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## **Executive Summary**

In November of 2006, the City of Seguin issued a Request for Qualifications for the "development of a linear park along the banks and immediate environ of the historic Walnut Branch Creek." In March of 2007, Jacobs began working with the City of Seguin and the Walnut Branch Committee to develop a Walnut Branch Linear Park Master Plan.

The intention of the Master Plan is to serve as a roadmap for future development along the Branch, and to highlight the rich cultural history of Seguin, originally known as "Walnut Springs" due to the multiple groundwater springs that feed the Branch. Seguin also has a wonderful architectural history, involving both the development of a form of concrete known as "limecrete," and park elements designed for Walnut Branch by the architect Robert H.H. Hugman, more widely known as the designer of San Antonio's famous Riverwalk.

Coupling the rich past of Seguin and its connection to Walnut Branch with the modern desire to reconnect the Branch to the citizenry through a compelling and unique park is the main challenge of the Master Plan. By examining the cultural, architectural and historic context of the Branch, and developing conceptual design solutions that respond to that context, the Master Plan successfully envisions a vibrant park space that will create a true "sense of place," both for Seguin residents and for visitors.

Focusing efforts for Phase 1 of development between Guadalupe Street and Nolte Street will make a significant impact in the community and hopefully generate momentum to continue with the development of future phases of the park. Located 2 blocks west of the historic downtown, this area was the site of an original Hugman park, is easily accessible for visitors, has multiple existing spring locations, and is located in an area where the City already owns several properties.

The Walnut Branch Linear Park, upon completion, should celebrate and respect of the unique history and cultural resources found in Seguin and specifically along Walnut Branch, including the natural springs, remove many of the invasive vegetation species, and provide stabilization of the banks of the branch to prevent erosion. Utilizing the Master Plan as a guide, the City should be able to successfully target for acquisition those properties required to construct the project ultimately envisioned by the community.

## Acknowledgements

The following individuals and organizations were participants in the Walnut Branch Linear Park Master Plan process.

#### City of Seguin

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#### Introduction

In November of 2006, the City of Seguin issued a Request for Qualifications for the "development of a linear park along the banks and immediate environ of the historic Walnut Branch Creek." In March of 2007, the City entered into a contract with Carter & Burgess (now Jacobs) to perform the work requested in the RFQ. A copy of the RFQ can be found in **Appendix 1**.

The work performed by Jacobs, outlined in the Scope of Services, included data synthesis, mapping, project initiation, site understanding and analysis, master plan preparation, Phase 1 constructions plans, and project management (reference **Appendix 2** for the entire Scope of Services). This Master Plan Report serves as the narrative associated with the development of the Linear Park Master Plan produced by the Jacobs team to satisfy the requirements put forth in the original RFQ.

Subsequent to the award of the contract for the Master Plan, the City of Seguin approved additional funds to perform extensive physical and property survey work in the area that was identified as Phase 1. Refer to the "Land Acquisition" paragraph under the "Master Plan" section below for more information.

#### History

The staff at the City of Seguin supplied the Jacobs team with a wealth of information regarding the rich history of the town. This information is compiled in **Appendix 3**, and several items of note in Seguin's history bear directly on the development of the master plan for Walnut Branch.

Firstly, Seguin was originally named Walnut Springs when the City was founded in the 1830's, paying homage to the numerous natural springs that create the Branch and the large number of majestic oaks and walnut trees that lined its banks. The City center was sited just east of the springs to take advantage recreational and domestic advantage of the water, and is still there today.

Next, the environmental architect R.H.H. Hugman, famously known as the architect of San Antonio's Riverwalk, was employed by Seguin in the 1930's to develop a park along the banks of Walnut Branch. Hugman designed a series of low water stone dams, retaining walls, steps and pathways along the Branch, mainly in the area between Court Street and Nolte Street. While the original structures were intentionally destroyed during a severe drought in the mid-1950's to remove potential disease spreading mosquito breeding areas, some of the structures were partially rebuilt over the next few decades. These rebuilt structures, however, were subsequently neglected. The remains of these Hugman era structures serve as reminders to the community of the "high-point" of park development along the Branch, and as inspiration to redevelop a linear park to recall that era.

Historical flooding events have plagued Walnut Branch and the City of Seguin for decades. Several of these floods have caused the City to be declared a major disaster area, such as the flood of May 1972 which was deemed a 30-year flood event. In 1979, the City attempted to alleviate flooding issues with channel improvements along Walnut Branch from Guadalupe Street to Campbell Street. In 1987, the United States Army Corps of Engineers (USACE)

prepared a report entitled "Local Flood Protection Feasibility Report" (**Appendix 5**), which detailed several options considered for flood control improvements. The USACE investigated costs of non-structural and structural improvements for various flood events. They determined that the grass-lined trapezoidal channel, now in place from New Braunfels Street to just upstream of Williams Street, provided the best cost to benefit ratio. This flood damage reduction project was designed to a 10-year flood recurrence level of protection.

In December 2003 the USACE published the "Planning and Design Report and Integrated Environmental Assessment" for Walnut Branch that contained recommendations regarding bank stabilization measures for areas along the Branch. This USACE report can also be found in **Appendix 5.** The 2003 report was the latest generated by the USACE regarding the Branch and it focused on opportunities for Ecosystem Restoration. The Jacobs design team took these recommendations into account during the development of the master plan, and nothing proposed in the master plan document would preclude the implementation of the recommendations made by the USACE.

In an effort to respond to the growing population of Seguin interested in the development of Walnut Branch in to a park, the City of Seguin formed the Walnut Branch Committee (WBC) in 2000, with Sam Flores serving as the chair. The committee, comprised of former council members, local business leaders and other citizens concerned about the development of the Branch, works with the City staff and serves as an advisory committee to the City Council.

Years of interest in developing a linear park along Walnut Branch manifested in 2001 when Seguin voters approved several bond propositions, including means of funding a project on Walnut Branch. The voters approved a total of \$3 million for the design and development of a linear park along Walnut Branch. A portion of those monies were used to fund the master plan creation and this report.

Even before the creation of the WBC in 2000, the citizens and government of Seguin were interested in restoring the overgrown creek to an inviting park that recalled the splendor found along the Branch in the 1930's and 1940's. Due to the amount of privately owned property along the creek banks, however, the issue of which property to purchase for the project always seemed to bog down the process. The property acquisition problem was therefore one of the driving forces that led to the issuance of the RFQ in November 2006 for the Walnut Branch Linear Park Master Plan project. The City and the WBC recognized a need for help in determining what the linear park would look like, and which property was required for its development.

# **Objectives**

In August of 2004 the City of Seguin published the "Walnut Branch Park Restoration Master Plan" which outlined the community desire to establish a linear park along the Branch, and summarized the efforts made to date to make the park a reality. This report, included as **Appendix 4**, includes a discussion of the creation of the Walnut Branch Committee, justification of the park's need using national standards for service areas and population, listed desired activities, and prioritized which sections of the Branch should be developed first.

In order to help the City and the WBC determine which properties might be required to develop a linear park along Walnut Branch, Jacobs recommended that an updated Walnut Branch Master Plan be created to address eventual development of the entire Branch, from IH-10 downstream to the confluence with the Guadalupe River. While the master plan would serve as a "roadmap" for future development, the City made it clear to the design team early in the process that whatever portion of the project was targeted for construction as Phase 1 would need to be a complete project that could stand on it's own merits, regardless of whether or not any other phase of the project was ever constructed. Once the master plan was completed, Phase 1 was determined largely by the amount of money available for construction.



Figure 1: Walnut Branch Master Plan Project Area

The upper most portion of the Walnut Branch channel is mainly characterized by agricultural land and becomes much more developed and urbanized further downstream. The USACE developed the existing grass-lined trapezoidal channel that extends from New Braunfels Street to just upstream of Williams Street. The channel in this area is approximately 120 feet wide and five to six feet deep. The channel bank slopes to the north of Saunders Street are much flatter than the slopes in the lower sections, and this northern section of the channel from the "headwaters" to Saunders Street is normally dry until a rain event. Just downstream of the bridge at Saunders Street is a natural spring that constantly feeds water into Walnut Branch. The channel downstream of the spring progressively narrows and becomes deeper as it meanders towards the Guadalupe River and is fed by other natural springs. The average depth in this area is close to eleven feet and the channel is approximately 110 feet wide. The furthest downstream portion of the channel is the narrowest, at 65 to 70 feet, with an average depth of 10 feet.

The City of Seguin has hired TRC (engineering design firm from Austin, Texas) to design two regional detention ponds in the upper portion of the study area, to aid with further flood reduction along Walnut Branch. The north pond is located upstream of IH-10 and has a maximum flood storage of 809.7 acre-feet. This proposed pond will control a drainage area of

approximately 4 square miles. The second pond, which is the smaller of the two, is located between IH-10 and New Braunfels Street. This pond has a maximum storage volume of 173.4 acre-feet and will control a drainage area of approximately 0.55 square miles.

The hydraulic model that is being studied for the ponds project was developed by Halff Associates, Inc. who was contracted by FEMA to complete a restudy of the Guadalupe County Flood Insurance Study (FIS). TRC took this model and incorporated the two regional detention ponds in order to complete a Conditional Letter of Map Revision (CLOMR) for the City of Seguin. This is the same model used by Jacobs to develop the Master Plan and the Phase 1 construction documents.

Long after the master plan is completed and Phase 1 is constructed, the Walnut Branch Master Plan will serve as a general guide for the City to develop future phases of the linear park. To effectively achieve the objective of providing a "roadmap" for development of a linear park, the master plan must be specific enough to recommend future land uses, activities and pedestrian connectivity, both along the Branch to the surrounding community, while also remaining flexible enough to be adjusted as time goes by and the economic development and funding climate changes. Effectively engaging both the WBC and the City staff, therefore, was an absolute necessity in the development of an effective master plan.

#### Citizen's Committee

In addition to serving as an advisory committee to the Seguin City Council, the WBC also received monthly updates from the Jacobs team on the progress of the master plan development. While Jacobs was under direct contract with the City, the team understood the importance of the WBC and of obtaining as much input as possible from them. After all, the committee had been working on the linear park idea for six years prior to the hire of the design team.

The design team met with the WBC early in the development of the master plan to outline the process that the team would use to progress from data gathering to Phase 1 construction documents for the project. At each meeting, the team updated the committee on the status of the project and the project timeline.

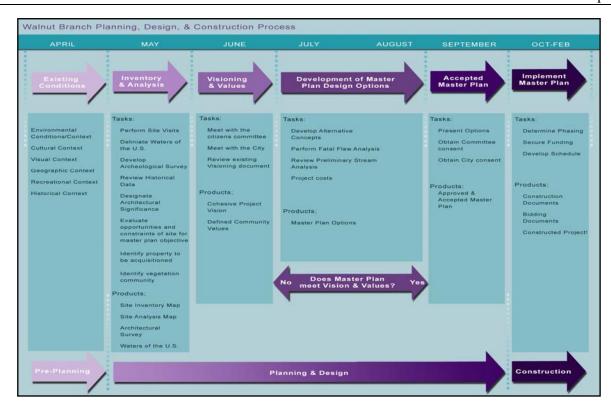


Figure 2: Design & Construction Process

In addition to keeping the WBC informed regarding the progress of the master plan, the design team also sought to keep the committee and the City engaged in the process of data collection, data synthesis, and master plan development. The team learned something new about the project from the committee at each meeting, and worked hard to incorporate that knowledge into the master plan development. Meeting minutes and notes can be found in **Appendix 12**. By continuous involvement in the process by the stakeholders, it is the hope of the design planners that the master plan has become a document to which the WBC and the City can proudly claim ownership.

#### Site Inventory

During the site inventory process, the design team spent time in the field gathering site information such as existing onsite and offsite trails, spring locations, vegetation types, densities, and other environmental data, severity of slopes, condition of street crossings, points of pedestrian connection and destination points. While gathering this site information, pictures were taken with a GPS capable camera to pinpoint, with relative accuracy, where the images were taken. The team assembled the information onto an aerial photograph to produce a graphic which shows the "big picture" about what existed on the Branch at the beginning of the project. **Appendix 6** contains the Existing Conditions Photographs.

The field team also collected information regarding the cultural resources investigation and performed a survey of the standing structures along the Branch so as to complete a Sec. 106 Cultural Resources survey. The City of Seguin provided many historical accounts, photographs, and other bits of information which can be found in **Appendix 3**. The cultural resource

investigation can be found in **Appendix 10** and the Standing Structures Inventory can be found in **Appendix 11**. A reduced size of the completed site inventory graphic can be viewed in **Appendix 7**.

During the site inventory, the team realized that the project area could be divided into five distinct areas. The delineation of these areas was based upon existing characteristics of the Branch and the immediately adjacent community. Listed from downstream to upstream, the areas are Starcke Park, Austin Street to Nolte Street, Nolte Street to Guadalupe Street, Guadalupe Street to Williams Street, and Williams Street to New Braunfels Street. When viewed downstream to upstream, the project area generally becomes more sparsely vegetated and easier to access. In other words, the downstream end of the Branch is very densely vegetated and relatively difficult to access, while the upstream end is more sparsely vegetated and any proposed access would be relatively simple to achieve. Each of the five project areas are briefly described below.

## Starcke Park



Figure 3: Starcke Park

Max Starcke Park, the only regional park in Seguin, is a 227-acre Cityowned park which is highly visited by a variety of user groups. The pecan tree lined, well maintained park sits on the west bank of Walnut Branch at the confluence to the Guadalupe River and has an existing concrete trail along the Branch as well as throughout the park. Other recreational elements of the park include play structures, shade pavilions, fishing piers, restrooms, tennis courts, basketball courts, little league fields, an 18-hole golf course, and a wave pool. The Fairgrounds

Complex is a specialty park adjacent from Starcke Park and has recreational league softball fields and volleyball courts.

For the purposes of this study, the Starcke Park area of the project includes the Walnut Branch channel from Austin Street downstream to the Guadalupe River. This area has spring fed flowing water and an average Ordinary High Water Mark (OHWM) of 15 feet in width, although it expands in width at the mouth of the creek to an average OHWM of 50 feet. Vegetation in the area includes sedge, American sycamore (*Platanus occidentalis*), boxelder, poison ivy (*Toxicodendron radicans*), giant ragweed, slippery elm, live oak, and green ash. Exotic species such as elephant ear (*Colocasia esculenta*) and other large ornamental shrubs also grow here.

#### Austin Street to Nolte Street

Predominantly residential, the land along the Branch from Austin Street to Nolte Street provides a unique, secluded experience. The banks are steep and overgrown with both native and invasive exotic vegetation which enhances the "wild" experience, but ultimately harms the stability of the banks and makes this section a difficult place to enjoy, even for the owners of the land along the Branch. The wilderness feel to this section of the Branch lends itself to being generally termed the "natural" segment of the



project. Like Starcke Park, this area has spring fed flowing water **Figure 4: Austin St. to Nolte St.** with an average OHWM of 25 feet in width. Vegetation in the channel in this area is very similar to that found in Starcke Park.

## Nolte Street to Guadalupe Street



Figure 5: Nolte Street to Guadalupe Street

Formerly the jewel of Walnut Branch, this section of the Branch has suffered deterioration by neglect over the years. The once prized Hugman-era structures located here are currently in a state of decline and are hidden by overgrowing vegetation or concrete riprap collected in the channel. For the most part, this section of the Branch has remained relatively accessible, but there is little reason to visit. The Memorial Rose Garden is the portion of the Branch which is the best cared for, but when its path deadends at the Branch, the view is un-climactic. The channel banks at the foot of the Garden are unstable and unsafe, so the visiting public is left having no

choice but to turn around and walk back to Travis Street.

Multiple springs are located in this section of the Branch, including three on the east bank; one just upstream of the end of the Rose Garden, one in between the Rose Garden on the Creekside Grill, and one that is apparently under the parking lot of the Creekside Grill. The exact location

of the spring under the parking lot is unknown, but water continuously flows from several locations in the creek bank immediately below the parking area, and the Branch has an average OHWM of 15 feet. Local lore is that the spring was capped or piped to the Branch when the parking area was constructed by the landowner.

This section of the Branch contains both relatively flat and steep banks, with the steepest located just south of Court Street, on the west bank. Additionally, numerous large boulders and pieces of concrete rubble are scattered along the steep slopes and in the channel in this area. The two primary



Figure 6: Guadalupe St. to Williams St.

land-uses surrounding this section are residential and commercial. This area is located just west of the downtown district, and can generally be termed the "downtown" area of the Branch.

#### Guadalupe Street to Williams Street

This section of the Branch is unique not only because of the land-uses which surround it (primarily institutional and educational), but also because this area is where the most upstream springs on the Branch can be found. The most downstream location where springs occur on the Branch is just upstream of Saunders, and the flow is contained just downstream in a concrete channel as the Branch flows parallel with Guadalupe Street. The average OHWM in this area is 25 feet. The Lizzie Burges School, Seguin Activity Center, Sebastopol House, Juan Seguin Elementary School, and Police Station have property along the Branch or within very close proximity to it. There are some residential sites in this area that also abut the channel. Just upstream of the Juan Seguin school property is a tract of vacant land owned by the City and County which was originally purchased by the City for use as a gravel quarry, but then was used as an informal landfill. This parcel is currently under utilized by the community, even though it has frontage directly on the creek channel.

Upstream of Saunders, the primary source of water in the channel is storm drainage. Therefore, the channel is dry a good portion of the time. Vegetation within the channel here consists of curly dock (*Rumex crispus*), Johnson grass, black willow, sedge (*Scirpus sp.*), common cattail (*Typha latifolia*), tickseed (*Coreopsis tripteris*), and perennial rye grass (*lolium perenne*). Woody vegetation on the banks of the Branch includes Chinese tallow, boxelder, American elm, black walnut, and hackberry.

#### Williams Street to New Braunfels Street



Figure 7: Williams Street to New Braunfels Street

The northernmost section of the Branch, often referred to as the "Corps Channel", is a grass lined, dry channel that was completed in 1990 to aid in flood damage reduction. Upstream of Kingsbury, the channel is about 50 feet wide, and from Kingsbury to Williams it is about 65 feet wide. Even though the area is surrounded by privately owned land, the City owns a right-of-way along the channel itself. The R.O.W. is a necessary remnant of the ongoing USACE project there. There is plenty of access to the Branch, but in addition to lacking destination points, it is viewed as a backyard ditch and not many people have any desire to use the area. The channel is fairly well maintained in this section but has little tree canopy cover and is therefore an uninviting place to be in the summer months. At the downstream end of this section, the City owns a large parcel of heavily wooded land which they plan on developing into a new city park. This tract of land also contains a historic house, documented in Appendix 11.

Like the area of the Branch just downstream, the primary source of water in the most upstream section of the Branch is runoff from the adjacent and northern properties. Even so, water is often impounded at the Williams Street crossing and can be present for weeks after a storm event. Vegetation within the channel consists of giant ragweed, King Ranch bluestem, hairy

vetch (*Vicia villosa*), and Johnson grass. Adjacent to the channel, the vegetation consists of live oak, American elm (*Ulmus Americana*), retama (*Parkinsonia aculeate*), devils walking stick (*Aralia spinosa*), Japanese honeysuckle (*Lonicera japonica*), Chinese tallow (*Sapium sebiferum*), and boxelder.

#### Water Flow in the Upper Section

As outlined above, the upper section of Walnut Branch (upstream of Saunders Street) is predominantly a dry channel, while the lower section (downstream of Saunders Street) has fairly permanent flow fed by springs and groundwater seeps. The presence of water in the lower section of the Branch affects the type of vegetation that occurs there, and, in turn, contributes greatly to the overall lushness and tropical "feel" of the area. The lower section of the Branch is considered to be much more attractive than the upper section. Therefore, the design team looked briefly at the feasibility of putting flowing water back into the upper channel.

The Rio Nogales power generation facility is located at the headwaters of Walnut Branch, just downstream of IH-10, and frequently utilizes water in its operations that originates at the Walnut Branch Wastewater Treatment Plant (WBWWTP). The WBWWTP is located on the east bank of Walnut Branch just upstream from the confluence of the Branch and the Guadalupe River (as shown in **Figure 3** above). Rio Nogales has the "right of first refusal" to the discharge water from the WBWWTP, which, if not required by Rio Nogales, is discharged into the Guadalupe River. When necessary, the discharge water is transmitted from the WBWWTP to Rio Nogales via a 3.5 mile long 16" PVC re-use water line, pressurized by three dedicated pumps located at the WBWWTP. The location of the re-use water line servicing Rio Nogales is shown in **Appendix 14.** On average, Rio Nogales uses approximately 40,000 gallons per day of re-use water from the WBWWTP, which is only a portion of the approximately 2.3 to 2.5 million gallons per day discharged from the WBWWTP into the Guadalupe River. Therefore, it is clear that enough water physically exists to introduce flow into the upper section of Walnut Branch. Having enough water available to introduce into the Branch, however, is only the first question to answer.

Both Rio Nogales and the WBWWTP must operate under existing permits from the Texas Commission on Environmental Quality (TCEQ), which governs all aspects of water quality. Factors regulated include amount, location, and time of discharge, what facility or river water is discharged into, and from what source the discharge comes. Of course, the water quality of the effluent is closely monitored. Therefore, any change in any of these parameters, such as discharging re-use water from the WBWWTP into Walnut Branch instead of the Guadalupe River or pumping it to Rio Nogales, would involve an amendment to existing TCEQ permits or the securing of new ones.

In addition to permitting issues, new infrastructure would have to be constructed to get the water from the re-use line or from Rio Nogales to Walnut Branch, while ensuring that all parties involved are still able to use the water they need. Additional treatment of the water might also be required by TCEQ prior to discharging it into Walnut Branch, which might also involve additional infrastructure.

The design team presented this information to the City staff and to the WBC for discussion. Over the course of several meetings, it was decided that the introduction of water into the upper

section of Walnut Branch remains a possibility for future phases of the Walnut Branch Linear Park, but that the Master Plan should be formulated based on the assumption that water would not be artificially introduced into the upper section of the Branch.

## **Site Analysis**

After gathering the information for the site inventory, the next step for the design team was to make professional judgments on that information. These judgments are made in the form of a site analysis. For example, if a particular view was noted in the site inventory, then a decision was made during site analysis as to whether or not that view was "good" or "bad". Subsequently, the master plan was developed to enhance "good" views and to mitigate "bad" ones.



Figure 8: Site Analysis

As another example, the team looked at where the existing land uses and points of connection were on site and then began to determine which areas of dense vegetation needed to be thinned in order to provide access, or conversely, which areas were lacking vegetation and needed more shade or required a visual buffer. Potential locations for trailheads, based on available land, location relative to the project, and the potential ties to the surrounding community, were also identified. Subsequently, where it would be necessary to cross a street, crossing methods,

whether at street level or under a bridge, were recommended based on safety concerns and the physical restraints of the crossing locations.

Another aspect of the master plan that was considered was the community fabric within a 5 minute walk (approximately ¼ mile) from the Branch and how individual community elements might connect with each other. Considering the areas within an easy walk of Walnut Branch allows community leaders to consider economic development opportunities, community program opportunities, and possibilities for civic involvement.

For example, in the area between Guadalupe Street and Williams Street, there is a potential user group connection between the schools in the area, the Seguin Activity Center, the historic Sebastopol House, the surrounding neighborhoods, the educational opportunity provided by the headwaters of Walnut Branch, and the Police Station. It is the opinion of the design team that there is a strong potential for synergy of uses in this area and the master plan caters to those users by proposing physical connections between those elements. While the master plan cannot create that synergy, it does recognize the potential and therefore can outline physical elements that might help that synergy to develop. Those physical elements must be teamed with school and community programs, neighborhood events and civic initiatives to fully realize the potential of the area.

In addition to making subjective professional decisions regarding the elements of the project and how they related to physical design, the Jacobs environmental team investigated potential

permitting issues regarding the delineation wetlands and other "waters of the United States." The USACE regulates the discharge of dredged and fill materials into these types of areas under provisions as outlined in Section 404 of the Clean Water Act. By definition, waters of the U.S. include not only marshes and swamps, but also certain stock tanks, lakes, rivers, and creeks including Walnut Branch and the Guadalupe River.

Waters of the U.S. are all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. These waters include all interstate waters including wetlands, intrastate lakes, streams, mudflats, sand flats, wetland sloughs, prairie potholes, wet meadows, playa lakes or natural ponds. Tributaries of these waters may also be delineated as Waters of the U.S. Wetlands adjacent to waters (other than waters that are themselves wetlands) may also be determined jurisdictional.

The Clean Water Act established two types of wetland permits: individual and general. The USACE recently reissued criteria for the general nationwide permits (NWP'S) pertaining to activities that impact aquatic ecosystems. The Walnut Branch Linear Park project, for instance, may impact existing aquatic ecosystems in such a way as to require a NWP.

Individual permits apply to a single project in a specific location that has more than 0.5 acres of impacts to waters of the U.S. General permits including both nationwide and regional authorize activities that are similar in nature for any project that meets the permits conditions and requirements. Under the Clean Water Act, general permits allow for only minor activities that have minimal adverse effects on the aquatic environment. Generally speaking, the time required to obtain an individual permit is great than the time required to obtain an NWP. Therefore, the design team mad every effort during design to position the project as much as possible to take advantage of the USACE administered NWP program.

While NWP's reduce the burden and expense of obtaining an individual permit they are implemented under strict guidelines. NWP's do not eliminate the need to obtain other federal, state, and/or local permits, approvals, and authorizations as required by law.

Based on discussions with the USACE, the Walnut Branch Linear Park project may have design features impacting waters of the U.S. that may be addressed under several possible scenarios. For example, NWP 3 is a Maintenance permit that allows for certain repair, rehabilitation, or replacement of existing structures; removal of accumulated silt and sediment and placement of riprap; or separate authorization for temporary structures or discharge of dredge or fill material necessary for maintenance. On the other hand, NWP-12, Utility Line Activities, allows for construction, maintenance, repair, and removal of utility lines and associated facilities. This might include any sewer or storm water outfalls in Walnut Branch that need repair, replacement, or upgrade.

On a broader scale, discussions between the USACE and the City may identify ways to utilize provisions under NWP 27, Aquatic Habitat, Restoration, Establishment, and Enhancement Activities. This permit deals with activities associated with restoration of former waters of the U.S. Enhancement of degraded waters, establishment of wetland and riparian areas.

Each NWP has restraints, conditions, and thresholds, but each offers its own special advantage of treating project impacts to waters of the U.S. The identification of the best Section 404 permitting scenario will only be possible by actively engaging the USACE and by utilizing more detailed design specific information not available as a result of the master planning exercise. Such detailed information will be available only upon implementation of Phase 1 of the project.

During the site analysis, decisions similar to those above were made regarding all of the data collected during the site inventory phase. A reduced size version of the completed site analysis graphic can be viewed in **Appendix 8**.

## **Standing Structures Survey**

Mainstreet Architects, Inc. researched, surveyed, photographed, and mapped 241 buildings along Walnut Branch. Further study was conducted on 52 buildings and structures, which were determined to be eligible for listing on the National Register of Historic Places. In conducting the research, several areas of interest were identified and incorporated into the Walnut Branch Master Plan via a proposed expansion of the existing downtown walking tour. Additionally, the historical importance of restoring the Hugman-era structures in the channel was clearly identified. The complete report can be viewed in **Appendix 11**.

## **Cultural Resources Investigation**

The Center for Archaeological Research (CAR) at the University of Texas at San Antonio conducted a cultural resources background review of the area associated with the Walnut Branch Master Plan Project. A recommendation of the report was to conduct a pedestrian survey of the entire project area to collect items of possible archaeological or historic significance that may be

found within the project limits. The pedestrian survey will be conducted during the design of Phase 1, and prior to any construction commencing on the project. The complete Cultural Resources Background Review is attached as **Appendix 10**.

Both the Standing Structures Survey and the Cultural Resource Investigation were utilized to develop the final Master Plan.

# Master Plan - Conceptual Basis

After completing the above steps and meeting extensively with the WBC and City staff, the design team began the development of the Walnut Branch Master Plan. In addition to the WBC's desire to have a linear park, it was clear that the community was looking for something that

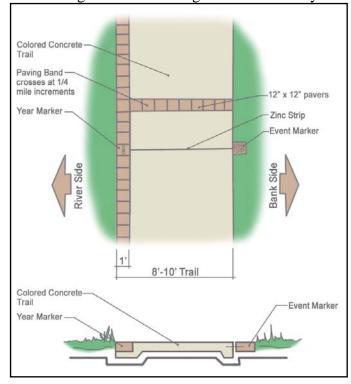


Figure 9: Trail Timeline

was "uniquely Seguin." As can be seen from the information in **Appendix 3**, Seguin has a rich historical background from which to draw design concepts. A reduced size version of the completed master plan graphic can be viewed in **Appendix 9**.

Seguin's rich historical background coupled with the linear nature of a proposed trail along the Branch led to the design concept of a "timeline" for Seguin. The "timeline" could be a physical expression in and along the trail showing the chronology of historically and culturally significant events in Seguin's history. An example of what the trail might look like is shown above, in the form of a paving band following the Branch side of the trail. Significant events and dates, to be determined by the Walnut Branch Committee with aid from the citizens, could be highlighted along the trail with some sort of commemoration such as a year and event marker and an inlaid zinc strip. For instance, the "timeline" would begin in Starcke Park with the date of 1825 when the first settlers, the Rangers, built Ranger Station on the banks of Walnut Branch and made the area their own. It would continue on through time with the establishment of the town, the annexation of Texas, the opening of the Goodrich School and the Guadalupe Female Academy, and reach dates and events around modern day near Court Street where the springs begin and the character of the Branch changes to a more urban state. The design team will work with the City and the WBC to develop appropriate dates and events to commemorate along the timeline trail if it is desired to construct the timeline trail in Phase 1.

The elegance of the timeline concept is that it does not end. If the "beginning" of the timeline trail is in Starcke Park, and the "now" time is near Court Street, then future events can be used to continue to document Seguin's timeline along the trail as it is constructed further upstream, and those events happen. As Seguin continues to grow and thrive, so does the timeline trail and community use of the Walnut Branch Linear Park.

The City and the WBC may elect to allow citizens to petition to donate to the timeline trail and make their own contributions to the timeline with the addition of meaningful dates that were not initially selected to be installed. The purpose of the "timeline" is to add a unique, personal touch to the Walnut Branch Master Plan, with dates and events that are important specifically to the citizenry of Seguin.

The physical design of the timeline trail should be executed so that additional dates and events may be added as appropriate. Additionally, the design should be such that the trail functions and is visually appealing even without any timeline elements; as the trail is constructed into the "future" section of the timeline, no events can be included until they occur!

#### **Master Plan Elements - Overview**

Physical components of the Master Plan can be divided up into two categories; global and local. The global elements are those that can be found throughout the project, regardless of phase. The local elements, in contrast, are those that occur only at specific locations along the project. The global elements will be discussed first, followed by the local elements.

#### **Master Plan Elements - Global**

#### Trail

A trail is proposed along Walnut Branch linking the existing trail at Starcke Park to the upstream extents of the project at New Braunfels Street. The trail will occur on one bank of the Branch everywhere except for the area between Nolte and Court Street where the trail will be on both banks of the Branch. As the trail will be constructed in the floodplain, and in some cases directly in the floodway, it should be constructed out of concrete.

Concrete was selected as the preferred trail construction material because it is a more durable material than decomposed granite or asphalt, and will require less maintenance. To soften the visual impact of a light gray or white concrete trail, it is proposed that the trail will be constructed using integrally colored concrete, colored so as to blend with the surroundings. Other construction materials may be considered in specific locations along the Branch that are not so prone to flooding, but it is the recommendation of this report that consistent construction methods and materials be used for the entire length of the trail, if possible. Colored concrete pavers should be used to accent the trail where necessary. Concrete pavers are ideal because they are dimensionally consistent, readily available in a variety of colors, cost effective, and are as durable as the concrete trail itself.

The width of trail will vary by section depending on the available land and scale of the area, but should range from 8'-12' to provide enough room for safe passing of cyclists and pedestrians. In the area from South Austin Street to Nolte Street, the trail may need to be narrower due to the minimal amount of land available, the steepness of the banks, the scale of the area, and the desire to maintain the natural, secluded feel of that portion of the Branch.

#### Hydraulics

The hydraulic baseline used by the design team for the Master Plan and subsequent design is the CLOMR model developed by TRC for the City which reflects the proposed detention ponds at the upper end of the project area. A global constraint from a hydraulics or floodplain perspective considered by Jacobs in the Master Plan is to, at a minimum, have "no adverse impact" to the flood carrying capacity of Walnut Branch. According to the City's floodplain ordinance, a FEMA submittal is not necessary as long as it is demonstrated through hydrologic and hydraulic analyses that the improvements will not cause an increase in flood levels. If it is determined that the improvements will cause an increase in the base flood elevations, a conditional FIRM and floodway revisions would have to be submitted to and approved by FEMA.

As each of the Master Plan phases moves into detailed design, opportunities for floodplain reduction should be incorporated where possible. Such opportunities to consider include reducing flood elevation by reducing channel roughness through selective clearing or thinning of vegetation and over excavation of channel along trail alignments.

## Invasive Clearing

Along the Branch there are many invasive species such as Ligustrum and Chinaberry that need to be removed in order to allow for growth of native species. Invasive species can create a monoculture of vegetation along a bank, choking out native undergrowth which leaves the soil

exposed and the banks susceptible to erosion. Hand clearing followed by a chemical application of herbicide directly to the cut stump is one effective treatment. It is also recommended that the local Agricultural Extension agent be contacted for the best chemical approach to be used in this area.

Each construction phase of the project should contain guidelines for which species should be removed and recommended methods for removal. An important aspect of vegetation removal is the identification of which vegetation should remain. Construction documents for each phase should also clearly identify which vegetation should remain, and list specific requirements for protecting the remaining vegetation during construction.

## Land Acquisition

Large sections of Walnut Branch are bounded by entirely privately-owned land, which make the construction of a public project problematic. The development of the master plan identified several properties that would be necessary to acquire, either by purchase or by easement, to construct the project. Inevitably, additional properties necessary for acquisition will be identified during final design of each project phase. The City of Seguin is tasked with securing the necessary real estate for the construction of the project. The land required will be needed for the project access points, recreational elements, and bank stabilization.

As stated previously, the identification of which properties to target for acquisition for the construction of the Walnut Branch Linear Park was a significant impetus for the original RFQ for the development of the project master plan. The design team and the City discovered early in the master plan process the scarcity of survey information available for Walnut Branch. Subsequently, additional funding was approved to complete extensive physical and property surveys for the area identified as Phase 1. This information was needed to complete construction documents for the first phase of the project, and the City needed this information to begin the process of acquiring ownership of specific properties, or securing easements across them. A digital copy of the survey executed by Tri-County Land Surveying is included as **Appendix 13**.

Similarly complete survey information, for both physical elements and property geometry and ownership, should be obtained early in the design process for each subsequent phase of construction.

#### Bank Stabilization

The need to implement bank stabilization methods along Walnut Branch has been documented in the Corps Reports (**Appendix 5**). Specific methods of stabilization will need to be determined for each construction phase based upon available property, physical site constraints, hydraulic analyses, and construction costs.

#### **Amenities**

Recreational amenities such as benches, picnic tables, trash receptacles, and water fountains will be used throughout the project to provide "rest stops" for the users of the linear park. Nodes will be created for some amenities where passive recreation is desired, while other amenities will be

placed in more active recreational areas. The materials and design of the amenities should fit the character of the project and should be capable of surviving periodic inundation.

A paving band running across the trail is proposed every ¼ of a mile to break up the trail visually, add interest, and serve the users wanting to track their progress along the trail. The paving band will also serve as a clear indication that you are on the Walnut Branch Trail.

The paving bands also offer an opportunity to take the project out of banks of the Branch. If the City of Seguin decides to expand the trail outside of the current project limits, the paving bands are elements that can occur along the "tributaries" to the Walnut Branch trail, to help lead pedestrians to the linear park. For instance, a trail "tributary" linking the campus of Texas Lutheran University to the linear park trail could have similar paving markings as the "main" trail.

## Lighting

Lighting a linear park within an active floodway is always a difficult and expensive undertaking, and the Walnut Branch Linear Park is no exception. Any light fixtures installed in the floodway must be able to withstand periodic inundation. In addition to becoming submerged, the entire system is then subject to damage from debris carried by flood waters. Therefore, maintenance costs for floodway lighting is also often an expensive proposition. For these reasons, only limited lighting is proposed on the linear park.

Area and element lighting is proposed for selected areas between Nolte Street and Guadalupe Street where the most intensive uses are proposed, along the pedestrian bridges at the top of bank (span bridges), and along the surface trail approaches which connect the vehicular street to the pedestrian span bridges. Any lighting beyond this may be determined on a need basis by the City of Seguin. Fixtures should coordinate with the fixtures used throughout the project and with the site amenities and the light emitted should provide a sense of security without being a distraction to adjacent land-owners.

Lighting for subsequent phases should be considered on a phase-by-phase basis, balancing the judicious use of public funds with the requirements to protect the health, safety and welfare of the park users.

# Master Plan Elements – Local (Downstream to Upstream)

## Vehicular Bridge Treatments

Walnut Branch has been a largely forgotten element in the community fabric of Seguin. In fact, where streets cross the Branch in the "wet" section (constantly fed by the springs) it is easy to miss the



Figure 10: Court Street and Guadalupe Street

(constantly fed by the springs), it is easy to miss the presence of the Branch altogether.

Therefore, it is proposed that bridge treatments be designed at each of the crossings at South Austin Street, Nolte Street, and Court Street.

The vehicular bridge treatments should include two enhancements, one on the pedestrian level and the other on the vehicular level. At street level, these bridges will be enhanced by having a vertical, sculptural element that is visible to passing vehicles to delineate that they are passing over the Branch. At the trail level below, the bridges will be enhanced with the addition of stone veneer to create a pedestrian scale "gateway" as the users pass into and out of the "natural" and "downtown" sections of the Branch.

The pedestrian "gateways" should draw on the architecture of the older sections of the bridges at Nolte Street and Court Street, both of which have a parabolic arch form. The arches occur at each location on only one side of the bridge; it appears that the arch was not continued when the bridges were widened to accommodate modern traffic. Ways to express that arch more completely at each location and to introduce it at the rather plain South Austin Street crossing should be explored. One option would be to construct an arched frame of expanded metal mesh and encourage the growth of vines on the mesh.

## Pedestrian Bridges

The proposed pedestrian bridges are span bridges, which connect the top of bank on the east to the top of bank on the west, and will be located out of the floodway. The bridge locations were selected based on available land, location within the project, location within the community, and the connectivity of elements. Between 6'-8' wide, the bridges will provide enough room for passing and gathering on the bridge, but not enough room for a vehicle to drive across. The bridges could be pre-manufactured to save on cost, but should be tastefully designed to fit with the surroundings.

#### Convent Street Bridge

The Convent Street Bridge is a proposed pedestrian bridge located at the top of bank along the Convent Street R.O.W. between the St. James Catholic Church to the east and the Vaughn



Figure 11: Convent Street Bridge

Property on Goodrich Street to the west. The City of Seguin still owns a R.O.W. from Camp Street to Walnut Branch and from Guadalupe Street to Walnut Branch. Both of theses R.O.W. alignments are vacant and underutilized.

The primary purpose of the bridge, at a location where a historic crossing once stood, is to provide a barrier free access across the Branch to join the two neighborhoods on the east and west bank without pedestrians having to walk on the South Austin Street bridge or

the Nolte Street Bridge where they share the path with vehicles. The bridge would also provide a link between the existing Seguin Historic Walking Tour on the east bank which passes by St.

James Church and the historic homes along Goodrich Street on the west bank. With the addition of the Convent Street Bridge, pedestrians could walk at street level from the Historic Tour Center at Court Street, along the Seguin Historic Walking Tour through downtown, across Walnut Branch at the Convent Street Bridge, up Goodrich Street by the historic homes, through the future pottery museum at Goodrich and Nolte currently known as the Matthies Property, and complete the extended loop by crossing over the Matthies Property Bridge to the Historic Tour Center.

The City of Seguin and the WBC expressed their intent to re-use a bridge (that once was installed as a utility bridge across the Guadalupe River) as a pedestrian crossing to the Matthies Property (see Matthies Property Bridge below.) The Guadalupe River bridge was disassembled for a variety of reasons, but by all accounts was unsightly. This report proposes that the salvaged bridge, or at least parts of it, be incorporated into a new design at the Convent Street location. While an important part of the master plan, the Convent Street Bridge will not have the visibility that the Matthies Property Bridge will have. Therefore, any money toward a completely new bridge should be spent on a "signature" bridge at the Matthies Property Bridge, and the salvaged bridge, if used at all, should be used at the proposed Convent Street crossing.

## Matthies Property Bridge

Also a pedestrian only bridge, the proposed Matthies Property Bridge is located just upstream of the Memorial Rose Garden. It will connect a City-owned vacant lot with frontage onto Court Street to another City-owned lot that is known as the Matthies Property. Currently, there are plans to turn the house that sits on the Matthies Property into a pottery museum. The City had plans prior to the hiring the of the Jacobs team to use grant money from the LCRA (Lower



Figure 12: Matthies Property Bridge

Colorado River Authority) to place a bridge in this area and placing a parking lot on the Cityowned vacant lot (see "Historic Tour Center" below). The design team agreed that this would be an ideal location for a pedestrian span bridge and a parking lot, but felt that any bridge placed in this location will become such a focal point for the area. It will be visible by motorists on Court Street and pedestrians at the Memorial Rose Garden, two of the primary entry points to the Branch. The WBC agreed with this point.

The parking area proposed by the City to occur on the parcel that fronts onto Court Street is a functional use for both the City and the County (Guadalupe County owns the parcel to the east, and is in need of additional parking, which will be provided by the new lot through agreement with the City), but it also offers a unique opportunity for the Walnut Branch Linear Park. Court Street is arguably the busiest thoroughfare in Seguin, and this parcel offers the only publicly owned property available to the park that fronts onto Court Street. Therefore, this report recommends that the proposed parking area be designed as an obvious gateway to Walnut Branch. An elegantly landscaped, functional parking area, with visually captivating "portal" elements should be designed and constructed at this location. The master plan offers

connectivity to this parking area with the intent that this unique portal opportunity is effectively realized.

## Dolle Street Bridge



Figure 13: Dolle Street Bridge

The third pedestrian span bridge proposed on the project, the Dolle Street Bridge, will be in alignment with the Dolle Street R.O.W. connecting Juan Seguin Elementary School to the Sebastopol House. The Sebastopol House is on the National Register of Historic Places, yet is one of the least visited places in Seguin. A bridge connecting the Sebastopol House with a potential user group such as an elementary school and nearby alternative school, together with easy connection to a linear park, might increase attendance. There is an existing vehicular bridge just downstream of this

location at Saunders Street. The sidewalk along the Saunders Street bridge is quite narrow and hardly conducive to a safe crossing for a class of elementary school children. A pedestrian only bridge a Dolle Street would offer a safer place for children to cross the Branch, and could even serve as an outdoor classroom to learn about the springs around which the town was founded.

## Hugman Era Structures

It is the recommendation of the design team that all Hugman Era Structures such as dams and walls be restored where possible and replaced where necessary. These elements are historically and culturally significant to the City of Seguin, and are critical to meet the objective

of re-establishing the sense of



Figure 14: Hugman Era Structures

pride the City once had for the Branch and the structures. A new low water crossing of the trail is proposed just downstream of one of the Hugman era dams, and just upstream of the Nolte Street Bridge. The crossing should be sited to take advantage of the sound and views of the water spilling over the refurbished dam, and be designed to compliment the dam and the other refurbished stone works in the immediate area.

Due to the historic nature of some of the structures along the branch, especially in the location between Guadalupe and Nolte streets, the Texas Historical Commission (THC) should be contacted during final design to ensure that no "adverse impact" to the historic fabric is caused by the any proposed design plan. The recommendations of the THC could directly impact the design direction, the USACE permitting process, and the cost of construction. Until final design

is well underway for each construction phase, it is unclear how the THC will classify the various on-site structures.

#### Spring Treatments

Many springs exist along the Branch, beginning upstream of Saunders Street and continuing to surface downstream to the confluence of the Guadalupe River. The springs are a natural resource that should be treated with care and should not be disrupted during construction. Means should also be taken to ensure their continued survival and well-being. For example, when a proposed trail must come in contact with a spring, the trail should "tread lightly" over the spring by using a small footbridge to protect the area immediately adjacent to the spring. Water should not be impounded directly on top of any spring location to prevent the spring from migrating to another location. Cascades can be employed, however, if done carefully and downstream of the spring source.

In the area between Nolte Street and Court Street, it is recommended that the two largest springs will be visually enhanced. Boulders that allow the water to cascade and plantings that frame the spring could be added to delineate the spring and make it a special place to enjoy the sound and beauty of naturally flowing water.

#### Memorial Rose Garden Overlook



Figure 15: Memorial Rose Garden Overlook

The Memorial Rose Garden is one of the best kept elements on the Branch and will remain in place. The garden should be upgraded with pedestrian lighting, the planting beds should be cleaned up, and there should be selective tree trimming. Additional benches could be added along the walk in the Memorial Rose Garden, and an overlook could be added to signal the arrival of the pedestrian at the Branch and to

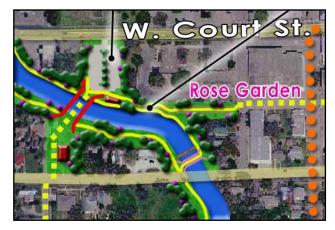
provide a visual terminus to the very linear Rose Garden. The overlook would occur at the intersection of the Rose Garden and the Walnut Branch Linear Park and consist of a plaza area where the Branch can be viewed both upstream and downstream. Access could be provided via an upper trail to the Matthies Property Bridge, the Historic Tour Center, and the proposed parking area (reference "Matthies Property Bridge" section above), and to the timeline trail at a lower elevation, running along the Branch. The Rose Garden Overlook could also serve as a tribute to the 33 founding fathers of Seguin by having 33 elements at the overlook with the name of each of the founding fathers.

#### Historic Tour Center

Located on the City-owned vacant lot fronting Court Street at the eastern foot of the proposed Matthies Property Bridge, the proposed Historic Tour Center will serve as the signature trailhead for those wanting to access the Walnut Branch Trail or the Seguin Historic Walking Tours. As stated earlier, this location can serve as the portal to the Walnut Branch Linear Park, and should

be accentuated.

The Historic Tour Center could consist of a parking facility and a kiosk of some sort, perhaps with maps of the trails. While the programming of the Center should be fully developed jointly between the City, the WBC, the Mainstreet Program, and other stakeholders, the design team envisions maps of several "options" available to visitors wanting to walk and experience Walnut Branch.



**Figure 16: Historic Tour Center** 

One option open to visitors would be an unguided walk along the trail which stays at the top of bank, along the branch to the base of the Rose Garden at the proposed overlook, through the Memorial Rose Garden and into downtown, or by using the Seguin Historic Walking Tour. Another option would be to walk along the higher trail down to the Rose Garden Overlook where they may continue on to the lower timeline trail which follows the Branch. Yet another option for someone beginning their tour at the Historic Tour Center would be crossing the Branch at the Matthies Property Bridge and visit the Pottery Museum and the historic homes surrounding the area on the west bank.

#### **Outdoor Learning Center**

As mentioned in the "Site Analysis" section, the potential synergies of institutional, educational, and neighborhood user groups surrounding the Branch section between Guadalupe Street and



Figure 17: Outdoor Learning Center

Williams Street offer an opportunity to include a space on Walnut Branch targeted specifically at education. The Outdoor Learning Center would be located between the Police Station and the Branch on east bank. This site is ideal because of the physical space available, convenient access to the site from the surrounding neighborhoods and schools, and the educational value offered by overlooking the headwaters of the Branch.

Perhaps consisting of a small amphitheater with a stage set into

shade trees, classes could gather at the learning center to hear lessons about nature, view student exhibits, participate in outdoor experiments, or teachers could give a lecture or read a story to their class on a nice spring day. With the added security of the nearby police station, this area could become a place where it is safe to let the students walk from school to the Seguin Activity Center or the Community Park just upstream.

## Community Park

Proposed on the corner of Dolle Street and Jones Street on the east bank, the proposed Community Park could be a gathering place for the adjacent neighborhoods and play area for the adjacent schools. A shade structure, playground, large multi-purpose field, and picnic facilities could be built to create a place where neighbors meet and enjoy each other. A grassed perimeter berm approximately 2'-3' tall could be used to create a subtle sense of enclosure and protection. The close proximity of the police station to the park certainly adds another

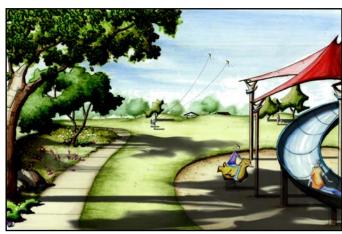


Figure 18: Community Park

degree of security. The main trail will follow the Branch closely in this area, but a secondary trail loop could offer easy access to the Community Park.

# Future City Park



Figure 19: Future City Park

The Future City Park will be located on a parcel recently purchased by the City of Seguin between Vaughn Street and Williams Street. This report recommends that there be a trail which connects the main trail of the Walnut Branch Master Plan to Texas Lutheran University located two blocks west of the Future City Park. The main trail should be located on the west bank of the grassed channel near the preserved tree line to provide shade. A trail loop is recommended once the Future

City Park is planned and installed, either around the grassed channel with two small

footbridges connecting the two banks, or within the park to the west of the Corps Channel.

#### Disc Golf Course

The proposed disc golf, or "Frisbee" golf course, is an 18-hole course located in the "Corps Channel" area between the Future City Park and the Amphitheater. The location for the Disc Golf Course was chosen in order to provide an active element to move the users along the trail while also giving them a desire to be there. The "Corps Channel" area is primarily a connection

path between the Future City Park and the Future Sports Complex, and disc golf is a land use that is appropriate for the area, and that works well with the linear real estate parcel occupied by the Walnut Branch ROW. Disc golf is a sport in which all ages and skill levels can participate and will prompt active and relaxing recreation along this section of the Branch.

#### **Amphitheater**

An amphitheater is proposed for the northern most part of the Walnut Branch Master Plan project at New Braunfels Street. This location, farthest upstream on the Branch, is ideal not only for a trailhead for users of the linear park, but also a destination point that could bring users up the branch. Depending upon the size and programs to occur at the amphitheater, the facility could generate a traffic volume that is better suited to this area than to a more downstream location along Walnut Branch.



Figure 20: Amphitheater

As amphitheaters are universal areas that could be used for large to small gatherings, community events, concerts, or just another open field in which to throw a Frisbee, the ultimate size and programming of the facility should be undertaken by the City, WBC, neighborhood stakeholders, and development partners when the timing is appropriate to do so. The design team hopes that future development along the branch will make the construction of an amphitheater in this location a feasible undertaking.

## **Phasing**

As stated previously in this report, Jacobs was asked to develop both a master plan for the entire Branch and construction documents for the first phase of construction of the Walnut Branch Linear Park. Additionally, whatever portion of the project targeted for construction as Phase 1 would need to be a complete project, regardless of whether or not any other phases of the project were ever constructed.

A variety of phasing options were presented to the WBC, each based on feasible breaks in the overall design. Each option was developed as a logical "design piece to the puzzle" and included a preliminary budget projection presented within the context of the total available construction funds. The preliminary costs for each option was critical to the decision making process because the committee had to begin to prioritize which segments of the branch were the most crucial to them.

The committee ultimately and unanimously decided that the section between Nolte Street and Guadalupe Street should be designed and constructed first. This is the area of the highest profile due to its location adjacent to downtown Seguin and the fact that it is the site of the Walnut Branch Park designed by Hugman. This option was regarded as the "base option," and preliminary cost projections indicate that the entire construction budget of \$2.5 million could be

completely exhausted with this section alone. The WBC asked the Jacobs team and the City to be conscientious with construction dollars so that, if the construction costs are less than expected, an additional segment of the plan might also be constructed. Therefore, the WBC asked the design team for options upstream and downstream of the base option to determine what additional elements might be constructed in Phase 1. If additional construction dollars are available after the construction of Phase 1, the team recommended that the best option would be to install the trail connecting Starcke Park to the downstream end of the "base option," at Nolte Street. The Convent Street Bridge would be excluded in the first phase of construction, but the bridge could easily be added later. The following graphic shows the extents of Phase 1 as planned in October of 2007 which was agreed upon by the Jacobs team, WBC, and City Council.

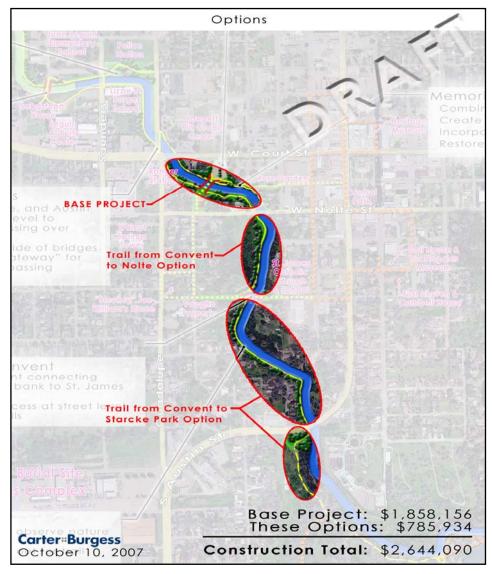


Figure 21: Phase 1 Graphic

## **Summary and Recommendations**

In conclusion, the Master Plan clearly identifies goals to be met when fully developing the Walnut Branch Linear Park. While the specific program elements will certainly be adjusted to meet future committee and citizenry needs, the following recommendations should be carefully considered during design to create a holistic project which effectively creates an experience that is uniquely Seguin.

#### Global Recommendations

To be a successful Walnut Branch Master Plan, the plan must provide direction so that the City may:

- Celebrate and respect the unique history and cultural resources found in Seguin and specifically along Walnut Branch;
- Celebrate and respect the natural spring resources;
- Target for acquisition those properties deemed necessary to construct the project;
- Maintain or improve flood carrying capacity of Walnut Branch
- Stabilize the banks of Walnut Branch to prevent erosion;
- Remove invasive vegetation;
- Require a physical design that unifies the Branch with the rest of the City of Seguin;
- Require a physical design that unifies the Future City Park (between Vaughn and Williams) with regards to the site amenities and overall program for the Walnut Branch Linear Park:
- Install an 8'-12' continuous concrete trail from Starcke Park to New Braunfels Street;
- Establish access and destination points along the Branch;
- Visually enhance the vehicular bridges passing over the "wet" section of the Branch on both the vehicular and pedestrian levels, and;
- Construct pedestrian only bridges along the Branch at key places of connection and gathering.

#### **Local Recommendations**

To fully realize Phase 1 of the linear park project, the design must illustrate how to:

- Incorporate all of the applicable Global Recommendations;
- Respect (restore, repair, replace or avoid as appropriate) the Hugman era structures in Walnut Branch channel, and construct new amenities in such a way as to complement them;
- Create a primary trail head located along Court Street;
- Accentuate the terminus of the Memorial Rose Garden, and;
- Accomplish all of these goals within the allotted budget.