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ECONOMIC DEVELOPMENT FOR THE COMMUNITY OF ISRAEL- BITUMUL

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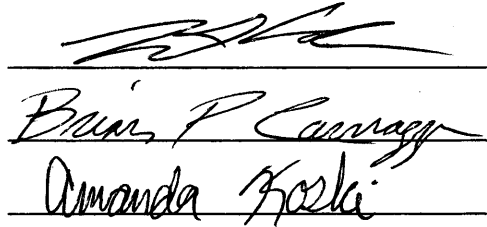
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This report is the product of an education program, and is intended to serve as partial documentation for the evaluation of academic achievement. The report should not be construed as a working document by the reader.

ABSTRACT

This report, prepared for the Autoridad de Carreteras y Transportación (ACT) of Puerto Rico, focuses on identifying options for the economic development of the communities along the Martín Peña Channel, specifically the community of Israel-Bitumul. Our main recommendation to the ACT was a community-based housing maintenance business for a housing complex within Israel-Bitumul. This business will satisfy an immediate need within the community, and will also position the entire community for further economic development.

Authorship Page

This report has become a unified effort of equal contribution among all team members. All sections can be equally attributed to the work of each person in the group.

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EXECUTIVE SUMMARY

Currently, more than 30,000 people live in poverty in the neighborhoods along the Martín Peña Channel in San Juan, Puerto Rico. During the 1940s, the large-scale industrialization program, called Operation Bootstrap, led to unplanned settling of the wetlands adjacent to the channel. Some of the poorest industrial workers in San Juan used garbage and other available materials to build on the wetlands around the channel.

The Puerto Rico Highway and Transportation Authority (Autoridad de Carreteras y Transportación [ACT]) has initiated the Martín Peña Channel Rehabilitation project in order to establish a waterway transportation system from the San Juan Bay to the San José Lagoon. The major focus of this project is to widen the channel. As a major effect of widening the channel, certain families living in the houses built on the filled-in land of the channel will be relocated to new housing developments.

One of the communities along the Martín Peña Channel, Israel-Bitumul, will need to relocate 180 families. The Community Housing Development Organization of Israel-Bitumul is implementing a two-phase housing development project primarily for these displaced families. Villas del Paraíso, the first-phase of the development project, consists of 108 units and has been completed, although the residents have not moved in at this time. While the ACT does not play an active role in the housing development process, they maintain a strong interest in the project due to its close connection with the Rehabilitation Project.

In addition to housing and infrastructure improvements as part of the Martín Peña Channel Rehabilitation Project, the ACT has identified the need for economic development of the communities around the waterway. Once the channel waterway is established in 2012, it will bring people through the area, providing economic opportunities for services and businesses in Israel-Bitumul. In order for the residents to benefit from the project in the long run, the community needs to begin the initial stages of development now. These first steps include reducing the levels of poverty and unemployment by providing people in the community with the necessary skills to obtain jobs. Training programs and hands-on experience with various job skills and business management are possible approaches to this goal. By providing training to the residents, the community will have a greater potential for economic growth.

Following ACT's plans for economic development of the communities along the channel, the goal of our project was to identify community-based economic development opportunities for the community of Israel-Bitumul. Through our research, we identified the need for regular maintenance of the housing facility of Villas del Paraíso. Currently, the only option for maintenance is to contract services from outside of the community. This, coupled with the need for community economic development, suggests the opportunity for a community-based housing maintenance business. This business may satisfy an immediate need within one particular housing facility in the community, but,

once established, may also serve as the foundation for expansion and further development.

To establish and implement a housing maintenance business, a number of key factors must be taken into consideration. These important factors include organization, leadership, funding, and training. The following are the recommendations and options that we discovered for planning and implementing a community-based housing maintenance business.

- Recruit motivated individuals from Israel-Bitumul to establish a new economic development division within the CHDO-1 of Israel-Bitumul that is dedicated to the development and support of community economic development projects.
- Obtain funding for the new economic development division to finance its operational costs.
 - Recommendation for funding: Community Development Block Grant (CDBG) Program
- Conduct an extensive skills and licensing survey of all of the residents of Israel-Bitumul through the new division of the CHDO-1 to determine specific skills, licensing, training, and professional experience.
- Identify and approach potential leaders to manage the implementation of the housing maintenance business.
 - Recommendation for business format: worker-owned corporation (Corporación Especial Propiedad de Trabajadores [CEPT])
- Acquire start-up capital for the housing maintenance business.
 - Recommendation for funding: Puerto Rico Community Foundation
- Revisit community-wide skills survey for employee recruitment.
- Coordinate necessary training and licensing programs for business administration and maintenance skills.
 - Recommendation for funding: CDBG, Individual Development Accounts (IDA)
 - Recommendation for business administration training: Department of Continuing Education in the Universidad del Sagrado Corazón
 - Recommendation for maintenance skills training: Administración para el Adiestramiento de Futuros Empresarios y Trabajadores (AAFET), Vocational Training Program

This housing maintenance business for the housing complex of Villas del Paraíso can provide both short and long-term benefits. The business should directly benefit the residents in the housing community by satisfying an immediate need. The residents who will be employed as maintenance workers will obtain skill training and the administrators

of the business will gain management experience. In addition to receiving training, participants should gain a sense of success and accomplishment.

This housing maintenance business can serve as a building block for future community economic development. It should have the opportunity to expand beyond the housing development with the potential to serve the neighboring communities surrounding Israel-Bitumul. If successfully implemented, the community-based housing maintenance business should bring economic development to Israel-Bitumul. Therefore, upon completion of the Martín Peña Channel Rehabilitation Project, this community should have the ability to prosper from the opportunities that arise from the waterway transportation system.

CHAPTER I. INTRODUCTION

A dramatic rural-to-urban internal redistribution of the population in Puerto Rico occurred during the 1940s due to a large-scale industrialization program, called Operation Bootstrap. This program generated an urban workforce by attracting agricultural workers to major industries in San Juan. The new industrial workers were forced to settle near the factories in the city. Although the government encouraged this nation-wide initiative, it failed to meet the greatly increased housing demands.

This lack of existing housing led many to build homes on the previously uninhabited lands adjacent to the Martín Peña Channel, which runs from the San Juan Bay to the San José Lagoon in San Juan, Puerto Rico. Garbage and other available materials were used to build upon the wetlands and to claim land from the wetlands around channel. The spontaneous and unstructured settlements lacked the provision of formal utilities and community services. The government did not regulate these developments or provide essential services such as wastewater disposal and solid waste collection. Therefore, many homes disposed of their wastewater and trash directly into the channel, leading to a serious pollution problem in and around the channel. Many of the homes along the channel are faced with permanent flooding. The combination of these factors exposes many of the residents to serious health and environmental risks. In addition to the poor living conditions in the neighborhoods, more than 30,000 people currently live in poverty, thousands are unemployed, and a significant number of people are dependent on welfare.

The Puerto Rico Highway and Transportation Authority (Autoridad de Carreteras y Transportación [ACT]) has initiated the Martín Peña Channel Rehabilitation project in order to establish a waterway transportation system from the San Juan Bay to the San José Lagoon. The main focus of this project is to widen the channel. As a major effect of this, certain families living in the houses built on the filled-in wetlands of the channel will be relocated to new housing developments.

One of the communities along the Martín Peña Channel, Israel-Bitumul, has currently completed the first phase of a two-phase project, which will relocate the families living in the squatter settlements on the channel. The Community Housing Development Organization (CHDO-1) of Israel-Bitumul is implementing this two-phase project to provide housing primarily for the displaced families. The first phase consists of the construction of a housing development for long-term homeowners, and the second phase will accommodate the remaining displaced families living along the channel. During the first phase, 108 families will be moved into the new housing complex, called Villas del Paraíso. The expectations of the CHDO-1 are that the housing community will become self-governing after living there for the required fifteen years.

In addition to housing and infrastructure improvements, the ACT has identified the need to plan economic development of the communities around the waterway in order

to successfully revitalize the quality of life and to enable these communities to benefit from the completed Rehabilitation Project. Once the channel waterway is established in 2012, it may serve Israel-Bitumul as a means to improve their economy. The waterway will bring people through the area, providing economic opportunities for services and businesses.

In order for the residents to benefit from the project in the long run, the community needs to begin the initial stages of development now. These first steps include reducing the levels of poverty and unemployment by providing people in the community with the necessary skills to obtain jobs. Training programs and hands-on experience with various job skills and business management are possible approaches to this goal. By providing training to the residents, the community will have a greater potential for economic growth. In order for continued economic improvement to occur, community involvement is essential. Therefore, community-based models for economic stimulation would be valuable to the community.

Once occupied by the relocated families, Villas del Paraíso will need regular maintenance, including plumbing, landscaping, cleaning, and other upkeep services. Currently, the only option for maintenance would be to contract services from outside of the community. This, coupled with the need for community economic development, suggests the opportunity for a community-based housing maintenance business.

The goal of this project was to identify economic development opportunities for the community of Israel-Bitumul. Therefore, to meet this goal and to satisfy an immediate need within one particular housing facility in the community, our main recommendation was the implementation of a community-based housing maintenance business. This business could serve to satisfy an immediate need, but, once established, could also be positioned for further development.

CHAPTER II. BACKGROUND

The island of Puerto Rico has changed significantly over the last half of the 20th century. Rapid urbanization, industrialization, and a major increase in economic development have led to increased unemployment and impoverished urban communities. We begin this chapter by discussing the causes and effects of this uneven development in Puerto Rico. We then focus on the current problems and conditions of the eight communities surrounding the Martín Peña Channel in San Juan, which are being addressed by the Autoridad de Carreteras y Transportación (ACT) through the Martín Peña Channel Rehabilitation Project. A major concentration of this project is the widening of the channel to provide a waterway transportation system. This involves the relocation of many families living on the wetlands around the channel, along with other necessary plans to reach the goal of transportation through the channel. We will describe the Rehabilitation Project with a focus on the new housing for the displaced families.

Our project focuses specifically on the community of Israel-Bitumul, which is one of the eight communities affected by the Martín Peña Channel Rehabilitation Project. We will describe the history and current conditions of the community and its current and future plans for community organization and development. Lastly, we will discuss the principles of community economic development, as well as lessons from other community development projects on the island, which can be applied to Israel-Bitumul.

Socio-economic Background of Puerto Rico

This section describes Puerto Rico's social and economic development since the industrialization initiative created by the government in the 1940s. At this time, many people moved from rural areas to the city of San Juan, seeking better job opportunities. We will explain how this economic growth led to the formation of an informal economy, unemployment, and welfare dependency.

Urbanization

A dramatic rural-to-urban migration characterized the population dynamics of the post World War II era in Puerto Rico. While only 30% of the Puerto Rican population lived in urban areas in 1940, more than 70% were considered urban in the year 2000 (World Factbook, 2001). The geographic mobility of the Puerto Rican population was exemplified not only by migration to the United States, but also by the internal redistribution of the population. According to the 2000 census, 53% of the population lived in a *municipio* different from the one in which they were born (Boswell, 2001).

In the late 1940s, manufacturing was seen as the means by which Puerto Rico could develop economically, since political leaders of the time considered agricultural

countries to be underdeveloped and industrial countries to be developed (Carrión, 1983). As a consequence, the government launched an industrialization program known as Operation Bootstrap. The goal of this program was the industrialization of Puerto Rico by emphasizing local labor, inviting investment of external capital, importing the raw materials, and exporting the finished products to the U.S. markets. To entice participation, tax exemptions and differential rental rates for industrial buildings were offered (Carrión, 1983).

Upon hearing the plans of Operation Bootstrap, many rural workers seized the opportunity to take advantage of industrial employment opportunities and moved to the city. During the late 1930s and early 1940s, most of the rural Puerto Ricans were poor and did not own land. Sugar cane workers had seasonal employment during the planting and harvesting season, but remained idle and impoverished during the months requiring little work. Wages were subject to change based on the demand for sugar, the market price of the product, and the demand for labor (Caban, 1989). The incentives provided by Operation Bootstrap appeared to offer a more secure future and an escape from this unstable lifestyle.

The industrial promotion strategy through Operation Bootstrap was responsible for major changes to the island's economy, creating an industrial workforce and transforming the social division of labor from agricultural production to manufacturing. Whether the creation of an industrial working class resulted in a decrease in the economic status of workers, or an overall improvement of the working class, remains a debatable point. On one hand, Wells (1969) felt that the resulting working class could be defined as low-skilled and low-paid workers. On the other hand, Dietz (1986) implied that the industrialization, accompanied by a focus on the improvement of education, healthcare, transportation, and communications, improved the people's standard of living. Dietz (1986) also claimed that the effects of Operation Bootstrap provided the minimum requirements of a relatively healthy, literate labor force as well as the necessary infrastructure for capitalist industrialist production, growth, and accumulation. Despite the differing opinions, the government's efforts through Operation Bootstrap brought about major changes to the island's economy and created a new industrial working class.

Informal Economy

An important consequence of the industrialization and urbanization of Puerto Rico following Operation Bootstrap was the formation of an informal economy. An informal economy resulted from the population increasing faster than formal employment opportunities were being created. This forced people to invent their own jobs in order to survive (Itzigsohn, 2000). Although it is understood that the informal economy in Puerto Rico grew during the 1940s, there is much debate over the concept of an informal economy and its definition, origin, and consequences.

The varying characteristics of an informal economy make it hard for experts to determine an exact definition. Itzigsohn defines an informal economy as activities that

avoid labor regulations. The International Labor Office terms it as an informal sector characterized by small firms with low capital and simple technologies, including the self-employed, micro-enterprises, and domestic workers. There is no distinct line between a formal and an informal economy because there is variation in their definitions and in the identification of what types of jobs fall into which category. For example, self-employment is not restricted by the labor regulations followed by employees of a formal economy. However, the self-employed are often contracted and work under a large, regulated company. Another problem with the classification is that many workers in medium-sized and large companies are paid below the minimum wage or are not covered by social security. These companies are normally considered formal businesses, but they also possess the characteristics of an informal business because workers are paid below minimum wage or are not covered by social security benefits. These variations make it difficult to measure and compare the two separate economies (Itzigsohn, 2000).

Modernization, industrialization, and economic growth suggest an increase in jobs, but this does not necessarily mean formal employment opportunities. It is this lack of formal job opportunities that lead to the development of informal employment during times of economic growth. With a lack of formal job opportunities available to people, the origin of informal economy activities can be argued. On one hand, Harris and Todaro (1970), Fields (1975), and Rivera-Batiz (1986) attribute the formation of an informal economy to a surplus in the labor force. On the other hand, De Soto (1989) said an informal sector is created by the burdens imposed by state regulation on the entrepreneurial activities of poor people (Itzigsohn, 2000).

A common assumption is that an urban informal sector of the economy is often associated with low-paying earnings. However, some experts argue that an informal segment is a symbol of entrepreneurship, characterized by high employment and prosperity without tax and government restrictions. Research conducted by Rivera-Batiz and Santiago (1986) concluded that the informal sector offers both high-paying earnings as well as low-paying earnings. These authors argued that an informal economy is successful and dynamic, with comparatively low unemployment rates and relatively high earnings.

Experts' views of an informal economy and the impoverished communities often associated with it have changed over the years. Originally the growth of an informal economy appeared to contribute to poverty. Such growth, however, is now considered by some to be a solution to the problems of poverty and unemployment (De Soto, 1989); (Franks, 1994); (Rakowski, 1994) [(Itzigsohn, 2000)]. Although a growing informal economy may in fact reduce poverty, it remains a controversial issue. Some experts argue that even if an informal economy appears to decrease poverty and increase jobs, the state should not tolerate a solution that functions outside of its regulation. Then, the state, in a sense, is promoting the deterioration of the rights that allow people to achieve an accepted basic standard of living (Itzigsohn, 2000). As a solution to this dilemma, Itzigsohn (2000) and Márquez (1994) suggest that people should not be solely dependent on an informal economy, but should treat the two economies as complementary. This

way, people will not be denied access to health services, pensions, and decent education (Itzigsohn, 2000). The goal of developing both formal and informal economies should be to create developmental-protective regulatory regimes that can promote economic growth and social citizenship.

Unemployment and Welfare

Although Operation Bootstrap stimulated both the formal and informal economies of Puerto Rico, high unemployment levels were not alleviated. Interestingly, unemployment actually increased in Puerto Rico during the peak period of Operation Bootstrap, from 11.2 percent in 1948 to 12.9 percent in 1958 (Fernandez, Mendez, Cueto, 1998). There was an apparent contradiction of high rates of economic growth linked to continuing high levels of unemployment. This could be attributed partly to a loophole in the tax breaks for mainland companies on the island. The law provided that companies could only benefit from tax-free earnings once they had liquidated their corporation. Therefore, many firms left after they had exhausted their local and federal tax benefits. The failure of companies to hire and retain workers over a longer period of time contributed to the high unemployment levels.

The unemployed have been able to survive, even during economic hardships, due to federal aid programs. A minimum standard of living was established through welfare assistance. The aid was intended to alleviate the effects of unemployment on a short-term basis. However, this promoted a long-term dependency on welfare because the system provided sufficient aid to a large population of poor people (Rivera-Batiz & Santiago, 1996). The aid amounts were enough to allow recipients to remain unemployed while waiting for jobs to surface.

Although many of the unemployed do take advantage of federal assistance, the participation of Puerto Ricans in welfare programs has been widely exaggerated. There is a belief among some that most of Puerto Rico's population receives some form of public assistance payments from the government. However, 1989 census data indicates that, among the native-born population in Puerto Rico, 17 percent of men and 28 percent of women 16 years of age or older received some public assistance (Rivera-Batiz & Santiago, 1996). Although the number of welfare recipients is not as high as some may believe, it is over twice as high as the number of mainland U.S. immigrant recipients, with 4.3 percent of men and 14.4 percent of women receiving federal aid (Rivera-Batiz & Santiago, 1996). The initiation of federal transfers, according to Dietz (1986), has prevented a decrease in the average standard of living and an increase in poverty. Consistent with this theory, a decrease in available welfare payments could increase poverty and lower the standard of living.

Martín Peña Channel Rehabilitation Project

Beginning with the urbanization stimulated by Operation Bootstrap and continuing to the present time, the poorest inhabitants of San Juan have had to populate previously uninhabited lands located in the metropolitan area. One such area has been the wetlands through which the Martín Peña Channel passes. The banks of the channel have been encroached upon by the growth of the bordering eight communities. The breadth and depth of the waterway have been drastically decreased by the garbage used by squatter settlers to fill in the wetlands for house construction.

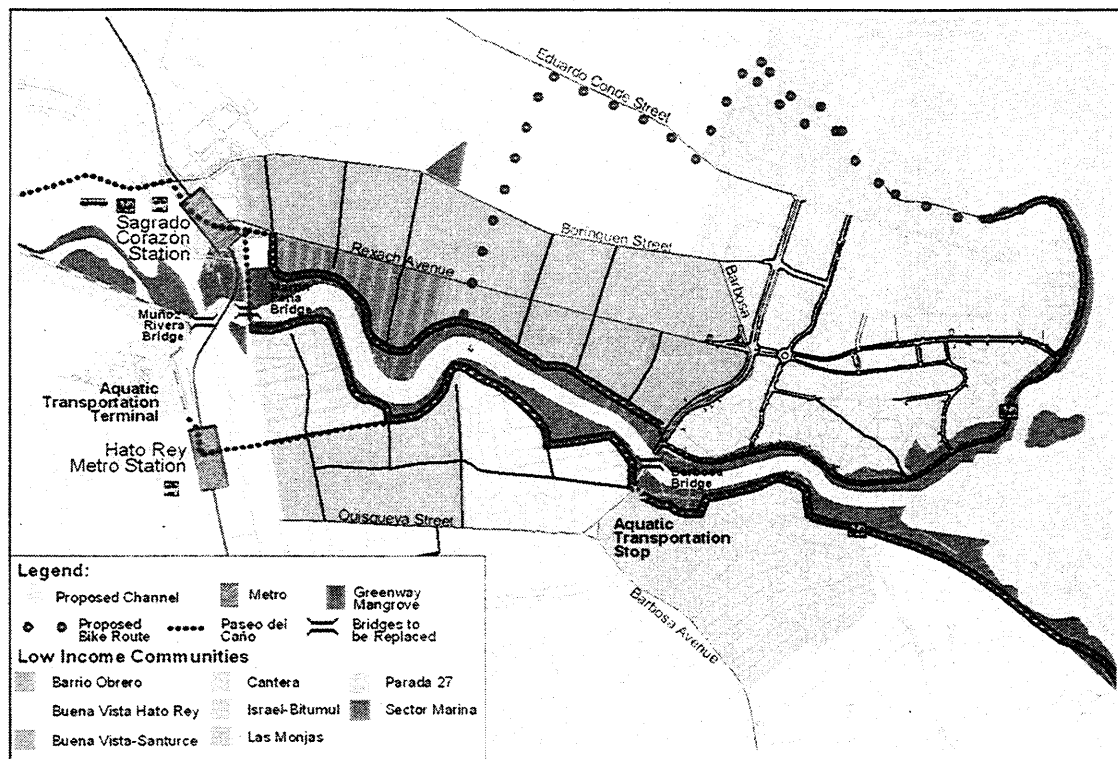
Recently, the Puerto Rican Department of Transportation and Public Works has identified the Martín Peña Channel as the focus of a major transportation development plan that will provide a waterway to alleviate traffic congestion in the San Juan Metropolitan Area. In order to complete the engineering of the Martín Peña Channel Rehabilitation Project's physical infrastructure, the relocation of many residents in several communities along the channel must occur. The relocation efforts involve the planning, construction, and support of several housing facilities. In this chapter, we will provide an overview of the entire scope of the project, along with detailed plans to each phase.

The Autoridad de Carreteras y Transportación has been designated as the leading agency for the development of the Martín Peña Channel Rehabilitation Project. There are more than ten government agencies participating in the project, including the Municipality of San Juan, the Cantera Development Corporation, the San Juan Bay Estuary Program, and various community-based organizations.

The Rehabilitation Project aims to improve the water quality of the channel, foster the rehabilitation of the San Juan Bay Estuary System, and integrate the Martín Peña Channel into a multimodal public transportation system in the San Juan Metropolitan Area. The project is intended to improve the quality of life of nearly 30,000 residents of the eight communities along both sides of the channel, particularly in the areas of public health, housing, and infrastructure.

The development of the Martín Peña Channel Rehabilitation Project has been organized into five phases. The first three phases are concerned with infrastructure improvements and housing developments. Phase 1 will affect the area between Barbosa Avenue and the San José Lagoon. This area contains the communities of Cantera and Israel-Bitumul, as seen in the Figure 2.1, which presents all eight communities affected by the Rehabilitation Project.

Figure 2.1 Map of Communities Affected by Martín Peña Channel Rehabilitation Project



Map provided by ACT

The ACT has demarcated the necessary boundaries for the construction of the channel. Since most of the delineated area is within a hundred feet of the current edges of the channel, the homes within this area are primarily squatter settlements. These homes will be demolished and the families will be relocated to new housing developments elsewhere in the communities.

Cantera has plans to construct 490 housing units to accommodate the families that will be moved. Funds for the construction costs will be provided by the Department of Housing. In Israel-Bitumul, there are plans to construct 180 housing units for the families that will be displaced due to the widening of the channel. The construction of the units will be done in two parts. The first part, which is already completed, is the creation of 108 units for the homeowners that must be relocated. In 1994, after the ACT demarcated the lines for the channel's expansion, a survey was conducted of the families within those bounds. The units that have already been constructed will be made available to the homeowners identified in that survey. The remaining families will be accommodated after the second part of the housing project is constructed. The Department of Housing will also be the financial agent for the housing developments in Israel-Bitumul. The Community Housing Development Organizations in both communities will serve to oversee the new housing and relocation matters. The CHDO's

are non-profit community organizations that receive federal funds for the construction of community housing projects.

The second and third phases of the channel rehabilitation project will affect the area from Muñoz Rivera Avenue to Barbosa Avenue. The communities within this area are Marina, Buena Vista Santurce, Obrero, Parada 27, Las Monjas, and Buena Vista Hato Rey. A census will be conducted to obtain information about the families along the channel, and these data will be used to develop housing alternatives. Additionally, two bridges over the channel in this area will be examined for reconstruction. The infrastructure needs for proper plumbing, drainage, and electric utilities will be met also.

The fourth phase of the project will be to dredge and widen the channel. The area from the Muñoz Rivera Avenue Bridge to the San José Lagoon will be dredged to a depth of ten feet and widened to a variable width between 150 and 230 feet. Once the channel is widened, the fifth and final phase of the project will establish the aquatic transportation routes and stations. The transportation route will allow for a water route from points in the lagoon to points in the San Juan Bay. More importantly for the eight communities along the channel, the first major transportation route through their area will be established.

With the launch of a waterway transportation system through the channel, there will be many opportunities for economic development. In order for the communities to take advantage of these opportunities, benefit from the channel, and reduce the risk of being displaced, they need to be economically developed and stable. The ACT expects that the eight communities surrounding the channel can gain from this development to further improve their social and economic status and contribute to the success of the transportation project.

The Community of Israel-Bitumul

The community of Israel-Bitumul is one of the communities affected by the first phase of the Martín Peña Channel Rehabilitation Project. It is located between Barbosa Avenue and the San José Lagoon in the Hato Rey section of San Juan. This chapter will describe the establishment of the community and the characteristics of the current population. Also, the existing conditions, community development, and community organization will be discussed in order to understand the role of the community in economic development.

History

The first settlers to the community of Israel-Bitumul arrived in the late 1930s, during the rapid urbanization associated with Operation Bootstrap. At this time, the community, called Chichamba, had only a few homes and consisted of one dirt road that is now Barbosa Avenue. During the 1940s, the spiritual leader, Juanita García Peraza,

whom according to the beliefs of the Mita Congregation the Holy Spirit of God spoke through, moved to Hato Rey. Many of the church members bought homes, created streets, and chose to rename the area Israel. With the help of the Mita Congregation and Juanita García Peraza, a sense of community was created in Israel. Juanita García Peraza and other community leaders helped establish small businesses, as well as the first school in the community, which still exists today.

The Mita Congregation has played an integral part in the development of the community over the years. They have helped create approximately 400 jobs by starting several small businesses and providing various services. For example, today there are pharmacies, furniture stores, medical offices, clothing stores, bakeries, barbershops, an auto repair shop, gift shops, and restaurants that were founded with the aid of the Mita Congregation. The Mita Congregation also provides social support through the Orientation and Social Assistance Office. They offer counseling and assistance on issues such as alcoholism, drugs, violence, relationships, housing, employment, and health. Although only about half of the residents of Israel-Bitumul currently belong to the Mita Congregation, these services have helped to improve and develop the entire community over the years.

Current Conditions and Characteristics

The uneven development caused by the rapid urbanization in the 1940s, led to squatter settlements built upon trash and filled-in areas of the channel. The settling of these lands did not allow for urban planning; therefore proper infrastructure does not exist. Many homes lack a public water source, appropriate sewage disposal, and the opportunity for trash collection because access to these homes is restricted by narrow roads or flooding. Many of these families are also faced with serious problems that have a major impact on their lives and the community, including poverty, unemployment, permanent flooding, improper disposal of sewage and trash, and serious health concerns.

According to a 1993 inventory of Israel-Bitumul, there were approximately 3,262 residents, consisting of 1,209 families. A similar survey was completed in 1994 to gain a better understanding of the poor living conditions of the 232 families that were living directly around the Martín Peña Channel. Of the 210 families that replied to the 1994 survey, 85 percent of them were considered to be living below the poverty line, receiving a monthly income between \$0 and \$999. This high occurrence of poverty may be dependent on the rate of unemployment. Approximately 41 percent of the families in Israel-Bitumul were without jobs, leaving many of the residents reliant on public and federal assistance as their main source of income.

Another problem facing the families of Israel-Bitumul is the poor living conditions, the worst of which exist in the squatter settlements close to the Martín Peña Channel. Although most of the families reported that their homes were in good to regular condition, almost everyone living in the homes to be displaced indicated that they had

flooding problems, many with water up to six feet high. This permanent flooding hinders access to homes and leads to unhealthy and unsanitary conditions.

Improper sewage and trash disposal also have a negative effect on the living conditions in the community. Nearly all of the homes have access to public water and sanitary facilities, yet more than half of the families said that their waste is discharged into the channel. In addition to sewage, trash is often discarded in and around the channel. This may be due to the fact that it is difficult to gain access to the homes closest to the channel. The unstructured roads are narrow, which limits access from the main roads.

Due to the unsanitary conditions of the area, many of the residents of the community suffer from a variety of health problems. Measles, mumps, influenza, allergies, and asthma were among the most common reported by the survey respondents.

Overall, the 1993 and 1994 surveys of the Israel-Bitumul community residents showed that they were fully aware of the physical and social problems that existed in the area. Many homes were deteriorating in permanently flooded land and lacked proper infrastructure. There were major health concerns and a high rate of unemployment. On the positive side, the majority of the residents saw the need for improvement and assistance and appeared to express interest in the development of the community.

Community Development and Organization

Since the establishment of Israel-Bitumul in the 1940s, there have been active residents with a high interest in the betterment of the community. Mr. Santos Concepción and other concerned neighbors established the first organization within the community in the 1970s. The initiative set forth by Concepción was based on his childhood, when he had used sports as an outlet for coping with difficult times in his life. Based on this idea, he created a Recreational Association in hopes of improving the welfare of the children in the community and providing the opportunity for a more promising future. The first accomplishment of the group was the construction of the first recreational facility, which consisted of a basketball court, used for various activities and tournaments. Several years later a baseball park, Parquesito de Israel, was established, also fostering the interaction of the members of the community.

In the 1980s, the Recreational Association became the Israel and Bitumul Wards United Citizens Organization, taking on a more active role in the demarcation, zoning, and improvement of the community. In 1993, Teófilo Vargas Seín, the spiritual leader Aarón of the Mita Congregation, motivated the community to propose an affordable housing plan. That same year, the organization was certified as the first Community Housing Development Organization in Puerto Rico, which granted them the right to receive federal funds for the proposed housing project. In 1996, the community received 4.8 acres of land from the Department of Transportation and Public Works in order to build the 108 housing units, for which construction began the following year. In 2000,

the government granted the community an additional 6.17 acres of land for the second phase of their housing proposal. Upon completion of these projects, families will be allowed to escape the unhealthy living conditions around the channel and move in to new housing, while improving their quality of life (Trabal, 2000).

Approaches to Economic and Community Development

In order for the residents of Israel-Bitumul to benefit from the opportunities created by the Martín Peña Channel Rehabilitation Project and the waterway transportation system, the community needs to begin positioning itself for further development. Providing a short-term economic development alternative for the community will help to prepare the residents and the community for future economic development. In addition to economic development, Israel-Bitumul has other social and environmental issues that should be addressed to continue improving the community. Community sustainability is a multi-objective idea that can be used to help build a community in its social, economic, and environmental areas. A common tool used to achieve community sustainability is community development. Community development is a concept that specifically works towards improving the overall quality of life of the community members. Community sustainability and community development methods can serve to address socio-economic problems often associated with urbanization.

In this chapter, we will discuss varying approaches to economic and community development. This will include describing two examples of community development initiatives in Puerto Rico. In the urban communities of Cantera and La Playa de Ponce, various components of these methods have been implemented successfully to improve the residents' quality of life. Examining the various methods of planning, implementing, evaluating, financing, administrating, and reporting used by both community and outside agents will help to serve as a basis for the recommendations for Israel-Bitumul.

Community Sustainability

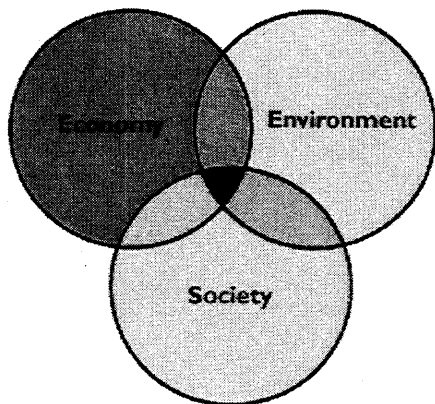
Given the patterns of development in Puerto Rico since the 1940s and their effects on the economy of the island, a long-term solution for the poor communities needs to be addressed. The drastic increase in the urban population posed difficult challenges for Puerto Rico to provide housing, health care, education, safe water, and sanitation for everyone (The World Bank Group, 1999). One important option for achieving these goals is the application of community sustainability. Different views on community sustainability, and the environmental, social, and economic issues associated with sustainability will be discussed in this section.

The integrated multi-objective program of community sustainability requires that the economy and society can develop without destroying the natural environment on which life is dependent. There are different ways of viewing the relationships among the

economic, social, and environmental aspects of a community. Viewing the community as three separate entities does not effectively solve a community's problems. Although one issue may be resolved in one area, often times a new problem is created or an existing problem is made worse in one or both of the other areas. Also, groups working towards solving a specific problem can oppose the effects of another group's work to solve a different problem which can create tension within the community. Solving isolated problems also tends to focus more on the short-term effects of a solution instead of planning for the long-term as well (Sustainable Communities Network, 2002).

To address some of these issues, the three parts can be considered to be overlapping and interrelated. By using the approach shown in Figure 2.2, the focus is not on solving isolated problems, but rather understanding the connections between the three parts and achieving a balance among the social, economic, and environmental pieces of a community (Sustainable Communities Network, 2002).

Figure 2.2. View of Community as Three Overlapping Circles

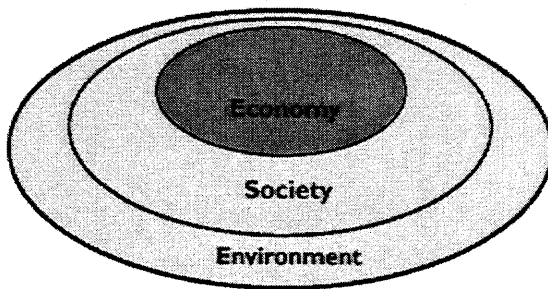


A view of community that shows the links among its three parts: the economic part, the social part and the environmental part.

Adapted from Sustainable Measures, www.sustainablemeasures.com, 1999.

An alternative view to the relationship between the economy, society, and environment is to view them as three concentric circles, as shown in Figure 2.3. This illustrates that the economy exists entirely within the society, and that the society exists entirely within the environment. This is true because the economy is dependent on the interactions between people, yet the society is composed of more than just the economy. The society also depends on the environment and vice versa. Survival of the society depends on the environment because air, water, and food are essential components of life. The environment is dependent on society because all social activities have an impact on the environment (Sustainable Communities Network, 2002).

Figure 2.3. View of Community as Three Concentric Circles



A view of community as three concentric circles: the economy exists within society, and both the economy and society exist within the environment.

Adapted from Sustainable Measures, www.sustainablemeasures.com, 1999.

With an understanding of how these three elements of a community relate to one another, community sustainability can more likely be achieved. One goal of community sustainability provided by Sustainable Communities Network, requires establishing a local economy that is economically viable, environmentally sound, and socially responsible. To reach these goals, community participation is essential for both identifying needs and implementing solutions (Sustainable Measures, 1999).

Community Development

A multiplicity of factors within and outside of the community affects the improvement of a community in a sustainable manner. In this section, the factors of community empowerment, participation, and organization will be discussed. Other community development aspects such as problem assessment, support of outside agents, and entrepreneurship also will be described.

Along with assessing the environmental, economic, and social conditions in a community, the community members should be involved in development plans. Community development deals more specifically with the people in a community, whereas community sustainability is concerned with the overall conditions of the community. Many of the elements of community sustainability that were discussed in the previous section can also be applied to community development. Community development is a tool of community sustainability with the goal of enabling the community members to be self-sufficient participants in the community (Porter 1995).

Conroy and Litvinoff (1988) believe that community sustainability and community development require concentration on community building, community organizing, the use of outside help, and external funding. This suggests that in order to successfully realize sustainability, all of the available resources within the community must be identified and considered collectively. This includes the balance of the intertwined social, economic, and environmental elements as well as a delicate balance of outside help and community participation.

Community sustainability and community development involve decisions on planning, implementation, evaluation, financing, and administration by both the community and outside agents. Community development cannot succeed entirely on its own because the expertise of outside agents is necessary to assist with the various development aspects. The community may not have the access to useful resources or the influence that is essential for the development process. The outside planners may also need to implement incentives for agencies to work with the poor, keep residents informed, coordinate between stakeholders, and clearly define the roles of the various agencies (The World Bank Group, 1999). By working with outside agents, the community should have the power and resources needed for successful development.

However, these outside agents must carefully monitor their control over decisions and resources to allow communities to discover their ability and competencies to manage their own lives (Laverack 2001). The role of the outside agents should serve to enhance the capabilities of the community rather than acting as the dominant force behind the development process. Communities will respond better to changes and ideas generated from within the community, as opposed to those imposed by an outside source. When the community has control over its own destiny through decision making and planning, it promotes community empowerment. By examining some of the aspects of community empowerment, the factors of outside help to the community will become related and integrated (Laverack, 2001).

An initial step towards empowerment involves the participation of community members. This can be manifested through involvement in small groups and larger organizations (Laverack, 2001). Organizational structures in a community include small groups such as various local committees and church and youth groups that meet in order to socialize and address their concerns and problems (Laverack, 2001). Wgelin-Schuringa (1992) found that community members in Pakistan, India, and Cambodia seemed to have a better chance of establishing organizational structures when they had a sense of community and were able to relate to one another. Elliot (1994) agrees by saying that enabling community organization is essential for solving immediate problems as well as taking advantage of long-term benefits. Based on these experts, empowerment seems to be most successful once an organizational structure is present.

Once the community is organized, it is important for them to extensively examine the problems that need to be addressed. Through problem assessment, communities can identify these problems, find solutions to the problems, and take actions to resolve the problems (Laverack, 2001). The case study below gives an example of a community that used community participation and problem assessment to critically assess the factors that were contributing to their disempowerment.

Elliot (1994) describes the Orange Pilot Project (OPP), in Karachi, Pakistan as an example of successful community-based participation. The initial stages of the project focused on finding out the methods for waste disposal that were being used by the community, selecting the most desirable, and building on these to achieve a low-cost

method of sanitation within the community. The OPP leaders chose an underground system of sewerage lines. The OPP organized the community by lanes, and each lane elected a lane manager who acted on behalf of the residents. The managers were responsible for the tasks associated with the project, such as collecting and handling money for the people. The OPP was successful in providing sanitation to households at a much lower cost than if the service was provided by the Karachi Municipal Corporation. As a result of the new sanitation system, major environmental changes had occurred in the Orange settlement. Human health had improved, people were upgrading their houses and property values had gone up. This study showed the use of problem assessment and its sustained success through community participation (Elliot, 1994).

Although the need for outside assistance is apparent according to several experts, the form of assistance varies. Michael Porter (1995) believes that community development should be achieved through economic rather than social terms, focusing on resource mobilization as the main element of economic development. Porter proposes that inner-city businesses become suppliers or co-ventures with firms outside of the community. This involves creating interdependent "clusters" or sectors, rather than focusing on individual companies or occupations. These clusters suggest that business people, entrepreneurs, and investors should assume a lead role in this economic development process. Developing clusters more effectively links the businesses to those in the surrounding economy, offering a more effective economic development strategy.

Harrison and Glasmier (1997) had a different philosophy than Porter. They believed that economic success in the inner city could be achieved with the government playing the lead role, as opposed to Porter's theory of clusters. They cited examples of a successful government-run economic development project in New York called MetroTech. The city's economic development department planners designed the project and recruited financial Wall Street houses to participate. The project's success showed that government involvement could be beneficial.

Entrepreneurship can be another community economic development strategy. Although entrepreneurship is generally an individualistic economic development approach, the outcome can benefit an entire community. The success of one entrepreneur can stimulate motivation in others and bring economic development to the area. The small business can provide the chance for training as well as employment opportunities for other community members. This idea leads to an approach of community-based entrepreneurship.

A potential obstacle for this alternative is the lack of knowledge or job skills of the members in the community. Sclar (1970) believes that entrepreneurs alone cannot achieve success for a community without social institutions to aid in their development. These institutions would provide the necessary training and education to participating members of the community and would therefore increase the overall strength of the community with better planning, coordination, mobilization and integration of existing resources, and the creation of new resources (Perry, 1973).

Using mutual cooperation within the community, a single community owned business could provide work for the whole community. By addressing the institutional decline of low-income communities and by building upon the culture of the community, community economic development programs strive to rejuvenate the entrepreneurial spirit, which would benefit the community in the long-run (Kelly, 1977). The entrepreneurial spirit within the community appears through participation and motivation as a community strives to better their own lives. Providing the training and skills necessary for running a business will not only foster the entrepreneurial spirit, it also unites the community through involvement in operating the business.

A variety of factors within and outside of the community affect the improvement of a community in a sustainable manner. It is important that the community development plan provides the community members the power and opportunity to assess and solve the environmental, economic, and social conditions that attribute to various problems.

Community Development Projects

In Puerto Rico, Cantera and La Playa de Ponce are two examples of successful community development models. Both communities have effectively utilized participation, motivation, and organization of the members in the community for development. They have both shown that a focus on organization, leadership, funding, and training can provide the necessary means for development.

Cantera

Cantera is a community along the Martín Peña Channel, consisting of 3,600 homes and 12,000 residents. This community has similar characteristics to Israel-Bitumul, with 82% of the population living with an annual income of less than \$4,700, 50% having an education level of ninth grade or lower, 62% being employed by jobs within the informal economy, and 30% relying on public welfare programs. To help address such social issues, the community has initiated the Cantera Peninsula Project. Its goal is to improve the quality of life of the neighborhood over a period of 15 years through the joint efforts of the residents, government, and private sector. This project has served as a development model for other communities in Puerto Rico. This section will explain how the organization, leadership, funding, and training of the community development project has helped lead to its success.

The Cantera Peninsula Development Company was created in 1992 to serve as the main organizational component of the community. It is a quasi-public corporation established to plan and execute a comprehensive 15-year development plan. Its responsibilities include stimulating private investment, facilitating community empowerment, and coordinating government responsibilities. The board of directors

consists of residents from the community, civic leaders, and business leaders. The municipality, the private sector, and the state share the operational costs.

The Cantera Peninsula Neighborhood Council is a non-profit corporation in charge of the leadership responsibilities of the community. A board of community residents, who represent the community's 11 neighborhoods, governs the council. Each neighborhood may elect three representatives to the council. The council is responsible for leading the community initiatives, representing the interest of the residents, and coordinating their participation in the community planning and development process.

Apoyo Empresarial para la Peninsula de Cantera is a non-profit corporation that acts as the main source of acquiring funds for the community and its projects. It seeks funding from different corporations, foundations, and federal programs to aid community economic development projects. Since this corporation is a community housing development organization, it is able to receive federal housing funds. The board of directors includes members from both the Cantera Peninsula community and the private sector.

With the basic administrative components established, the community economic development also can be examined. One economic development initiative that is being developed in the community of Cantera is an incubator for small businesses. It serves to act as the training ground for entrepreneurs that will give them the business skills and experience necessary to get a job. A group of women in the community have already begun training to start a crafting micro-business from their homes. In addition to the craft business, the incubator has also trained a group in landscaping. Currently, three micro-businesses are receiving aid from the incubator in order to develop a business plan and obtain bank loans. This incubator has helped to prepare the residents to initiate their new businesses by providing them with the necessary support and training.

The success of these programs can be attributed to the balance of power between the community members and outside sources. The projects are all community-based, which involve the residents and empower them to make decisions regarding various aspects of the project. The outside agents aid in the community's success by guiding, teaching, and supporting the residents to realize their potential for expansion from within. Both groups work together to reach the common goal of bettering the community by complementing one another's strengths and weaknesses along the way.

La Playa de Ponce

The community of La Playa de Ponce is another example of a successful community development project. Many of the community development principles previously discussed in this chapter were applied in this project. The community's organization, leadership, funding, and training components will be described in this section, as well as their emphasis on basing the projects within the community.

In 1969, Sister Isolina Ferré, along with other missionary servants and members of La Playa de Ponce community, founded a community development center. They believed that poor communities often remained poor and underdeveloped because their economic, educational, political, and other institutions failed to function efficiently on a sustained and regular basis. Therefore, the community center was initiated in order to achieve equal opportunity in the areas of health, housing, education, and work. To accomplish this ideal, the goal of the organization was to develop new community institutions and to modify any existing ones, through the establishment of a network of relationships with public and private funding.

The first step in this development program was to identify natural leaders from within the community and train them to become advocates and counselors for the rest of the community. These leaders directly helped motivate others through the work they did, and indirectly encouraged participation by being exemplary citizens. They were also a vital part of the community's improvement because of their extensive knowledge of the area and its people, and their ability to relate with the residents. Through this work they helped organize the community members, increase community participation, and support, improve, and sustain the overall development effort.

The funding obtained for this program came from various sources. Sister Isolina Ferré and her family provided the funding to start the program. Her family donated the land, then the proper infrastructure was built, staff was hired and trained, and the first program opened. Other funding had been received from other outside agents, depending on the type of program seeking the financial assistance. The money received not only helped with the physical components of starting and running a program, but also helped the community members realize that their potential could be reached with proper organization.

Another important aspect crucial to the success of the development program was training. The community development program started with a retired teacher who was willing to teach other women how to sew in order for them to have the necessary skills to get a job. These women were then willing to do the same for other job-seeking women in the community. The center continued to stand by this philosophy and offered extensive hands-on job training in various trades. Another aspect of training was provided through The Ray of Light Project. With the motto 'Hope for All', this program offered micro-enterprise training in order to help residents start their own business. It provided the necessary training for motivated people who had ideas, but lacked the resources or plan to launch a new venture. The center also provided other social assistance through health services, human development programs such as self-esteem and motivation workshops, educational development, housing and job fairs, and juvenile delinquency prevention.

Although all of the center's programs were funded by outside sources, all other matters were kept strictly within the community. Aside from funding, the center firmly believed that keeping all projects community-based reinforced its strength and effectiveness and helped facilitate its growth. By restricting the participation of outside

agents to complete any work, the community was empowered to provide all of the necessary resources to maintain and expand it from within.

This approach differed from that of Cantera. The development of La Playa de Ponce is in its later stages than Cantera's project, which may be a contributing factor to this difference. By having more experience with community development, La Playa de Ponce would have more existing resources and power to eliminate the need for any outside assistance. The two different approaches to community development contain key elements of organization, leadership, funding, and training that can provide evidence and guidance from which other community development projects can benefit.

CHAPTER III. METHODOLOGY

The goal of this project was to identify community-based economic development opportunities for the community of Israel-Bitumul along the Martín Peña Channel in San Juan. We began by conducting general background research from within the community. We learned about the history, current needs, organizational structure, and leadership, as well as any past and present economic development plans of Israel-Bitumul. We also learned of some general ideas for community development. By interviewing various community economic development planners, we obtained a better understanding of the development process, in addition to learning about the success or failure of previous development initiatives throughout the island and the mainland.

Through our general background and community development research, we identified and analyzed several different options for community economic development. This research indicated a need for regular maintenance for the housing development of Villas del Paraíso. We chose a community-based housing maintenance business as the best option for satisfying this immediate need, as well as providing an opportunity for economic development. We confirmed our selection with the community leaders of Israel-Bitumul and several of the community economic development professionals we had previously interviewed. With their approval, we began to further investigate a community-based housing maintenance business.

We obtained information on the existing resources and skills for the housing maintenance business idea through a questionnaire of community members. Concurrently, we gathered information outside of the community on the funding, training, organization, and leadership options available to the business. This also included studying two similar communities that had established successful economic development programs for the residents. Combining this specific research helped to develop the project by providing the necessary knowledge to correlate the existing resources within the community to the specific community-based economic housing maintenance business. This chapter will explain the details of both the general background research and the specific housing maintenance business investigation.

General Background Research

The main goal of our background research within the community was to understand the history, organization, leadership, current plans, and existing resources of Israel-Bitumul. We also wanted to generate some general ideas on community development. This helped to discern the successful aspects of comparable past community projects in Puerto Rico which could be applied within the community.

We interviewed three leaders of the community who gave us insight into the structure of the community from their perspective. We held discussions with:

- Santos Concepción, President of the Community Housing Development Organization (CHDO-1) in Israel-Bitumul
- Iraida Trabal, Executive Director of the CHDO-1 in Israel Bitumul
- Gladys Acosta, social worker for the Mita Congregation Office of Orientation and Social Assistance, Inc.

Our goal was to learn about the community's history, organization, leadership, current plans, and needs. We explored the Mita Congregation and the CHDO-1 as a potential resource for leadership, organization, and motivation for the maintenance business due to their influence within Israel-Bitumul. Additionally, in order to analyze the demographics of the community members; we examined two community inventories completed in 1993 and 1994. The studies, kept at the CHDO-1, allowed us to determine the education, employment, and income levels of the entire population. These studies were both coordinated by Gladys Acosta, a social worker for the Mita Congregation Office of Orientation and Social Assistance, Inc. Several professionals working for the Mita Congregation conducted the surveys with assistance from a group of 25 students from the Mita Congregation High School.

We also conducted background research outside the community to obtain a better understanding of the community development process and criteria. We met with several community economic development planners including:

- Lucilla Fuller Marvel, A.I.C.P., chief community development planner, Taller de Planificación Social
- Ellen Seidman, an independent community development planner
- Mike Soto, Executive Director for the Center for the New Economy, an independent, non-partisan research company focused on producing innovative economic development strategies
- Allan Cintron Salichs, Executive Director of the Business Program from Centros Sor Isolina Ferré, Inc., a partner of the U.S. Department of Housing and Urban Development
- José Santori, Marketing Director for Artesanías Tabaiba, a social and economic development project within the Centros Sor Isolina Ferré community

These interviews had a semi-structured format, where we had opening questions planned, but then formed further questions based on the responses. We gathered our interviewing sample by using the snowball technique. We were initially recommended by our liaison to speak with three planners. During each interview we received additional contacts to interview.

The goals of these interviews were to gain a better understanding of the community development process and concepts, find new options to explore, encounter experts to contact for more information, and identify specific case studies to examine. This included learning about the different aspects of each interviewee's job and his or her past community development experiences. We were interested in learning about community motivation, leadership, and participation, as well as development challenges and the role of outside agents in the development process. We also gained feedback on some of the preliminary ideas we obtained from our research within the community.

Housing Maintenance Business Research

After conducting this general background research within and outside of the community, we had identified the need for regular maintenance within the housing development of Villas del Paraíso. In order to satisfy this need and meet the goal of providing economic development, we chose to focus our investigation on a community-based housing maintenance business. We began to determine the preliminary steps and available resources to develop this business through interviews and a questionnaire. The questionnaire served to identify the existing skills, resources and interest of Israel-Bitumul residents. We also conducted interviews with professionals in order to establish more specific guidelines and options for the business.

In order to continue our research on the housing maintenance business idea, we conducted a questionnaire at an informational community meeting about the Martín Peña Channel Rehabilitation Project. The questionnaire posed questions that would provide insight into the abilities, experience and desire for community members to participate in the maintenance business. The questionnaire, written in Spanish, was distributed to the community members who were voluntarily attending the meeting and who were willing to participate. The beginning of the questionnaire obtained general information such as age, gender, whether they lived in Israel-Bitumul, and whether they would be moving into the new housing units at Villas del Paraíso.

The remaining questions were directed towards the housing maintenance business idea. Specific maintenance jobs were listed, and questions were asked concerning each one. Residents were asked whether they had done plumbing, carpentry, painting, landscaping, electric work, cleaning, appliance repair, roof repair, and trash pickup for themselves. They were also asked if they had ever contracted someone to do any of these maintenance jobs, and, if so, they were asked whether they had hired someone from within the community or outside of the community. They were asked how often they needed these services done during the year. Another question was whether they would be interested in working in any of the maintenance fields and whether they would be willing to take a short training class for the job. The end of the questionnaire obtained more background information about the residents such as whether they were employed, unemployed, or self-employed. If they were employed, then they were asked to list their job title.

The second part to our maintenance business research was directed towards investigating the necessary components of community economic development, which could be applied to the development process. We sought to obtain the specific resources available for funding, training, leadership, and organization. We conducted interviews with:

- Michelle Sugden, Assistant Community Reinvestment Act (CRA) Officer for Banco Popular
- Marta Ramos, Vice President and CRA Officer for Banco Popular.
- Ángel Melendez, independent financial consultant for Community and Economic Development Corporation, Producir, Inc.
- Mari Villariny, President of independent economic development consulting firm, Ocho Punto Com, Inc.
- Key Participants in Cantera's Economic Model Implementation Project
 - Mabel Román, Interim Economic Development Director
 - Iricely Ortiz, Oficina de Desarrollo Económico Comunitario Organizado
 - Rubén González, People's Recycling, PT
 - María Lourdes Rivera, Executive Director of Consejo Vecinal, Inc.

The goal of these interviews was determine the factors needed to develop the business. We hoped that learning of other community economic development projects would help lead us to specific resources to investigate for the development of the business. In particular, we were interested in understanding the necessary financial structure, the available training for the maintenance workers and administration, options for different organizational structures that could run the business, and important leadership characteristics. In addition to investigating these components, we sought to discover any barriers that we might encounter and possible approaches to overcome such obstacles.

We met with key participants in the Cantera Peninsula Project. Among the goals of this meeting was to investigate a successful example of community economic development in a similar, neighboring community, and gain more specific details about the planning of their economic development projects. We wanted to determine how they first developed the organization, leadership, training, and funding aspects within Cantera. We also sought to learn about the small business incubator that enabled the Cantera residents to be trained in the skills needed to run a business. Another goal was to gain insight into any challenges that they had encountered and the steps they had taken to overcome such difficulties. By researching and understanding the success of the Cantera community economic development projects, we could be able to use the information gathered as a basis for our recommendations.

Our combined research helped to develop the project by providing the necessary knowledge to correlate the existing resources within the community to the specific

community-based housing maintenance business. After conducting this qualitative research from within and outside Israel-Bitumul and identifying ideas for development, we made recommendations to the Autoridad de Carreteras y Transportación for an approach to a community-based housing maintenance business for the community of Israel-Bitumul.

CHAPTER IV. A STRATEGY FOR COMMUNITY-BASED ECONOMIC DEVELOPMENT IN ISRAEL-BITUMUL: HOUSING MAINTENANCE BUSINESS

Based on our research, we recommend a housing maintenance business as a strategy for community-based economic development in the community of Israel-Bitumul. After identifying different economic development alternatives, the choice of this approach arose because of the immediate need that it addresses for the housing community of Villas del Paraíso and the job opportunities it may present to the residents in the community. Since the workforce for the housing maintenance business would consist of residents within Israel-Bitumul, the existing community members with experience in maintenance jobs would be recruited to fill the job positions. The implementation of this business idea is based upon several necessary community economic development components. These important factors for consideration include organization, leadership, funding, and training. Organizations that sponsor and assist with such elements for development have been identified. The success of community economic development projects can be facilitated by drawing on a fitting combination of the organizational, leadership, funding, and training elements.

This chapter will provide the rationale that we used to select the housing maintenance business as an option for economic development in Israel-Bitumul. Since the business initiative should be based within the community, the potential for community participation will be evaluated. We will then analyze the necessary components for implementation and conclude with recommendations for the implementation of the business venture.

Housing Maintenance Business as a Strategy for Economic Development

The ACT had commissioned our project in order to identify options for economic improvement in the communities along the Martín Peña Channel. They were interested in the long-term development of the economies so that, once the channel waterway is completed, the residents will be in the position to benefit from the new economic opportunities the project will offer. During the exploratory research phase of our project, we determined that short-term economic development strategies were needed in order to establish the basis to realize longer term improvement.

In order to identify ideas for short-term economic development, we decided to pinpoint existing needs within the community that would offer an opportunity for economic development. Lucilla Fuller Marvel, A.I.C.P., an independent community development planner, emphasized to us that while it was important to identify different opportunities for economic improvement, we should address an immediate need of the community. Therefore, our approach was to choose a development opportunity that

would both satisfy an immediate need and provide economic growth. The most apparent economic development option, involving the two considerations, was to focus on the new housing development in Israel-Bitumul.

The housing development project to construct the Villas del Paraíso in the community of Israel-Bitumul began in 1996. The plan for the new housing resulted from the desire of community leaders to improve the living conditions of the residents living on the Martin Pena Channel in the community. In 1993, the first Community Housing Development Organization (CHDO-1) in Puerto Rico was established in that community. The formation of this organization was necessary in order to receive federal funding for the housing project.

Construction for the Villas del Paraíso project was completed in 2001. During the discussion held with the President and Executive Director of the CHDO-1, Santos Concepción and Iraida Trabal respectively, we became aware of the current state of the housing project. At the time of the meeting, held on March 25, 2002, the units were not yet populated due to delays in utilities permits. However, the leaders mentioned that once all of the permits had been attained, then the residents who were scheduled to be relocated to the apartments would begin to move.

Once the living units are occupied, there will be a clear need for regular maintenance. Various upkeep tasks must be fulfilled in order to sustain the condition of the complex. According to the discussion with the leaders of the CHDO-1, the need for this regular maintenance had not been addressed by any current plans. The administrative need of the Villas del Paraíso will be met by a separate organizational plan of the CHDO-1. Once the residents have moved into the complex, a Home-Owners Association will be elected. This administrative arm of the housing project will be an elected group of residents from the living units that will represent the entire housing community. Among the responsibilities of this association will be to select and contract maintenance services for the housing complex. Currently, the only option for maintenance is to contract services from outside of the community. Rather than fulfilling the maintenance needs by contracting services from outside of the community, residents from Israel-Bitumul could be employed in a maintenance business to satisfy the maintenance of the Villas del Paraíso. The opportunity for residents of Israel-Bitumul to meet the housing maintenance needs creates the prospect of a community-based housing maintenance business.

This community-based maintenance business could offer a variety of services. As with other housing complexes, the Villas del Paraíso will have a need for plumbing, cleaning, electrical maintenance, carpentry, appliance repair, landscaping, painting, and roof repair. Although residents will be responsible for some maintenance of the interior of the apartment, the maintenance business will keep up the exterior of the complex. Common areas, such as lawns, walkways, and apartment exteriors will fall under the responsibilities of the maintenance business. When problems occur within a particular

residency, the maintenance business will be notified by the Home-Owners Association to fix the problem.

Currently, there are no definitive plans for maintenance fees and services for the Villas del Paraíso. A monthly maintenance fee may be established to be collected from the owners of each housing unit. The association would plan the amount for the fee and would collect it from the housing residents. The maintenance services could be met through a contract between the Home-Owners Association and the maintenance business. The negotiations may determine that the maintenance business would be the sole provider of maintenance services and may specify the minimum amount of money that the business will receive from the association for regular monthly maintenance. The maintenance business may profit from this relationship with the association.

Existing Skills Related to Housing Maintenance

In order to establish the maintenance business with a focus on community participation and advancement, it is important to harness the existing human resources within the community. Any expertise, certified or non-certified, of residents within the community relative to the job positions of the maintenance business should be identified. Additionally, the interest of residents to participate in the community-based business should be noted. By understanding the current technical capabilities of the members of the Israel-Bitumul community and the potential for employee recruitment, we can begin to identify the possibilities of community involvement in the maintenance business.

To obtain a preliminary indication of the occupational aptitudes and interests of the community members, we issued a questionnaire to a group of residents at a community meeting in Israel on April 10, 2002. The meeting was held by representatives from the ACT to educate residents about the Martin Pena Channel Rehabilitation Project and the details of the phase to be done in Israel-Bitumul. Attendance was on a voluntary basis and about one hundred community members were present. This created a non-probability, convenience sample for our questionnaire. Since we did not strategically select the individuals for questioning, direct inferences about the entire population of Israel-Bitumul could not be made with statistical confidence. However, due to the time constraints of our project, we seized the opportunity to issue a list of questions to the group of residents in attendance at the meeting. After the representatives from the ACT were finished with their presentation, a list of questions, in Spanish, was distributed to all who remained in attendance. Not all residents in attendance responded to the questionnaire due to literacy challenges or lack of desire. The voluntary responses that were obtained were used to gather informal insight into the role that community members could play in the housing maintenance business. Despite the limitations of the findings of the questionnaire, much useful information was collected.

The questionnaire identified the respondents through their age, gender, employment status, interest in owning their own business, interest in job training, and

experience in business administration. In total, 23 women and 14 men, between the ages of 32 and 80, completed the questionnaire. Sixty-four percent of the respondents were unemployed at the time, but 54% said they would be interested in starting their own business. This indicates a need for work and that there is motivation to be self-employed among the group of residents who completed the questionnaire.

Since the customers of the housing maintenance business will be the residents of the community, it was important to discover where the respondents went when they needed certain maintenance services. Table 4.1 shows whether the respondents used maintenance services from Israel-Bitumul, outside of the community, or if they fixed the problem on their own. Note that in Table 4.1, the respondents more frequently contracted maintenance services from inside the community or performed the work on their own rather than contracting from outside of the community. Carpentry, plumbing, and electrical work were done mostly by people inside of the community or on their own. Eighty-six percent of the residents did not contract anyone for cleaning but rather did it themselves. The responses to the questionnaire imply that there are people within Israel-Bitumul who already have skills in these maintenance areas. This identifies the community residents' strengths of completing some of the maintenance tasks themselves without relying heavily on outside help.

Table 4.1 Where Questionnaire Respondents Go for Maintenance Services

Maintenance Services	Performed Themselves	Inside Community	Outside Community
Gardening	89%	7%	4%
Cleaning	86%	8%	6%
Painting	58 %	34%	8 %
Carpentry	41 %	52%	7%
Plumbing	39%	52%	9%
Appliance repairs	36%	32%	32%
Roof repairs	19%	31%	50%
Electrical work	15%	75%	10%

Since the maintenance business will employ people, both with and without previous maintenance experience, from Israel-Bitumul, it was significant to note the interest of the respondents in working in the various maintenance areas. Table 4.2 shows the interest the respondents have in working in the maintenance areas. The table lists the interest in working in the areas with rankings from most interested to least interested. The respondents were more interested in working in cleaning and trash collection and less interested in working in appliance repairs and roof repairs. When we examined Table 4.1 and looked at these same areas of maintenance, we noticed a correlation between the two. In Table 4.1, cleaning is the area that was done mostly by the respondents themselves or by someone in the community. This coincided with the data in Table 4.2 that showed the strong interest in working in cleaning. Looking at the roofing and appliance repairs in Table 4.1, these areas were done more often by people outside of the community and Table 4.2 shows that there is a lack of interest in those

areas. The areas in between, such as electrical work, plumbing, and carpentry, are the areas where people can get someone inside of the community to do it or do it themselves, and these areas are of moderate interest in Table 4.2.

Table 4.2 Rank of Interest in Maintenance Jobs

Maintenance Jobs	
1 st	Cleaning (most interested)
2 nd	Trash collection
3 rd	Painting
4 th	Electrical work
5 th	Gardening
6 th	Plumbing
7 th	Carpentry
8 th	Appliance repairs
9 th	Roof repairs (least interested)

The results of this questionnaire suggest that there are residents within Israel-Bitumul who have some of the skills that are necessary to fulfill the jobs within a community-based housing maintenance business. Interest in working in maintenance jobs shown by the respondents also indicates that there may be enough individuals in the community from which to select a workforce.

The implementation of the maintenance business would require an investigation beyond the small sample that responded to the questionnaire. A more extensive study would need to be completed to fully understand the capabilities of the community members. A broader inventory of the community members could reveal details about specific skills, licensing, training, and professional experience. This analysis of Israel-Bitumul may be conducted by a new division of the CHDO-1 that is specifically concerned with the economic development of the community. Such a subsequent study could enable the maintenance business to recruit the most talented worker base from within Israel-Bitumul. In the next section, we will discuss the elements that must be planned and established, including the formation of a new economic development division, in order to implement the housing maintenance business.

Four Key Factors in Planning and Implementation

Interviews with several community planners and study of community-based business models led us to identify four primary components to consider in the implementation of a community-based maintenance business. A new division of the CHDO-1, dedicated to economic development within the community, could be created to aid the founding and provide support for the housing maintenance business. The implementation process should follow the four components in a sequential manner for both the new economic development division and the housing maintenance business.

1. Organization
 - a. Establish a division within the CHDO-1 to promote and serve as a financial agent for community economic development projects.
 - b. Determine the organizational structure of the proposed housing maintenance business.
2. Leadership
 - a. Recruit motivated individuals from Israel-Bitumul to form a new community economic development division.
 - b. Identify and approach potential leaders to manage the implementation of the housing maintenance business plan.
3. Funding
 - a. Obtain funds to form a new division of the CHDO-1.
 - b. Acquire start-up capital for the housing maintenance business.
4. Training
 - a. Coordinate necessary training for business administration and maintenance skills.

The implementation process begins with the conception of a new community organization that would provide technical support to the new maintenance business. Then, the organizational structure of the business itself must be established. Leadership, either a single community member or small group, would need to carry out and sustain the development of the maintenance business. Subsequently, the leadership must both obtain funding to establish the business and begin to select and train a workforce from within the community. Once the economic development division, business structure, leadership, funding, and training factors are in place, the maintenance business should be positioned to begin its operations.

Economic Development Division of CHDO-1

The organizational structures necessary for the realization of the maintenance business are the foremost components that must be outlined. The implementation of the business idea would have to be spearheaded by a single or small group of community members, but a supporting economic development organization must first be present.

The presence of this organization would help to attain resources from outside of Israel-Bitumul. A business enterprise launched without the presence of an economic development organization would require the business leaders to be solely responsible to attain funding and expertise for the planning and operation of the business. An organization dedicated to economic development would serve as the primary source for business leaders within Israel-Bitumul for the support of their business.

Options for the economic development organization can follow the model used in the neighboring community of Cantera. During our interview with Mabel Román,

Interim Economic Development Director of the Cantera Peninsula Project, and other representatives from the Cantera Peninsula Project, we discovered that three separate organizations exist in the Cantera Peninsula Project that stimulate development and provide support to the community. One of the three organizations demonstrates the responsibilities that an economic organization in Israel-Bitumul should assume.

One of the organizations assisting in the community's development is the Apoyo Empresarial para la Peninsula de Cantera. It is a non-profit corporation that acts as the main source of acquiring funds for the community and its projects. The organization seeks funding from corporations, foundations, and federal programs to aid community economic development projects. Since this corporation is a community housing development organization, it is able to receive federal housing funds. The board of directors includes members from both the Cantera Peninsula community and the private sector. The projects are all community-based, involving the residents. The outside agents aid in the economic development initiatives by guiding, teaching, and supporting the residents. In Cantera, the success of the economic development programs could be attributed to the balance of contribution from the community members and outside sources. This balance has been achieved due to the presence of an organization committed to community economic development.

Currently, the CHDO-1 attends to the construction and coordination of the housing projects within Israel-Bitumul but does not have a distinct division to promote community-based business initiatives. A separate division within the CHDO-1 itself is needed to facilitate the funding, legal, and training processes required for the inception and subsequent operation of the maintenance business. The organizational functions extant in Cantera, such as acquiring funding, managing funds, establishing training programs, and hiring economic development experts, may be attained by Israel-Bitumul for community economic development. The CHDO-1 in Israel-Bitumul is primarily concerned with the planning and construction of housing for the community. The CHDO-1 would need to form a separate division that would be in charge of managing funding resources for community economic development projects.

The leaders of the CHDO-1 could select members from the community who seem interested and capable of leading the new economic development division. The composition of the new division also would consist of hiring an agent from outside of the community with technical advice in funds acquisition and management. This outside agent would work with the leaders of the CHDO-1 and members of the new division to search for and attain the appropriate financial support for community initiatives. In addition, the leaders of the new division could undergo leadership training to further advance their capabilities as effective community economic development leaders.

Maintenance Business Structure

The organizational structure for the maintenance business must be established during the conceptual stage of the business. The first choice for the organization of the

business is that of an entrepreneurial venture. This type of enterprise would require an individual to be the only stimulus for the launch of the business. This person would be the primary decision maker during the foundation of the business as well as during the operation of the business. Decisions about the business would be made in the best interest of that one individual. Additionally, this sole proprietor would have to bear the financial responsibility of the business and provide motivation to his workers to perform on a high level.

During our interview with Mari Villariny, the choice of a worker-owned business composition arose. A worker-owned corporation, or Corporación Especial Propiedad de Trabajadores (CEPT) in Spanish, is a business structure that combines elements of a traditional firm and a cooperative. It is administrated solely by the people who work in the business. All who work in the business have the opportunity to be an owner, but other non-owner workers may also be employed. However, all business decisions are controlled by a pre-established majority of the single votes that each worker-owner is allotted. This corporate scheme distributes responsibility of the business amongst most of the business' personnel.

The CEPT makeup counters several characteristics of an entrepreneurial venture. A business following the CEPT model would distribute the financial burden amongst all of the worker-owners, and a stake in the financial success of the business would offer motivation for the worker-owners to succeed. It is not known whether there is a clear, determined entrepreneur in Israel-Bitumul with a stable financial status. Moreover, a CEPT model would provide more residents with experience in the business development and operational processes. According to these considerations, a CEPT business model would be a more fitting set-up.

Leadership

Committed leadership is important for the success of the maintenance business. This person or small group of people need not have all of the proper training and skills necessary for business management. While experience with business administration is highly desirable for the leaders, formal training through coursework and counseling may be completed as the business implementation progresses. However, a strong sense of motivation to implement this business idea is essential because the leaders will be the primary source of advocacy.

The first leadership component that should be in place is in the new economic division of the CHDO-1. According to the precepts of the community development organization in La Playa de Ponce, a key step in community development programs is to identify natural leaders from within the community. The current leaders of the CHDO-1 in Israel-Bitumul should inform the community of the plans to compose a new economic development division. Interested and motivated individuals should then be approached and recruited to form the division. These individuals would become advocates and counselors for the rest of the community about economic development initiatives.

Through their work, they could help organize the community members, increase community participation, and support overall economic development.

In order to gain a more complete view of the skills throughout the community, the new community development division of the CHDO-1 would need to conduct an extensive survey of the residents of Israel-Bitumul. With a clearer understanding of the potential and existing abilities of the individuals in the community, the leaders of the economic development division may be able to identify possible candidates to head the housing maintenance business. The leaders of the division would then be able to approach certain individuals to ascertain if they would be interested and committed to the implementation of the maintenance business.

The second leadership component that should exist is the leadership for the housing maintenance business. The economic development division of the CHDO-1 would provide funding and training support, whereas the leadership of the business venture would be concerned with the establishment and operation of the business. Among the responsibilities of the business leadership would be to identify and hire workers from within Israel-Bitumul for the various maintenance jobs. The responsibilities would also involve coordinating the necessary skill training of the workers through training opportunities identified by the economic division of the CHDO-1. The leadership would act as the intermediary between the workforce and the supporting organization within the CHDO-1. The leadership of the business would address worker concerns while managing other business concerns with the CHDO-1, such as coordinating funding and training resources for the maintenance business.

Funding

Acquiring sufficient funding is also a necessary component for the founding of the housing maintenance business. We identified two sources for funding, yet more financial sources could be ascertained by the new economic development division of the CHDO-1. One of the funding sources is The Puerto Rico Community Foundation (PRCF). It is an establishment on the island that is committed to the development and support of economic development initiatives of community organizations. The CHDO-1 in Israel-Bitumul receives support for their housing project through the Puerto Rico Community Foundation. The foundation serves to assist community organizations with information about the analysis and preparation of financial proposals for the development of community housing. It is also concerned with assuring the efficient and adequate use of local, state, and federal funds by community organizations. The access to consulting and to both private and public financial resources by the PRCF may be utilized for economic development by the new economic development division of the CHDO-1. Additionally, start-up capital for the housing maintenance business could be found by the division through the PRCF.

Another source of funding may be used for job training for workers in the housing maintenance business. The U.S. Department of Housing and Urban Development has a

Community Development Block Grant (CDBG) Program, established to ensure people with decent affordable housing, to provide services to the underprivileged in communities, and to create jobs and expand business opportunities. Part of the CDBG Program is the Individual Development Accounts (IDA) Program. IDA's are dedicated savings accounts that can only be used for purchasing a home, paying for education or job training expenses, or capitalizing a small business. These accounts, which are generally managed by community organizations, are held at local financial institutions in the name of the individual participant (Department of Housing and Urban Development, 2001).

The proposed community economic development division of the CHDO-1 in Israel-Bitumul could be the intermediate community organization that acquires the CDBG funds to establish the IDA's. Workers in the housing maintenance business would then be able to create their own accounts for the purposes of funding their individual training within their field of work. Formal training about business administration as well as their job-specific instruction could be attained by the funds acquired through their IDA's.

Training

Proper business administration training and job-skill training are two essential factors for consideration when planning the housing maintenance business. There are many different sponsoring agencies that can be accessed for administrative training and support. The Association of Worker-Owned Corporations, or Asociación de Corporaciones Especiales Propiedad de Trabajadores (ACEPT), is a source for business administration programs (May, 1998). The ACEPT provides business administration training to registered worker-owned corporations that belong to the association. Worker-owners may participate in various training programs and courses to help them gain the skills that are necessary to run a worker-owned business.

Other formal business administration training may be realized through the Department of Continuing Education in the Universidad del Sagrado Corazón in Santurce, San Juan. A program in the department, called Programa de Cursos Cortos, offers many part-time courses in various areas, including business administration, sales and marketing, and computer training. The courses are available to any person and full-time enrollment is not necessary. These short courses may provide some of the basic skills and ideas necessary to operate the housing maintenance business.

Job-skill training may be necessary for the workers in the housing maintenance business. The results of the respondents to the questionnaire issued to residents in Israel-Bitumul suggest that there may be people within the community who have developed certain skills informally. Many of the respondents indicated that they had performed many of the maintenance tasks themselves. The maintenance work conducted by the residents on their own homes may have provided them with useful knowledge and experience. While such informal experience is beneficial to learning maintenance jobs,

the residents that may be employed in the housing maintenance business may have to receive formal training in specific maintenance vocations.

An organization in Puerto Rico that provides such training is the Administration for the Training of Future Businesspersons and Workers (Administración para el Adiestramiento de Futuros Empresarios y Trabajadores [AAFET]). The AAFET, under the Department of Labor and Human Resources, focuses on providing job training and assistance to Puerto Ricans between the ages of 14 and 29. The agency offers this training to the underprivileged youth with the aim of strengthening individual job skills, preparation for financial independence, and integration into the workforce of the Puerto Rico. Among the training programs offered by the AAFET is the Vocational Training Program. Workers in the housing maintenance business, up to age 29, could use the training resources of this program to obtain job-skill training specific to their particular job in the business.

Another important consideration is the licensing requirements for some of the maintenance services. In order for plumbers and electricians to be contracted for work, The Department of Public Safety necessitates licenses for the two maintenance areas. In addition to simply providing training opportunities, licensing resources should be made available to the workers in the maintenance business.

Recommended Steps for Implementation

Based on our investigation of Israel-Bitumul and interviews with various outside professionals, the following is a synopsis of the implementation strategy that we recommend in order to establish the community-based economic development initiative of a housing maintenance business.

- Recruit motivated individuals from Israel-Bitumul to establish a new economic development division within the CHDO-1 of Israel-Bitumul that is dedicated to the development and support of community economic development projects.
- Obtain funding for the new economic development division to finance its operational costs.
- Conduct an extensive skills and licensing survey of all of the residents of Israel-Bitumul through the new division of the CHDO-1.
- Identify and approach potential leaders to manage the implementation of the housing maintenance business.
- Acquire start-up capital for the housing maintenance business.

- Revisit community-wide skills survey for employee recruitment.
- Coordinate necessary training and licensing programs for business administration and maintenance skills.

CHAPTER V. ECONOMIC VISION FOR ISRAEL-BITUMUL

The housing maintenance business for Villas del Paraíso in the community of Israel-Bitumul is a short-term economic development initiative that may provide services the residents in the housing community and employment opportunities for members throughout the community. In addition, both the business and proposed economic development division of the CHDO-1 could have the potential to provide benefits to the community as a whole. In this final chapter, we will discuss how the housing maintenance business could serve as a building block for future community economic development.

Short-Term Benefits

The housing maintenance business and the initiation of the economic development division of the CHDO-1 could have several short-term benefits. The business and proposed economic development division could provide opportunities for professional advancement to the residents of Israel-Bitumul. Several job openings and training opportunities could be provided. Motivated residents could have the potential to become leaders amongst the community and receive management training and experience. Possible maintenance workers could be provided with job skill training and licensing opportunities along with work experience. By improving the technical and administrative skills of community members involved in the business, it could provide the capabilities necessary for the business to expand and encourage the development of other community-based businesses.

The business could give the participants a sense of success and accomplishment as well. They could have the chance to improve their leadership skills and become a model of success. These residents could serve as role models, promoting others to follow their path of hard work and participation. This could provide the motivation for residents to become involved and take more active roles in the community. As more residents participate in community economic development opportunities, such as the housing maintenance business, significant short-term improvements in employment, training, and business experience may benefit the community.

Long-Term Vision

Once the business is established and the short-term benefits have been realized, opportunities for further development could arise. The maintenance business could

expand beyond Villas del Paraíso and the economic development division of the CHDO-1 could use its resources to support and facilitate other small businesses.

The housing maintenance business could remain operational in the housing development, but also expand to other residences within Israel-Bitumul. The second phase of the housing development project could provide a solid opportunity for the growth of the customer base of the maintenance business. Proper marketing could help spread the business to individual homes within the community, and, eventually, the maintenance business could spread to communities throughout the San Juan metropolitan area. In addition to serving households, the maintenance business could also be contracted by other businesses and corporations to help maintain their facilities. By expanding the business outside of the community, more jobs could become available. Since the business would remain based in Israel-Bitumul and employ the members of the community, expansion and increased profits would help advance the local economy.

Upon the opening of the waterway transportation system, there will be a need for providing various services to the travelers. The economic development division that will be aiding the maintenance business could help initiate other small businesses by using their contacts, expertise, and leadership resources. The new division would serve as the economic development authority within Israel-Bitumul to support these other community-based businesses. This may include helping to set-up small businesses such as bakeries, coffee shops, gift shops, restaurants, gas stations, boat maintenance and other services to benefit those using the channel. Although the division would have the most experience dealing with maintenance services, the knowledge gained in community-based development initiatives could be applied.

In ten years, when the Martín Peña Channel Rehabilitation Project is completed and a waterway transportation system is established, the community should have the necessary experience and job training to take advantage of economic opportunities that arise. By improving the economy of the community, it will be able to benefit, in the long run, by the changes brought about by the Martín Peña Channel Rehabilitation Project and the waterway transportation system.

APPENDIX A

Mission and Current Projects of the Puerto Rico Highway and Transportation Authority

The information presented in this appendix was obtained from a previous year's IQP, titled "Inventory & Evaluation of Routes PR-123 & PR-111." This project provided the mission statement and historical background of this institution. The information on the current projects was taken from a PowerPoint presentation provided by our liaison at the Highway and Transportation Authority.

Mission Statement

The current mission statement of The Department of Transportation and Public Works is "To provide Puerto Rico with the modern, efficient, and safe surface transportation infrastructure necessary to improve the Island's competitive position in the global market place."

Autonomy

The Puerto Rico Highway and Transportation Authority (Autoridad de Carreteras y Transportación [ACT]), one of six agencies under the Department of Transportation and Public Works, is primarily in charge of roadway and bridge design, construction, and maintenance; policy and planning; highway safety; environmental protection and enhancement. The policies for both the Highway and Transportation Authority and the Department of Transportation and Public Works are set by the Puerto Rico Planning Board.

Current Projects

One of the main goals of the Department of Transportation and Public Works is to alleviate the traffic congestion that exists in San Juan. Many of the current projects are aimed at achieving an efficient multimodal transportation network. This will help to shift the focus from the roadways to other means of transportation and eliminate the number of cars on the roads.

The largest of these projects is the Tren Urbano, which will interconnect major activity centers and sites of interest throughout the city. In the future this will hopefully be the backbone of transportation for the San Juan Metropolitan area.

In addition, a waterway transportation system is currently being developed through the Martín Peña Canal from the San Juan Bay to the San Jose Lagoon. Along with incorporating waterway transportation to the San Juan Metropolitan Area

Multimodal System, the Highway and Transportation Authority hopes to attain social and environmental justice for the eight disadvantaged communities settled near the Martín Peña Channel's banks; improving the Martín Peña Channel's water quality and restoring the San Juan Bay Estuary System; and promoting community-based economic development through recreational and tourism activities.

Phase one, stage one of the project includes working on urban design and long-term planning; housing; road infrastructure; storm water and sewer systems and utilities; and superficial debris clean up. Stage two is the dredging of the canal, which includes displacing about 550 structures due to the expansion of the canal, and displacing about 650 more for new infrastructure and greenways. It also includes new housing for those displaced, replacement of three bridges, and many similar activities that are involved in stage one.

Phase two is the development of the waterway transportation infrastructure, including three new stops. It also incorporates the development of greenways and bike routes. The last phase is to connect the Luis Muñoz Marín International Airport to the Boca de Cangrejos, and the Puerto Rico Convention Center to the Condado Hotel Sector via the new waterway system.

All of these improvements to the San Juan area are estimated to take until the year 2012, and to cost a total of \$660 million. Upon completion, the project is expected to significantly decrease traffic congestion in the capital city; bring economic development to the area as well as improve surrounding communities; and offer a convenient, unique intermodal transportation system.

APPENDIX B

Interviews

Gladys Acosta, Social worker for Mita Congregation Office of Orientation and Social Assistance, Inc., April 15, 2002.

Santos Concepción, President of CHDO-1, March 25, 2002.

Rubén González, People's Recycling, Proyecto Península de Cantera's April 19, 2002.

Lucilla Fuller Marvel, Chief Community Development Planner of Taller de Planificación Social, March 26, 2002.

Angel Melendez, Independent Financial Economic Consultant for Producir, Inc., April 9, 2002.

Iricely Ortiz, Oficina de Desarrollo Económico Comunitario Organizado, Proyecto Península de Cantera's April 19, 2002.

Marta Ramos, Vice President and CRA Officer of Banco Popular, April 8, 2002.

María Lourdes Rivera, Executive Director of Consejo Vecinal, Inc., Proyecto Península de Cantera's April 19, 2002.

Mabel Román, Interim Economic Development Director, Proyecto Península de Cantera's April 19, 2002.

José B. Santori, Marketing Director for Artesanías Tabaiba, March 21, 2002.

Miguel A. Soto-Class, Executive Director of the Center for the New Economy, April 2, 2002.

Michelle Sugden-Castillo, Assistant CRA Officer of Banco Popular, April 8, 2002.

Iraida Trabal, Executive Director of CHDO-1, March 25, 2002.

Mari A. Villariny, President of Ocho Punto Com, Inc., April 11, 2002.

APPENDIX C

The following information was adapted from the results of a 1993 study of the community of Israel-Bitumul. The Mita Congregation Office of Orientation and Social Assistance, Inc. completed the inventory.

Profile of the 1,059 Heads of Families

Age of Head of Family	Number of People	Percent
13-19 years	8	1%
20-29 years	124	12%
30-39 years	152	14%
40-49 years	191	18%
50-59 years	178	17%
60-69 years	169	16%
70-79 years	151	14%
80 years and over	72	7%
No Response	14	1%

Sex	Number of People	Percent
Male	483	46%
Female	575	54%
No Response	1	0%

Civil Status	Number of People	Percent
Married	538	51%
Single	153	14%
Separated	35	3%
Widowed	189	18%
Divorced	122	12%
No Response	22	2%

Education Level	Number of People	Percent
Elementary	385	36%
Intermediate	170	16%
High school graduate	289	27%
Associates Degree	50	5%
Bachelor's Degree	65	6%
No Response	100	10%

Citizenship	Number of People	Percent
U.S.	880	83%
Dominican	45	4%
Columbian	2	0%
Other	5	0%
No Response	127	13%

Occupation	Number of People	Percent
Skilled	226	21%
Unskilled	111	10%
Professional	75	7%
Housewife	372	35%
Unemployed	180	17%
No Response	95	9%

Approximate Salary of Head of Household	Number of People	Percent
\$75-\$300	129	12%
\$301-\$600	141	13%
\$601-\$900	126	12%
\$901-\$1200	49	5%
\$1202-\$1500	19	2%
No Response	595	56%

Years Lived in Community	Number of People	Percent
Less than 1 year	60	6%
2-6 years	119	11%
7-11 years	86	8%
12-16 years	71	7%
17-21 years	101	10%
22-26 years	131	12%
27 years or more	482	45%
No Response	9	1%

Profile of 1,059 families, consisting of 3,262 people

Sex	Number of People	Percent
Female	1639	50%
Male	1617	50%
No Response	6	

Age	Number of People	Percent
0-5	315	10%
6-12	348	11%
13-19	320	10%
20-29	497	15%
30-39	428	13%
40-49	404	12%
50-59	329	10%
60-69	263	8%
70-79	212	6%
80 and over	114	3%
No Response	32	1%

Education Level	Number of People	Percent
Elementary	996	31%
Intermediate	447	14%
High school graduate	773	24%
Associates Degree	75	2%
Bachelor's Degree	262	8%
No Response	709	21%

Number of People per Home	Number of People	Percent
1-3 persons	667	63%
4-8 persons	371	35%
9-12 persons	3	0%
13-18 persons	1	0%
No Response	17	1%

Number of Employed People per Family	Number of People	Percent
None	435	41%
1-3 persons	571	54%
4-6 persons	7	1%
7-10 persons	0	0
No Response	46	4%

Monthly Income per Family	Number of People	Percent
0-\$100	64	6%
\$101-\$200	78	7%
\$201-\$300	135	13%
\$301-\$400	159	15%
\$401-\$500	96	9%
\$501-\$600	103	10%
\$601-\$700	111	11%
\$701-\$800	55	5%
\$801-\$900	29	3%
\$901 and over	183	17%
No Response	46	4%

Source of Family Income	Number of People	Percent
Salary	461	31%
Pensions	58	4%
Social Security	376	26%
Economic Assistance	51	3%
PAN (Program of Nutritional Assistance)	374	26%
Own Business	11	1%
Rent	14	1%
Fluke	36	2%
Unemployment	12	1%
Plan 8	15	1%
Veteran	5	0%
Other	43	3%
No Response	1	0%

Member of the Family Disabled	Number of People	Percent
Yes	284	27%
No	698	66%
No Response	77	7%

Member of the Family Crippled	Number of People	Percent
Yes	146	14%
No	829	78%
No Response	84	8%

Profile of Housing Characteristics

Type of Home	Number of Homes	Percent
Wood	112	11%
Cement	569	54%
Cement and Wood	343	32%
No Response	35	3%
Condition of Home	Number of Homes	Percent
Own with Mortgage	129	12%
Own without Mortgage	634	60%
Rent with Payment	201	19%
Rent without Payment	62	6%
No Response	33	3%
Deed	Number of Homes	Percent
Yes	718	68%
No	167	16%
No Response	174	16%
Property Title	Number of Homes	Percent
Yes	533	50%
No	346	33%
No Response	180	17%
Land Owner	Number of Homes	Percent
Municipality	134	39%
CRUV	44	13%
Housing Department	12	4%
Unaware	117	11%
Does not Apply	739	13%
Use of Property	Number of Homes	Percent
Commercial Establishment	34	3%
Medical Office	2	0%
Professional Office	0	0%
No Response or Does not Apply	1023	97%

Property Value	Number of Homes	Percent
Less than \$5,000	5	0%
\$5,000-\$9,999	25	2%
\$10,000-\$14,999	34	3%
\$15,000-\$19,999	65	6%
\$20,000-\$24,999	55	5%
\$25,000-\$29,999	64	6%
\$30,000-\$34,999	63	6%
\$35,000-\$39,999	42	4%
\$40,000-\$44,999	54	5%
\$45,000-\$49,999	36	3%
\$50,000-\$54,999	39	4%
\$55,000-\$59,999	14	1%
\$60,000-\$64,999	44	4%
\$65,000-\$69,999	16	2%
\$70,000 or More	68	6%
Unknown	435	41%

Number of Bedrooms	Number of Homes	Percent
1	51	5%
2	269	25%
3	484	46%
4	134	13%
5	30	3%
6 or More	20	2%
No Response	71	6%

Number of Living Rooms	Number of Homes	Percent
1	968	92%
2	45	4%
3	1	0%
No Response	45	4%

Number of Dining Rooms	Number of Homes	Percent
None	4	1%
1	888	84%
2	22	2%
3	0	0%
No Response	145	13%

Number of Kitchens	Number of Homes	Percent
1	980	92%
2	23	2%
3	6	1%
4	0	0%
No Response	50	5%

Number of Bathrooms	Number of Homes	Percent
1	849	80%
2	131	12%
3	18	2%
4	1	0%
No Response	60	6%

Source of Water	Number of Homes	Percent
Rain	92	9%
Drinkable	911	86%
Well	2	0%
Other	2	0%
No Response	52	5%

Type of Lighting	Number of Homes	Percent
Electric	1007	95%
Gas	11	1%
Other	0	0%
No Response	41	4%

Waste Disposal	Number of Homes	Percent
Sanitary	1005	95%
Latrine	10	1%
Other	6	0%
No Response	38	4%

Profile of Health Areas

Medical Services	Number of People	Percent
Public	653	61%
Private	404	38%
None	12	1%
Illnesses that a Family Member may be Suffering	Number of People	Percent
Measles	331	31%
Diphtheria	36	3%
Mumps	188	18%
Polio	10	1%
Influenza	178	17%
Parasites	69	6%
Allergies	226	21%
Hypoglycemia	51	4%
Diabetes	239	22%
Bronchial Asthma	280	26%
Hepatitis	22	2%
Anemia	77	7%
Arthritis	317	30%
Skin Diseases	102	9%
High Blood Pressure	351	33%
Syphilis	5	0%
Tuberculosis	19	2%
Venerable Diseases	5	0%
Obstructive Diseases	32	3%
Ulcers	76	7%
Visual Disorder	495	47%
AIDS	1	0%
Mental Disorder	69	6%
Other	117	11%
Family Member Diagnosed with Cancer	Number of People	Percent
Yes	405	38%
No	624	59%
No Response	30	3%

Number of Family Members with Cancer	Number of People	Percent
1-3	381	94%
4-6	21	4%
7-9	3	1%

Type of Cancer	Number of People	Percent
Skin	12	3%
Breast	39	8%
Stomach	102	22%
Lung	36	8%
Colon	15	3%
Prostate	43	9%
Gallbladder	4	1%
Ovarian and Uterus	49	11%
Brain	14	3%
Kidney	6	1%
Liver	18	4%
Other	122	27%

Illnesses a Family Member is Suffering	Number of People	Percent
Migraine	413	39%
Nasal	246	23%
Hearing	190	18%
Digestive System	161	15%
Oral	96	9%
Urinary	86	8%
Respiratory	160	15%
Skeletal Muscle	168	16%
Cardiac	202	19%
Emotional or Mental	99	9%
Menstrual	60	6%
Sleeping	145	14%
Neurological	29	3%

Profile of Community Social Needs

Necessary Physical Facilities	Number of People	Percent
Senior Center	712	67%
Community Center	627	59%
Children's Day and Night Center	647	61%
Other	182	17%

The following information was adapted from the results of a 1994 needs assessment of the families that live close to the Juan Mendez Channel, in the community of Israel-Bitumul. The Mita Congregation Office of Orientation and Social Assistance, Inc. completed the inventory.

Profile of the 210 Heads of Families

Number of People per Home	Number of People	Percent
1-3 Persons	117	57%
4-9 Persons	89	43%
10-15 Persons	0	0%

Number of Employed People per Family	Number of People	Percent
1-3 Persons	116	55%
4-6 Persons	17	8%
7-9 Persons	0	0%

Relationship	Number of People	Percent
Head of Family	210	30%
Spouse	97	14%
Son/Daughter	285	41%
Other Family	91	13%
No Family	12	2%

Profile of 210 families, consisting of 695 people

Sex	Number of People	Percent
Female	483	46%
Male	575	54%
Age	Number of People	Percent
0-5	87	13%
6-12	97	14%
13-19	91	13%
20-29	101	15%
30-39	109	16%
40-49	71	10%
50-59	39	5%
60-69	44	6%
70-79	34	5%
80-89	12	2%
90 and over	4	1%
Education Level	Number of People	Percent
Illiterate	50	8%
Elementary	259	41%
Intermediate	110	17%
High school	168	27%
University	44	7%
Occupation	Number of People	Percent
Skilled	74	12%
Unskilled	62	11%
Professional	11	2%
Housewife	142	24%
Unemployed	30	5%
Incapacitated	30	5%
Retired	16	3%
Outside of Labor Force	37	6%
Other	30	5%
Student	184	30%

Monthly Income per Family	Number of People	Percent
0-\$300	54	31%
\$301-\$500	49	28%
\$501-\$999	46	26%
\$1000-\$1499	15	9%
\$1500-\$1999	6	3%
\$2000-\$2499	4	2%
\$2500 and over	0	0%

Source of Family Income	Number of People	Percent
Salary	93	30%
Social Security	69	22%
Pensions	16	5%
PAN (Nutritional Assistance Program)	90	29%
Rent	4	1%
Unemployed	1	0%
Public Welfare	14	4%
Veteran	0	0%
Own Business	2	1%
Chance	8	3%
Plan 8	0	0%
Other	17	5%

Profile of Housing Characteristics

Type of Home	Number of Homes	Percent
Cement	50	19%
Wood	11	3%
Cement and Wood	124	48%
Wood and Zinc	61	24%
Other	14	5%
Physical Condition of Home	Number of Homes	Percent
Good	63	32%
Regular	103	52%
Poor	33	16%
Facilities in Home	Number of Homes	Percent
Living Room	205	31%
Dining Room	164	24%
Kitchen	200	30%
Porch	53	5%
Patio	55	8%
Number of Bedrooms	Number of Homes	Percent
1	13	7%
2	61	32%
3	86	45%
4	22	12%
5	4	2%
6	4	2%
Tenure of House and Land	Number of Homes	Percent
Ownership of House and Land	77	37%
Ownership of House, not Land	84	40%
Rental of House and Land	28	14%
Free House and Land	9	4%
Unsure or No Response	1	1%
Other	9	4%

Deed	Number of Homes	Percent
Yes	61	89%
No	18	11%

Property Title	Number of Homes	Percent
Yes	61	35%
No	112	65%

Land Owner	Number of Homes	Percent
Municipality	66	61%
CRUV	7	6%
Housing Department	0	0%
Private Sector	0	0%
Unknown	34	32%

Property Value	Number of Homes	Percent
Less than \$5,000	6	4%
\$5,000-\$9,999	10	6%
\$10,000-\$14,999	29	19%
\$15,000-\$19,999	41	27%
\$20,000-\$24,999	22	15%
\$25,000-\$29,999	8	6%
\$30,000-\$34,999	11	7%
\$35,000-\$39,999	5	3%
\$40,000-\$44,999	6	4%
\$45,000-\$49,999	1	1%
\$50,000-\$54,999	4	3%
\$55,000-\$59,999	0	0%
\$60,000-\$64,999	2	1%
\$65,000-\$69,999	1	1%
\$70,000 or More	5	3%

Tenant	Number of Homes	Percent
Does not pay	4	13%
Pay	28	87%

Housing Facilities	Number of Homes	Percent
Public Water and Sanitary Facilities	199	94%
Supply of Water by Other System	3	1%
Some Sanitary Facilities	10	5%
No Sanitary Facilities	2	0%
Latrine	1	0%
Other	5	0%

Place of Waste Disposal	Number of Homes	Percent
No Facility	1	0%
Sewer System	7	3%
Wall Well	30	12%
Free Discharge	7	3%
Body of Water	58	23%
Unknown/No Response	4	2%
Other (Cano Juan Méndez)	142	57%

Existing Facilities in the Community	Number of Homes	Percent
Electric Lighting	198	94%
Sanitary Sewer	24	11%
Pluvial Sewer (?)	101	48%
Streets	147	70%
Sidewalks	40	19%
Telephone	171	81%

Height of Flooded Waters	Number of Homes	Percent
0-1 feet	2	1%
1-3 feet	130	68%
4-6 feet	60	31%

Knowledge of the Housing Project	Number of People	Percent
Yes	144	70%
No	63	30%

Interest in Participating in Housing Project	Number of People	Percent
Yes	192	92%
No	11	6%
Do not know	5	2%

Heads of Household who are Available to Sell Property and Move	Number of People	Percent
Yes	152	75%
No	49	24%
Do not know	2	1%

Residents who are Available to Move	Number of People	Percent
Yes	187	90%
No	12	6%
Do not know	9	4%

Social Problems	Number of People	Percent
Flooding	169	38%
Environmental Contamination	28	6%
Bad Odor	5	1%
Odor from the Channel	19	4%
Trash	12	3%
Lack of Facilities	7	2%
Sewer	22	5%
Insects	36	8%
Deteriorated Streets	9	2%
Housing Problems	5	1%
Illnesses	2	0%
Sanitary Conditions	2	0%
Overcrowding	3	1%
Trash Collection	3	1%
Alcoholism	4	1%
Mistreatment of Minors	1	0%
Lack of Morals	1	0%
Transportation	1	0%
Desertion of Schools	3	1%
Poverty	1	0%
Unemployment	2	0%
Drugs	65	15%
Crime	22	5%
Shootings	3	1%
Delinquency	13	3%
Assassinations	1	0%
Lack of Security	7	2%

APPENDIX D
Sample Questionnaire

ENCUESTA ESTABLECIMIENTO COMUNITARIA EN ISRAEL-BITUMUL

Proyecto de investigación de estudiantes del Instituto Politécnico de Worcester en
Massachusetts

Todo las respuestas serán completamente confidencial.

Edad _____

☐ Masculino ☐ Femenino

¿Vive en Israel-Bitumul?

☐ Sí

☐ No

¿Se mudará a la primera fase de las Villas del Paraíso?

☐ Sí

☐ No

¿Le interesaría montar su propio negocio?

☐ Sí

☐ No

¿Tiene experiencia administrando un negocio?

☐ Sí

☐ No

1) ¿Cuál de estas actividades de mejoras a su hogar usted realiza personalmente? (Por favor marque todos los que apliquen.)

☐ Plomería

☐ Trabajo eléctrico

☐ Reparaciones
de aparatos
electrodomésticos

☐ Recogida de
basura

☐ Carpintería

☐ Limpieza

☐ Pintura

☐ Reparaciones
de techo

☐ Jardinería

2) ¿Le han contratado para uno de estos servicios? (Por favor marque todos los que apliquen.)

☐ Plomería

☐ Trabajo eléctrico

☐ Reparaciones
de aparatos
electrodomésticos

☐ Recogida de
basura

☐ Carpintería

☐ Conserje

☐ Pintar

☐ Reparaciones
de techo

☐ Jardinería

3.) ¿Para cual de estos servicios usted ha contratado a un residente de Israel-Bitumul?
(Favor de marcar las que apliquen.)

- | | | | |
|--------------------------------------|--|---|---|
| <input type="checkbox"/> Plomería | <input type="checkbox"/> Trabajo eléctrico | <input type="checkbox"/> Reparaciones de aparatos electrodomésticos | <input type="checkbox"/> Recogida de basura |
| <input type="checkbox"/> Carpintería | <input type="checkbox"/> Conserje | <input type="checkbox"/> Reparaciones de techo | |
| <input type="checkbox"/> Pintar | | | |
| <input type="checkbox"/> Jardinería | | | |

4.) ¿Para cual de estos servicios usted ha contratado a una persona que no es de la comunidad de Israel-Bitumul.

- | | | | |
|--------------------------------------|--|---|---|
| <input type="checkbox"/> Plomería | <input type="checkbox"/> Trabajo eléctrico | <input type="checkbox"/> Reparaciones de aparatos electrodomésticos | <input type="checkbox"/> Recogida de basura |
| <input type="checkbox"/> Carpintería | <input type="checkbox"/> Conserje | <input type="checkbox"/> Reparaciones de techo | |
| <input type="checkbox"/> Pintar | | | |
| <input type="checkbox"/> Jardinería | | | |

5.) ¿Cuántas veces al año usted requiere estos servicios? (Favor de circular una de las opciones para cada servicio.)

- | | | | | |
|--|-----|-----|-----|----------------|
| - Plomería | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Carpintería | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Pintar | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Jardinería | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Trabajo eléctrico | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Conserje | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Reparaciones de aparatos electrodomésticos | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Reparaciones de techo | 0-1 | 2-3 | 4-5 | más de 5 veces |
| - Recogida de basura | 0-1 | 2-3 | 4-5 | más de 5 veces |

6.) Indique si estaría interesado trabajar en uno de las siguientes áreas.

☐ Plomería

☐ Trabajo eléctrico

☐ Reparaciones de
techo

☐ Carpintería

☐ Conserje

☐ Recogida de basura

☐ Pintar

☐ Reparaciones de
aparatos
electrodomésticos

☐ Jardinería

7.) ¿Estaría interesado en tomar algún curso corto o adiestramiento para conseguir empleo? ☐ Sí ☐ No

8.) Está usted: ☐ Empleado

☐ Desempleado

☐ Trabaja por su cuenta

Profesión oficial: _____

Gracias por tomar el tiempo de llenar este cuestionario.

APPENDIX E

Results of Questionnaire

Table E-1 presents the information gathered from the preliminary background questions, as well as question numbers seven and eight on the questionnaire. This includes the respondent's gender, age, whether moving to the new housing development, occupation, employment status, interest in owning his or her own business, interest in participating in job training courses, and if he or she has any previous administration experience. The table is organized by age from youngest to oldest.

Table E-1. Background Information of Questionnaire Respondents

Male/Female	Age	Moving to Villas del Paraíso	Occupation	Employed	Interest in Owning Business	Interest in Job Training	Administration Experience
Female	32	X				X	
Female	39	X				X	
Female	39		Cashier	X			X
Female	39						
Female	39	X	Cook	X	X	X	
Female	40	X	Nurse		X	X	
Female	44		Housewife		X	X	
Male	44		Electrician		X	X	X
Male	45	X	Police	X	X	X	
Male	46	X	Student			X	
Male	46	X	Construction	X	X	X	
Male	46	X	Financial Asst.	X	X		
Female	46		Teacher	X			
Male	46				X	X	
Female	50	X	Cashier	X	X		
Female	54		Receptionist	X	X		
Female	54	X	Seamstress		X	X	X
Male	55	X			X		X
Male	55		Owens business	X	X		X
Female	56					X	
Male	56	X	Bus driver			X	X
Female	57	X		X	X		
Male	58	X	SecurityGuard	X	X	X	X

Table E.1 cont'd							
Male/Female	Age	Moving to Villas del Paraíso	Occupation	Employed	Interest in Owning Business	Interest in Job Training	Administration Experience
Female	59		Housewife				
Female	59				X		
Female	61						
Female	62	X			X		
Female	63	X					
Female	63	X	Housewife				
Female	66	X	Housewife		X	X	
Male	67	X			X		
Female	68	X					
Male	76		Government		X	X	
Male	76	X					
Male	76	X					
Female	77	X			X		
Female	80	X					

Table E-2 organizes the responses that obtained from question numbers two, four, and five on the questionnaire. The percentages were broken up into three categories for each area of maintenance service, each indicating what areas of maintenance community members have experience.

Table E-2. Where Questionnaire Respondents Go for Maintenance Services

Maintenance Service	Inside Community	Outside Community	Fixed Themselves
Plumbing	52%	9%	39%
Carpentry	52%	7%	41 %
Painting	34%	8 %	58 %
Gardening	7%	4%	89%
Electrical work	75%	10%	15%
Cleaning	8%	6%	86%
Appliance repairs	32%	32%	36%
Roof repairs	31%	50%	19%
Trash collection	31%	13%	56%

Table E-3 shows the responses from questions three and seven from the questionnaire. This shows the number of respondents that were interested or had been contracted to work in a specific maintenance area. This data indicates the existing available and potential resources for the maintenance business.

Table E-3. Interest and Experience in Maintenance Services

Maintenance Service	Interest in Working	Previously Contracted
Plumbing	3	4
Carpentry	2	6
Painting	5	5
Gardening	4	4
Electrical work	5	5
Cleaning	6	5
Appliance repairs	1	2
Roof repairs	1	4
Trash Collection	6	8

Table E-4 shows the data gathered from question six of the questionnaire. This categorizes the number of times a year a specific maintenance service was needed.

Table E-4. Frequency of Need for Maintenance Services

Maintenance	Times per Year			
	0-1	2-3	4-5	5+
Plumbing	9	6	1	1
Carpentry	3	9		1
Painting	13	6		2
Gardening	5	10	1	1
Electric	10	5	1	1
Cleaning	6	2	2	1
Appliance	6	5	2	2
Roof	6	5	1	
Trash	5	3	8	7

REFERENCES

- Ards Borough Council (2002). Ards Borough Council - Economic Development. Retrieved February 26, 2002, from the World Wide Web: http://www.ards-council.gov.uk/council_economicdev.htm
- Boswell, T.D. "Puerto Rico." Grolier Multimedia Encyclopedia, Grolier, Inc. 2001. <http://gme.grolier.com> (January 23, 2001).
- Bould-Vantil, S. (1976). Work and the Culture of Poverty: The Labor Force Activity of Poor Men. San Francisco, CA: R & E Research Associates.
- Bureau of the Census. (1990). *Population and Housing Characteristics for Census Tract and Block Numbering Areas* (Current Population and Housing Reports, San Juan, PR PMSA). Washington, DC: U.S. Government Printing Office.
- Caban, P.A. (1989). Industrial Transformation and Labour Relations in Puerto Rico: From 'Operation Bootstrap' to the 1970s. Journal of Latin American Studies. 21, 559-591.
- Carrión, A.M. (1983). Puerto Rico: A Political and Cultural History. New York, NY: W.W. Norton and Company, Inc.
- Community Economic Development Centre (1997). Sharing Stories. Retrieved February 26, 2002 from the World Wide Web: <http://www.sfu.ca/cedc/gateway/sharing/content.htm>
- Conroy, C. & Litvinoff, C. (1988) The Greening of Aid: Sustainable Livelihoods in Practice. Eastscan, London.
- Department of Housing and Urban Development (2001). Community Development – Programs – CDBG. Retrieved April 20, 2002 from the World Wide Web: <http://www.hud.gov/offices/cpd/communitydevelopment/programs/cdbg.cfm>
- Dietz, J.L. (1986). Economic History of Puerto Rico: Institutional Change and Capitalist Development. Princeton, NJ: Princeton University Press.
- Downs, A. (1994). New Visions for Metropolitan America. Washington, DC: The Brookings Institution.
- Elliott, J.A. (1994). An Introduction to Sustainable Development. London: Routledge.
- Fernandez, R. (1994). Prisoners of Colonialism. Monroe, ME: Common Courage Press.

- Fernandez, R., Méndez, S., Cueto, G. (1998). Puerto Rico: Past and Present. Westport, CT: Greenwood Press.
- Fordham, G. (1993). Sustaining local involvement. Community Development Journal, 28(4), 299-304.
- Hackett, S.C. (2001). Environmental and Natural Resources Economics. Armonk: M.E. Sharpe.
- Hall, D. & Richards, G. (2000). Tourism and Sustainable Community Development. London: Routledge.
- Harrison, B. & Glasmeir, A.K. (1997). Why Business Alone Won't Redevelop the Inner City: A Friendly Critique of Michael Porter's Approach to Urban Revitalization. Journal of American Economic Revitalization, 11, 28-39.
- Hinch, T. D. (1996). Urban Tourism: Perspectives on Sustainability. Sustainable Tourism, 4, 95-110.
- Itzigsohn, J. (2000). Developing Poverty. University Park, PA: The Pennsylvania State University.
- Kelly, R.M. (1977). Community Control of Economic Development. New York, NY: Praeger Special Studies.
- Lane, M. & Henry, K. (2001). Community Development, Crime and Violence. Journal of Community Development, 36, 3, 212-222.
- Laverack, G. (2001). An Identification and Interpretation of the Organizational Aspects of Community Empowerment, 36, 2, 134-145.
- Maclaren, V.W. (1996). Urban Sustainability Reporting. Journal of the American Planning Association, 62, 184-202.
- May, K. (1998). Conversion to Worker-Owned or Cooperative Businesses Through Privatization: International Experience and the Case of Puerto Rico. New Hampshire: New Hampshire College Graduate School of Business.
- Mills, E.S. & McDonald, J.F. (Eds.) (1992). Sources of Metropolitan Growth. New Brunswick, NJ: Rutgers, the State University of New Jersey.
- Nicanor, N. (2001). Practical Strategies for Pro-poor Tourism: NACOBTA the Namibian Case Study. Retrieved February 26, 2002, from the World Wide Web: http://www.propoortourism.org.uk/namibia_cs.pdf.

- Nowak, J. (1997). Neighborhood Initiative and the Regional Economy. Journal of American Economic Revitalization, 11, 3-11.
- Perez, M.G. (1994). Propuesta para la Recopilación de la Historia y Desarrollo de las Barriadas Israel y Bitumul.
- Peterman, W. (2000). Neighborhood Planning and Community-Based Development. Thousand Oaks: Sage Publications.
- Porter, M.E. (1993). The Competitive Advantage of the Inner City. Harvard Business Review, 73, 55-71.
- Prentice, R. (1993). Community-Driven Tourism Planning and Residents Preferences. Tourism Management, 14, 218-27.
- Rivera-Batiz, F. & Santiago, C. (1996). Island Paradox: Puerto Rico in the 1990's. New York, NY: Russel Sage Foundation.
- Sustainable Community Network (2002). Sustainable Community Network Home Page. Retrieved April 20, 2002, from the World Wide Web: www.sustainable.org.
- Sustainable Measures (1999). Sustainable Measures Home Page. Retrieved April 20, 2002, from the World Wide Web: www.sustainablemeasures.com.
- The World Bank Group (1999). Upgrading Urban Communities- A Resource Framework. Retrieved January 17, 2002, from the World Wide Web: <http://web.mit.edu/urbanupgrading/upgrading/whatis/what-is.html> - Anchor-What-41312.
- Trabal, I. (2000). Profile of the Israel and Bitumul Wards Housing Development Corporation History of the Work Conducted and Achievements.
- United States Central Intelligence Agency. (2001). World Factbook. Washington, DC: U.S. Government Printing Office.
- Wagenheim, K. (Ed.) (1973). The Puerto Ricans. Maplewood, NJ: Waterfront Press.
- Wells, H. (1969). The Modernization of Puerto Rico. Cambridge, MA: Harvard University Press.