

# MARKET AND ECONOMIC ANALYSIS OF THE GUÅHAN MUSEUM

Originally Prepared for  
Guam Visitor's Bureau  
May 2006

Updated for  
Guam Economic Development Authority /  
Department of Chamorro Affairs  
September 2013

Prepared by  
Knowledge Based Consulting Group  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

Barry Howard Limited  
Architects Laguaña + Cristobal, LLC

## Section I

# INTRODUCTION

Guam Economic Development Authority/Department of Chamorro Affairs is interested in an environmentally, socially, and financially responsible development program for the Guåhan Museum. The museum project will be an important addition to the overall revitalization program for Guam tourism. The museum is intended to provide a year-round complex, with a wide range of historic and cultural interpretation activities, and a quality of development that would place it as a key Guam attraction.

Bringing together a coalition of leaders from cultural, environmental and education institutions on Guam, the museum will provide a focal point and gateway for residents and tourists to appreciate and experience Guam's history, culture, and environment. It will focus on incorporating the ideals and spirit of Chamorro culture, with a special emphasis on learning, interpretation, public participation and the creative process. Exhibitory will have broad content and emphasize participation and interaction techniques to help visitors discover or enhance their appreciation of Guam and stimulate personal creativity. Events, changing exhibits, and special themes will renew the excitement and freshness of the Guåhan Museum on a regular basis.

Appropriate merchandise will be available and a special events area will provide space for catered midday and evening dining. The use of computers and multimedia technology to allow individual investigation/ expression of particular themes or exhibits will also enhance interpretation. It is intended that the project will provide an opportunity to combine the great stories and history of Guam with advanced capabilities in exhibitry, software and special effects. We believe the project as conceived will find a very responsive market.

Proposed a non-profit organization, the Guåhan Museum will not compete with existing Guam merchants and attractions but rather serve as a catalyst to draw more residents and visitors to the island. The non-profit mechanism is specifically designed to encourage volunteerism, community outreach, and the involvement of local school systems. The museum is designed to be a regional asset that will have a sense of ownership by the Chamorro people and all Guam residents. One only has to look at other successful museums to see that creating such a constituency is beneficial to the project and the surrounding area and is also the most financially sustainable approach.

Following this brief introduction is an Executive Summary. Section II evaluates the concept for the project and site location considerations. Section III presents a review of available markets including resident and tourist markets and an analysis of potential project components. The market and economic potential for the overall project is summarized in Section IV.



KNOWLEDGE BASED CONSULTING GROUP

19 Holly Avenue, Larkspur, CA 94939

(415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

## EXECUTIVE SUMMARY

Bringing together a coalition of leaders from cultural, environmental and education institutions on Guam, the museum will provide a focal point and gateway for residents and tourists to appreciate and experience Guam's history, culture, and environment. It will focus on incorporating the ideals and spirit of Chamorro culture, with a special emphasis on learning, interpretation, public participation and the creative process.

### *Concept and Site Analysis*

The concept for the Guåhan Museum is to create a destination museum, attraction, and education resource offering a variety of activities, exhibits, and retail features that reflect Guam's history, culture, and environment. The museum is designed to appeal to both Guam residents and visitors. The scope of the museum should address the under representation of cultural attractions in the Guam tourism product and establish the museum as an important destination for Guam and the Marianas region.

The Skinner Plaza site is well known to the regional population and is within walking distance of many businesses, and government offices. It is on the existing tour routes of many of the Guam tour operators and there are a number of complementary attractions and historical venues in the area.

### *Available Markets*

Visitation to the Guåhan Museum will be derived from residents of the area and overnight tourists to Guam. The overall market for the Guåhan Museum includes a Guam resident population of about 165,000, an expanding population of an estimated 55,000 military personnel and their families, and a tourist market of over 1.2 million visitors, primarily from Japan

In 2012, tourism growth in Asia and the Pacific averaged 7%. Guam tourism also grew substantially (+ 5.8%) from 2011 to 2012 corresponding with improvement in the economy of its main market, Japan, and increased penetration of growing markets, particularly Korea and greater China. In the longer term, however, tourism to Guam is just returning to visitor levels reached in the 2004/5 period.

It is a general trend within the tourism industry that new tourists want to be involved - to learn new experiences, to interact with the community, and to learn about and appreciate the destination at more than a superficial level. This is the opportunity offered by the Guåhan Museum. Nearly half (41%) of Japanese tourists provided positive responses when asked about potential cultural activities on Guam. Discussions with the principal inbound Japanese tour operator on Guam confirmed that the museum would be a very attractive destination for their customers.



## *Comparable Facilities*

Whereas there are no comparable cultural attractions in Guam and the Northern Marianas, there are some particularly relevant examples in the Asia-Pacific region. These include the Te Papa museum in New Zealand and the Bishop Museum in Honolulu. Te Papa receives over a million visitors a year, and visitation to the Bishop Museum is about 355,000.

The overall penetration rate for cultural activities in Hawaii with Japanese visitors is around 70% up from just under 50% in 2005 and for museums/ art galleries, from 8% to 17%, depending on market segment. The market segments most attracted to cultural activities are the middle age and senior segments, while the lowest penetration is with the youth market. Considering that the Guam market has reportedly lost its appeal to many middle aged and senior travelers (and increased its proportion of younger visitors), the lack of cultural attractions and a quality museum may be a contributing factor to that shift. Based on the Hawaii experience of museum visitation by Japanese visitors, a penetration rate of 9% to 15% could be expected for a quality museum project on Guam. This is consistent with the opinions expressed by Guam's principal inbound tour operator.

## *Visitation*

The Guåhan Museum project combines a superior location with a well thought out portrayal of the history and potential of Guam and its Chamorro heritage. This mix creates a strong destination suited to the market and the role of the Plaza de España area as a gathering place for both residents and tourists. Annual visitation to the Guåhan Museum is forecast at approximately 215,000. This is based on a penetration rate of 15% of the local market and around 9% of the Japanese tourists. While the visitation is primarily (77%) tourists since they make up the greatest share of the underlying market, it is extremely important that the museum is attractive and a source of pride to Guamanians, their visiting friends and relatives, and helps induce visits by other islanders of Chamorro heritage. Approximately 5,000 school children from Guam will visit the museum annually.

## *Revenue*

The recommended admission price to the Guåhan Museum is \$20 for adults and \$15 for seniors and youth. As a practical matter, the published fare is a bit misleading in a tour operator driven destination such as Guam. In such an environment it is very common that attractions and museums offer substantial discounts through promotional partners and/ or tour operators. This is particularly true in Guam where tour operators routinely receive a 30% to 40% rebate on the published fare for attractions as well as for shows and dinner entertainment. Annual memberships will be available for \$30 for an adult membership and \$100 and up for supporting members of the museum.

Estimated annual spending on admissions, museum shop retail, and special exhibitions is just under \$3.2 million. After deducting for costs of goods sold in the retail shop and fees for putting on or renting special exhibitions, the net revenue from museum visitor spending is \$2.8 million



KNOWLEDGE BASED CONSULTING GROUP  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 [clivej@sbcbglobal.net](mailto:clivej@sbcbglobal.net)

Supporting revenues for museum operations can also be generated from the rental of retail, food and beverage, and office space as well as a specialty leasing program (carts and kiosks) in the Skinner Plaza and surrounding areas. Given the popularity of weddings and honeymoon travel to Guam, a wedding venue could also be included. The current program does not include these potential revenue generating elements.

Combining museum admission revenues with other income provides total operating funds of about \$3.9 million. This includes approximately \$300,000 from special events, fundraisers (including two major Guåhan Museum fund raising events), and facility rentals for groups, conventions, and social gatherings. Having a special event venue such as the Guåhan Museum should be particularly attractive to corporate incentive travel groups, and help bring back this lucrative market. Ongoing corporate and public sponsorship, licensing and external/Internet sales are targeted to bring in another \$370,000 in revenue. Nearly all museums also receive and rely on some level of on-going government and industry support and specialized tax revenues and/or appropriations; however, we have not included an allowance from these sources.

### *Operating Costs*

Total operating costs are \$2.66 million, including a staff of 30 museum employees. The operating cost ratios are \$12 per attendee, \$80 per square foot, and \$88,000 per employee, which are consistent with a quality museum experience.

### *Construction Costs*

Estimated construction and site development costs are \$22.4 million. These cost estimates are subject to change based upon final development plans and other project agreements.

Estimates for fit outs of exhibit and interior spaces are an additional \$3.5 million. Soft costs which include architecture and design fees, organizational expenses and permitting/ inspection/ construction management fees are estimated at just over \$7 million. These allowances lead to a total project cost of \$26.6 million. The average improvement cost is \$796 per net square foot, which is again consistent with a quality museum experience.

### *Summary of Financial Analysis*

The model assumes that project planning and permitting will occur in 2012 through 2014, and building construction occurs during 2013 and 2014. The project should open in early 2015.

The project's overall development cost is \$26.6 million, and this capital cost will be funded through a variety of sources.

- HOT Bond proceeds of \$27 million.
- Approximately \$2 million is to be raised over two years in the form of individual contributions, corporate grants and sponsorship offsets.



With these capital sources, there is sufficient operating revenue to support the construction of the project and provide for a reasonable cash surplus.

The sequence of funding shows detailed planning and construction starts in 2013, at which time initial funds from the HOT Bonds were available. After operating expenses, the Guam Museum project has sufficient positive cash flow to provide for a 5% reinvestment allowance plus an ongoing endowment to support the program expansion and outreach services of the museum. In 2025, the target is to have a \$7.7 million endowment that provides for contingencies as well as an ongoing stream of investment income to support operations. Considering the historical volatility of the Guam visitor industry as well as the US military presence, we see this endowment as an integral part of sound financial planning for the Guam Museum.

### Sensitivity

Further financial analysis shows that the Guam Museum could sustain a 20% shortfall in attendance and other revenues and still break even.



## Section II

# CONCEPT AND SITE ANALYSIS

The concept for the Guåhan Museum is to create a destination museum, attraction, and education resource offering a variety of activities, exhibits, and retail features that reflect Guam's history, culture, and environment. The museum is designed to appeal to both Guam residents and visitors. The scope of the museum should address the under representation of cultural attractions in the Guam tourism product and establish the museum as an important destination for Guam and the Marianas region.



### Site Location

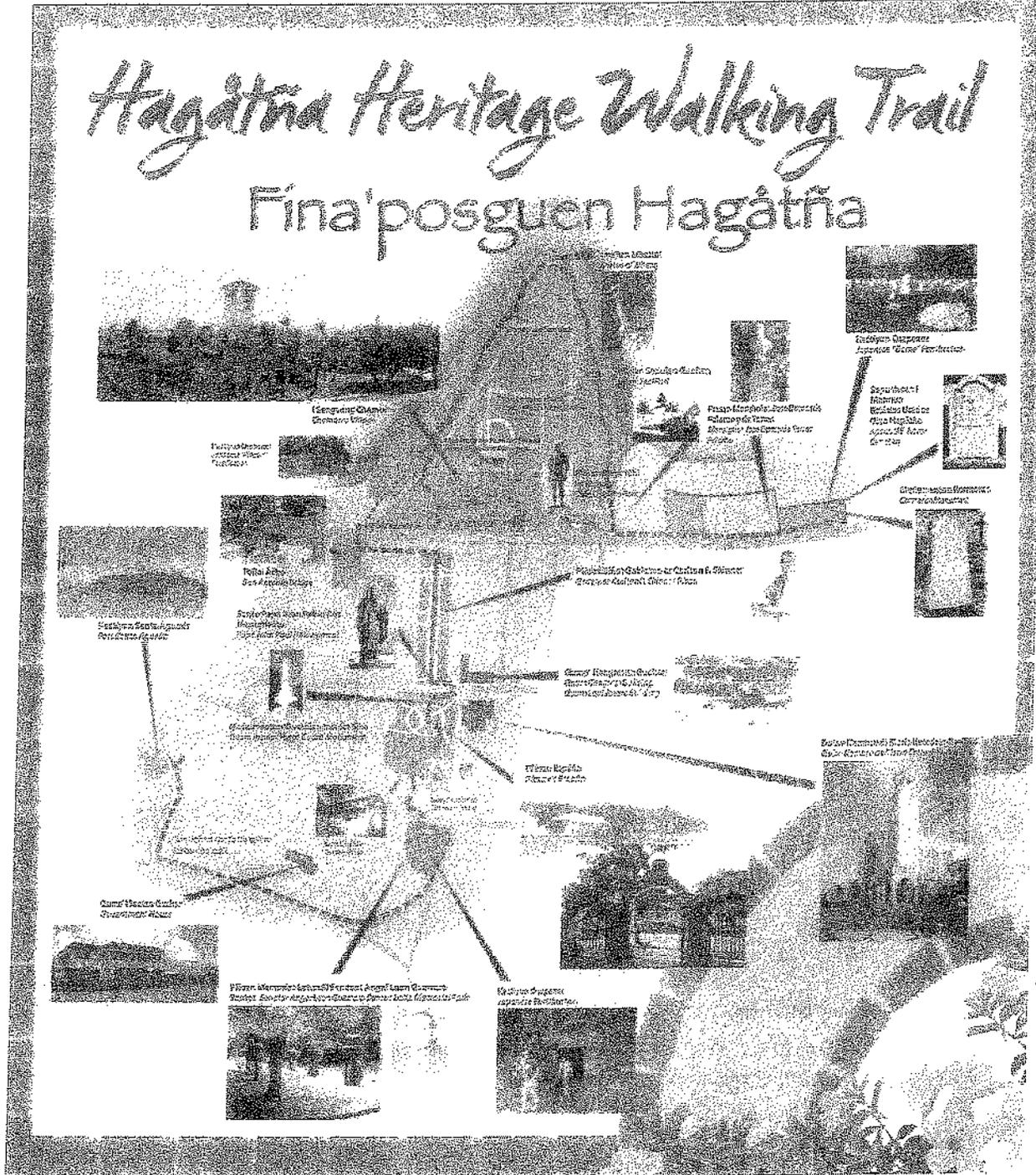
The Guam Museum site is in the capital city of Hagåtña along the main street of Chalan Santo Papa. It is located in Skinner Plaza, adjacent to the Plaza de España, which will be the center of the revitalization of Hagåtña. The Plaza de España is currently undergoing restoration and the museum will be an integral part of this rebirth.



In the immediate area are the Dulce Nombre de Maria Cathedral Basilica, the Chamorro Village, Latte Stone Park and the Guam Legislature Building. These sites are well known to the regional population and all well within walking distance of the Guåhan Museum. The historical district of Hagåtña is on existing tour routes for most if not all tour operators. The Hagåtña Heritage Walking Trail map on the opposite page provides a striking example of the many visitor sites in proximity to the Skinner Plaza/ Plaza de España area.

# Hagåtña Heritage Walking Trail

## Fina'posguen Hagåtña



KNOWLEDGE BASED CONSULTING GROUP  
 19 Holly Avenue, Larkspur, CA 94939  
 (415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

## *Focus on Fundamentals*

---

It is our experience that a successful development program must, in the long run, have a very clear focus in terms of market identity and competitive position. In many development planning exercises, the result is often based on detailed analyses of the existing situation. These plans tend to be strong on analysis and weak on vision. The Guåhan Museum approach is to focus on the appropriate role for a museum in the future of Guam tourism and cultural identity and for that vision to be continually refined throughout the planning and development process.

The development program is being guided by a continuous focus on such fundamental issues as:

- How can the development strategy reinforce/restore the Hagåtña historical district as a center of tourism activity in the region?
- How can the development program create value during weekdays and weekends, day and night, and during periods of bad weather?
- How can the development program improve market awareness of Guam as a preferred tourism destination and gateway to the cultural and environmental resources of the region?
- How can the development program improve market awareness of the Hagåtña historical district as a preferred gathering place for regional residents and school children?
- How can the development program encourage the use of the facility by the manamko' (elders) as a gathering place to record and document their recollection of history.
- How can the development program encourage and increase opportunities for locally owned and operated small businesses?
- How can the development program of the Guåhan Museum improve the value of the overall area for other businesses and local employees?
- How can the development program bring in high value tourists that travel to experience cultural facilities and attend events?
- What kind of development program is financially responsible and still meets the above objectives?

## *Vision*

---

We suggest that the Guåhan Museum's competitive position is to be the voice of Guam history, culture preservation, and sustainable development. It will be a gathering place for visitors to Guam and residents of the region to learn about, appreciate, and be entertained by what should be a magnificent resource.



KNOWLEDGE BASED CONSULTING GROUP  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

## Components

### *Guåhan Museum Exhibitory and Attractions*

- Focal Point Attraction
- Interactive exhibits

### *Special Events*

- Special events, performances, seasonal celebrations, and demonstrations make the Guåhan Museum a community asset that encourages repeat visitation.

### *Outreach and Education*

- Incorporating technology and communications infrastructure support from software and hardware suppliers, the Guåhan Museum facilitates Internet and video-based outreach to schools and residences as well as on line retail and educational material sales.

### *Retail*

The retail component of the Guåhan Museum program will include:

- Responsible retail goods that focus on culture and environmental issues and education
- Selected craft and specialty goods.
- Gallery of local art
- Takeaway snacks and organic foods
- Handicrafts and custom designed goods respectful of the culture and environment
- An events area that allows for catered food service for tour groups and social/business group meetings.

The retail component provide will include a traditional "museum shop" along with freestanding kiosks and recreation opportunities in the Skinner Plaza and Plaza de España. The grounds should be an attractively landscaped, clean, garden environment with a variety of activity areas that will appeal to both adults and children. In addition to the opportunities to rest and relax in a vibrant and clean environment, the area can host special events and a variety of community activities.

### *Site Climate*

The climate of Guam is agreeable in all seasons, which will allow all year operation with a minimum of disruption due to normal weather conditions. The museum design and entrance sequence should offer protection from the relatively frequent rain showers and shaded areas should provide sun protection for walkways and patio areas. The museum should also expect that operations could be disrupted on occasion by tropical typhoons. Building design and cost estimates need to incorporate protection from typhoon winds as well as earthquakes.



### Section III

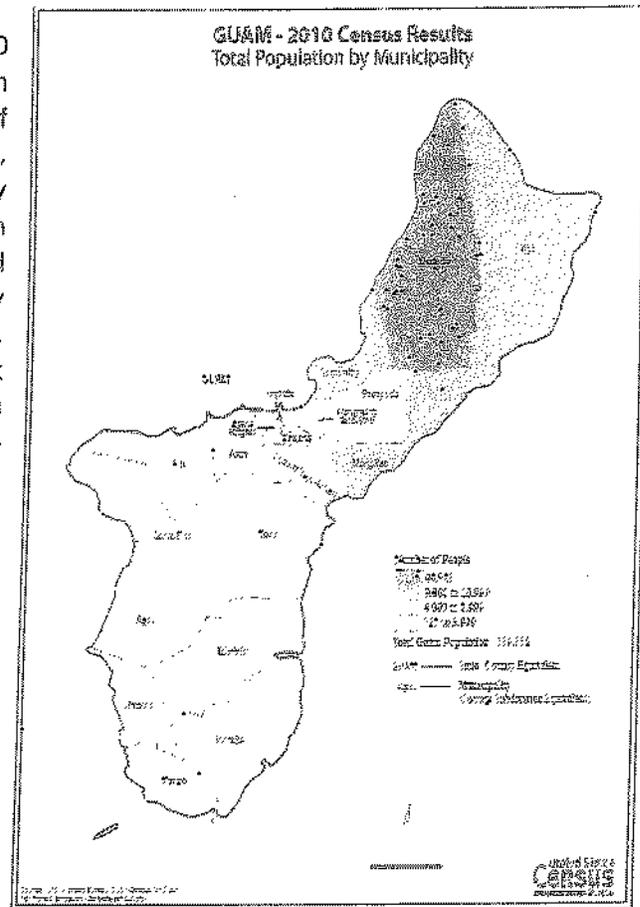
## AVAILABLE MARKETS

Visitation to the Guåhan Museum will be derived from residents of the area and overnight tourists to Guam. The overall market for the Guåhan Museum includes a Guam resident population of about 170,000, an expanding population of an estimated 30,000 military personnel and their families, and a tourist market of over 1.2 million visitors, primarily from Japan.

### Resident Market

In 2013, there are an estimated 160,400 residents of Guam and the annual growth rate has been 0.24% per year. By the time of the opening of the Guåhan Museum in 2015, the resident market will be approximately 165,000 residents both due to natural growth and the anticipated jobs that will be created due to the current and forecast US military buildup. In terms of relationship to the site, about 75,000 persons currently reside or work within 5 miles of the site (areas of Agaña Heights, Hagåtña, Sinajaña, Mongmong-Toto-Maite, Tamuning, Barrigada, Chalan Pago, Piti, Mañilao, and Asan) and another 84,000 residents elsewhere on Guam.

In addition to Guam residents, there is a substantial military presence on Guam that includes the soldiers and sailors themselves, their dependents and private personnel under contract. While the actual size of the Guam military presence is not disclosed, estimates put their population at around 30,000. This is expected to increase substantially in the near future as the military redeploys troops from other Pacific Asia bases to Guam.



In an April 13, 2013 report to Congress, analyst Shirley Kan reported "that in July 2010, the U.S. Navy's Joint Guam Program Office issued the Final Environmental Impact Statement (EIS) on implications of the buildup on Guam. The detailed study estimated ... that a total of 8,552 marines plus 630 Army soldiers would form the 9,182 permanent military personnel to relocate to Guam. The total military population on Guam would increase by 30,190 (including 9,182 permanent military personnel, 9,950 dependents, 9,222 transient military personnel, and 1,836 civilian workers). In addition, construction workers and others could mean a total increase in



population of about 79,000 at the peak in 2014, in this initial assumption." After changes in the Realignment Roadmap Agreement roadmap announced in April 2012, the Joint Guam Program Office announced in October 2012 that it will prepare a Supplemental Environmental Impact Statement.) This supplemental Impact Report is expected to be completed in 2014. The roadmap adjustments included reducing the originally planned relocation of approximately 8,000 Marines (and 9,000 dependents) to a force of approximately 5,000 Marines (and 1,300 dependents) on Guam and will therefore require an assessment of potential environmental impacts related to the force reduction, base and family housing, and training requirements. With these considerations KBCG estimates that the military plus dependent population will increase by approximately 25,000 to a total of 55,000 in 2015. Construction workers would add to that amount.

### Resident Market Demographics

The demographics of the resident market, in addition to the magnitude of the population, also play an important role in determining potential museum patronage and admission pricing policies.

The median family income in Guam is approximately \$49,263 in 2010, up 7.1% from 2008. Although the economic wellbeing of the Guam resident market is improving and most can afford a reasonable museum admission price, we suggest that there should be a special price structure for Guam residents (at 50% of tourist prices) to encourage the broadest possible participation in the museum by the Chamorro community and other locals.

The median age on Guam is a young 29.6 years, with 26.8 % of the population under 15. There has, however, been a slight shift towards an older population since 2005.

Shown at right, there is a reasonably balanced distribution of the population. These age demographics suggest that the resident market is well suited to support a museum with educational and attraction appeal, with particular value to school groups, seniors, and parents with children.

**Age Distribution of Guam Residents**

Age Group	% of Total	
	2005	2012
0 to 14	30.8%	26.8%
15 - 24	15.7%	18.9%
25 - 54	42.3%	38.8%
55 to 64	6.2%	8.9%
65 and over	5.3%	7.6%

### The Visitor/Tourist Market

The potential visitor market that is available for the Guahan Museum totals approximately 1.2 million people, and includes the following:

- Tourists staying in hotels and motels
- Visitors staying at their own or rental condominiums and timeshares
- Visitors staying with friends and relatives within the resident market area.



- Military visitors staying on base at military housing

### Regional Tourism Context

Despite occasional shocks, the United Nations specialized agency, the World Tourism Organization (UNWTO) reports that international tourist arrivals have shown virtually uninterrupted growth – from 25 million in 1950, to 278 million in 1980, 528 million in 1995, and 1,035 million in 2012. Looking forward, international tourist arrivals worldwide will increase by 3.3% a year from 2010 to 2030 to reach 1.8 billion by 2030 according to the UNWTO long term forecast *Tourism Towards 2030*. The number of international tourist arrivals recorded worldwide grew by 4% in 2012 and exceeded 1 billion for the first time ever. Growth in Asia and the Pacific averaged a 7% increase and is recognized as the most dynamic region, with China becoming the number one source market in the world.

### Guam Tourism

Guam tourism also grew substantially (+10.1%) from 2011 to 2012 corresponding with improvement in the economy of its main market, Japan, and increased penetration of growing markets, particularly Korea and greater China (including Hong Kong and Taiwan). In the longer term, however, tourism to Guam is just returning to visitor levels reached at the turn of the millennium and in 2005.

Year:	<u>2005</u>	<u>2011</u>	<u>2012</u>
Number of Visitors:	1,227,587	1,130,858	1,244,867

In 2013 and looking forward, the industry is responding with substantial reinvestment in a number of hotels. Additionally, the economies have strengthened in major source markets and the outlook for the future is substantially improved.

### Guam Visitor Characteristics

The table below presents the market share distribution and growth rates for Guam tourism. As shown, nearly 3/4 of the Guam visitors are from Japan. Visitation from Korea is growing rapidly (at a 13% rate) and now represents 13% of overall visitors. The next most important sources of visitors are Taiwan, the US mainland, and the Marianas. We have separately identified the greater China region because of its rapid growth rate (21.2% overall and a remarkable 44.4% from the PRC). Overall, Guam is fortunate to have such large markets that can provide support to a wide variety of visitor attractions.



**Table 1**  
**Guam Visitor Arrivals**

	Number of Visitors					Market Share			
	2005	2011	2012	Growth Rate		2005	2011	2012	Net Change 2005 to 2012
				2011 to 2012	2005 to 2012				
Civilian Air Arrivals	1,184,928	1,122,921	1,240,020	10.4%	0.6%	98.5%	99.3%	99.6%	3.1%
Civilian Sea Arrivals	42,659	7,937	4,847	-38.9%	-11.1%	3.6%	0.7%	0.4%	-3.1%
Armed Forces Air Arrivals						0.0%	0.0%	0.0%	0.0%
Armed Forces Sea Arrivals						0.0%	0.0%	0.0%	0.0%
ALL ARRIVALS	1,227,587	1,130,858	1,244,867	10.1%	0.2%	100.0%	100.0%	100.0%	0.0%
ORIGIN OF AIR ARRIVALS (Civilian & Armed Forces)									
JAPAN	956,245	821,383	902,690	9.9%	-0.7%	77.8%	72.6%	72.6%	-5.3%
KOREA	109,335	144,852	164,821	13.8%	6.3%	8.9%	12.8%	13.2%	4.3%
TAIWAN	23,386	40,710	49,853	22.5%	14.1%	1.9%	3.6%	4.0%	2.1%
U.S. MAINLAND	36,839	40,653	41,778	3.0%	1.7%	3.0%	3.6%	3.4%	0.4%
CNMI	18,042	18,094	17,442	-3.6%	-0.4%	1.5%	1.6%	1.4%	-0.1%
HAWAII	9,029	9,515	9,794	2.9%	1.1%	0.7%	0.8%	0.8%	0.1%
FSM	8,394	10,168	10,142	-0.3%	2.8%	0.7%	0.9%	0.8%	0.1%
PHILIPPINES	7,051	11,398	10,455	-8.2%	6.1%	0.6%	1.0%	0.8%	0.3%
HONG KONG	4,518	8,519	8,388	-1.4%	10.7%	0.4%	0.8%	0.7%	0.3%
PALAU	3,298	3,518	3,667	4.2%	1.4%	0.3%	0.3%	0.3%	0.0%
AUSTRALIA	2,546	6,702	5,197	-23.5%	13.0%	0.2%	0.6%	0.4%	0.2%
EUROPE	1,750	2,074	1,869	-9.9%	0.9%	0.1%	0.2%	0.2%	0.0%
RMI	958	1,250	1,081	-13.5%	1.8%	0.1%	0.1%	0.1%	0.0%
CHINA, P.R.C.	840	6,236	9,002	44.4%	121.5%	0.1%	0.6%	0.7%	0.7%
CANADA	503	798	938	17.3%	10.8%	0.0%	0.1%	0.1%	0.0%
THAILAND	170	389	322	-17.2%	11.2%	0.0%	0.0%	0.0%	0.0%
OTHER/UNKNOWN	3,035	4,060	4,368	7.5%	5.5%	0.2%	0.4%	0.4%	0.1%
Greater China	28,744	55,455	67,261	21.2%	16.7%	2.3%	4.9%	5.4%	3.1%

Since the Japanese market is predominant, it is useful to examine their visitor characteristics and their propensity to visit a cultural and educational attraction such as the Guahan Museum. As shown in Table III - 2, the average Japanese visitor is quite young (less than 30) and they are generally on a packaged tour traveling with friends or family (only 1% traveling alone). They are of moderate income, but good spenders. Their overall trip expenses are about \$1,280 of which about half is prepaid and half is spent on island. They currently come to Guam primarily for the climate and beach/ watersports activities, with important submarkets targeted to weddings and honeymoon couples.



**Table 2**  
**Relevant Characteristics of Japanese Visitors to Guam**

	Demographics and Travel Patterns		Economics		Attitudes and Motivation				
	2005	2012		2005	2012	2005	2012		
<b>Marital Status</b>			<b>Annual Personal Income</b>			<b>Most Important Motivation to visit Guam</b>			
Married	66%	39%	Less than	¥2,999,999	34%	19%	Pleasure	14%	19%
Single	34%	61%	¥3,000,000	¥3,999,999	19%	13%	Beaches, climate	14%	17%
<b>Age</b>	29.3	31.6	¥4,000,000	¥4,999,999	12%	14%	Short Travel time	11%	6%
<b>Frequency of Visit</b>			¥5,000,000	¥5,999,999	10%	20%	Price of Package	9%	10%
First Time	71%	62%	¥6,000,000	¥6,999,999	5%	15%	Company trip	8%	8%
Repeat	29%	38%	¥7,000,000	¥9,999,999	4%	16%	Relax	8%	8%
<b>Length of Stay</b>	3.4	3.0	¥10,000,000 and above	No income	18%	2%	Shopping	8%	6%
<b>Traveling Companions</b>			Average Yen	¥4,132,530			Recommendation	4%	7%
Friends	57%	63%	Average \$	\$ 35,835			Attend Wedding	4%	6%
Spouse	16%	16%	<b>Expenditures</b>				Honeymoon	4%	3%
Office Colleagues	13%	9%	Prepaid	\$ 600	\$ 800		SCUBA diving	3%	2%
Family	12%	23%	On Island	\$ 677	\$ 596		Water Sports	3%	4%
Children Under 16	6%	13%	Total	\$ 1,276	\$ 1,496		Golf	2%	
Alone	1%	2%	<b>Breakdown of On Island Expenditures</b>				<b>Activity Participation in Guam if Available</b>		
<b>Travel Arrangements</b>			Expenditure per Day	\$ 374	\$ 489		Sports Competition	36%	36%
Free-time Packages Tour	74%	69%	Gifts for Self	41%	\$ 256.00		Theme Park	28%	27%
Full Package tour	14%	22%	Gifts for Friends and Family	21%	\$ 135.60		Casinos	29%	21%
Group Tour	7%	3%	Optional tours and activities	19%	\$ 87.70		Beach Boardwalk	26%	26%
Individually Arranged	5%	5%	Food/ beverage outside Hotel	16%	\$ 80.70		Chamorro Food Festival	22%	21%
<b>Attractions Visited</b>			Other expenses	8%	\$ 247.70		Guam Culture Festival	16%	16%
Alupang Beach Club	11%	10%	Fast food restaurant/ store	4%	\$ 34.00		Music/Film Festival	12%	12%
Cocos Isle	7%	7%	Food and beverage in a hotel	3%	\$ 33.10		Micronesian Cultural Center	8%	8%
Chamorro NM			Local transportation	1%	\$ 16.50		<b>Not Positive Responses to</b>		
Fish Eye			<b>Optional Tour Participation</b>				Cultural Attractions	41%	
Atlantis Submarine	4%	4%	One or More	71%			<b>% Agreeing to surcharge of</b>		
Underwater World	5%	3%	Average Number	1.4			\$3/Day/Room to Help		
Mandara Spa	5%	3%					Build Guam Museum	11%	
Sand Castles	5%	3%							

It is also a general trend within the tourism industry that new tourists want to be involved - to learn new experiences, to interact with the community, and to learn about and appreciate the destination at more than a superficial level. This is the opportunity offered by the Guåhan Museum and the tourists provided positive responses when asked about potential other activities on Guam that would interest them. Whereas the idea of the Guåhan Museum itself was not tested, 41% of the tourists in 2005 responded positively to one or more of the cultural attraction suggestions and these response rates are similar in 2012. In addition, included in the 2012 survey was a question that asked if visitors were willing to pay a hotel surcharge of \$3 per day per room to help build a Guam museum. The rating range was 1 to 7, where 7 meant Strongly Agree. The mean rating was 3.3 (essentially neutral). However, 11% gave the idea a 6 or 7 rating, which could be considered a reasonable proxy for the percentage of Japanese visitors who are likely to visit such a facility.

As the Guåhan Museum moves forward, it will be important to do further market research with the Japanese and other tourists to see which elements of the story line and potential attractions at the Guåhan Museum will have the most appeal.



Discussions during 2005 with the principal inbound Japanese tour operator on Guam confirmed that the museum would be a very attractive destination for their customers. They volunteered that a number of their customers have asked if there is a museum on Guam and that tour operators have been waiting for such a product. They offered that the museum would be attractive to 20% to 25% of their middle age and senior visitors and about 10% of younger travelers. They also volunteered that there are a number of special markets such as student tours that would nearly all visit the museum. They confirmed that a \$20 walk in price would be appropriate with a discount for the tour operator. A particularly attractive package for them would be a dinner in the museum program. Priced at \$60 to \$75, this would be strongly received and could achieve 150 to 200 covers per night (This program, if implemented per these parameters, would generate about 45,000 annual visitors to the museum and \$2.5 to \$3.5 million in gross revenue for the tour operator. Whereas we allow for this visitation in the attendance estimate, any additional revenues to the museum from the food and beverage component are not included). In preparing for the launch of the museum, the tour operators recommend that appropriate marketing materials be available at least a year in advance. This will allow the tour operators to deliver the message that there is a new and exciting product in Guam that their clients should visit.

#### *Overnight Visitors from Out of Town*

According to surveys done in other markets, on average, 50% to 60% of local area households can be expected to have overnight guests from out of town. These visitors staying with friends and relatives tend to stay for longer periods of time and have a larger party size.

Based upon this information, KBCG estimates that by the year 2015, there will be about 100,000 visitors staying with friends and relatives on Guam. This market of visitors staying with friends and relatives is important for two reasons, its size and its tendency to trigger accompanying resident visits and increase the penetration of resident markets. For example, experience in other markets indicates that 50% to 70% of this market segment will be accompanied by one or more members of their host household when they visit an attraction.

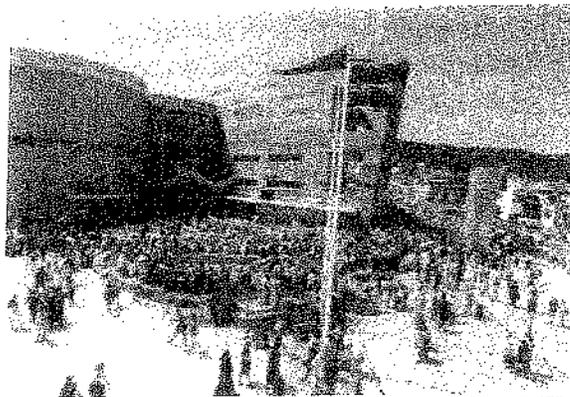
#### *Comparable Facilities*

Whereas there are no comparable cultural attractions in Guam and the Northern Marianas, there are some particularly relevant examples in the Asia-Pacific region. These include the Te Papa museum in New Zealand and the Bishop Museum in Honolulu. Several of the other Pacific islands also have museums, including a small museum in Suva, Fiji and the New Caledonia museum.

##### **Te Papa**

Te Papa, New Zealand's new and massive national museum, opened on 14 February 1998.

Ten years in the planning, the finished building represented on opening day a NZ\$317 million



**KNOWLEDGE BASED CONSULTING GROUP**  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

government investment in culture (US\$177 million). Te Papa is a bicultural museum in a country of many cultures. This is because, regardless of the number of cultures represented, there are truly only two "partners" in the country known as New Zealand: Maori, or those there by right of first discovery (tangata whenua); and those there by right of a treaty signed with the Crown in 1840, the Treaty of Waitangi. In addition to being bicultural, the museum is a "forum for the nation" for the discussion of matters pertaining to national identity. In addition, Te Papa is charged with "changing peoples' perceptions of museums", and it is doing that through the introduction of techniques and programs that are new to the museum setting: "Dark rides"; virtual reality entertainments; an outdoor park complete with caving adventures; a living "marae" or meeting place for all cultures that make up New Zealand.

Te Papa has developed its exhibits and programs with issues of identity in mind. Consequently, its collections policies and scholarship strategies focus on such matters, as well. Most of the world identifies New Zealand as a country blessed with a spectacular natural beauty; and many recognize the rich heritage of the Maori culture, as well. Indeed, these are the two key attractors for those international guests who visit New Zealand. Kiwis value these attributes, as well, and this is why they form two of the major portions of Te Papa's exhibit programs. The museum also has extensive galleries devoted to history, art and the rich diversity of Pacific cultures which have contributed to the national identity of New Zealand.

Planning for Te Papa incorporated extensive visits to benchmark museums of the world and a picking and choosing of the best qualities of the best. These tours took place in the Eighties. Following this the planning involved a comprehensive program of evaluation, visitor and market research to contribute to the development of a museum and exhibits, events and programs that would create an experience that was appealing to the broadest possible audience. Research was also conducted to project total visitation to Te Papa. Attendance projections were, by most peoples' standards, quite optimistic; Te Papa estimated that 723,000 people would visit in the first year of opening. Wellington, Te Papa's home, and the capital of the country, claims 350,000 residents, so this was quite an adventurous call in the eyes of many.

Based in Wellington, Te Papa reportedly received 700,000 visitors in the first 90 days of opening and continues to receive over 1 million visitors per year – but it has no admission fee.

#### Visitor milestones

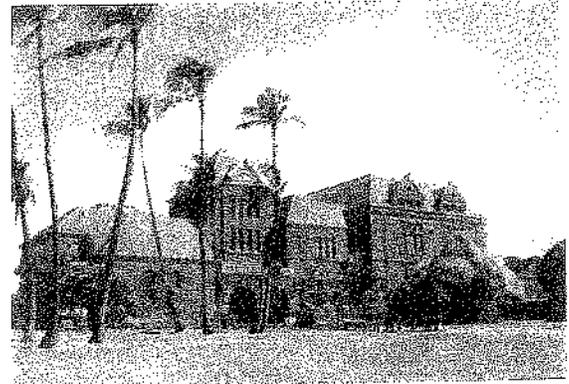
- 2001 5 million
- 2004 10 million
- 2008 15 million
- 2012 20 million

The general experience in the museum world (a principal of KBCG prepared the Handbook on Museum Fees and Charges for the National Science Foundation) is that instituting admission fees reduces reported attendance by 30% to 60%. This type of reduction was observed at the Auckland Museum. When they introduced a \$5 admission charge, reported attendance dropped from over 1 million visitors to 440,000. Thus, with admission fees, we expect that Te Papa would also receive around 450,000 visitors.



## Background Information

The Bishop museum is a major cultural institution in the Pacific region. It has a broad program of research and exhibitions covering nearly all aspects of Pacific Island culture, history, and natural sciences. Founded in 1889, it is the largest museum in Hawai'i and is home to the world's largest collection of Polynesian cultural and scientific artifacts. It also features a planetarium and up until 2009 administered the Hawaii Maritime Center.



Visitation to cultural attractions is an important part of the Hawaii visitor experience. As shown below, a large majority of westerners participate in cultural experiences while about half of the Japanese visitors are so inclined

	<u>US West</u>	<u>US East</u>	<u>Japan</u>
Culture	76%	83%	46%
Entertainment	52%	57%	53%
Shopping	93%	90%	99%

The Bishop Museum is the principal museum on Oahu and receives 355,000 visitors per year including 25,000 students. It is, however, not well located re the main tourist areas of Waikiki and probably does not get the tourist visitation that would be possible at a more visible and convenient location. On the other hand, the Guam Museum site is conveniently located with respect to tourist markets and established tour routes.

Considering that visitation to Guam is principally from Japan, it is useful to look more closely at the cultural activity participation in Hawaii by Japanese travelers. The overall penetration rate for cultural activities in Hawaii with Japanese visitors was about 70% in 2011, up from just under 50% in 2005 and for museums/ art galleries, from 8% to 17%, depending on market segment. The market segments most attracted to cultural activities are the repeat visitors and senior segments, while the lowest penetration is with the youth market. Considering that the Guam market has reportedly lost its appeal to many middle aged and senior travelers (and increased its proportion of younger visitors), the lack of cultural attractions and a quality museum may be a contributing factor to that shift. It is also worthy of note that the most popular cultural activity of Japanese visitors to Hawaii is a Polynesian cultural show/luau/hula (at around 35% participation) and including programmed performances in Skinner Plaza and possibly the museum itself would probably be complementary for attracting these visitors.

Based on the positive response in the GVB Visitor Survey toward suggested cultural attractions in Guam and the Hawaii experience of museum visitation by Japanese visitors, a penetration rate of 9% to 15% could be expected for a quality museum project on Guam. This is consistent with the opinions expressed by Guam's inbound tour operators. It should also be noted that while

most major tourist destinations have several museums that compete for visitor attention, the Guåhan Museum would have relatively little competition within Guam.



---

**KNOWLEDGE BASED CONSULTING GROUP**  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

Section IV

**ECONOMIC ANALYSIS OF THE GUAHAN MUSEUM**

The development program for the original Guahan Museum was based upon the concept and vision of the Guam Museum Task Force, the Guam Visitors Bureau, and the Department of Chamorro affairs.

The museum will occupy some 33,400 square feet. In addition to exhibit and displays, the museum will include a high quality museum shop and event spaces suitable for group activities and receptions. The recommended space program for the Guahan Museum is shown below.

Development Program for Guahan Museum

Net Square Footage

Tenant	Galleries or Public Space	Food and Beverage	Retail Shop	Office	Back of House/ Administration	Total Net Sq. Ft.
Guahan Museum	21,553		2,256	2,788	6,791	33,388

Square Footage and Use Breakdown By Floor

	First Floor	Second Floor	Third Floor	Total Net Sq. Ft.	Recap
<b>Museum Spaces</b>					
Exhibit galleries	1,922	5,768		7,690	
Lobby/Vestibule	680			680	
Lobby/Reception/restaurant	3,175			3,175	
Museum Foundation	488			488	
Thinker Building	3,684			3,684	
Temporary exhibit/Event space	3,088	3,026		6,114	22,051
<b>Support Services</b>					
Retail		2,256		2,256	2,256
<b>Back of House</b>					
Collection storage		798	4,624	5,422	
Curatorial Research		1,371		1,371	
Administration/offices		2,292		2,292	8,083
<b>Interior Space</b>	15,513	13,253	4,624	33,390	33,390
<b>Other Compatible Uses (Future Considerations)</b>					
Guam Visitors Bureau				0	
Chamorro Affairs Office				0	
Specialty Leasing (rental) Trucks on Pier 3				0	
Specialty Leasing (rental) Trucks on Pier 3				0	
<b>Net Square Foot Totals</b>	15,513	13,253	4,624	33,390	33,390

The project site is well located with respect to the Skinner Plaza/Plaza de España activity centers, has large amounts of nearby parking, and is on the existing travel routes of many of the Guam tour operators. It will also require significant investment to reach the scale necessary for success. An analysis of the project economics is provided below



KNOWLEDGE BASED CONSULTING GROUP  
 19 Holly Avenue, Larkspur, CA 94939  
 (415) 924-6577 clivej@sbcglobal.net

## Projected Revenue

Figure 14

The Guåhan Museum project combines a superior location with a well thought out portrayal of the history and potential of Guam and its Chamorro heritage. This mix creates a strong destination suited to the market and the role of the Plaza de España nearby as a gathering place for both residents and tourists. In addition to general market support, attendance at the museum will benefit specifically by being located in an established destination (which is already a popular stopping point for Guam visitors and tour operators) that has other interesting attractions including the Azotea, Garden House and Chocolate house. Renovations to these facilities as well as the fountain, bandstand, and Almacen Gates are included as part of the \$1.4 million Plaza de España renovation project that should be completed in early 2014. Nearby points of interest and attractions include the Cathedral, and Chamorro Village. This location and visitor exposure should account for at least 50,000 more visitors than would otherwise attend the Guåhan Museum.

The overall market for the Guåhan Museum includes a Guam resident population of about 165,000 a potential expanding population of military personnel and their families, and a tourist market of over 1.2 million visitors, primarily from Japan.

As shown below, annual visitation to the Guåhan Museum is forecast at approximately 215,000.

ATTENDANCE AND SPENDING ESTIMATES							
Market Source	2013 to 2015 growth rate	Market Size (2015)	Market Penetration Rate	Number of Visits	Net Penetration Rate	Attendance	% of Attendance
<b>Residents</b>							
Guam Residents		165,000	15.0%	1.5	22.5%	37,125	17%
Military and Dependents		55,000	12.0%	1.2	14.4%	7,920	4%
<b>Subtotal</b>		<b>220,000</b>				<b>45,045</b>	<b>21%</b>
<b>Tourists</b>							
From Japan	7%	1,013,490	9.0%	1.0	11.0%	113,684	53%
Korea	10%	199,433	11.0%	1.0	11.0%	21,938	10%
China (incl. Chinese Taipei and HK)	18%	93,640	11.0%	1.0	11.0%	10,300	5%
Other Visitors	4%	119,090	11.0%	1.0	11.0%	13,100	6%
<b>Subtotal</b>		<b>1,445,653</b>				<b>159,022</b>	<b>74%</b>
Induced Tourists @:	4%	6,361	100.0%	1.0	100.0%	6,361	3%
<b>Subtotal</b>		<b>1,452,014</b>				<b>165,383</b>	<b>77%</b>
<b>School Market</b>		<b>32,000</b>	<b>16.0%</b>	<b>1.0</b>	<b>16.0%</b>	<b>5,120</b>	<b>2%</b>
<b>Total Paid Attendance</b>						<b>215,348</b>	<b>100%</b>
<b>Per Capita Spending</b>						\$ 14.84	
<b>On-Site Expenditures</b>						\$ 3,197,899	
<b>Economic Impact</b>							
		Visitors	Added Length of Stay (in days)		Added Visitor Days	Expenditure per Capita per Day	Added Expenditures
Existing Tourists		159,022	0.2		31,804	\$199	\$6,318,468
Induced Tourists		6,361	3.0		19,083	\$199	\$3,791,081
<b>Total</b>					<b>50,887</b>		<b>\$10,109,549</b>

Source: KBCG

This is based on a penetration rate of 15% of the local market and around 9% of the Japanese tourists. While the visitation is primarily (77%) tourists since they make up the greatest share of the



**KNOWLEDGE BASED CONSULTING GROUP**  
 19 Holly Avenue, Larkspur, CA 94939  
 (415) 924-6577 clivej@sbcglobal.net

underlying market, it is extremely important that the museum is attractive and a source of pride to Guamanians, their visiting friends and relatives, and helps induce visits by other islanders of Chamorro heritage. Approximately 5,000 school children from Guam will visit the museum annually. The economic impact from additional tourism generated by a small increase in length of stay and new visitors is estimated at \$10.1 million annually in new expenditures on Guam.

Attendance at selected comparable history and culture museums varies from around 218,000 visitors (Atlanta) to 260,000 (Chicago) to 335,000 (St. Louis) to 355,000 at the Bishop Museum in Honolulu and over 1 million visitors at the Te Papa museum in Wellington, New Zealand. Each year, 25,000 school children visit the Bishop Museum.

#### Planning Parameters

Reviewing the seasonality of visitation, there is a relatively even flow of visitors into Guam throughout the year - although the composition of the market changes to reflect Japanese customs of school holidays, graduations, and weddings.

This even flow of visitors is advantageous in that the museum design does not have to accommodate large peaks of visitor activity and can therefore be more efficient in its space utilization. Taking these visitation patterns into account and adjusting for local school holidays and vacation periods, the planning parameters for the Guahan Museum are shown below:

**Seasonality of Visitation, FY2012**

Month	Total Visitors	Seasonality
October	90,376	7.1%
November	99,345	7.8%
December	103,606	8.3%
January	116,580	9.2%
February	112,129	8.8%
March	126,376	9.9%
April	87,806	6.9%
May	82,697	6.5%
June	94,948	7.5%
July	111,970	8.8%
August	131,983	10.4%
September	112,742	8.8%
<b>2012</b>	<b>1,270,161</b>	<b>100.0%</b>



## Guahan Museum Planning Criteria

Design Day Planning Criteria			Parking and Area Requirements		
Peak in Grounds Analysis			2015		
Estimated Attendance		215,548	Parking		
Peak Month Attendance @	11%	23,710	Peak-Day Capacity at One Time (Peak-in Grounds plus 10 percent)	110%	250
Peak Weekly Attendance	23%	5,354	Arrivals by Auto (percent)	35%	90
Peak Day Attendance	16%	857	Parties arriving by Auto (Persons per Car)	3.5	30
Design-Day Attendance	90%	771	Employee Spaces	15%	5
Peak In-Museum Attendance	30%	231	Total Parking Spaces		35
Food and Beverage and Merchandise Facilities			Museum Area Requirements (sq. ft.)		
2015			2015		
Food and Beverage			Peak In-Museum Attendance		
Peak In-Museum Attendance		231	Museum Space per person during peak		100
Maximum Hourly F & B Demand	45%	104	Area Requirements		
Number of Seats Required			Exhibits, Museum Store, and Theater		23,809
Restaurant/Cafe (1.25 turns per hr)	100%	80	Non-Visitor / Support Areas		9,581
Space per seat	25	2,000	Total Area		33,390
Lounge and Private Dining	40%	800			
Square feet of Food and Beverage		2,800			
Merchandise			2015		
Projected Total Attendance		215,548			
Per Capita Merchandise Expenditures		\$5.00			
Estimated Sales (\$/sq)	\$ 500	\$1,078,000			
Square Feet of Retail Space		2,200			

Peak day attendance at the Guahan Museum is expected to be about 850, with a maximum number of people in the museum at any one time of around 230 persons. This visitation will support about 90 restaurant seats (not included in the museum program, but will support nearby dining venues) and a museum store of approximately 2,200 square feet. Estimated museum parking requirements are 35 spaces that can be adequately served nearby. The museum space requirements are 33,400 square feet which is consistent with the proposed program and adequate to meet expected visitation. This allows for approximately 100 square feet per person during peak times which is quite comfortable and allows for a good experience.

### Guahan Museum Admission

The recommended general admission price to the Guahan Museum is \$20 for adults and \$15 for seniors and youth.

Adult admission prices at other history museums range from \$14 (Chicago) to \$18 (New York) to \$16 (Atlanta) and \$20 at the Bishop Museum in Honolulu. Local attraction prices on Guam include Underwater World at \$23, Yokoi's Cave/Talofofa Falls at \$20, and Fish Eye Observatory at



KNOWLEDGE BASED CONSULTING GROUP  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 clivej@sbcglobal.net

\$37 (including transportation and buffet lunch). As a practical matter, the published general admission fare is a bit misleading in a tour operator driven destination such as Guam. In such an environment it is very common that attractions and museums offer substantial discounts through promotional partners and/ or tour operators. This is particularly true in Guam where tour operators routinely receive a 30% to 40% rebate on the published fare for attractions such as Underwater World and Fish Eye Observatory as well as for shows and dinner entertainment. Accordingly, we have applied a substantial discount factor of 35% against adult admissions (This includes some walk in visitors (20%) paying full price while the rest receive admission as part of the tour package (and the 30% to 50% discount goes to the tour operator). It is also common for attraction operators in Guam (and Hawaii) to offer substantially reduced prices to local residents and military. For example, the Bishop Museum has the following somewhat complicated admission fee schedule.

In the Bishop Museum case, the local (Kama'aina) rate is 65% of the general admission ticket, while for military or "friend of Kama'aina" it is at 85%. In Guam, the practice seems to be a 50% discount for locals and military and KBCG has stayed within this general guideline. Within this structure, annual admissions revenue at the Guåhan Museum is about \$2.2 million. Annual memberships will be available for \$30 for an adult and \$15 for youth and seniors. These relatively low membership options are intended to encourage local support and involvement with the museum. School groups will be charged \$2 per student (most history museums charge \$1 to \$5 per student). In addition, the Guåhan Museum will host a series of special exhibitions to encourage repeat visitation. Taking into account all these sources, total attendance and regular membership income is estimated at \$2.33 million.

Admission Prices at Bishop Museum

Single Day	
Adult	
Kama'aina	\$ 13.00
Tourist	\$ 20.00
Military/ Guest of Kama'aina	\$ 17.00
Senior	
Kama'aina	\$ 11.00
Tourist	\$ 16.00
Military/ Guest of Kama'aina	\$ 14.00
Youth (4-12)	
Kama'aina	\$ 9.00
Tourist	\$ 15.00
Military/ Guest of Kama'aina	\$ 12.00
Annual Pass/ Member	
Family	\$ 85
Adult	\$ 50
Senior	\$ 45
Student	\$ 35
\$3/person discount for groups of 10+	

Estimated annual spending on admissions, museum shop retail, and special exhibitions is approximately \$3.2 million as shown broken down as follows:

PER CAPITA EXPENDITURES AT GUÅHAN MUSEUM							
	Per Capita Revenue	Total Revenue	Cost of Goods Sold		Exhibition Fees		Net Revenue to Guåhan Museum
			%	\$000	%	\$000	
Admission Revenue	\$ 10.84	\$ 2,335,708					\$ 2,335,708
Merchandise	\$ 3.50	\$ 754,417	46%	\$ 301,767	\$ -		\$ 452,650
Special Exhibitions	\$ 0.50	\$ 107,774		\$ -	50%	\$ 53,887	\$ 53,887
<b>Total</b>	<b>\$ 14.84</b>	<b>\$3,197,899</b>		<b>\$ 301,767</b>		<b>\$ 53,887</b>	<b>\$ 2,842,245</b>
Source: KBCG							



After deducting for costs of goods sold in the retail shop and fees for putting on or renting special exhibitions, the net revenue from museum visitor spending is \$2.84 million.

*Supporting Revenue from Sustaining Memberships*

Nearly all museums have an extensive support apparatus from interested and community minded individuals. These include sustaining memberships at a variety of levels of benefits, privileges, and responsibilities as well as corporate sponsorships and cost offsets. This support can be especially beneficial since it to some extent independent of attendance based risk. For example, the Bishop Museum in Honolulu generates about \$1.5 annually from its sustaining membership program, as shown below:

**Sustaining Memberships at Bishop Museum**

Category	Individuals		Corporations		Total Contribution	
	Number	Minimum Level	Number	Minimum Level	At Minimum Level	20% Above Minimum
Pauahi Circle	7	\$ 25,000	7	\$ 25,000	\$ 350,000	
CR Bishop Society	80	\$ 5,000	30	\$ 5,000	\$ 800,000	
Leadership Circle	29	\$ 5,000			\$ 145,000	
Heritage Council	44	\$ 1,000	38	\$ 1,000	\$ 82,000	
Presidents Circle	45	\$ 500			\$ 22,500	
Supporters	350	\$ 100	34	\$ 100	\$ 38,400	
					\$1,237,900	\$ 1,485,480

Whereas KBCG does not expect this level of sustaining support to be initially achieved, it is a worthy goal. Rather, we have allowed for net annual revenue of \$250,000 from this sort of program in Guam with a goal of having 150 to 200 supporting members at \$1,000 per year or more.

*Supporting Revenue*

Supporting revenues for museum operations can also be generated from the rental of retail, food and beverage, and office space as well as a specialty leasing program (carts and kiosks) in the area. Given the popularity of weddings and honeymoon travel to Guam, a wedding chapel could also be included. The current program does not include any interior rental space, but certain compatible uses could be considered. For example, the nature and character of the museum would seem to be a logical location for a Guam Visitors Bureau office as well as an outreach location for the Office of Chamorro affairs. These uses are not included in the current analysis but we believe they are worthy of consideration as mechanisms to generate revenue, increase exposure of the museum to visitors and the visitor industry, and further the role of the museum as a focal point for Chamorro culture, pride and outreach programs.

For the time being, the analysis assumes that the retail shop will be operated directly by the Guåhan Museum and museum operating costs and revenues reflect this approach. It is quite possible, however, that the museum may wish to concession this activity and it could become rental income rather than direct operating revenues with associated expenses. We have not included the opportunity for food and beverage revenues that could be generated through a packaged "Dinner at the Guåhan Museum" program, but that should certainly be considered.



## Sources of Operating Funds and Operating Costs

Combining museum admission revenues with rental revenues and other income provides total operating revenues of about \$3.9 million per year as shown below:

### SOURCES OF OPERATING FUNDS FOR GUAHAN MUSEUM

Category	Annual Revenue	% to Guahan	Amount	Assumptions
Guahan Museum Admissions	\$ 2,331,768	100%	\$ 2,331,768	Table 7
Guahan Museum Merchandise	\$ 734,417	68%	\$ 498,650	Table 7
Guahan Museum Food and Beverage	\$ -	0%	\$ -	
Guahan Museum Special Exhibitions	\$ 107,774	50%	\$ 53,887	Table 7
Guahan Museum Events and Space Rentals	\$ 500,000	75%	\$ 225,000	2 events @ \$50,000 and 50 @ \$4,000 and 75 % to Guahan Museum
Retail Space Rentals	\$ -	100%	\$ -	Table 2
F & B Space Rentals	\$ -	100%	\$ -	
Office Space Rentals	\$ -	100%	\$ -	
Guahan Museum Sponsors and Cost Offsets	\$ 250,000	100%	\$ 250,000	Lump sum target
Guahan Museum Licensing of Collections	\$ 20,000	100%	\$ 20,000	Lump sum target
Guahan Museum Internet/ External Sales	\$ 100,000	50%	\$ 50,000	Lump sum target
<b>Total Sources of Operating Funds</b>	<b>\$ 3,857,959</b>		<b>\$ 2,987,245</b>	
<b>Total Attendance</b>	<b>216,548</b>			

Source: KBCG

In addition to admissions and retail sales, sources of funds include approximately \$300,000 from special events, fundraisers (including two major Guahan Museum fund raising events), and facility rentals for groups, conventions, and social gatherings. (Representative facility rental rates at other history Museums range from \$4,500 (Atlanta) up to \$9,250 (Chicago) to \$15,000 (New York). SF-MOMA has facility rental rates ranging from \$4,000 to \$14,500 depending upon the space being used. Having a special event venue such as the Guahan Museum should be particularly attractive to corporations and travel/ social groups for a variety of functions and help bring back this lucrative market

Ongoing corporate and public sponsorship, licensing and external/Internet sales are targeted to bring in another \$370,000 in revenue. Nearly all museums also receive and rely on some level of government and industry support and specialized tax revenues and/or appropriations; however, we have not included an allowance from these sources.

Total operating costs are \$2.66 million, including a staff of 30 museum employees as shown below.

### GUAHAN MUSEUM OPERATING COSTS

Overall Costs		Labor Distribution			Operating Expenses by Department			
		Employee	Full Time	Part Time	Total	Department	Percent	Departmental Cost
Employees								
Full Time	20					Administration and Finance	12%	\$ 318,372
Part Time	10					Marketing and PR	12%	\$ 318,372
Average Annual Wages						Operations and Maintenance	16%	\$ 424,496
Full Time	\$ 50,000					Security	16%	\$ 424,496
Part Time	\$ 30,000					Reservations	0%	\$ -
Total Labor Budget	\$ 1,200,000					Museum Store	8%	\$ 212,248
Labor as Percent of Total Operating Cost	49.0%					Education	8%	\$ 212,248
Total Operating Cost	\$ 2,453,060					Membership and Events	12%	\$ 318,372
Operating Cost per Employee	\$ 83,435					Curatorial/Collections	16%	\$ 424,496
Operating Cost Per Attendance	\$ 12.31					<b>Total</b>	<b>100%</b>	<b>\$ 2,653,100</b>
Operating Cost/square foot of museum space	\$ 70.46							
Source: KBCG								



**KNOWLEDGE BASED CONSULTING GROUP**  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

The operating cost per attendee is \$12 or \$79 per square foot, which is consistent with a quality museum experience. The Bishop Museum is substantially larger, with 229 employees and is therefore somewhat lower in terms of operating cost per employee (\$57,000 compared to about \$88,000 forecast for the Guahan Museum).

### Construction Costs

Based on information available in September 2013, estimated construction, site development, and soft costs are \$26.6 million as shown below. These cost estimates are subject to verification based upon final development plans and other project agreements.

COST ESTIMATE - GUAHAN MUSEUM				% Distribution		Expenditures	
Project Component	Quantity	Price per Square Foot	Total Budget	2013	2014	2013	2014
<b>Preliminary Construction Estimate</b>							
Main Building	40,667	\$ 268	\$ 10,880,124	20%	80%	\$ 2,176,026	\$ 8,712,098
Theater Building	4,777	\$ 337	\$ 1,610,729	20%	80%	\$ 322,146	\$ 1,288,584
Utility Buildings	1,266	\$ 847	\$ 1,067,260		100%	\$ -	\$ 1,067,260
Subtotal	46,639	\$ 292	\$ 13,558,133			\$ 2,500,171	\$ 11,057,983
Site Work			\$ 2,482,281	50%	50%	\$ 1,231,131	\$ 1,231,131
Bid Option #1 (Various Exterior Work)			\$ 1,418,165		100%	\$ -	\$ 1,418,165
Bid Option #2 (Theater Fitout)			\$ 387,267		100%	\$ -	\$ 387,267
Bid Option #3 (Permitting and Utility Fees)			\$ 251,152		100%	\$ -	\$ 251,152
<b>Cost Estimate</b>		<b>\$ 543</b>	<b>\$ 18,118,000</b>			<b>\$ 3,731,301</b>	<b>\$ 14,386,697</b>
<b>September Construction Bid</b>							
General Contractor Bid			\$ 15,900,000			\$ -	\$ -
Contingency			\$ 765,000			\$ -	\$ -
<b>Construction Hard Costs</b>		<b>\$481</b>	<b>\$ 16,665,000</b>	<b>20%</b>	<b>80%</b>	<b>\$ 3,213,000</b>	<b>\$ 12,852,000</b>
<b>Fitouts</b>							
Exhibits			\$ 2,900,000	20%	80%	\$ 580,000	\$ 2,320,000
Security System			\$ 250,000		100%	\$ -	\$ 250,000
Office Furniture			\$ 350,000		100%	\$ -	\$ 350,000
<b>Total Fit Outs</b>			<b>\$ 3,500,000</b>			<b>\$ 580,000</b>	<b>\$ 2,920,000</b>
<b>Soft Costs</b>							
PM/O/GEDA/Arch			\$ 1,900,000	20%	80%	\$ 380,000	\$ 1,520,000
Design Team			\$ 2,200,000	20%	80%	\$ 440,000	\$ 1,760,000
Construction Management			\$ 2,000,000	20%	80%	\$ 400,000	\$ 1,600,000
Designers SDC			\$ 860,000	20%	80%	\$ 172,000	\$ 688,000
Relocation Costs			\$ 50,000	50%	50%	\$ 25,000	\$ 25,000
<b>Total Soft Costs</b>			<b>\$ 7,010,000</b>			<b>\$ 1,417,000</b>	<b>\$ 5,593,000</b>
<b>Total Projected Cost</b>			<b>\$ 24,575,000</b>			<b>\$ 5,210,000</b>	<b>\$ 21,365,000</b>

Estimates for fit outs of exhibit and interior spaces are an additional \$3.5 million. Soft costs which include architecture and design fees, organizational expenses and permitting/ inspection/ construction management fees are estimated at just over \$7 million. These allowances lead to a



KNOWLEDGE BASED CONSULTING GROUP  
 19 Holly Avenue, Larkspur, CA 94939  
 (415) 924-6577 clivej@sbcglobal.net

total project cost of \$26.6 million. The average improvement cost is \$796 per net square foot. Whereas this budget is a reasonable estimate, quality museum and exhibit space is expensive. For example, the recently opened Science Adventure Center at the Bishop Museum cost slightly over \$1,000 per square foot (\$17 million for a 16,500 square foot exhibit area).

### *Summary Of Financial Analysis*

---

The economic model for the Guahan Museum is presented on the following page and reflects the market environment, construction costs, and other planning factors discussed above. The points below explain the methodology used in the overall model.

- The model runs from 2013 to 2024, covering the first ten years of operation.
- For growth/inflation, we used a rate of 2 percent on revenues and costs. Note that this is a reasonable, and possibly conservative, assumption in terms of a comparison to the overall growth rate of Pacific Asia travel.
- A preopening/ working capital allowance of \$200,000 is included
- Other preopening cost allowances include marketing, as well as, mobilization and training of museum staff.
- A reinvestment reserve of 5% of revenue is designated to assure that the museum continues to add new exhibits and attractions that encourage repeat visitation. This begins in 2015.
- For the purposes of summarizing the economic performance, operating entities are capitalized in the final year of analysis (2024). The cap rate is estimated at 8%.

The model assumes that site work and building construction occurs during 2013 and 2014. The project should open in early 2015.

In the opening year of most museums, attendance typically runs 10% to 20% above long term trends because of initial public interest. We have used a 10% first year premium. After this initial boost, the project's annual net operating income increases from \$779,000 in 2016 to \$913,000 in 2024. The proforma shows an end of project economic value based on capitalized income in 2024 of \$11.4 million.

The project's overall development cost is \$26.6 million, and this capital cost will be funded through a variety of sources.

- HOT Bond proceeds of \$27 million.
- Approximately \$2 million is to be raised over two years in the form of individual contributions, corporate grants and sponsorship offsets.

With these capital sources, there is sufficient operating revenue to support the construction of the project and provide for a reasonable cash surplus.

The sequence of funding shows detailed planning and construction starts in 2013, at which time initial funds from the HOT Bonds were available. After operating expenses, the Guahan Museum project has sufficient positive cash flow to provide for a 5% reinvestment allowance plus an



ongoing endowment to support the program expansion and outreach services of the museum. In 2025, the target is to have a \$7.7 million endowment that provides for contingencies, as well as, an ongoing stream of investment income to support operations. Considering the historical volatility of the Guam visitor industry as well as the US military presence, we see this endowment as an integral part of sound financial planning for the Guåhan Museum.

Conclusion

Further financial analysis shows that the Guåhan Museum could sustain a 20% shortfall in attendance and other revenues and still break even, including maintaining a 5% reserve for reinvestment.



---

**KNOWLEDGE BASED CONSULTING GROUP**  
19 Holly Avenue, Larkspur, CA 94939  
(415) 924-6577 [clivej@sbcglobal.net](mailto:clivej@sbcglobal.net)

CASH FLOW ANALYSIS BUDGET FINANCING

Address	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>TOTAL</b>												
Clinton Museum Administration	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000	\$ 26,000,000
Clinton Museum Administration	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000	\$ 5,156,000
Operating Van Rentals	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000
Clinton Museum Special Exhibitions	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000	\$ 613,000
Clinton Museum Events and Special Events	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000	\$ 2,562,000
Rental Space Booth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
F & B Space Booth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office Space Booth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Clinton Museum Sponsor and Cost Offset	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000	\$ 2,848,000
Clinton Museum Learning of Collections	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000	\$ 277,000
Clinton Museum History External Sales	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Rental Space of Operating Booth	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000
Operating Expenses	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000	\$ 30,223,000
Operating Profit	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000	\$ 6,664,000
East Value Capitalization	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000	\$ 11,410,000
Development Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commission Profit Cash	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000	\$ 16,064,000
Real Estate Cash	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000	\$ 3,970,000
Real Estate Cash	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000	\$ 7,010,000
Real Estate Cash	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000	\$ 26,575,000
Real Estate Cash	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000
Property Working Capital	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
Real Estate Cash	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000
Property Working Capital	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000	\$ 27,475,000
Real Estate Cash	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000	\$ 1,943,000
Real Estate Cash	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000	\$ 37,890,000
Capital Investment Fund	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000
Real Estate Cash	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
Capital Investment Fund	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000	\$ 28,500,000
Real Estate Cash	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000	\$ 7,750,000
Capital Investment Fund	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000	\$ 22,200,000
Real Estate Cash	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Clinton Museum Cash Flow	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000
Real Estate Cash	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -