

HemisFair Park: In-Depth Case Study and Recommendations

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1. History of the Site and Regional Context

Regional Context: History of San Antonio

The Village of San Antonio de Bexar was founded by Spanish Colonists who also established seven missions along the San Antonio River, the most well-known being the Misión de San Antonio de Valero (today known as the Alamo today) in 1718 (Figure 1). Of these settlements, the San Francisco and the Alamo missions were central to the formation of the settlement of San Antonio. The village of San Antonio de Bexar was designed according to the principles of Spanish Colonial towns of that era. These features include open plazas surrounded by adobe houses, a cathedral, and a Governor's palace in a classical grid plan with the San Antonio River and the San Pedro Creek.¹



Figure 1. Misión de San Antonio de Valero (Alamo) Source: Wikimedia Commons

The growth of San Antonio remained relatively constant until the 19th century, after which expansion progressed along the main access roads leading to the city. Most of the development in the 19th century occurred eastwards and westwards of the center along the

¹ Caragonne, A. (September, 1969). *Urban Development San Antonio*. M. Arch. Thesis, Cornell University.

bend of the San Antonio River to the south, and to the Highlands in the north. After the Second World War, San Antonio's street grids increasingly followed a suburban street layout². Concurrent with these suburban developments were expressways built in the post war period. These expressways currently surround downtown San Antonio, contributing to the development of large parking lots and an increasingly auto-dependent city. Over time expressways have reduced property values in adjacent areas, while the city has been modified to accommodate larger flows of automobile traffic. Many urban spaces were converted to auto-compatible uses, such as parking lots, garages, auto shops, and gas stations³.

1968 HemisFair World's Fair

The 1968 HemisFair World's Fair coincided with the 250th anniversary of the founding of San Antonio, and one of its focal points was the birth of the city and its heritage. The fair lasted for 6 months from April 6th to October 6th, 1968. The theme of the fair was "The Confluence of Civilizations in the Americas", with more than 30 nations displaying their pavilions and about 6.3 million visitors in total.

HemisFair Park is approximately 78 acres in size⁴. As part of the federal government's urban renewal program, the land used for the fair was acquired mainly through eminent domain and the site was heavily redeveloped from the funds provided by the federal government⁵. Originally this area was occupied by over 1000 primarily residential structures, construction of the fair led to the demolition of more than one hundred existing buildings and historical structures on the site. Today, only 22 buildings and 2 stabilized ruins survive from the pre-1968 World's Fair period, and of the 24 only 18 remain on their original sites.⁶ While walking through the site, there is a clear contrast in architectural styles between pre-1968 structures and buildings that were constructed for HemisFair. Most visibly, buildings built during and after 1968 are much larger in size and use different building materials⁷. One of the features of the fair site is the The River Walk (Paseo del Rio). This was extended to connect to the HemisFair Park site in 1968. The River Walk was further extended for the Convention Center Expansion in 2001 which also connects to the lagoon in the park.

2. Existing Conditions

² Caragonne, A. (September, 1969). *Urban Development San Antonio*. M. Arch. Thesis, Cornell University.

³ Caragonne, A. (September, 1969). *Urban Development San Antonio*. M. Arch. Thesis, Cornell University.

⁴ UTSA Center for Cultural Sustainability (2011) *Inventory, Assessment and Evaluation of Historic Resources in HemisFair Park*, San Antonio: UTSA Center for Cultural Sustainability.

⁵ UTSA Center for Cultural Sustainability (2011) *Inventory, Assessment and Evaluation of Historic Resources in HemisFair Park*, San Antonio: UTSA Center for Cultural Sustainability.

⁶ UTSA Center for Cultural Sustainability (2011) *Inventory, Assessment and Evaluation of Historic Resources in HemisFair Park*, San Antonio: UTSA Center for Cultural Sustainability.

⁷ UTSA Center for Cultural Sustainability (2011) *Inventory, Assessment and Evaluation of Historic Resources in HemisFair Park*, San Antonio: UTSA Center for Cultural Sustainability.

Physical Character and Historic Integrity

Our client, Andres Andujar, the CEO of the Hemisfair Park Area Redevelopment Corporation (HPARC), presented the current progress of the redevelopment plan of Hemisfair Park. This plan roughly divides the park into three sections: Civic Park in the northwestern quadrant part of the park, Yanaguana Garden in the southwestern part, and our area of focus, Tower Park and its surroundings, in the southeastern part of the park (Figure 2).

Redevelopment plans for Civic Park and Yanaguana Garden are underway in the Master Plan, however, Tower Park and the surrounding areas are still largely lacking in planning. In the redevelopment plan, Civic Park and Yanaguana park will include facilities such as sidewalk cafes, mixed-used residential or office buildings, and cultural institutions⁸. The overall vision for the redevelopment of Hemisfair Park is a public park with increase in green spaces, so that the space can be a downtown park that can provide a gathering place for people to gather, shop, picnic, play sports and interact.

There are historical buildings that also remain today which were not incorporated in the original 2011 Master Plan, as they were originally planned to be removed. The existing buildings in this area are now considered buildings with historical significance and must be retained on site. Therefore, our project will address possible design concepts to reuse these historical buildings. Our project will consider the following 4 historical buildings (Adrian Spears Judicial Training Center, John H. Wood Courthouse, Women's Pavillion, and UTSA Institute of Texan Cultures) and one post-HemisFair building, the Federal building built in 1970. We will also consider smaller historical houses around the site that have been kept since the time of the fair.



Figure 2 Plan for the area under redesign in HemisFair Park, San Antonio

Source: (<http://www.hemisfair.org/vision/> 2012)

⁸ Hemisfair Park Area Redevelopment Corporation (2013) *Hemisfair Civic Park: Vision and Program Plan*, San Antonio: HPARC.

Environmental Functionality and Performance

The City of San Antonio has pursued two ambitious sustainability plans in the last several years, the Mission Verde and SA2020. The first plan, the Mission Verde is a sustainability plan organized by the Mayor's Office to expand San Antonio's green credentials, implemented in February 2010. This plan directs attention to investments in green technology, energy conservation, renewable energy, efficient transportation and smart buildings. Mission Verde includes 11 initiatives that focus on these green planning strategies for San Antonio and was also expanded to include water, waste, green space, historical preservation, alternative fuel and food initiatives. It also encourages mixed-use, mixed-income, walkable and transit-oriented development, while adopting a high performance green building code for new residential and commercial buildings that target net zero energy use by 2030⁹.

The second plan, SA2020 was commissioned by the City of San Antonio in 2011, which is part of a city-wide master plan. SA2020 expands the Mission Verde plan's sustainability goals, in which the HemisFair redevelopment plans also address many of SA2020's goals. These goals include economic development, downtown development, green buildings and walkable, mixed-use neighborhoods¹⁰. While Mission Verde and SA2020 offers extensive sustainability plans, the city is still in need of a model project that can demonstrate these mixed-use, energy efficient and low-impact development as examples to follow. With the SA2020 in mind, the redevelopment plan of HemisFair provides an opportunity to act as a forefront in reflecting the economic, social and environmental aspects for sustainable performance for the city.

Texas Electricity Concern

Relying on electricity is an increasing concern for cities in Texas due to its isolated state-wide grid and increasing consumption. Texas had 13 of the country's 15 fastest-growing cities in 2011. A growing population with an exceptionally cold winter in 2010 overtaxed the state's electric supply resources, leading to rolling blackouts. This poses the concern that electrical power in Texas will become more expensive in the future. Energy companies must look toward alternative low-cost fuels with low investment hurdles to support future growth. Therefore, alternative fuel on-site and renewable energy sources will be an economically viable option for HemisFair's redevelopment plan.

Although Texas has a high level of renewable energy generation capacity compared to other states, the use of renewable energy is limited due to the unpredictable nature of wind power. Texas also has potential for solar photovoltaic electricity generation, however, this

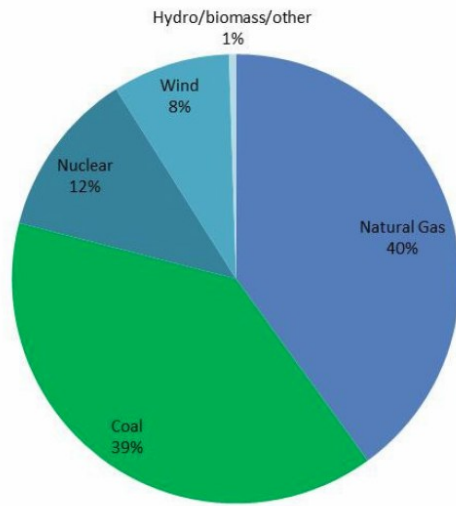
⁹ HemisFair Park Area Redevelopment Corporation (2012). HemisFair Park Area: Sustainability Goals Final Issue, San Antonio: HPARC. Retrieved from:

http://www.hemisfair.org/pdfs/0006_HemisFair_Sustainability_Plan_Arup_09052012.pdf.

¹⁰ UTSA (2012) The City of San Antonio Neighborhood Sustainability Assessment, San Antonio: UTSA. Retrieved from:

<http://www.sanantonio.gov/Portals/0/Files/Sustainability/NeighborhoodSustainabilityAssessmentReport.pdf>

remains a small part of the grid system based on the data from the Electric Reliability Council of Texas (ERCOT) (Figure 3)¹¹.



TEXAS ELECTRICITY GRID USE (2011)

Figure 3 Texas Electricity Grid Use

Source: Hemisfair Park Area Redevelopment Corporation (2012). *Hemisfair Park Area: Sustainability Goals Final Issue*, San Antonio: HPARC. Retrieved from:
http://www.hemisfair.org/pdfs/0006_Hemisfair_Sustainability_Plan_Arup_09052012.pdf.

San Antonio's climate is also advantageous for providing opportunities for renewable energy options. As San Antonio has a modified sub-tropical climate, the year-round mild temperature means that many sustainable strategies can be incorporated into buildings. Such strategies include natural ventilation systems in using sun shading and wind movements in the summer months.

Economic Issues and Context

San Antonio's basic industries can be summed up by four major sectors: manufacturing, merchant wholesaler, retail, and accommodation/food services (Figure 4). Retail sales forms the largest component in San Antonio's economy, followed by merchant wholesaler, then manufacturers shipments, then accommodation/food services being the smallest component in the economy¹². The large share of retail may indicate that the population in San Antonio has a high level of available disposable income.

¹¹ Hemisfair Park Area Redevelopment Corporation (2012). *Hemisfair Park Area: Sustainability Goals Final Issue*, San Antonio: HPARC. Retrieved from:
http://www.hemisfair.org/pdfs/0006_Hemisfair_Sustainability_Plan_Arup_09052012.pdf.

¹² (<http://quickfacts.census.gov>, Year 2007)

San Antonio is also famous for its history as one of the Spanish colonial missions in the region. Therefore, these historical attractions such as the Alamo, the Riverwalk, the Tower of the Americas in Hemisfair Park, the Alamo Bowl, and Marriage Island are some of the major tourist attractions that draw visitors and residents into the city.

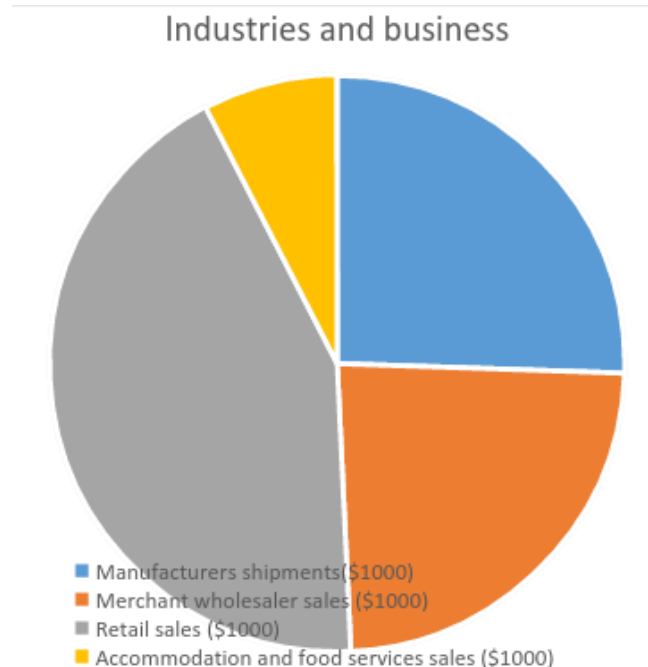


Figure 4 Basic industries and businesses in San Antonio

Source: <http://quickfacts.census.gov>, Year 2007

Social Equity (access, uses, outreach and engagement)

Hemisfair Park is located in downtown San Antonio. San Antonio is the second most populous city in Texas and the seventh in the USA. The population in San Antonio in 2013 was 1.4 million, and the city itself has experienced a significant increase in population of 6.1% in the three years between 2010 to 2013. The city is projected to continue its growth. San Antonio is relatively young in age with a median age of 34 and the 21-24 and 55-64 age group range comprise the most in the population¹³. With the large number of young population in the city, and the projected increase in the number of younger cohorts can lead to increased public transit and bike use. The residents in San Antonio are ethnically diverse, with a progressive mix of young singles, couples and families that range from students to professional workers, however, there are pockets in the center city where lower mid-middle age households with children can be found. This is characteristic of the areas surrounding Hemisfair Park, as the median age in this area is higher than the city's average, at 48.9 years old, and median income of about \$24,700, which is significantly lower than the city's average income of \$61,635¹⁴. As such, the

¹³ (<http://quickfacts.census.gov>, year 2010; Nielsen Pop-Facts Demographics 2014)

¹⁴ (Nielsen Pop-Facts Demographics 2014)

older population has lower disposable income compared to their younger counterparts and may not be as receptive to increased use of bicycles and will have different consumer spending patterns. The racial composition in the San Antonio Metropolitan Area is mainly of Hispanic and Latino origin, comprising 53.8% of the total population. In Bexar County, where downtown San Antonio and Hemisfair Park is located, the percentage increases slightly, to 59.10%¹⁵.

3. Evaluation of Existing Future Visions: 2011 Framework and Masterplan

The 2011 Framework and Masterplan of San Antonio proposed by HPARC first began with input from stakeholders and the general public. The values and characteristics that were expressed in the initial engagement process can be identified in five general categories¹⁶ :

- Parks and Open Space
 - Emphasis on regional park, neighborhood park, public events, amphitheater, Arts/Sculpture garden, community garden, water element, playing fields, jogging trails, children's play area
- Arts and Culture
 - Cultural Institutions, ITC/UNAM/Instituto de Mexico, live music, local arts programs, folk art market, contemporary arts
- History
 - City of San Antonio Museum, Historic Homes, goliad trail, historic street grid, acequia systems, public art, memory
- Education
 - school, library, media center, recreation center, community services, non-traditional learning opportunities
- A 24/7 Living Place
 - Residential, neighborhood shops, restaurants, workplaces, civic and cultural, local business, public transit

The Master Plan is also based on seven principles that aims to address key aims and targets. These principles consist of:

- Leadership
 - Redevelopment of Hemisfair to act as a model in the revitalization of downtown San Antonio and transition into a vital, mixed-use urban core
- Preservation
 - Protect historical buildings by integrating existing historical structures and new development
- Public Space

¹⁵ (<http://quickfacts.census.gov>, year 2010)

¹⁶ Hemisfair Park Area Redevelopment Corporation (2012) *Hemisfair: Transforming San Antonio Framework and Master Plan*, San Antonio: HPARC.

- Preserve existing green and public space while enhancing further public urban space
- Mixed Use
 - Mixed-income housing, commercial, institutional and civic uses to enhance Hemisfair as a major downtown corridor and meet demands of locals
- Connectivity
 - Address multimodal transportation that includes pedestrian, bicycle, wheel-chair access, vehicular travel, and parking while ensuring supportive land uses throughout the park
- Balance
 - Balancing between green space and development in the plan
- Sustainability
 - Considering the environmental, social and economic impact for better quality of life. Focuses on elements of water, connection, energy, climate, best practices (considering adopting LEED standards), coordination in integration of entire Hemisfair system)

An emphasis was placed on preserving the history of Hemisfair, as the current park is quite disconnected from the rest of the Downtown area. The site remains fragmented and disjointed by the streets of Alamo, Commerce, Market and the Henry B. Gonzalez Convention Center. This resulted in an uncoordinated mix of buildings that are both being used and abandoned. Therefore, the redevelopment plan of Hemisfair park considers restoring some of these structures to also reconnect the surrounding neighborhoods.

Land use for HemisFair park will be divided into different uses as well. One focuses on open space, plazas and courtyards that will act as event spaces. Another focus would be civic uses, consisting of museums, educational institutions, performing arts centers, visual arts studios, galleries and workshops. This can be combined with commercial uses as well as residential uses to help maintain various activities that will take place. Commercial use is also another focus, which includes retail, services, restaurants or cafes, in which the uses of these services will be enhanced by the combination of civic and residential uses in the park. Finally, the park will also be residential, which will encourage activities on site. A range of unit types are proposed, including condominiums, rental apartments, and townhouses. The residential developments will surround the historic structures.

Redevelopment advisors have conducted a thorough real estate market assessment of the downtown area including neighborhoods that surround the park. Using the collected market data, the 2011 Master Plan recommends the creation of a mixed-use development program with a residential neighborhood, proposing about 1000+ units of new residential development with retail amenities and offices. Estimates of capital investment needed to support the redevelopment plan ranges from \$100m to \$150m. The next stages of the Master Plan include acquiring long-term and short-term capital funding from federal, state, county and philanthropic sources to move forward with the plan. Negotiation with the City of San Antonio in acquiring land parcels in some of the development plans will also be underway.

4. Sustainability Issues to Address as Identified by the Client (from Master Plan)

The sustainability element to the redevelopment plan of Hemisfair park are potential strategies mentioned in HemisFair's Sustainability Plan. The Sustainability Plan¹⁷ explores six core sections, detailed below:

Energy

The energy component mainly deals with the physical building and the design concept of the development. This includes plans in reducing energy demand for new construction, connect district energy systems, developing alternative energy supplies, encourage the use and incorporation of renewable energy systems, passive design principles for buildings and public space, and use of smart buildings that have smart meters with real-time consumption feedback and utility rate information.

Water

The water component focuses on the use of water features and infrastructure in the park system. The plan includes scenarios for reduced water demand, stormwater treatment for reuse and reduce runoff pollution, placement of infrastructure to capture, treat, and reuse runoff, treatment and reuse of recycled water, celebrate the site's water history, such as restoring the historic acequias that were on site originally as the center of development. The plan hopes to use this as an opportunity to provide onsite education about the role of water in the city. Other initiatives include adopting native landscapes to be irrigated with recycled water.

Transportation

The sustainability of transportation include new transport to be aligned with existing transit by making transit stops within Hemisfair park so that public transit can be as accessible and comfortable as possible, reducing personal vehicle ownership and use by reducing the number of free parking in the site, encourage other alternative transportation options such as providing electric vehicle charging infrastructure, car sharing, increased bike uses and incorporation of bike lanes, and complete streets. To make the park more pedestrian friendly, the plan also incorporates pedestrian crossings in mid-block areas and at intersections in large feeder streets such as Chavez Blvd and Alamo St.

Community

The community sustainability initiative is mainly focused on completing the park in the proposed plan, by incorporating local food production and develop urban agriculture, establishing

¹⁷ Hemisfair Park Area Sustainability Goals. (2012). Retrieved from http://www.hemisfair.org/pdfs/0006_Hemisfair_Sustainability_Plan_Arup_09052012.pdf

community councils to allow Hemisfair residents to participate in the decision making process, increase mixed income residential development to ensure a diverse population, and increase educational opportunities by creating an 'educational' park with an interactive, learning component for children to play. This also gives an opportunity for the city to showcase its growing innovations.

Waste Management

Sustainable initiatives of waste management include reuse or recycle existing buildings and material, reducing the environmental impacts of materials in design and operation such as use of green materials, and having separated waste streams in an effort to expand recycling. Strategies for this include providing segregated waste receptacles for landfill, recyclables, and paper in public spaces. The plan also encourages developers to incorporate a sorting space in each floor of the building to make waste sorting an easier process. In order to optimize waste opportunities, the plan will also consider implementing a waste-to-energy component to the existing energy plant that can accept waste from Hemisfair in producing energy such as electricity or biogas. This can enhance community awareness on waste issues while create jobs.

Economics

The last component to the Hemisfair Park sustainability initiative is economics. This consists of incentivising ecological development in increasing green buildings, renewable energy, water conservation and other sustainable strategies to be incorporated in Hemisfair Park. The plan also aims to provide high values to residents and businesses by linking residential development to employment centers in downtown and surrounding commercial corridors, and also creating alternative financial instruments for sustainability such as adopting a green building fund to pool resources from tenants and residents, and encouraging local and green businesses by implementing a clause agreement in leases that include incentives for local businesses to adopt sustainability policies into their business plans and goods production.

5. Additional Sustainability Issues to Address as Identified by Team

The 2011 Masterplan includes sophisticated and detailed sustainability goals and measures. Our design interventions will take these already established sustainability elements and hopefully expand them in our concepts. Elements of energy (such as use of green buildings, etc.) and economic components (such as building prototypes, etc.) will be assessed by using a financial feasibility test. By using Envision Tomorrow's Return-on-Investment tool, we will also address whether these proposed projects will provide financially sustainable outlook as well. Water, transportation and community elements will be addressed through our design scenarios and mapping, which will be detailed in the section below.

A factor to consider for sustainability is the existing infrastructure and historical buildings. As mentioned above, our focus area consists of several historical structures that provide an

invaluable legacy for San Antonio and the park. The existence of these buildings will play a huge role in creating an identity for the new neighborhood for the redeveloped neighborhoods. How to reuse these buildings with consideration for neighborhood identity that leads to not only environmental sustainability but also social and economic sustainability will be vital considerations for the redevelopment of the park. As HemisFair is also adjacent to several historical San Antonio neighborhoods, including the Lavaca historic district to the south, La Villita to the west and King William to the southwest¹⁸ (Figure 5), new development of HemisFair will have a huge social impact and implications on these neighborhoods and its characteristics as well. Furthermore, using existing infrastructure and energy sources should also be considered, as electricity, natural gas and water are all present on the park site.



Figure 5 Map of Downtown San Antonio showing HemisFair Park, Lavaca Historic District and King William Historic District Source: UTSA Center for Cultural Sustainability (2011).

¹⁸ UTSA Center for Cultural Sustainability (2011) *Inventory, Assessment and Evaluation of Historic Resources in HemisFair Park*, San Antonio: UTSA Center for Cultural Sustainability.

6. Proposed Design Interventions

Our future visions will build on the elements which make the focus area special within Hemisfair Park. The area contains the most historical buildings on the site, San Antonio's iconic tower, popular water features, and extensive surface parking lots which can be redeveloped. The focus area will also be surrounded by hubs of activity once Civic Park and Yanaguana Garden are complete, and it will also be fronting Cesar Chavez Blvd and the Lavaca neighborhood. With this in mind, we have developed two concepts that build on the area's assets while tying it to the rest of the park and the community. This will be complemented by a financial feasibility test in the reuse of these historical buildings.

Design Constraints

There are several design constraints on the Hemisfair site that should be taken into account when developing the new plan. Of particular concern is the Tower Park area, centered around the Tower of Americas. As mentioned above, this area contains the most number of historical buildings than any other area in the park. Therefore, new designs must complement the outdoor environment when reusing these buildings. Identifying ways to revitalize and reuse huge open spaces with these large historical buildings will be challenging.

In addition, park identity is also another factor for consideration. There are multiple identities of the southern portion of HemisFair Park. One is a tourist park, as many visitors consider the Tower of Americas to be San Antonio's primary landmark and symbol. Tourists from Civic Park can walk to Tower Park. However, this southern portion could also act as a neighborhood park as well, serving its local population from adjacent residential and historical neighborhoods. Due to its convenient location situated between the new convention center and the historical districts, this provides spaces for developing new connections and access points for its surrounding areas.

As there is already an existing Master Plan for the redevelopment of Hemisfair Park, our design intervention takes into account the plans proposed by HPARC and use its framework as a guideline. We have integrated our interventions into the existing park Master Plan along with Civic Park and Yanaguana Garden.

Concept 1: Peaceful Sculpture Park

Since both Civic Park and Yanaguana Garden are planned as active and lively spaces, they may be well served by an adjacent area that is quieter and more peaceful, such as a Sculpture Park. An example of an existing park that is similar to this concept is Seattle's Olympic Sculpture Park(Figures 7,8). Seattle's 9-acre park has become one of the city's most beloved attractions due to its engaging public art and tranquil atmosphere. This concept could be applied to Hemisfair. This can be supplemented by using the historical buildings on site as

cultural attractions, such as theaters and museums, which would benefit from the quiet environments. Additionally, incorporation of water features would add to a peaceful atmosphere.

With the proximity to the existing historical buildings and the Tower of the Americas, this can promote more visitors and residents to visit Hemisfair. It also bodes well for infill mixed-use development to complement the Sculpture Park concept. Key elements of this plan are: cultural activity reuse of Historic buildings, public art areas, multi-level landscape design creating flexible use spaces such as event spaces and underground parking, water features, trees and greenery, pedestrian walkways, and mixed-use infill development.

A sculpture park at the Southeast end of Hemisfair will create a space that would be an extension of the Cultural Aspects of the Hemisfair Redevelopment Project. International competition for sculptures in this park will attract world attention and the resultant art objects could prove to be popular tourist attractions.

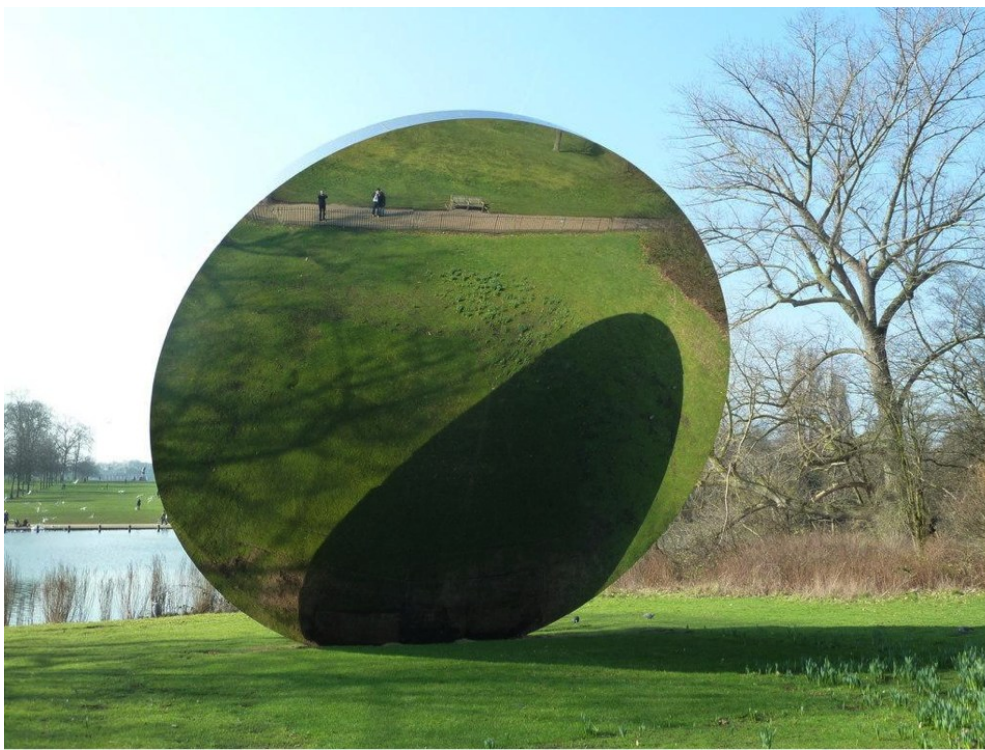


Figure 6 Giant mirror by Anish Kapoor in Kensington Gardens © Graham Hogg, Google images: Labeled for reuse

Since this park area would be a more quiet space, this can provide a place for quiet physical activities such as meditation, yoga, and tai-chi. A landscaped sculpture garden with varying levels could also provide underground parking and sunken indoor spaces opening out to the garden can be spaces for outdoor events and ancillaries. It can also host catered group picnics, outdoor galas, and fashion shows to name a few uses. There is also a potential for outdoor amphitheater space to be utilized as multi-functional spaces.



Figure 8 (Right) Olympic Sculpture Park, Seattle, Photo credit: flickr/C4Chaos, Creative Commons license

The view of the sculpture garden from the Tower of the Americas would be an added attraction for the tourists visiting the observation tower. An idea for a sculpture, to be viewed specifically from the observation deck, might also profit the two entities. If structural and financial feasibility would allow, a glass skywalk in the Observation Tower with a view of the Sculpture Park below could be an attraction. Sculpture parks also create great opportunities for photo opportunities that can draw people in.

While designing for the sculpture garden, the following points must be considered:

1. Focal areas for the sculptures.
2. Paths/routes leading on a walking tour of the sculptures
3. Flexible infill spaces

Being situated in the eastern part of the Park, it would lead visitors to this area by creating an interesting Focal Point in conjunction with the Observation Tower. The popular Riverwalk would be, conceptually, extended further inside Hemisfair by connecting water features culminating in the reflecting pond in the landscape feature inspired by the Hemisfair Logo. The overall landscape design would incorporate multiple levels, allowing flexible use of spaces such as underground parking and event spaces. Varied uses would keep the area busy over the duration of the day and part of the night (Figures 9, 10).



Figure 9 Concept Plan for Sculpture Park Design. Source: Rashmi Gajare, group member



Figure 10 Visitors to the John and Mary Pappajohn Sculpture Park view “Nomade” by the Spanish artist Jaume Plensa. Photo: Mark Kegans for The New York Times, permission from photographer for image usage.

There are several design challenges to this park concept. We addressed the challenges in the reuse of historical buildings with the Sculpture Park concept (Figures 10, 11)



Figure 10: Challenges to address in Sculpture Park Concept. Source: Rashmi Gajare, group member

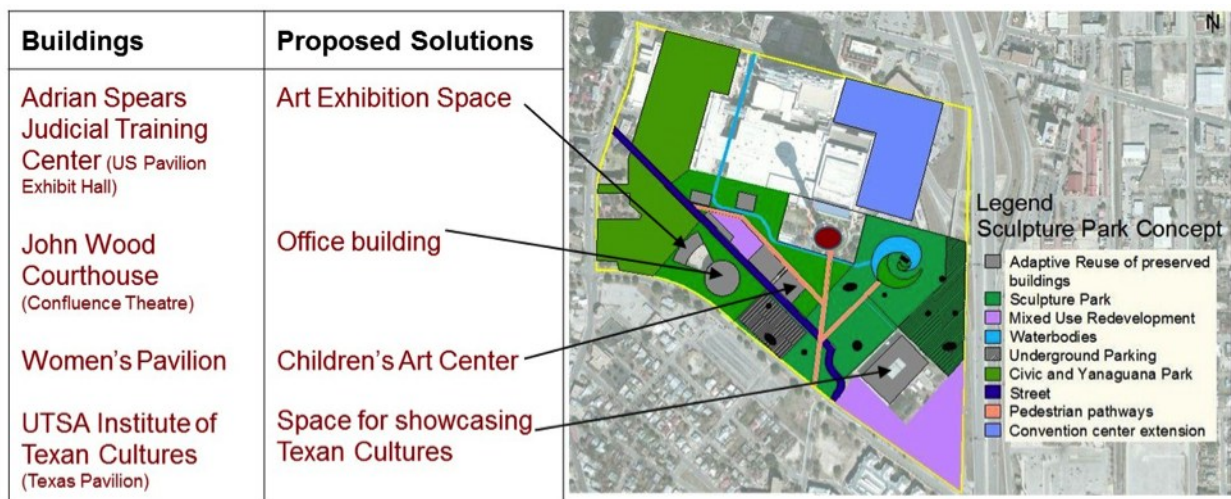


Figure 11: Challenges to address in Sculpture Park Concept. Source: Rashmi Gajare, group member

In conclusion, a sculpture park would create a point of focal interest and lead the visitors to the eastern portion of the Hemisfair. It would act as an extension to the cultural aspects of the Reuse of the Historic Buildings and would provide an area with contrasting use to the other park areas.

Concept 2: Lively Fair, Lively Neighborhood

Our second concept is a lively neighborhood park in bringing back the vibrant characteristic at the time of the World's Fair. As our focus area will retain most of the buildings from the World's Fair era, the area will be inspired by the busy and active atmosphere that reflects the fair. In order to accommodate the high demand for housing, retail, and office spaces in downtown San Antonio, the site could be developed into a lively mixed-use neighborhood. Infill development can be built where there are surface parking. Mid to low-rise buildings will add density required to sustain commercial activity. Ground-level shops, outdoor patios, and cultural institutions that will be placed in these historical buildings will allow for a vibrant street corridor, while plazas and courtyards will provide public gathering spaces for residents.

This concept is more in line with the 2011 Hemisfair Park Master Plan that envisioned this area to be a mixed-use neighborhood. One difference to our design concept is incorporating the reuse of these historical buildings into the mixed-use neighborhood. Key elements of this plan are: mixed-use infill development, complete streets, plazas and courtyards, outdoor patios, cultural institutions, World's Fair flair, and parking.

The first step involves breaking extra large blocks into small and medium sized blocks. Scaling down the block sizes will allow the area to better serve its community. The historical grid maps also show a much different layout than the current site, in which we propose a part of the historical grid to be incorporated. As seen from the map (Figure 12), the block volumes are smaller and the building density was higher in the 1920s. Therefore, creating inner and outer paths can promote connectivity that incorporates pedestrian paths and streets, while block volumes can be broken down.



Figure 12 Pre-existing street grids before Hemisfair. Source: UTSA Center for Cultural Sustainability (2011).

This concept also incorporates some of the design features seen during the world's fair in 1968. As shown on the map (Figure 13), there were pedestrian paths with water features around the Tower of Americas. Structures were small but also high in density, and the park was relatively pedestrian oriented. In addition, historic grids and Hemisfair's 1968 layout will also be

incorporated into the lively mixed-use neighborhood concept plan. The huge blocks will be minimized in scale and will be broken down into smaller sizes. The base of the Tower of Americas will be the central open space in the park, and the water feature will be extended from the River Walk to the park fountain (Figure 14).



Figure 13 Georeferenced Hemisfair 1968 Site Plan. The yellow areas are for pedestrians only. Source: Hemisfair group members



Figure 14 Design of concept two. The orange areas are the adaptive reused blocks that contain the preserved buildings. New mixed-use infill is marked in pink. Source: Christine Ma, group member

The concept plan is divided into three areas of focus: new development, connecting water features, and temporary creative uses. The first focus, will be the infill new development (Figure 15). The development pattern in the smaller blocks will be courtyard-style mixed-use. The building facades will be extended out to the streets so pedestrians can easily access the first floors of the retail spaces. The yard in the middle can be turned into public space, providing a spacious opening with water features, seating, cafes or restaurants. A new mixed-use building will be built on the current site of the parking lot adjacent the Federal Building. It will mirror the smaller heights of the federal building, with no more than 5 to 6 floors. The first floor will be used as commercial space, with condominiums above, featuring small sized apartments and building amenities to attract the younger cohorts of San Antonio.

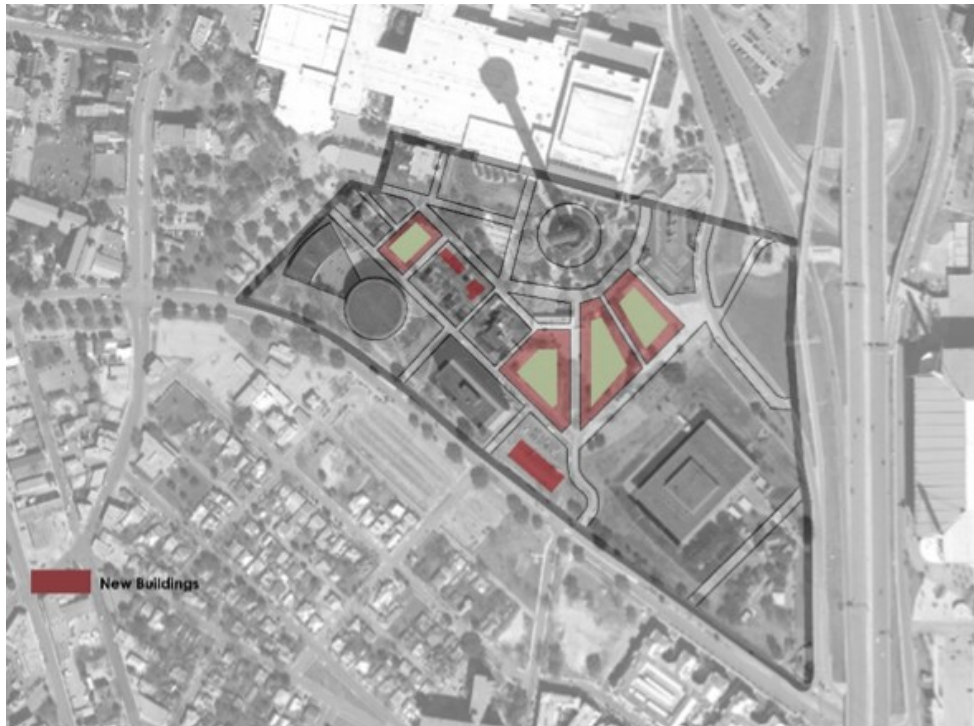


Figure 15 Design concept with new development for concept two. Source: Christine Ma, group member.

Our second focus will attempt to connect water features in the park. A water corridor will be built to connect the water features that are on site. Although the River Walk ends at the convention center currently, we propose it to be connected to the Hemisfair Plaza, where new wall fountains and water features will be built in the courtyard area. The water display at the Institute of Texan Culture will also be connected to all the other water features as well (Figure 16)

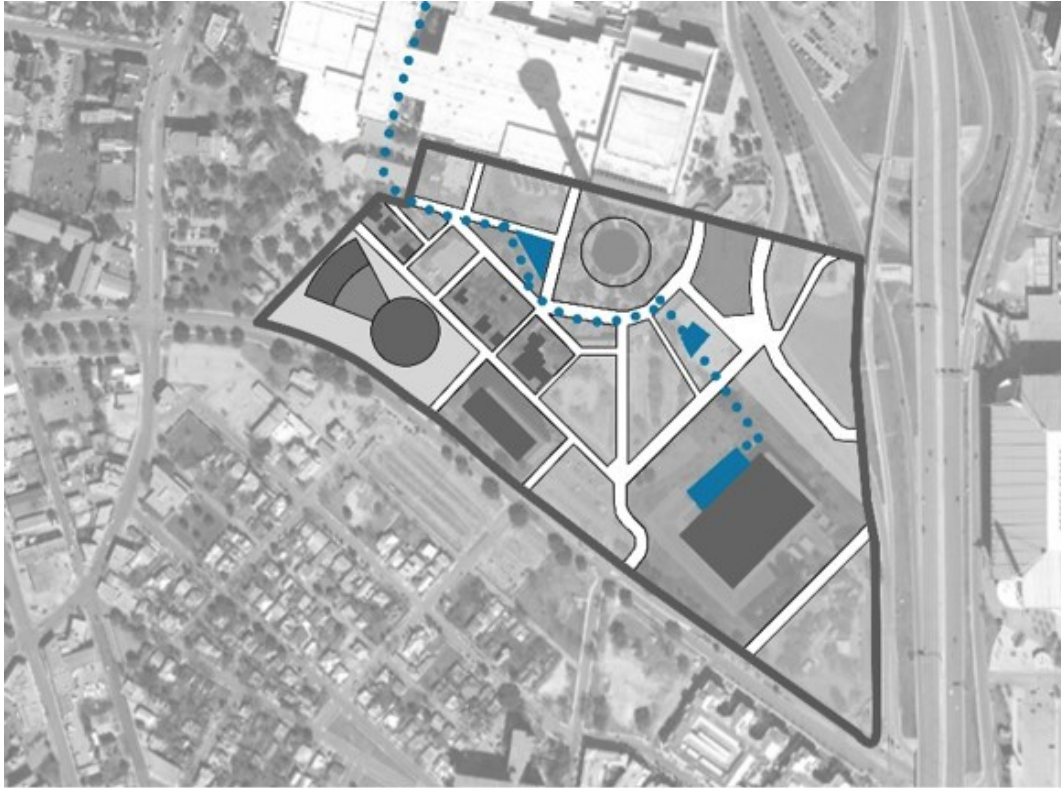


Figure 16 Connecting water features in concept two. Source: Christine Ma, group member

Our third design will address some of the temporary creative uses for the site. This will take place before the redevelopment of the park. There are many areas in the park that can be quickly transformed to serve the community. For example, a temporary shelter structure can be built atop the round circular footprint of the former Coca Cola Pavilion, thereby creating a flexible outdoor public space. Public arts with urban functions could be temporarily installed in these parking lots and open spaces. The area next to Yanaguana Garden could also be turned into vendor stalls with food trucks or craft-carts. Parking lots in the southern neighborhood area can be used in a similar fashion, or even as market spaces during the weekends (Figure 17).



Figure 17 Temporary creative uses in the design. Pink areas are impervious surfaces, including an underused parking lot and plazas. Source: Christine Ma, group member

In summary, peaceful sculpture park and lively neighborhood park are two different scenarios which could be combined and integrated with the original Master Plan (Figures 18, 19) . For example, the open spaces among large building footprints could feature sculpture parks and public art installations, while the mixed-use infill could still be brought into the smaller blocks in the middle. However, the success in the redevelopment of the park will depend heavily on the appropriate reuse of Hemisfair's existing historical buildings. While these two concepts provide possible reuse scenarios for the park, making progress on this project will be affected by the financial constraints. Therefore, the next section explores the financial feasibility of this plan by considering the many economic factors that are necessary in the decision-making process in carrying this project forward.



Figure 18 Peaceful sculpture park concept integrated with the Master Plan



Figure 19 Lively Mixed-Use neighborhood concept integrated with the Master Plan

7. Adaptive Reuse Strategies: Envision Tomorrow

The focus area of our project contains the highest number of buildings remaining from the fair. Most of the major buildings, such as the US Pavilion's Confluence Theatre and Exhibit Hall, have been repurposed for office and institutional spaces. The large Texas Pavilion has also retained its use as an exhibit space. However, most of the smaller buildings, such as the six historic pre-Hemisfair houses and the Women's Pavilion, are now abandoned. While redevelopment of the land on which they stand may have been possible in the past, these buildings should remain in place now as they have gained historical significance as relics of modernist and pre-modernist architecture.

The intention of preserving these buildings is not to let them remain as abandoned shells appreciated from the outside. Additionally, given the level of activity that Hemisfair Park will produce once redevelopment is complete, the historical buildings should also not be used for institutions that leave a dearth of activity outside. With the upcoming land swap of the US Pavilion site between its current tenant – the US Government – and the City of San Antonio, the possibility exists to reinvigorate these buildings for active public use. We propose the adaptive reuse of all historical buildings in the Tower Park area for uses that will generate activity throughout the day and night in order to make Hemisfair Park an attractive place to be at all times, not only for its green space but also for the activities it offers.

Additionally, to determine economic feasibility of the adaptive reuse of buildings, our research employed the use of Envision Tomorrow's Return-On-Investment (ROI) tools. Envision Tomorrow is a suite of urban planning tools designed to get financial estimates of real estate projects and their impact on jobs and the environment. For each historic building, a ROI model was created using the building's dimensions and real estate data specific to San Antonio. In the model, all buildings are reused to be mixed-use, with a high amount of green infrastructure incorporated into them including green roofs, bioswales, rain gardens, and rainwater harvesting.

US Pavillion Confluence Theater. Exhibition Hall and Migration Courtyard (Current John H. Wood, Jr. Federal Courthouse and Adrian Spears Judicial Training Center)
(Figure 20)



Figure 20 John H. Wood Courthouse and Adrian Spears Judicial Training Center
 Source: Marmon Mok Architecture. 1968. Confluence Theater, Hemisfair. Photo. All rights reserved.
<http://www.marmonmok.com/about/confluence-theater-hemisfair/>.

During the fair, the Confluence Theatre was a specially designed 1200-seat movie theater that was complemented by an exhibit hall and a public plaza in between. Today, this complex of buildings has been reused by the federal government for judicial purposes. The institutional nature of the buildings has created an outdoor atmosphere that is inactive and stale. Few people visit the buildings and workers go to their workplaces and return to their cars after.

An upcoming land swap between the federal government and the City of San Antonio means that the site can be reused in a way that will complement an active and lively redeveloped Hemisfair Park. To that end, we propose two possible reuse scenarios for the US Pavilion buildings.

A fiscally prudent and possibly revenue generating reuse scenario is the conversion of the current buildings to high end offices with retail and/or cafes at the ground floor. Retail and cafes will invite visitors to enter these buildings and make use of its outdoor spaces every day, while offices of a non-institutional character will provide weekday 9-to-5 activity. With the location of two universities on-site at Hemisfair Park, regular offices could also be mixed with educational spaces or a business incubator, which will provide activity for longer periods of time.

A building design strategy that could be used to accommodate all of these uses inside Confluence Theater would be the approach used by Central City Shopping Center in Surrey, British Columbia, Canada. The shopping center has a floor-to-ceiling atrium with retail on the first floor and university classrooms and offices along the perimeter of the upper floors. This

strategy would highlight the majestic height that the Confluence Theater offers. The US Pavilion Exhibit Hall, with its less welcoming front, would be best suited as primarily office space.

According to the Envision Tomorrow ROI model, reusing the Confluence Theater as a three-floor retail/office/educational complex would cost \$13.2 million including landscaping to the immediate green space and have an IRR of 14.2% when mostly it is fully leased, primarily because parking is decoupled from the improvements and must be built away from this site. Similarly, reusing the Exhibit Hall as offices would cost almost \$7 million, but have an IRR of 17.8% due to uncoupled parking.

Another possible reuse scenario of these buildings would be to return them to civic use. This option would probably not generate profit, but would be most complementary to the civic use of the park. To that end, the theater could be converted into a public library, with community rooms and some leasable office or business incubator space on the upper floors (Figure 21). Having a physical book collection at this library may not even be necessary; just as Hemisfair '68 looked to the future, so would this library. San Antonio is a leader in digital libraries with its BiblioTech library on the outskirts of the city. A second, larger BiblioTech branch at Hemisfair would provide constant daily public use at this site. Alternatively, the building could be reused as a stage theater, which would provide a nighttime use to this area of the park.



Figure 21 A public library concept photo.

Source: Florida Polytechnic University. 2014. The Reveal Web-5-3 (IGT Building Opening Day). Photo. All rights reserved. <https://www.flickr.com/photos/flpolytechnic/14713327467/>.

The Exhibit Hall, with its lack of windows, would be ideally converted back to its former use as a place to exhibit materials. The lack of windows helps prevent damage to delicate materials due to exposure to the elements. Not all of the building would need to be open to the

public. A museum could store its archives in a part of the building, and it will need some administrative space. This can help reduce the size of the exhibit areas of the building, making the museum more accessible to visitors.

The primarily civic uses of the two buildings means that the reuse will not be profitable. However, there is something to be said about adding more amenities to the park which will attract a constant flow of visitors. Additionally, adding amenities may increase the land value of the surrounding land, which means that there is a possibility of funding the renovation projects through tax increment financing. Nevertheless, the Envision Tomorrow ROI model estimates that the cost of reusing the theater would be \$13.3 million while the Exhibit Hall would cost \$7.9 million.

Federal Building (Figure 22)



Figure 22 The Federal Building

Source: Gary Easter. 2009. Federal-Building-San-Antonio. Photo. All rights reserved.
<https://www.flickr.com/photos/29457670@N04/3326700215/>.

The Federal Building is a 6-story Brutalist building built after Hemisfair '68. Due to its height and institutional character, the building commands a towering presence in the Tower Park site and is also relatively inactive on the outside. It is also surrounded by large surface parking lots. While the building is not included as part of the land swap between the federal government and the City of San Antonio, changes to the building should be incorporated in order to make the building and its surroundings match the character of a redeveloped Hemisfair Park.

The building itself is not considered historically significant at this point in time. If a land swap were to occur, the option to demolish the building and redevelop the land in a way that will match the vision of HemisFair may be considered. Alternatively, the building could be kept and converted into a mix of rental apartments, offices, and ground-floor retail. An Envision Tomorrow ROI model was conducted for this mixed-use reuse option and estimated the cost of the reuse to be \$29.3 million with an IRR of 10.1%, which could be addressed with subsidies. To accommodate these uses and bring the existing building closer to the street, a new building that envelopes the existing one may be necessary.

Alternatively, if only the parking lots may be swapped, they could be redeveloped into either mixed-use apartments, a surface parking lot, or additional parkland. In that case, the building would be left untouched, but the City should push the federal government to make changes to the outside of the building and the ground floor to make it more inviting for visitors, such as incorporating retail or adding interesting landscaping and public art.

Women's Pavilion and Historic Homes (Figure 23, 24)



Figure 23 (Left) Women's Pavilion Outside. Source: Johnson, Stuart. 2010. HemisFair Historic Properties. Photo. All rights reserved. <https://www.flickr.com/photos/whatafarce/4927657628/>.

Figure 24 (Right) Women's Pavilion Inside. Source: La Citta Vita. 2011. Viktualienmarkt, München (Victuals Market, Munich). Photo. CC 2.0 Attribution-ShareAlike. <https://www.flickr.com/photos/la-citta-vita/6959381398/>.

Currently owned and abandoned by the University of Texas at San Antonio, the Women's Pavilion was a quaint modernist exhibit space during the fair. Its small footprint and large open rooms makes this building one of the most adaptable on site. For its reuse, we envisioned a mix of retail, offices, and exhibit or civic spaces. In the future, this may be the appropriate space for HPARC headquarters or the administrative space of a non-profit organization. Envision Tomorrow analysis estimates the renovation costs to be \$2.9 million with a 6.8% IRR if 50% of the space were market-rate leasable office space and 25% was for retail.

There are also six 19th-century homes on the Tower Park area and they are currently being restored with funds provided by the City of San Antonio (Figure 25). Our proposal would keep the homes and recommend HPARC to continue pursuing tenants for them, either retail or restaurants. However, we also recommend installing a beer/wine courtyard within a pod of historic homes next to the Women's Pavilion, adding nighttime life to the outdoors (Figure 26).



Figure 25 (Left) Photo of a historical, pre-HemisFair home. Source: Johnson, Stuart. 2010. HemisFair Historic Properties. Photo. All rights reserved. <https://www.flickr.com/photos/whatafarce/4927657628/>.

Figure 26 (Right) Beer Garden concept photo. Source: La Citta Vita. 2011. Viktualienmarkt, München (Victuals Market, Munich). Photo. CC 2.0 Attribution-ShareAlike. <https://www.flickr.com/photos/la-citta-vita/6959381398/>.

Texas Pavilion (Currently UTSA Institute of Texan Cultures) (Figure 27)



Figure 27 UTSA Institute of Texan Cultures Source: Tse, B. 2006. UTSA Institute of Texan Cultures. Photo. All rights reserved. <https://www.flickr.com/photos/b2tse/2588477660/>.

Currently the Texas Pavilion has not lost its purpose as an exhibit space now that the UTSA has become its tenant. However, the building's imposing character makes it uninviting to potential visitors. While changes to the building envelope would disturb the historically significant structure, changes to the exterior land may entice visitors to visit the museum. The grass could be better maintained and large pieces of public art (preferable of Texan origin) could be incorporated to draw the attention of visitors on their way to the Tower of the Americas or any future amenities at Hemisfair Park. Additionally, the outdoor fountains at the pavilion should be in operation at all times, and lighting may be incorporated into the fountains and the building to make the site more dramatic.

New additions to the building could be solar panels or a green roof, as long as they are removable in the future. A green roof accessible to visitors that is adapted to San Antonio's hot weather provides additional parkland to the site and makes it more attractive to visitors. Changes to the interior of the building may also allow space for uses other than exhibit space, which could draw in more people as well.

Adaptive Reuse Results

Project	Reuse Function	Cost	Profitability	Social Impact
Confluence Theatre and surrounding greenery	74% Public/Edu 20% Office 8% Retail	\$13.4 Million (\$1.8M for green infrastructure)	No, will need funding	100 jobs Community space
US Pavilion Exhibit Hall	65% Public/Edu 20% Office 15% Retail	\$7.9 Million (\$664k for green infrastructure)	No, will need funding	65 jobs
Federal Building	49% Rental Units 34% Office 17% Retail	P3: Give land	\$2.8M subsidy	200 jobs 16 affordable housing units
Women's Pavilion	50% Office 25% Retail 25% Public/Edu	\$2.9 Million (\$961k for green infrastructure)	Mildly profitable	34 jobs