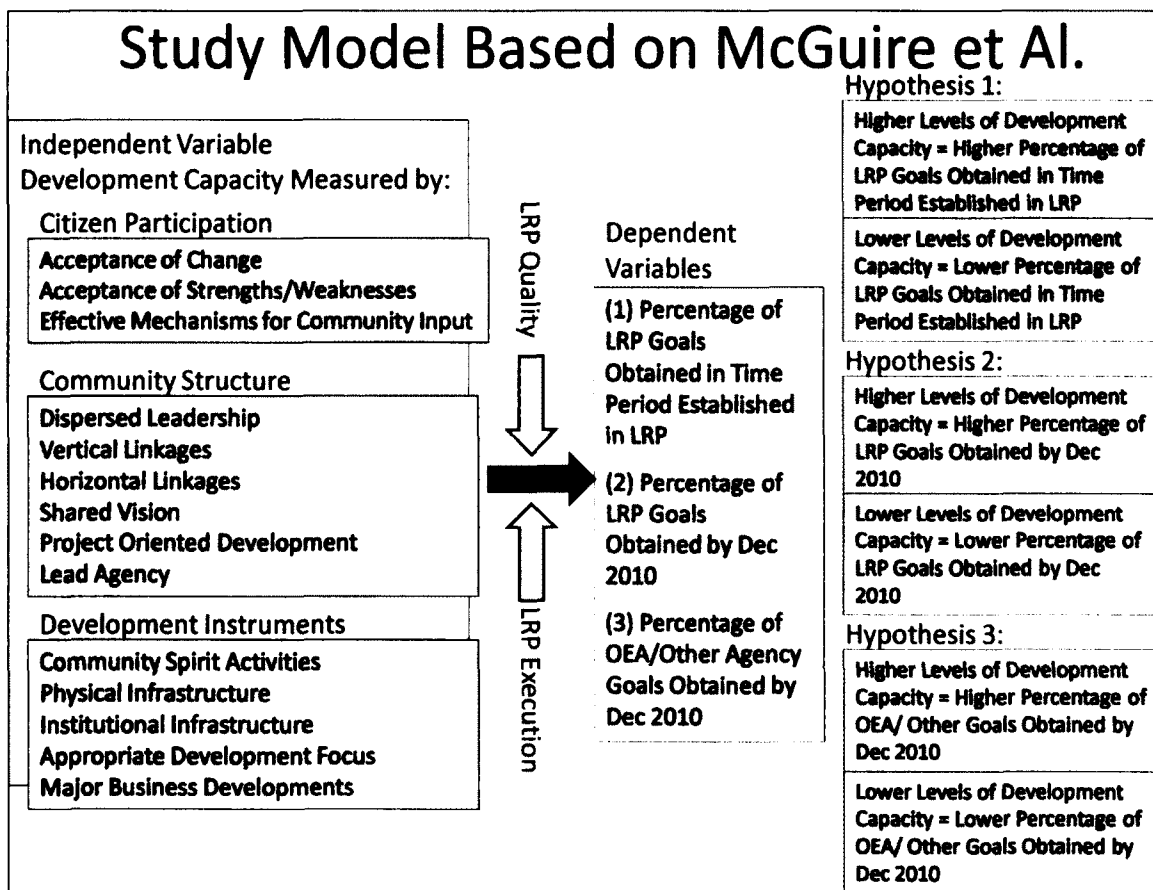
The settings for this study were six communities/installations affected by the 1988, 1991, and 1993 base realignment and closure (BRAC) rounds. Communities were chosen because generally communities are responsible for redevelopment. BRAC communities were chosen because due to the BRAC process, each community followed a similar closure and redevelopment process. The six closures occurred within two years of each other (1993 and 1995) and each community/installation lost a similar number of civilian employees. Due to similar previous missions, the installations had many similar physical characteristics. The installations were also similar in terms of both overall and cantonment acreage. Finally, the communities were located in non-metropolitan areas.

### **Research Model and Hypotheses**

The research model for this study was based on the McGuire et al. study and model (1994) and the Yin Multiple Case Study Method (2009). The McGuire et al. study compared the existence or non-existence of a development plan as an independent variable to development capacity as the dependent variable (figure 1-1).

The McGuire et al. (1994) model used 13 variables divided into three categories to measure development capacity with each variable weighing equally. Their study showed that the existence of a development plan led to greater development capacity. The McGuire et al. study (1994) was appropriate to use as a model for this study because it is one of the few studies that defines development capacity. The McGuire et al. study recommended that research into the linkage between development capacity and the attainment of development goals should be conducted. To investigate the link between development capacity and the attainment of redevelopment goals, this study used a model based on the McGuire et al. study (1994) (figure 3-1).

In this study, development capacity was the independent variable and the attainment of redevelopment goals, both within the time period established and through December 2010, was the dependent variable. To measure development capacity this study used 14 variables. This study divided the infrastructure variable into physical and institutional infrastructure. This was appropriate because even though local governments provide both types of infrastructure, the infrastructure can support people/programs differently. Physical infrastructure (roads and utilities) provides the physical backbone for other infrastructure and can support a wide range of people and programs or can be targeted to specific individual property owners (as has been done in BRAC). Institutional infrastructure (schools and hospitals) supports specific programs. These programs usually support the general public and are generally not targeted to specific property owners. (A detailed discussion of why it is appropriate to divide this variable into two variables was discussed in chapter two). Thus, physical infrastructure can be targeted to specific people, organizations, or companies and institutional infrastructure generally is not.



*Figure 3-1. Study Model With Development Capacity as the Independent Variable and the Achievement of Redevelopment Goals (or OEA/Other Organization Goals) Either Within the Time Period Established or by December 2010 as the Dependent Variable*

All independent variables chosen for the model were appropriate to use because each variable addresses a different aspect of development capacity with little overlap between the variables. Also, the local communities had some, if not total, control over each variable. This study used development capacity, the development category, or one of the development capacity variables as the independent variable.

To measure the attainment of redevelopment goals, this study initially used redevelopment goals as defined in the first approved local redevelopment plans (LRP) within the time period established by the LRP as the dependent variable. Redevelopment

goals and their associated time periods as defined in the initial LRPs were selected because these were the goals that the BRAC communities used to define success and the time periods they chose. Job creation, reuse of existing infrastructure, and low unemployment were the major LRP goals across the six communities.

Because all but one community (Rantoul, Illinois) did not achieve their LRP goals either within the time period identified in the LRP or by December 2010, this study also used OEA and other organization goals to measure redevelopment success. These measures included the percentage of jobs created at the installation compared to civilian jobs lost due to the base realignment and closure (BRAC), the percentage of land deeded or in long-term lease compared to the land gained by the LRA as a result of the BRAC closure, the change in the unemployment rate in the local reuse area compared to the change in the state unemployment rate from the time just before the base closure announcement (1990) through 2010, the change in the per capita income levels of the local reuse area compared to the change in the state's per capita income level from the time just before the base closure announcement (1990) through 2010, and the change in population of the local reuse area from the time just before the BRAC closure announcement (1990) through 2010 with each indicator being weighed equally to determine if these indicators were met. Below are the details for the OEA/other organization goals. The communities were considered a success if:

1. The communities created the same number of jobs on the former installation as the civilian jobs that were lost due to BRAC closure at that installation. For this



measure, the number of jobs created at the former installation was compared to the number of civilian jobs lost when the base was closed.

2. The communities have deeded or placed in long-term lease the acreage they received as a result of the BRAC closure. For this measure, the acres either deeded or placed in long-term leases were compared to the acreage released to the LRA. A long term lease is considered 25 years or longer by OEA and DoD.
3. The difference between the unemployment rate in the local reuse area and the state's unemployment rate in 2010 is lower than the difference between the unemployment rate in the local reuse area and the state's just before the base closure announcement ((unemployment rate of local reuse area in 1990 – state unemployment rate in 1990)-(unemployment rate of local reuse area in 2010 minus state unemployment rate in 2010)).
4. The difference between the per capita income in the local reuse area and the state's per capita income in 2010 is higher than the difference between the per capita income in the local reuse area and the state's per capita income in 1990.
5. The population in the local reuse area in 2010 does not decrease from the population of the local reuse area at the time just before the base closure announcement (1990). For this measure, the population of the local reuse area must be equal to or higher than the population of the local reuse area in 1990, just before the base closure announcement.

The reason for these additional measurements is that the communities may have established LRP goals that were difficult to achieve. These additional measurements

helped show if the community was achieving redevelopment success according to these other organizational measures. These development goals are mentioned often in development literature: Bingham and Blair (1984), Blakely (1994), Frieden and Baxter (2000), Lynch (1970, 2002, 2004), Matwiczak (2004, 2006), McCutcheon (1998), Reimer (1996), Spencer (2005), and Hansen, Skopek and Somma (1997).

Before the determination of a link between development capacity and the attainment of redevelopment goals was made, the LRP and LRP execution were reviewed to see if those areas significantly differed between the communities and if any differences impacted the link between development capacity and the attainment of redevelopment goals. The LRPs were measured by reviewing the LRPs to ensure they included existing facility, utility, and environmental conditions; they targeted multiple markets in their marketing plans; they indicated how homeless concerns were to be addressed; they discussed financial considerations; and they discussed how to normalize the property the LRA would receive. (The details of how these seven items were selected are in chapter two.) If the LRPs did not include any of the areas, then the study included a discussion of the areas not included and whether the absence of those areas seemed to impact any link between redevelopment capacity and the attainment of redevelopment goals.

In reviewing LRP execution this study looked to see if there were separate LRAs for planning and execution (i.e., a business management entity), if the execution LRA was separated from politics, if the LRA streamlined redevelopment processes (such as permits, etc.), and whether contractual responsibilities for the LRA were outlined. (The details for how these four areas were selected are included in chapter two.) If the LRP execution did not include any of these four areas, then the study included a discussion of

the areas not included and whether the absence of those areas seemed to have impacted any link between redevelopment capacity and the attainment of redevelopment goals. At the very end, the study determined if there was a link between development capacity and the dependent variables, the categories of the independent variables and the dependent variables, and any of the independent variables and the dependent variables.

The Yin Multiple Case Study Method (2009) was also used for this study. Each community/installation was evaluated on its own merits as a case study. Then the community/installation was compared with the other six communities/installations. Similarities as well as differences were noted to provide an in-depth understanding and to determine whether there appeared to be a link between development capacity and attainment of redevelopment goals. Figure 3-1 (shown earlier in this chapter) shows the model with development capacity as the independent variable and the achievement of redevelopment goals within the time period established and through December 2010 as the dependent variable as well as using the OEA/Other Organizations criteria as the dependent variable. The model was also analyzed with each development capacity category as the independent variable and each separate variable as the independent variable. The model shows the analysis of the LRP and their execution and how it was used to interpret the results.

The hypotheses for each situation are below. The study was run three times: first, measuring the achievement of redevelopment goals within the time periods established in the LRPs; second, measuring the achievement of redevelopment goals through December 2010; and third, using the development indicators used by OEA and other organizations, measuring the achievement of those indicators through December 2010.

H1: The higher the development capacity, the more redevelopment goals will be obtained within the time period established by the initial approved LRP.

H2: The higher the Community Structure category, the more redevelopment goals will be obtained within the time period established by the initial approved LRP.

H3: The higher the shared vision variable, the more redevelopment goals will be obtained within the time period established by the initial approved LRP.

The hypotheses, when reviewing the results for December 2010 and with the OEA/other organization goals, were similar.

### **Populations of Interest and Units of Analysis**

The populations of interest were six communities near installations that closed during the 1988, 1991, and 1993 BRAC rounds. The communities/installations were Rantoul (Champaign County), Illinois, near Chanute Air Force Base (AFB); Peru (Miami County), Indiana, near Grissom AFB; Marquette (Marquette County), Michigan, near K.I. Sawyer AFB; Oscoda (Iosco County), Michigan, near Wurtsmith AFB; Plattsburgh (Clinton County), New York, near Plattsburgh AFB; and Rome (Oneida County), New York, near Griffiss AFB. Communities were selected as the unit of analysis because economic redevelopment is primarily a local issue.

Communities from the BRAC process overall were chosen because, due to the BRAC process (and in this case the installations belonging to the same DoD service), each community followed a similar development process. The communities were selected

from the 1988, 1991, 1993, and 1995 BRAC rounds, versus the 2005 BRAC round, the 1960s/1970s closures, or earlier closures, because these communities are from the latest BRAC rounds where the communities have completed a significant portion of their redevelopment and the BRAC processes followed will be applicable to communities from the 2005 BRAC round (which is following similar procedures to the 1988, 1991, 1993, and 1995 BRAC rounds.) Also future BRAC rounds will probably follow similar procedures. The 1960s and 1970s closures were not selected because their results are forty to fifty years old and because they followed slightly different closures procedures than the 1980s and 1990s BRAC rounds and therefore their results might not be as applicable to the 2005 and future BRAC rounds.

Further, these six communities/installations were selected because their BRAC closures occurred at approximately the same time (1993 to 1995), each installation lost a similar number of civilian employees (compared to the entire population of 1998, 1991, 1993, and 1995 BRAC installations), and there were many physical similarities across the installations including facilities and infrastructure left from similar previous missions. Finally, the installations were similar in size (considering overall acreage and cantonment areas) and the communities were in non-metropolitan locations. These similarities were discussed in more detail in chapter two.

### **Data Sources and Acquisition**

The data sources and how the data was acquired are described with each variable. The data is separated into development capacity variables (that form the independent

variable), LRP data, LRP execution data, redevelopment goals, and indices used by others (dependent variables). When the data was collected it was verified using secondary or tertiary sources available.

### **Independent (Development Capacity) Variables**

The development capacity variables are described below and are divided into three categories following the McGuire et al. model (1994): citizen participation, community structure, and development instruments.

#### ***Citizen Participation Category Variables***

Citizen participation and buy-in is important for any community undertaking. The citizen participation category of the model for this study included three variables: acceptance of change, acceptance of strengths and weaknesses, and effective mechanisms for community input. These variables measured the strength of local political instruments (whether they can accept change and understand their own strengths and weaknesses) and community input. For this study, the variables in this category measured whether the community has accepted the BRAC closure decision, whether the local community has evaluated itself in terms of its ability to redevelop (including admittance of strengths and weaknesses), and whether the community included all groups/persons in their redevelopment decision-making process.

The acceptance of change variable measures whether or not the community accepts the need for economic and/or social change. In the McGuire et al. (1994) study, this variable is assigned a “yes” if the community had regular community meetings where citizens resolved conflict and gained consensus, and a “no” if they did not hold such meetings. In this study, the acceptance of change was measured in the same manner as

McGuire et al. well as adding whether the community accepted the BRAC closure decision. If the local community had regular meetings and accepted the BRAC decision the variable was assigned a “yes.” If the community did not have regular meetings or actively tried to get the military to remain at the installation after the BRAC decision the variable was assigned a “no.” The data was taken from community meeting notes (see appendix E for all data sources).

The acceptance of the community strengths and weaknesses variable identifies if the community has undergone an honest assessment of its strengths and weaknesses. In the McGuire et al. (1994) study this variable is measured as a binomial variable (“yes” or “no”). The variable is coded as a “yes” if the community has undergone an assessment of its strengths and weaknesses and a “no” if the community has not undergone such an assessment. This study measured the acceptance of strengths and weaknesses in the same manner. The variable was coded as a “yes” if the community listed its strengths and weaknesses in the LRP and as a “no” if the community did not list its strengths and weaknesses. There was no distinction for the number of strengths and weaknesses listed or any quality measurement of the strengths and weaknesses. If the community listed one strength or weakness the variable was coded a “yes” just the same as a community that listed many strengths and weaknesses. For this study it is important that the community admitted its strengths and weaknesses, not the number of strengths and weaknesses. This variable is a binominal variable. The data was obtained from the LRPs.

For community endeavors it is important for communities to provide ways for leaders and decision makers to receive community input. This is especially true for communities making redevelopment decisions following a BRAC closure, because this is

often the first time the community has had to redevelop following a major employer closure. The effective mechanisms for direct community input variable identifies if the community had community-wide meetings and discussions that provided community input to community leaders/decision makers as a normal part of the political process. In the McGuire et al. (1994) study this variable is a binomial variable (“yes” or “no”) measured by whether the community had regular community-wide meetings on development issues. The variable was coded as a “yes” if the community held such meetings or “no” if the community did not hold such meetings. In this study the effective mechanisms for direct community input variable was measured in a similar manner. The variable was coded as a “yes” if meetings such as planning boards, economic development board, chamber of commerce, or city council meetings were held in the five years prior to the base closure announcement. Otherwise the variable was coded a “no”. Meetings had to be open to the public. Regularly scheduled means at least yearly. The data was obtained from community government minutes, the LRP, and the LRA surveys.

#### ***Community Structure Category Variables***

The existing community governance structure, especially the governance structure put in place to guide redevelopment, is very important for the success of any community effort. The community structure category variables include dispersed leadership roles, vertical linkages, horizontal linkages, shared vision, project-oriented development, and lead agency. These variables focus on the ideas of administrative capacity common in public administration literature, such as a theory that high administrative capacity in local governments is important for development success (Honadle 1981; Mead 1981).



The dispersed leadership roles variable determines if leadership roles in organizations that address development issues are divided among many different persons or held within the same group of people. In the McGuire et al. (1994) study the dispersed leadership roles variable is coded as a “yes” or “no,” a bi-nominal variable with the dispersing of leadership among many people coded as a “yes” and only one set of leaders across all groups coded as a “no.” This study noted the leaders in the LRA and compared them to leaders in other community development organizations (such as the planning board, economic development board, and chamber of commerce) at the time of the LRA establishment through community minutes and LRA surveys. If the LRA leaders were also members of the other community development organizations and vice versa, then the variable was coded as a “no.” If the membership was not the same, then the variable was coded as a “yes.” One person can make the difference between a “yes” and a “no.”

If the community actively seeks out external resources (financial and technical) from the state and federal levels of government, then the community has established vertical linkages. Creating these linkages is important because few communities can finance/support a development effort on their own. Using state or federal resources to leverage the development makes the development more achievable. In the McGuire et al. (1994) study the vertical linkages variable is a binominal variable with the variable coded as a “yes” if the local government sought help from the state or federal governments and “no” if the local government did not seek help from either state or federal governments. This study measured vertical linkages in the same manner. If the LRA sought a grant from either the state or federal government the variable was coded as a “yes.” If it did not

seek a grant from either the federal or state government, the variable was coded as a “no.” Data was collected from LRA surveys, LRPs, and books describing the redevelopment.

The horizontal linkages variable identifies if the community seeks development assistance from other communities, such as lessons learned from other communities that have attempted redevelopment or by participating in groups made of community representatives that focus on redevelopment efforts. In the McGuire et al. (1994) study the variable is a binominal variable with “yes” being coded if the local government is involved in multi-community efforts, either formally or informally, and “no” being coded if the community was not involved in any horizontal linkages. In this study the variable measured whether the community engaged in horizontal linkages (inter-community partnerships, regional development organizations, etc.) sought outside of OEA. The data was taken from the LRA minutes, LRPs, and a book on redevelopment. The survey asked how many connections the LRA had with horizontal organizations outside of OEA. (OEA was a mandatory linkage as part of the BRAC process, so it was not included in the horizontal linkage variable.) If the community engaged in at least one horizontal linkage outside of OEA, the variable was coded as a “yes.” If the community did not engage in any horizontal linkages outside of OEA the variable was coded as a “no.”

To have a better chance at successful development, it is important that more organizations than just the LRA be involved in development. The project-oriented development variable measures whether the community has different groups working on the development process. In the McGuire et al. (1994) study the variable is a bi-nominal variable, with “yes” being coded if the local government has at least two groups working on development and “no” being coded if there is only one group working on

development. For this study the variable was treated the same. A “yes” was coded for the variable if the local community had at least two groups working on development and a “no” was coded if there was only one group working on development. Data was taken from the LRPs, LRA minutes, and LRA surveys.

It is important that the community have a clear, shared vision for development so that all agencies and persons involved in development are working toward the same goals. The shared vision or direction variable measures whether the community has a clear, shared development vision. In the McGuire et al. study (1994), the variable is a binominal variable with “yes” being coded if the local community has a shared vision for development amongst all its development agencies and “no” coded if the local community has multiple visions amongst its development agencies. This study reviewed the LRP, community minutes (especially of other development agencies within the local reuse area), and LRA surveys. If all the goals for the redevelopment of the base were the same, the variable was coded as a “yes.” If any of the data showed different goals/vision, the variable was coded as a “no.”

Despite the need to include many groups, jurisdictions, and citizens, it is important to have one agency leading the redevelopment process. McGuire et al.’s (1994) ninth variable addresses this being coded as a “yes” if there is one lead agency and a “no” if there is not one lead agency. For the redevelopment following a BRAC closure, the lead agency for base redevelopment should be the LRA. This organization was developed by the community and identified to OEA by the community as the lead agency for redevelopment. Cullingworth (1997) notes that development plans, that are often crafted by planning entities such as the LRA, are legislative acts that are the responsibility of

elected legislative bodies. So it is appropriate that the lead agency for redevelopment be the entity formally recognized by the community government and OEA. For this study the lead agency variable was measured similarly to McGuire et al. If the LRA was the lead agency, the variable was coded as a “yes.” If the LRA was not the lead agency, the variable was coded as a “no.” Data sources for this variable are the LRPs, books on redevelopment, and LRA surveys.

### ***Development Instrument Category Variables***

The development instrument variables determine quality of life improvements in the community as well as what economic development tools the local community possesses. Development instruments are based in both economic and noneconomic sectors of the community. The community spirit activities and infrastructure variables measure the quality of life improvements. The appropriate development focus and major business developments measure the economic development tools. Research shows that communities require a balance between economic development tools and quality of life improvements (McGuire et al. 1994) to support redevelopment.

Richard Florida (2002, 225) says that cities that have a vibrant, varied city life attract more people. These cities have cultural and other amenities. The community spirit activities variable identifies whether the community holds and continues to promote regular community appreciation activities, such as major festivals and other annual events. McGuire et al. (1994) codes the community spirit activities variable as a binominal variable as a “yes” if the community had at least one activity and a “no” if the community did not have any activities. This study measured community spirit activities the same as McGuire et al. The variable was coded as a “yes” if the community had one

spirit activity per year in the local reuse area in the five years before the base closure announcement. The variable was coded as a “no” if the community did not hold at least one spirit activity in the local reuse area per year in the five years before the base closure announcement. Data came from the LRPs, community minutes, and LRA minutes.

Investment in infrastructure, both physical (e.g., roads and sewers) and institutional (e.g., schools and hospitals), identifies a community’s long-term commitment to its citizenry and the citizenry’s commitment to the community (by supporting the infrastructure investment through taxes). In the McGuire et al. (1994) study the infrastructure variable was measured in as a bi-nominal variable, being coded as a “yes” if at least one infrastructure project had been funded and “no” if no infrastructure project had been funded. In this study infrastructure was broken into two variables: physical infrastructure and institutional infrastructure. This was done because, although the community funds both physical and institutional infrastructure, the communities can use physical and institutional infrastructure differently for economic development and the attraction of firms. Each infrastructure variable was measured similar to McGuire et al. coded as a “yes” if at least one physical infrastructure project had been funded in the local reuse area in the five years prior to the base closure announcement and a “no” if no physical infrastructure projects had been funded in the local reuse area in the five years prior to the base closure announcement. Data was collected from the LRPs, LRA interviews, and community minutes.

In the 1980s and 1990s, communities often tried to attract industries with tax and other financial incentives targeted to specific industries and, at times, specific companies. Current literature maintains that companies might initially be attracted by such

incentives, but that such incentives do not keep the company in the community in the long term. Current literature states that companies are attracted in the long run to communities that have a work force with a combination of experience, skill sets, raw intelligence, and energy that are suited for their company (Florida 2002, 283). Thus communities should not try to attract companies with tax and other financial incentives. Therefore, the appropriate development focus variable identifies if the community avoids expensive industrial attractions efforts and concentrates instead on indigenous development efforts. In the McGuire et al. (1994) study, appropriate development focus is measured as a bi-nominal variable, with the variable coded as a “yes” indicating if expensive industrial attraction efforts were used and a “no” if at least one expensive industrial attraction effort was used. An expensive industrial attraction effort is considered to be offering tax incentives for firms, offering free land, or providing infrastructure projects specifically for the targeted industry. This study used the same measurement technique. The data was obtained from the LRPs and LRA surveys. The variable was coded as a “yes” if there were no expensive industrial attraction efforts in the LRP and a “no” if there were expensive industrial attraction efforts in the LRP.

The major business developments variable identifies if the community has recently experienced any major expansions in jobs or businesses. In the McGuire et al. (1994) study the major business developments variable was measured as a bi-nominal variable (“yes” or “no”). The variable was coded as a “yes,” if the local community experienced a major expansion in jobs or businesses and a “no,” if the local community did not experience a major expansion. This study used the same criteria as McGuire et al. The variable was a “yes” if the local community experienced a major expansion in the five

years prior to the base closure announcement and a “no” if the local community did not experience a major expansion in the five year prior to the base closure announcement.

Data came from the LRPs, community minutes, and the LRA surveys.

### **LRP Data**

Data on the LRPs was gathered directly from the LRPs. The LRPs were reviewed to ensure they included a review of existing facility, utility, and environmental conditions; they included a marketing plan that targeted multiple markets; they indicated how homeless concerns would be addressed; they discussed financial considerations, and they discussed how property would be normalized. The review in chapter four includes a brief discussion of these five items and, if any of the items are missing, provides insight into why the items are missing.

### **LRP Execution Data**

Data to review LRA execution came from the LRA survey, LRA minutes, and other community documents. LRA execution was reviewed to see if there were separate LRAs for planning and execution, if the execution LRA was separated from politics (i.e., none of the execution LRA members was elected), if the LRA streamlined any redevelopment processes (such as permits, etc.), and if contractual responsibilities for any redevelopment activities were outlined. Chapter four includes a brief discussion of these four items.

### **Dependent Variables**

The initial dependent variable, the attainment of redevelopment goals, is the percentage of LRP goals obtained by the LRA within the time period outlined in the LRP. The LRP goals and the time period within which the local community planned to achieve the goals were obtained from the LRPs. Each goal became part of the dependent variable

with each goal weighted equally. The data to measure achievement of these goals were obtained from the LRA surveys, LRA minutes, AFRPA documentation, and community organization minutes. The details on the LRA goals and redevelopment achievement are included in each case study in chapter four.

The percentage of each goal achieved within the time period established in the initial LRA was calculated. Only one of the communities (Rantoul, Illinois) achieved their goals within the time period established in their LRP so the results were run through December 2010. The LRP redevelopment goals for all the communities through December 2010 were recalculated. Again only Rantoul achieved their LRP goals, so the achievement of OEA/other organization goals through 2010 were calculated.

For each community, the percentage of each OEA/other organization variable was first obtained on an individual variable basis. The variables were the percentage of civilian jobs recreated at the installations, the percentage of acreage transferred or placed in long-term lease, the difference in the unemployment rate for the local reuse area minus the state's unemployment rate before the base closure announcement (1990) compared to the unemployment rate for the local reuse area minus the state's unemployment rate in 2010 (a decreasing number is good), the difference in the per capita income of the local reuse area minus the state's per capita income before the base closure announcement (1990) compared to the per capita income of the local reuse area minus the per capita income of the state's per capita income in 2010 (if the number increases that is good), and if the local reuse area had lost population or not between prior to the BRAC closure announcement (1990) and 2010. The five variables were weighted equally and compared.



Data for the number of civilian jobs lost on the former installations and the number of jobs recreated on the former installation was gathered from the AFRPA records. Data for the acreage received by the LRA as a result of the BRAC closure and the acreage either deeded or placed in long-term lease was gathered from AFRPA records. The unemployment rates in the local reuse areas and states were gathered from the U.S. Bureau of the Census (1993 a-j, 2010 k-t). The per capita income in the local reuse areas and states were gathered from the U.S. Bureau of the Census (1993 a-j, 2010 a-j). Population in the local reuse areas were gathered from the U.S. Bureau of the Census (1993 a-j, 2014 a-f).

### **Analysis Method**

This section discusses data collection, data differentiation, limitations of the data, analysis procedures, and results.

#### **Data Collection**

To begin the analysis, Excel spreadsheets were prepared. Next the data was gathered from the sources listed above for each variable. Additional data collected included the LRA organization and contact information. To gather the LRA survey data, each LRA was contacted prior to emailing the survey to identify one person responsible for completing the survey. The surveys were sent electronically. The LRAs had two weeks to complete the survey. Several of the LRA representatives called in their survey results. It was noted on the survey when this occurred. Copies of the original data were kept separately to ensure there was an original source to return to if required at any point

during the analysis. Data gathered was verified against secondary and tertiary sources when they were available.

### **Data Differentiation**

The data was visually surveyed to identify any abnormalities. None were identified. Differences in the data are discussed in each case study, in the synopsis in chapter four, and in chapter five. This study used mostly data collected by others. There was one survey instrument, the LRA survey, which asked the current LRA director (or appropriate designee) questions. The LRA survey is attached at appendix D.

### **Limitations of Data**

There are several limitations to the data. None of the limitations is seen as significant and measures have been taken to explain the limitations. For some variables, the differences in intensity vary. For the effective mechanisms for direct community input variable, some of the community meetings may have been more effective than others. There is no easy way to determine which meetings were more effective. This study did not try to make a distinction between the effectiveness of the community input meetings in developing a community's development capacity however it does discuss explanations of the meetings in the case studies.

A similar limitation could be found with the horizontal linkages variable where the variable measures how many relationships the community under study had with other communities/agencies to learn from other communities/agencies' experiences. It is possible that some community relationships with other communities were more beneficial than others. This study explained any differences in the case studies.

For the LRP goals, which are the foundation of the dependent variable, there is a limitation because the LRP goals for each installation are different from each other. This difference, however, is appropriate because each community selected and tailored its goals to its specific situation so the LRP goals for each community should be different. Further, measuring the community by the goals they selected and timetable they established is appropriate to determine whether they met their goals or not.

### **Preparatory Calculations**

The data from the fourteen development capacity variables was used to create development capacity similar to McGuire et al. (1994) with each variable weighted equally. To create the dependent variable, the attainment of redevelopment goals, the percentage of each LRP goal achieved by the time period established in the initial LRP was calculated. Then the final attainment of LRP goals measurement was created with each goal weighted equally. This measurement was repeated for the attainment of LRP goals by 2010.

For the OEA/other organizations variables, pre-calculations included determining the percentage of civilian jobs recreated at the installations, determining the percentage of acreage transferred or placed in long term lease, determining if the difference between the unemployment rate for the local reuse area and the state's unemployment rate increased or decreased between the base closure announcement and December 2010, determining if the difference between the per capita income minus the state's per capita income increased or decreased between the base closure announcement and December 2010 and determining if the local reuse area had lost population or not.

For the percentage of civilian jobs, the number of jobs created on the former installation was divided by the number of civilian jobs lost at the installation due to the BRAC closure multiplied by 100 to provide the percentage. For the percentage of acres transferred or placed in long term lease, the number of acres transferred or placed in long term lease was divided by the number of acres transferred to the LRA multiplied by 100 to provide the percentage. To determine whether the difference between the unemployment rate for the local reuse area and that state's unemployment rate decreased or increased between the base closure announcement and December 2010, the two differences between the rates were compared for each time period. To determine whether the difference between the per capita income of the local reuse area minus the state's per capita income increased or decreased between prior to the base closure announcement (1990) and 2010, the two differences were compared using the U.S. Bureau of Census rates at the appropriate time periods. To determine if the local reuse area had lost population, the population of the local reuse area prior to the base closure announcement (1990) was compared to the population of the local reuse area in 2010.

The five variables were weighed equally and visually analyzed with verbal descriptions of any information identified for any similarities or differences. After the cases were analyzed individually, their data was compared across the case studies.

### **Analysis Results, Model Recommendations, and Areas for Future Study**

Analysis results are documented in chapter four and follow the Yin Multiple Case Study Method, with each case presented, cross-case comparisons drawn, the theory

reviewed to see if it needs to be modified, policy implications developed, and finally a cross-case report provided. For each case study, general context materials are first provided. Next data for the community's development capacity (the independent variable) is presented, followed by data for the dependent variable-the LRP goals achieved for each community within the time period established in the LRP, the LRP goals achieved for each community through December 2010, and the OEA/other organizations variables achieved for each community through December 2010. The last section draws cross-case conclusions from the results, recommends model revisions, and recommends areas for future research.

#### **Analysis Assumptions, Limitations, Threats to Validity, and IRB Concerns**

A limitation and a benefit of this study is that it is a case study with only six case studies. The limitation is that there is not enough data to create results that will be transferable to the other BRAC communities without a contextual understanding of the case studies from which the data was drawn. The benefit is that this qualitative analysis provides more insight into redevelopment than a purely quantitative study might. The other benefit is that these cases were carefully chosen to select communities/installations that were very similar and are in some of the hardest locations for redevelopment (non-metropolitan communities). The results, therefore, help shed light on redevelopment at some of the hardest locations to develop in the future.

An assumption of this study is that each community's development goals are roughly as difficult to achieve as another community's development goals. This does not

appear to be true. Some communities (Rantoul, Illinois) appeared to set very easy LRP goals and some selected difficult LRP goals. When the community appeared to set very easy or difficult goals, this was highlighted and discussed in chapter four. The third measurement in this study (using OEA/other organization goals as the dependent variable) helped to show if the LRP goals were overly easy or aggressive.

Finally, an assumption is that the McGuire et al. model (1994) accurately measures development capacity. The literature review found that much of the previous BRAC and economic development literature supports the variables used in the McGuire et al. model and the literature does not highlight any new variables to add.

#### **Internal Threats to Validity**

An internal threat to validity is that some LRP goal attainment (such as jobs created) may be inflated by the LRAs. This is controlled for by using secondary and tertiary sources such as OEA and AFRPA data to check the LRA claims. An additional internal threat to validity is that some of the LRAs choose extremely easy or difficult LRP goals to achieve. When this appeared to have occurred it was noted and discussed in the case study. Further using OEA/other organization goals as the dependent variable provided an additional method to compare redevelopment results.

#### **External Threats to Validity**

An external threat to validity is that the attainment of some goals may be affected by other events on-going in the community (such as another plant closing or opening). To control for this, the study asked in the LRA survey if there were any extenuating circumstances that occurred after the LRP was developed and were not known about while the LRP was in development. These instances were noted in each case study.

**IRB Concerns**

Aside from the information collected about leaders in the LRA survey there is no information on individuals that was not gathered through open source information. The LRA surveys were conducted between 2010 and 2013 when BRAC clean-up fell under the Air Force Center for Engineering and the Environment and I served as their Senior Immobilization Reserve Augmentee. Thus the use of the LRA data for this study is secondary data.

## **CHAPTER IV**

### **CASE STUDIES**

The results for this study follow the Yin Multiple Case Study Method, with each case presented, cross-case comparisons drawn, the theory reviewed to see if it needs to be modified, policy implications developed, and finally a cross-case report provided. This chapter presents the findings of the six case studies with a synopsis at the end. Chapter Five provides the cross-case conclusions, recommended theory modifications, policy implications, and cross-case report.

These communities were selected because they, and the bases that are near them, were similar in nature. The communities were in rural locations in the mid-west/near mid-west. The bases were similar in prior missions (missions related to large aircraft), facilities, infrastructure, and size (acreage and cantonment area). The installations closed between 1993 and 1995.

A basic information chart is included at the beginning of each case study. It includes the year of the base realignment and closure (BRAC) round, the date the base closed, the military category of the base (small aircraft, large aircraft, etc.), the size of the base in acres, and the number of civilian jobs that were lost when the base closed. This information is similar for the bases due to the community/base selection process.

Each case study includes a community and installation history followed by a description of the community and base at the time of the BRAC announcement, including a description of the local reuse area, facilities, utilities, and environmental situation on base as well as opportunities and constraints. Next is a discussion of the proposed



development, including a discussion on the planning local redevelopment authority (LRA), the local redevelopment plan (LRP) vision, LRP goals, proposed uses, the execution LRA, and redevelopment resources. Each case study discusses redevelopment success, including execution, attainment of LRP goals, impact on the reuse area, and any environmental clean-up during redevelopment. Following that is a synopsis of the development capacity, LRP quality, LRP execution, achievement of LRP goals, and achievement of indices used by others. For each case, calculations for development capacity, LRP quality, LRP execution, achievement of LRP goals, and achievement of indices used by others are provided.

Development capacity is made up of fourteen variables. For six of these variables—acceptance of strengths and weaknesses, effective mechanisms for community input, dispersed leadership, vertical linkages, horizontal linkages, and community spirit activities—all the communities achieved a perfect score. Because the six variables were the same for each community, they will not be highlighted in the individual case studies but will be discussed in the synopsis at the end of chapter four. Two of the variables—shared vision and major business development—had only one community with a negative score. These variables will be discussed for those communities only, with the synopsis at the end of the chapter. The other variables will be discussed with each community and in the synopsis. If any variables had important issues to highlight, those issues will also be highlighted.

All communities did well on LRP quality. Of the seven variables, all the communities had positive scores for five: facility condition, utility condition, environmental condition, marketing plan, and financial plan discussions. The variables

without positive scores were a normalization plan and homeless plan, so the case studies will concentrate on those differences when discussing LRP quality. LRP quality will also be discussed in the chapter synopsis.

The communities also did well in LRP execution. Perfect scores were achieved in taking steps to streamline government processes and outlining contractual responsibilities. The major differences occurred in whether execution was separate from the local government or not. That separation is discussed in the case studies and all variations are discussed in the chapter synopsis.

Next, each case study discusses how well the communities obtained their LRP goals, both within the time period outlined in the LRP and by 2010. This is followed by a discussion of how the community performed in indices used by others and a short synopsis of the individual case.

The cases are arranged by geographic area, beginning with Peru, Indiana, with the highest development capacity score and Rantoul, Illinois, from the 1988 BRAC round (the first BRAC round used for this study). Next are Oscoda and Marquette, Michigan. Last are Plattsburgh and Rome, New York.

### **Peru, Indiana, and Grissom Air Force Base**

#### **Overall Notes**

The former Grissom Air Force Base (AFB) is located in Miami and Cass counties in north central Indiana, 65 miles north of Indianapolis, 115 miles southeast of Chicago, and halfway between Indianapolis and South Bend. The former base is one mile from the

Town of Bunker Hill, six miles southwest of Peru, and 14 miles north of Kokomo (Grissom Air Reserve Base [ARB] 1997, 4).

### **Community and Installation Information**

Bunker Hill had 900 persons at the BRAC announcement and Bunker Hill is the only town in the Pipe Creek Township in Miami County. Its first settlers were Samuel Durand and John Wilson in 1838 (Brandt and Fuller 1887, 741). Otherwise there is no mention of Bunker Hill in the Indiana histories.

Peru, Indiana, is the closest major community and thus, used for this study. It was founded in 1834 by Jason Smith (Stephens 1986). Early in the 20th century, Peru was home to a pioneering automobile maker, Model Automobile Company. Like other early automobile makers, Model did not survive (Clymer 1950, 57). Peru was winter headquarters for several famous circuses, including Ringling Brothers, Hagenbeck-Wallace, and Buffalo Bill's Wild West Show. The International Circus Hall of Fame, located in Peru, holds its annual Peru Amateur Circus in July ending with a Circus City Festival and Parade. Peru is the home of the world's only remaining manufacturer of steam calliopes (Adkins 2009). Songwriter Cole Porter (2011) was born in Peru, and the county uses his house for tourism (HNTB 2006c, 30).

Grissom was constructed by the Navy in 1942 as one of 24 aviation training stations across the United States (U.S.) and named Bunker Hill Naval Air Station. Before the base was constructed, the area consisted of ten farmhouses, barns, other farm structures, and farmland (Grissom AFB 1997, 12). When it was deactivated at the end of World War II (WWII), the War Assets Administration sold the barracks, messing, and housing facilities to local colleges to use as veterans housing and placed the land in caretaker status,

reverting part of the land back to farmland (Grissom AFB 1993, 3-1). The base reopened in 1954 as Bunker Hill AFB and was renamed Grissom AFB in 1968 in honor of Lieutenant Colonel Virgil I “Gus” Grissom (RKG 1993a, II-9).

The southeast side of the airfield included aviation support, industrial uses (including the storage of ammunition and hazardous waste), educational land uses, small arms firing range, classrooms, obstacle course, and vacant grasslands. The northwest side of the airfield, the developed portion of the base, included aviation support, industrial, educational, medical, commercial, residential, public, recreation, and vacant land uses (U.S. AF Grissom EBS 1993, 3-2). See table 4-1 for a synopsis of Peru information.

**Table 4-1. Peru/Grissom AFB Basic Information**

<b>Peru/Grissom AFB Basic Information</b>
- BRAC Round: 1991
- Base Closed: September 30, 1994
- Military Category: Large aircraft – strategic air refueling
- Base Personnel: 792 permanent civilian jobs lost at closure
- Base Size: 3180 acres minus reserve cantonment area of 670 acres = 2510 acres
- Development Capacity: 100 (ranked 1st out of 6 communities)
- LRP Quality: 86 (ranked 5th out of 6 communities)
- LRP Execution: 100 (tied for 1st with 3 communities)
- Achievement of LRP Goals per LRP and by 2010: 93 and 96 (ranked 3rd and 2nd respectively out of 6 communities)
- Achievement of Indices Used by Others: 94 (ranked 1st out of 6 communities)

#### **Situation at Peru and Grissom at the BRAC Announcement**

Grissom’s redevelopment area includes Miami, Cass, and Howard counties. The local communities include Logansport in Cass County, Kokomo in Howard County, and

Peru and Bunker Hill in Miami County. Peru has a mayor-council form of government. In 1990 the City of Peru had a population of 12,800 and the per capita income was \$11,192, with an Indiana per capita income of \$13,149. The city's focus was economic development and jobs. The 1990 unemployment rate in Miami County was 7.5 percent (RKG 1993a, VII 9-10; U.S. Bureau of the Census (1993 d); Indiana Fact Book, 34) compared to the state's unemployment rate of 5.7 percent (Grissom AFB 1997).

Miami County had an increasing age from 1971 to 1991 (RKG 1993a, VIII-6), the population was getting older as young people left the area. In 1990 thirty percent of the Miami County employees worked in the government sector—most at Grissom AFB. Thirty percent of the Miami County employees were in the manufacturing sector with 20 percent in wholesale/retail trade (RKG 1993a, VIII-8).

Cass County contains 413 square miles. Logansport, ten miles northwest of Grissom, is the county seat (RKG 1993a, VIII-3). The city has a mayor-council form of government. Per capita income in Logansport was \$11,451 in 1990. At the BRAC announcement, Cass County had the most stable employment base, reflecting the lowest changes in employment from 1975 to 1992 (RKG 1993a, VIII-10). The unemployment rate in Cass County was 10.1 percent. According to the LRP, Logansport was expected to be least affected by the closure/realignment of Grissom AFB (Grissom AFB 1997, 5).

Howard County contains 293 square miles, with Kokomo as the largest city and county seat (RKG 1993a VIII-3). Kokomo has a mayor-council form of government. Manufacturing is the dominant employment. In 1994 the unemployment rate in Howard County was 5.9 percent (Grissom AFB 1997, 5). The 1990 per capita income in Kokomo was \$14,129 (RKG 1993a, VIII-10). Howard County exceeded the state average income

level for both households and families. This was due to the presence of the United Auto Workers, which kept pay levels at or above state levels (RKG 1993a, VIII-13). Howard County's housing stock showed a moderate increase in the 1980s by rising by more than 900 units to a level of 33,820 (RKG 1993a, IX-2).

The local area around Grissom had healthy job growth prior to the base closure announcement. The number of jobs in the tri-county area grew by 6,250 between 1984 and 1989—an increase of 11.9 percent. Total jobs in the tri-county area increased from 52,610 to 58,864. Service industry jobs represented 55 percent of the increase in jobs. Contract construction showed the largest percentage change, increasing 72 percent (RKG 1993a, IX-12). The local community permitted 89 new stores and mercantile facilities (\$22 million) from 1986 to 1991, 69 banks and offices (\$35 million), 56 industrial facilities (\$23 million), and 11 service stations and repair facilities (\$1.1 million) (RKG 1993a, IX-11). Between 1984 and 1989 the Tri-County area absorbed between 200,000 and 900,000 square feet of building space (RKG 1993a, IX-2). The counties, local municipalities, and school systems had 50 percent of their total borrowing power unencumbered (RKG 1993a, VII-2).

There had been some form of civilian-military affairs group in the Grissom area since the base opened in 1943. In the early 1960s the Grissom Community Council was formed. The council was involved in the Triple E summer youth camp, civic leader symposiums, orientation flights, golf outings, air shows, base tours, speakers' bureau, and open houses until base closure. Aside from these meetings there was little participation in local community meetings (Grissom AFB 1997, 6-8).

There were two industrial parks in the reuse area. The North Miami Industrial Park had two light manufacturing/warehousing companies, and its appearance was good. At the closure announcement there were major sites available. No expansion was recommended for the North Miami Park to allow development closer to existing developed areas near Peru (HNTB EDS 2006d, 35). The Peru Industrial Park was the second oldest industrial park. It contained manufacturing and assembly uses. The condition was poor. Pavement improvements and strengthening were needed to meet truck needs (HNTB EDS 2006d, 34).

#### **Facilities at Grissom at BRAC Announcement**

The 434th Reserve Air Refueling Wing, which was to remain at Grissom after the closure, occupied a 670-acre cantonment area near the center of the base abutting the airfield. The cantonment buildings included hangars, squadron operations facilities, aircraft maintenance back shops, and administrative buildings. The number of buildings inside the cantonment area matched the number of buildings in the redevelopment area.

In the 1991 BRAC Commission Report, the Grissom facilities were graded lower than the category average for strategic flying bases (U.S. Congress BRAC Commission Report 1991, 5-36). The LRA did not anticipate that the condition of the facilities would draw businesses to the base. The buildings had code-compliance issues, such as not complying with the Americans with Disabilities Act (ADA) and asbestos contamination with removal estimated at \$2.1 million (RKG 1993a, VI-1).

The aviation facilities occupied the center of the base. The runway was 12,500 by 200 feet. Parts of the runway, taxiways, and aprons needed repair. The existing runway, taxiway edge lights, and airfield signage system did not conform to Federal Aviation

Administration (FAA) standards (RKG 1993a, IV-6) and the underground fuel system did not conform to Environmental Protection Agency (EPA) standards (RKG 1993a, IV-2-3).

Office space at Grissom totaled 259,376 square feet including the Wing Headquarters, two dormitories, and the Personnel Support Center. Shop and garage space included 76,000 square feet in five buildings. Specialty buildings included the kennel, medical clinic, and dental clinic. Warehouses included seven buildings with 28,826 square feet (RKG 1993a, II-10-17).

The community service facilities available to the LRA totaled 97,415 square feet in seven buildings, including the child development center, community center, security police station, and base library. Retail facilities included seven buildings: a dining hall, theater, credit union, service station, Burger King, commissary, and Base Exchange. Recreation buildings included the golf course, riding stables, hobby shop, pool, and fitness center. Residential facilities included eight dormitories and 1128 family housing units with fifteen different floor plans (RKG 1993a, II-10-17).

The Grissom utilities were in adequate condition. There was sufficient water supply and treatment. Grissom AFB derived its potable water from seven on-base wells. The total pumping capacity was 4.9 million gallons per day. An eighth well provided non-potable water to the golf course (Grissom AFB 1993, 3-5). Water could also be provided by the City of Peru and Town of Bunker Hill. At base closure buildings were not metered for water usage (RKG 1993a, VII-2).

Sanitary sewage was handled by the base wastewater treatment plant (WWTP) constructed in 1942 and upgraded in 1993, with a capacity of 1.75 million gallons per day and an average flow of 1.3 million gallons per day. There was sufficient treatment



available for redevelopment plans (RKG 1993a, IV-7). Sanitary sewer capability could also be provided by the City of Peru and the Town of Bunker Hill (RKG 1993a, VII-2). The base had an industrial wastewater treatment plant west of Hangar 200 to treat aircraft wash water. The outfall went to the base WWTP (Grissom AFB 1993, 3-6). Again the LRP estimated that there was sufficient treatment available for redevelopment plans (RKG 1993a, IV-7). Storm sewer services were provided by a surface drainage system consisting of open drainage courses that fed to underground storm drains. The general flow was to the northwest. Subsurface groundwater on the base generally flowed (and still flows) in the north-northeast direction (Grissom AFB 1993, 3-6).

Natural gas was provided by an underground pipeline supplied by Northern Indiana Public Service Company, which was owned and maintained by the AF. The distribution to the housing area was constructed in 1975. In 1991 the natural gas distribution system needed to be upgraded if the area were to be used for industrial purposes (RKG 1993a, IV-8). The steam heating facility was connected in 1990 (Grissom AFB 1993, 3-8).

Grissom purchased electricity from the Public Service Company of Indiana (PSI Energy). The power was allocated to the base through one substation that was owned and operated by PSI Energy. The base's primary electrical distribution system was limited to a 7,500 kilovolt amp electrical substation. To accommodate development an additional substation would have to be added (RKG 1993b, IV-7; Grissom AFB 1993, 3-6).

Through early 1993, solid waste at Grissom was disposed of at the T.H. Landfill. That landfill was closed, so solid waste was disposed at two primary landfill sites: Byers Recycling and Disposal Facility in Logansport and the Wabash Landfill in Wabash County (Grissom AFB 1993, 3-6; RKG 1993a, VII-2). Petroleum (JP-4) was stored at

Grissom in five aboveground storage tanks with a combined capacity of 3.57 million gallons. The tanks were supplied by tank trucks that delivered 15 loads of JP-4 daily. The JP-4 was then transferred from the tanks through a ten-inch transfer line to fourteen 50,000-gallon underground holding tanks located south of the operational apron. From this point, the JP-4 fed into the fuel hydrant system that contained seven laterals and 42 refuel/defuel hydrants so that aircraft could refuel while parked on the ramp. At the time of base closure the system was operational. The 434th Air Reserve Wing (which was to remain at Grissom after closure) planned to use the system (Grissom AFB 1993, 3-15). Regional access to Grissom was (still is) provided primarily by U.S. Route 31, which runs north and south from South Bend to Indianapolis. Additional regional access was (still is) provided by U.S. Route 24, which runs east and west (RKG 1993a, IV-1).

In 1992 operating costs for Grissom totaled \$18 million, with the major utility costs totaling \$3 million. Maintenance of utility plants, lines, and distribution systems represented an additional cost of \$736,000. The cost of water and sewer plant operations totaled \$460,000. Building maintenance costs totaled \$2.2 million or approximately \$1.16 per square foot. Grounds maintenance services, fire protection, and miscellaneous costs totaled \$9.5 million. Utility costs for family housing totaled \$925,000. Road maintenance and provision of public safety services ranged from \$400,000 to \$900,000 annually (RKG 1993a, V-2). The cost to maintain an airfield can vary widely. In 1993 Kokomo's budget was \$160,000, while Peru's airport was \$58,477. The former Pease AFB has an aviation budget of \$2.2 million annually (RKG 1993a, V-12-13).

### **Environmental Situation at Grissom at BRAC Announcement**

The Grissom Installation Restoration Program (IRP) was initiated at Grissom in 1984 (Grissom AFB 1997, 18). Grissom had fourteen contaminated sites and 56 points of interest, including fire training areas, low point drainage boxes, fuel sludge weathering areas, oil drum storage pads, an oil drum burial site, three landfills, and an abandoned underground storage tank. The contamination included a variety of petroleum products such as motor oils, lubricants, hydraulic fluids, industrial solvents, industrial solvents, pesticides, paints, thinners, cleaning solvents, and jet and motor fuels, as well as soil lead contamination. There were 45 facilities at Grissom that stored hazardous materials (Grissom AFB 1993, 3-8/14; Seiler 1991; Grissom AFB 1997, 18). It was determined that the contaminants for those facilities would not affect the drinking water (Shaw 1998). Base chemicals had reached a small aquifer about 25 feet below ground, but it was too shallow to use for drinking water. Grissom draws its water from wells that are 80 feet deep. There were underground storage tanks on base, including 382 inactive tanks with unknown locations in the military family housing area. No leaks had been identified and there were no plans for upgrade or removal (RKG 1993a, VI-1; Grissom AFB 1993, 3-8/14). Environmental clean-up was estimated to be at least \$26 million (Seiler 1991).

### **Opportunities and Constraints**

Opportunities for the Peru and Grissom area were the central location in the U.S. with access to suppliers and markets, a high-quality affordable labor force, low worker's compensation rates (especially compared to Kokomo), the availability of building space, and reasonably priced utility services (HNTB 2006b; RKG 1993b, II-1). Employers interviewed in the area during the LRP development were pleased with the education

system. Miami County had a low 16:1 student-to-teacher ratio (RKG 1993b, II-30). Also, the Peru area enjoyed a low cost of housing and living (RKG 1993b, II-32-33).

The labor situation in the Peru area was a mixture of opportunities and constraints. A firm called Resource Inventory and Assessment provided statistical information on Miami County's labor pool, including factors such as employment distribution, labor force, and the unemployment rate. They found a correlation between productivity, absentee rates, tardiness rates, and high turnover. Absentee rates were slightly higher than nearby locations. Unskilled employees were easy to find, but skilled employees were difficult to find. The applicant-to-job ratios were reported as high as 30 to 1 in the unskilled areas. The employers indicated that they had no problem in the recruitment of technicians and professionals. Productivity was rated very high. Labor costs and pay levels ranged from radically low to high. An average entry-level position for an unskilled or semiskilled worker generally fell to \$6.00 per hour, with skilled categories starting at \$8.00 to \$11.00 per hour. The overall labor profile in the area was positive, with the possible exception of a significant amount of union activity (RKG 1993b, II-9-12).

The constraints of the local area were a lack of amenities in Miami County such as live theaters, private schools, and institutions of higher learning. This meant a long commute to Indianapolis to reach these amenities (HNTB 2006b). Constraints relating to reuse issues included that there was no clear practical solution for the provision of firefighting and police services between Bunker Hill and Peru after realignment (RKG 1993b, VII-29). (The transfer of electric, water, and sewer lines to Rural Electric or Peru Utilities had been determined.)

The 434th Air Refueling Wing remaining at Grissom was both an opportunity and a constraint. The opportunity was that the reserve wing would provide some full-time civil service positions and part-time reserve positions, as well as pay for part of the airfield maintenance and operations costs. The plan was that the reserve wing would control and fund the water, sewer, and central heating system (it was later changed that they would provide funding, but not control the systems). The constraint was that the reserve wing would occupy an 1800-acre cantonment area near the center of the base, including 600 acres with facilities and 1200 acres with the airfield. The reserve cantonment area essentially cut the installation into two pieces, making redevelopment more difficult.

### **Proposed Redevelopment**

Some communities chose to have a single LRA oversee redevelopment planning and implementation. Some communities chose to have one LRA oversee the planning and another oversee the implementation. John Lynch (1970) recommends two LRAs. He envisions the planning LRA involving the public in the process of determining how the base should be reused and the implementation LRA as a business-like entity that oversees the development after the plan has been determined. In alignment with Lynch's recommendation, Peru chose to have two separate LRAs and many other organizations included in the redevelopment (Lynch 1970).

The Grissom Community Redevelopment Authority (GCRA), the planning LRA, was established in March 1992 with 29 board members (OEA Sheet n.d.). The Peru/Miami County Economic Development Corporation (EDC) was the economic development arm of the local government and responsible for a wider area than Grissom. It partnered with GRCA on marketing and recruitment. The LRP was completed in 1993

and written by RKG Associates in conjunction with The Pathfinders and Greiner, Incorporated (Inc). When completed, it was the only up-to-date planning document in the local area. (Miami County and Peru had last updated their master plans in the late 1960s.)

### **Local Redevelopment Plan (LRP) Vision**

The LRP called for GCRA to seek economic growth based on (1) economic base diversification, (2) net real income growth, (3) net employment growth, (4) net real gross-area-product growth, and (5) value added to human and community resources and environment (RKG 1993b, II-1). GCRA and EDC were to concentrate recruitment on firms that were export-based (RKG 1993b, II-11). It was anticipated that business and industrial sectors would be most attracted to Grissom due to the attributes and strengths of the Grissom area, not necessarily the Grissom facilities (RKG 1993b, II-10).

### **LRP Goals**

The LRP Goals were:

1. Land Use: Acreage will be absorbed at a level rate over 20-years including aviation/aviation support, heavy industrial/manufacturing, light industrial/assembly zone, commercial zone, office, educational, warehouse, light industrial, recreation, open space, and cultural uses (RKG 1993b, X-23; Tidd 2010).
2. Facility Use: Absorb 841,394 net square feet of space in 12 years (RKG 1993b, X-15).
3. Net Employment Growth: Create 1724 jobs in the existing structures. (If completely built-out to 3.27 million square feet it was anticipated that redevelopment could create 5,082 jobs [RKG 1993b, X-17]).
4. Tax Revenue: Create \$650,000 in tax revenue.
5. Airport Acquisition: No acquisition of the airport (RKG 1993b, IV-1).

The LRP anticipated that the land would be absorbed over a 20-year period and square footage in the facilities would be absorbed over a 12-year period (RKG 1993b, X-23). It anticipated that all the facilities would be privately owned by tax-paying entities

(RKG 1993b, X-18). In order to determine the market position of Grissom, the LRP consultants employed the methodology they used to search for sites for corporate clients. First-hand observations were made as well as interviews conducted with area employers, transportation officials, community leaders, government officials, school system officials, utility providers, and users. Questions asked in these interviews included:

1. What factors make the Grissom area a logical location choice over competitors?
2. For what type of business operations is Grissom best suited?
3. What forces might discourage businesses from locating to Grissom?
4. What advantages do the area and airport possess?
5. How can those advantages be most effectively communicated to prospective users? (RKG 1993b, II-2)

The factors reviewed during the interviews were business compatibility, markets, resources, supplies, transportation, labor force, livability, technology levels, utility requirements, business linkages, and the state and local business climate (RKG 1993b, II-36). The LRA considered manufacturing, heavy industry, warehousing, distribution, high technology, low technology, light industry, office, commercial, and aviation research and development (R&D) uses (RKG 1993b, IV-3-5). The LRP also noted that the community had the option to take nothing. The community could let the property be sold directly to private developers with no direction from the local community. The LRA felt that if the property were in private hands, the redevelopment might take 25 years—a significant risk. If development took that long, downward pressure on both the local commercial and industrial real estate markets would be exacerbated (RKG 1993b, VI-3). The community chose to have the LRA involved in redevelopment.

The LRA also could have pushed to have no reserve unit. (The local congressmen could have requested to have the BRAC law modified.<sup>11</sup>) The reserve buildings are newer and in better physical condition than the buildings outside the cantonment area. These buildings would be easier to sell than the older facilities outside the reserve cantonment area. Also, the reserve cantonment splits the base and uses up prime real estate along the flight line. With it gone, the base would no longer be “split up” and real estate along the flight line could be sold. With the reserves gone, the runway could be reduced in length and width to be used for general aviation. However, not having the military would have meant more property to sell. Also since the military would not be paying for any services such as fire, police, water, or sewer, and the jobs related to the military would go away, the community would have to climb that much further to “get back to even” (RKG 1993b, VI-3). So asking the reserve unit to leave was not a good option.

A third option was to create a proposal that did not take advantage of the flight line. Proposed uses would include heavy industrial manufacturing, light industrial assembly, commercial, office, educational, warehouse, light industrial, recreational, open space, and cultural amenities (RKG 1993b, IV-19). Military aviation and aviation support would occur at Grissom but not be part of the redevelopment. Designating Grissom as a non-aviation-related redevelopment area would not help distinguish it from other industrial parks in the Peru/Miami County area, so this option was not selected.

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<sup>11</sup> It is rare, but sometimes BRAC recommendations from DoD are changed while the recommendations are being reviewed by the BRAC Commission. One example was McGuire AFB. To establish a global reach capability, the AF and DoD recommended to the 1993 BRAC Commission that a mobility wing be established on the East Coast at Plattsburgh AFB, NY, and on the West Coast at Travis AFB, CA, which meant the closure of McGuire AFB. However, the BRAC Commission, on the recommendation of a congressman, recommended that Plattsburgh be closed and that the East Coast mobility wing be located at McGuire (GAO 1998).



The fourth option was to create a community-based aviation proposal. Uses would include aviation, aviation support, heavy industrial, manufacturing, light industrial, commercial, office, education, warehouse, recreation, open space, and cultural activities (RKG 1993b, IV-19). Projected revenues were to be primarily in the form of property taxes ranging from \$250,000 to \$650,000. This assumed 100 percent occupancy, which the LRA estimated would take 10 years to reach (RKG 1993b, IV-2). Assuming an average value of \$12.00 per square foot for the 1.17 million square feet of building space would create an approximate market value of \$14 million and a true tax value of \$4.7 million which would generate approximately \$250,000 in tax revenue. The 1,128 housing units, assuming an average per-unit market value of \$20,000, would result in tax revenue of \$150,000 total. Thus the total minimum tax revenue was a base of \$250,000 and a maximum of \$650,000. The projected time to fill all the buildings was 10 to 15 years (RKG 1993b, V12-15). Costs for supplying services to the former base could range from as low as \$423,500 per year without operation of the airfield to a high of almost \$3 million with the airfield. Overhead, including the GCRA staff with five employees, would require an annual budget of \$100,000 to \$150,000 (RKG 1993b, V-15-16). This option, with the reserve unit remaining, was selected.

### **Implementation LRA**

When the LRP was completed, the GCRA board was reduced to five members. Also, the LRP recommended that although GCRA and EDC could work separately, there should be close coordination to avoid duplication of effort and adequate market coverage (RKG 1993b, II-3). So GCRA and EDC worked closely from 1993 to 2005. On July 1, 2005, GCRA and EDC consolidated into one collaborative economic development

organization called the Miami County Economic Development Authority (MCEDA). The MCEDA Steering Committee Members included Michael Bakehorn (American Stationery), Denise Day (Peru/Miami County Chamber of Commerce), Carmine Gentile (Maconaquah Schools), Gary Hawley (Miami County Commissioner), Gary Horner (Purdue Extension Service), Kurt Kraskopf (Bryan Steam/City Council), Roger Merriman (Peru Utilities), Shirley Mull (Miami County Council), Chuck Oldfather (Carriger/Oldfather Realty Board of Realtors), Steve Reiff (Town of Converse Economic Development), Terry W Smith (Rock Industries, Chamber), Jim Walker (Mayor, City of Peru), and Larry West (Square D) (HNTB 2006, 1).

### **Redevelopment Resources**

The Grissom community received a good deal of support from the federal and state governments. The Office of Economic Adjustment (OEA) provided \$1,767,000, the Economic Development Administration (EDA) provided \$3,000,000, the Department of Labor provided \$612,000, and the AF provided \$4,561,000 in cooperative agreements. The federal government also provided a rural Economic Development Conveyance (EDC) that included 630 acres of land and facilities and a Public Benefit Transfer (PBT) to Peru Utilities and Rural Electric, 201 acres transferred to the state for a prison, 24 acres for the Heritage Museum as well as water and sewer lines transferred. The golf course was sold to Grissom Redevelopment Authority for \$275,000 (OEA sheet n.d.).

The State of Illinois provided \$1,075,000 in grants, \$250,000 for marketing, and a \$179,000 line of credit to be used to attract businesses (OEA sheet n.d.). In the Grissom local area there were several economic development resources available. The Miami

County, local municipalities, and school systems had approximately 50 percent of their total borrowing power unencumbered (RKG 1993b, VII-2).

### **Peru Redevelopment Success**

One of the keys to understanding Peru's success is that the local community approached economic development as a whole and did not specifically concentrate on either Grissom or one of the other industrial parks. The county chose to locate "like" industries in similar industrial parks. This was a tactic used at other communities, as well, including Plattsburgh and Rantoul. Small scale warehousing, light manufacturing, R&D, and office uses were directed to the Grissom Aeroplex and emerging development areas in the U.S. 31/24 corridor. Large-scale warehousing, light manufacturing, and distribution uses were encouraged to locate to the North Miami Industrial Park, Grissom Aeroplex South Industrial Park, and the U.S. 31/24 corridor. Heavy industries and those requiring outdoor storage or assembly were directed to the North Miami Industrial Park and Grissom Aeroplex South Industrial Park. Large manufacturing requiring significant employment was directed to the Peru Industrial Park, Grissom Aeroplex South Industrial Park, and U.S. 31/24 corridor. Agricultural businesses and agriculture were reserved for rural areas (HNTB 2006, 41). The Grissom Aeroplex compared well to the other industrial sites. It had key sites available. Its overall appearance and the condition of its infrastructure were good. There was one downside: the signage at Grissom did not present a consistent image, which caused confusion for customers trying to visit businesses in the park. This was mentioned by several local industries and corrected during redevelopment (HNTB 2006, 33 and 37).

In 2000, sixteen years after the base closure, manufacturing was the main economic driver in north-central Indiana, accounting for 40 percent of all jobs. Manufacturing accounted for 18 percent of jobs nationwide in 2000 (falling to only 12 percent by 2005). Other important sectors in north-central Indiana included health care, retail, tourism, and tourist accommodations. These four sectors accounted for 70 percent of all county jobs. Transportation equipment manufacturing accounted for 60 percent of the manufacturing, as Miami County is part of the “automotive corridor” extending from Detroit into Ohio, Indiana, Kentucky, Tennessee, and Alabama. However, Miami County was less dependent on vehicle manufacturing than the region as a whole (HNTB 2006, 3-7).

Between 1998 and 2003, Miami County’s private employment declined by over 200 jobs or 2.6 percent (Grissom closed in 1994). Twelve of the county’s 19 major economic sectors experienced a drop in employment, which coincides with the tail end of a national economic “boom” as well as a recession from 2001 to 2002. Employment fell sharpest in administration support, information services, transportation, education, and wholesale trade. Administrative support declined from 123 to 44 jobs—a 64.2 percent decline. The county lost 100 wholesale trade jobs, with employment declining 16.5 percent in this sector. Kokomo had an unemployment rate of 6.0 percent in November 2005—the third highest in the state. The county increased employment in professional and technical services (a 34.7 percent increase with 35 new jobs), real estate and health care (a 13.8 percent increase with 132 new jobs), lodging, and other services. Employment fell in manufacturing 1.8 percent but not as much as the national drop (HNTB 2006, 8-9).

In spite of these setbacks, all industries in the local area were supportive of MCEDA, Peru, and Miami County and worked with the government entities to attract

more businesses to the area (HNTB 2006, 33). By 2005 there were 735 new jobs at Grissom. Construction was completed for the new Indiana medium-security, 1000-bed prison that employed 107 people and created another 993 new jobs through 2009. The former commissary was purchased by Marburger Foods Inc. The North Central Indiana Law Enforcement Training Council Inc. leased building 38 and Power Investments Inc. leased buildings 21, 48, and 49. Franklin Power Products leased space in buildings 190, 21, 48, and 49. Cost Plus World Market, a furniture distribution business, signed a three-year lease for a 129,000 square foot facility and employed 30 people. The company planned to expand to a total of 1676 jobs. Also, Peru Utilities agreed to assume full responsibility for the water and sewer treatment systems (OEA Sheet n.d.).

In 2005 Peru's largest employers were Square D Company (520 employees), ConAgra (400 employees), American Stationery (300 employees), Trelleborg Automotive (220 employees), Bryan Steam (170 employees), Timberland RV Company (170 employees), Heraeus Electro-Nite Company (160 employees), Snavely Machine (110 employees), and Western Reman Industrial (120 employees) (HNTB 2006).

On the negative side, an airport feasibility study found no short-term market or expectation to develop a market for aircraft maintenance or general aviation. GRA representatives met with the OEA Director on March 25, 2003, to brief him on their concept of a Homeland Security training facility (OEA Sheet n.d.).

By 2005/6 the redevelopment results and forecasts were mixed. In 2005 the State of Indiana estimated that the region was expected to gain over 1200 positions in health care, 1200 in education, 1100 in restaurants, and 640 business services jobs, but transportation equipment jobs were expected to decline by 1300 and the county was projected to lag

behind the state in higher-education opportunities (HNTB 2006, 10-12, 16). In 2006, the Miami County Economic Development Strategy found that north-central Indiana was a center for advanced transportation equipment manufacturing with almost four times the national average share. Agri-business was 2.5 times the national average. Education services and advanced materials were two times the national average. There was a small concentration of businesses in testing or sensing instruments. Fifty percent of the input materials used in the state (machinery, castings, paper, pork bellies, packaging film, steel, ink, hardware, tooling, information technology, aluminum supplies, plastic parts, chassis, refrigeration, and furniture) were from Indiana. The market for Miami County goods was 80 percent national, 10 percent international, and 10 percent in Indiana. Forty percent of the Miami County workers commuted from outside of the county each day, meaning Miami County businesses drew workers primarily from the county (HNTB 2006).

By 2010 there was a healthy demand for warehousing and distribution space in Miami County. Logistics had maintained a 17 percent growth rate in the local area including trucking, warehousing, distribution, information technology services, air freight, courier services, freight forwarding, and logistics services. The Miami County Economic Development Plan called for attracting packaging and aircraft maintenance to take advantage of Grissom, as well as attracting remanufacturing and bio-fuels to take advantage of local food production and rail lines. Licensed machining training programs were available at local community colleges and universities such as Ivy Tech, Purdue, and Vincennes to prepare students to work in manufacturing jobs (HNTB 2006, 27-28).

In 2010 there was still a lack of qualified entry-level workers. Workers demonstrated a poor attitude, inability to work with others, drug addiction, low self-

image, and lack of basic life skills. There was also a dearth of technical and salaried workers (HNTB 2006, 25). This lack of quality workers hampered future potential growth and may have been a result of the jobs that Grissom, Peru, and Miami County were able to produce between closure in 1994 and 2010, leaving the county with a low supply of entry-level workers. The 2010 Miami County Economic Development Strategy called for improving worker skills, strengthening community pride, and involvement through active participation in civic matters (HNTB 2006, 39).

Overall, Grissom has been a success. The community created 1,357 direct jobs on base, 4,816 indirect jobs throughout the local economy, and \$593,085 in tax revenues. The LRA attracted Marburger Foods, North Central Indiana Law Enforcement, Power Investments Inc., Franklin Power Products, and Cost Plus World Market. In the years following the realignment of Grissom, Peru had an overall reduction in population and employment. However, it was able to regain the jobs lost and grow additional jobs.

The county's Economic Development Vision Statements continues the LRP direction and calls on the community to: (1) create a multi-dimensional and complete community, (2) capitalize on unique attributes, (3) strengthen community pride and involvement, and (4) increase the workforce educational attainment, training, and well-being (HNTB 2006). The County's Economic Development Strategies included: (1) adopt an economic development strategy, (2) strengthen the existing industrial base, (3) use competitive advantages to attract growth industries (including agriculture), (4) build the local workforce, (5) capitalize on community attributes, (6) strengthen the existing employment centers (includes creating and using a management association approach), and (7) plan for future development areas (HNTB 2006, 71). The Proposed Economic

Development Strategy Way Forward was to create a quality “small town” lifestyle, focus like industries in similar industrial parks, provide a high-quality community appearance, and use a “master planning approach.” The incorporation of GCRA into MCEDA and the city’s goals show how Peru took on the Grissom redevelopment as its own.

### **Achievement of Goals**

Peru set very specific LRP goals. They projected that the acreage would be absorbed in 20 years and were successful. They projected they would absorb 841,394 square feet of space in twelve years. They absorbed 86 percent of that square footage. They specified creation of 1,724 jobs on base in twenty years, almost 200 percent of the 792 civilian jobs they lost with base closure, and 6,806 jobs throughout the local economy (indirect jobs) (RKG 1993b, X-16 and 20). They created 1,357 direct jobs on Grissom and 4,816 jobs throughout the local economy, 88 percent of the direct jobs goal and 71 percent of the indirect jobs goal (AFRPA 2012). Peru targeted creating \$650,000 in tax revenue (RKG 1993b, X-19) and was successful in creating \$593,085 in tax revenue, 91 percent of the goal (AFRPA 2012 and City of Peru 2010). Even though Peru did not achieve 100 percent of their LRP goals, they were successful in redevelopment.

### **Environmental**

Environmental clean-up at Grissom started in 1984, so the clean-up had been underway for ten years when the base closed. The AF environmental shop reported in 1996 that Grissom clean-up was underway and the areas that were being tested for pollution were not a risk to human health (Pharos-Tribune 1996). That year fuel tanks were removed from the housing area and environmentalists determined that the contamination was not spreading. Crews continued testing near 30 oil-water separators, a



former fire training area outside reserve boundaries, and a landfill inside the reserve base until clean-up was completed (Shaw 1998).

### **Peru Comparison of Development Capacity to Redevelopment Success**

Peru, Indiana, was the community with the highest independent variable, development capacity with 100 points. Peru's strengths were that the community had a good track record of attracting businesses to the area, investing in physical and institutional infrastructure, and holding community spirit events. Also, the LRA partnered with the local EDC to share marketing responsibilities (sharing vision), did a good job at researching other BRAC communities/bases (horizontal linkages), and applied heavily for federal, state, and local grants (vertical linkages). Peru performed well in all fourteen variables that make up development capacity.

In the five years prior to the BRAC announcement, the tri-county area around Peru attracted tenants to fill over 200,000 square feet of building space and created 6,254 jobs for the local area (RKG 1993b, IX-2). This put Peru first among the six communities surveyed in the number of jobs and square footage created in the five years prior to the base closure announcement. In the five years prior to the BRAC announcement, Peru invested in a new elementary school and hospital addition and spent \$5.9 million on roads, as well as investing \$3.4 million in capital improvements (RKG 1993b, VII-7). This placed Peru first in the infrastructure variable investment amongst the six communities studied. Community spirit events in the five years prior to the BRAC announcement included the Grissom Community Air Show, held annually with an attendance of 160,000 visitors (Tidd 2010); Miami County Fair; Cole Porter Classic; Bunker Hill Festival; Converse Fair; Denver Days; Circus City Festival; and Hoosier

Heritage Festival. The Grissom Community Council also sponsored the Triple E Summer Youth Camp Program, civil leader symposiums, KC-135 orientation flights, golf outings, base tours, speakers' bureau, and open houses (Grissom AFB 1997, 5).

Peru's LRA researched nine BRAC communities including Blytheville, Arkansas (the former Eaker AFB); Fort Worth, Texas (Carswell AFB); Alexandria, Louisiana (England AFB); Rantoul, Illinois (Chanute AFB); Limestone, Maine (Loring AFB); Tampa, Florida (MacDill AFB); Portsmouth, New Hampshire (Pease AFB); Oscoda, Michigan (Wurtsmith AFB); and Myrtle Beach, South Carolina (Myrtle Beach AFB) (RKG 1993b, XII-7). They tied with Rome, New York, for the most BRAC communities researched (horizontal linkages). Further, Peru went after the second largest number of federal and state grants of the communities studied. They went after 18 grants (RKG 1993b, V-7). Rome, New York, went after the most grants—36 (Hamilton 1995, 13). Some communities went after three or four grants.

Peru had a good LRP quality score of 86 points. The LRP did well on all measures including its marketing plan, facility, and utility condition discussions. It particularly did well in the environmental condition assessment, as well as property transfer and zoning recommendations. The environmental condition assessment described the 83 underground tanks, the asbestos survey, and fourteen contaminated sites including fire training areas, low point drainage boxes, fuel sludge weathering areas, oil drum storage pads, three landfills, and an abandoned underground storage tank (RKG 1993b, VI-1). In property transfer and zoning issues, the LRP discussed “by right” zoning and land transfer techniques (RKG 1993, IV-9 and I-1). The LRP could have been improved by completing a homeless plan rather than having only a discussion about the homeless in

the LRP.<sup>12</sup> More sophisticated LRPs had a homeless plan such as the K. I. Sawyer LRP (Greiner 1995, xxxiv). So Peru started out with good development capacity and LRP.

In LRP execution, Peru had 100 points, the same score as Plattsburgh, New York (Plattsburgh AFB) and Rome, New York (Griffiss AFB). Peru did particularly well in taking steps to streamline the government processes. They developed a guidebook establishing time frames, costs, and specific requirements to be encountered by new industrial and commercial investors. They also set up reciprocal relationships with the environmental regulatory groups at the regional, state, and federal levels (Greiner 1995, II-10), so that environmental paperwork would be processed quickly. Peru did have problems with their planning LRA being too large. The initial LRA was 29 people. It was later streamlined to a five-member governing board for implementation (OEA 2006). However, Peru's LRA was not the largest. The largest was Plattsburgh with 150 people—a 14-member board and 136 committee volunteers. Plattsburgh also later downsized their LRA for implementation (Calabro 2008, 39).

In development achievement, Peru attained the second-highest dependent variable, “attainment of LRP goals by 2010”, with a score of 96 points (second to Rantoul, Illinois), and the third-highest dependent variable, lower than Rantoul and Rome, New York (the former Griffiss AFB), for the “attainment of LRP goals by the dates specified in the LRP,” with a score of 93. The attainment of LRP goals for Peru may not provide the best comparison of Peru's development in relation to the other communities studied. Peru set very specific and aggressive goals in their LRP. They specified that they would create 1,724 (direct) jobs on base in twenty years, almost 200 percent of the 792 civilian

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<sup>12</sup> BRAC law requires that each local redevelopment authority address the accommodation of homeless assistance needs in cooperation with the Department of Housing and Urban Development (HUD) (Base Closures and Realignment PL No 95-82 1995).

jobs lost, and 6,806 (indirect) jobs throughout the local economy (Greiner 1995, X-16 and 20). They created 88 percent of the direct jobs goal and 71 percent of their indirect jobs goal (AFRPA 2012). Peru targeted creating \$650,000 in tax revenue (Greiner 1995) and were successful in creating 91 percent of their goal (AFRPA 2012 and City of Peru 2010). Even though Peru did not achieve 100 percent of their LRP goals, they were successful in redevelopment. Other communities that scored higher on the attainment of LRP goals set less specific LRP goals that were easier to obtain.

For example Rantoul, that achieved the highest LPR goal attainment scores—100 points in both “attainment of LRP goals by the dates specified in the LRP” and by 2010—selected more general goals such as “create a land use plan that incorporates aviation, aviation support, industrial, education, medical, commercial, residential, and open space;” “operate the site as an airport and training complex;” “integrate the proposed on-base land uses with existing and planned off-base land uses;” “retention of open space;” and “the former base should be financially independent of the Village of Rantoul” (EDAW 1990, 4-2). Thus, Rantoul received credit for meeting the “operate the site as an airport and training complex” by having one tenant that conducted training and operated the airport versus achieving a certain number of jobs created or attracting a certain number of tenants. This helped Rantoul achieve 100 percent of their LRP goals.

So it is also beneficial to look at the “redevelopment success measured by indices of other agencies” which provides a more comparative scoring between communities than comparing attainment of LRP goals. Peru’s score was 95 points, the highest score. To achieve this score, Peru created 171 percent of the civilian jobs lost at closure (AFRPA 2012). They increased their local population after the base closure between 1990 and

2010. They also improved their unemployment rate relative to the state unemployment rate by 1.2 percent (U.S. Bureau of the Census 2010 n and q).

To synopsise, Peru started out with the highest development capacity (100 points), a solid LRP, executed well, and ended up with good marks in all three ways of measuring the redevelopment success (attainment of LRP goals by LRP dates, LRP goals by December 2010, and success measured by indices of other agencies). From this individual example it appears that a high score in the independent variable, development capacity, along with high scores in LRP quality and LRP execution, are related to a high score in the three ways to measure the dependent variable.

### **Rantoul, Illinois, and Chanute Air Force Base**

#### **Overall Notes**

Chanute AFB was one of the first bases closed during the 1988, 1991, 1993, and 1995 BRAC rounds as part of BRAC 1988. Chanute is located in northeastern Illinois, 120 miles south of Chicago, 135 miles west of Indianapolis, and 190 miles east of St. Louis. Chanute had 2174 acres (AFRPA 2012). It was identified for closure on September 30, 1988 (EDAW 1990, ES-1). Chanute had 966 civilian jobs at closure. The nearest community is Rantoul, Illinois, which abutted the base. Chanute was the “trial base” for many BRAC initiatives. Experiences from Chanute, combined with Rantoul’s mayor, Katie Podagrosi, helped improve many BRAC processes.

### **Community and Installation Information**

Rantoul is in Champaign County. Mr. Archa Campbell, Rantoul's first settler, came to the area in 1835 and settled in Rantoul in 1849 (Lothrop 1871). The first land entry for Rantoul was by Lewis H. Long in June 1853. It read, "The land, with the exception of Mink Grove, which lies just west of the Village of Rantoul, is entirely destitute of forest trees. The land has deep, rich soil, excellent for farming." Settlements in Rantoul were exceedingly sparse until 1855, when the Illinois Central Railroad was completed and the name was changed to Rantoul Station in honor of Robert Rantoul, Jr., a U.S. representative from Massachusetts and a director of the Illinois Central Railroad (Lothrop 1871). The railroad erected depot buildings and the town was platted with 18 blocks in 1856 by John Penfield (Callary 2009; EDAW 1990, 2-19). The name was shortened to Rantoul in May of 1862 (Lothrop 1871).

Rantoul Aviation Field was established on May 21, 1917, for the U.S. Army Air Service (EDAW 1990, 2-19). Rantoul was chosen by the Army to be the site of Chanute Field due to its proximity to the Illinois Central Railroad and the War Department's Ground School at the University of Illinois in Urbana-Champaign, 14 miles from Rantoul (Octave Chanute Air Museum n.d.; Wikipedia 2012a). On June 6, 1917 the name was changed to Chanute Field in honor of Octave Chanute (1832-1910), a pioneer aeronautical engineer and adviser to the Wright Brothers. During World War I (WWI) Chanute was a pilot training school. Its proximity to the University of Illinois at Urbana-Champaign and the Ground School allowed training resources (people, materials, courses, etc.) to be shared between the training locations. After WWI, Chanute was closed and used as a storage depot for surplus war material (Wikipedia 2012a).

In February 1921, Chanute Field was reopened as a technical training center, with training being transferred from Kelly Field, Texas. By 1924 nine steel hangars were constructed as classrooms. However, diminishing funds resulted in a sharp decline in the number of students and the use of the airfield during the Great Depression. Late in the 1930s, in preparation for possible conflict, Chanute Field again grew to dominate the local economy. The U.S. Army Air Service Technical Training Command was established at Chanute in 1941 and the 99th Pursuit Squadron was activated at Chanute ("Pursuit" being a synonym for "Fighter"). The training included enlisted men who were trained in aircraft ground support trades and new recruits (Wikipedia 2012a).

With the formation of the AF in 1947, Chanute Field was renamed Chanute AFB. The Korean War affected the training workload at Chanute. The student load grew from 5,235 in 1949 to 12,000 by 1953 (Techbastard 2012). In the 1960s, Chanute became the prime training center for the long range guided missile (LGM-30) Minuteman intercontinental ballistic missile (ICBM). Chanute contained training ICBM Launch Facility "silos" for the Minuteman ICBM maintenance personnel. These training facilities were housed at a hangar located on the flight line. For the rest of its existence, Chanute's primary mission was AF technical training. Personnel at Chanute trained aircraft maintenance officers (AF, Army, Navy, and Marine Corps), enlisted meteorology personnel, enlisted aircraft, flight simulator, and fuel system maintenance personnel as well as firefighters, life support specialists,<sup>13</sup> welders, non-destructive aircraft material inspectors, airframe repairmen, and most vehicle maintainers.<sup>14</sup> Finally, the AF Technical Training Instructors Course was conducted at Chanute (EDAW 1990, ES-2).

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<sup>13</sup> Ejection seat, aircrew survival equipment, aerospace ground equipment, etc.

<sup>14</sup> General purpose, special purpose, fire truck maintenance, material handling and equipment maintenance.

Beginning in the 1960s, airmen at Chanute trained thousands of allied airmen from Asian and Middle Eastern nations. During the 1970s, Chanute AFB provided training for thousands of airmen sent to Vietnam. During the 1960s and 1970s, the base invested heavily in quality-of-life programs, building new student dormitories and support facilities. In 1971 the AF closed the base's runway. In 1978 Chanute was considered for possible closure (EDAW 1990, 3-16). At the time of its closure, Chanute was the AF's third-oldest active base and its tenant, the Chanute Technical Training Center, was the oldest technical training center in the service (Techbastard 2012).

Rantoul and Chanute's histories are tied closely to the University of Illinois at Urbana-Champaign. The Morrill Act of 1862 granted each state a portion of land on which to establish a major public state university, which could teach agriculture, mechanic arts, and military training without excluding other scientific and classical studies. After fierce bidding, Urbana was selected in 1867. The University opened on March 2, 1868, with two faculty members and a small group of students. It was known as the "Illinois Industrial University." In 1885, the Illinois Industrial University officially changed its name to the University of Illinois, reflecting its holistic agricultural, mechanical, and liberal arts curricula. The Army's School of Military Aeronautics opened on campus on January 30, 1918 (a year after Chanute was established). The university was also selected as the home of the Army Corps of Engineers' Construction Engineering Research Laboratory, which partners with the university on military-related research. The name was changed to the University of Illinois at Urbana-Champaign in 1982. The university was (still is) a world-leading magnet for engineering and sciences, both applied and basic (Wikipedia 2012n), which supported military partnerships.



### **Situation at Rantoul, Illinois, and Chanute at BRAC Announcement**

At base closure, the Village of Rantoul had 20,640 residents (EDAW 1990, ES-1) and the population in Champaign County was 171,130 (EDAW 1990, 2-15). Forty percent of the jobs in Champaign County were government positions. The 1989 unemployment rate was 6.5 percent in Rantoul, 4.1 percent in Champaign County, 6.0 percent in Illinois, and 5.3 percent across the United States (EDAW 1990, 2-9 and 13). See table 4-2 for a synopsis of Rantoul information.

**Table 4-2. Rantoul/Chanute AFB Basic Information**

<b>Rantoul/Chanute AFB Basic Information</b>
- BRAC Round: 1988
- Base Closed: September 30, 1993
- Military Category: Large strategic aircraft
- Base Personnel: 966 permanent civilian jobs lost at closure
- Base Size: 2174 acres
- Development Capacity: 79 (ranked 3rd out of 6 communities)
- LRP Quality: 71 (ranked 6th out of 6 communities)
- LRP Execution: 67 (tied for 4th with 3 communities)
- Achievement of LRP Goals: 100 (ranked 1st out of 6 communities)
- Achievement of Indices Used by Others: 74 (ranked 3rd out of 6 communities)

Due to possible base closure in 1978, Rantoul had anticipated that Chanute might be closed and took several actions to decrease the community's economic dependency on the base. In the 1980s, Rantoul began an active economic development program to bring new employers to the community. This eased actual dependence on base employment and gave the community important economic development experience. Prior to the BRAC announcement Rantoul had attracted five large manufacturers to their industrial park,

Rantoul Industrial Park, on the western edge of Rantoul. The park has 160 acres and in 1986 had 2500 people working in manufacturing—forty percent of the employment in Rantoul (EDAW 1990, 2-14, 19). The manufacturers included the Rantoul Glass plant, a division of Chrysler Corporation with 200,000 square feet of plant space and 215 jobs (EDAW 1990, 3-25), and the Conair plant with 100,000 square feet and 50 jobs. The industrial park was designated an “Illinois Enterprise Zone” offering tax incentives to firms to locate in the zone (EDAW 1990, 3-19).

As soon as the closure was announced, Rantoul created a “Chanute Impact Fund” of \$200,000 to mitigate anticipated declines in public revenues. This fund gave Rantoul resources to weather short-term losses caused by the base closure (Frieden and Baxter 2000, 113). The Village also set aside \$300,000 annually from 1994 to 1997 for a total of \$1.5 million to be used for redevelopment (Podagrosi 2010). The community had good community spirit, with events such as the Fourth of July freedom celebration complete with a 5K run, pancake breakfast, parade, car show, kids activities, and fireworks; the Rantoul Area Chamber of Commerce (RACC) golf outing; the Annual Community Banquet; legislative luncheons; a political candidates forum; and a Christmas parade celebration (Rantoul Chamber of Commerce 2010).

#### **Facilities at Chanute at BRAC Announcement**

The facilities at Chanute were in adequate condition at closure. The aviation and training facilities were mainly located in the core area of the installation with four hangars, a large 50-year-old training facility called Old White, and Smith and Jackson Halls. There were aviation facilities for fuels, fire, and engine test cell training. The industrial areas were scattered throughout the base and included a sewage treatment

plant, cold storage, supply facilities, central heat plant, fire station, and loading and unloading areas (EDAW 1990, 3-39-55).

The administrative buildings included base headquarters and building four, the former hospital. Medical facilities included a hospital constructed in 1956 with 200 beds and a dental clinic built in 1955. The community buildings were some of the newest on the former base, including a commissary (built in the 1980s), base exchange (built in the 1980s), two theaters, bank, telephone center, gymnasium, restaurant, child care centers, and multi-purpose building with a post office, restaurants, and shops. Recreation facilities included the bowling alley, athletic forum, youth center, and arts and crafts building. Outdoor recreation facilities included a golf course, skeet range, lake, two swimming pools, 14 tennis courts, two recreation courts, eight softball fields, two running tracks, and a soccer field (EDAW 1990, 3-39-55).

Bachelor housing included five enlisted 330- to 500-room dormitories, two officer dormitories in excellent condition, and six enlisted older dormitories in adequate condition. Family housing was located in four areas. The southwest section of the base included 217 housing units in excellent condition plus older transient lodging. The northeast section included 359 units including duplex, quadraplex, and sexplex units constructed in the 1950s and 1960s. The west section included six eightplex units that were recently renovated. The east section included 20 housing units in Staff Row, six in Vinson Circle, and ten senior officer quarters in excellent condition built in the 1940s. Demolition was recommended for Chapman Court housing, which was boarded up at the time of base closure, and the sewage treatment plant (EDAW 1990, 3-39-55).

The utilities at Chanute ranged from good to inadequate. The water system was adequate. The water was supplied from nine wells, treated in a water treatment plant, and stored in four elevated tanks. The base water supply system was also connected to the village water system in case extra water was needed. The sanitary sewer system included 24 pump stations that sent the sewage to the village sewage treatment plant. The collection system had a history of inflow and infiltration problems and was listed as inadequate. The storm sewer collection system flowed to the Salt Fork Creek. It had three emergency pumping stations and was also listed as inadequate (EDAW 1990, 3-55).

The central heating system had two centralized heat plants. The majority of the buildings on base were heated by the central plants, with only a few buildings heated by electricity. The LRP recommended that all the buildings be converted to individual units for each building so that the buildings could be sold more easily. The base electrical distribution system included 13 primary feeders with a substation and distribution system with a peak demand capability of 14,000-17,000 kilovolt amps. The system was in good condition. Street lighting was inadequate (EDAW 1990, 3-55).

#### **Environmental Situation at Chanute at BRAC Announcement**

At the closure announcement Chanute had environmental contamination, but not enough to place it on the National Priority List (NPL). There were seven hazardous waste sites, including four landfills, a tank sludge disposal pit, and two fire training areas. There were 16 abandoned underground storage tanks and fuel lines. Other environmental sites included three oil/water separators, a coal storage area, a small arms range, and an area with lead solder that required sampling. Tests on the landfills indicated elevated levels of lead and benzene. There was also concern that landfill four once contained a grenade

launcher range. The recommended remediation for the landfill was a \$36 million cap, meaning that the land would carry redevelopment and deed restrictions. The institutional controls on these properties might prohibit the use of water on the property for drinking water purposes (Chanute AFB 1998a and b; EDAW 1990, 3-75).

### **Opportunities and Constraints**

Rantoul's most attractive features were accessibility to transportation (rail and highway), a good labor force, low wage rates, low tax rates, low utility costs, and economic development assistance offered through the local government (EDAW 1990, 3-20). Rantoul also had good community spirit. At base closure Chanute's opportunities were its educational facilities, including dormitories, classrooms, and facilities to teach specialized training such as firefighting, the small arms range, and the runway. The runway was also a constraint because it had been closed for 17 years. The University of Illinois at Urbana-Champaign offered partnering opportunities but could also be viewed as a competitor for any educational entities considering locating to central Illinois. Rantoul's Industrial Park would also be a competitor for the attraction of manufacturers unless the manufacturer needed runway access.

The pure size of the base would be a challenge for Rantoul—the base was almost the same size as the Village of Rantoul itself. Most of the facilities were in excellent or adequate condition; however, there were some that needed to be demolished. The centralized heat plants were a constraint because either the heating systems for each building would have to be modified before they could be sold or the LRA would have to take on the task of running the heat plants. The plants were inefficient if there were not a large amount of buildings using heat from the plants. Some buildings did not meet the

current building codes and would have to be upgraded before they could be used. Also, Chanute property needed to be normalized so it could be sold as parcels. Finally, environmental contamination would be a constraint due to the time required for clean-up and any deed restrictions required by the clean-up methods.

### **Proposed Redevelopment**

The planning LRA for Chanute was the Village of Rantoul. The main benefit in having the local government serve as the LRA was that the local government took responsibility for redevelopment. Redevelopment became part of the Village goals. Another benefit was that once a redevelopment plan was developed, no additional government entity needed to approve the plan. Finally, during the planning process it was beneficial that the local government served as the LRA because they already knew many of the community players; understood the community's requirements, concerns and desires; and knew which players might be able to contribute to the redevelopment process. (Of course if governmental relations with certain constituents or organizations were poor, that could be a detriment).

The downside of a local government serving as the LRA was that redevelopment requires a great deal of time from the local officials, government offices, and agencies. In such a situation, redevelopment might take local government resources away from other priorities. The redevelopment of Chanute was a large load for the Village of Rantoul. However, the close proximity of Chanute to Rantoul (the base literally ran into the village) almost required that the local government be the LRA. In overseeing redevelopment planning, the mayor of Rantoul led the LRA with the Village economic development director and a committee providing input.

## **LRP Goals**

The LRP developed by the LRA adopted four planning principles.

1. Reuse base facilities for similar functions.
2. Operate the base as an airport and training complex using the Crawford, Murphy and Tilley, Incorporated (CMT) Preliminary Airport Layout. (CMT was a private consultant that was hired using OEA funds.)
3. Integrate the proposed on-base uses with existing and planned off-base land uses.
4. Retain open space and landscaping (EDAW 1990, 4-1).

## **Proposed Uses**

Proposed uses for Chanute were aviation and aviation training related. The University of Illinois had a four-year pilot training program and the LRA proposed moving part of the University of Illinois program to Chanute (EDAW 1990, 3-3). Also, the Federal Aviation Administration (FAA) had a certified school for pilots and flight engineers. During LRP development the Professional Aviation Maintenance Association projected a 50,000-space shortage nationwide in airline technician schools (EDAW 1990, 2-2). Rantoul thought Chanute would make a good airline technician training location. Finally, an aviation museum was proposed (EDAW 1990, 3-11).

The LRA considered non-aviation uses. The National Fire Academy conducts emergency airport training for firefighting and first aid across the U.S. Since Chanute had been the AF firefighting school, it was proposed that Chanute would be a good location for a firefighting and first aid school as well as a hazardous waste material incident response training complex. There was a Police Training Institute at the University of Illinois at Urbana–Champaign. The LRA thought the university might be interested in the firing range, housing, classrooms, and offices. It was proposed that Chanute would make a good location for a Reserve Officer Training Corps training camp (EDAW 1990, 3-11).

At base closure, the East Central Illinois Partnership for Education was looking for a home for a children's science and math center. Chanute was proposed as a location as well as a location for a foreign language village or international college of languages. The LRA met with the National Air and Space Administration (NASA) about a simulated astronaut training, teacher orientation, or Top Gun flight simulation program and with the U.S. Olympics about a gymnastics or ice skating training facility (EDAW 1990, 3-11).

Other uses proposed were a truck-driving school to make use of the runway and taxiway areas if the airport was not successful and an incubator laboratory for solid and hazardous waste management, recycling, and aviation safety. Uses related to gasohol and new fuels were proposed to take advantage of the local agricultural industry as well as agriculture-related research at the University of Illinois at Urbana-Champaign. Back office spaces for data processing and information storage were proposed for companies in either Chicago or St. Louis, as well as a federal or state minimum security prison and a senior life care center to make use of the housing (EDAW 1990, 5-22). All the proposed uses had viable connections to former base facilities, uses, or the Rantoul area.

The final LRP proposed that Chanute be operated as an airport and training complex (EDAW 1990, ES-8). Rantoul made a decision to direct industrial uses to Rantoul's industrial park and to direct commercial uses to downtown Rantoul or Chanute (EDAW 1990, 4-6). Airfield uses were directed to Chanute. The proposed uses were:

1. Aviation maintenance training—United and Northwest airlines were looking for sites.
2. Aviation Challenge Top Gun (U.S. Space Camp).
3. Hands-on mathematics and science center.
4. Hands-on manufacturing training center.
5. Hazardous waste training facility.



6. Police training institute.
7. Life care housing.
8. Manufacturing incubators.
9. Octave Chanute Aerospace Museum and the Rantoul National Aviation Center (EDAW 1990, ES-8, 3-3; Octave Chanute Aerospace Heritage Foundation 2012.)

The LRP also included proposals for improved vehicular circulation and connections to the off-base transportation system (EDAW 1990, 4-11). The LRA felt that the country's economy was becoming more reliant on technology (EDAW 1990, ES-2) and that the skills gap between U.S. students and work requirements would drive a requirement for training facilities (EDAW 1990, 2-2).

### **Redevelopment Resources**

There were several financing opportunities available. OEA provided federal funds for redevelopment plans. Rantoul planned to seek federal public benefit discounts and allowances for utilities, parks, recreation areas, an airport, conservation areas, and health and education facilities. They would also seek the negotiated sale of the other federal property, including industrial and commercial property (EDAW 1990, 5-8). In agreement for taking these funds, the operation of the park, recreational land, and facilities would be limited to government agencies (primarily the Village of Rantoul). The Village would also have to use the education facilities for 30 years before they could be transferred. As a result of being part of the 1988 BRAC rounds, Rantoul did not have as many PBT options as later BRAC communities because the laws for public PBTs were not in place.

At base closure there were state funds available. The Illinois Department of Commerce, Community Affairs, and Build Illinois offered grants, as did the state Incubator Assistance Program (EDAW 1990, ES-10, 3-22). Rantoul sought state funding

for an education specialist (EDAW 1990, 5-7). Rantoul's Enterprise Zone at the Rantoul Industrial Park under the Illinois Enterprise Zone Act of 1982 was expanded to include Chanute and used to attract businesses (EDAW 1990, 3-22).

Because Rantoul was the LRA, local government funds were more readily available than at other BRAC communities. Immediately after the closure announcement was announced, Rantoul set up the Chanute Impact Fund to help pay for base redevelopment activities or village services during the closure process. The Village Economic Development Director and the Village Community Development Director were key to redevelopment and paid for by the Village.

Non-profit sources included religious entities as well as private sources (EDAW 1990, ES-10). Kraft Foods paid for an Urban Land Institute study. During LRP development the LRA was anticipating private or non-profit funding for some training and education facilities (EDAW 1990, 5-15). The East Central Illinois Partnership for Education had expressed interest in a hands-on math and science center. Bell Sports, a local manufacturer, had expressed an interest in employee training opportunities.

### **Implementation LRA**

The LRP recommended a two-phase LRA management structure (EDAW 1990, 5-1). During Phase I, from the BRAC announcement to 1995, the Village of Rantoul would serve as the LRA. During that time the LRA would oversee redevelopment of the air base, establish an airport authority, and operate the airport. The airport would be a local, non-profit authority with a board of directors. They would have bonding capacity and be eligible for public benefit allowances (EDAW 1990, ES-10). A village education specialist would market and manage aviation and training functions. The Village of

Rantoul would seek state funding for this position. The Village of Rantoul's mayor's office would hire a marketing coordinator who would report to the Village's economic development director (EDAW 1990, 5-1 to 7). The Village Library Board would run the Chanute Museum. Rantoul Recreation would operate the recreation facilities and the Rantoul Utilities Department would operate the infrastructure. During Phase II, from 1995 and beyond, a second formal legal entity, an implementation LRA, would manage and operate the technical training programs and Aviation Museum. The technical training authority would be a non-profit entity (EDAW 1990, 5-2).

### **Redevelopment Success**

Rantoul redevelopment started well. Within the first year (1993-1994), Rantoul worked with the AF to dispose of 98 percent of the property that could be transferred. The majority of those facilities were purchased by residents of Rantoul and Champaign County (OEA 2006, 40). Most sales were done through General Services Administration (GSA) auctions with the property being sold to the highest bidder. In the long run, some of these sales would hurt redevelopment. Some owners could not keep up with the maintenance or upgrade their property to correct building code deficiencies. These owners had not taken these upgrades into account in their redevelopment plans or their plans did not fully materialize.

Chanute had another early victory. In 1993, the Center for Strategic and International Studies published a study, "Forging a Military Youth Corps." That year, Congress, acting upon the study's recommendations, provided funds for the National Guard Bureau's pilot youth intervention program to determine if life coping skills and the employability of high school dropouts could be significantly improved through

participation in a military model life skills program. The Lincoln's Challenge Academy, established at Chanute, is part of that program (Wikipedia 2012a).

In January 1994 the Chanute Restoration Advisory Board (RAB) announced that they were making progress to sell one of the largest buildings on Chanute, White Hall. Bids were received on White Hall, officer's row, dormitories, and cold storage areas and sales soon followed. In April the southwest housing was sold and eighty units were transferred to Hope for the Children. The chapel, library, childcare centers, commissary, and hospital were for sale. The airport was fully functional by March of 1994. The FAA, State of Illinois, and Village provided \$750,000 for airport improvement projects (Chanute AFB 1994). By February 1998, the Chanute RAB announced that there were three remaining properties that could be transferred: the golf course, chapel, and library.

By 1998 the Greyhound Bus Company had started a training program in the Youth Services building. The first class had 75 students who stayed at the Fanmarker Inn and later at Smith Hall. Tricare Champus was located at 1 Aviation Center. Jacobs Engineering was in building 728 (Chanute AFB 1998a). In October 1998 a new taxiway was installed at Hangar 2 and hangars were constructed to serve the museum. Textron constructed a 16,000-square-foot addition to hangar 1 (Chanute AFB 1998e).

It was also in 1998 that the redevelopment started to have some problems. In 1998 Summit Windows announced that they were closing their Chanute location, consolidating their work in Ohio. However, all Summit employees that wanted to stay in the local area were offered jobs at another local company, Caradco. There were also two companies interested in leasing the Summit Window buildings (Chanute RAB Meeting Minutes August 6, 1998). Also in 1998 Building 16, the People's Center, was found unsafe and

demolished. Further, the owner of White Hall, who bought it for \$51,000, realized that there were many code violations that he could not afford to correct. White Hall was a stately brick façade located where people first entered the base. It would eventually fall into disrepair, with trees growing through the roof.

Around 1998 the Chanute Beautification Committee was established. Rantoul citizens were concerned that the unsold facilities were not being kept up making it difficult to attract new tenants (Chanute AFB 1998b). In an effort to improve Chanute's appearance, the village established better roadway connections between the base and the local transportation network, opening more points of entry. In 2000 the Village built Veterans Parkway as a truck route to the highway. The project was funded by the Illinois Department of Transportation. Also in 2000 the Prairie Air Festival was held, which showcased the airfield for Village residents and tenants. The festival included a carnival, circus, car show, and static air displays (Chanute AFB 2000).

In 2002 the Village board approved renovations to Smith Hall, and Cingular Wireless took over the building. The Village also worked with the Illinois Department of Transportation to realign Route 45 and extend Tanner Street to better connect the former base to Rantoul (Chanute AFB 2002). In 2004 there were also several blighted buildings that were demolished (Chanute AFB 2004).

The exterior images were not the only problem. Because Chanute was one of the first AF bases closed and the environmental clean-up did not get substantially underway until the 1980s, Chanute's contamination was being cleaned up at the same time as redevelopment. Thus, throughout redevelopment there was a continual struggle between getting property ready for transfer early and the level to which the property would be

cleaned up. BRAC legislation required environmental clean-up to follow the LRA's LRP. This meant that if a facility or piece of land was designated for industrial use in the LRP, the facility would be cleaned up to industrial standards (which were less stringent than residential standards). If the property was designated as residential in the LRP, it would be cleaned up to residential standards. Early BRAC communities did not understand this nuance. Local citizens wanted all sites cleaned up to residential standards. They argued that the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA) required cradle-to-grave management, and this required stringent clean-up. The AF would not clean up industrial property to residential standards. This controversy caused a time delay in the transfer of property. It also caused Rantoul and other BRAC communities to pay closer attention to the future uses identified in the LRPs. In the end the property was cleaned up in accordance with the Chanute LRP (Chanute AFB 2006).

### **Environmental Clean-Up**

Due to environmental clean-up it took 15 years for all the property to be ready for transfer. There was also base contamination that affected off-base property - in 1998 there were concerns about water quality in off-base residential wells. The AF tested three off-base wells in close proximity to the AF landfills; the wells tested positive for volatile organic compounds. To solve the problem, Mayor Brown, the new Mayor of Rantoul, offered land so that a retention pond could be constructed to retain water from the landfill cap (Chanute AFB 1998e). The AF capped the landfills and cleaned the coal storage soil to industrial/commercial standards (Chanute AFB 2000). Across Chanute seventy

monitoring wells and nine hundred groundwater screening locations were evaluated as well as 1100 soil borings and 5200 samples (Chanute AFB 2004).

### **LRP Goal Accomplishment**

Rantoul achieved one hundred percent of its LRP goals within the LRP dates and by December 2010. Rantoul's LRP goals were to (1) develop a land use plan with aviation, aviation support, industrial, medical, commercial, and residential uses as well as open space; (2) operate Chanute as an airport and training complex; (3) integrate on-base uses with existing and planned off-base land use patterns; (4) retain open space; and (5) have each entity on the former base be financially independent of the Village.

Rantoul achieved these goals by (1) establishing a land use plan and attracting at least one user for each land use; (2) operating Chanute as an airport and attracting Greyhound Bus Training and Lincoln's ChalleNGe Academy, which are training uses; (3) integrating the former base street pattern and utility system with the Village of Rantoul; and 4) retaining open space and a pond. For goal number five, Rantoul set aside \$300,000 annually from 1994-1997 to be used for redevelopment. In 1997 those funds totaled \$1.5 million with interest. Those were the only Village funds used for redevelopment. By 2012-2013 the Chanute redevelopment had a positive net income. The airport had \$1,453,200 in revenue and \$1,326,255 in expenses. Economic development took in \$354,865 in federal grants and grant carryover. These grants covered the economic development expenses as well as provided \$41,714 to social service programs. The museum used \$17,000 in revenue from the airport (Village of Rantoul 2012).

### **Rantoul Comparison of Development Capacity to Redevelopment Success**

When comparing Rantoul's redevelopment capacity to redevelopment success, the case study has mixed results. Rantoul had the third-highest score in development capacity, 79 points; the lowest score in LRP quality, and an LRP execution score of 67 points. It achieved 100 points in both the dependent variable of redevelopment success measured by the attainment of LRP goals by the dates set in the LRP and to 2010.

Rantoul received the third highest score, 74 points, in "redevelopment success measured by indices of other agencies."

Rantoul had a high development capacity score due to major business expansion prior to the BRAC announcement, the LRA as the lead agency, a shared vision, community spirit events, institutional infrastructure, and vertical and horizontal linkages. Part of development capacity is the local community's understanding of how to attract business and prepare land/buildings for parcelization and development. Rantoul gained that experience prior to the BRAC announcement and received higher development capacity by expanding its industrial parks prior to the BRAC announcement. Rantoul said its most important attraction features were accessibility, labor force, and utility costs. Rantoul believed they might be on a closure list during the 1970s, so Rantoul expanded their industrial parks in preparation for a BRAC round (Podagrosi 2010). Rantoul attracted five large manufacturers to the city's industrial parks and added 400 jobs prior to the 1988 base closure announcement. The manufacturers included Rantoul Glass plant, a division of Chrysler Corporation and a Conair plant (EDAW 1990, 2-14). Overall the village stores and mercantile category increased by 89 new facilities, with a total construction cost of \$22 million and banks and offices permitted an average of 11 units



per year prior to the BRAC announcement (Podagrosi 2010). Another factor that increased Rantoul's development capacity was that the Village of Rantoul served as the LRA. This established the LRA (Village) as the "lead agency" and helped the Village, its business community, and its residents have a shared vision for what the base could become. Rantoul's community spirit events contributed to its development capacity.

Finally, Rantoul had a high score in development capacity due to their outreach (horizontal linkages) to other communities. Katy Podagrosi, the Mayor of Rantoul, spent many hours sharing her experience with other communities, testifying before Congress, and writing a book about her BRAC experiences. She was often mentioned by the OEA and Association of Defense Communities (ADC) as a resource (University of Illinois Study 1990; Podagrosi 2000, X).

Chanute's LRP received a lower score than other LRPs. Rantoul was identified for closure as part of the 1988 BRAC round, the first round of the 1980s and 1990s. Rantoul's LRP was one of the first developed during the 1988 base closures and served as a model for future LRPs. The developers of Rantoul's LRP did not have the benefit of recent previous LRPs on which to model their LRP. The LRP quality is measured by six factors: facility condition discussion, utility condition discussion, environmental condition discussion, development of a marketing plan with multiple markets, a real estate plan that discusses normalization of the property, and a homeless plan. The Rantoul LRP did not include the normalization of property in preparation for sale and a plan for the homeless. These items became common in subsequent LRPs partially based on lessons learned from the Rantoul redevelopment process—especially lessons learned at Rantoul about property normalization.

Communities from the 1991, 1993, and 1995 BRAC rounds benefitted from Rantoul and other 1988 BRAC round communities' experiences and LRPs. Rantoul's Mayor Katie Podagrosi spent many hours visiting and sharing her experiences, testifying before Congress to get additional assistance for BRAC communities from the federal government, and writing a book (Podagrosi 2000, X.) Thus, Rantoul may not have done as well during redevelopment because it was one of the first bases closed from the 1980/1990 BRAC rounds and did not have mentorship from recent BRAC communities.

The 1988 and 1991 closures also differed from subsequent closures in the amount and type of federal assistance offered to affected BRAC communities. In July 1993, President Bill Clinton announced major program changes that provided more assistance to communities affected by base closures. These changes affected the 1993 and 1995 closures more than the 1988 and 1991 closures. Clinton instituted job-centered property disposal, where the Department of Defense (DoD) can convey property to redevelopment agencies at reduced or no cost based on the level of economic impact suffered as a result of the base closure. DoD could no longer remove personal property from the installation unless it was required to support the missions at other bases. Clinton instituted easier access to transition and redevelopment assistance by OEA. He instituted fast-track environmental clean-up. He positioned transition coordinators at closing bases (which were paid for by DoD funds). Finally, he offered larger economic development OEA planning grants (Boles 1994). Many of these changes were due to Mayor Podagrosi, other mayors, and local government leaders' efforts from the 1988 BRAC communities. However, due to the timing of the 1993 legislation, the 1988 BRAC communities spent most of their planning years without these benefits. Thus, Rantoul and the other 1988

BRAC communities served as a learning platform for DoD, the federal government, the AF, and BRAC communities. This service as a learning platform probably affected their redevelopment and perhaps made them appear less successful than communities affected by the 1993 and 1995 BRAC rounds.

A Rantoul difficulty that extended the redevelopment timeline was environmental clean-up. The 1988 BRAC communities felt the burden of environmental clean-up more severely than later-round BRAC communities, because DoD environmental clean-up was generally not started until the 1980s and most environmental clean-up sites were not completed by the time the 1988 BRAC bases were closed. Sites were generally cleaner for 1991, 1993, and 1995 BRAC rounds. Rantoul also had some unfortunate environmental clean-up experiences. Initial samples at some sites were incorrectly taken in 1998 (Chanute AFB 1998e) and had to be re-accomplished in 1999 (Chanute AFB 1999). Thus, Rantoul had to adjust the timing its redevelopment plans to align with environmental clean-up. Also, there was less understanding about the relationship of the LRP and the base environmental clean-up levels at Rantoul than for subsequent BRAC communities (Chanute AFB 2006). Discussions about the standards took time to sort through. This, and the normal time period for clean-up, caused the environmental clean-up activities for Chanute AFB to continue to 2010.

Another of Rantoul's difficulties, and a learning platform for future BRAC communities, was property transfer. Rantoul initially sold property through the GSA. GSA is the official federal agency charged with disposing of excess federal property, and GSA initially handled disposal of the 1988 BRAC bases. Those disposals increased GSA's workload significantly, so in 1993 President Clinton charged the DoD with

disposal of federal property to speed up the process. Subsequently, DoD delegated that authority to the three services. The disposal process, the change in disposal agency, and the environmental clean-up made the disposal of Rantoul's property a long process.

Rantoul also had the misfortune that some initial property buyers had difficulties bringing the property up to current codes and maintaining the property. These properties had to be sold a second time before a buyer with adequate resources to renovate and maintain the properties could be found. Also, at times these properties were unkempt, creating an image problem for Chanute, the Village, and the LRA.

Chanute's LRA was the Village of Rantoul and all redevelopment activities were handled by the Village. In some respects this was a benefit, because all decisions and responsibilities rested with the Village. In other respects the LRA responsibilities placed a large burden on the Village departments. However, this burden seemed small when compared to other communities, such as Plattsburgh, New York. At Plattsburgh the LRA was a separate entity from the City of Plattsburgh and the Village of Plattsburgh. During redevelopment, bitter disagreements between the City, the Town, and the LRA delayed redevelopment. Such disputes between the local governments and the LRA as well as the associated delays did not occur in Rantoul because the Village itself was the LRA.

If a public authority, non-profit, or similar agency serves as the LRA and there are not disputes with the local government there could be a benefit to having that entity as the LRA. Under that situation some LRA decisions are not open for public debate. They are handled by a board or executive director. By the nature of having Rantoul serve as the LRA, all decisions were open to public debate. So, on the issue of whether it is good for the local government to serve as the LRA, the results are mixed. On one hand, the

decision to have the Village serve as the LRA may have taxed the Village government offices, creating a hardship for government departments. On the other hand, because the Village was the LRA there were no large interagency disputes holding up redevelopment.

Rantoul's LRP execution score of 67 points is a result of the Village serving as the LRA. LRA execution is measured by (1) whether the local government takes steps to streamline government processes, (2) was the LRA separate from the local government and (3) did the LRA clearly define any contractual relationships responsible for redevelopment. Rantoul's LRA was clearly not separate from the local government. This is the factor that lowered the LRA's execution score. Finally, Rantoul did not have any redevelopment contracts because most work was conducted through city departments. However, they did get credit for "clearly defining their contract requirements" since they had no unclear contracts. Rantoul did streamline local government processes—making it easier for people to buy and lease property. The Village also worked hard to streamline federal processes for environmental clean-up and property transfer.

Rantoul achieved one hundred percent of its LRP goals both within the dates set in the LRP and to date. Rantoul did a good job of achieving their goals. Also, as was pointed out in the Peru discussion, Rantoul's generalized LRP goals (as compared to Peru's specific goals) help them achieve a score of one hundred.

Rantoul came in third when measured by "redevelopment success measured by indices of other agencies." In those indices Rantoul was successful in recreating 172 percent of the civilian jobs lost when the base closed and increasing the local population in Rantoul between the 1993 closure and 2010. They were not successful in improving their unemployment rate when compared to the state's unemployment rate between

closure and 2010 or improving the per capita income when compared to the state's per capita income for the same time period. However, Rantoul's redevelopment and its contributions to the BRAC process were certainly a success, and Rantoul was used as a model for other BRAC communities. From Rantoul's ranking of third in development capacity and third in redevelopment success there appears to be a correlation between development capacity and redevelopment success.

### **Marquette, Michigan, and K. I. Sawyer Air Force Base**

#### **Overall Notes**

K. I. Sawyer AFB is located in the Central Upper Peninsula (UP) in a relatively isolated area in Marquette County, Michigan. K. I. Sawyer is located 7 miles northeast of Gwinn, 32 miles south of Marquette, 463 miles northwest of Detroit and 276 miles north of Milwaukee. The base is surrounded by public land—owned by Marquette County, the state of Michigan, and the federal government—most of which is timber. The total Central UP population was 179,293 persons at the end of 1993 (Wikipedia 2012c). The local area includes the cities of Marquette, Ishpeming, and Negaunee; charter townships of Marquette and Chocolay; six unchartered townships of Chocolay, Marquette, Forsyth, Sands, Skandia, and West Branch; and the counties of Alger, Delta, Dickinson, Marquette, and Menominee. K. I. Sawyer is located in Marquette County, the largest county in the state, encompassing 1,206,992 acres. Iron mining and forestry shaped the land use patterns of the country (Greiner 1995, xx-xxii and 2-5).

## **Community and Installation History and Information**

The Gwinn area was acquired by the Cleveland-Cliffs Iron Company (CCI) in 1902, which opened the Gwinn Mine in 1905 (Romig 1986). In 1906, CCI President William Gwinn Mather commissioned landscape designer Warren H. Manning, to design a residential community to support the mine. Mather named the community Gwinn after his mother. Construction occurred from 1907 to 1915 (Gwinn 2010). Manning emphasized Gwinn's connection to the surrounding environment by preserving many of the existing trees and planting new ones (Brown 2006). By the Great Depression, CCI no longer operated the town (State of Michigan 2009).

The nearby Austin Mine was also operated by Cleveland-Cliffs, which developed the Austin in 1911 to provide residences for miners and their families. Similarly, New Swanzey took its name from the Swanzey Iron Company, formed in 1883. Swanzey was a station on the Chicago & Northwestern Railroad (Romig 1986). The population of the Gwinn was 1,965 at the 1990 census (U.S. Bureau of the Census 1993f).

Marquette is the next nearest major population center, the county seat of Marquette County and the most populated city of the UP. Marquette is well isolated from major populations and centers of industry. In Marquette County only three percent of the total county land area is urbanized (Greiner 1995, xxi and xxiii). The City of Marquette averages about 148.9 inches (378 centimeters) of snow per year, making it the third snowiest city in the contiguous U.S. (NOAA 2012). Marquette is a major port on Lake Superior, primarily for shipping iron ore, and home to Northern Michigan University (NMU). Marquette has freight rail service provided by the Lake Superior and Ishpeming Railroad. The Canadian National Railway also serves Negaunee, Michigan (Griener

1995, xxxi). Along with NMU, the largest employers in Marquette are the Marquette School System, Marquette General Hospital (the only Level 2 Trauma center in the Upper Peninsula), Marquette Branch Prison, Pioneer Surgical Technology, and Charter Communications. During the five years prior to the base closure announcement, 15,000 to 20,000 square feet of industrial space was absorbed by the county.

There are 52 lakes near Marquette in recreational areas. One can enjoy canoeing, boating, water skiing, swimming, fishing, and camping. The lakes are surrounded by woods where people can hunt, enjoy peaceful walks, or take to the hundreds of miles of trails. The winters provide an opportunity for snowmobiling, snowboarding, snowshoeing, ice fishing, and cross country and downhill skiing. There are many winter carnivals, sports, and other events (Gwinn Chamber of Commerce 2012). Festivals include the Marquette County Fair; the Hiawatha Festival, which started in 1978; and the International Food Festival, which started in 1985 (Marquette County 2012).

Kenneth Ingals Sawyer, the Marquette County Highway Department Superintendent, presented the county airport concept to the Marquette County Board of Supervisors in 1941. On July 22, 1949, the airport was officially activated. Six years later the airport was renamed K. I. Sawyer AFB when the AF took over. K. I. Sawyer AFB was an important AF installation during the Cold War. It hosted the B-52H bombers and KC-135 tankers as well as a fighter interceptor squadron. The base was identified for closure in September 1993 (Greiner 1995, xviii) and closed on September 30, 1995 (AFRPA 2012; Greiner 1995, xiv). Prior to closure the base had over 12,000 people associated with it, including 3,657 military, 1,413 civilians, 5,773 military dependents, and 1,353 retirees. At the time of closure the civilian positions had dropped to 788.



Civilian positions are important because the military are reassigned when a base closes. The civilians may be offered opportunities at other bases, but may lose their jobs if they don't want to relocate (Greiner 1995, Table 1.1; AFRPA 2012).

At the time of base closure K. I. Sawyer AFB had \$33,707,066 in expenditures, including construction, services, materials, equipment, supplies, Commissary, Base Exchange, health, education, temporary duty, and other expenses. K. I. Sawyer's impact on local retail sales was \$114,742,000, income place of work was \$123,350,000, and government revenues were \$16,026,000 (Griener 1995, Tables 1-3 and 1.4). See table 4-3 for a synopsis of Marquette information.

**Table 4-3. Marquette/K. I. Sawyer AFB Basic Information**

<b>Marquette/K. I. Sawyer AFB Basic Information</b>	
-	BRAC Round: 1993
-	Base Closed: September 30, 1995
-	Military Category: Large aircraft – strategic bombardment
-	Base Personnel: 788 permanent civilian jobs lost at closure
-	Base Size: 5200 Acres
-	Development Capacity: 86 (ranked 2nd out of 6 communities)
-	LRP Quality: 100 (tied for 1st with 4 communities)
-	LRP Execution: 67 (tied for 4th with 3 communities)
-	Achievement of LRP Goals: 85 (ranked 5th out of 6 communities)
-	Achievement of Indices Used by Others: 84 (ranked 2nd out of 6 communities)

#### **Situation at Gwinn, Marquette and K. I. Sawyer at BRAC Announcement**

From 1985 to 1995 Marquette County experienced significant employment gains. The stability was due to K. I. Sawyer, NMU, and the growth of Marquette General Hospital. The largest gains were in services jobs (2,325) and retail trade (1,575 jobs). The

largest portion of civilian jobs were in the government sector (29 percent), and 85 percent of the government jobs were state and local government jobs (NMU and a prison).

Manufacturing was the second smallest sector with only 825 jobs and the second slowest growth sector. These jobs were related to lumber, wood products, and food production.

At the closure announcement the county had recently become the headquarters for Senco (a manufacturer of ice fishing and hunting equipment), Pioneer Labs (medical devices for spinal surgery), and Marplex (specialized mining vehicles) (Greiner 1995, 8-6).

The county's unemployment rate in June 1994 was 6.4 percent and the yearly average was 8.1 percent (Greiner 1995, 2-1). The unemployment rate for Marquette County was 8.6 percent in 1991, 8.2 percent in 1992, 7.0 percent in 1993, and 8.1 percent in 1994 (Greiner 1995, Table 8.2). In 1994 the average Michigan household income was \$33,964, compared to \$34,013 in the U.S. (Greiner 1995, Table 8.5).

At the time of the base closure announcement, Marquette County had recently increased its wage base in agricultural services, manufacturing, transportation, communications, utilities, retail, finance, insurance, real estate, and government. The county had decreased its wage base in farming, mining, construction, and wholesale trade (Greiner 1995, Table 2.5). Prior to the announcement of the K. I. Sawyer closure, the availability of high-quality industrial sites and buildings was limited. Marquette County had only one Class A industrial park, Riverside Park. Eighty percent of Marquette's industrial prospects were seeking existing buildings (Greiner 1995, 8-7).

#### **Facilities at K. I. Sawyer at BRAC Announcement**

The facilities at K. I. Sawyer were in average condition (Greiner 1995, 6-3). Aviation facilities included hangars, squadrons operations, an air traffic control tower,

and maintenance buildings. The existing navigation aids, airfield lighting, pavement marking, and other aircraft operation support systems would require revision, modification, or replacement to meet civil aviation and FAA standards (Greiner 1995, 6-3). A new air carrier terminal would have to be built for the base to serve as a commercial or general aviation airport. The hospital was found unsuitable for use as a hospital. However, it could be used for education or training. The hospital and other facilities could also be adapted for educational purposes using fiber optics (Greiner 1995, 6-6).

K. I. Sawyer's utility systems were adequate, and many were self-contained within K. I. Sawyer. Greiner, the utility consultant, recommended that many of utility systems remain self-contained due to the distance to Marquette (Greiner 1995, 6-7). The area around K. I. Sawyer is made up of unconsolidated glacial outwash deposits that provide the best source of ground water (Greiner 1995, xxiii, 1.11 and 1-4). K. I. Sawyer's water was supplied by five wells. The water system met all EPA water quality standards. The supply, storage, and distribution system consisted of 151,903 feet of water mains, 549 control valves, 313 fire hydrants, and three storage tanks with a capacity of 900,000 gallons. There was good water pressure. In-place emergency generators for the well heads (\$24,000) or automatic wells (\$60,000) were recommended in the LRP (Greiner 1995, 6-17). Greiner recommended that the K. I. Sawyer water supply system remain in place (Greiner 1995, xxiii, 1.11 and 1-4).

K. I. Sawyer's wastewater service was provided through a network of gravity collection, pressure mains, and treatment serviced by the K. I. Sawyer WWTP with a capacity of three million gallons per day. The collection system consisted of 118,939 feet of mains, 17 lift stations, and 10 oil separators (Greiner 1995, 6-20). Greiner

recommended minor improvements to the wastewater system for \$136,000 (Greiner 1995, xi). The storm sewer consisted of a system of surface and subsurface drainage conduits. It was in good condition. The LRA would need a storm water permit to operate K. I. Sawyer's aviation facilities due to the potential release of aviation fuel getting into the storm water system from storm water runoff (Greiner 1995, 6-21).

The heating system consisted of one central heat plant with a 210 million British thermal unit (Btu) capacity. Many of the high value buildings were served by this plant; however, the plant was uneconomical for use because it served a small number of buildings with an overall low heat demand. The LRP recommended that the central heat plant be closed and separate units be installed for each building. The work could cost \$2,500,000 (Greiner 1995, 6-24 and xki). Michigan Gas Company furnished natural gas to the base through a four-inch and a six-inch gas main at two metering stations. After closure, the LRA would have the option to sell the system or continue to operate it. The LRP recommended negotiating with the Michigan Gas Company to operate and maintain the natural gas distribution system (Greiner 1995, 6-22).

The electricity for the base was supplied by Upper Peninsula Power Company (UPPC) through an 11,200 kilovolt amp substation. The system was modern and in good condition. The LRP proposed to add meters and shut down devices for \$400,000 plus allow UPPC to run the power system via a franchise or lease (Greiner 1995, 6-15-6). Telephone service was provided by Ameritech, who was presumed to be the owner of the lines. The LRP proposed that an agreement should be coordinated with Ameritech for them to provide service to future tenants (Greiner 1995, 6-18). The cable service was provided by Bressman Communications Company. The LRP recommended that

Bressman continue the service and that a franchise fee not to exceed five percent of gross be assessed and a pole rental fee be charged by the LRA (Greiner 1995, 6-24). The fire alarm security system was in good condition (Greiner 1995, 6-23).

The solid waste disposal service for K. I. Sawyer was provided by the Peninsula Sanitation Incorporation of Marquette. The LRP recommended that a negotiation of a franchise for solid waste collection would be an advantage to the LRA when they marketed to future tenants (Greiner 1995, 6-23). From a transportation point of view, intersections on the base would need improvement at \$25,000 per intersection. Also, an all-season route through the base from CR553 to US 41 would need to be constructed at a cost of \$400,000 (the seasonal road was dirt). The gate houses would need to be removed at \$50,000 each (Greiner 1995, 6-13).

The LRP recommended that the existing utility corridors needed to be well identified to prevent damage and disruption of service and to determine lease boundary lines. The LRP proposed identifying future utility corridors to provide adequate utility coverage and expansion opportunities. Utilities in the residential areas would need to be removed and replaced with larger lines spaced further apart to convert those areas to industrial usage (Greiner 1995, 6-14).

#### **Environmental Situation at K. I. Sawyer at BRAC Announcement**

Trichloroethylene (TCE) and benzene contamination were found in 1984 when the base was looking for a new water source. Tests recorded TCE levels of 350 to 1280 parts per billion. The state acceptable level was 75 parts per billion (Greiner 1995, 3-75). K. I. Sawyer launched an \$8.5 million clean-up plan in 1990 to address the TCE and other contaminants (Gonyea 1991). At the time of base closure, clean-up was still on-going.

### **Opportunities and Constraints**

Sawyer's strengths were its northern tier location, access to markets, a stable labor force, low taxes, minimal regulation, and the availability of land, buildings, infrastructure, and natural resources—especially timber (Greiner 1995, 8.3). Marquette had potential tenants looking for buildings that might be interested in K. I. Sawyer. K. I. Sawyer's weakness was its distance from major cities.

### **Proposed Redevelopment**

The K. I. Sawyer Planning LRA was the K. I. Sawyer Base Conversion Authority (KISBCA) created by Michigan's Enrolled Senate Bill No. 763 on July 12, 1993 (Greiner 1995, xviii). KISBCA included Ellwood Mattson, Chairman of the KISBCA Board and former MFC First National Bank executive, and ten other members. There were also ex-officio members including local government officials, state senators, and representatives that sent designated representatives to KISBCA meetings (Greiner 1995, iii and 1-2).

### **Local Redevelopment Plan (LRP) Vision**

The KISBCA's vision for K. I. Sawyer was a thriving full-service community, tourist/recreation center, and world service intermodal center with warehouse facilities and 2000-2500 service and manufacturing jobs (Greiner 1995, 4-2). They envisioned Sawyer International Airport with its transportation and utility infrastructure as the keystone for the Central UP's development and growth. They intended to establish affordable, flexible, quality, educational opportunities to support job growth. They planned to utilize recreational resources to attract visitors throughout the year (Anderson and Prokopowicz 2002).

The LRA's planning principles were to:

1. Meet the region's current and future public transportation needs.
2. Generate new employment opportunities.
3. Ensure maximum local flexibility in responding to market needs.
4. Satisfy goals at the least possible cost using PBTs.
5. Use the interim use period when the AF pays some operating costs to create a favorable future cash flow.

### **Proposed Uses**

The LRA considered two alternative plans, with the second plan having three options (Greiner 1995, xxxiii). Alternative 1 was only landside development (meaning no aviation uses would be encouraged). This option did not meet the goals of the community so it was not selected.

Alternative 2a was a regional, commercial, general, military, and cargo aviation airport with a business park development. Land uses would include an airport, aviation-related commercial, aviation-related industrial, military, institutional, light industrial, commercial, office, residential, recreational, and LRA uses as well as land set aside for native American tribes, environmentally sensitive areas, and green belt uses (Greiner 1995, xxxix). The county would transfer commercial air carrier services and general aviation operations from the Marquette County Airport (MQT) to K. I. Sawyer. K. I. Sawyer was to be used as the primary commercial airport with its facilities on the east side of the runway. There were also two areas totaling approximately 162 acres designated for the Michigan National Guard and Army Reserve next to the aircraft operating area on the west side of the runway. It was anticipated that U.S. Army Reserve, National Guard, active duty U.S., and Canadian military aircraft would use the airfield for transient aircraft (Greiner 1995, 6-8). The transfer of land from the AF to the LRA would be accomplished under an EDC or FAA sponsorship. A new terminal would have

to be developed. There would be a fixed base operator to service civilian and military aircraft and the existing fuel storage would be used. The hydrant refueling system would not be reused due to environmental issues. This plan was not selected because the LRA did not believe there was enough business for a regional airport (Greiner 1995, xxxiv).

Alternative 2b was a commercial, general, military, and cargo aviation airport with landside development in the form of a business park. It is similar to alternative 2a without the regional airline service (Greiner 1995, xxxix). The county would transfer commercial air carrier services and general aviation operations from the MQT airport to K. I. Sawyer. Sawyer would be used as the primary commercial transport airport for the region. The transfer of land from the AF to the LRA would be accomplished under an EDC or FAA sponsorship. A new terminal was recommended. It was anticipated that U.S. Army Reserve, National Guard, active transient U.S., and Canadian military aircraft might use the airfield. The LRA would establish a fixed base operator to service the civilian and military aircraft. The existing fuel storage would be used, but not the hydrant refueling system (Greiner 1995, xxxiv-xxxvi).

Alternative 2c was proposed to be similar to alternative 2b without commercial aviation. This plan was not selected because there was enough demand within the local population for commercial aviation to be kept when the airport moved from MQT to K. I. Sawyer. There was concern that some people would choose to drive to Detroit to catch a direct flight rather than make the 32 mile trip from Marquette to K. I. Sawyer to catch a connecting flight, but it was anticipated that the number of people willing to make the drive to Detroit was small (Greiner 1995, xxxv).



Alternative 2b was selected because the local area could not support a regional airport. A feasibility study predicted that commercial air service would continue to be in demand in the UP. At that time, the Marquette County market area generated over 130,000 annual origin and destination air passenger trips with nearly eighty percent of those passengers utilizing MQT. That equates to approximately 52,000 enplanements each year. American Airlines and United flew out of MQT and connected to Chicago. Northwest flew out of MQT and connected to Detroit and Minneapolis. The LRP estimated that if the planned reuse for the base was successful, the local airport enplanements would be expected to increase to 99,000 by 2015 (Greiner 1995, xxvi). The feasibility study revealed that the regional (commuter) aircraft market was a more promising segment for third-party maintenance than for the transport of regional passengers. The rapid growth of regional airlines, the acquisition of new aircraft for regional routes, and the limited capital position created a demand for outsourcing maintenance for regional aircraft. Plus, there were no major third-party maintenance firms in the Great Lakes region (Greiner 1995, xxvii).

The adopted LRP included an initial land use plan to operate the airport as a limited FAA Regulations Part 139 commercial airport for a few years and a final land use plan to operate the airport as an air carrier airport FAA Part 139 for the following years. Initial land uses included an airport operating area, aviation-related commercial/industrial, military, institutional, light industrial, commercial office, recreational, Native American, circulation, environmentally sensitive sites, residential, and LRA authority. Institutional uses included the hospital, athletic fields, youth center, and child development center. There were approximately 400 Installation Restoration Program (IRP) sites which would

be cleaned up as K. I. Sawyer moved through closure and toward redevelopment. Many of the IRP sites were small and could be cleaned up quickly. Residential units would be used as rental properties. Native American tribes had requested 271 houses, a preschool and a shoppette. The authority requested space for administrative offices, police, fire, utility, and one maintenance building (Greiner 1995, 6-10). The final land use plan deleted environmentally sensitive sites because all were to be clean at implementation. There were no residential units in the final plan (Greiner 1995, 6-12, table 6.1).

K. I. Sawyer had prospective tenants that were unique to the northern tier. They included an automotive research and development center, a cold weather automotive track and testing facility, a cold weather truck driving school, timber, cranberries, hands-on training for Bay De Noc Community College at the waste water treatment plant, a U.S. Department of Agriculture Forest Service Jobs Corps Center, a communications center to take advantage of the northern location to track freight in real-time over the horizon, and recreation to take advantage of the natural lakes, waterfalls, and Escanaba State Forest (Greiner 1995, xxxi and 6-4). There were also options common across closed military installations such as a state police law enforcement training facility, a U.S. Olympic Training Center, an aviation maintenance program for Northern Michigan State, a small business incubator, and back offices for metropolitan areas such as Detroit. The LRP estimated a total absorption of 62,500 square feet per five-year period, or a total of 250,000 square feet from 1995 to 2015 (Greiner 1995, xxxi and xxxiv).

K. I. Sawyer's LRP recommended surveying be done to zone, plat, and subdivide the property for sale or lease (Greiner 1995, 7-3). The LRA anticipated that K. I. Sawyer

would turn a profit in 2001 and have a cumulative wealth of \$324,211 by 2010 (Greiner 1995, Table 9.13.a). This is based on seventy percent occupancy (Greiner 1995, 7-7).

### **LRP Goals**

To achieve the LRP planning principles, the LRA's goals were as follows (Greiner 1995, Exhibit 9.6 and Table 9.13):

1. Have 2500 jobs by 2002.
2. Be 100 percent occupied by 2002.
3. Be a self-supporting organization.

To do this the LRA would:

1. Acquire the airfield under the EDC rural designation or FAA-PBT.
2. Initiate a public airport master plan.
3. Convey all personal property to support the new civilian airport.
4. Convey the golf course as part of the EDC conveyance.
5. Convey the utility systems at no cost to the local authorities.
6. Establish a one-million-dollar reserve fund.

### **Implementation LRA**

The proposed Implementation LRA was smaller than the planning KISBCA, with nine members proposed as follows (Greiner 1995, 1-3):

1. A chairperson of the county board of commissioners.
2. A township supervisor from each township in the local reuse area.
3. Representative of a business, commerce or economic development association operating in Alger, Delta, Dickinson, Marquette, or Menominee counties (the local reuse area).
4. Representative of a public utility operating in the local reuse area.

5. Representative of an employer with more than 500 employees working in the local reuse area.
6. Representative of an employer with fewer than 500 employees working in the local reuse area.
7. Resident of the local reuse area.
8. Representative of organized labor.
9. Resident of Delta County.

KISBCA would be the lead organization in the development of the Central UP airport system that included K. I. Sawyer and Marquette County Airport. They would receive grants and loans, make agreements with government agencies, issue bonds, acquire property, lease facilities, rehabilitate buildings, and arrange financing. KISBCA would separate the policy making and implementation functions, with the Board of Directors leading policy making and the airport authority staff implementing that policy. KISBCA would educate the region about the airport authority and opportunities at K. I. Sawyer (Greiner 1995, 8-28). In other case studies, such as Plattsburgh, difficulties arose when both the LRA staff and local community leadership tried to make implementation decisions. At K. I. Sawyer the LRA Board of Directors had a good perspective of their role versus the role of the airport authority staff, and execution went more smoothly. The KISBCA staff would be between 23 and 138 persons depending on what maintenance and operations activities were accomplished in-house. Outside assistance would be used for auditing, legal, environmental, advertising, market research, public relations, aviation planning, design, engineering, and construction management (Griener 1995, xlii and 7-8).

Business recruiting would be an all-volunteer organization with a KISBCA Economic Development Committee (EDC) and a KISBCA Economic Development Resources Group (EDRG). The EDC originated economic development policy. All

proposed tenant leases and development actions were developed and approved by EDC prior to full KISBCA action (Greiner 1995, 8-28). The EDRG supported the EDC members. It included finance, human resources, logistics, legal, political, infrastructure, legislative, governmental, research, communications, telecommunications, utilities, labor, environmental, military, transportation, development agencies, community, recreation, and meteorological volunteers (Greiner 1995, 8-31).

KISBCA's role was multi-faceted. Policies included pricing, negotiations of contracts, inter-regional movement of businesses, lease forms, and requirements. Prospect origination was a shared responsibility (Greiner 1995, 8-28). The response to prospects was handled by an EDC reuse team with EDRG response team support. The response team's role was to satisfy the information and entertainment needs of the prospect. Response teams were recruited from the EDRG, KISBCA, and community leadership. The Chairperson of the EDC organized the response team (Greiner 1995, 8-31). The EDC reuse team also coordinated with the Marquette Area Chamber of Commerce and the Forsyth, Sands, and West Branch Townships on potential leads (Greiner 1995, xviii). This organizational structure was very different from other LRAs, but appeared to work.

For marketing, the LRP proposed an international vision with a \$10 million revolving loan fund at Sawyer and \$5 million with Marquette County with low interest rates to stimulate businesses locating to Sawyer or Marquette County. The LRP listed no-cost assistance from investor-owned utility companies, Chambers of Commerce, local government Industrial Development Boards, and State Departments of Economic Development. It listed items to get from prospects, including a company profile, real

estate requirements, environmental concerns, transportation needs, utility needs, financial statements, waste management information, bank references, and a business plan.

### **Redevelopment Resources**

To upgrade the airfield to FAA standards, the LRA sought funds for aviation, including \$3,413,700 from the FAA, \$3,575,250 from EDA, \$1,148,525 from the State of Michigan, and \$1,632,525 from the local government. They sought non-aviation funds, including \$3,135,000 from EDA, \$522,500 from the State of Michigan and \$522,500 from local governments (Greiner 1995, ES-10 and Tables 9.3.a and b).

Two reports completed by the Central Upper Peninsula Planning and Development Agency and a Northern Michigan University administrator, Lyle Shaw, determined that some type of outside assistance would be needed to make Sawyer financially viable. The studies projected that the reuse would not be viable until 2004 and would require \$9.8 million each year in caretaker expenses (Williams 1997).

### **Redevelopment Success**

The *Mining Journal* reported in October 1993 that the “moment of truth has come for Sawyer AFB. After long deliberations, the Defense BRAC Commission voted unanimously to accept the Pentagon's closure recommendation.” The area’s U.S. Representative, Bart Stupak, had a less gloomy perspective. He encouraged the community that “putting the same vigor into converting the base, as was put into trying to save it, would make Sawyer's transition to civilian use a model for the nation.” With that recommendation, Herb Parsons, the Marquette Area Chamber of Commerce Executive Director, announced that a conversion group would be formed (Holland 1998).

KISBCA was appointed by the State of Michigan at the end of 1993 and authorized for five years with Ellwood Mattson as the Board of Directors Chairman. Mattson emphasized that even though the authority was only authorized for five years." It (was) important to conclude a governance agreement to assure prospective businesses that Sawyer will continue to operate after the Authority ceases to exist." KISBCA completed the LRP in March 1995.

Before the LRP was complete, the EDC and EDRG had been formed and 70 prospective tenants had been identified (Greiner 1995, 9-1). Interested industries included trucking, transportation, public transportation, golf course, education programs, night club operations, aircraft services, air cargo, paper mill, veneer mills, furniture, electrical, gaming, communications, plastics, and state and federal agencies (Greiner 1995, Table 8.8). Under the McKinney Act the Sault Tribe of Chippewa requested 271 single-family and 144 duplex units (Greiner 1995, xxxiii). In June 1995 Tom Rumora was hired as the Director of the K.I. Sawyer Development Department under KISBCA, a position that he held until September 2001 (Anderson 2002).

As closure approached Ellwood Mattson said, "There will be tears of sadness for many of us left behind. I will be a part of those that will shed tears. But, the Air Force is leaving us a \$300 million asset in our care and if we can all work together, we can turn this base around and use it to build a new and better tomorrow for all of us." In August 1995 the 410th Bomb Wing retired (Anderson 2002). The base closed on September 30, 1995. When the base closed, the Sault Ste. Marie Tribe took over management of 275 homes and began residential rentals. Non-DoD tenants were allowed to start renting at K. I. Sawyer prior to the official closure.

The first civilian businesses opened in 1995: the Gwinn-Sawyer Veterinary Clinic, SENCO Inc., Marplex, Ramrod Hydraulics, and R&G Management at the Red Fox Woods Golf Course (Anderson 2002). Bud Zeug, president of the Gwinn Area Business Association, reported that, "Just in the last few weeks we've had seven new businesses come on line. We have businesses that are growing. It didn't kill the spirit of the people of Gwinn. We have people here working hard to make things happen" (*Mining Journal* 1995). However, despite the success at Sawyer, the local unemployment rate rose to 8.3 percent for June 1996, a 1.8 percent increase over June 1994 (Anderson 2002).

By the summer of 1996, the Lake Superior Jobs Coalition had formed to help spark development. Ed Bailey was hired as the new KISBCA Director of Operations and remained through 2000 (Anderson 2002). In August 1996 American Eagle located a maintenance center at K. I. Sawyer making a 25-year commitment. In March 1997 Boreal Aviation began its operations to provide aircraft ground services. It started with three employees and grew to 15 employees by 2001.

Marquette County assumed control of the Caretaker Operations and Development Authority in April 1997. In 1997 the K. I. Sawyer Business Alliance was formed to represent Sawyer's business community. In the fall of 1997, the Sawyer Lumber opened a \$43 million high-tech sawmill, the first of its kind in the Midwest. By March of 1998 the saw mill employed 107 people and by January 1999 it employed 210 people. In December of 1997, the West Branch Township leased the base health and fitness center. Eventually the facility became the South Marquette County YMCA (Anderson 2002).

In January 1998 the Sawyer Medical Center opened in the former credit union, where they remained for one year and then moved to the former child development



center. In April of 1998 the Progressive Tool Company began operations in automotive tool design with 17 employees. It would later become Comau/PICO. In June of 1998 the First Annual Sawyer EXPO was organized by the Sawyer businesses to showcase development opportunities. In the fall of 1998 the Victory Lutheran Church opened. It was the first operating church at Sawyer (Anderson 2002). In December 1998 the first issue of *Sawyer Tri Township News* was published by the Sawyer Business Alliance and K. I. Sawyer Development. In 2001 the Sawyer Community Association and Marquette County took over the publishing (Anderson 2002).

The Lake Superior Jobs Coalition was instrumental in relocating the Marquette County Airport to K. I. Sawyer with the airport named Sawyer International Airport (SIA) (Anderson 2002). The Marquette Airport terminal had been constructed in 1983, so the community was not pleased about the plan to abandon a relatively new building, but was pleased to be getting an improved airfield, greater hangar space, and enhanced airfield equipment (Marquette Airport 2012; *Mining Journal* 1999). It was hoped that the twelve-thousand-foot runway, new larger terminal, and international designation would increase business potential and service (Freeman 2002). Getting to Sawyer was difficult for most Marquette County residents, so to improve the commute, the Kelly Johnson Memorial Drive was opened in the fall of 2000, shortening the drive to Sawyer for northern and western Marquette County residents (Anderson 2002).

Superior Extrusion opened its aluminum extrusion plant in January of 1999. The firm soon expanded to two shifts with 50 employees. In January 1999, the Head Start and Marquette General Hospital Behavioral Health Services began operations in the new Sawyer Medical Center. In March 1999, the Captain's Lounge and Restaurant

opened, and in May 1999 the YMCA assumed operations of the West Branch Health & Fitness Center. The Second Annual Sawyer EXPO was held in June 1999. In August 1999 the Sawyer Dental Clinic, operated by Marquette County Health Department, opened in the Sawyer Medical Center, followed by the Salvation Army opening the Salvation Army Youth Center to support Forsyth Township and the Sault Tribe. During the summer of 1999 a new substation was installed to improve electrical service. Sawyer also demolished its central heating plant in December 1999 to make way for a potato processing facility (Anderson 2002).

During the new millennium, DELPHI Automotive reached a lease agreement with Marquette County for an automotive testing facility. Frank the Mover began commercial moving operations, and the American Communications Network call center began taking calls in June of 2000. The call center predicted that they would reach 750 jobs at Sawyer. In June of 2000 Louisiana Pacific purchased Sawyer Lumber and began operations. In July 2000 the Sawyer Floral Services opened at the former art and crafts center. In October 2000 the Meyer Family Vision opened at the Sawyer Medical Center. In the same month the D&J Restaurant and The American Place were opened. The Sawyer Business Alliance and Gwinn Area Chamber of Commerce merged in July to form the Gwinn Sawyer Area Chamber of Commerce, and membership grew to 131 by November 2001. In September 2001 the Free Will Baptist group leased the base chapel, and in November 2001 the housing developers, MACASU and Red Fox Woods, received deeds making a variety of homes available for sale to the public (Anderson 2002).

The LRA and other K. I. Sawyer organizations did a good job at building community spirit. In December 1999, the Sawyer Community Development Work Group (CDWG) formed under the auspices of Education & Human Services Committee of the Lake Superior Community Partnership. The group's goals were to improve the public perception and quality of life at Sawyer. Two events occurred before the group was established that helped achieve these goals. MACSASU, the housing manager for K. I. Sawyer, took over management of the Little Trout Lake recreation area in August 1999 in partnership with the Sault Ste. Marie Tribe, Sawyer Village, and West Branch Township. In September 1999, the K.I. Sawyer Elementary School opened a 14,000-square-foot addition because the Sawyer K-6 enrollment had reached 500 students. In March 2000, CDWG began dialogues with residents to learn what residents wanted for their community. In June 2000 K. I. Sawyer had their first annual community flower planting. In May 2000 the community opened a Community Coordination Office. Their operations were covered by donations, grants and volunteers. In the summer of 2000 CDWG and the Marquette-Alger Youth Foundation sponsored neighborhood picnics with activities to facilitate resident interaction and community building. In December 2000, over 200 people attended the community Christmas party at the YMCA sponsored through a partnership of the community organizations and volunteers. In December of 2001, the Library Project run by a group of volunteers began moving the AF library books into the Gwinn/Sawyer communities, and in the same month Sawyer held its First Annual Community Tree Lighting Ceremony at the Community Coordination Office (Anderson 2002).

In June 2001, AmeriCorps selected Gwinn and Sawyer for community volunteer projects where 170 residents and AmeriCorps volunteers spruced up Little Trout Lake Park, Nordeen Park, and the Sawyer Head Start classrooms. In July 2001, the Catholic Campaign for Human Development announced a grant award to the Sawyer Community Association to hire Sawyer's first community coordinator. That summer, Charter Communications installed a fiber optic cable throughout Sawyer to provide high-speed Internet and improved cable services. Marquette General Hospital Rehabilitative Services opened in August 2001 at the Sawyer Medical Center. The South Marquette County Alliance developed an area-wide strategic plan in the fall of 2001 (Anderson 2002). By 2012, Sawyer and Marquette were served by a private transportation bus system called the "MarqTran" that ran through the City of Marquette and to nearby places such as Sawyer International Airport and Ishpeming (Wikipedia 2012k).

Sawyer environmental clean-up in 1997 was slow but on target (Holland 1998). The only issue during redevelopment was that contaminant plumes from the jet fuel storage tanks had breached Sawyer's boundaries and were spreading to the Silver Lead Creek and part of the Chocolay River Watershed. Studies were conducted on how to remove the contaminant in 1997 and the contamination was removed (Williams 1997).

K. I. Sawyer's redevelopment was highly recognized. In 1999, the K. I. Sawyer Development Department along with Marquette County received the "Facility of the Year" award from the National Association of Installation Developers (Anderson 2002). On June 24, 2002, Gwinn was listed in the National Register of Historic Places as the "Gwinn Model Town Historic District, Forsyth Township, Marquette County, Michigan" (Gwinn 2010). In 2012, Marquette was listed among the 10 best places to retire in the

U.S. by CBS Money Watch (Marquette County 2012). By December 2001 there were 1,961 residents at K. I. Sawyer and 1,034 jobs (Anderson 2002). By 2012 the number of jobs had grown to 1,088 (K. I. Sawyer AFB 2012).

As Tom Rumora remarked, “The winds of change hit this area especially hard. But local business, governments, and individuals were able to alter how they think, to come to grips with reality, and to adapt. Building a civilian community at this former military installation has been a tremendous challenge. We all have good reason to be proud of what's been accomplished; but, we must remember that we're not done. There are several more acts in this play before the curtain can be drawn. The success of our community will continue to depend upon us. As long as we are purposeful, see what is needed, and set about doing it, our actions will create the community that fulfills Sawyer's part of the South Marquette County Vision” (Anderson 2002).

### **Meeting LRP Goals**

Marquette and Gwinn were moderately successful in reaching their LRP goals. Their first goal was to create 2000-2500 jobs. The base lost 788 civilian positions when it closed, so targeting 2000-2500 jobs was a stretch. The LRA created 1088 jobs (K. I. Sawyer AFB 2012). The LRA and the local community achieved 54.4 percent of the goal. This overly ambitious goal was the one that brought down Marquette's score for achievement of LRP goals.

The second goal was to create areas with an airport, industrial, commercial, office, recreation, residential, and native American uses and to be 100 percent occupied (i.e., have all the facilities and land either sold or under long-term leases by 2002) (Greiner

1995, xxxviii). They projected tourism, recreation, world service intermodal, and warehouse uses. This goal was met.

The third goal was to conduct the redevelopment at minimal cost to the public and to build a self-supporting organization by 2001 (Greiner 1995, 4-2). The LRA was successful in doing this.

### **Marquette Comparison of Development Capacity to Redevelopment Success**

Marquette's rankings in development capacity, LRP quality, LRP execution, achievement of LRP goals, and redevelopment measured by indices of others show strong results. Marquette received an overall development capacity score of 86, placing it second amongst the six communities studied. Its LRP quality was 100, tied with four other communities. Its execution was 67, falling short in one variable. Its attainment of LRP goals was 85, placing it fifth among the communities studied, and its attainment of indices used by others was 84 points, placing it second amongst the six communities.

For development capacity Marquette did well at community spirit activities, business development, lead agency, vertical linkages, project-oriented development, and appropriate development focus. Marquette had community spirit events such as the Marquette County Fair; the Hiawatha Festival, which started in 1978; and the International Food Festival, which started in 1985 (Marquette County 2012). Marquette had modest commercial development of 15,000-20,000 square feet per year in the five years prior to the base closure announcement (Greiner 1995). KISBCA was the lead agency, as stated in their LRP. Marquette was also successful in getting grants. They received \$1,105,600 in grants from OEA and FAA (GAO 1996). However, Marquette was not as successful as Rantoul, Illinois, which received \$11,027,508 from OEA

(\$1,131,428), FAA (\$937,830), EDA (\$5,958,250) and DOL (\$3,000,000), or Wurtsmith, which received \$13,149,916 from OEA, FAA, EDA, and DOL (GAO 1996). Marquette had several agencies involved in development, raising its project-oriented development score, although some of those agencies were created late in redevelopment. Finally, Marquette was one of the few communities that did not have an enterprise zone so it received an appropriate development focus score.

On the negative side, Marquette had limited success in infrastructure, and horizontal linkages. The only infrastructure improvement, both physical and institutional, that was found in the Marquette area was the Marquette County Airport, which was built in 1983. In regard to horizontal linkages, the Griffiss LRP indicated that Marquette was contacted by Rome, New York, about redevelopment lessons learned, but there is no indication that Marquette contacted other BRAC redevelopment communities.

The K. I. Sawyer LRP quality was good, receiving 100 points. The LRP did well on its plans for normalization of property and the homeless. In normalization, the LRP discussed changes to the utility systems that would be required to accommodate dividing the base into sellable and leasable parcels (Greiner 1995, 6-14), something none of the other LRPs did. The K. I. Sawyer LRP had a homeless housing plan that recommended homes on base be used for affordable housing (Greiner 1995, 4-65). The LRP also proposed something unusual: a marketing committee that would serve free of charge (Greiner 1995, Chap 8). Many communities have volunteers, typically from the Chamber of Commerce or other community organizations. In fact, Plattsburgh, New York, had 150 volunteers on its initial LRA. Volunteers are a very important part of redevelopment. They are energetic and passionate about their community. They are good spokespersons

to discuss firsthand accounts and acquaint future tenants with the community. But most LRAs also have some paid staff. Paid staff usually have redevelopment and marketing skills that volunteers sometimes do not possess. Marquette was the only community that relied so heavily on volunteers for marketing and it appeared to work.

The LRA execution received 67 points, tied for fourth with three other communities. There was no indication that Marquette tried to streamline any government processes to make the purchasing or leasing processes easier. Otherwise, Marquette achieved all the points it could in LRP execution.

Marquette came in fifth in LRP goals obtained by dates set in LRP and LRP goals obtained by 2010, with scores of 85 points in both. There were only three goals in the K. I. Sawyer LRP. The first goal was to generate 2,000-2,500 jobs (Greiner 1995, 4-2). The LRA was able to attract 1,088 jobs, 54.4 percent of the goal (K. I. Sawyer Base Conversion Authority 2012). Even though the jobs generated are below the LRP goal, the generation of over 1,000 jobs is very good for a local community that is either seven (Gwinn) or 32 miles (Marquette) from the former installation. It was also very good to develop 1,088 jobs when Gwinn only had a population of 1965 at closure. This means that many people who took positions at Sawyer had to travel a considerable distance for work. Marquette offers a bus services from Marquette to the base several times each day, but the positions are still not as convenient for Marquette residents as a position in Marquette. Companies looking to locate in the area would surely have to take this factor into consideration when deciding where to locate, so being able to attract that many positions to Sawyer was an accomplishment. A second LRP goal was to redevelop the former base as an airport with world service intermodal, industrial, warehouse,



commercial, office, tourist, recreational, and residential uses, as well as to accommodate requirements of the local Native American tribes (Greiner 1995, xxxviii and 4-2). This goal was met. The third goal of the LRP was to minimize the cost to the public and build a self-supporting organization (Greiner 1995, 4-2). This goal was met. The LRA was self-supporting by 2001. So Sawyer did well on attaining its goals. The first goal was the one that brought down their score.

K. I. Sawyer redevelopment, as measured by indices of other government organizations, was 84 points, which placed it second among the six communities studied. Marquette did well at recreating jobs. There were 788 civilian jobs lost when K. I. Sawyer closed in 1996. There were 964 jobs created at the former base, 122 percent of the former jobs (AFRPA 2012). Marquette also did well in regard to their unemployment rate. When the K. I. Sawyer closure was announced in 1993, the local unemployment rate was 8.4 percent and the state unemployment rate was 8.1 percent—a .3 percent difference in favor of the state. In 2010, the unemployment rate in the local area was 4.5 percent and the state unemployment rate was 7.3 percent—a 2.8 percent difference in favor of the local reuse area, for a 3.1 percent change in favor of the local community (U.S. Bureau of the Census 1993e, f and h and 2010o, p, and r). Naturally part of the difference reflects the downturn in the auto industry in Michigan; however, some of the credit also has to go to the LRA and Marquette for their local redevelopment efforts. Marquette was not successful in maintaining the local population. The local population in 1990 was 70,887 persons. The population in 2010 was 67,077 persons.

K. I. Sawyer did well in redevelopment. However, a couple of issues about the redevelopment were noted by local citizens. First, four developers bought the housing

and marketed it as low-income housing. This concentration of low-income housing seven miles from Gwinn and 32 miles from Marquette makes it difficult on both redevelopment and the Sawyer residents. For the residents, there is local bus service that connected (and still connects) Sawyer to Gwinn and Marquette. The bus is used for school children and the local population, making several runs in the morning and afternoon. This is great for school children, but difficult for residents without vehicles to get to Gwinn or Marquette at times other than morning or evening. Having to have a vehicle at Sawyer makes it more expensive to live at Sawyer versus living in a location within walking distance of amenities or with a more regular public transit schedule. Sawyer workers also noted that there is an exodus of people from Sawyer at closing time. Most service businesses—restaurants, shops, etc.—do better when there are people in the local area at all times of the day. Because Sawyer closes up in the evening, service businesses have a harder time staying in business at Sawyer than if they were located in an area with 24/7 activity (Zuiss 2010). Also, targeting a mixture of housing that had a wide range of price points could have created a community that better supports service businesses.

Finally, geography was both a limiting and empowering factor. K. I. Sawyer is located in Michigan's UP, surrounded by government owned forest land owned, with the closest communities seven and 32 miles away (Gwinn and Marquette) (Greiner 1995, xii). This distance makes it difficult to attract businesses that want or need to be near a metropolitan area. However, the location is a draw for industries associated with the timber industry or attracted to northern climates (such as cranberries, cold weather testing, etc.). Prior to the closure announcement, Marquette reported that they had businesses interested in locating to Marquette, but lacked the existing facilities that these

businesses desired. Sawyer's existing buildings provided opportunities for businesses that did not have to be located in Marquette. During the Cold War, the extreme northern location gave K. I. Sawyer an advantage for its bombers to reach the former Union of Soviet Socialist Republics. Marquette found industries (such as logistics tracking) that took advantage of that northern tier location. Another advantage of Sawyer's remote location was that once businesses were established at Sawyer, there was motivation to create a complete community (businesses, housing, commercial, and recreation).

In this example, Marquette achieved the second-highest development capacity score, a high LRP quality score, a low achievement of LRP goals, and a high score for redevelopment when measured by indices of other organizations. Since Marquette's LRP goals were so ambitious, the score for indices used by other organizations is probably more indicative of their redevelopment success. Therefore, the high development capacity score appears related to a high redevelopment achievement score.

### **Oscoda, Michigan, and Wurtsmith Air Force Base**

#### **Overall Notes**

Wurtsmith AFB is located in the northeast lower peninsula of Michigan approximately 198 miles north of Detroit and three miles north of Oscoda Township in Iosco County (Wikipedia 2012f; Wikipedia 2012p). The area is well known for its outdoor recreational activities year-round. According to the *Detroit Free Press*, the area between Oscoda and Ossineke included beaches that are "overlooked" and among the "top ten in Michigan" (Wikipedia 2012f).

## **Community and Installation History**

Oscoda is an unincorporated township located north of the Au Sable River. The post office at Oscoda was first opened with the name AuSable on September 23, 1856. The name changed to Oscoda on July 1, 1875. Oscoda was designated as the official home of Paul Bunyan (Wikipedia 2012f). The 1990 census population was 1,061. For a small community, Oscoda held—and continues to hold—many festivals, such as the Paul Bunyan festival, holiday parades, Art on the Beach, and the Red, White and Blue Collar festival immediately before the Fourth of July (Kellum 2012 and U.S. Census 1993h). The Red, White and Blue Collar festival attracts workers and retirees from Detroit.

Wurtsmith AFB started in 1923 as Loud-Reames Aviation Field, a soft-surface landing site for the Army Air Corps from Selfridge Field near Detroit. It was renamed Camp Skeel in 1924 for World War I pilot Captain Burt E. Skeel. In 1942, three 500-foot by 150-foot hard-surface concrete runways were built and the camp was renamed Oscoda Army Air Field. The airfield was declared excess in December 1942. Third AF reactivated the field in March 1943 as a training field for black aviators. Beginning in July 1944, Oscoda was used to train Free French AF pilots. In December 1945, the field was placed in an inactive status. The field was again activated in February 1947 and became a permanent installation on January 1948, when the AF designated it as a fighter-interceptor training base for the Air Defense Command. The base was renamed Wurtsmith AFB in 1953 after Michigan native Major General Paul Wurtsmith, who was killed in September 1946 near Cold Mountain, North Carolina. Wurtsmith AFB transferred to Strategic Air Command in April 1960 and the 379th Bombardment Wing became the host (Wikipedia 2012p). See table 4-4 for a synopsis of Oscoda information.

**Table 4-4. Oscoda/Wurtsmith AFB Basic Information****Basic Information**

- BRAC Round: 1991
- Base Closed: June 30, 1993
- Military Category: Large aircraft–strategic bombardment & air refueling
- Base Personnel: 690 permanent civilian jobs lost at closure
- Base Size: 4626 acres
  
- Development Capacity: 71 (ranked 4th out of 6 communities)
- LRP Quality: 100 (tied for 1st with 4 communities)
- LRP Execution: 67 (tied for 4th with 3 communities)
- Achievement of LRP Goals: 77 (ranked 6th out of 6 communities)
- Achievement of Indices Used by Others: 54 (ranked 6<sup>th</sup> out of 6 communities)

**Situation at Oscoda, Michigan, and Wurtsmith at BRAC Announcement**

The regional economy of the northeast lower peninsula of Michigan consists of thirteen counties, of which six are near Wurtsmith: Iosco, Alcona, Alpena, Oscoda, Ogemaw, and Arenac. During the 1980s, the local economy grew at an average rate of 1.2 percent per year (Pathfinder 1992,I-1, I-18 and iii). Industries in the local area included a small industrial park that was created in the 1970s.

At base closure, there were two plants in the Oscoda industrial park that employed 30-50 people each (Kellum 2009). In 1990, the magnitude of Wurtsmith's economic impact on the local area was \$145,525,450 (Congress 1991, 5-45). The local community did not invest much in public facilities prior to the base closure. The high school was built in 1963, but there was no institutional or infrastructure investment in the years immediately prior to the BRAC announcement. Prior to base closure, Oscoda Township

management was a Board of Trustees with no full time staff. With the base closure announcement, the township hired Robert Stocker as manager (Kellum 2012).

It was anticipated that closing the base would have a severe economic impact on the local community (Congress 1991, 5-45). The six counties nearest to Wurtsmith were anticipated to be directly affected by the base closure. The counties listed in order of severity of anticipated economic dislocation were Iosco, Alcona, Alpena, Oscoda, Ogemaw, and Arenac counties. The regional income was anticipated to be 8.2 percent lower in 1994, 14.3 percent lower in 1997, and 12.1 percent lower in 2000 (Pathfinder 1992, I-1 and iii). The largest sectors expected to feel the impact were construction, transportation, and utilities. The community thought the Oscoda Area Schools would have to lay off 152 people, or 45 percent of its staff, and would lose \$15 million in Federal School Impact Aid (Pathfinder 1992, I-8, 14 and 17).

### **Wurtsmith Facilities**

At base closure, Wurtsmith AFB contained 4,626 acres with 327 buildings for a total of 1,700,000 square feet. The acreage consisted of 1,843 acres of forestry, 348 acres residential, 492 acres industrial, 61 commercial, 12 institutional, and 636 acres recreational and tourism, including convention-like uses, with the balance of 1,234 acres being airfield and aviation support (Pathfinder 1992, III-1).

Wurtsmith facilities included 13 aviation-related buildings with 372,527 square feet including seven large hangars, ten industrial/warehouse buildings with 317,117 square feet, 14 office/data processing/telecommunications facilities with 242,715 square feet, one medical building with 113,989 square feet, four conference/convention/training facilities with 124,243 square feet, seven food service or retail buildings with 98,428

square feet, nine hospitality/hotel buildings with 293,008 square feet, and eight recreation buildings with 114,425 square feet (Pathfinder 1992, III-2).

The runway was 11,800 feet by 300 feet, with a weight-bearing capacity of 155,000 pounds (strong enough for large commercial aircraft). The apron had parking for 30 large aircraft. There was a fuel storage area with 1,890,000 gallons of fuel bulk storage capacity (Pathfinder 1992, III-3, 18 and 20). There was a large family housing area. The vacation destination nature of the Oscoda area provided opportunities for the family housing area to be reused as vacation homes (Pathfinder 1992, III-10).

The condition of the utility systems was mixed. The Township of Oscoda supplied water to the base and water quality was good. Wurtsmith had a pumping capacity of 2.25 million gallons per day from seven wells. Three reservoirs on the base had a combined storage capacity of over 750,000 gallons. The static pressure of the water distribution system was generally in excess of 55 pounds per square inch except in the housing (Pathfinder 1992, II-15-16). The average maintenance costs for the water system were \$68,667 per year (Pathfinder 1992, III-46-47).

There were concerns about the sewage treatment plant on base, which was operating on an expired permit. It was degrading the ground water and did not meet the state standards of five parts per million in total inorganic nitrogen levels. The wastewater treatment distribution system was also a maintenance concern. Every two years the sewer lines needed to be flushed to reduce sewer backups, at a cost of \$40,667 (Pathfinder 1992, II-15 and III-40). There were two options when the base closed. Wurtsmith could rely on the Township of Oscoda sludge plant. It was designed to handle 800,000 gallons per day with a revised design capacity of 400,000 gallons per day due to the addition of

an ultraviolet treatment system. It processed an average of 227,000 gallons per day and required industrial wastewater to be pretreated before going to the plant. At base closure, the Wurtsmith plant could not provide that pretreatment (Pathfinder 1992, II-15). The requirement for pretreatment and the reduction in the Oscoda plant's capacity would make it difficult for Wurtsmith to send its sewage to the Oscoda plant. The better option was to upgrade the Wurtsmith plant.

The central heating plant included four high-temperature hot water boilers fired by natural gas and oil backup. The operating costs in 1991 were \$1,568,384. The supply of natural gas from Michigan Consolidate was almost unlimited (Pathfinder 1992, II-1 and 42-43). Electricity was supplied by the Consumers Power Company. The costs were at about mid-range compared to other areas (Pathfinder 1992, II-13). There were deficiencies in the system. Two of the 2,500 kilovolt amps transformers exceeded the self-cooling rating, causing them to be overloaded often. They needed to be upgraded (Pathfinder 1992, III-44).

#### **Environmental Situation at Wurtsmith at BRAC Announcement**

Wurtsmith was not on the NPL. However, Wurtsmith did have some environmental issues. Wurtsmith ranked fifth out of 1,532 toxic waste sites throughout the state (*Bay City Times* 1987). The aquifer under Wurtsmith was considered fragile. It migrated north to south across the base, changing its relationship to contaminated areas often and making it difficult to track the water and any contamination. There were concerns that any groundwater contamination would affect the aquifer and that there might be seepage off Wurtsmith into Van Extan Lake, the AuSable River, Van Extan Creek, and smaller adjacent ponds and wetlands (Pathfinder 1992, III-47; *Bay City Times* 1991; Rouse



2009). A prior state suit against the AF was settled in 1980 when the AF agreed to investigate the scope of contamination and pay a \$100,000 penalty (Freedman 1991). On September 27, 1991, the State of Michigan asked the AF to clean up 29 identified contaminated sites. Major James Lyon said that the base would “essentially be done with environmental clean-up by 1995.” Lastly, almost all the buildings that were pre-1980 contained some form of asbestos (Pathfinder 1992, III-47). The asbestos would have to either be removed or encapsulated with appropriate identification for future owners.

### **Opportunities and Constraints**

Oscoda’s strengths were the positive community attitude, a productive labor force, and the availability of electricity, natural gas, industrial sites, industrial buildings, housing, and recreational facilities. Oscoda also had low industrial site and building costs as well as low construction, transportation, labor, housing, and living costs. Land-use controls were fairly minimal and the local tax climate was favorable. The area had a low crime rate and a generally positive area ambiance (Pathfinder 1992, II-4 and II-40).

Liabilities included the limited availability of professionals, universities, hotel accommodations, shopping, and entertainment facilities as well as limited sewage treatment capacity. Residents had to drive 75 miles to reach a major highway and on to Saginaw, Michigan, to access air jet service (Pathfinder 1992, II-4). Finally, Michigan’s high workers’ compensation and high state tax climate were disadvantages (Pathfinder 1992, II-24 and II-41-42).

Oscoda’s local regulatory climate and local tax rates were seen as neither pro nor con. Tax rates would neither create a competitive advantage nor eliminate Oscoda from consideration when compared to other communities (Pathfinder 1992, II-24). Prior to the

closure announcement, the local community had meetings with Wurtsmith AFB personnel on environmental clean-up, but no other community meetings (Kellum 2009).

### **Proposed Redevelopment**

The Wurtsmith Area Economic Adjustment Committee (WAEAC), a unit of Oscoda Township, was appointed as the planning local reuse authority (LRA) and Carl Sachs was selected to lead WAEAC. Additionally the Base Conversion Authority (BCA) was created by the State of Michigan on November 6, 1991 with Jim Storey appointed as its head. These two organizations were charged with direct responsibility for converting Wurtsmith AFB. WAEAC was charged with economic development and marketing. BCA was charged with management of the Wurtsmith assets (Pathfinder 1992, V-20). A County Economic Development Commission served as the economic development organization for the county (Pathfinder 1992, V-21).

### **Local Redevelopment Plan Vision**

Oscoda's vision for Wurtsmith was to make maximum reuse of any marketable assets on the base. They wanted to bring industry to the region and to create a broad employment base from recreation to business to industrial uses. They wanted to protect the water resources and open space. As part of that concept, development would occur in clusters around significant facilities for reuse, with the space in between being left open for recreation and tourism. Oscoda wanted to promote a variety of housing options to include low-income housing (Pathfinder VI-2). This vision would tie into the long-range vision for Oscoda Township, Oscoda County, and Iosco County's so that the area would become a unified network of satellite communities.

## **LRP Goals**

Oscoda had five goals for Wurtsmith to make maximum use of the marketable assets on base. The LRP also needed to ensure that it was compatible with the existing adjacent areas within Oscoda (Pathfinder 1992, III-38). Wurtsmith LRP Goals:

1. Job Creation – Replace civilian jobs lost by 2013.
2. Regain Oscoda's population of 7,842 by 2010.
3. Regain Iosca County's population of 11,720 by 2013.
4. Have an on-base population of 2,196 by 2013.
5. Create 2002 jobs off base by 2013.

## **Proposed Uses**

WAEAC wanted Wurtsmith to become a mixed-use facility with airport, industrial, manufacturing, warehouse, training, convention/meeting, residential, and office activities (Pathfinder 1992, I and v). The LRA proposed the following uses for the site: forestry would occupy 1,998.4 acres or 43.2 percent of the base; industrial uses would occupy 1,424.8 acres (30.8 percent of the base); mixed, medium and high density residential uses would occupy 356.2 acres (7.7 percent of the base); agricultural would account for 309.9 acres (6.7 percent); recreational vehicles would have access to 175.8 acres (3.8 percent); general business would occupy 161.9 acres (3.5 percent of the base); residential tourists would own property on 157.3 acres or 3.4 percent of the base; and the central business district would occupy 41.6 acres or .9 percent of the former base (Pathfinder 1992, IV-3).

To reach these goals the targeted markets would include forestry, colleges, retail, and industrial—including millwork, wood pallets, metal household furniture, mattresses, office furniture, sanitary food containers, folding paperboard boxes, packaging paper, plastics, aluminum extruded products, sheet metal work, special dies, current-carrying

wire devices, aircraft repair, and aircraft engines (Pathfinder 1992, IV-13-15). The Township of Oscoda already had a bowling alley, theater, and library so the LRP did not identify keeping any of these facilities. The LRP did not identify keeping the hospital since Oscoda did not have the population to support a hospital the size of the Wurtsmith facility (Pathfinder 1992, III-46).

Proposed aviation uses included general aviation, commercial aviation, air cargo, and aviation-related operations such as industrial/air carrier overhaul, maintenance, and refurbishing operations. The LRP found that while the aviation industry as a whole was declining, both maintenance and refurbishing operations were growing (Pathfinder 1992, i). The LRP found that the East Taswas/Iosco County Airport would satisfy the general aviation needs although it could not offer facilities and amenities for commercial, air cargo, overhaul, and maintenance. Wurtsmith could accommodate these uses. The only amenity Wurtsmith was missing was a crosswind runway. This is because the wind patterns at the base were consistent enough to not require a crosswind runway for the heavier military aircraft. The crosswind runway would be required for lighter general aviation aircraft, or lighter aircraft operations would be restricted during certain weather conditions (Pathfinder 1992, III-23).

The LRP gave the airport from January 1993 to 1995 to attract aviation-related industry. If a major aviation-related use was not attracted, then WAEAC might abandon that industrial sector (Pathfinder 1992, V-2). It was anticipated that even if an aviation related industry was attracted, the airport would have a negative annual cash flow for ten years (Pathfinder 1992, i).

Two redevelopment options were considered and dropped. The option of not redeveloping the property was rejected because the community felt it should make use of the aviation-related resources. The option to redevelop Wurtsmith as a training facility was considered but eliminated due to the aviation potential (Pathfinder 1992, i).

### **Implementation LRA**

During planning the LRP recommended consolidating WAEAC and BCA. If the two organizations were not consolidated, then the LRP recommended that Carl Sachs (head of WAEAC) be an ex-officio, non-voting member of BCA, and Jim Storey (head of BCA) remain an ex-officio, non-voting member of WAEAC. It proposed that both be ex-officio, non-voting members of the County Economic Development Commission and that the director of the Commission should become a non-voting member of the other agencies (Pathfinder 1992, V-21).

During the planning stage, WAEAC thought the LRA was too large and progress bumpy. The execution LRA was reduced to a seven-seat board that consisted of the chairperson/designee from Oscoda Township, the Township Supervisor from Au Sable Township, the Director of the State Department of Commerce, the Director of State Department of Natural Resources, a representative from a local financial institution, and the President of the Oscoda Chamber of Commerce. Their terms were for five years with two extensions possible (Pathfinder 1992, IX-9). By 2000 the State of Michigan, which initially organized the BCA, was pleased with WAEAC's progress. The state declared success and closed BCA, making WAEAC the sole implementation LRA (Kellum 2012).

After the Oscoda-Wurtsmith Airport was established in 1993, the base was divided into two portions for implementation: the airport, which consisted of 2200 acres and is

managed by the Oscoda-Wurtsmith Airport Authority, and the remainder of the base, approximately 2300 acres, which is managed by WAEAC. The Airport Authority has a Board of Supervisors with representatives from the local counties and three supervisors from the local townships. The airport staff is six people: four staff, a secretary and a contractor. In the long run it is anticipated that both the airport and the former base will be run by the county (Kellum 2012).

### **Redevelopment Resources**

Wurtsmith had several development resources available. The community sought and received a grant from the FAA MAP for ten million dollars. It was used to narrow the runway from 300 to 200 feet and to restripe, relight and repave it, as well as to provide new signage. Reducing the runway width lowered the yearly maintenance fees and made the airport more affordable. Reducing the width doesn't affect airport operations because extra large aircraft are not anticipated to use the airfield. The EDA provided a \$2.2 million grant to reactivate the base wastewater treatment plant. That project doubled the capacity and allowed the base to treat the sewage from the local community. OEA funding was used to establish a revolving loan fund overseen by the Iosco County Economic Commission to help businesses. The grant money, which had a cap of \$666,000, helped attract the Holiday Inn, a golf course operator, a canoe company, and restaurants. The rate was one point above prime (Kellum 2012).

The LRP pointed out that, in addition to building conditions, companies also consider non-financial factors when selecting a location for their firms (Pathfinder 1992, II-22). The Oscoda community had non-financial resources that were used to attract companies. The local employee productivity rate was high and the quality of the labor

force was considered to be excellent or good with no substance abuse. This workforce existed with few union shops (which tends to increased wages) (Pathfinder 1992, II-20). There were also 2,095 retirees in the local area, which helped to pump money into the local economy (Pathfinder 1992, I-13).

During the planning phase, the LRA reached out to the nearby townships and Iosco and Oscoda counties for their input on the LRP. The LRA also consulted with NAID and were contacted by Peru for sharing of lessons learned and information on the installation redevelopment process (RKG 1993b, X11-7). Finally, the Wurtsmith team watched K. I. Sawyer and was successful in getting more caretaker funds from OEA due to K. I. Sawyer getting its years of caretaker funds extended (Kellum 2012).

A number of local government processes at Wurtsmith were improved to help attract businesses. The Airport Authority streamlined its leasing process reducing a process, that could take several weeks to a “one stop” process that took a few days. For a comparison, it takes 90 days with the township to process a building permit. The federal government also improved some of its BRAC processes in response to Wurtsmith input (and other LRAs). The Wurtsmith LRA recommended that DoD have a standardized agreement for real estate transfers. At the beginning of the BRAC process, the AF frequently changed its agreement based on lessons learned and the local LRA would have to renegotiate agreements based these changes. A standard agreement (with less frequent changes) was eventually adopted with a DoD Directive (Kellum 2012).

### **Redevelopment Success**

WAEAC made good strategic decisions during their redevelopment. They chose to prepare the property for subdivision and reduce operating costs with utility upgrades.

Airports require funding from federal, state, and local sponsors (Pathfinder 1992, III-36). Oscoda got most of their funding through grants. WAEAC was awarded a transition ten-million-dollar grant from OEA. The grant was used for technical assistance, marketing, a global information system, to extend a water line, to create a local water authority, and to map for real estate boundaries and utilities. To save on airport operating costs, the airport used the FAA MAP grant to lessen the runway width. The EDA grant was used to upgrade the base's WWTP to serve Wurtsmith and the local community (Kellum 2012).

The Oscoda-Wurtsmith Airport is used primarily for cargo and light general aviation. During the Iraq war there was contract cargo hauling flown from Oscoda-Wurtsmith Airport and into Iraq. There is no scheduled commercial airline service (Wikipedia 2012g). Iosco County has a population of only 23,000 people, which is generally too small to support commercial airline service. The transfer of the airport to Wurtsmith has been rough on the community because capital projects are expensive for a small community (Kellum 2012).

To attract businesses Wurtsmith used WAEAC, the Oscoda-Wurtsmith Airport Authority, the Township of Oscoda's Economic Development Commission, and the local Chamber of Commerce. The Chamber of Commerce primarily concentrated on tourism and retiring auto workers. WAEAC was successful in attracting businesses. The LRA attracted a small auto parts manufacturer and a canoe manufacturer. The canoe manufacturer relied on tourism (Kellum 2012).

Over time the job attraction has been cyclical. At one point there were 1640 jobs. Then some jobs were lost and the county lost about 6,000 people. However, Wurtsmith came back stronger with more diversification in the types of jobs and employers.



Wurtsmith now has 38 businesses with 1430 jobs. There is a large aviation maintenance tenant with 750 employees that repairs 747s. The WAEAC felt the maintenance activity would grow. The Airport Authority said that each time Wurtsmith goes through rebuilding, there are more businesses—which provides more overall stability, due to diversification - versus one employer with many jobs (Kellum 2012). In 1997 the Wurtsmith Renaissance Zone was created, which exempted businesses and residents from all state and most local taxes (Wikipedia 2012).

There were originally 1342 houses at Wurtsmith. The community kept 762 and the housing area street infrastructure. Oscoda will build an additional 120 houses on the property. A developer “tricked the 762 houses up” by changing the floor plans and offering a la carte modifications to buyers. It was successful: the units were filled within 10 years. The developer concentrated on attracting retirees from southern Michigan, so the local housing real estate market was minimally impacted (Kellum 2012).

During the redevelopment there were problems with some buildings, making it sometimes easier to attract businesses with only land than to attract businesses with buildings. Older buildings did not have fire suppression systems, did not meet the Americans with Disabilities Act (ADA) standards, and were difficult to redevelop. Many were torn down. As of December 2010 WAEAC still had land to sell and was still receiving property from the AF. They proposed holding an auction, but the AF could not support the auction due to manpower (Kellum 2012)<sup>15</sup>.

WAEAC and the Airport Authority provided lessons learned. First, open the base up and have a base master plan that connects to the outside community (Pathfinder 1992, III-38). Second, never let the grass get overgrown. Get good curb appeal, even on vacant

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<sup>15</sup> The land was final transferred in 2012 (AFPRA Deck Cards).

buildings. Third, don't attract local businesses to the former base. Attract people from out of town. Lastly, share information with other LRAs (Kellum 2012).

### **Environmental**

Environmental clean-up at Wurtsmith will take until 2045 (AFRPA 2012). Disagreements between the Michigan Department of Environmental Quality and the AF occurred over the nature and extent of contamination, characterization of the soil contamination, proposed clean-up remedies, and land use restrictions (Hogarth 2002). After it is cleaned up, the land will carry land use restrictions and institutional controls and will require an approved monitoring plan, legal agreements due to the type of contamination, and operational and maintenance plans (Hogarth 2001). Three to four thousand of the six thousand acres will have land use restrictions. Those restrictions will remain with the land and are included in deeds (Rouse 2009). Through 2012, the environmental costs to clean up Wurtsmith were \$70.5 million and the cost to complete in 2012 was projected to be \$23.5 million (AFRPA 2012).

### **LRP Goal Accomplishment**

The LRP's first goal was to regain the number of on-base civilian jobs lost when Wurtsmith closed by 2013. At closure, there were 685 full time civilian jobs. Wurtsmith created 555 jobs on base with 587 total jobs recreated in the community by 2011 (AFRPA 2012). That is 90 percent of the civilian base jobs lost recreated on the former base. The Oscoda Township website says that there were 1,300 jobs created on the base and in the community (Oscoda 2012). This study used the Air Force Real Property Agency (AFRPA) data to keep consistency on how jobs are calculated.

The LRP's second goal was to regain Oscoda's population by 2010 (Pathfinder 1992, I-6). In 1990 Oscoda's population was 7,842 persons. The 2010 population was 8,640, so the goal was achieved with 110 percent of the population being regained.

The LRP's third goal was to have an Iosco County population of 11,720 by 2013 (Pathfinder 1992, I-5). The 2010 Iosco County population is 8,640 (U.S. Bureau of the Census 2014d). Iosco County would have to gain 1,026 persons per year for the next three years to reach 11,720 persons. It is unlikely the county will reach their 2013 goal. They are estimated to have achieved 24 percent of the growth needed to reach their goal.

The LRP's fourth goal was to have an on-base population of 2,196 by 2013 (Pathfinder 1992, I-5). The on-base recreation of jobs was 555 jobs (AFRPA 2012). There are also 762 homes on the former base that are being used (Wurtsmith District 2012). The 2010 U.S. Census average household size is 2.63 persons. With 555 jobs and 762 homes on the former base, the highest that the population could be in 2010 is 2,559 (555 workers with 762 homes times 2.63 persons per home). Extrapolated to 2013 the population would be 3,010. This assumes that all the workers live off the former base. The lowest that the number could be is 2,004 persons (762 homes times 2.63 persons per home and all workers live on base). That number extrapolated to 2013 would be 2,357 persons. This conservative number is the one used in this research, showing that Oscoda achieved 107 percent of the goal (U.S. Bureau of the Census 2014d).

The LRP's fifth goal was to have 2,002 jobs created off-base due to Oscoda redevelopment by 2013. Oscoda Township says 1,300 jobs were recreated both on base and in the community. It is unlikely that the employee goal of 2,002 off-base will be reached by 2013 (Oscoda 2012).

### **Oscoda Comparison of Development Capacity to Redevelopment Success**

Oscoda received an overall development capacity score of 71, placing it fourth in development capacity amongst the six communities studied. Of the development capacity variables, Oscoda performed well in the community spirit, vertical linkages, project oriented development, and business development. The Oscoda area had a vibrant community spirit hosting five festivals each year. Oscoda developed many vertical linkages, applying for and receiving grants from multiple agencies. Oscoda was project-oriented, with multiple local agencies responsible for attracting businesses, and was also able to achieve a high business development score by attracting businesses to the local area in the five years prior to the BRAC announcement. There was also a small industrial park created for two counties in the 1970s with two plants (Kellum 2012).

Factors that lowered Oscoda's development capacity score included that the LRA was not the lead agency for redevelopment (BCA was involved early in the process and the airport authority was involved later in the process) and that the local area had not built any infrastructure (either institutional or physical) in the five years prior to the base closure announcement (Pathfinder 1992, V-21; Kellum 2012). Oscoda also received a low score in its appropriate development focus score. Initially the LRP and WAEAC advocated attracting business with features other than reduced taxes. However, in 1987 they did create the Wurtsmith Renaissance Zone, which exempted businesses and residents from state and local taxes (Wikipedia 2012o).

Wurtsmith's LRP quality was good, achieving 100 points. The LRP addressed the homeless plan and financial plan well. In regard to the homeless plan, the LRP said that the base homes would target low-income persons, although in the end the LRA tore down

many homes (Pathfinder 1992, VI-2; Kellum 2012). The financial plan went beyond the typical financial plan requirements and also included an economic recovery strategy.

In LRP execution, Marquette's score was 67 points, one of the three communities to receive that score. As part of execution, the airport authority took steps to streamline lease agreements for new tenants. Oscoda did not have to be concerned about contractual relationships because in-house forces performed most of the LRA work. The only execution element missing was that the LRA was not separate from politics. As can be seen from the LRA discussion, there were many government persons involved in the LRA and other organizations that were involved in development. Also, the Wurtsmith BCA was a state organization that was established to receive the property and assets (including personnel property). Later, the Township of Iosco Community Development Department would sell and lease the property. There was also a government organization, the Iosco County EDC, that would market the property.

Oscoda reached 77 percent of their LRP Goals obtained by dates set in LRP and obtained to date. This places them sixth out of the six communities studied. Oscoda did well in creating jobs to replace the civilian jobs lost due to base closure. They created 90 percent of the jobs (Pathfinder 1992, I-5; AFRPA 2012). They did well in regaining the Iosco County 1990 population by 2010; they regained 86 percent (U.S. Bureau of the Census 1993e and 2014d). Finally, Oscoda did well in achieving a Wurtsmith population of 2,357 by 2013. They achieved 107 percent of their goal.

The third LRP goal, to reach a population of 11,720 by 2013, held Oscoda back. Based on their 1990 population they would only reach 24 percent of their goal by 2013. This is one of the two LRP goals that significantly brought down the Oscoda LRP goals

attained by the time period established in the LRP and through December 2010. This goal was probably a bit too aggressive for a community that had 7842 residents, was located in a rural area, and was losing a major employer. Lastly, Oscoda wanted to have 2,002 non-Oscoda employees by 2013. The Oscoda Township website (2012) says that they have created 1,300 jobs both on base and in the local community. It is unlikely that Oscoda will have 2,002 employees by the end of 2013.

Oscoda's main goal was to become a major regional airport (Pathfinder 1992). Oscoda was successful. Additionally they attracted aviation businesses Kalitta Air, Kalitta Maintenance, Oscoda-Wurtsmith Aviation Services, and TIMCO Aviation Services. They were less successful in attracting other businesses. To date they have attracted Phoenix Composite Solutions and Sage Ordnance. They still have 18 facilities to sell or resell (K. I. Sawyer 2010).

When redevelopment is measured by indices of other government organizations, Oscoda came in sixth with 54 points. Oscoda recreated 555 on base jobs, which was about 80 percent of the 690 civilian jobs lost due to base closure (AFRPA 2012). This placed Oscoda fifth among the six communities. Rome, New York, was sixth, replacing 74 percent of the civilian jobs lost due to base closure. The community with the best record was Plattsburgh, replacing 259 percent of the jobs lost due to base closure. The average percentage of jobs recreated across the six communities was 147 percent.

Oscoda either sold or placed in long-term lease 90 percent of the acreage of the former base. Oscoda was sixth amongst the communities because all the communities sold or placed in long-term lease 99 or 100 percent of their acreage, except for Oscoda

and Plattsburgh, which sold or placed in long-term lease 97 percent. Much of Oscoda's difficulties had to do with environmental clean-up.

Oscoda's change in the unemployment rate relative to the State of Michigan's unemployment rate was not good. In 1990 Iosco County had an unemployment rate of 7.3 percent compared to the State of Michigan with an unemployment rate of 8.2 percent, a 0.9 percent difference in favor of Iosco County (U. S. Bureau of the Census 1993h and 2010o). In 2010 Iosco County had an unemployment rate of 12.5 percent and the State of Michigan had an unemployment rate of 7.3 percent, a difference in favor of Michigan of 5.2 percent. This total difference of 6.1 percent meant that Iosco County and Oscoda had the worst unemployment figures of the six communities studied. The community with the best figures was Marquette, with a total difference of 3.1 percent in its favor. The average difference was a negative 0.5 percent. Since Marquette had better unemployment numbers, the downturn in the auto industry in the late 2000s and Detroit's proximity to Oscoda may have had something to do with this finding.

When compared to the State of Michigan, Iosco County's per capita income was better following redevelopment compared to prior to the closure announcement. In 1990 Iosco County's per capita income was \$5,988. The State of Michigan's was \$14,154, a difference of \$8,166 in favor of the state (U.S. Bureau of the Census 1993h and 2010e). In 2010 Iosco County's per capita income was \$21,303 and the State of Michigan's was \$25,135, for a difference of \$3,382 in favor of Michigan. The change of a positive \$4,334 placed Oscoda/Iosco County first among the six communities studied. Marquette and Oscoda/Iosco are the only communities out of the six that had a positive difference relative to their state. The automotive crisis in Michigan during the time of Oscoda and

Marquette's redevelopment may have helped them perform better than the State of Michigan. The other communities went from Chanute's negative \$2,158 to a negative \$8,000 for Plattsburgh. The average was a negative \$1,833. These numbers point out that while many communities are successful at recreating jobs (four of the six communities recreated at least as many jobs as civilian jobs that were lost due to base closure), it is possible that fewer are successful at recreating jobs with a similar per capita income.<sup>16</sup>

Iosco County's population was down from prior to the BRAC announcement when the county population was 30,229 (U.S. Bureau of the Census 1993e) and in 2010 when the Iosco County's population was 25,887 (U.S. Bureau of the Census 2014d). The population went down by 4,342, which was the second-largest decrease amongst the six communities. The largest was Rome, New York, with a loss of 15,958 persons.

Plattsburgh, New York, gained the most population with a gain of 28,056 persons.

The Oscoda example does not help support the link between development capacity and redevelopment success as strongly as other examples. Oscoda had the fourth-highest development capacity score. It had a high LRP quality and a good LRP execution score that did not hinder its redevelopment. It did the worst in achieving its own LRP redevelopment goals and had the lowest redevelopment success when measured by indicators used by other government entities. One reason for this inconsistency could be the proximity to Detroit and the automobile industry's crisis during the later part of redevelopment, which may have had an impact on Oscoda's redevelopment. Detroit was potentially actively recruiting the same companies that Oscoda was trying to recruit.

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<sup>16</sup> Since this study did not determine the per capita incomes of the jobs created at the former bases, it is not possible for this study to determine whether the per capita incomes of the jobs created at the former installations went up or down. However, it is interesting to note that the per capita income of the local communities went down in four of the six communities studied relative to the state per capita incomes.



## **Plattsburgh, New York, and Plattsburgh Air Force Base**

### **Overall Notes**

Plattsburgh is located in upstate New York on Lake Champlain approximately 40 miles from Montreal. Plattsburgh AFB was part of the 1993 BRAC round and closed September 25, 1995 (HDR 1995, xiv). At closure 446 permanent civilian employees were employed at the base (HDR 1995, xv and 17). Plattsburgh was on the Superfund NPL list. The AFRPA, the agency charged with clean-up and transfer of base property, estimated the property could be cleaned up and transferred by 2001 (HDR 1995, 185). In 2013 there was still clean-up left to accomplish (AFRPA 2012).

### **Community and Installation Information**

As early as Samuel de Champlain's 1609 expedition into the Lake Champlain valley, the Plattsburgh region began to fall under the French influence as part of the fur trade. The early French contact and the proximity of Plattsburgh to Quebec made the area an historically French region (Wikipedia 2012i).

Plattsburgh was founded in 1785 by Zephaniah Platt. The City of Plattsburgh set itself off from the Town of Plattsburgh by incorporating as a village in 1815, with the city government established in 1902. With its significant location on a major water thoroughfare and close to the U.S.-Canadian border, Plattsburgh has been the site of a number of historic events, including the Revolutionary War's Battle of Valcour Island and the War of 1812's Battle of Plattsburgh (Wikipedia 2012i).

Plattsburgh AFB boasts a long military tradition reaching back 400 years. Immediately after the War of 1812, Plattsburgh sold 200 acres to the U.S. government that became Plattsburgh Barracks. Various Army troops occupied the property between

1812 and the 1900s. In February 1944, the Army turned Plattsburgh Barracks over to the U.S. Navy. The Navy left within the decade. In 1954 ground was broken for Plattsburgh AFB (Wikipedia 2012h).

During the Cold War, the military took a prominent role at Plattsburgh as Strategic Air Command's primary wing on the East Coast. The 380th Bombardment, Aerospace, and Refueling Wings included B-52 bombers, air-refueling "tankers," and FB-111s. The base had a great deal of land surface and was one of only four military bases in the U.S. with a landing strip large enough for a Space Shuttle landing (Calabro 2008). Plattsburgh AFB was closed on September 29, 1995 as the AF began to pare down its post-Cold War missions. See table 4-5 for a synopsis of Plattsburgh information.

***Table 4-5. Plattsburgh/Plattsburgh AFB Basic Information***

**Plattsburgh/Plattsburgh AFB Basic Information**

- BRAC Round: 1993
- Base Closed: September 25, 1995
- Military Category: Large aircraft – strategic air refueling (KC-135)
- Base Personnel: 446 permanent civilian jobs lost at closure
- Base Size: 4912 acres
  
- Development Capacity: 73 (ranked 5th out of 6 communities)
- LRP Quality: 100 (tied for 1st with 4 communities)
- LRP Execution: 100 (tied for 1st with 3 communities)
- Achievement of LRP Goals per LRP and by 2010: 94 (ranked 4th out of 6 communities)
- Achievement of Indices Used by Others: 71 (ranked 4th out of 6 communities)

Throughout much of the 1980s, when the Canadian dollar was strong relative to the U.S. dollar, Plattsburgh was a favorite tourist location for vacationers from Montreal and southern Quebec. Bilingual signs in English and French were erected in parts of the city. The city beaches and campgrounds were regularly crowded, and Plattsburgh had attracted enough retail stores and outlets to build a second large indoor shopping mall, Champlain Centre North, in addition to several outdoor shopping centers. However, during the 1990s the U.S. dollar strengthened and Canadian tourism declined (Wikipedia 2012i).

#### **Situation at Plattsburgh, New York, and Plattsburgh AFB at BRAC Announcement**

The Plattsburgh local reuse area includes Clinton County, the City of Plattsburgh, and the Village of Plattsburgh. In 1990 Clinton County had a population of 85,969, the City of Plattsburgh had a population of 21,255, and the Village of Plattsburgh had a population of 17,231. The local community was greatly affected by Plattsburgh's closure. "It wasn't dollars and cents. It was people," said former newspaper editor, Jim Dynko, speaking as a citizen and longtime volunteer firefighter, "We had church congregations that were halved. We had volunteer fire departments that were halved. We had the Big Brother/Big Sister program disappear" (Calabro 2008, 54).

Prior to the base closure, Clinton County absorbed approximately 45 acres and 300,000 square feet annually of commercial or industrial space. Industrial parks included the Clinton County Air Industrial Park, Gateway Industrial Park, Northgate Industrial Park, X-Plo Industrial Park, Oak Street Business Park, Powertex/Fort Montgomery Estates, and Kimpex, as well as the proposed Clinton County Area Development Corporation industrial park (HDR 1995, 83). Other construction in the area included the

1990 Fitzpatrick Cancer Center and SUNY Rehab in the 1980s (Champaign Valley Physicians Hospital 2012).

### **Facilities at Plattsburgh AFB at BRAC Announcement**

The facilities at Plattsburgh AFB were divided into two areas: the old base near the City of Plattsburgh and the new base near the Town of Plattsburgh. The old base had 290 acres and the new base had 3622 acres for a total of 4912 acres. The old base included the Oval Historic District, which is listed in both the National Register of Historic Places and the State of New York Register of Historic Places. The Oval included 56 acres, an historic parade field from the War of 1812, lakefront, and 29 historic buildings with a total of 600,000 square feet, as well as 160 Capehart housing units that were built in the 1960s and 1970s (HDR 1995, xv, 17 and 35). The Old Base also had 8500 feet of frontage on Lake Champlain (HDR 1995, xv).

The new base included over two million square feet of aviation hangars, maintenance shops, and a control tower and over one million square feet of dormitories, educational buildings, dining halls, office buildings, a fire station, gymnasium, and commercial facilities, as well as multi- and single-family housing units (HDR 1995, 35). Many of the housing units were identified for demolition (HDR 1995, 205). The rest of the facilities were well maintained and in good condition. The runway was 11,760 feet long and 300 feet wide. It was sized for large aircraft. There were 800 raw acres on the former base, with 17,200 feet of river frontage along the Salmon River and 10,000 feet of river frontage on the Saranac River (HDR 1995, 35).

When the base was closed, the utility systems were in fair condition (HDR 1995, 55). The City of Plattsburgh supplied the base with potable water via a 12-inch water

main. The base water system included water mains, booster pump stations, metering, chlorinating stations, and elevated tanks. The sanitary sewer discharged its waste to the City of Plattsburgh. The base sanitary system included sewer mains, manholes, industrial waste pre-treatment disposal stations, and pump stations. The majority of the system was vitrified clay pipe. The base storm sewer system was a combination of cast iron, corrugated metal, and reinforced concrete pipes. The LRP recommended that the LRA review the existing State Pollution Discharge Elimination System permit to determine if the storm sewer system was adequate (HDR 1995, 21).

At base closure, 1400 buildings on the new base were heated by a 50-year-old central heating plant. Approximately ten million dollars in capital improvements had been made to the plant ten years prior, leaving the plant in excellent condition. The New York State Electric and Gas Company supplied electric power (46,000 volts) to a sub-station. New York NEX operated the pay telephones on the base. Falcon Cable Television provided cable service. Due to the corrosiveness of the soils, an extensive cathodic protection system existed on the base (HDR 1995, 21).

Plattsburgh was located near a good transportation network. The Adirondack Northway (I-87), a major north-south transportation link, bordered the base with state routes 9 and 22 on either side (HDR 1995, 21 and 59). A rail line runs by the base and carries freight for Georgia Pacific and Amtrak trains. There was also a waterborne cargo system near Plattsburgh that connected to the Great Lakes system.

#### **Environmental Situation at Plattsburgh AFB at BRAC Announcement**

Plattsburgh was an NPL site. Originally, the base had 40 problematic sites, including landfills, hazardous chemical spills, lead-contaminated firing ranges, gasoline-

tainted groundwater, and underground and above-ground fuel tanks. The biggest site was the old fire training pits (Calabro 2008, 55). Seven sites were left at base closure. At that time, an Environmental Baseline Study (EBS) had been completed. The majority of the base was categorized as category one by the EPA guidelines, meaning there was no storage, release, or disposal of hazardous substances and no migration. Five sites were categorized as category five, meaning there were areas where there had been storage, release, disposal, or migration of hazardous materials and remediation actions were under way. There was one category six site, which meant that contamination and response actions were not yet implemented. Finally, there was one category seven site, meaning that the area had not yet been evaluated. Within the buildings many of the hot water pipes had asbestos-cement or asbestos-wrapped piping that would require removal or encapsulation. The LRP indicated that the environmental clean-up presented no major problem in achieving the long-range reuse plan (HDR 1995, 24). After base closure, the AFRPA (2012) spent \$80,300,000 between 1999 and 2012 on clean-up. They anticipate spending an additional \$11,950,000 in 2013 to finish (AFRPA 2012).

### **Opportunities and Constraints**

Opportunities at Plattsburgh included its location close to Montreal and Canadian markets, the large airfield, Plattsburgh's location on Lake Champlain, and historic and recreational tourist opportunities. Canadian firms establishing businesses in the U.S. needed to locate warehousing, shipping, and assembly locations in the U.S. Plattsburgh offered a good location with easy access to Montreal (Calabro 2008, 80). Constraints included Plattsburgh's location in upstate New York, which was not close to U.S. urban areas and the renovation requirements that would be required for the historic buildings. In

redevelopment plan development, opportunities and constraints of the general site development were considered. Potential uses were evaluated, starting with the existing facilities and then continuing to market evaluations (HDR 1995, 94). The LRP did not consider the skills of the local population.

### **Proposed Redevelopment**

Plattsburgh decided to have a planning and an implementation LRA. The Plattsburgh Inter-municipal Development Council (PIDC), the planning LRA, was established by an inter-municipal agreement under New York state law. PIDC had a 14-person board representing state, county, city, and town interests, including the Chairperson of the Clinton County Legislature, the Mayor of the City of Plattsburgh, the Governor of the State of New York, the New York Senator from the 45th Senatorial District, the New York Assemblyman from the 110 Assembly District, and the U. S. Congressman from the 24th Congressional District. There were also two appointees from the Clinton County Legislature, two from the City of Plattsburgh Common Council, two from the Town of Plattsburgh Town Board, and one from the School District (HDR 1995, 2 and xiv). PIDC had over 100 volunteers who were assigned to different committees (Calabro 2008, 39). PIDC oversaw LDP development.

PIDC's first chair from 1993 to 1994 was Bill McBride, a local businessman. He was a good choice-non-partisan and a good coordinator of PIDC and its many volunteers (Calabro 2008, 39). PIDC's first interim director was Steve Erman, who was on loan from the Adirondack Park Agency for six months. He had worked for Booz Allen Hamilton in Washington DC on base closure issues so he had a working knowledge of OEA and other Washington agencies (Calabro 2008, 43).

PIDC's first chief executive officer was David Holmes, who served from 1994 to 1996. Prior to coming to PIDC, Holmes was the commissioner of planning and development for Yonkers. David Holmes had a difficult time. The local community leadership often inserted itself in the PIDC decision-making process. One PIDC member said, "We were living under a microscope. Everybody was walking around on eggshells. You can't run an organization that way. It was frustrating." Said Doyle, another PIDC member, "There was so much to be done, yet all they talked about was a strategy to counter the barbs coming from the mayor." Steve Erman said that "the first Chief Executive Office of almost every local redevelopment agency, whether an insider or outsider, takes the brunt of the local anger." In the case of Plattsburgh, the brunt seemed especially difficult (Calabro 2008, 44-47). Eventually PIDC accomplished its mission, which was to finish the LRP. It took 715 days (nearly two years) to produce. That was partly due to the size of the planning LRA and partly due to the political situation.

### **LRP Vision**

The vision for the base was a "planned international aviation center, business park, and lakeside resort specifically designed to reap the benefits of a global economy" (HDR 1995, xiv). In the long run, the entire community shared this vision; however, initially the City of Plattsburgh mayor wanted to get a military use back on the base. Due to this, he diverted industrial development, such as the Bombadier company, to another location (Calabro 2008, 46-47). Eventually, the mayor realized that a military use was not going to be allowed to come to the base, agreed with the LRP vision, and directed companies to Plattsburgh. The LRP planning principles were to:



1. Emphasize job creation and economic development.
2. Preserve airfield and airside operations, including conveyance of AF airfield equipment.
3. Capitalize on the intermodal transport potential, including relocating the rail switching yard from the waterfront to the new base.
4. Create tourism, resort, entertainment, and destination attractions.
5. Provide appropriate housing, demolishing code deficient and unneeded housing.
6. Preserve and enhance the old base character including design standards.
7. Create a “mixed use” core on the new base to establish a critical mass.
8. Preserve environmental and natural resources.
9. Effectively integrate the base development with the surrounding areas.
10. Provide community services and amenities.

The primary objectives in the LRP were to create the maximum number of jobs on base and in the immediate area; to determine the most effective use of the property at the lowest possible cost to the community; to identify base reuse options that are realistic, sustainable, and economically viable; and to integrate base property with the community and create a plan that will enhance of the quality of life for residents (HDR 1995, 3).

In keeping with these principles, PIDC wanted to diversify the Plattsburgh economy with manufacturing and distribution jobs. PIDC coordinated with the Clinton County strategic plan to promote interim uses that were compatible, ensure most parcels were taxable, and avoid relocating businesses already in the local reuse area. PIDC emphasized early production startup and reasonable lease rates (HDR 1995, xx).

### **LRP Goals**

The LRP goals were to:

1. Create 3,600 direct jobs and 4,400 indirect jobs by 2015.
2. Create on-site income tax revenue of \$6 million and \$2.4 million in retail taxes annually by 2015.
3. Generate property values of \$90 million by 2015.
4. Minimize financial risk to the local jurisdictions.
5. Create rental income of \$2 million (HDR 1995, xiv, xx, 3 and 146).

The LRP estimated that the plan would take 25 to 40 years to achieve.

### **Proposed Uses**

PIDC proposed to operate Plattsburgh as a new civilian international airport. The airport and aviation support would occupy 1,298 acres and include commercial passenger service, general aviation, air cargo, and airplane maintenance. The Clinton County Airport would close and move to Plattsburgh (HDR 1995, xviii and 92). Light industrial and education training would occupy 407 acres and 2,500,000 square feet of facilities (HDR 1995, 113-115). A second area with light industrial would occur along the highway and include 82 acres and 600,000 square feet of building space. An area for commercial, recreational, cultural, and residential space would occupy the central 240 acres of Plattsburgh, with an additional 92 of those acres and 586,000 square feet of building space for tourism and lakeside resort uses including an Adirondack Center for the Arts similar to Tanglewood. A separate area was reserved for medical uses, with residential health care for retirees or commercial office space with residential to make use of a portion of the former base's 1,600 housing units. Lastly, an area was reserved for industrial research, retirement housing, community, and office uses.

Plattsburgh and Clinton County are located in the northeast corner of New York that borders Quebec and Vermont. Plattsburgh planned to make use of the area's excellent transportation network (HDR 1995, xv). There are several major markets within driving distance, including Montreal (40 miles), Albany (150 miles), New York City (210 miles), and Boston (225 miles). PIDC envisioned Plattsburgh as a good location to offer flights to Florida, the East Coast, and Canada. PIDC proposed that the airfield, with nearby rail and highway services, could create a transportation hub. They also

recommended drop-in back office space. In anticipation of trade with Montreal, PIDC established Plattsburgh as a free trade zone similar to Rantoul, Illinois. The City of Plattsburgh proposed using the Civil Engineer yard for the Plattsburgh Municipal Lighting Department (HDR 1995, 91).

The LRP planned to preserve and enhance the historic character of the old base so that the old base could be used for museums, hiking trails, and golf. They envisioned public use for a portion of the base's Lake Champlain shoreline. To connect the base to the community, PIDC planned to remove the gates and fences. PIDC would wait ten years to see if an aircraft maintenance operation and courier cargo could be developed. At the end of ten years, a decision would be made on whether or not to continue to pursue cargo and aircraft maintenance operations (HDR 1995, 92). The LRP was completed on September 25, 1995, two weeks before the base closed (Calabro 2008, 58).

### **Implementation LRA**

The LRP recommended that the implementation LRA be a smaller, focused, business-oriented, real estate management entity called the Plattsburgh Airbase Redevelopment Corporation (PARC) and that PARC be a Local Development Corporation (LDC).<sup>17</sup> Under New York law, LDCs can acquire property from a municipality without appraisal or bidding. Another benefit of an LDC is that they are under no obligation to participate in the competitive bidding process, which can make development easier (New York State Economic Development 2010).

PARC would have a seven-member Board of Directors appointed by elected state and local officials and have a full-time staff with a CEO. The board would appoint the CEO, who would appoint the senior staff (HDR 1995, 165). A Subsidiary Housing

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<sup>17</sup>LDCs are not-for-profit corporations and are used by municipalities to support particular purposes.

Corporation was established. Its board included a few people from PARC, a real estate appraiser, the commissioner of Social Services, president of the Board of Realtors, chairman of Evergreen Corporation (or a similar non-profit), executive director of the Plattsburgh Housing Authority, president of the local Builders' Association, and members from the City of Plattsburgh and the Town of Plattsburgh. The purpose of the Corporation was to ensure the incremental absorption of base housing (HDR 1995, 189). PIDC recommended that core members of the PIDC board become members of PARC. In the end, seven members of the PIDC board would become part of the PARC board (HDR 1995, 165). The LRP proposed that PARC board members have a strong professional business and entrepreneur background (HDR 1995, 164).

PARC, as the implementation LRA, was the agency in charge of redevelopment. It performed maintenance, acquired property, marketed, provided long-term leases, maintained the U.S. Oval, prompted new tourism development, served as landlord for educational facilities, provided utilities, and contracted for operation of recreational facilities, including the golf course (HDR 1995, 171). PARC decided to provide all services and maintenance in-house except for fire support (HDR 1995, xx and 913). PARC could not float tax-exempt debt, initiate tax deals as a stimulus for development, or apply for a State Economic Development Zone or Federal Empowerment Zone status (HDR 1995, 163). The LRP recommended an investment strategy where investors would receive tax abatements in exchange for the city bearing no capital on operating liabilities, but would share in all profits derived from rentals on the base (HDR 1995, 144). They used this to raise funds.

PARC's first CEO was David Holmes from 1994 to 1996 (Calabro 2008, xx). PARC's second CEO was Mark Barie, a local businessman, from 1996 to 1998 (Calabro 2008, 63). One of the New York senators, Senator Stafford, was not pleased with PARC's progress in 1997 and told PARC to hire Daniel Wieneke. In-house turf battles between Wieneke and Barie began and ended with Wieneke becoming PARC's third CEO in May 1998. He stayed for seven years (Calabro 2008, 67 and 95). The last PARC CEO was Bruce Stedman, from 2005 to 2010.

### **Redevelopment Resources**

The LRP recommended applying for \$11,314,000 in grants or subsidies over a 20-year period to support infrastructure development as well as minor airport construction and improvements (HDR 1995, ES-10 and 147). It recommended applying for \$6,163,000 in 1996; \$3,138,000 in 2000; and \$673,000 in a third phase (with no time period mentioned) from the EDA, FAA, the Federal Highway Administration through the Surface Transportation Program, National Recreational Trails Program, and the Intermodal Surface Transportation Act (HDR 1995, 159 and 211). The LRP recommended that PARC acquire property from the AF at no cost through a permanent EDC where the title transfers on an incremental basis (HDR 1995, xx). PARC requested that OEA cover 75 percent of staff and management operating expenses during an interim period between base closure and when PARC could operate profitably (HDR 1995, 209-211). Finally, the National Trust for Historic Preservation offers below-market-rate loans or lines of credit for properties listed on the National Register of Historic Places. In 1991 these loans were up to \$150,000 for each site, with a five-year payback (HDR 1995, 212). The LRP proposed that these loans be used for the Historic Oval. Investors in properties

in the Historic Oval would also be able to receive Federal Historic Investment Tax Credits of up to 20 percent.

The LRP recommended that PARC apply to be a New York State Economic Development Zone (EDZ), which gives special tax incentives and program assistance to businesses that locate in the development zone (HDR 1995, 213). One downside to the Empire Zone is that Local Empire Zones must submit an annual report on their activities (HDR 1995, 214). The other downside is that EDZs do not align with the concept of appropriate development focus.

Plattsburgh received two grants from EDA. One was a Long-Term Economic Development Grant, which established a revolving loan fund that made loans to businesses below market rates. This loan required a 25 percent local match (HDR 1995, 210). PARC also received a Sudden and Severe Economic Dislocation Grant, which provided business assistance, planning, research, training, and rent supplements. It required a 25 percent local match (HDR 1995, 210).

After the BRAC announcement, PARC applied for many state and federal grants. It received 12 state grants worth approximately \$12 million, including a \$455,000 state grant from the Urban Development Corporation in 1994 (Calabro 2008, 42 and 134). As part of the 2003-04 New York State budget, the New York State Senate approved the Transportation, Economic Development and Environmental Conservation budget bill (S.1405B), which included \$1.4 million for infrastructure and other improvements (Senate Republican Majority Website 2003).

PARC developed a beneficial relationship with NBT Bank. "NBT learned the ins and outs of our (PARC's) business and didn't panic at some transactions (as other banks

might have),” said Mark Poirier, PARC’s Director of Finance. This relationship helped PARC prepare property and attract businesses (Calabro 2008, 74).

### **Redevelopment Success**

David Holmes, PARC’s first CEO, had the responsibility of establishing PARC, preparing property for transfer, and negotiating with entities that wanted to locate to the former base (Calabro 2008, 57). PARC did two things to attract tenants. First, it set very reasonable rates, ranging from \$3 to \$4.50 per square foot for industrial facilities to \$12 to \$13 per square foot for space on the Oval or with lake views (Calabro 2008, 57). Second, wanting to attract tenants from outside the Plattsburgh area, PARC voted to accept relocating local tenants only if the move increased jobs by at least 25 percent. Otherwise, tenants relocating from the local area would have to pay 25 percent more (Calabro 2008, 58). Finally, auctions were held to auction off personnel property left by the AF. They netted \$1.5 million (Calabro 2008, 57).

Initially, Holmes had trouble attracting tenants from outside the Plattsburgh area. Mayor Rabideau, who had become mayor after the approval of the LRP, envisioned a military mission returning to the base and industrial development occurring at the city’s other industrial parks. He purposefully diverted Bombardier, a major manufacturer of aircraft and rail transportation, to another industrial location in the city (Calabro 2008, 47). This devastated PARC, which wanted to attract a major client early in the redevelopment process. Eventually, Mayor Rabideau adopted the LRP and PARC attracted ten Bombardier suppliers (Calabro 2008, 77). However, having Bombardier and its ten suppliers would have benefitted PARC more and provided opportunities for greater synergy amongst the companies at PARC.

There were additional difficulties. The St. Regis Mohawk Tribe applied to the federal Bureau of Indian Affairs for full custody of the base. They had a reservation 70 miles from Plattsburgh, where they operated the Akweasne Mohawk Casino (Calabro 2008, 46). They wanted the PARC property for a juvenile detention center, an aviation college, a gambling resort, and senior and homeless housing. “In the first year more than half of the hours I spent at work were dealing with the Mohawks,” said Holmes. “Eventually their interests faded” (Calabro 2008, 48).

A third concern for Homes was the watchful eye of the *Press Republican*'s chief editor, Bob Grady. Grady said, “We as a newspaper felt our responsibility was to really heighten our vigilance, because this group (PIDC/PARC) was self-appointed, self-anointed and they were not elected by anybody. They were not answerable to anybody. So we felt this was an enormous opportunity for abuse. Not that we suspected any individual... But a lot of the people were not used to public scrutiny” (Calabro 2008, 46).

PARC's second CEO was Mark Barie, a local businessman, from 1996 to 1998. Barie was under pressure to produce leases. PARC tried several initiatives. The first was a three-day fest called Cliffort Ball, featuring the jam band Phish. During the summer of 1996, 100,000 fans camped out on the runway. The concert brought \$25 million to the local merchants but no businesses to PARC, and PARC paid for runway clean-up. In 1997 PARC tried a smaller concert on the U.S. Oval with Joe Walsh, but it lost money (Calabro 2008, 65). Eventually PARC gave up on concerts.

After the concerts, PARC concentrated on direct marketing, with open houses that showcased the airport and local television spots to update the local community. The events allowed the public to see what was happening at PARC and the potential for the



runway. PARC even plowed the runway during the winter to allow clients to envision the potential. PARC released 30-second televised “PARC Updates.” Initially, PARC paid for the advertisements, but eventually the local television stations ran them as a public benefit. The television station’s signal reached into Quebec and Vermont, two of PARC’s primary markets with a total viewership of 3-5 million. “They were so effective, said Alexander “Sandy” Treadwell, former New York Secretary of State and former PARC board member. In making the commercials, “they [PARC] paid attention to details: here’s what the new entry to the base will look like; here’s a sign listing the companies that have come in” (Calabro 2008, 80). The television spots highlighted the benefits of PARC as a location immediately across the border for Canadian firms operating in the U.S.

Barie had two limitations on marketing. He couldn’t market the aviation side of the base, because under FAA Federal Aviation Regulation Part 139, the county could certify only one airport and Clinton County Airport was still open. He had a difficult time marketing the housing, because local realtors said that market was already flat and did not want additional houses on the market (Calabro 2008, 63).

The year 1998 marked a turning point in Plattsburgh. During an ice storm PARC’s small in-house maintenance staff, lead by Art Graves, kept PARC open and provided much-needed assistance to the City and Village of Plattsburgh. The assistance from the maintenance staff showed that PARC was a community asset and partner (Calabro 2008, 68). The maintenance staff were the unsung heroes of the closure process, said Art Graves. “ Our maintenance crews mowed, mulched, planted, and repaired all 3,500 acres and 28 miles of roads. When it came to personnel we were not deep by any means, but the magnitude of the work these fellows did! It was a small city here” (Calabro 2008, 55).

Also in 1998, PARC switched from the oil-fired central heating plant to gas, reducing utility costs significantly (Calabro 2008, 68).

In 1998, PARC and the AF came to an agreement on how to transfer property. Because PARC was a 501(c)3 non-profit, the military was reluctant to have it act as the recipient of deeds and property titles. “The idea of an authority was very attractive,” said former Assemblyman Chris Ortloff.” An authority would have bonding power, could run the airport, and would have legal insulation that would protect the municipalities from liability. “The key was using the County of Clinton Industrial Development Agency (CCIDA) and its bonding authority.” CCIDA was not involved in the day-to-day operations of PARC, but did accept the property transfer (Calabro 2008, 70-71). PARC transferred 3,496 acres in fee-simple ownership and 1,416 in easements (AFRPA 2012).

In 1998, 1,280 acres were designated as a New York State Empire Zone. “Companies that move into an Empire Zone qualify for a variety of tax credits. In some cases they don’t have to pay New York State business taxes for 10 to 15 years,” said Economic Development Specialist Roseanne Murphy (Calabro 2008, 71). Also, the City of Plattsburgh offered to waive taxes for seven years for businesses locating in the city or on the former base (Calabro 2008, 47).

Wieneke became PARC’s third CEO in May 1998. He stayed until 2005. He was a master dealmaker who ran PARC as a business. Wieneke publically re-approached Mayor Rabideau, establishing PARC’s place as the development lead for Plattsburgh. PARC ended the ban against local businesses relocating to the former base and started talks to developers about renovating the Capehart housing. PARC also pressed New York State Electric & Gas Corporation to take over the electrical infrastructure.

Wieneke headed off newspaper scrutiny by directly confronting *Press Republican* editor Bob Grady. As bad as newspaper scrutiny was, leakage of potential tenant information by the newspaper could be even more devastating. Wieneke addressed this issue by taking Bob Grady on a marketing trip to Montreal's Dorval Airport. When Wieneke was close to cutting a deal with one airline, Grady pulled the head of the company aside. He asked, "Can you envision any circumstance where if the local newspaper knew about this and wrote about it, it would interfere with the deal?" The company head said "Absolutely. We are in the middle of labor negotiations right now, and if unions ever found out that we were considering either moving a plant or opening up another plant, anything that might have any effect at all on jobs, I would say it is over right now." Grady never released sensitive information after that trip (Calabro 2008, 88).

PARC established a good relationship with Moody's Investment Services. When Moody's threatened to lower the county's debt rating, Clinton County Treasurer Janet Duprey invited Moody representatives to Plattsburgh. Dan Wieneke showed them around. "The women from Moody's got out of his car with their heads spinning. At the end of the day they told me Plattsburgh was awesome," said Duprey (Calabro 2008, 110).

What ultimately sold tenants was PARC's tenacity in meeting their needs. Pratt and Whitney said that "PARC wrangled several million dollars from the state and federal governments to refit a hangar with a new fire protection system, new heating, lighting, renovated hangar doors, new overhead cranes, and more." PARC also satisfied Pratt and Whitney's concerns about lingering environmental problems on the flight line by buying environmental insurance, one of the first LRAs to do so (Calabro 2008, 87). Scott Hockett of Fleet Max Incorporated, an importer of off-lease cars from Canada told the

press: “They (PARC) treated me like I was somebody, not just another business. PARC jumped through hoops for us” (Calabro 2008, 89).

To attract aircraft-related industries, it was important for PARC to show that they could land chartered planes. For a closed rural airfield to be able to land charters was aggressive. Bill Malott, the supervisor of airport operations, and Mike Caraballo, an employee with AF fire training experience, made it happen. Bill developed an airfield operations checklist that was critical to the FAA’s decision for approval and traced down baggage loading equipment. Mike rehearsed with the South Plattsburgh Fire Department so they would be prepared. Cheers went up when the plane landed. “That got us on the road to making it a viable airport,” said Ken Hynes, PARC Aviation and Tenant Services Director (Calabro 2008, 92). In 2004 the Clinton County municipal bus system came to PARC (Plattsburgh AFB 2004a), as well as Homeland Security, which opened a facility that employed 60-70 people (Plattsburgh AFB 2004b).

October 2004 marked a second change for PARC. On October 14, 2004, the New York legislature wanted to be more involved in flight line redevelopment, so they terminated the county’s arrangement with PARC to market the flight line. Beginning in February 2005, the agency’s reuse activities were limited to a small portion of the base. Environmental clean-up had progressed well, and Plattsburgh was nominated for removal from the NPL list and removed in 2004 (Plattsburgh AFB 1990; U.S. EPA 2012).

In 2004, property transfers quickened. Kemp Lane and portions of the Central Old Base transferred on August 24, 2004 (Plattsburgh AFB 2004a); portions of the Central Old Base and old small arms range transferred on December 21, 2004 (Plattsburgh AFB 2004b); and the remainder of the old small range, the central airfield, golf course, and

part of the industrial area transferred on April 19, 2005 (Plattsburgh AFB 2005a). The last deed transferred the summer of 2006 for 365 acres (Plattsburgh AFB 2005b).

Bruce Steadman, part of the PARC staff, served as PARC's final CEO from 2005 to 2010. Bruce oversaw the final clean-up, transfer of property, and redevelopment as well as the closure of PARC in 2010 (Calabro 2008). Today, Plattsburgh relies on new industries expanding to Plattsburgh and established manufacturing plants, such as Bombardier and Georgia-Pacific paper plant.

### **Plattsburgh Comparison of Development Capacity to Redevelopment**

Plattsburgh's development capacity was fifth highest, with a score of 73. Aspects of the development capacity that contributed to that score include business development brought to the local area, vertical linkages, institutional infrastructure built, and community spirit events held during the five years prior to the base closure announcement. The City of Plattsburgh, the Town of Plattsburgh, and Clinton County all border the former base. These entities did a good job of bringing businesses to the local area. Clinton County absorbed 45 acres and 300,000 square feet of businesses at local industrial parks (HDR 1995, 83). The local governments built institutional infrastructure such as the Fitzpatrick Cancer Center (CVPH 2012).<sup>18</sup> The local community held spirit events such as the Mayor's Cup Regatta and Battle of Plattsburgh Commemoration (City of Plattsburgh 2012). PARC applied for many state and federal grants (vertical linkages), and received 12 state grants worth approximately \$12 million, including a \$455,000 state grant from the Urban Development Corporation (Calabro 2008, 42 and 134). Finally, PARC was the lead agency for base redevelopment (Calabro 2008).

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<sup>18</sup> Although there was no record of physical infrastructure built.

Plattsburgh's development capacity was lowered by the acceptance of change, shared vision, project-oriented development, physical infrastructure, and appropriate development focus variables. Offering special tax incentives and program assistance through New York State's Economic Development Zone Program (HDR 1995, 213) as well as the City of Plattsburgh's willingness to waive taxes for seven years for businesses locating in the city or base lowered Plattsburgh's appropriate development focus variable (Calabro 2008, 47). Development capacity was also lowered by a low score in project-oriented development because the LRA was essentially the only organization responsible for redevelopment. Finally, PARC did not have a shared vision until later in the process.

Plattsburgh's LRP was very good, achieving 100 points on the LRP quality measurement. Plattsburgh's execution was also 100 points, but that number does not capture some of the subtleties in the execution that led to Plattsburgh's redevelopment success scores. Plattsburgh's initial execution was hampered by PIDC's size; 14 representatives and 136 volunteers are too many people to reach quick decisions. Bill McBride, PIDC's first chair said, "Cumbersome, but everybody wanted to help. We were finding our way. We had never closed an air base before." The PARC book said: "Early on everybody wanted a piece of the pie. In the PIDC there were 150 people involved on the main committee and subcommittees ... well-meaning, but obviously with 150 people no one can agree on anything" (Calabro 2008, 39 and 132). The size of PIDC no doubt contributed to it taking 715 days to develop the LRP. This compared with Peru, Indiana, which took 362 days and an average across the six communities of 509 days (AFRPA 2012). The upside of the large planning LRA was that there were many community members involved and they reached agreement. In some ways that is better than a small

LRA reaching quick agreement without broad community support. Of course, the desired outcome is a quick agreement with broad community support.

Plattsburgh's execution was also hampered by a quick turnover of PIDC and PARC chairs, interim directors, and CEOs. Together PIDC and PARC had seven leaders in 17 years—an average of 29 months per leader, with several leaders serving as little as six months (Calabro 2008). Several turnovers were caused by government involvement and disagreements. Execution was also hampered by a lack of shared vision between the local government and PARC (Calabro 2008, 46-48). In addition to city government scrutiny, PIDC and PARC were under a great deal of scrutiny from the local newspaper. In response to both levels of scrutiny Mark Barie, PARC's second CEO, said, "I walked away (from PARC) frustrated with the very political way in which (redevelopment) was being approached, rather than in a business-and-economic way" (Calabro 2008, 61).

If Plattsburgh AFB had not been physically divided between the City of Plattsburgh and the Village of Plattsburgh, then a potential way to solve the bitter disputes would have been to have the local government serve as the LRA. This would have made the local government responsible for all decisions and eliminated the scrutiny between the local government and the LRA. However, in this case, with two governments and a county straddling the base, development almost had to be handled by a separate third agency to eliminate fighting between the two government entities. Finally, in execution PARC learned to not attempt publicity events such as concerts, but rather to concentrate on direct marketing or events that showcased the former base in its airport capacity.

A positive part of Plattsburgh's redevelopment was the good relationships that Plattsburgh, PARC, and Clinton County made and kept with NBT Bank and Moody's

Investment Services (Calabro 2008, 74 and 110). Finally, what ultimately sold tenants was PARC's tenacity in meeting their needs (Calabro 2008, 89).

Plattsburgh's redevelopment was fourth in terms of "attainment of LRP goals by dates set in the LRP" and "goals to date." Plattsburgh's LRP goals included (1) attracting 3,600 direct and 4,400 indirect jobs, (2) creating \$6 million in income taxes and \$2.4 million in retail taxes annually, (3) creating property values on the former base reaching \$90 million, (4) minimizing fiscal risks to the local jurisdictions, and (5) creating rental income of \$2 million annually by 2015 (HDR 1995, 146). To attract 3,600 jobs by 2015 is 180 jobs per year, or 1,440 jobs by 2010. Plattsburgh was able to create 913 jobs by 2010, or 63 percent (AFRPA 2012). Those 913 jobs with an average Clinton County annual income of \$22,660 and a tax rate of eight percent would produce \$2,587,588 in income taxes, 54 percent of the LRP goal (U.S. Bureau of the Census 2010b; IDEA 2012). The *Life After Base Closure in Plattsburgh, New York: A Case History* video said that the former base property was worth \$80 million in 2011, placing Plattsburgh ahead of where they should be to reach their 2015 goal (Calabro 2008). Development at the former Plattsburgh AFB reached a point where they were a minimal fiscal risk to the local jurisdiction, income rental reached two million dollars, and the airport was making a profit (Plattsburgh AFB 2004b).

Plattsburgh's redevelopment in terms of success measured by indices of other government agencies was fourth, at 71 points. Plattsburgh was very successful at creating jobs. When the base was active, civilian employment had peaked at 976 jobs in 1989. By 2001, PARC matched that number (Calabro 2008, 89). Eventually, PARC reached 213 percent of the civilian jobs lost. Plattsburgh also sold or placed 97 percent of their



property under long-term lease. Plattsburgh was also very close in improving their unemployment rate. They had a .1 percent drop between the difference between the local and state rates prior to the BRAC announcement and the difference between the local and state rates in 2010.

Plattsburgh placed 27th in the 2006 Policrom national rankings that indicate economic strength among 577 U.S. micropolitan areas (Calabro 2008, 115). Micropolitan refers to communities with populations under 100,000 and a city with 10,000 to 50,000 residents.<sup>19</sup> At 27th in the nation, Plattsburgh held the highest ranking in New York (Calabro 2008, 115). Rome, New York ranked 361 in the metropolitan rankings. Marquette, Michigan, ranked 197th on the micropolitan rankings. Champaign–Urbana, Illinois (near Rantoul, Illinois, and the former Chanute AFB), ranked 300th on the metropolitan rankings and Kokomo, Illinois (near the former Grissom AFB), ranked 354th on the metropolitan ranking. Policrom Corp., a Florida-based economic consulting firm, compiles its Economic Strength Rankings from indicators such as employment, population, earnings, and personal income. Welfare and Medicaid payments are also included in the analysis, as indicators of economic weakness. Absolute measures such as current population and per capita income are combined with changes over five, ten and twenty-year periods to produce the rankings (Calabro 2008, 115).

What held Plattsburgh's redevelopment back were the frequent changes in CEOs and the second-guessing relationship of the City of Plattsburgh and PARC. CEOs that had a short time in tenure didn't get a chance to know potential clients and build long-term relationships. Dan Wieneke, the last and longest-serving PARC CEO, had the most

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<sup>19</sup> Oscoda, Michigan, with only 8640 residents in 2010, is not large enough to be considered a micropolitan. Metropolitan areas have a city of at least 50,000 residents (Policrom 2006).

time to develop relationships and had the most redevelopment success. He concentrated on relationships such as that with Mayor Rabineau, Bob Grady, and the International Brotherhood of Electrical Workers. During his first week on the job, Wieneke made a phone call to the Mayor. "I told him I'd like to jumpstart this transition by inviting the *Press-Republican* out to take pictures of us together, you and I touring some buildings, so the public understands we are going to do all of this collectively," Wieneke said. Rabideau met Wieneke at Building 100, and a reporter and photographer followed them as they discussed intended uses and infrastructure issues (Calabro 2008, 72). The photographs appeared in the local paper, showing the local community that the two gentlemen were going to work together. A spokesperson for the International Brotherhood of Electrical Workers Local 910, which moved its offices and training classrooms into an 1895 building on the Oval added, "Dan Wieneke has never made a commitment to us that he hasn't honored" (Calabro 2008, 89).

What made Plattsburgh work was the commitment of the people in the end to reach for a shared vision. Bryant Monroe, from the Department of Defense's Office of Economic Adjustment said, "A developer would have gone broke there (Plattsburgh). The PARC model, despite the abrupt transition of the CEOs, was a planning entity with broad participation. Federal, state, and local politicians had seats at the PARC table. The very existence of PARC allowed for local control while insulating any single entity from liability" (Calabro 2008, 118).

Plattsburgh came in fifth out of the six communities studied for development capacity with good LRP quality and good LRP execution. It came in fourth in "attainment of LRP goals both by dates set in the LRP" and "attainment of LRP goals to

date.” It came in fourth in redevelopment success measured by indices of other government agencies. The closeness of these rankings indicates that there may be a relationship between development capacity and redevelopment success.

### **Rome, New York, and Griffiss Air Force Base**

#### **Overall Notes**

The former Griffiss AFB is located in the heart of New York State, approximately 100 miles west of Albany, 18 miles east of the City of Oneida, 15 miles west of the City of Utica, and immediately on the outside district of the City of Rome in Oneida County (Hamilton 1996, 5). Oneida County, Rome, and Griffiss are in a north-central ("Upstate") New York. In 2010 the population was 33,725 (Wikipedia 2012l).

#### **Community and Installation Information:**

For hundreds of years Rome enjoyed great strategic and commercial importance. It sits along a historic, 1,000 mile east/west trade route from the Great Lakes to the Hudson River and the sea. Rome was built astride the *Great Carrying Place*, known to the Six Nations people. This name refers to a portage path—the carry—between the Mohawk River and Wood Creek that is the only overland section of that trade route. Boats coming up the Mohawk River from the Hudson had to transfer overland between 1.7 to six miles (depending on the season) to continue west to Lake Ontario (Wikipedia 2012l).

The region was also the scene of bloody fighting during the French and Indian War. The British had erected small forts to guard the carry and lucrative fur trade against French incursions from Canada. However, a combined French, Canadian, and Native

American force overwhelmed and massacred the British force in the Battle of Fort Bull. In 1758, after several abortive attempts to fortify the area, the British sent a very large force to secure the carry and build a stronger rampart complex, named Fort Stanwix.

Fort Stanwix played a pivotal role in the Saratoga Campaign of 1777, becoming renowned as "the fort that never surrendered." Patriot militia, regulars, and their Oneida Nation allies successfully repelled a prolonged siege in August 1777 by British, German, Loyalist, Canadian, and Native American troops. The failed siege, combined with the battles at Oriskany, Bennington, and Saratoga, thwarted a coordinated British effort to take the northern colonies and led to American alliances with France and the Netherlands (Wikipedia 2012). Fort Stanwix became the primary staging point for American attacks against British loyalist units. The fort continued to shield America's northwest frontier from British campaigns until being abandoned in 1781 (Wikipedia 2012).

Rome's development began with the Erie Canal construction in 1796. That year the Town of Rome was created (Zackey 2012). Rome served as the main transportation route between the Mohawk River and Wood Creek. The Erie Canal runs a mile south of Rome but is inaccessible due to swampland, so the city could not reap any benefits from the canal (River Street Planning and Development 2000).

The Town of Rome was converted into a city by the New York State Legislature on February 23, 1870 (Canfield 1909). The City of Rome encompasses over 72 square miles, making it one of the largest city land areas in the nation. The city has a strong mayor/council form of government (River Street Planning and Development 2000, 61).

Griffiss' initial history is tied to Paul E. Watson, a pioneer in the development of radar. Born in Bangor, Maine, Watson was a civilian engineer employed by the U.S.

Army Signal Corps from the 1920s until 1943 (Mulvey 2012). In 1936, he was named Chief Engineer of a Signal Corps research group at Camp Evans in Fort Monmouth, New Jersey, and tasked with developing a workable long-range radar for coastal defense. By 1937, Watson's team had developed a prototype "Search Light Control Radar" and successfully demonstrated it to the Secretary of War. Watson's team then became the "Radio Position Finding Section" and worked with the Westinghouse Corporation to deploy an Early Warning Radar in 1938. The Early Warning Radar was capable of detecting incoming bombers at a range of 78 miles, and a second system was deployed in 1939 with an operational range of 138 miles (Congress 1993).

Watson's prototypes were adopted by the Army in 1940, and Westinghouse delivered 112 radar sets. This was the first radar system to be deployed by the US military. Six of these sets were made operational in Hawaii, and one set, at Opana Point, detected the incoming Japanese air assault on Pearl Harbor on the morning of December 7, 1941 (Congress 1993). Colonel Watson died in 1943 (Hamilton 1995a).

In February 1942, Rome Air Depot opened at Rome AFB. After World War II, the AF Reserve 65th Reconnaissance Group, who conducted aerial photo and mapping operations, was assigned to Rome AFB. The base was renamed Griffiss AFB in 1949 in honor of Lt. Col. Townsend E. Griffiss (1900-1942), the first U.S. airman to be killed in the line of duty in the European Theater (Hamilton 1995a; Wikipedia 2012b).

Electronic research began at the Rome Air Depot in 1949. The Rome Air Development Center (RADC) was created in June 1951 for research, development and testing of ground communications and electronics. Watson's lab was absorbed into RADC and focused on radar. In the 1970s they began making airborne radar with the

airborne warning and control system (AWACS) and space surveillance radars. In the 1980s, they were on the forefront of fiber optics and photonics development. In the 1990s, their efforts included automated artificial intelligence-based mission planning and new radar systems. By 1990 the AF would control the world's most powerful radar, designed to cover the entire Atlantic Ocean from Europe to Africa (Wikipedia 2012b). RADC eventually became one of the four AF super labs, specializing in command, control, communications, and intelligence. It was also known as Rome Lab.

On October 3, 1950, the Air Defense Command's 1st Fighter Interceptor Group became the first permanently assigned AF flying unit to Griffiss. In January 1959, the 4039th Strategic Wing of Strategic Air Command was activated as an associate unit at Griffiss AFB. The Northeast Air Defense Sector located there in 1960. The 41st Air Refueling Squadron and 56th Munitions Maintenance Squadron were soon reassigned to Griffiss. In 1963, the 4039th Strategic Wing was redesignated the 416th Bombardment Wing (Wikipedia 2012b).

The 49<sup>th</sup> Fighter Interceptor Squadron came to Griffiss in October 1959 and was converted from the McDonnell F-101 Voodoo to the Convair F-106 Delta Darts in 1968. Rome Depot closed in 1967 with its functions transferred to other AF Logistics Command bases. The 49th FIS was inactivated on July 1, 1987, when the air defense mission was transferred to the Air National Guard (ANG). In November 1987, Griffiss became home to the United States Army 10th Aviation Brigade (Wikipedia 2012b).

At one time Griffiss was the largest employer in Oneida county, with an annual economic impact of more than \$650 million, employing over 4,000 civilian and 4,000 military (Griffiss AFB 1990). The base was realigned on September 30, 1995, losing

3,000 civilians, with 1,000 remaining at RADC (Rome Comprehensive Plan 2000, 2; Hamilton 1995a). See table 4-6 for synopsis of Rome information.

**Table 4-6. Rome/Griffiss AFB Basic Information**

<b>Rome/Griffiss AFB Basic Information</b>
- BRAC Round: 1993
- Base Closed: September 30, 1995
- Military Category: Large aircraft–bomber/tanker
- Base Personnel: 1342 permanent civilian employees lost at base realignment
- Base Size: 3,638 acres
- Northeast Air Defense Sector, Rome Laboratory and the Air National Guard will remain (U.S. DoD BRAC Commission Report,1993 I-71).
- Development Capacity: 68 points (ranked 6th out of 6 communities)
- LRP Quality: 100 points (tied for 1st with 4 communities)
- LRP Execution: 100 points (tied for 1st with 3 communities)
- Achievement of LRP Goals: 94 % (ranked 2nd and 3rd out of 6 communities)
- Achievement of Indices Used by Others: 55 points (ranked 5th out of 6 communities)

#### **Situation at Rome, New York, and Griffiss at BRAC Announcement**

The local reuse area for Griffiss is Rome, New York and Oneida County. Oneida County had 250,836 persons in 1990 and Rome had 44,350 (New York State Economic Development 2012; River Street Planning and Development 2000, 1). Realignment would mean a 30 percent loss of Rome's economy (River Street Planning and Development 2000, 11). The unemployment rate in the reuse area at the time of the

closure announcement was 6.7 percent and the state unemployment rate at the time of the closure announcement was 6.9 percent (U.S. Bureau of the Census 1993j, 15). The Oneida County per capita income for 1990 was \$5,027 and the state's was \$8,915 (U.S. Bureau of the Census 1993j, 175).

There were no major business expansions identified in the five years prior to the closure announcement. Local community events included the Base Open Houses (Gray 2010). Higher education in relative close proximity to Rome included Mohawk Valley Community College (Hamilton 1995a, 31); Syracuse University of New York (SUNY) Tech; Herkimer County Community College; the Center for Advanced Systems and Engineering (CASE) Center, which fostered university-industry collaboration; the Northeast Parallel Architectures Center, specializing in parallel mainframe computers; Theory Center at Cornell University; Reliability Analysis Center; New York State Education and Research Network; and the Institute for Advanced Studies in Information Science and Technology.

#### **Facilities at Griffiss AFB at BRAC Announcement**

Griffiss had a total of 3638 acres. At the time of realignment 136 acres were retained by DoD for Rome Lab, 3,310 acres were transferred to the local reuse authority (LRA), and 192 acres were leased (AFRPA 2012). Historically, construction on the base had occurred in three distinct periods. The early 1940s saw rapid war-time construction. Most of the buildings were of wood, with tight column spacing, marginal-quality building materials, and less than optimum maintenance (except for building 101, which was a state-of-art aircraft repair and maintenance hangar). The second period was the military buildup during the late 1950s and 1960s. Structures from that period were brick veneer



buildings with load-bearing masonry perimeter walls, and steel-frame floor and roof structures. Many of the structures built were relatively small in useable areas. The third period was the 1980s. The construction type was not mentioned, but most buildings appear to be brick veneer structures similar to the 1950s and 1960s construction. The structures from the 1950s, 1960s, and 1980s were in good maintenance condition at realignment (Hamilton 1995a, 6).

The FAA Federal Aviation Regulation (FAR) Airfield Evaluation and Compliance report conducted by Greiner Inc. indicated that—aside from no passenger terminal, security fencing, or de-icing—there were no large deficiencies with the airfield. There were no severe airspace conflicts. There was no crosswind runway, but one was not warranted due to consistent wind patterns. Rome Lab, New York ANG, the Defense Reutilization and Marketing Office (DRMO), and the First Space Surveillance Squadron were to remain at Griffiss. Their facilities in the central part of the base were not evaluated. The 10th Mountain Division would remain at Griffiss until an airfield was constructed at Ft. Drum and then the unit would relocate to Ft. Drum.

Griffiss was served by a very extensive network of utilities and could accommodate a variety of new uses with no changes to the utility systems (Hamilton 1995, Utility Annex 2). Water was supplied by Rome from its reservoir. Raw water from the region is virtually unlimited (Hamilton 1995a, Utility Annex 6). The sewage system included gravity lines and force mains with a pump station. The sewage was sent to Rome (Hamilton 1995a, Utility Annex 4). The city's sewage system had capacity to expand (River Street Planning and Development 2000, 56). There was no piped storm sewer

drainage system. All the water went via surface drainage to Three Mile Creek (Hamilton 1995a, Utility Annex 3).

The central heating plant on base served about 200 buildings. The plant was coal-fired and delivered 280,000 pounds of steam per hour during the winter. Forty people were required to maintain the system. Natural gas was supplied by Niagara-Mohawk Power Corporation (Hamilton 1995a, Utility Annex 9). Greiner thought Niagara's cost of gas was high and identified other local providers (River Street Planning and Development 2000, 59). Niagara-Mohawk Power was the sole provider of electricity. Fifteen kilovolts were delivered to the base (Hamilton 1995a, Utility Annex 8).

Due to Rome Labs, Griffiss enjoyed a sophisticated telecommunications infrastructure that would not have to be upgraded for most future development recommendations (River Street Planning and Development 2000, 59). The road system on base was good and the base was served by a rail line (River Street Planning and Development 2000, 58). Readyng the site for development would still require substantial capital investment, especially to convert the 200 buildings from a central steam plant to individual boilers and also to meter all the buildings (Hamilton 1995a, 11).

#### **Environmental Situation at Griffiss AFB at BRAC Announcement**

Griffiss was proposed for addition to the National Priority List (NPL) in October 1984 and designated a Superfund site in 1987. It was one of 156 federal Superfund sites (Griffiss AFB 1991; EPA 2012). In 1994 there were 31 areas of concern, 9 petroleum sites, and 51 areas of interest (Griffiss AFB 1994).

The areas of concern included underground storage tanks and contaminated soil. De-icing fluids had been used base-wide and the battery acid disposal pit included metals

and polychlorinated biphenyls. Chromium, copper, and zinc were detected in landfill 5. Ethylene glycol and other organic compounds were discovered in more than a dozen wells. A 1975 landfill caused problems with leachate and impacted Six Mile Creek. The AF paid for environmental clean-up, and provided funds to extend the municipal water supply lines to areas east of the Griffiss to replace a well contaminated by the base. All long-range remediation measures were in place by 2012 (Griffiss AFB 1990; Law Environmental 1992; Corbett 1990; New York State Department of Environmental Conservation; River Street Planning and Development 2000, 34, AFRPA 2012).

### **Opportunities and Constraints**

Rome realignment opportunities included the size of the former base. Griffiss was the largest piece of land available near Rome. Ninety percent of the city's land was residential, with West Rome Industrial Park (WRIP) the only industrial park (River Street Planning and Development 2000, 15). Opportunities also included the federal agencies that were to remain in or come to Griffiss, including RADC, with 1000 people; the Defense Finance Accountability Service, which would establish an office at Griffiss and employ 750 people; the ANG with 401 persons; DRMO with 20 persons; and the First Space Surveillance Squadron, with 60 persons (Hamilton 1995, 2 and 15). These tenants provided a good anchor for redevelopment and helped orient the Griffiss LRP toward research and technology. Finally, opportunities included special facilities such as the runway, rail access, and a good infrastructure system—especially the telephone and communications fiber network (Hamilton 1995a, 9). The 10th Mountain Division would remain at Griffiss until its airfield was completed at Ft. Drum. While at Griffiss, it paid approximately \$9 million per year to keep the “airfield warm.” These maintenance funds

helped the Griffiss Local Development Corporation (GLDC), the implementation LRA, get on its feet during the early redevelopment.

The constraints included significant environmental clean-up, with some clean-up being accomplished during redevelopment; a vacant rental housing rate of 14.3 percent; and a decrease in home values of 30 percent, attributed to the base realignment (City of Rome Comprehensive Plan 2000, 19). An additional concern was that there were no major business expansions in the Rome area immediately prior to the BRAC announcement, which could indicate either a lack of businesses wanting to expand or relocate to Rome or local restrictions that limited business expansion (Reynolds 2010).

### **Proposed Redevelopment**

In accordance with John Lynch's (2004) recommendations, Rome chose to have two separate LRAs. Their planning LRA included organizations and individuals involved in the planning process. The Griffiss Redevelopment Planning Council (GRPC) served as the planning LRA. The GLDC served as the Implementation LRA. GRPC membership included Joseph Griffo and Raymond Meier as co-chairs, Paul Cataldo (Chair, GRPC Economic Development Committee), RoAnn Destito (GRPC Base Operation Committee and State Representative), Frederick Tillman (GRPC Base Operations Committee), Ronald Conover (GRPC Base Operations Committee), Robert Lambe (co-chair Master Plan Committee), Steven DiMeo (executive director), and eight additional members.

### **Local Redevelopment Plan (LRP) Planning Vision**

The LRP was developed by Sasaki and Associates, Inc., in 1995 and updated in 1996 (Griffiss International Airport 2010a, 8). It took 457 days to develop the LRP, which is about average. Its reuse strategy was to provide a framework for transformation

of an obsolescent industrial complex into a vibrant, mixed-use research/business park, generating jobs and tax revenue (Hamilton 1995, 2 and 15). This strategy included:

1. Support Rome Lab and other government tenants.
2. Establish outlying zones of development.
3. Demolish obsolete, unmarketable structures.
4. Create new open space resources that linked the Erie Canal and Mohawk River.
5. Address the need for better regional transportation.
6. Provide a rational, financially feasible means of transferring ownership, which will spread capital and operating costs.

### **LRP Goals**

For business purposes, Griffiss was divided into Griffiss Business and Technology Park (GBTP) and the Griffiss International Airport (GIA). GBTP's goals were to promote land use that was compatible with Rome Lab and other DoD uses (River Street Planning and Development 2000, 11). Uses were to be labs, offices, industrial, aviation, education, and housing as well as back offices, interactive information media, electronic publishing, distance research, mail order, distance learning, remote analysis, problem-solving, telecom, food processors, chemicals, manufacturing, and technology-dependent operations. The food processing, chemical and manufacturing uses were selected to utilize existing rail lines to bring in bulk materials (Hamilton 1995, 44). Compatible uses also included being compatible with adjacent neighborhoods and uses, integrating the circulation network into the existing off-base traffic patterns, and creating open spaces networks that connected to existing open spaces.

GBTP wanted to create new jobs to replace or exceed the civilian jobs lost due to realignment by 2015 and to minimize the financial burden on the local community. Finally, all goals were to maximize long-term growth versus achieving short-term real

estate deals (Hamilton 1995a, 2-1; Reynolds 2010). The airport's goal was to be operational by 1996, with its long-term goals being the attraction of regional commercial service and operating profitably (Hamilton 1995a, 4 and 18). Their goals included:

1. Comply with community development needs, consistent with local planning policy.
2. Generate jobs.
3. Minimize fiscal and economic burden on local jurisdictions.
4. Realistic implementation. Do not contemplate short term opportunities that preclude long term objectives. Promote uses that are compatible with Rome Labs.
5. Have an operational airport by 1996.

### **Proposed Uses**

The LRP proposed three scenarios for the site: a research park, business center (titled the Mohawk Valley Business Center), and regional aviation complex. The research park took advantage of Rome Lab remaining at Griffiss. Rome Lab's presence was important to distinguish Griffiss from other industrial parks and other BRAC communities. At realignment, the lab had 191 contracts valued at over \$100 million. As one of the four AF super labs, Rome Lab had an important mission in technology transfer, taking C3I technologies and implementing them within the AF and DoD (Hamilton 1995a). The research park would attract business or research entities related to Rome Lab's research to further the lab's technology transfer.

The business center would seek the same businesses and research entities, but not limit the businesses or research to technology. This opening of Griffiss to almost any business was both good and bad. On the negative side it diluted Griffiss' technology focus, making it less attractive for businesses or research entities wanting to locate in a

concentrated technology park. However, it could also attract businesses more quickly, because any business interested would be welcome.

For the regional aviation complex, the Greiner study looked at the market for air services. The military did not need the airfield. So the airfield was considered for civilian use only (Hamilton 1995a, 1-1). This meant that in order to operate GIA profitably, Griffiss would have to generate more airfield operating funds than other BRAC communities with joint use airfields where the military provides some of the airfield operating services or costs<sup>20</sup> which helps lower the LRA's operating costs.

The regional aviation complex would be a tough challenge. General aviation alone would not be sufficient to create enough revenue (Hamilton 1995a, x). There was no clear cargo market (Hamilton 1995a, 6). Regional carrier service was considered to four possible markets: Newark, Detroit, Pittsburgh, and Chicago (Hamilton 1995a, 6-3), but regional carrier service was considered difficult to attract due to the proximity of Syracuse and Buffalo airports. Other communities in a similar situation, such as K. I. Sawyer, were able to move the regional carrier to the former base. Rome did not have this option since the county airport did not have a regional carrier. This made generating aviation revenue at Griffiss difficult. Thus, the Greiner study recommended that air service not be moved from the county airport to Griffiss (Hamilton 1995b, 1-1).

The proposed LRP included pieces of all three scenarios. It proposed research, development, and businesses related to Rome Lab. It proposed non-research uses that Griffiss could attract—due to its remote location (compared to New York City) and lower wage structures—telecommuting centers, back-office administration processing

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<sup>20</sup> In a joint user arrangement DoD shares the airfield and usually provides fire service. Special fire training is required for military aircraft, so fire service is an appropriate shared service for the military to provide.

operations, interactive information media, and electronic publishing. Finally, it proposed an aviation district (in spite of Greiner's recommendation). To take advantage of the rail line, the LRP proposed food processing and chemical manufacturers who relied on bulk materials that could be brought inexpensively by train. Manufacturers that required large sites were also targeted (Hamilton 1995a, 35). The LRP included education and training uses, as well as affordable home ownership opportunities (Hamilton 1995a, 31 and 17). Higher education entities near Griffiss were offered opportunities for expansion.

The proposed LRP included nine districts (four central and five outlying districts) distinguishing areas for specific uses. In essence Griffiss was creating mini business parks within Griffiss, each with its own identify (Hamilton 1995a, 19). They included:

1. AF Research Lab (AFRL)/R&D Core (a central district).
2. Office/R&D District (a central district).
3. Industrial District (a central district).
4. Aviation District (a central district).
5. Education and Training District (an outlying district).
6. Skyline Development East and West (an outlying district with office, industrial, warehousing, and large-scale retail).
7. SAC Hill (an outlying district with retraining and education).
8. Housing at Woodhaven (an outlying district for housing).
9. Floyd (an outlying district with facilities for Rome Lab and the golf course).

The LRP investigated three levels of development. In the high-end scenario, property tax revenues began to exceed the public service provision costs in year ten. In the low-end scenario, property tax revenues did not exceed the public service provision costs until year 20 (Hamilton 1995a, 46).



## **Implementation LRA and Other Redevelopment Organizations**

There were many players involved with Griffiss. Implementation of the LRP was the primary function of the GLDC. GLDC was created by the New York State Legislature in 1994 as a development partnership with Oneida County and formally recognized as the LRA. To implement the reuse plan GLDC was authorized to perform strategic and financial planning; market, buy, and sell property; perform landlord functions, including day-to-day management; and incur debt and raise funds for the Griffiss Business and Technology Park (GBTP) (Hamilton 1995a, 3; Griffiss International Airport 2010b, 8; City of Rome Comprehensive Plan 2010, 11). GLDC was a not-for-profit with a 15-member board of directors (Griffiss International Business Park 2012, 8). Board membership included people such as Douglas Bartell (Vice President of Oneida Savings Bank) and Kevin Martin (lawyer and also member of Village of Clinton Planning Board), who were appointed to the Board of Directors in 2010 (Rome Daily Sentinel 2010). Choosing local banking industry and planning board members assisted GLDC redevelopment. Initially, GLDC was responsible for all of Griffiss; however, when the municipal airport was transferred to Griffiss, Oneida County took responsibility for the airport (Reynolds 2010).

There are many organizations in the Griffiss area that assisted (and continue to assist) in economic development. They include the Mohawk Valley Economic Development Growth Enterprises (EDGE), a vertically integrated, private, non-for-profit, economic development corporation that served as the economic development agency for Oneida and Herkimer Counties. EDGE provided research and planning studies, feasibility studies, GIS support, and other technical support to communities, prospective businesses,

and developers. It was a one-stop agency for potential Griffiss tenants (GIA 2010b, 8). EDGE managed real estate development projects and other aspects of business development, including Job Development Loan Funds, the Micro-Enterprise Assistance Program, revolving funds, and the Rural Business and Agri-Business Assistance Program (Rome Comprehensive Plan, 2000, 14). EDGE linked the county's financing incentive and other assistance packages to prospective businesses and provided staff to GLDC (GIA 2010b, 8 and 49).

Rome Industrial Development Corporation (RIDC) acted as Rome's economic development arm, getting 50 percent of its funding from Rome and 50 percent from private sources. RIDC acted as a conduit for businesses seeking assistance from the Community Development Block Grant program, the state in training assistance, low-cost financing, infrastructure loans, grants, and private funds. Local loan funds provided low-interest loans to companies, creating new jobs for low and moderate income persons and small businesses (River Street Planning and Development 2000, 13).

The New York State Technology Enterprise Corporation (NYSTEC) was responsible for identifying, developing, and transferring dual-use technologies to non-military users. NYSTEC worked with Rome Lab to build needed technical support for economic development and global competition (Hamilton 1995a, 49). NYSTEC also identified potential tenants for Griffiss. The Griffiss Institute facilitated the cooperation of private industry, academia, and government in developing solutions to critical cyber security programs (Griffiss Park Land Owner's Association 2012).

The Oneida County Industrial Development Agency (IDA) was a New York public benefit corporation offering financial incentives for hands-on manufacturing and other

eligible projects, such as payments in lieu of taxes (PILOT), tax-exempt industrial development bond financing, taxable industrial revenue bond financing, relief from mortgage recording tax, and relief from sales tax on materials, machinery, equipment, and furnishings (GIA 2010b, 9).

New York State encouraged and designated Empire Zones. Rome has three zones: the WRIP, the city's central business district, and GBTP (GLDC 2009). The Rome Empire Zone's 14-member Administrative Board included one member from RIDC, one from Mohawk Valley EDGE, and one from GLDC (City of Rome Empire Zone Administrative Board 2006). Empire zones offered exemptions from real property taxes, state sales taxes, wage tax credits, investment tax credits, sales tax exemption, credits, real property tax credits, tax reduction credits, utility rate reductions, and capital credits (River Street Planning and Development 2000, 13). New York state helped GBTP by creating the New York State Science and Technology Foundation (Hamilton 1995a, 30).

Also in the Rome area were the Corporation for Innovation Development, the Northeast Manufacturing Technology Center, the Industrial Effectiveness Program, the Small Business Innovation Research Promotion Program, and the Strategic Industrial Group Services Program, as well as the Industry-Labor Education Council and the Mohawk Valley Applied Technology Commission. The Mohawk Valley Quality Improvement Council helped with total quality management. The Industrial Technology Extension Service brokered assistance from other sources. The Central New York Business Incubator was a 30,000-square-foot facility where new businesses could start up (Hamilton 1995b, 30-1).

The Griffiss LRA contacted other LRAs for lessons learned, including K. I. Sawyer AFB; Pease AFB in Portsmouth, New Hampshire; Cecil Field in Florida; Plattsburgh AFB; Charleston Naval Yard in Charleston, South Carolina; Fort Ord in Monterey, California; and several former installations in San Antonio, Texas (Reynolds 2010).

### **Redevelopment Resources**

GLDC prepared applications for seven years requesting funds, loans, and grants from OEA, EDA, HUD, the New York State Economic Development Corporation (NYSEDC), and the New York State Department of Labor (NYSDOL) (Reynolds 2010). The FAA MAP and Airport Improvement Program awarded over \$90,000,000 to Griffiss (GIA 2010b, 1-3; Hamilton 1995b, 3-4). Later Griffiss would also receive FAA funds for operating, based on the number of enplaned passengers per year (Hamilton 1995b, 3-3).

In 2003, as part of the Transportation, Economic Development and Environmental Conservation bill (S.1405B), New York State provided \$1,400,000 to improve the transportation network on Griffiss and tie it in with the local transportation network (Senate Republican Majority Website 2003). Between 1995 and 2009, the Empire State Development (ESD) Directors approved more than \$17,700,000 in funding in legislative/executive-sponsored grants, as well as \$6,400,000 in legislative/executive sponsored grants and ESD discretionary funding for GBTP's primary tenant, Empire Aero Center. In addition, the Directors approved a total of \$12,000,000 in grants for the consolidation and modernization of Rome Lab (GLDC 2009). GBTP received \$1,053,000 from New York State as an Empire Zone for redevelopment expenses, and New York State approved \$1,000,000 for the New York State Technology Enterprise Corporation to commercialize technologies developed at the Rome Lab as well as \$300,000 to GLDC

(Cooper 2009; GLDC 2009; New York State Economic Development 2012, 222). Local assistance consisted of tax-exempt municipal debt financing, such as tax-exempt municipal bonds. GLDC used tax abatements and subsidized real estate development to attract businesses (Reynolds 2010).

Other assistance included a \$1,300,000 construction loan in 2001 to GLDC by Rome Savings Bank for the renovation of a building to lease to BAE Systems who hired 65 new full time employees. The project was also funded in part by a \$175,000 grant from the NYSEDC and a \$135,000 grant from the Economic Development Administration (New York State Banking Department 2001, 4-1). In 2002, the National Trust for Historic Preservation's Main Street Center designated Rome as one of 12 state pilot "quality communities" (New York State Economic Development 2010). This assistance did not go directly to Griffiss, but did benefit Rome. Rome's code officer streamlined processes for tenants to hasten the issuance of permits (Reynolds 2010). Finally, Working Solutions maintains a "one stop" center in Rome, which offers a wide variety of workforce development services to ensure that the workforce is trained to meet the requirements of new employers (Griffiss AFB 2000).

### **Redevelopment Success**

The economic and demographic structure of Rome changed dramatically in 1995 when Griffiss was realigned. Base employment had represented 30 percent of the city's economy and generated an economic impact of more than \$1.239 billion (Griffiss AFB 1989). These figures included expenditures for the 4,574-person military payroll, 3,407-person civilian payroll, and the materials, equipment, and supplies purchased by the base (Rome Daily Sentinel 1990).

When Griffiss was realigned, the AF transferred 3,310 acres to the LRA: 1,554 acres as a Public Benefit Transfer, 1,412 by Economic Development Conveyance (EDC), four in negotiated sale, 239 in reversion, eight in a federal-to-federal transfer, and 93 in public sale. One hundred ninety-two (192) acres were placed in long-term lease. Conveyance was complete in 2012 (AFRPA 2012).

### **Execution**

The GBTP was a large commercial and industrial development opportunity for Rome. This is beneficial for Rome because 90 percent of their land area outside of Griffiss was zoned for residential use with the only other business park being WRIP (River Street Planning and Development 2000, 3 and 27). GBTP divided their portion of Griffiss into seven development sites, each with its own identity: defense, commercial, technology, heavy industry, education, office, recreation, and open space. The Park Center was a 180-acre site for the AFRL, Defense Finance Accounting Service (DFAS), and other private companies doing business with defense agencies. Technology Heights with a hilltop site for satellites was part of the New York State Empire Zone and became home to the Griffiss Institute. Enterprise Way, also part of the Empire Zone, was a 150-acre shovel-ready site for heavy and light industry. Campus Green was a 142-acre site ideal for a conference or educational setting. Skyline Summit was 126 acres of prime land for an executive park. Mohawk Glen included the golf course that fronts the Mohawk River, and Aviation Gateway—also part of the Empire Zone—was the entry to the airport (River Street Planning and Development 2000, 12; GIA 2010, 3). GBTP and the West Rome Industrial Park are foreign trade zones.

To reach its goals, GBTP spent over \$15 million in capital improvements to modernize the park infrastructure (River Street Planning and Development 2000, 12). In 2007, the Griffiss Parkway was rebuilt and strengthened to accommodate heavier truck traffic and additional vehicle traffic. All the current access points to GBTP were updated for increased traffic loads and volume. GLDC funded Project Cardinal, a new \$1,450,000 state-of-the-art office complex with 45,000 square feet. The project expanded research opportunities at the park, leading to new project development and business opportunities, with an estimated 50 jobs (River Street Planning and Development 2000, 15). MV EDGE and GLDC's marketing frameworks were to concentrate on export goods and services (Hamilton 1995, 3), as well as on standard economic development tools to locate companies through industry contacts and trade shows (ADC 2011).

Through 2010, Griffiss welcomed over 75 businesses, 5800 employees and generated four million dollars in taxes in 2010 (Federal Register 1996). Scienx, a high-technology start-up company that specializes in optical imaging and anti-counterfeiting technology, was attracted to Griffiss (River Street Planning and Development 2000, 15). BAE Systems Rome began operations in 1997 in a 14,000-square-foot building. In 2001, BAE Systems Mission Solutions dedicated a new 18,000-square-foot, \$6 million software development facility. The new facility doubled the company's presence at the park, with the workforce expected to grow by 50. BAE's Rome facility develops and produces the Image Product Library, a software package developed for the U.S. National Imagery and Mapping Agency, part of DoD (ADC 2001). In 2010, Assured Information Security Inc. (AIS), became the sole tenant in a newly constructed, \$10 million corporate headquarters. AIS is a research and development company that works with the government on cyber

security (Rome Daily Sentinel 2010). The Photonics Development Corporation (a non-profit) started in 1989 (Hamilton 1995a, 30-1). Other businesses to locate at GLDC included Leonard Bus Sales, Family Dollar, and the Oneida Financial Center, a two-story structure offering Class A office space (GIA 2010, 18-23, 46-48; River Street Planning and Development 2000, 15). In 2002, Rome opened a new 320,000-square-foot high school on Grissom worth \$45.4 million and completed several parks (River Street Planning and Development 2000, 3, 28 & 51).

GBTP has a disparate mix of uses among its 70 businesses. “It’s in that diversity that we’re able to sustain the park,” said Mary Bonney, vice president of communications for Mohawk Valley EDGE, “so if one sector is lagging we can rely on others.” When employers decided to leave GBTP, GLDC worked hard to identify new employers. In 2010 the parent of Empire Aero Center wanted to divest its assets at GBTP. Officials successfully identified another aircraft maintenance firm to take on Empire’s assets, ensuring hangar and ramp space would not go unused. A deal to sell Empire’s facilities to Quebec-based Premier Aviation was reached in October 2010, only eight months after Empire’s parent company Israel Aerospace Industries said it wanted to divest. The CEO of Premier cited the availability of a wide-body paint bay, as well as the aircraft mechanic training program offered onsite by the local community college, as critical factors in taking over Empire’s hangars, back shops, offices, and ramp space (ADC 2011).

GIA is a public-use airport owned by Oneida County. The airport began operations on January 1, 2007, after Oneida County’s general aviation operations moved from Whitestown to Griffiss (Rome Daily Sentinel 2009).<sup>21</sup> GIA is classified in the National

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<sup>21</sup> Whitestown became an emergency preparedness center for first responders, with Met Life Bank of New York Mellon and Daimler Buses North America the leading employers (*Rome Sentinel* 2009).



Plan of Integrated Aviation Systems as a general aviation airport with no commercial passenger service. Funding for the airport comes from the Airport and Airways Trust Fund, which is supported through aviation system users taxes as well as Oneida County (GIA 2010, 5 and 10).

The GIA is 1,680 acres, with an 11,820-foot by 200-foot runway and twenty structures. GIA is divided into seven marketing districts, with each district promoting different features to attract different groups of tenants. Area 1 (201.6 acres) contains aviation uses. Area 1a (53.9 acres) is for aviation-related development. Area 2 (7.9 acres) contains hangar 101, the largest hangar, which was originally used for aviation depot repair work. Area 3 (4.6 acres) contains additional conventional hangars. Area 4 (38.2 acres) contains a corporate hangar facility. Area 5 (12.8 acres) was set aside for additional corporate hangars, and area 6 (31.5 acres) has five nose dock maintenance hangars (Griffiss International Airport Business Plan 2010). The Department of Aviation has 23 county employees to manage and maintain the airport (GIA 2010a, 1-6).

GIA is operated as a county department and led by the aviation commissioner. The county has a 29-member Board of Legislators with an independently elected County Executive. There are 11 standing committees under the Board. The Aviation Commission is one of them. The Commission, with nine members, is appointed by the County Executive and confirmed by the Board. There are three divisions under the Commission—Management Services, Capital Projects, and Operations and Planning (GIA 2010a, 6-7). Discussions with the airport management indicate that job creation in Oneida County is the number one priority for economic development, followed by marketing and retrofitting the aging infrastructure (GIA 2010a, 1-5). Specific goals include:

1. Enhance public relations to elevate community awareness of the economic impact of the airport in the county, including the many high-paying jobs. Reduction of high utility costs associated with the steam heat system.
2. Continued support of existing maintenance, repair, and overhaul (MRO) operations and recruitment of new businesses.
3. Provide assistance to the field base operator for growth opportunities.
4. Improve revenue through new tenants and private investment.
5. Reduce maintenance costs associated with the large amount of infrastructure.

From 1995 to 2010, the airport attracted 75 companies and approximately 5500 jobs. As of January 2010, 68 aircraft were based at Griffiss including 52 single-engine aircraft, 11 twin-engine aircraft, two jets, and four helicopters. For the year ending October 2009, 53,678 operations occurred. Griffiss was the busiest general aviation airport in New York outside of New York City. At Griffiss, Million Air provided flying-based operations (FBO) out of hangar 100. Airport Services Unlimited provided helicopter services and helicopter maintenance. Braddock Press, Inc., a Utica-based graphic communications company that maintained a 24-hour plant in Utica and used aircraft stationed at Griffiss to reach customers. Galaxy Aviation was a flight training school and club. Indium Corporation was a developer, manufacturer, and distributor of alloys, solders, pure indium, indium compounds, and electrically conducive adhesives. Landcare Aviation, Inc. provided aerial photography and remote sensing collection services. Midair USA provided aviation-related services including aircraft trading and leasing. Avis, Budget, and Hertz provided rental cars. In 2008, the Mohawk Valley Community College (MVCC) opened an Airframe and Powerplant Training Center in building 221. The school accepted 72 students annually. In the future, the school planned to expand its curriculum to include Eurospace certification, the FAA equivalent for international work (Mohawk Valley Community College Campus Briefings 2008). The

Civil Air Patrol operated out of Hangar 48. The Computer Chip Hybrid Integration Partnership was a high-tech venture between the State University of New York Institute of Technology and the University of Albany (GIA 2010a, 18-23, 46-48). The Northeast Air Defense Sector opened a new \$9,600,000 headquarters building (GLDC 2009).

In spite of their success, the airport has had some setbacks. Essential Airline Service left in 2002 (GLDC 2009). In 2008, the AF decided to suspend and cancel the AWACS Forward Training mission at GIA (Acuri 2008). In 2011 the community-military partnering organization received \$500,000 from New York's Empire State Development Corporation to ready the sites for new missions and to prepare for future BRAC rounds (Association of Defense Communities 2011). To try to attract scheduled airline service, Griffiss obtained a Part 139 Operating Certificate. However, the airport is seen as too close to Syracuse, with Syracuse having a larger population than Rome and Syracuse's location able to draw more customers than Rome, so a scheduled airline service is not likely to locate to Griffiss (GLDC 2009).

The LRP thought that the Griffiss infrastructure, while attractive for a commercial airport, was too large for a general aviation airport. That proved to be true. High utility costs contribute to the airport operating at a net loss each year. The airport's yearly operating costs are \$4.5 million, with the centralized steam plant's operating costs having the highest cost and building 101 using \$800,000 in utilities each year (GIA 2010b, 1).

### **Impact on Reuse Area**

The impact of the 1995 closure of Griffiss AFB has been mixed. Local redevelopment agencies continue to redevelop the installation and market the facility (River Street Planning and Development 2000, 15). Between 1990 and 2000, the

population in the Utica-Rome metropolitan area of Oneida and Herimer Counties declined 5.3 percent to 299,896. The losses are partly the result of the closure of Griffiss AFB and partly due to the continuing decline in manufacturing employment in the upstate New York area (River Street Planning and Development 2000, 15). The mix of private and public sector employers has also shifted since the closure of Griffiss AFB. The number of finance, insurance, and real estate sector businesses in the Rome area increased by 32.8 percent. The number of retail establishments in the City of Rome dropped 11.2 percent from 1992 to 1997. The acute loss of population provided fewer customers. Retail-related businesses in the City of Rome generated \$347,702,000 in sales in 1997. This is 14.7 percent of the sales generated in 1992 (River Street Planning and Development 2000, 16). The area's economy has been shifting toward tourism and recreation. In 1993, the construction of the Turning Stone Casino in the town of Verona, New York-part of the Oneida Indian Nation-added more than 3,000 jobs. This facility evolved into a multipurpose destination resort. Gulford Mills, a manufacturer of curtains and bedding, closed in March 2002, with 325 jobs lost. For twelve months ending in February 2003, employment in the manufacturing sector declined by more than 1200 jobs and was offset by only 500 jobs (River Street Planning and Development 2000, 15).

The Oneida County unemployment rates were favorable post-redevelopment. At the BRAC announcement, the Oneida unemployment rate was 6.7 percent compared to a New York State unemployment rate of 6.9 percent .2 percent in favor of the county. After redevelopment the county rate was 4.1 and the state's was 4.8, with a larger percentage (.7) in favor of the county. In home sales and occupancy, the closure of Griffiss AFB

resulted in significant vacant housing stock, including a 14.3 percent vacancy rate and a 30 percent decrease in home values (River Street Planning and Development 2000, 15).

### **Achievement of LRP Goals**

Griffiss' LRP goals were to (1) comply with community development needs, (2) create new jobs to replace or exceed the civilian jobs lost, (3) minimize the financial burden on the local community, and (4) create a realistic and long-term master plan and have the airport operational by 1996 (Hamilton 1995a, 2-1; GIA Business Plan 2010b). Rome was successful. The LRP developed by the LRA complied with community development needs, was a realistic long-term plan, and through many grants minimized the financial burden on the city. The airport was operational by January 1, 1996. Rome was not able to re-create all the civilian jobs lost at base realignment. It re-created 986 of the 1342 civilian jobs lost due to base closure, approximately 74 percent. Seventy-four percent is the lowest of the six communities studied. The highest was Plattsburgh, which re-created 259 percent of the jobs lost. The average job re-creation was 147 percent. This inability to create jobs, despite all the successes, was Rome's Achilles heel.

### **Environmental Clean-Up**

During redevelopment, the Griffiss RAB was responsible for coordinating environmental clean-up and restoration. Some Griffiss environmental clean-up occurred after the installation was closed. In 1996, the underground and aboveground petroleum storage tanks were removed (Griffiss AFB 1996). On June 21, 2000, an EDC was signed by the AFBCA and the Oneida County IDA that allowed the AF to convey property to the local community. On April 10, 2009, the EPA finalized its decision to remove 23

parcels (approximately 2900 acres) from the Superfund NPL (EPA 2013). All long-range remediation measures were in place by 2012.

### **Rome Comparison of Development Capacity to Redevelopment Success**

The Plattsburgh Airbase Redevelopment Corporation (PARC) said that it benefitted by shedding any vestiges of military presence, such as ANG units. “The federal government took away 100 percent of the base,” emphasized former PARC Board Chairman C. Randall Beach. “We used that argument to get as much money from them [federal government] for as long as we could” (Calabro, 118). Rome, New York, took a different approach. They embraced the decision to leave Rome Lab and other federal agencies at Griffiss. The lab provided a good anchor for research and development tenants, and the good existing infrastructure support system could support similar tenants. Multiple educational opportunities near the base could easily establish satellite campuses related to Rome’s research. This would help attract technical research and business organizations. So Rome was well poised to develop a strong technology park.

In development capacity Rome was sixth out of the six communities studied, with a score of 68. Rome did well in vertical linkages (applying for state and federal assistance), horizontal linkages (learning from other LRAs), and project-oriented development (having the community involved in development). Rome applied for grants at both the federal and state levels, receiving a total of \$34.1 million in state grants and \$90 million in federal assistance. There were private funds available, and local loan funds provided low-interest loans to companies creating new jobs for low- and moderate-income persons as well as loans to small businesses (River Street Planning and Development 2000, 13).

There was also assistance from a multitude of agencies (Hamilton 1995a, 30-1). For horizontal linkages the Griffiss LRA contacted six other BRAC communities.

The variables where Rome did not do well were major business expansions, lead agency, appropriate development focus, and institutional and physical infrastructure. There were no major business expansions identified in the five years prior to the base closure announcement. In regard to lead agency, GLDC was responsible for marketing and initially responsible for the entire redevelopment of Griffiss AFB. Later the responsibilities were split between GLDC and GIA, with multiple other agencies playing some kind of role. This division of responsibilities made it difficult for each entity (the LRA and the Airport Authority) to find and attract tenants. In regard to institutional and physical infrastructure, there were no known projects completed in the five years prior to the BRAC announcement (Reynolds 2010). Finally, because the State of New York promoted Empire Zones, there was a lack of appropriate development focus.

Rome ranked second and third in attainment of LRP goals, with the dates specified in the LRA and to 2010 (respectively), with a score of 94 in each. Griffiss was successful in complying with community development needs, minimizing the financial burden on the local community, creating a realistic and long-term master plan, and having the airport operational by January 1, 1996. Rome was not able to re-create all the jobs. They re-created 986 of the 1,342 civilian jobs lost due to base closure, approximately 74 percent. This one factor brought the dependent LRP goal attainment variable down to a score of 94. It is interesting to note that Griffiss's goals, except for job creation, are similar to Rantoul's in that they are easily attainable. The most difficult goal was what lowered their score.

Rome ranked fifth, with a score of 55, in redevelopment success measured by indices of other government agencies, slightly ahead of Wurtsmith, with a score of 54. Rome recreated 986 or 74 percent of the civilian jobs lost due to base closure. They sold or placed in long-term lease 100 percent of the acreage. The unemployment rate when compared to the state unemployment rate was better in 2010 than at the time of the base closure announcement. (The rate went from being .2 percent below the state rate to .7 percent below the state rate.) The per capita income difference between the local community and the state got worse, going from \$3,888 at base closure (in favor of the state) to \$7,490 (in favor of the state) after redevelopment. Finally, Rome and Oneida County both lost population from the BRAC announcement to 2010.

One of Rome's difficulties is what most communities would consider a success. Rome felt fortunate that Rome Laboratory and other federal agencies were going to stay at the base, and patterned their future reuse off of those entities. They also felt fortunate that many jobs were going to remain in the local area, and that they would not have to re-create as many jobs as would be needed if the entire base closed. But bases can be poor users of the potential inherent in property, meaning sometimes commercial developments can create more jobs per acre than are typically found on government campuses. So keeping Rome Lab may not have created as many jobs as redeveloping the property. This is speculative, because certainly companies such as BAE systems, Sciencx, AIS, and Photonics Development Corporation located to Griffiss to be close to Rome Lab. If Rome Lab had not stayed the other companies probably would not have located at Griffiss, making the number of jobs to create and businesses to attract more difficult.



Rome's second difficulty was that Rome Lab did not jointly use the runway and as a result did not pay for or provide airfield services. In other communities, joint use meant that the federal agency paid for or provided airfield services, reducing the cost of operating the airport to the local community. This was not the case at Rome and was a burden for GIA. Thirdly, the Rome community did not have a history of major business expansion and was encouraged by the state to use tax incentives to attract business. These factors—in addition to the loss of manufacturing jobs in the local area during the redevelopment time period and the relative distance (three hours) from New York City—did not make the location attractive as a commuting location.

Finally, there are differences in the reported number of jobs created. This study used the AFRPA Report Card (2012) because using the AFRPA card provided consistency in how the jobs were counted across the communities studied. However, the LRA Survey reported 5,500 jobs created and the federal register reported 5,800 jobs created. It is possible that the later sources counted direct and indirect jobs.

Griffiss is a good example of how keeping federal entities as part of the base redevelopment might appear attractive at first, but have drawbacks. Plattsburgh, 142 miles away, originally felt that it was dealt a more difficult hand when no military presence was left at the former base. In hindsight, the complete closure and Plattsburgh's proximity to Canada probably helped their redevelopment. It is also interesting to note that Peru, Indiana, kept an Air National Guard unit as part of their redevelopment and were successful at redevelopment. Peru was successful in consolidating the ANG to one area of the base, albeit a piece in the relative center of the base. Peru had another advantage over Rome in that its airfield was a joint-use airfield.

So Rome's development capacity is an indicator of redevelopment success and supports McGuire's model. Griffiss had the lowest development capacity score. It had a good LRP and LRP execution but was not successful in redevelopment, as measured by indices used by others where it came in fifth.

### **Research Synopsis**

The following section aggregates development capacity, LRP quality, LRP executive, the attainment of LRP goals, and attainment of indices used by other's results across the six communities. A conclusion of the results is presented at the end.

#### **Development Capacity**

Development capacity is made up of fourteen variables divided into citizen participation, community structure, and development instruments (table 4-7).

#### ***Synopsis of Citizen Participation Variable Category***

Citizen participation measures the strength of local governments. It includes acceptance of change, acceptance of strengths and weaknesses, and effective mechanisms for community input. There was little variation in the acceptance of the change variable measured by whether the community had regular community meetings where the citizens could resolve conflict and whether the communities tried to get the military to stay at the base after the closure announcement. All the communities had regular meetings.

Plattsburgh was the only community that tried to attract the military after the closure decision. Mayor Rabideau, the City of Plattsburgh mayor, wanted to bring a military use back to Plattsburgh AFB even after the LRP was approved. He diverted industries that were part of PARC's targeted industries away from PARC to other area industrial parks.

For the acceptance of strengths and weaknesses, all the communities accepted and identified their strengths and weaknesses in their LRPs. There were no noticeable strengths or weaknesses missing. In comparing the strengths and weaknesses, these six communities were chosen because they had many similar features. Therefore they had similar strengths and weaknesses.

**Table 4-7. Comparison of Development Capacity**

Base	Citizen Part			Community Structure						Development Instruments					Development Capacity
	Acceptance of Change	Acceptance of Strengths/Weaknesses*	Effective Mechanisms for Community Input*	Dispersed Leadership*	Vertical Linkages*	Horizontal Linkages*	Shared Vision	Project-Oriented Development	Lead Agency	Community Spirit Activities*	Physical Infrastructure	Institutional Infrastructure	Appropriate Development Focus	Major Business Developments	
Rantoul Chenute	100	100	100	100	100	100	100	0	100	100	0	100	0	100	79
Peru Grissom	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Marquette Kl Sawyer	100	100	100	100	100	100	100	100	100	100	0	0	100	100	86
Oscoda Wurtsmith	100	100	100	100	100	100	100	100	0	100	0	0	0	100	71
Rome Griffis	100	100	100	100	100	100	100	100	0	100	0	0	0	0	64
Plattsburgh Plattsburgh	0	100	100	100	100	100	50	0	100	100	0	100	0	100	68

\*Variables where every community was coded with a score of 100.

Plattsburgh and Marquette had slight differences from the other four communities. Plattsburgh was 30 miles from Montreal, which made it closer to a metropolitan area than the other communities. However, people traveling to Montreal had to cross the border, which made traveling to Montreal more difficult than traveling to a U.S. city 30 miles away. Marquette had natural resources, such as forests, which made their strengths slightly different than other communities'. However, no community had a clear advantage in terms of strengths or a clear disadvantage due to weaknesses. All the communities were coded with a score of 100 (figure 4-8).

The BRAC process was main reason for this score. BRAC communities are required to complete LRPs and encouraged—almost expected—to include strengths and weaknesses in those documents. OEA, who funds the LRPs, provided assistance to the communities during the LRP development process. This assistance practically ensured that every BRAC community examined their strengths and weaknesses and included them in their LRP.

All the communities had effective mechanisms for community input, including community meetings prior to the closure announcement and all communities received a score of 100 on effective mechanisms for community input (figure 4-8). This was primarily due to the AF's environmental clean-up process, which required routine community meetings to gather community input. The environmental community meetings were relatively standard, varying slightly depending on the clean-up level. Other community meetings varied in frequency and attendance.

Rantoul had thought that it might be on previous BRAC lists, so the community met routinely prior to the 1988 BRAC announcement and developed plans in case they were

closed. Miami County reported little attendance at their local council meetings held prior to the base closure announcement. At Oscoda/Wurtsmith, the local community did not hold community meetings other than the AF environmental clean-up meetings. If better data had been available, more detailed data could have been reported for this variable.

**Table 4-8. Citizen Participation Category Scores and Comparison**

Base	Citizen Participation					Indices Used by Others Score	Position Amongst Communities
	Acceptance of Change	Acceptance of Strengths/Weaknesses *	Effective Mechanisms for Community Input *	Citizen Participation Score	Position Amongst Communities		
<b>Rantoul/ Chanute</b>	100	100	100	100	1	74	3
<b>Peru/ Grissom</b>	100	100	100	100	1	94	1
<b>Marquette/ KI Sawyer</b>	100	100	100	100	1	84	2
<b>Oscoda/ Wurtsmith</b>	100	100	100	100	1	54	6
<b>Rome/ Griffiss</b>	100	100	100	100	1	55	5
<b>Plattsburgh/ Plattsburgh</b>	0	100	100	66.7	6	71	4

\*Variables where every community were coded with a score of 100.

All of the communities did well in the citizen participation category, due to their scores of 100 in acceptance of strengths and weaknesses and effective mechanisms for community input. When the citizen participation variables are averaged and rankings applied the rankings do not show a relationship between the citizen participation category and redevelopment success.

### ***Synopsis of Community Governance Structure Variable Category***

The community governance structure variables focus on the ideas of administrative capacity in local governments and include dispersed leadership, vertical linkages, horizontal linkages, shared vision, project-oriented development, and lead agency. Similar to the citizen participation category, three of the variables (dispersed leadership, and vertical and horizontal linkages) were coded with a score of 100 for all the communities providing no way to differentiate amongst the communities (figure 4-9).

All the communities studied had some dispersed leadership. Rantoul probably had the least because the local Village was the LRA. However, Rantoul did have community groups who shared the same vision as the Village.

Plattsburgh, Rome, and K. I. Sawyer had the most dispersed leadership. Plattsburgh had 150 people in the planning LRA. This—and the fact that the new mayor had a different view of the LRP goals than the LRA—made it difficult for Plattsburgh to achieve a shared vision. Rome had over ten development organizations. This provided a lot of manpower to reach potential tenants, but also made it difficult to track which organization was doing what. K. I. Sawyer used volunteers to work with potential tenants. This dispersed their leadership. At K. I. Sawyer, everyone appeared to share the same vision and work together.

**Table 4-9. Community Structure Scores and Comparison**

Base	Community Structure								Indices Used by Others	Position Amongst Communities
	Dispersed Leadership*	Vertical Linkages*	Horizontal Linkages*	Shared Vision	Project Oriented Development	Lead Agency	Community Structure Score	Position Amongst Communities		
<b>Rantoul/ Chanute</b>	100	100	100	100	0	100	83	2	74	3
<b>Peru/ Grissom</b>	100	100	100	100	100	100	100	1	94	1
<b>Marquette/ Ki Sawyer</b>	100	100	100	100	100	100	100	1	84	2
<b>Oscoda/ Wurtsmith</b>	100	100	100	100	100	0	83	2	54	6
<b>Rome/ Griffiss</b>	100	100	100	100	100	0	83	2	55	5
<b>Plattsburgh/ Plattsburgh</b>	100	100	100	50	0	100	75	6	71	4

\*Variables where every community was coded with a score of 100.

Vertical linkages with state and federal agencies help communities be aware of state and federal assistance and to take advantage of that assistance. All the communities applied for state and federal grants. The federal assistance was relatively consistent across the communities, including OEA assistance to pay for LRP development and OEA liaisons assigned to each community, as well as EDCs and PBTs available for education and health-related properties. The federal government also paid for environmental clean-up. The amounts for clean-up varied depending on the contamination.

State assistance varied from \$100,000 to millions of dollars, usually based on what the state could afford and the level of advocacy from state representatives. This variable scored based on how much vertical assistance the communities sought. Since they all sought assistance, they all received 100 points. The BRAC process contributed to this score since the OEA alerted communities to federal programs for which they might be eligible and encouraged them to apply.

Horizontal linkages are where local governments reach out to each other. All six communities reached out to other communities. In addition, Rantoul reached out to many communities to learn, but more importantly shared lessons learned and helped shape BRAC federal policy for future BRAC rounds. Mayor Podagrosi of Rantoul and Marian Calabro of Plattsburgh both wrote books about their BRAC experiences. Marquette appears to have had the least contact with similar communities; it was contacted by Rome and Oscoda, but there is no evidence of Marquette reaching out to others. All the communities received a score of 100 because each participated in some horizontal outreach. Again, the BRAC process helped all the communities do well on this variable because OEA helped facilitate the sharing of lessons learned.

The benefit of a shared vision is that all members in the redevelopment effort are pulling together toward the same goals. There were differences in how much each community shared their LRP vision. In Rantoul, the Village government was the LRA and thus it had one vision for Chanute. On the flip side, the City of Plattsburgh's mayor, who was elected after the LRP was finalized, did not initially share PARC's LRP vision. It took time and political persuasion before the mayor accepted the PARC vision and both PARC and the city worked together. Due to this, Plattsburgh was given 50 points for the



variable. The goal of the BRAC process, and the LRPs, is to create a shared vision. As this study demonstrates, this works in many communities, but not all.

Project-oriented development looked at whether the local community was “project oriented” and whether the community had organizations besides the LRA working on development. Three of the communities (Peru, Rome, and Oscoda) had such organizations. Rome, New York, had ten organizations to market Griffiss. Rantoul, Plattsburgh, and Marquette had primarily their LRAs.

Even though it is good to have a dispersed group with a shared vision working the redevelopment tasks, it is also important for the LRA to be the lead agency. In Rantoul and Plattsburgh, the LRA was the lead agency (although in Plattsburgh the local government and the newspaper often questioned the LRA). At Marquette the LRA was the lead agency locally but had to get permission from the State of Michigan for review of the LRP. In Rome and Oscoda, the airport was separated from the LRA for both operations and marketing. Thus, Rome and Oscoda received a score of zero.

Of the community structure variables, project-oriented development and lead agency were the two variables that showed the most variation. When the community structure variables are averaged and rankings applied, the rankings do not show a clear relationship between the community structure category and redevelopment success. There is a relationship between the lead agency variable and redevelopment success. Oscoda and Rome were communities where the LRA was not the lead agency for redevelopment. Both received a low score for lead agency. Those communities scored fourth and sixth respectively in development capacity and sixth and fifth in indices used by others.

### ***Synopsis of Development Instruments***

Development instruments, both economic and noneconomic, are tools that local governments use to implement their vision. It is important for communities to have these tools before they start redevelopment. They include community spirit, institutional and physical infrastructure, appropriate development focus, and experience in development.

Community spirit activities help citizens feel a part of the local community and have pride in their communities. Some of the communities studied had large amounts of activities, such as Peru with the Miami County Fair, Cole Porter Classic, Circus City Festival, etc. Rome only had community spirit activities associated with the AF, such as air shows and open houses. All the communities were coded with a score of 100 for the community spirit variable. Having a score of 100 would be typical for military installations. Most host annual community events such as air shows and open houses.

Major businesses often look at the availability, quality, and cost of local utilities in their site selection, as well as the local road infrastructure. Thus, it is important for communities to offer good physical infrastructure and to show a history of recent investment. In the five years prior to the BRAC announcements Peru, Indiana, invested over \$10 million in their utilities. Peru also had a very good bond rating to finance infrastructure improvements. Research and interviews could not find similar physical infrastructure investments in the other communities (figure 4-10). Thus, Peru received a score of 100 and the other communities received a score of zero.

Institutional infrastructure, such as schools, hospitals, and government buildings, provides benefits to the local community in the form of education, health care, and government services. They are part of the community benefits that can help attract new

businesses. Some of the six communities studied were blessed with large institutional infrastructure—such as Rantoul, which was 30 miles from the University of Illinois at Urbana–Champaign and K. I. Sawyer, which was 32 miles from Marquette University. Both universities had their own medical institutions as well as higher education facilities.

**Table 4-10. Development Instruments Scores and Comparison**

Base	Development Instruments							Indices Used by Others Score	Position Amongst Communities
	Community Spirit Activities*	Physical Infrastructure	Institutional Infrastructure	Appropriate Development Focus	Major Business Developments	Development Instruments Score	Position Amongst Communities		
<b>Rantoul/ Chanute</b>	100	0	100	0	100	60	2	74	3
<b>Peru/ Grissom</b>	100	100	100	100	100	100	1	94	1
<b>Marquette/ KI Sawyer</b>	100	0	0	100	100	60	2	84	2
<b>Oscoda/ Wurtsmith</b>	100	0	0	0	100	40	5	54	6
<b>Rome/ Griffiss</b>	100	0	0	0	0	20	6	55	5
<b>Plattsburgh/ Plattsburgh</b>	100	0	100	0	100	60	2	71	4

\*Variables where every community were coded with a score of 100.

Other communities had to rely on a mixture of community colleges. In addition to having local institutional infrastructure available, it is important for the local

communities to invest in their own schools and medical facilities. Prior to the BRAC announcements, investments ranged from a new elementary school and hospital addition built in Peru, a Cancer Center in Plattsburgh, and a village facility in Rantoul, to no investment found at Rome, Marquette, and Oscoda.

Adopting an appropriate development focus (i.e., one that focuses on creating quality communities to attract businesses rather than attracting businesses with tax incentives) followed state boundaries. The State of New York offered state tax incentives for businesses that located in Empire Zones. Thus, both Rome and Plattsburgh established Empire Zones.

At Rantoul, the State of Illinois offered Enterprise Zones. Mayor Podagrosi's book listed accessibility, labor force, and wage rates ahead of tax rates and economic assistance as the village's major attraction features. However, Rantoul eventually extended the Village's Enterprise Zone to encompass Chanute. Similarly, the Oscoda LRA wrote in their Base Reuse Master Plan that they felt that tax burdens were typically considered subsidiary to other comparative advantages or disadvantages, so they were not concerned about offering tax incentives (Base Reuse Master Plan Econ, II-23). In the end, however, they did establish an enterprise zone that offered tax advantages.

Major business attraction is a sign that communities can attract additional businesses. Prior to the BRAC announcements, Rantoul had five manufacturers come to Rantoul, including Rantoul Glass Plant, a division of the Chrysler Corporation. Peru absorbed approximately 900,000 square feet of building space between 1984 and 1989. Oscoda and Marquette had modest commercial gains, with about 20,000 square feet gained in Oscoda and a small automobile manufacturer at Marquette. Plattsburgh

absorbed approximately 45 acres and 300,000 square feet annually prior to the base closure announcement. Rome was the only community without business attraction. Rome was coded with zero points and the other communities were coded with 100 points.

The development instrument category shows the most variation in scores, with variation across five variables. Community spirit was the variable where all the communities were coded with a score of 100. When the development instrument scores are averaged and rankings applied, there is a positive relationship between the development instruments category and redevelopment achievement. It shows that the communities with the top two rankings for development instruments (Peru, Rantoul, Marquette, and Plattsburgh) were in the top rankings for indices used by others. The communities with the lower scores for development instruments (Oscoda and Rome) were in the lower scores for indices used by others.

#### ***Synopsis of Development Capacity***

In terms of overall development capacity, Peru had the highest development capacity with 100 points and Marquette was second with 86. Rome had the lowest score of 64 points, followed by Plattsburgh with 68 points. Rantoul was third with a score of 79 and Oscoda was fourth with 71. The top three development capacity rankings (Peru, Marquette, and Rantoul) were also the top three rankings in order for indices used by others. The bottom three development capacity rankings (Rome, Plattsburgh, and Oscoda) were in the bottom three rankings of indices used by others (figure 4-11).

Peru's perfect score was due to a good track record of attracting businesses to the area, investing in physical and institutional infrastructure, acceptance of change, obtaining a common vision, having an appropriate development-focused attitude, and

reaching out to state and federal opportunities. Rome's low scores were due to Rome's LRA not being the lead agency and zero scores in all development instrument variables, except for community spirit activities.

**Table 4-11. Comparison of Key Redevelopment Variables**

<b>Base</b>	<b>Development Capacity Ranking</b>	<b>LRP Quality Ranking</b>	<b>LRP Execution Ranking</b>	<b>LRP Goal Attainment by LRP Time Period Specified Ranking</b>	<b>LRP Goal Attainment by 2010 Ranking</b>	<b>Indices Used by Others Ranking</b>
<b>Rantoul/ Chanute</b>		6	4	1	1	
<b>Peru/ Grissom</b>		5	1	3	2	
<b>Marquette/ KI Sawyer</b>		1	4	5	5	
<b>Oscoda/ Wurtsmith</b>		1	4	6	6	
<b>Rome/ Griffiss</b>		1	1	2	3	
<b>Plattsburgh/ Plattsburgh</b>		1	1	4	4	

For six variables (acceptance of strengths and weaknesses, community input, dispersed leadership, community spirit, and vertical and horizontal linkages) the communities were coded with a score of 100. These scores were driven by the BRAC process, the AF environmental clean-up process, and military outreach. Because the scores are the same, they do not explain differences between the communities.

The areas that had the most impact on the difference in development capacity were lead agency, project oriented development, appropriate development focus, and institutional infrastructure. Most of these variables are in the development instruments category indicating that the communities had good citizen participation and community structures but were lacking in development instruments. Oscoda and Rome had low scores in lead agency, appropriate focus, and both infrastructure variables. These communities placed fifth and sixth respectively in development capacity as well as sixth and fifth in indices used by others. In appropriate development focus Peru and Marquette received the top scores and were ranked first and second in both development capacity and indices used by others.

### **Comparison of LRP Quality**

Overall the LRP quality was good with the communities having similar scores (figure 4-12). Each LRP did an adequate job of accessing facility condition with almost all mentioning asbestos and code violations. Some LRPs such as K. I. Sawyer did a more detailed facility study than other LRPs and estimated costs for redevelopment. This helped the implementation LRA to more fully understand potential future projects. All environmental assessments were similar in their breadth and depth. This is due to the AF conducting all the environmental assessments and their standard processes.

The marketing plans differed across the LRPs. Many communities focused on similar industries such as aviation related industries—especially aviation maintenance—to take advantage of the airfields, hangars, and back shops. Some focused on educational uses to take advantage of existing classrooms and dormitory spaces or to provide educational resources for other tenants and the local community. These educational uses included police and fire academies to take advantage of obstacle courses and fire training pits, which are hard to establish in local communities due to environmental concerns.

**Table 4-12. Comparison of LRP Quality**

<b>Base</b>	<b>Facilities Condition*</b>	<b>Utilities Condition*</b>	<b>Environmental Condition*</b>	<b>Marketing Plan*</b>	<b>Normalization Plan</b>	<b>Homeless Plan</b>	<b>Financial Plan*</b>	<b>LRP Quality Score</b>	<b>Position Amongst Communities</b>
<b>Rantoul/ Chanute</b>	100	100	100	100	0	0	100	71	6
<b>Peru/ Grissom</b>	100	100	100	100	100	0	100	86	5
<b>Marquette/ KI Sawyer</b>	100	100	100	100	100	100	100	100	1
<b>Oscoda/ Wurtsmith</b>	100	100	100	100	100	100	100	100	1
<b>Rome/ Griffiss</b>	100	100	100	100	100	100	100	100	1
<b>Plattsburgh/ Plattsburgh</b>	100	100	100	100	100	100	100	100	1

\*Variables where every community was coded with a score of 100.



Two communities tried to establish Olympic training sites but were not successful. Three communities targeted transportation training that took advantage of the large concrete ramps, such as Greyhound Bus training at Rantoul and all weather vehicle testing and training at Oscoda and Marquette. Several communities targeted providing back offices or call-in centers so businesses in large metropolitan areas could take advantage of a good labor pool at low labor rates in a rural location to perform work that didn't have to be performed in the metropolitan areas. Griffiss was successful in attracting a printing business that flew publishers from New York City to review production. Several communities targeted state or federal prisons, such as Oscoda.

Communities also focused on industries specifically related to a community's location. This was a better approach than focusing on industries that could be attracted to multiple locations. Marquette targeted industries related to the northern climate, such as a cold weather track and testing facility for the Michigan automotive industry, a cold weather truck driving school, timber, and cranberry facilities, as well as industries that used the northern location to track air freight and vehicles in real time. To take advantage of its location 30 miles from Montreal, Plattsburgh targeted Canadian industries that were looking for warehousing or office space in the U.S. Plattsburgh was successful in attracting Scott Hockett of Fleet Max Inc. from Canada.

Some LRPs were very detailed, highlighting the exact businesses the LRA intended to attract. Others were more general in nature. In the end, the detailed marketing plans did not appear to benefit the LRAs because some targeted businesses did not come and other businesses had to be found.

Most LRAs hired professionals to work in their LRA offices. These professionals, with the local government officials and Chamber of Commerce volunteers, did most of the marketing. Marquette chose to use only volunteers for marketing and set up a rather complicated set of LRA organizations to attract and serve tenants. Marquette's process worked, which could be good news for small communities looking to have an all-volunteer marketing group.

A discussion about the normalization of property was included in all the LRPs except Rantoul's. As one of the first LRPs developed, Rantoul probably did not know to include a normalization discussion. This was included in later LRPs. The Grissom LRP discussed land transfer techniques and base disposal procedures. The K. I. Sawyer LRP discussed utility changes required to accommodate property division so parcels of property could be sold. The Plattsburgh LRP discussed zoning. The Griffiss LRP established that Griffiss would be a zoned planned development. Homeless plans were missing from Rantoul's and Peru's LRPs.

What differentiated the LRPs were the homeless plans and the normalization section. Otherwise, the LRP quality scores were relatively close together with Rantoul being coded with the lowest score of 71, Peru next at 86, and the other four communities with a score of 100.

### **Comparison of LRP Execution**

The LRP execution scores were also similar across the communities with Plattsburgh, Rome, and Peru being coded with perfect scores of 100 (figure 4-13).

Rantoul, Marquette and Oscoda were coded with a score of 67 (missing one of the three variables). Rantoul and Oscoda did not have LRAs that were separate from their

local government politics, so they missed the relationship separate from local government variable. There was no evidence of Marquette streamlining any government processes, so it missed the steps to streamline government processes variable.

**Table 4-13. LRP Execution**

<b>Base</b>	<b>Steps to Streamline Govt Processes</b>	<b>Relationship Separate from Local Govt</b>	<b>Contractual Relationships Outlined*</b>	<b>LRA Execution Score</b>	<b>Position Among Communities</b>
<b>Rantoul/ Chanute</b>	100	0	100	67	4
<b>Peru/ Grissom</b>	100	100	100	100	1
<b>Marquette/ KI Sawyer</b>	0	100	100	67	4
<b>Oscoda/ Wurtsmith</b>	100	0	100	67	4
<b>Rome/ Griffiss</b>	100	100	100	100	1
<b>Plattsburgh/ Plattsburgh</b>	100	100	100	100	1

\*Variables where every community were coded with a score of 100.

Streamlined government processes make it easier to lease or buy property and to build and conduct business. There were communities that streamlined their processes. GCRA at Peru, Indiana, developed a permitting guidebook to make permitting easier.

Oscoda refined their government processes. Rome, New York, acted as a conduit for businesses and provided assistance along the way. Rantoul helped streamline federal government processes for the 1991 and future BRAC rounds.

One of the benefits of having an implementation LRA separate from local government politics is that once a direction is set by the LRP, the implementation LRA can typically implement that vision with less political involvement than if the LRA was part of the local government. The six communities studied were in different situations. Rantoul's LRA was not separate from politics. The Village of Rantoul was the LRA, making redevelopment decisions very open to their community. PARC at Plattsburgh, New York, was technically separate from politics, but the local mayor and newspaper editor routinely inserted themselves into the redevelopment process until a new PARC Executive Director had some frank discussions with both the mayor and the editor.

The third variable in execution had little impact on the LRP execution score because there were few major contracts at the six communities studied. Griffiss had a grass-cutting contract. There were no major contracts at Peru, Oscoda and Plattsburgh. The Village of Rantoul was its own LRA and most work was done within the Village. Thus, most communities did not need to have major contractual relationships outlined.

There was no scores provided for environmental clean-up in execution; however, environmental clean-up should be discussed. The impact of environmental clean-up did not appear to be related to being on the EPA's NPL list. Both Rome and Plattsburgh were on the EPA's NPL list. Their clean-up did not appear to have a great impact on redevelopment whereas the environmental clean-up at Rantoul did impact development

(Carr 2013). This was due to the timing of the base closures, the local interest in clean-up, and mistakes in environmental testing during the clean-up process.

Chanute AFB at Rantoul was part of BRAC 1988 and not on the EPA's NPL list. Clean-up at Chanute started in the mid 1980s. There was property that perhaps could have been sold when the installation closed, except that the environmental clean-up had not been accomplished. At that time the federal government and communities did not know how to transfer environmentally contaminated land with deed restrictions. Transferring land with deed restrictions would become an option, although a rarely used option, for future BRAC communities. Also, the rules regarding to what level different parcels of land needed to be cleaned up were not well spelled out or understood when Chanute's LRP was developed. It was only during the clean-up and redevelopment process that Rantoul realized that parcels were cleaned up only to the level required by the land use as designated in the LRP rather than completely clean. Communities associated with later BRAC rounds were able to take advantage of this knowledge and target the level of environmental clean-up desired with the land use designation in the LRP. Finally, environmental testing mistakes at Chanute held up clean-up.

As a second example, Griffiss AFB was on the NPL list. The base was part of BRAC 1993 and closed in 1995. Clean-up started in the mid 1980s, was fairly far along in 1995, and all long-range remediation was in place by 2012. Environmental clean-up did not appear to affect redevelopment greatly.

### **Achievement of LRP Goals**

The LRP goals selected by the communities studied varied in the type of goals selected and the specificity outlined for goal achievement (figure 4-14). Most

communities concentrated on job development, except for Rantoul, which called for specific uses instead of a certain number of jobs to be created.

**Table 4-14. Attainment of LRP Goals per LRP**

<b>Base</b>	<b>LRP Goal 1 Attainment</b>	<b>LRP Goal 2 Attainment</b>	<b>LRP Goal 3 Attainment</b>	<b>LRP Goal 4 Attainment</b>	<b>LRP Goal 5 Attainment</b>	<b>Total LRP Goal Attainment</b>	<b>Position Among Communities</b>
<b>Rantoul/ Chanute</b>	100	100	100	100	100	100	1
<b>Peru/ Grissom</b>	100	86	88	91	100	93	3
<b>Marquette/ KI Sawyer</b>	54	100	100	NA	NA	85	5
<b>Oscoda/ Wurtsmith</b>	90	86	24	107	76	77	6
<b>Rome/ Griffiss</b>	100	71	100	100	100	94	2
<b>Plattsburgh/ Plattsburgh</b>	63	54	111	100	100	86	4

Four communities—Rantoul, Marquette, Rome, and Plattsburgh—concentrated on lessening the financial burden to the local governments. Rome also specified that the LRP should be realistic. Three communities—Rantoul, Peru, and Marquette—called for specific land uses, although inherent in all the plans were general land uses and targeted businesses. Rome specified that a certain number of square feet should be occupied.

Rantoul and Rome specifically called for operating an airport. Oscoda said that if they could not get an airport operational in two years, they would not pursue an airport at Wurtsmith. Peru specifically set as one of its goals not to operate the airport, but to have the AF Reserve operate the airport.

Tax generation was a goal for Peru and Plattsburgh. Rantoul and Rome wanted the on-base land use to be compatible with the local community. This was understandable because these two communities were the closest to the former bases. Rantoul listed green space as a goal. Oscoda wanted a certain number of people to be living on K. I. Sawyer and for the local population to regain its population.

Some communities, such as Peru and Marquette, selected very specific and aggressive LRP goals. Peru wanted to create 1,724 jobs on base (direct jobs) in a twenty-year time span. Those jobs represented nearly 200 percent of the 792 civilian jobs that Grissom lost due to base closure. Marquette wanted to create 2000 to 2500 jobs, which is over 300 percent of the 788 civilian jobs lost due to base closure. These LRP goals were difficult to obtain. Other communities such as Rantoul choose more general LRP goals, such as “develop a land use plan with aviation, aviation support, industrial use, medical, commercial, and residential uses as well as open space” or “operate Chanute as an airport and training complex.” These goals had a similar intent as the Peru or Marquette goals, but as written were easier to achieve than very specific goals. It was unclear from speaking with the LRAs whether the more specific goals provided more motivation.

All communities did well in achieving their goals. They ranged from Rantoul, which achieved 100 of its LRP goals, to Oscoda, which achieved 77 percent. It was difficult for communities with very specific goals to achieve those goals. This study

compared achievement of LRP goals within the period specified in the LRP and to 2010. Only one community, Peru, showed any difference between the goals achieved by the time period set in the LRP and through 2010. Peru achieved 93 percent of its LRP goals by the dates in the LRP and 96 percent of its LRP goals by 2010 (figure 4-15).

**Table 4-15. Attainment of LRP Goals by 2010**

<b>Base</b>	<b>LRP Goal 1 Attainment</b>	<b>LRP Goal 2 Attainment</b>	<b>LRP Goal 3 Attainment</b>	<b>LRP Goal 4 Attainment</b>	<b>LRP Goal 5 Attainment</b>	<b>Total LRP Goal Attainment</b>	<b>Position Among Communities</b>
<b>Rantoul/ Chanute</b>	100	100	100	100	100	100	1
<b>Peru/ Grissom</b>	100	100	88	91	100	96	2
<b>Marquette/ KI Sawyer</b>	54	100	100	NA	NA	85	5
<b>Oscoda/ Wurtsmith</b>	90	86	24	107	76	77	6
<b>Rome/ Griffiss</b>	100	71	100	100	100	94	3
<b>Plattsburgh/ Plattsburgh</b>	63	54	111	100	100	86	4

#### **Comparison of Indices Used by Others**

The communities did not do as well in achieving the indices used by others as in achieving LRP goals. All communities were successful in creating jobs. Plattsburgh



recreated 259 percent of the civilian jobs lost. All but Rome and Oscoda recreated over 100 percent of the jobs lost (figure 4-16).

The communities did well in selling or placing property in long-term leases. The percentages varied from 90 percent at Oscoda to 99 or 100 percent at Rantoul, Peru, Marquette, and Plattsburgh. For four communities, at the end of redevelopment there were the same number of jobs at the former bases as prior to base closure and almost all of the land was in reuse.

Unemployment, average income, and local population show differences amongst the communities. In comparing the difference in the local reuse area's change in unemployment rate compared to the change in the state's unemployment rate, three of the communities—Peru, Marquette, and Rome—saw a change in favor of the BRAC community (i.e., the unemployment rate at the community got better between the two periods compared to state's unemployment rate for the same period), and three of the communities—Rantoul, Oscoda, and Plattsburgh—saw a change in favor of the state.

This means that although the jobs were replaced on base at Rantoul, Oscoda, and Plattsburgh, there was a higher percentage of people wanting jobs after redevelopment than before the closure. This could be due to people in the local community losing jobs due to the base closure and those positions not being replaced during redevelopment.<sup>22</sup>

A comparison of average per capita income between the local reuse area and the state prior to the BRAC announcement and after redevelopment shows that two communities, Marquette and Oscoda, had an increase in the local average income relative

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<sup>22</sup> Note that Oscoda recreated only 80 percent of the jobs lost due to BRAC and had a higher unemployment rate after redevelopment (when compared to the state) than prior to closure. Oscoda's poor unemployment rate might also be related to its proximity to Detroit and the downturn in the automobile industry during the same period as redevelopment.

to the state, and the other four communities had a decrease when compared to the state's change for the same time period. Both Marquette and Oscoda are in Michigan, so their success in average income relative to the state could be tied as much to the problems in the automotive industry in Michigan during the 1990s and 2000s as it could be an indication of the success of Oscoda and Marquette.

**Table 4-16. Attainment of Indices Used by Others**

<b>Base</b>	<b>Percentage of Jobs Recreated</b>	<b>Land Deeded or in Long-Term Lease</b>	<b>Unemployment Rate Change Compared to State</b>	<b>Average Income Change Compared to State</b>	<b>Local Area Population Change</b>	<b>Indices Used by Others Score</b>	<b>Position Amongst Communities</b>
<b>Rantoul/ Chanute</b>	172	99	0	0	100	74	3
<b>Peru/ Grissom</b>	173	99	100	0	100	94	1
<b>Marquette/ KI Sawyer</b>	122	99	100	100	0	84	2
<b>Oscoda/ Wurtsmith</b>	80	90	0	100	0	54	6
<b>Rome/ Griffiss</b>	73	100	100	0	0	55	5
<b>Plattsburgh/ Plattsburgh</b>	204	97	0	0	0	60	4

Four communities saw a decrease in the local population following redevelopment, including both locations in New York and Michigan. Closure appears to encourage people to leave, unless redevelopment is extremely quick. This may be especially true in very remote locations. Only two communities, Rantoul and Peru, saw an increase in their local population after redevelopment.

Overall, the indices used by others showed a wider variation in scores than achievement of LRP goals. Peru achieved the highest score with a score of 94. Oscoda had the lowest score with 54. In achievement of LRP goals, Peru was second and Oscoda was sixth, so there is some comparison between achievement of LRP goals and development capacity. Rantoul remains in the top three in this comparison, achieving the highest score in achievement of LRP goals and third when indices used by others are used. Rome and Plattsburgh are in the middle of the pack, with third and fourth place in achievement of LRP goals and fifth and fourth in indices used by others. Marquette is the outlier in this comparison, coming in fifth in achievement of LRP goals and second in indices used by others. Marquette had three goals, the first of which was to recreate 300 percent of the civilian jobs lost at base closure. This goal appears to be the sole reason for Marquette being fifth in achievement of LRP goals, because they achieved 54 percent of this one goal and 100 percent of their other goals.

When using indices used by other agencies, Peru, Marquette, and Rantoul have the top three development capacity and indices used by other agencies scores. The rankings are identical. Peru is first, Marquette is second, and Rantoul is third. In their attainment of LRP goals there is not such a clear correlation (figure 4-11).

Rantoul is third in development capacity, third in attainment of indices used by others, and first in attainment of LRP goals both by the times set in the LRP and to 2010. Rantoul set broad generalized LRP goals that were easier to obtain than the specific goals set by other communities. Rantoul's selection of goals contributed to its high ranking in attainment of LRP goals and its ranking in indices of other agencies is more reflective of its redevelopment success when compared to other communities. Rantoul's rankings in LRP quality (sixth) and LRP execution (fourth) are not good, but when the actual numbers are reviewed Rantoul was only missing two elements from its LRP and one element from LRP execution, so LRP quality and execution most likely did not have as large an impact as the rankings suggest. Rantoul's ranking of third in attainment of indices used by others aligns with its ranking of third in development capacity.

Peru is first in development capacity, third and second in attainment of LRP goals (depending on whether using LRP goals attained by the dates in the LRP or LRP goals attained by 2010), and first in attainment of indices used by others. Peru's ranking in the attainment of LRP goals is a reflection of the more difficult LRP goals that Peru selected when compared to Rantoul's more generalized LRP goals. Similar to Rantoul, Peru was missing one element in its LRP quality, so the LRP quality did not have a great impact on redevelopment. Peru's ranking of first in attainment of indices used by others aligns with its ranking of first in development capacity.

Marquette is second in development capacity and indices used by other agencies, yet fifth in attainment of LRP goals. Marquette selected three aggressive LRP goals. Their first goal targeted creation of almost 300 percent of the jobs lost due to base closure. They achieved only 54 percent of that goal. Attainment of other goals was good,

but their overall score in attainment of LRP goals was low when the first goal was averaged with the other goals. So Marquette's LRP rankings are indicative of the difficulty of their goals, not necessarily of their redevelopment success. Marquette was tied for first in LRP quality and tied for fourth in LRP execution (missing one element), so these two variables did not have a large an impact on Marquette's redevelopment.

When Oscoda, Plattsburgh and Rome are reviewed their scores are fourth, fifth and sixth for development capacity, with the order changing to Plattsburgh fourth, Rome fifth and Oscoda sixth for attainment of indices used by other agencies. Plattsburgh was tied for first in LRP quality and LRP execution. It was also fourth place in attainment of LRP goals, so Plattsburgh's development capacity of fifth appears to be a good indicator of its development success of fourth when measured both by attainment of LRP goals and attainment of indices used by others.

Rome was sixth in development capacity and tied for first in LRP quality and execution. It ranked second and third in attainment of LRP goals and fifth in indices used by others. Rome's development capacity and indices used by others' rankings align. What stands out are the significantly better LRP rankings. Similar to Rantoul, most of Rome's LRP goals were general in nature, such as to have an operational airport by 2011 and to create a realistic and long-term implementation strategy that complied with community development needs. These general goals helped Rome improve their LRP goal attainment scores. Their only difficult goal was to create 6000 jobs by 2011. As in the Rantoul example, the generalized LRP goals helped raise the community's LRP goal attainment score and ranking. However, the indices used by others are a better reflection of their redevelopment success and reflect their development capacity score.

Oscoda obtained fourth place in development capacity and tied for first in LRP quality. In LRP execution, attainment of LRP goals, and indices used by others, Oscoda placed sixth. Of the communities studied, Oscoda is the closest community to Detroit—closer than Marquette. Detroit's automotive industry difficulties during the time of Oscoda's redevelopment probably affected Oscoda's redevelopment. Marquette, which is located much further north, did not feel the automotive industry's impact as much.

So is there relationship between development capacity rankings and attainment of LRP goals or indices used by other agencies? There appears to be a clear relationship between development capacity rankings and indices used by other agencies. When a community does well in development capacity, it also does well in indices used by other agencies to measure development. When a community does poorly in development capacity, they also do poorly in indices used by others. There is not the same kind of relationship between development capacity, and achievement of LRP goals. This can be explained by either the type of LRP goals the LRA selected (general or specific) or the difficulty of the goals. Several communities that selected more general LRP goals appeared through interviews to actually be targeting more specific goals. In other words, they may have only specified general use goals in their LRPs, but in discussions they were obviously targeting job creation, tax base formation, etc.

During the research, LRP quality and execution were measured. There were no significant differences in LRP quality or their execution and no indication that either LRP quality or the factors measured in execution affected or study outcomes.

## **CHAPTER V**

### **CONCLUSIONS**

#### **Study Purpose, Organization and Methodology**

The purpose of this research study was to examine the link between development capacity and the attainment of redevelopment goals to help communities determine whether or not they should adopt policies and/or programs to improve their development capacity. This study was based on research by McGuire et al. (1994) that established a development capacity model. The McGuire et al. research showed that the development of a strategic plan led to higher development capacity. Their model did not show a relationship between development capacity and the achievement of development or redevelopment goals. If higher development capacity is tied to higher achievement of redevelopment goals, then communities can make policy decisions about whether or not the local community should invest in policies or programs that increase development capacity with some knowledge of anticipated results. Once the relationship between development capacity and the attainment of redevelopment goals is understood, any recommended changes to the McGuire et al. and this study model can be made.

This study was a multiple-case study employing cross case analysis (replication logic) using qualitative and quantitative variables to examine the relationship between development capacity and the attainment of redevelopment goals per the Yin Multiple Case Study Method. In accordance with the method, each community was evaluated on its own merits as a case study before being compared with the other communities. For each case study, context analysis was used to describe the basic setting and to explain

specific outcomes. This study used six rural communities associated with the 1988, 1991, and 1993 BRAC rounds. These communities were selected because they have many similar characteristics. All are located in rural locations. All had former Air Force (AF) bases with similar infrastructure, including runways and airfield capacity to support large aircraft. The acreage of the former installations is similar and all are in the Midwest or near the Midwest (New York, Indiana, Illinois, and Michigan). Data for this study was collected from existing documents and from interviews with representatives from Local Redevelopment Authorities (LRA).

### **Research Questions**

The first research question for this study was: “Is there a relationship between development capacity and the attainment of redevelopment goals?” From these six case studies the answer is “yes”, especially when using indices used by other agencies to measure redevelopment. Overall, when a community does well in development capacity, it does well in indices used by other agencies to measure development. When a community does poorly in development capacity, it does poorly in indices used by others.

When LRP goals are used to measure redevelopment the answer is not as clear, but explainable. There is not the same clear relationship between development capacity and achievement of LRP goals as there was between development capacity and indices used by others. This is because some communities selected very general goals (such as create aviation uses) that are easier to obtain than specific goals (such as attract 50 new aviation companies), and some communities selected more difficult goals (such as create 1000



jobs) than other communities' easier goals (such as create 100 jobs). This means that when development capacity and the attainment of redevelopment goals are reviewed, communities that selected more general or easier-to-obtain LRP goals did better than communities that selected specific or harder goals. Using indices used by others as the dependent variable provides a more consistent comparison of the communities.<sup>23</sup>

The second research question was: "Is there a relationship between each development capacity category (citizen participation, community structure, and development instruments) and the attainment of redevelopment goals and which category has the greatest positive relationship?" For the citizen participation category, there is no relationship between citizen participation and the attainment of redevelopment goals. The variables in the citizen participation category showed little differentiation. Two showed no differentiation between the communities, one due to the BRAC process and one due to the AF environmental clean-up process.

For the community structure category, when the community structure scores are averaged and rankings applied there is not a clear relationship between the community structure category and the attainment of redevelopment goals. Three of the six variables showed no differentiation between the communities. The BRAC process was the reason for two of the variables (horizontal and vertical linkages) having a score of 100.<sup>24</sup> For the third variable (dispersed leadership) it is unclear why that variable had no differentiation. The dispersed leadership variable showed differentiation in the McGuire et al. study.

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<sup>23</sup> It was interesting to note that the communities that had selected general LRP goals mentioned more specific goals in their LRA interviews. It may be that communities were hesitant to write specific goals in their LRPs in case they could not achieve them, but were targeting specific goals in their minds. It could also be that the LRAs originally targeted the general goals, but when those goals were obtained, they changed their goals to more specific goals.

<sup>24</sup> In future research, data collected for some of the community structure variables, such as horizontal or vertical linkages, may be able to provide more detail that could show more specificity in the variable and provide a better understanding of the relationship of the variable to the attainment of redevelopment goals.

There is a positive relationship between the lead agency variable, development capacity, and attainment of redevelopment goals, which will be discussed later in this chapter in the answer to question three.

The development instruments category showed the most variation of the three categories. When the development instrument scores are averaged and rankings applied, there is a positive relationship between the development instruments category and redevelopment achievement. The communities with the top three rankings for development capacity (Peru, Rantoul, and Marquette) also had the top three scores in development instruments. The communities in the lower three scores for development capacity (Oscoda, Plattsburgh, and Rome) generally stayed in the lower scores for development instruments. The variables that contributed most to this correlation were institutional infrastructure and appropriate development focus. These variables will be discussed in the answer to question three.

Next the research asks: "For each development capacity category, which variable is the most significant?" For the citizen participation category, no variable stood out. For the community structure variables the project development and lead agency variables show the most variation, and lead agency does correlate to both development capacity and redevelopment success. Oscoda and Rome were communities where the LRA was not the lead agency for redevelopment. Both received low scores for the lead agency variable. Those communities scored fourth and sixth respectively in development capacity and sixth and fifth in indices used by others. For development instruments, the institution infrastructure and appropriate development focus variables showed the most variation and there was correlation between those variables, development capacity, and

redevelopment success. In institutional infrastructure, Oscoda and Rome had the lowest scores being fourth and sixth in development capacity and sixth and fifth in indices used by others. In appropriate development focus Peru and Rantoul received the top scores and were ranked first and third in both development capacity and indices used by others.

The last question was: “Is there a relationship between each variable and the attainment of redevelopment goals and which variable has the greatest positive relationship?” The variable with the greatest variation, institutional infrastructure, showed a correlation between the variable and redevelopment success as did lead agency and appropriate development focus. This means that appointing the LRA as the lead agency, having an appropriate development focus, and investing in institutional infrastructure are important to successful redevelopment.

### **Recommended Changes for the McGuire et al. and This Study’s Model**

The McGuire et al. and this study’s model are the same except for the infrastructure variable, so the models will be discussed together. The discussion below addresses any proposed changes to the model and why certain aspects of the model should not be changed until future research is completed. It discusses where variables show no differentiation, reasons for the consistency, and the recommended way forward. For this study’s model, the McGuire et al. model was modified to separate the infrastructure variable into institutional and physical infrastructure. This was an appropriate decision because the variables support people and programs differently. This study did not find anything that suggested the infrastructure variables should be treated as one variable.

This study's model links development capacity to redevelopment success and the achievement of redevelopment goals. This study's model also uses both the attainment of redevelopment goals identified by the local community in their LRPs and the attainment of development indices used by other agencies to measure redevelopment success. This is done because the LRP goals selected by the communities do not provide a consistent measurement of redevelopment success across the communities. The use of development indices used by other agencies to provide a consistent measurement and allow broad comparison between the communities is appropriate and proved a good basis to compare the communities. However, it is still important to measure redevelopment success by using the LRP goals because those are the exact goals selected by the communities. It is possible that communities selected LRP goals that were significantly less aggressive than the indices used by others and it should be identified when communities reach those goals and do not want to achieve the indices used by others.<sup>25</sup>

The Citizen Participation category is made up of three variables: acceptance of change, acceptance of strengths and weaknesses, and effective mechanisms for community input. For the acceptance of strengths and weaknesses and effective mechanisms for community input, each community was coded as a score of 100. These variables did not contribute to an understanding of the impact of citizen participation on development capacity. However, these variables should not be removed from the model because these scores were driven by either the BRAC process (in the case of the strengths and weaknesses variable) or the military environmental clean-up process (in the case of

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<sup>25</sup> Of the six communities studied for this study Rantoul and Rome selected goals that were technically less aggressive than the LRA goals used by others. However, information from the LRA interviews showed that these communities were striving for more aggressive goals similar to the indices used by others. So using both LRP redevelopment goals and indices used by others to measure redevelopment success—while showing where differences exist between the LRP goals and indices used by others—was appropriate.

the effective mechanisms for community input variable), and there could be variation in these scores when non-BRAC or non-military clean-up communities are studied. BRAC communities are required to complete local redevelopment plans (LRP) and encouraged (almost expected) to include strengths and weaknesses in those documents. Advisors from the Office of Economic Adjustment (OEA), who fund the LRPs, provided assistance to the communities during the LRP development process and shared lessons learned across the communities. This ensures that almost every BRAC community examined their strengths and weaknesses and included them in their LRPs. The acceptance of strengths and weaknesses should remain in the model for future research because this variable may show more specificity and be more significant for non-BRAC communities in future research. All the communities were coded as a score of 100 for effective mechanisms for community input. However, they did not receive that score because they were BRAC communities, but rather that the Air Force (AF) was conducting environmental remediation and as part of that process the AF was required to hold meetings to gather community input. These meetings included local government officials and were open to all citizens.<sup>26</sup> Thus, the effective mechanisms for community input should remain in the model for future research because this variable may show more specificity and be more significant for future non-BRAC, non-military clean-up community studies. With more details about the number of community meetings and number of people attending, it may also be possible in future research to modify this variable for scores along the zero to 100 range.

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<sup>26</sup> For Oscoda, the environmental remediation meetings were the only community meetings identified in records or by the LRA. So the community would have had no mechanisms for community input if the AF had not been conducting environmental cleanup.

There are six variables in the community structure category. For three variables—vertical linkages, horizontal linkages, and dispersed leadership—all the communities were coded with a score of 100. As part of the BRAC process communities are encouraged by OEA to apply for state and federal loans, which contributed to all the study communities being coded with a score of 100 for vertical linkages. This variable should not be removed from the model because there may be variation in the model when non-BRAC communities are studied. There were varying numbers and amounts of state and federal loans for which the communities applied. In this study, it was difficult to get details on those numbers twenty years after the events. However, with those details future research could show more differentiation along the zero to 100 range. As part of the BRAC process communities are encouraged to draw lessons learned from other BRAC communities by OEA, which contributed to all the communities being coded with a score of 100 for horizontal linkages. This variable should remain in the model for future non-BRAC case studies because when the BRAC process is not used this variable may show more specificity and be more significant.<sup>27</sup> Dispersed leadership is the third variable in Community Structure where all the communities studied were coded with a score of 100. Unlike vertical and horizontal linkages, the BRAC process does not encourage dispersed leadership and there is no reason connected with the military for why the six communities would all be coded with a score of 100. This variable showed differentiation in the McGuire et al. research. Therefore, it is recommended that the variable remain in the model and be watched in future research to see if it should be kept in the model.

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<sup>27</sup> In future research, including additional BRAC case studies, it may be possible to collect data on the number of communities contacted, which could show more specificity in the variable. For this study this data was collected where available.

The developmental instruments category showed the most differentiation. Of the five variables in developmental instruments, in only one (community spirit) were the six communities coded with the same score of 100. Having a score of 100 in this category would be very typical for military communities. Almost every base hosts annual events such as air shows, open houses, etc. Therefore it would be very difficult for a military community not to receive a score of 100. This variable should remain in the model for future research as this variable may be more significant for non-military communities.

Of the six variables where all the communities were coded with a score of 100, one (dispersed leadership) should be watched for possible removal. Three appear to be affected by the BRAC process, one was affected by the AF environmental remediation process, and one was a result of military outreach to their communities. These five variables should be left in the model, and non-BRAC, non-military communities should be studied to determine if the variables should be left in the model. The dispersed leadership variable should be watched in future research for possible removal.

Interviewees did not mention factors that were not already captured with the model and the study did not highlight variables that needed to be added; therefore, no variables are recommended to be added to the model.

The model measured LRP quality and execution to see if they had an impact. In this study there was no impact. However, LRP quality and execution should be measured in future BRAC case studies in case there is an impact.

Discussions throughout the study provided contextual issues, such as the economic downturn of Detroit and the importance of natural resources as a strength at Marquette.

These discussions are important to understanding nuances in the results. Contextual discussions need to be included in any future research.

### **Contributions to Theory**

This study makes four contributions to current theory. This is the first time that the link between development capacity and redevelopment success has been studied. It is significant that a link between development capacity and redevelopment success was found in these six case studies. More research—with additional case studies from BRAC, military, and non-BRAC/military communities—needs to be done. It is important to study whether this model is transferable to other types of communities (than those near former rural, large-aircraft installations) and whether the model is scalable from rural communities to larger communities. The research should investigate whether there is a link between development capacity and redevelopment success for other 1988, 1991, 1993, and 1995 BRAC communities that are not rural communities and did not have previous large-aircraft missions. This would include investigating former Air Force, Army, and Navy communities. If there is a link between development capacity and redevelopment success for Army, Navy, and AF communities that were not previously large-aircraft installations, then the model is transferrable between different types of military installations. The research should include investigating former military communities near metropolitan areas as well as rural locations. If there is a link between development capacity and redevelopment success for metropolitan as well as rural communities, then the model would be scalable. It is also important to see if there is a



link between development capacity and redevelopment success for communities that are not military, but have lost a major employer. If there is a link this would make the model more transferable to non-military communities.

The second finding is that the development instruments category was more significant than the other categories. This could be due to the BRAC, military environmental clean-up, and community outreach processes in place, which resulted in scores of 100 for several variables in the citizen participation and community structure categories. More research using non-BRAC, non-military communities needs to be done to determine if the development instruments is more significant than the other categories for those communities. However, for BRAC and military communities the importance of development instruments is significant, indicating that for those communities to improve their development capacity and redevelopment success improvement in the development instruments category needs to be done in addition to the processes already part of BRAC, military environmental clean-up, or military outreach.

A third finding is the importance of lead agency, appropriate development focus, and institutional infrastructure on redevelopment success. Without this study it was not known which variables from the model had the larger impact on redevelopment success. This study highlights the importance of selecting and maintaining a lead agency, having an appropriate development focus, and having community investments in institutional infrastructure. This finding is important for BRAC/military and non-BRAC/military communities because both should be improving their development capacity.

The final finding is that the contextual conditions need to be studied to assist in explaining the results of each case study. K. I. Sawyer had a significant amount of natural

resources, especially timber. Understanding that contextual dynamic was important to understanding the redevelopment and redevelopment success of K. I. Sawyer.

Understanding the relationship of Oscoda as a resort location for Detroit workers and the impact of Detroit's automotive industry downturn on the redevelopment of Oscoda is important to understanding Oscoda's redevelopment. These two examples highlight the requirement to not rely only on variables within the model, but the requirement for case studies using this model to also consider contextual conditions.

Most of the literature aligns with this study, including Blakely (2002) and Erickcek and McKinney (2006). Progress toward a third generation of research would determine if the study model was applicable to non-BRAC and non-military communities.

### **Contributions to Policy Implementation**

On a local community policy level, rural communities—especially those with one or two major employers—should work on improving their development capacity to attract more businesses and to prepare in case a major employer should leave. They should concentrate on lead agency, appropriate development focus, and institutional infrastructure. They should be sure to include variables that the BRAC, military environmental clean-up, and military outreach include such as acceptance of strengths and weaknesses, community input, community spirit, and vertical and horizontal linkages.<sup>28</sup> They should first concentrate their efforts on development capacity variables that either cost little to accomplish or can be accomplished with volunteers, such as acceptance of change, acceptance of strengths and weaknesses, providing effective

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<sup>28</sup> Until the importance of these variables is determined from non-BRAC/military community research.

mechanisms for community input, creating a shared vision, creating an appropriate development focus, holding community spirit events, and taking advantage of vertical and horizontal linkages. Communities should then invest in institutional and physical infrastructure, being judicious about their investments.

On a national level, the Economic Development Agency (EDA) should encourage small military communities to improve their development capacity so that the community can attract other major employers (besides the military base) and so the community can be better prepared for future BRAC rounds. EDA can provide information about how to improve development capacity and push communities to establish a lead agency, to adopt an appropriate development focus, and to invest in institutional infrastructure.

### **Contributions to Overall Findings**

This study is one of the few BRAC studies during the second generation of BRAC literature (oriented toward the 1980 and 1990 BRAC rounds) that explores more than three cases and attempts to draw comparisons across the case studies.<sup>29</sup> John Lynch conducted a study of approximately 30 communities from the 1960 and 1970 closures. A large case study on the 1980 and 1990 closures should be conducted. Now is also a good time to collect data for similar studies from the 2005 BRAC round communities.

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<sup>29</sup> John Lynch (2002), who studied the 1960s and 1970s BRAC closures, conducted the most extensive multiple case study research exploring over thirty communities. After Lynch's research, researchers generally studied one, two or sometimes three case studies, but generally not more than three. Reimer (1996) was an exception that studied five case studies that looked at early involvement of private development interests. Matwiczak (2004) and GAO (2005) studied data across BRAC communities, but did not conduct in-depth case studies for each community. This study attempts to go beyond previous BRAC research by conducting six communities.

By studying the BRAC communities it is clear that the OEA and the services' redevelopment assistance contributes to redevelopment success by helping the communities develop a redevelopment plan, helping them identify their strengths and weaknesses, helping them develop forums to gather community input, and encouraging them to develop vertical and horizontal linkages. This finding supports the continuance of OEA and service support. Identification of other variables that contribute to redevelopment success provide the basis to encourage OEA to build into their processes a push for communities to establish a lead agency and an appreciation by the communities of appropriate development focus and investment in institutional infrastructure.

Finally, this is the one of the few follow-on research studies for the McGuire et al. model (1994).<sup>30</sup> Further research on the link between development capacity and redevelopment success will help bolster the McGuire et al. and this study's findings.

### **Limitations to the Study**

The findings from this study may be particular to these contexts and not intended for generalization. This limitation is addressed by fully describing each study's setting, including its relationship to BRAC and the military. With this information, other researchers can assess the study's transferability. The LRA interview data collected in this study is based on the interpretations of the researcher and the perceptions self-reported by those interviewed. As much as possible, the information from the LRA

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<sup>30</sup> Hall (2008) examined the capacity of regional economic districts to apply for and leverage federal grants; however, no other research was conducted using the McGuire et al. model.

interviews was corroborated with data from other sources. When this was not the case the instance was highlighted.

This research was initially limited to the variables identified within the theoretical model. When other factors—such as the natural resources at K. I. Sawyer and the influence of the economic downturn in Detroit—may have affected redevelopment, they were noted. While it is possible that other factors could influence interactions, it did not appear to be a concern. All variables were assumed to influence interactions equally. This may not be true. Future research should use data with finer specificity to determine if the variables are equal or not.

### **Future Research**

Future research needs to be conducted using non-BRAC, non-military communities to determine if the five variables where all six communities received a score of 100 should to be left in the model. Case studies on small towns where major employers have left need to be conducted to determine if the model proposed for this study is applicable to non-BRAC communities. Additional BRAC community case studies need to be conducted to retest the findings of this study further. Communities whose military missions were other than heavy aircraft need to be studied to determine how important the infrastructure left behind is to redevelopment. It would also be beneficial to repeat this study for other communities from the 1960s/70s, 1980s/90s, and 2005 BRAC rounds.

### **A Final Note**

This research shows that for these case studies there is a tie between development capacity and redevelopment success when measured by indices used by other organizations. There is not as strong a link between the achievement of LRP goals and development capacity; however, it is also important to look at attainment of LRP goals, because those are the real goals that the community wants to achieve. In measuring development capacity, individual variables that showed a correlation between the variable and redevelopment success were lead agency, appropriate development focus, and physical and institutional infrastructure. Communities should therefore appoint one entity as the lead agency, have an appropriate development focus, and invest in institutional infrastructure—all important aspects to successful redevelopment. Communities should seek to improve their development capacity scores by working on variables that have little or no cost. They should strategically work on variables that bear a cost to improve development capacity with the goal of improving the community for current residents and being able to attract future businesses and residents.

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**APPENDIX A –ACRONYMS**

ADA	Americans with Disabilities Act
ADC	Association of Defense Communities
AF	Air Force
AFB	Air Force Base
AFBCA	Air Force Base Closure Agency
AFRPA	Air Force Real Property Agency
AFS	Air Force Station
AIS	Assured Information Security
AITTS	Adjusted Interrupted Time Series
ANG	Air National Guard
ARB	Air Reserve Base
ARC	Appalachian Regional Commission
AST	Aboveground Storage Tank
AWACS	Airborne Command
BCA	Base Conversion Authority
BCD	Board of City Development
BOD	Board of Directors
BRAC	Base Realignment and Closure
BTU	British Thermal Unit
CASE	Center for Advanced Systems and Engineering
CCI	Cleveland Cliffs Iron
CCIDA	Clinton County Industrial Development Agency
CDBG	Community Development Block Grants
CDP	Census Designated Place
CDWG	Community Development Working Group
CEO	Chief Executive Officer
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CMT	Crawford Murphy and Tilley
CONUS	Continental United States
CRP	Community Relations Plan
DBCRA	Defense Base Closure and Realignment Act
DFAS	Defense Finances Accountability Service
DoD	Department of Defense
DoL	Department of Labor
DoT	Department of Transportation
DRMO	Defense Reutilization and Marketing Office
EAC	Economic Adjustment Committee
EBS	Environmental Baseline Survey
EDA	Economic Development Administration
EDC	Economic Development Conveyance
EDGE	Economic Development Growth Enterprises
EDRG	Economic Development Resources Group
EDS	Economic Development Strategy
EDZ	Economic Development Zone
EIS	Environmental Impact Study
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FBO	Field Base Operator

FOSL	Finding of Suitability to Lease
FTZ	Foreign Trade Zone
GAO	Government Accountability Office
GBTP	Griffiss Business Technology Park
GCRA	Grissom Community Redevelopment Authority
GDP	Gross Domestic Product
GIA	Grissom International Airport
GIS	Geospatial Information System
GLDC	Griffiss Local Development Corporation
GRA	Griffiss Redevelopment Authority
GRPC	Griffiss Redevelopment Planning Council
GS	General Service
GSA	General Services Administration
HASC	House Armed Services Committee
HHS	Health and Human Services
HUD	Housing and Urban Development
ICBM	Intercontinental Ballistic Missile
ICMA	International City/County Management Association
IDA	Industrial Development Agency
INC	Incorporated
IRB	Institutional Review Board
IRP	Installation Restoration Program
JCSG	Joint Cross Service Group
KISBCA	KI Sawyer Base Conversion Authority
LDC	Local Development Corporation
LEZ	Local Empire Zone
LRA	Local Redevelopment Authority
LRP	Local Redevelopment Plan
MAP	Military Airport Program
MCEDA	Miami County Economic Development Authority
MCEDC	Miami County Economic Development Corporation
MIT	Massachusetts Institute of Technology
MQT	Marquette County Airport
MVCC	Mohawk Valley Community College
NAID	National Association of Installation Developers
NAS	Naval Air Station
NASA	National Air and Space Administration
NDAA	National Defense Authorization Act
NEPA	National Environmental Protection Act
NMU	Northern Michigan University
NPIAS	National Plan of Integrated Aviation Systems
NPL	National Priority List
NOAA	National Oceanic and Atmospheric Administration
NS	Naval Shipyard
NYDOL	New York State Department of Labor
NYSEDC	New York State Economic Development Corporation
NYSTEC	New York State Technology Enterprise Corporation
OCIDA	Oneida County Industrial Development Agency
OEA	Office of Economic Adjustment
PARC	Plattsburgh Airbase Redevelopment Corporation
PBT	Public Benefit Transfer

PIDC	Plattsburgh Intermunicipal Development Council
PILOT	Payment in Lieu of Taxes
PL	Public Law
RAB	Restoration Advisory Board
RACC	Rantoul Area Chamber of Commerce
RADC	Rome Air Development Center
RCRA	Restoration Conservation and Recovery Act
RIDC	Rome Industrial Development Corporation
ROD	Record of Decision
ROTC	Reserve Officer Training Corps
R&D	Research and Development
SIA	Sawyer International Airport
SUNY	Syracuse University of New York
SWOT	Strengths Weaknesses Opportunities and Threats
TCE	Trichloroethylene
TIF	Tax Increment Financing
UDAG	Urban Development Action Grant
UIC	Urban Influence Code
UP	Upper Peninsula
UPPC	Upper Peninsula Power Company
US	United States
USAF	United States Air Force
USDA	United States Department of Agriculture
VVEDA	Victor Valley Economic Development Authority
WAEAC	Wurtsmith Area Economic Adjustment Committee
WRIP	West Rome Industrial Park
WWTP	Wastewater Treatment Plant
WWI	World War I
WWII	World War II
YMCA	Young Mens Christian Association



**APPENDIX B:  
BASES CLOSED BRAC ROUNDS 1988, 1991, 1993, & 1995 BY DEPARTMENT**

<b>Installation</b>	<b>BRAC YR</b>	<b>Dept</b>
Bergstrom Air Force Base, TX	1991	AF
Carswell Air Force Base, TX	1991	AF
Castle Air Force Base, CA	1991	AF
Chanute Air Force Base, IL	1988	AF
Eaker Air Force Base, AK	1991	AF
England Air Force Base, LA	1991	AF
Gentile Air Force Station, OH	1993	AF
George Air Force Base, CA	1988	AF
Griffiss Air Force Base, NY	1993	AF
Grissom Air Force Base, IN	1991	AF
Homestead Air Force Base, FL	1993	AF
Kelly Air Force Base, TX	1995	AF
K. I. Sawyer Air Force Base, MI	1993	AF
Loring Air Force Base, ME	1991	AF
Lowry Air Force Base, CO	1991	AF
March Air Force Base, CA	1993	AF
Mather Air Force Base, CA	1988	AF
McClellan Air Force Base, CA	1995	AF
Myrtle Beach Air Force Base, SC	1991	AF
Newark Air Force Base, OH	1993	AF
Norton Air Force Base, CA	1988	AF
O'Hara IAP Air Reserve Station, IL	1993	AF
Pease Air Force Base, NH	1988	AF
Plattsburgh Air Force Base, NY	1993	AF
Reese Air Force Base, TX	1995	AF
Rickenbacker Air Guard Base, OH	1991	AF
Richard Gebaur Air Reserve Station, MO	1991	AF
Williams Air Force Base, AZ	1991	AF
Wurtsmith Air Force Base, MI	1991	AF
Fitzsimmons Army Medical Center, CO	1995	Army
Fort Benjamin Harrison, IN	1991	Army
Fort Devens, MA	1991	Army
Fort Douglas, UT	1988	Army
Fort McClellan, AL	1995	Army
Fort Ord, CA	1991	Army
Fort Pickett, VA	1995	Army
Fort Ritchie, MD	1995	Army

Fort Sheridan, IL	1988	Army
Jefferson Proving Ground, IN	1988	Army
Letterkenny Army Depot, PA	1995	Army
Lexington Army Depot, KY	1988	Army
Presidio of San Francisco, CA	1988	Army
Red River Army Depot, TX	1995	Army
Sacramento Army Depot, CA	1991	Army
Savanna Army Depot, IL	1995	Army
Seneca Army Depot, NY	1995	Army
Sierra Army Depot, CA	1995	Army
Stratford Army Engineering Plant, CN	1995	Army
Tooele Army Depot, UT	1993	Army
Watertown Army Materials Technology Lab, MA	1988	Army
Cameron Station, VA	1988	DoD
Defense Personnel Support Center	1993	DoD
Memphis Defense Distribution Depot, TN	1995	DoD
Oakland Military Complex, CA	1993	DoD
Ogden Defense Distribution Depot, UT	1995	DoD
Philadelphia Defense Distribution Supply Center, PA	1993	DoD
Vint Hill Farms Station, VA	1993	DoD
Alameda Naval Air Station and Naval Aviation Depot, CA	1993	Navy
Barbers Point Naval Air Station, HI	1993	Navy
Bayonne Military Ocean Terminal, NJ	1995	Navy
Brooklyn Naval Station, NY	1988	Navy
Cecil Field Naval Air Station, FL	1993	Navy
Charleston Naval Complex, SC	1993	Navy
Chase Field Naval Air Station, TX	1991	Navy
Chicopee Naval Reserve Center, MA	1993	Navy
Dallas Naval Air Station, TX	1993	Navy
El Toro Marine Corps Air Station, CA	1993	Navy
Galveston Naval Station, TX	1988	Navy
Glenview Naval Air Station, IL	1993	Navy
Guam Naval Complex	1993	Navy
Hunters Point Annex Naval Shipyard, CA	1991	Navy
Indianapolis Naval Air Warfare Center, IN	1995	Navy
Johnstown Naval Air Facility	1993	Navy
Lake Charles Naval Station, LA	1988	Navy
Long Beach Naval Complex, CA	1991	Navy
Louisville Naval Ordnance Station, KY	1995	Navy
Mare Island Naval Shipyard, CA	1993	Navy
Martinsburg Naval Air Facility, WV	1993	Navy
Memphis Naval Air Station, TN	1993	Navy
Mobile Naval Station, AL	1993	Navy
Moffett Naval Air Station, CA	1991	Navy

New York (Staten Island) Naval Station, NY	1993	Navy
Norfolk Naval Aviation Depot, VA	1993	Navy
Orlando Naval Training Center, FL	1993	Navy
Quincy Naval Reserve Center, MA	1993	Navy
Pensacola Naval Aviation Depot, FL	1993	Navy
Philadelphia Naval Complex, PA	1991	Navy
Portsmouth Naval Electronic System Eng Center, VA	1993	Navy
Puget Sound Naval Station, WA	1991	Navy
San Diego Electronic Systems Eng Ctr, CA	1991	Navy
San Diego Naval Training Center, CA	1993	Navy
St Inigoes NESEC, MD	1993	Navy
Treasure Island Naval Station, CA	1993	Navy
Tustin Marine Corps Air Station, CA	1991	Navy
Warminster Naval Air Warfare Center, PA	1991	Navy

## **APPENDIX C - INSTITUTIONAL REVIEW BOARD**

A University Application for Exempt Research was filed with the College Human Subjects Committee to fulfill Institutional Review Board requirements. The only identifiable participants are the significant leaders identified and the LRA leaders completing the questionnaire. The other data sets are large and only local redevelopment area (county or city) information is given. Therefore, possible privacy violations or illegal/unethical participant manipulation are minimal for this study. Before any research is conducted the Old Dominion University Research Compliance Coordinator will review the information, survey instrument and datasets.

## APPENDIX D: LOCAL REUSE AUTHORITY SURVEY QUESTIONS

### Local Reuse Authority (LRA) Representative Survey

#### Informed Consent

To the LRA Representative,

Thank you for agreeing to participate in this study. Your participation is voluntary, and you can withdraw from the study at any time. Your identity will not be revealed in the publication of research results. This study is researching elements in local communities that are believed to enhance a community's success in economic development such as citizen participation, community structure and economic development instruments. This study uses six communities near bases closed during the 1991 and 1993 Base Realignment and Closure (BRAC) rounds – Rantoul, Illinois; Peru, Indiana; Marquette and Iosco, Michigan; and Plattsburgh and Rome, New York. Our goal is that the insight gathered from this study will help future communities affected by BRAC actions or the loss of a major employer. The nature of this study should not be invasive or embarrassing. Questions are confined to ones that address your professional situation, beliefs, perceptions, problem-solving, and/or demographics. Any information provided by you in the study will be afforded professional standards for protection of confidentiality.

By completing this study, you are consenting to the terms of this research as stated above. This notice serves as your copy of the consent agreement. You may also request a copy of these consent terms by contacting the Principal Investigator of the study.

If you have any questions about the study, please contact myself, the Principal Investigator:

Paula Loomis, Principal Investigator  
Urban Studies and Public Administration  
paula.j.loomis@usace.army.mil  
757-683-3961 or 757-630-4773

If you have any questions regarding your rights as a research subject contact the Human Subjects Research Committee Chair at [klmiller@odu.edu](mailto:klmiller@odu.edu) or 757-683-5109.

If you would like to elaborate more there is space at the end of the survey or add extra pages. This survey should take about 30 minutes to complete. We may like for you to elaborate on your responses. If so, will call for a short (45 minutes maximum) interview. Again your participation is optional. Notes from that interview will be sent to you for clarifications. To make this survey easy, you can type your responses on this sheet and return this form to [ploomisva@cox.net](mailto:ploomisva@cox.net). Your responses will be kept confidential and your name will not be published in the study results.

Our goal is to be open with the results of this study. You can receive a copy of the study's results by checking the last line and will be given a chance to provide comments before the final study is complete. Your participation is greatly appreciated. For questions please call Paula Loomis at 757-630-4773 or email [ploomisva@cox.net](mailto:ploomisva@cox.net).

Did your community hold community meetings open to the public during the five years prior to the base closure announcement? \_\_\_\_ If "yes", how many meetings each year? \_\_\_\_ What kind?

- 1) Did your community hold annual festivals/events open to the public during the five years prior to the base closure announcement? \_\_\_\_ If "yes", how many per year? \_\_\_\_ What kind and how big were the crowds? \_\_\_\_\_

- 2) Did your community have other local economic development organizations besides the Local Reuse Authority (LRA) (Chambers of Commerce, etc)? \_\_\_\_ If "yes", what organizations?  
\_\_\_\_\_
- a. If "yes", were your LRA leaders also leaders of the other organizations? \_\_\_\_ Which ones? \_\_\_\_\_
- 3) Did your LRA apply for grants? If so, approximately how many grants? \_\_\_\_ Which ones?  
\_\_\_\_\_
- 4) Did your LRA contact any other communities affected by BRAC or similar large employer closures? \_\_\_\_ If so, approximately how many communities and what were their names?  
\_\_\_\_\_
- a. Was the exchange beneficial? \_\_\_\_ How?  
\_\_\_\_\_
- 5) Did your LRA seek knowledge from economic development professional organizations such as the Association of Defense Contractors, etc? \_\_\_\_ If so approximately how many and what were their names? \_\_\_\_\_
- 6) Was your LRA primarily responsible for redevelopment or did it share responsibility? \_\_\_\_  
With whom? \_\_\_\_\_
- 7) How was your LRA organized?  
\_\_\_\_\_
- 8) What were your LRA's goals for base redevelopment?  
\_\_\_\_\_
- a. Did your local government/community agree? \_\_\_\_ Did your LRA reach those goals?  
\_\_\_\_\_
- b. Did your LRA reach those goals in the time period the LRA initially anticipated?  
\_\_\_\_\_
- 9) What did your LRA do to attract new uses to your former installation?  
\_\_\_\_\_
- 10) Did your local communities try to streamline any local processes (building permits, etc) to attract businesses? \_\_\_\_\_
- 11) Did your LRA have any major contracts that they used for redevelopment?  
\_\_\_\_\_
- 12) Did your community invest in infrastructure (roads, bridges, etc.) in the five years prior to the base closure announcement? \_\_\_\_ Do you know an approximate amount? \_\_\_\_
- 13) Did your community invest in community facilities such as schools, hospitals, etc. in the five years prior to the base closure announcement? \_\_\_\_ Do you know an approximate amount?  
\_\_\_\_\_

- 14) Did you community experience any major business expansion (100 new jobs or more) in the five years prior to the base closure announcement? \_\_\_ If so, how many expansions, which companies and how many jobs were created? \_\_\_\_\_
- 15) Do you have a copy of any names/rosters of persons also involved in base redevelopment that we should contact?
- \_\_\_\_\_

Name \_\_\_\_\_ Signature \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_ Please  
send me a copy of this study. Thanks for your participation! Feel free to add any other comments

## APPENDIX E: DATA SOURCES

### Community Acceptance of Change Variable Sources:

- Rantoul, Illinois (Podigrosi, K. 2000. *Eye of the storm*, Green Gables Publishing. Podigrosi, K. 2010. Interview by Paula Loomis, March 1.)
- Peru, Indiana (Grissom Air Force Base. *Grissom Air Reserve Base Installation Restoration Program Community Relations Plan*, Revised May 1, 1997. Tidd, J. 2010. Interview by Paula Loomis, March 16.)
- Marquette, Michigan (Zuiss, R. 2012. Interview by Paula Loomis, March 1.)
- Oscoda, Michigan (Wurtsmith Air Force Base Restoration Advisory Board Meeting Minutes, September 27, 1991.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York Plattsburgh Air Force Base. (*Minutes of the Plattsburgh AFB BRAC Cleanup Team*, June 5, 1990.)

### LRP Strengths and Weaknesses Variable Sources:

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section B.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter II.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 8.3.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section II-4.)
- Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, p9.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p94.)

### Community Input Variable Sources:

- Rantoul, Illinois (Podigrosi, K. 2000. *Eye of the storm*, Green Gables Publishing and Podigrosi, K. 2010. Interview by Paula Loomis, March 1.)



- Peru, Indiana (Grissom Air Force Base. *Grissom Air Reserve Base Installation Restoration Program Community Relations Plan*, Revised May 1, 1997 and Tidd, J. 2010. Interview by Paula Loomis, March 16.)
- Marquette, Michigan (Zuiss, R. 2012. Interview by Paula Loomis, March 1.)
- Oscoda, Michigan (Wurtsmith Air Force Base Restoration Advisory Board Meeting Minutes, September 27, 1991.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York (Plattsburgh Air Force Base. *Minutes of the Plattsburgh AFB BRAC Cleanup Team*, June 5, 1990.)

**Dispersed Leadership Variable Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section ES-10 and Podigrosi, K. 2000. *Eye of the storm*, Green Gables Publishing.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Executive Summary.) Tidd, J. 2010. (Interview by Paula Loomis, March 16.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section iii and I-3.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section X-9.)
- Rome, New York (*Rome Daily Sentinel*. 2010. Two new board members appointed to Griffiss Local Development Corporation, March 29 and Griffiss Air Force Base Restoration Advisory Board Meeting Minutes November 2, 2000.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p94.)

**Vertical Linkage Variable Sources:**

- Rantoul, Illinois (Podigrosi, K. 2000. *Eye of the storm*, Green Gables Publishing, pX.)
- Peru, Indiana (Tidd, J. 2010. Interview by Paula Loomis, March 16 and RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, pV-7 and X-21.)
- Marquette, Michigan (Zuiss, R. 2012. Interview by Paula Loomis, March 1.)
- Oscoda, Michigan (Kellum, G. 2012. Interview by Paula Loomis, March 1.)
- Rome, New York (Gray, Vernon. 2010. Interview by Paula Loomis, March 1; Griffiss International Airport. 2010b. *Griffiss International Airport business plan*. May, p33;

- and Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, p13.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p147 and 159.)

#### **Horizontal Linkage Variable Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section VII-7 and Podigrosi, K. 2000. *Eye of the storm*, Green Gables Publishing, pX.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, pII-8, IX-10, and XII-7 and Tidd, J. 2010. Interview by Paula Loomis, March 16.)
- Marquette, Michigan (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Oscoda, Michigan (Gray, Vernon. 2010. Interview by Paula Loomis, March 1 and Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, pXII-7.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)

#### **Shared Vision Variable Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section IV- A and Podigrosi, K. 2000. *Eye of the storm*, Green Gables Publishing.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter VIII-2. Tidd, J. 2010. Interview by Paula Loomis, March 16. *Grissom Air Force Base. Grissom Air Reserve Base Installation Restoration Program Community Relations Plan*, Revised May 1, 1997.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for*

- K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 4.2. and Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section VI-2. and Gray, Vernon. 2010. Interview by Paula Loomis, March 1.)
  - Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, p17 and Reynolds. 2010. Interview by Paula Loomis, April 1.)
  - Plattsburgh, New York (Calabro, M. 2008. *Flying high again, PARC's redevelopment of Plattsburgh Air Force Base*. Corporate History.net.LLC. p46-47 and HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, pxiv.)

#### **Lead Agency Variable Sources:**

- Rantoul, Illinois (Podigrosi, K. 2010. Interview by Paula Loomis, March 1.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter II-2 and 4 and Tidd, J. 2010. Interview by Paula Loomis, March 16.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 7 and appendix L.)
- Oscoda, Michigan (Vernon. 2010. Interview by Paula Loomis, March 1. Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section V-21.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York (Calabro, M. 2008. *Flying high again, PARC's redevelopment of Plattsburgh Air Force Base*. Corporate History.net.LLC.)

#### **Community Spirit Variable Sources:**

- Rantoul, Illinois (Rantoul Chamber of Commerce website, [www.rantoulchamber.com](http://www.rantoulchamber.com) (accessed May 8, 2010).)
- Peru, Indiana (Grissom Air Force Base. *Grissom Air Reserve Base Installation Restoration Program Community Relations Plan*, Revised May 1, 1997.)
- Marquette, Michigan (Marquette County website. <http://www.mqtshappening.com/mcvb/viewphp?view=1776> (accessed May 8, 2012).)

- Oscoda, Michigan (Vernon. 2010. Interview by Paula Loomis, March 1.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York (City of Plattsburgh website, [www.cityofplattsburgh.com](http://www.cityofplattsburgh.com), (accessed May 8, 2012).)

#### **Physical Infrastructure Variable Sources.**

- Rantoul, Illinois (Podigrosi, K. 2010. Interview by Paula Loomis, March 1.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter VII-7 and 11.)
- Marquette, Michigan (Zuiss, R. 2012. Interview by Paula Loomis, March 1.)
- Oscoda, Michigan (Vernon. 2010. Interview by Paula Loomis, March 1.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York (None found.)

#### **Institutional Infrastructure Variable Sources:**

- Rantoul, Illinois (Podigrosi, K. 2010. Interview by Paula Loomis, March 1.)
- Peru, Indiana (Tidd, J. 2010. Interview by Paula Loomis, March 16.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27. p 6-8.)
- Oscoda, Michigan (Vernon. 2010. Interview by Paula Loomis, March 1.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York (Champaign Valley Physicians Hospital History. <http://www.cvph.org/about-cvph/history/default.aspx>, (accessed July 8, 2012).)

#### **Appropriate Development Focus Variable Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Executive Summary, p3-10 and 3-20 and Podigrosi, K. 2010. Interview by Paula Loomis, March 1.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter II-11 and VII-7 and Tidd, J. 2010. Interview by Paula Loomis, March 16.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27. Appendix L.)
- Oscoda, Michigan (Vernon. 2010. Interview by Paula Loomis, March 1.)
- Rome, New York (Griffiss International Airport. 2010b. *Griffiss International Airport business plan*. May; Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki

Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. p11; and Reynolds. 2010. Interview by Paula Loomis, April 1.)

- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p144, 163-5, 171 and 913.)

#### **Major Business Development Variable Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, p2-14 and Podigrosi, K. 2010. Interview by Paula Loomis, March 1.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter IX-9 and IX-12.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, pxxxii.)
- Oscoda, Michigan (Vernon. 2010. Interview by Paula Loomis, March 1.)
- Rome, New York (Reynolds. 2010. Interview by Paula Loomis, April 1.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p83.)

#### **LRP Quality-Facility Condition Analysis Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section III-B-1.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter II F.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 4.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section III-3.)

- Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, Chapter II.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p29.)

**LRP Quality-Utility Condition Analysis Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section III-B-2.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter II.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer, Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 4 and 6.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section II-13.)
- Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, Utility Annex.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p55.)

**LRP Quality-Environmental Condition Analysis Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section III-B-3.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter VI-1 and X-7.)

- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 3.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section III-47.)
- Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated.; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, p9.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p24.)

**LRP Quality-Marketing Plan with Multiple Markets Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, Section V-D.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter IV.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 8.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section V-1.)
- Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated.; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, p19.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and

Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p182 and 219.)

**LRP Quality-Real Estate Management Plan Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter I-1, IV-9 and X-5.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section 6-14 and 7.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section VIII-1.)
- Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will & Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, p.27-28.)
- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p179.)

**LRP Quality- Homeless Plan Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter XI-2.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section xxxiv and 4.65.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section VI-2.)
- Rome, New York (Hamilton, Rabinovitz & Alschuler, Incorporated; Sasaki Associates, Incorporated; Allen, King Rosen & Fleming, Incorporated; Almy & Associates; Einhorn, Yaffee, Prescott, Greiner, Incorporated; McDermott, Will &



Emory; Mt Auburn Associates; Paulus, Sokolowski & Sartor, Incorporated; and Simat, Hellesen & Eichner, Incorporated. 1995a. *Master reuse strategy for Griffiss Air Force Base, Rome New York*. Submitted to Griffiss Redevelopment Planning Council, p31.)

- Plattsburgh, New York (HDR International, Inc. with Hammer, Siler, George Associates; C&S Engineers, Incorporated; Crawford & Stearns; John Lynch and Devencore. 1995. *Comprehensive reuse plan for Plattsburgh Air Force Base*. September 15, p173.)

#### **LRP Quality- Financial Plan Sources:**

- Rantoul, Illinois (EDAW, Inc. 1990. *Chanute Air Force Base reuse plan*. August, ES-10.)
- Peru, Indiana (RKG Associates, Inc., Durham NH in Association with The Pathfinders, Dallas, TX and Greiner, Inc. Grand Rapids MI. 1993a. *Grissom Air Force Base reuse plan*, December, Chapter V.)
- Marquette, Michigan (Greiner Consultant Team: Greiner Incorporated.; Hennessy, Kemp & Gallagher; Lawrence and Associates; Meyer. Meyer, La Croix & Hixson, inc.; Hammer, Siler, George & Associates; U.P. Engineers & Architects, Inc.; S.H. & E., Inc.; Sundberg, Carlson & Associates. 1995b. *A strategic reuse planning study for K. I. Sawyer Air Force Base*. Prepared for K. I. Sawyer Base Conversion Authority. March 27, Section xviii and 9.9.)
- Oscoda, Michigan (Pathfinders, White & Associates, Incorporated. 1992. *Base reuse master plan economic recovery strategy aviation study for Wurtsmith Air Force Base, Volume 1*, June, Section IX-10.)
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### EDUCATION:

- Master of Business Administration, Old Dominion University, Norfolk, Virginia (1995).
- Master of Architecture, Washington University, St. Louis, Missouri (1985).
- Master of Construction Management, Washington University, St. Louis, Missouri (1985).
- Bachelor of Environmental Design with University Honors, Miami University, Oxford, Ohio (1983).
- Joint Forces Staff College, Advanced Joint Professional Military Education (2007).
- Air War College (1999).
- Joint Forces Staff College (1992).
- Air Command and Staff College (1994).
- Squadron Officer School (1985).

### AREAS OF SPECIALIZATION:

- Architecture – Architectural Programming, Concept Design, Sustainability Analysis, Design and Planning Charettes.
- Planning – Master Planning, Area Development Plans, Development Capacity, Base Realignment and Closure Plans.
- Strategic Analysis – Process Analysis, Strategic Planning, and Development Capacity.

### ACCREDITATIONS:

- Licensed Architect, Commonwealth of Virginia, 0401 007450, 1989 – present.
- Leadership in Energy and Environmental Design, LEED BD+C, 2007-present.
- Project Management Professional, 2010- present.
- Certified Passive House Consultant, 2013-present.

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