



City of  
New Braunfels

**MISSION HILL PARK**

*Master Plan*



## *Acknowledgments*

**Steering Committee Members:**

Ron Reaves - Council Member District 3  
Bryan Feltner - Parks and Recreation Advisory Board  
Karen Boyd - Chair Comal County Historical Commission  
Jane Miller - Texas Master Naturalist  
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**Prepared For:**

City of New Braunfels  
Parks and Recreation Department



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# Executive Summary

Mission Hill has always been a vital part of the history and make up of Comal County. Because of its elevation it has served as a landmark, functioned as an overlook for safety and been used as a survey triangulation point. It has also been the homestead and farm of a prominent family that played an role in the development and history of New Braunfels. Today, the land surrounding Mission Hill is being developed and becoming more urban. It is important for this noteworthy location to be protected and preserved as a landmark that tells a story of the past and serves the current and future needs of the citizen's of New Braunfels and Comal County.

Being located at the highest point within the City of New Braunfels, Mission Hill has a great overlook of the surrounding area. However, views from the site are being impeded by surrounding development and efforts must be put in place to protect what remains. The site itself is a collection of very large native trees, native and adapted under-story plants and wildlife indicative of the region. Remnants of architecture, garden walls, paths and agricultural elements remain on the property.

Although the property has many assets, development of the site does have its challenges. Existing topography is very steep. The design and layout of roads, parking lots, accessible trails and buildings must be done in a manner to limit impact to the site and preserve the existing vegetation. Efforts should be set in place to minimize construction impacts and preserve the character of the site.

The intent of this master plan is to serve as a decision making tool to guide the development of Mission Hill into a park facility that serves the citizens of New Braunfels and Comal County while preserving the existing landscape. The park facility would help immerse people into the history and natural site features. To do so the plan proposes accessible hard-surface trails, natural soft-surface trails, trail heads, an elevated boardwalk, overlook tower, shaded deck, historical interpretation center, picnic areas, art, seating, parking and a park drive.







# Chapter One

# Mission Hill

# Chapter One

## Mission Hill

### History

Presence of the Spanish in the 1740's, to keep out the French, had a strong role in the history of Comal County. They formed missions to spread Christianity to the Native Americans and presidios to house the military and provide protection. A missionary named Fray Marino was the main advocate in establishing a mission on the Guadalupe River. It is suspected that the name for the prominent landmark, Mission Hill, came from this Spanish Mission, Nuestra Senora de Guadalupe<sup>1</sup>. Good pastures, abundant woods, and fertile lands with plenty of potential for irrigation drew settlers to the mission. They arrived as early as 1756 and the mission was officially recognized on August 1st, 1757<sup>2</sup>.

Though the exact location of the mission is unknown, the description of the surrounding area matches what is currently known as Landa Park. Some argue that it would only make sense for the mission to be located at the highest point of the hill where one could have the best vantage point. The small mission was the home of four Spanish families who lived in "jacales" or primitive mud huts as well as 41 Indian converts and two priests. Though irrigation was abundant and it was believed that many more Indians would join, the life of the mission was cut short. Political disputes and Comanche attacks lead the resources going to the mission to be dispersed elsewhere and the inhabitants were relocated. Mission Nuestra Senora de Guadalupe only lasted for 18 months. By the time the German settlers arrived in 1845, there was no evidence of the mission.

In the early 1800's, following the Napoleonic Wars, many of the German states were characterized by extreme poverty, political unrest, and

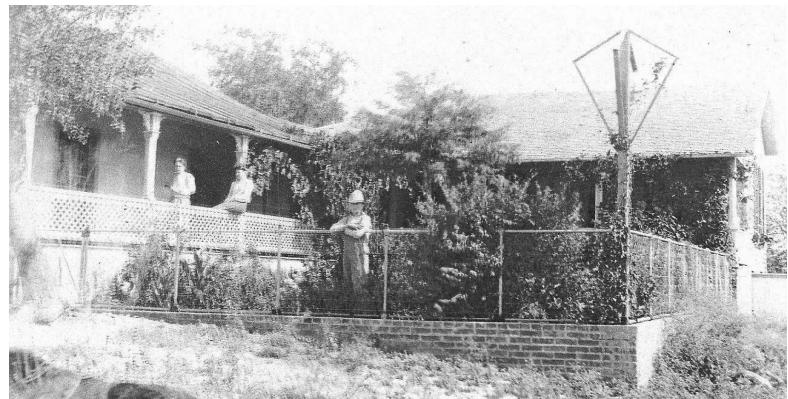
1. Alton Rahe. *History of Mission Valley Community* (Historical Publishing Network 2010) pg 8.

2. Rahe. *History of Mission Valley Community*, pg 8.

3. Rosemarie Gregory and Myra Goff. *New Braunfels Comal County, TX A Historical History* (Sophienburg Museum and Archive, 1993) pg 15.

overpopulation. Rumors of Texas being a land of opportunity spread to the Germans who hoped that immigration would help establish trade and alleviate the various pressures. Prince Carl of Solms-Braunfels was selected to lead the German immigration to Texas<sup>3</sup>. The prince arrived in Texas in 1844 to inspect the Medina area, the land which he had originally planned on colonizing. After seeing that the best parts of the land were already claimed, he found favor with a region known as "Las Fontanas" or the fountains or springs. Prince Carl decided that this was the place for his German colony. Soon after the purchase of the land the prince attempted to ride his horse up to the top of Mission Hill to overlook his purchase. His horse had trouble making it up the rough terrain so Prince Carl had to dismount and walk to the top himself. The land was named New Braunfels in honor of the prince and his homeland.

In 1846 Austrian Count Ernst von Coreth and his family immigrated to New Braunfels and purchased a farm. Later in 1884 his son Franz Coreth received an inheritance from his aunt in Austria. Franz also sold some property his father owned in Houston and used the money along with his portion of the inheritance to buy an additional farm from the widow Georgine Conring. The farm was 320 acres and included Mission Hill. Franz Coreth chose to build his home on top of the hill to overlook his farm. The hill was two miles north



Franz Coreth House, First Home Built on Mission Hill - Courtesy Kay Specht

of the courthouse and 350 feet above it. On the very day Franz rode into town to make his last payment on his home it caught fire and burnt to the ground. Efforts were made to extinguish the fire and save the house but the fire horses could not pull the tanker up the steep hill. The house was rebuilt in 1904.

One of the most notable features of the Coreth home was the tower. The tower played a number of roles for the early New Braunfels community. When the courthouse bell served as a fire alarm, people would call the Coreth's to know the fire's location. The tower was also used by the U.S. Coastguard and Geodetic Survey. The hill had been used as a triangulation station since 1899 and the benchmark is possibly still there today.

The On September 18, 1916 the National Guard held a huge mock battle which was centered around Mission Hill. The Wisconsin Brigade occupied the hill while the Illinois and Kansas regiments fought to take it. Generals observed the battle from the tower where the entire territory was visible. Those within earshot could hear the rifles and heavy artillery being fired. The mock battle lasted throughout the day until 6:00 that evening. Though the battle was not real, it was said to be a spectacle unlike any other witnessed in New Braunfels.

In 1917, Rochette Coreth, son of Franz Coreth, built a second home on the hill for himself and his new bride Flora Bading. Rochette took over the family farm after his father's death in 1921. Flora died in 1924 and Rochette married Melinda Staats three years later. The farm was primarily used for raising sheep and goats. It was said that at one point, the only sound you could hear from the top of the hill was the tinkling of sheep and goat bells. The hill was also used to produce saltpeter. Guano was harvested from a cave on the side of the hill and heated in kilns to make saltpeter crystals, and ingredient the Confederate Army used to manufacture gunpowder. By the late 1900's both homes fell into disrepair and in 1992 the second home was burnt followed by the first in 1993.

At some point Mission Hill was purchased by Westpointe Developers. They have or are developing the more level land around the base of the hill. Ten acres of land that consists of the top of the hill was given to the New



Franz Coreth House, Rebuilt After Fire Destroyed the First Home - Courtesy Kay

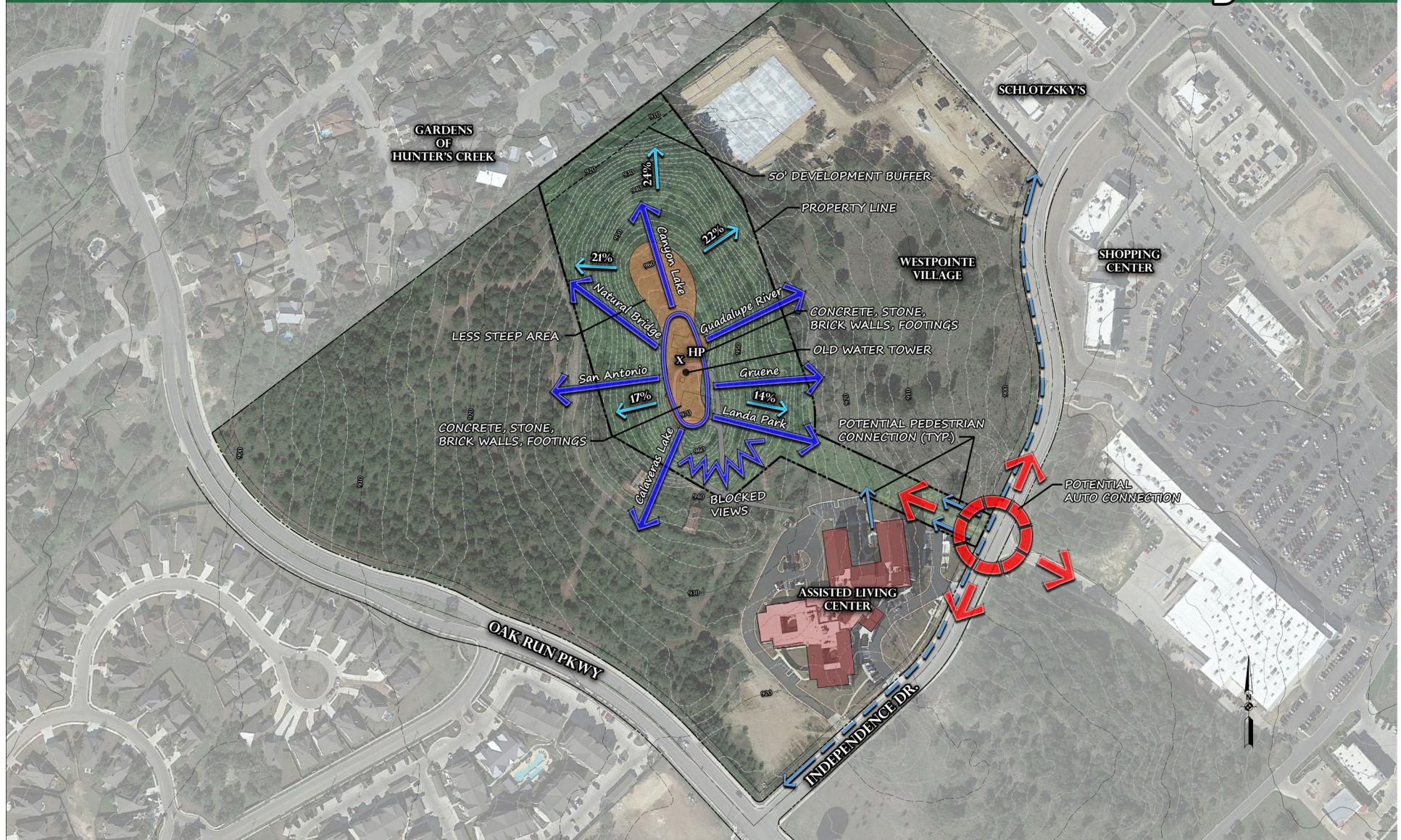


Rochette Coreth House - Courtesy Kay Specht

Braunfels Parks Foundation in 2012. The foundation is holding the land in a trust for the City for use as a future park.

# Station 1

# Site Analysis



# *Mission Hill Park*

A horizontal scale bar with tick marks at 0, 40, 80, 160, and 300. Below the scale, the text "GRAPHIC SCALE IN FEET" is printed.

MARCH 2016



## Site Analysis

A Site Analysis was conducted in February of 2016 by the design team and Park Staff. The intent of the analysis was to identify key features of the site and begin to develop an understanding of the topography, vegetation, character, wildlife, views and architectural remnants left on site.

## Views

Mission Hill Park is a 10-Acre Tract of land located near the intersection of Independence Drive and Oak Run Parkway in New Braunfels, TX. The high point of the site is also the highest point in the city and one of the highest points in Comal County. Standing at this point, views of the city and surrounding area can be experienced. Development along the southwestern corner of the project has obstructed some of the views from the park. Proposed development to the west is currently under construction. This site will be a senior living facility and it is anticipated that a portion, but not all, of the development will obstruct the view from Mission Hill. Southeast of the park an apartment community is being proposed. This facility will most likely obstruct views from the park. There are also many noteworthy interior views of nature within the site. The design and layout of the site should consider the views that will be potentially obstructed and identify ways to preserve those views.

## Topography and Geology

There is more than sixty feet of grade difference between Independence Drive and the top of Mission Hill. The land consists of a thin layer of topsoil and limestone bedrock / outcroppings are apparent. These characteristics will create accessibility and constructibility challenges when developing the park site. Americans with Disabilities Act (ADA) requires that the longitudinal slope of accessible walks without handrails not exceed 5% slope and the cross slope should not exceed 2%. Walks with handrails are considered ramps and can slope up to 8.3% but can not exceed a run of thirty feet without landings. To meet these parameters walks will need to not only include ramps but also include switchbacks. Retaining walls will be required to limit disturbance to the vegetation on site. The site should be laid out in a manner to import fill and limit mass grading across the site.

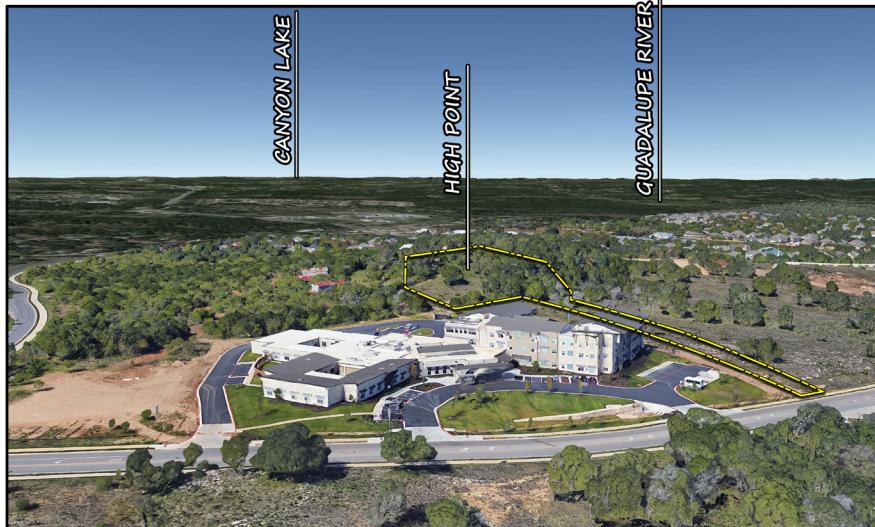
## Flora and Fauna

The site is predominately covered in Eastern Red Cedar, Live Oaks, Native Lantana and various native grasses. There are plant remnants of non-native vegetation that has naturalized from the former gardens around the homesteads. On March 29, 2016 Master Naturalists visited the site and documented vegetation that was identified. Below is that list of those findings:

Common Name	Scientific Name
Indian Mallow	<i>Abutilon incanum</i>
Huisache	<i>Acacia farnesiana</i>
Bee Brush	<i>Aloysia gratissima</i>
Agarita	<i>Berberis trifolia</i>
Lindheimer's Senna	<i>Cassia lindheimeri</i>
Mountain Mahogany	<i>Cercocarpus montanus</i>
Texas Purple Thistle	<i>Cirsium texanum</i>
Day-Flower	<i>Commelina erecta</i>
Croton	<i>Croton sp.</i>
Pencil Cactus	<i>Cylindropuntia leptocaulis</i>
Texas Persimmon	<i>Diospuros texana</i>
Anaqua	<i>Ehretia anacua</i>
Prairie Verbena	<i>Glandularia bipinnatifida</i>
Cut Rice Grass	<i>Leersia monandra</i>
Mimosa	<i>Mimosa borealis</i>
Sensitive Briar	<i>Mimosa roemeriana</i>
Prickly Pear	<i>Opuntia sp.</i>
Mesquite	<i>Prosopis glandulosa</i>
Mealy Blue Sage	<i>Salvia farinacea</i>
Desert Yaupon	<i>Schaeferia cuneifolia</i>
Texas Mountain Laurel	<i>Sophora secundiflora</i>
Eve's Necklace	<i>Styphnolobium affine</i>
Four-Nerve Daisy	<i>Tetraneuris acaulis</i>
Spiderwort	<i>Tradescanria sp.</i>
Frostweed	<i>Verbesina virginica</i>

# Station 1

# Site Analysis



VIEW LOOKING NORTH TOWARDS SITE



VIEW LOOKING SOUTH TOWARDS SITE



## Mission Hill Park

MARCH 2016



Figure 2 - Views From and Within the Site

The narrow strip of land that connects to Independence Drive has recently been cleared. This area is ideal for development of a park road and sidewalk with minimal disturbance to vegetation. At the base of the hill is a stand of Native Mountain Laurel that should be preserved as a natural site feature. On top of the hill are stately oak trees with character. To the North of the hill are stands of large Red Cedar that also add character to the site. Upon visiting the park visitors will always find native perennials in bloom if existing vegetation is preserved.

Although the surrounding area has become urbanized Mission Hill is habitat for an array of wildlife. Animals seen on site include deer, numerous birds, snakes, lizards, rabbits, rodents, possum, armadillo and insects. Protecting their habitat should be

### **Architectural and Agricultural Remnants.**

Although the homes that were on the land have been burned down, remnants of garden walls, chimneys, fences and foundation can be seen. There is also a large weathered and aged cistern at the highpoint of the hill that has become home to a flock of turkey buzzards. During site visits remnants of a bat guano kiln used to make saltpeter was also identified. In the adjacent column are photos of remnants that have been identified.



**Fireplace Remnant**



**Brick Wall and Paving Remnants**



**Brick Wall Remnants**



**Brick Wall Remnants**





*Chapter Two*  
**The Plan**



## Chapter Two

# The Plan

### The Process

#### Steering Committee

As the design team was wrapping up the initial site analysis the City of New Braunfels invited members of the community to participate on a steering committee to help guide the development of the park. This committee consisted of a City Councilman, Parks Board representative, historian, master naturalist, trails enthusiast, Park Foundation member and resident in the adjacent neighborhood. Key meetings were held with the steering committee prior to beginning each project milestone. This group of members provided significant data, information and input to the design team to help develop the Master Plan and will continue to be valuable assets to the project as the construction phase is entered.

#### Public Input

The community of New Braunfels was engaged as the project scope was being defined and as Master Plan Concepts were being developed with the opportunity to participate in two public input sessions and provide comments on-line throughout the process. The initial input session was a fact finding mission to determine what park elements were preferred, discover historical information about the site and gauge design theme preferences from the community. Graphics and questions from the first public input session were put on My Sidewalk, an on-line project communication site, to allow citizens to provide additional comments. The information gathered from this meeting was very helpful and became the foundation for how the Master Plan Options were developed.

From this input the design team identified that preservation of the native vegetation and views was desired. Numerous citizens requested that the park be developed around the history of Mission Hill and there were several

requests to bring back the a tower symbolic of the tower on the Coreth Home. Some residents suggested that an observation tower would help overcome the obstructed views that had occurred from surrounding development. Trails and seating areas were also a requested element to be incorporated into the Master Plan. A consistent theme in the comments was to not turn this into a typical New Braunfels park that had playgrounds. Many felt this should be a passive space where one could connect with nature and history.

Because of this input the design team developed three Master Plan Options, each of which included an observation tower, class / gathering space, parking, hard-surface trails, natural surface trails, restrooms, a trail head, native gardens, historical interpretation, seating and shade. Each Master Plan featured a different design style for the observation tower. These three options were presented to the public at the second input session and feedback was gathered. Online comments via the My Sidewalk page was also gathered.

The majority of the public preferred the master plan option with more rustic theme that took cues from the historical tower and architectural styles and stonework indicative of the Hill Country Region. There were many comments requesting more trails and seating and for the parking to be closer to the observation tower. There was still a strong sentiment to preserve the existing views and native vegetation. Additional items requested were meeting space within the observation tower and a small area for kids to play amongst nature. Due to the complexity of the site design a meeting was held with city staff to review site development requirements. Modifications to the fire lane were made and a storm water detention area was identified. Based on this input a final Master Plan was developed and presented to the steering committee and city staff for comment. The design team made final modifications to the plan and presented the results to the Parks and Recreation Board and City Council.



Figure 3 - Masterplan

## Master Plan

### Site Circulation

The narrow strip of land to the south will serve as the vehicular entry point from Independence Drive. This entrance should be identified with park entry signage. This point will be the single point of access to the park. A park drive runs from the southern lower level of the site to the middle of the site which is the high point. The drive is lined with head-in parking spaces, a midway turn around, trail head and an upper level parking lot. The drive must serve as fire-lane access and slope cannot exceed 10% per city requirements. In order to meet fire-lane turnaround requirements a grass pave hammerhead was integrated into the design. The upper level parking lot will serve the site during day to day use. It includes ten parking spaces, with five of them being accessible. The grass pave area of the fire lane hammerhead can be utilized for catering deliveries during larger events if needed. The lower level parking lot contains 56 hard surface parking spaces and 24 overflow spaces that are paved with grass pavers.

Pedestrian circulation to the site is also from Independence Drive. Interior pedestrian circulation includes accessible hard-surface walks and natural surface paths. The upper level of the observation tower can be accessed via the stairs interior to the building or from an elevated walk that winds through the tree canopy north of the observation tower. The elevated walk should include points of interest and overlooks along the route. During the Master Plan process the steering committee felt that an elevator ruined the natural characteristics of the park and posed maintenance issues for the city. As Construction Documents are prepared the feasibility of integrating an elevator should be analyzed. In addition to being circulation routes, concrete trails and natural paths provide the park user access to natural areas in the park and should be accompanied with seating and signage. The concrete walk connects to a trail head at the turnaround area and winds up the hill to the entrance of the observation tower. At the trail head there is also a connection to a natural surface path which makes a loop around the site. This path will require either the use of retaining walls or boardwalk type construction to limit disturbance to natural areas. The natural surface path has several connections to the concrete surface trail. Both trail systems will include seating areas and interpretive signage.



Figure 4 - Trailhead

## Observation Tower

To overcome views that are being obstructed by surrounding development. An observation tower is being proposed that will elevate the visitors 27' above the existing grade. This tower will be located near the footprint of the second home that was constructed on Mission Hill. It will include space for historical information, stairs, an optional second story meeting room an observation platform and a two-level exterior deck. The tower and attached architecture is oriented based on views within and around the site. Windows and portals are located to capture and frame views.

The base, or ground level, of the observation tower will accommodate historical information about the property. This area will be connected to the lower level deck, that captures views to the northwest. This space will also accommodate historical information about the site. Public restrooms will also be located at ground level on the east side of the observation tower. Currently the restrooms can accommodate events up to 125 people. As the program for the site is further developed the restrooms may need to be adjusted to accommodate the final projected user numbers.

The second story of the observation tower opens up to the upper level deck that faces the northwest of the property. This deck will include seating areas and will be partially shaded from the upper deck of the observation tower. This space can be utilized for small events or can be a gathering space during field trips that might visit the site. This space will be accessed from either the interior stairs or the exterior elevated boardwalk.

The third story consists of the observation deck. A shade structure will shade a portion of the deck. A guardrail integrated into the architecture will not only serve as a barrier it will support interpretive signage and binoculars. Flexible seating will also be provided on the observation deck. This space will be able to accommodate medium size gatherings such as weddings.

Around the perimeter of the observation tower are landscaped areas. At the entrance is a focal point located at the highest elevation on the site. It is proposed that a sculpture element be used to demarcate this point. A formal xeriscape garden is also located on the western side of the tower. The original homesteads on the property included gardens contained by masonry



Figure 4 - Observation Tower View from the South

garden walls. Around the xeriscape garden is a masonry garden wall is being proposed that will replicate historical masonry craftsmanship seen around New Braunfels and on site. A large architectural feature wall will create a portal that connects the garden to the exterior deck. A cistern which harvests rainwater for irrigation of the xeriscape garden is located within this space. Northwest of the tower is a picnic grove that will take advantage of the interior natural views and shade provided from the large canopy trees on the site. It is important that seating be incorporated into the garden spaces and along the perimeter of the observation tower. Special attention should be given to the location of shade and framing of views.

A grass pave type fire lane located at the entrance to the building can also serve as a flexible gathering space or staging area for events. Removable bollards are incorporated into the layout to prevent vehicles from driving over the grass paved area during normal operations.



Figure 6 - Observation Tower View from the Northwest



Figure 7- Observation View from the North



Figure 8 - Observation Tower View from the Southeast







## *Chapter Three* **Cost and Phasing**

## Cost and Phasing

### Overall Cost Estimate

A Cost Estimate was prepared for the overall construction of the site. This estimate includes a contingency and professional service fees for the production of Construction Documents. This estimate does not include a factor for inflation, which should be considered when budgeting for the development of the project. The graphic below illustrates the what is included in the overall cost estimate.



Figure 9 - Overall Masterplan for Overall Cost Estimate

**OPINION OF PROBABLE CONSTRUCTION COST**

 Mission Hill Park  
 New Braunfels, TX

**SRA**

No.	Item	Quantity	Unit	Unit Price	Amount
<b>A. General Items, Removal, &amp; Relocation</b>					
Mobilization	1	LS	\$ 220,000.00	\$ 220,000.00	
Clearing and Grubbing	2	AC	\$ 5,000.00	\$ 9,000.00	
Erosion Control	1,000	LF	\$ 1.50	\$ 1,500.00	
Tree / vegetation Protection	1	LS	\$ 5,500.00	\$ 5,500.00	
Demolition	1	LS	\$ 10,000.00	\$ 10,000.00	
		<b>Subtotal</b>		<b>\$ 246,000.00</b>	
<b>B. Earth Work</b>					
Fill Below Road and Parking	1,200	CY	\$ 25.00	\$ 30,000.00	
Fill Below Trail	205	CY	\$ 25.00	\$ 5,125.00	
Topsoil (Strip, Stockpile & Replace +/- 6")	185	CY	\$ 5.00	\$ 925.00	
Fine Grading	2,000	CY	\$ 20.00	\$ 40,000.00	
		<b>Subtotal</b>		<b>\$ 76,050.00</b>	
<b>C. Walls, Trails &amp; Concrete Construction</b>					
7" Concrete Drive / Fire Lane	26,343	SF	\$ 8.00	\$ 210,744.00	
5" Concrete Parking Stalls	11,498	SF	\$ 4.50	\$ 51,741.00	
5" Conc. Sidewalk Paving	11,995	SF	\$ 4.50	\$ 53,977.50	
Elevated Boardwalk, Deck surface and rails	1,691	LF	\$ 215.00	\$ 363,565.00	
Concrete Curb & Gutter	2,577	LF	\$ 20.00	\$ 51,540.00	
Grass Pave	4,432	SF	\$ 20.00	\$ 88,640.00	
Nature Trail (Natural Surface)	6,000	SF	\$ 3.50	\$ 21,000.00	
Nature Trail (Boardwalk Surface)	6,000	LF	\$ 10.00	\$ 60,000.00	
Retaining Walls (Around Trail)	5,500	FF	\$ 50.00	\$ 275,000.00	
Retaining Walls (Around Road)	800	FF	\$ 75.00	\$ 60,000.00	
Garden Walls	300	FF	\$ 100.00	\$ 30,000.00	
Striping (Parking Spaces ADA)	1	LS	\$ 2,500.00	\$ 2,500.00	
Accessibility Signs	5	EA	\$ 100.00	\$ 500.00	
Dumpster Enclosure	1	LS	\$ 25,000.00	\$ 25,000.00	
		<b>Subtotal</b>		<b>\$ 1,294,207.50</b>	
<b>D. Architecture</b>					
Tower (1st Floor)	400	SF	\$ 275.00	\$ 110,000.00	
Tower (Optional 2nd Floor Meeting Room)	250	SF	\$ 275.00	\$ 68,750.00	
Tower Deck	600	SF	\$ 200.00	\$ 120,000.00	
Tower Shade Structure	400	SF	\$ 50.00	\$ 20,000.00	
Tower Restrooms	1,600	SF	\$ 350.00	\$ 560,000.00	
Feature Wall	1,470	FF	\$ 55.00	\$ 80,850.00	
Deck (First Floor)	1,500	SF	\$ 25.00	\$ 37,500.00	
Deck (Second Floor)	700	SF	\$ 175.00	\$ 122,500.00	
Interpretive Signage	1	LS	\$ 100,000.00	\$ 100,000.00	
Cistern	1	LS	\$ 30,000.00	\$ 30,000.00	
Site Furnishings Benches	10	EA	\$ 1,500.00	\$ 15,000.00	
Site Furnishings Tables	10	EA	\$ 1,500.00	\$ 15,000.00	
Trash Receptacles	3	EA	\$ 1,000.00	\$ 3,000.00	
Bike Rack	1	EA	\$ 1,200.00	\$ 1,200.00	
Drinking Fountain	1	EA	\$ 3,600.00	\$ 3,600.00	
	600	LF	\$ 6.50	\$ 3,900.00	
		<b>Subtotal</b>		<b>\$ 1,291,300.00</b>	

<b>E. Site Furnishings / Amenities</b>					
Entry Signage	1	LS	\$ 25,000.00	\$ 25,000.00	
Kiosk	1	EA	\$ 25,000.00	\$ 25,000.00	
Benches	5	EA	\$ 1,500.00	\$ 7,500.00	
Trash Receptacles	3	EA	\$ 1,000.00	\$ 3,000.00	
Drinking Fountain	1	EA	\$ 3,600.00	\$ 3,600.00	
Bike Rack	1	EA	\$ 1,200.00	\$ 1,200.00	
Lighting	12	EA	\$ 5,000.00	\$ 60,000.00	
		<b>Subtotal</b>			<b>\$ 125,300.00</b>
<b>F. Landscaping</b>					
Soil Amendments	300	CY	\$ 25.00	\$ 7,500.00	
Mulch	150	CY	\$ 25.00	\$ 3,750.00	
Sod	1,183	SY	\$ 4.50	\$ 5,323.50	
Trees	17	EA	\$ 500.00	\$ 8,500.00	
Plantings	6,000	SF	\$ 10.00	\$ 60,000.00	
Irrigation	1	AC	\$ 15,000.00	\$ 15,000.00	
		<b>Subtotal</b>			<b>\$ 100,073.50</b>
<b>H. Total Items</b>					
Contingency 15%					<b>\$ 3,328,381.00</b>
Professional Services					<b>\$ 499,257.15</b>
<b>Grand Total</b>					<b>\$ 332,838.10</b>
					<b>\$ 4,160,476.25</b>

## Phasing

Phase one of construction is proposed to include the tower, park drive, concrete trails and a portion of the parking. It will exclude the trailhead, natural surface trails, grass pave overflow parking, a portion of restroom facilities, the exterior deck and the portion of elevated boardwalk that leads to the second level of the deck.



**Figure 10 - Phase I**

OPINION OF PROBABLE CONSTRUCTION COST Phase I					
Mission Hill Park			SRA		
New Braunfels, TX					
No.	Item	Quantity	Unit	Unit Price	Amount
<b>A. General Items, Removal, &amp; Relocation</b>					
Mobilization	1	LS	\$ 186,000.00	\$ 186,000.00	
Clearing and Grubbing	2	AC	\$ 5,000.00	\$ 9,000.00	
Erosion Control	1,000	LF	\$ 1.50	\$ 1,500.00	
Tree / vegetation Protection	1	LS	\$ 5,500.00	\$ 5,500.00	
Demolition	1	LS	\$ 10,000.00	\$ 10,000.00	
	Subtotal			\$ 212,000.00	
<b>B. Earth Work</b>					
Fill Below Road and Parking	1,200	CY	\$ 25.00	\$ 30,000.00	
Fill Below Trail	205	CY	\$ 25.00	\$ 5,125.00	
Topsoil (Strip, Stockpile & Replace +/- 6")	185	CY	\$ 5.00	\$ 925.00	
Fine Grading	2,000	CY	\$ 20.00	\$ 40,000.00	
	Subtotal			\$ 76,050.00	
<b>C. Walls, Trails &amp; Concrete Construction</b>					
7" Concrete Drive / Fire Lane	26,343	SF	\$ 8.00	\$ 210,744.00	
5" Concrete Parking Stalls	9,894	SF	\$ 4.50	\$ 44,523.00	
5" Conc. Sidewalk Paving	5,635	SF	\$ 4.50	\$ 25,357.50	
Elevated Boardwalk, Deck surface and rails	1,561	LF	\$ 215.00	\$ 335,615.00	
Concrete Curb & Gutter	2,361	LF	\$ 20.00	\$ 47,220.00	
Grass Pave	868	SF	\$ 20.00	\$ 17,360.00	
Retaining Walls (Around Trail)	3,500	FF	\$ 50.00	\$ 175,000.00	
Retaining Walls (Around Road)	800	FF	\$ 75.00	\$ 60,000.00	
Garden Walls	300	FF	\$ 100.00	\$ 30,000.00	
Striping (Parking Spaces ADA)	1	LS	\$ 2,500.00	\$ 2,500.00	
Accessibility Signs	5	EA	\$ 100.00	\$ 500.00	
Dumpster Enclosure	1	LS	\$ 25,000.00	\$ 25,000.00	
	Subtotal			\$ 973,819.50	
<b>D. Architecture</b>					
Tower (1st Floor)	400	SF	\$ 275.00	\$ 110,000.00	
Tower Deck	600	SF	\$ 200.00	\$ 120,000.00	
Tower Shade Structure	400	SF	\$ 50.00	\$ 20,000.00	
Restrooms	800	SF	\$ 350.00	\$ 280,000.00	
Feature Wall	1,470	FF	\$ 55.00	\$ 80,850.00	
Deck (First Floor)	-	SF	\$ 25.00	\$ -	
Deck (Second Floor)	-	SF	\$ 175.00	\$ -	
Interpretive Signage	1	LS	\$ 100,000.00	\$ 100,000.00	
Cistern	1	LS	\$ 30,000.00	\$ 30,000.00	
Site Furnishings Benches	10	EA	\$ 1,500.00	\$ 15,000.00	
Site Furnishings Tables	-	EA	\$ 1,500.00	\$ -	
Trash Receptacles	2	EA	\$ 1,000.00	\$ 2,000.00	
Bike Rack	1	EA	\$ 1,200.00	\$ 1,200.00	
Drinking Fountain	1	EA	\$ 3,600.00	\$ 3,600.00	
	Subtotal			\$ 766,550.00	

<b>E. Site Furnishings / Amenities</b>					
Entry Signage	1	LS	\$ 25,000.00	\$ 25,000.00	
Kiosk	-	EA	\$ 25,000.00	\$ -	
Benches	1	EA	\$ 1,500.00	\$ 1,500.00	
Trash Receptacles	1	EA	\$ 1,000.00	\$ 1,000.00	
Drinking Fountain	-	EA	\$ 3,600.00	\$ -	
Bike Rack	-	EA	\$ 1,200.00	\$ -	
Lighting	-	EA	\$ 5,000.00	\$ -	
	Subtotal			\$ 27,500.00	
<b>F. Landscaping</b>					
Soil Amendments	300	CY	\$ 25.00	\$ 7,500.00	
Mulch	150	CY	\$ 25.00	\$ 3,750.00	
Sod	1,183	SY	\$ 4.50	\$ 5,323.50	
Trees	17	EA	\$ 500.00	\$ 8,500.00	
Plantings	6,000	SF	\$ 10.00	\$ 60,000.00	
Irrigation	1	AC	\$ 15,000.00	\$ 15,000.00	
	Subtotal			\$ 100,073.50	
<b>G. Site Utilities</b>					
Fire Hydrant / Dry Stand Pipe	1	LS	\$ 4,000.00	\$ 4,000.00	
Water Service	1,050	LF	\$ 75.00	\$ 78,750.00	
Electrical Service	1,050	LF	\$ 50.00	\$ 52,500.00	
Sanitary Sewer	1,050	LF	\$ 55.00	\$ 57,750.00	
Storm Drain	70	LF	\$ 35.00	\$ 2,450.00	
	Subtotal			\$ 195,450.00	
<b>H. Total Items</b>					
Contingency 15%				\$ 2,351,443.00	
Professional Services				\$ 352,716.45	
<b>Grand Total</b>				\$ 235,144.30	
				\$ 2,939,303.75	

