Section IV: Environment, Habitat, and Standards
San Antonio River Channel Restoration

Exposure to significant storm events, and uncontrolled pedestrian access, have caused moderate to severe erosion to the banks of the San Antonio River. The graphic on this page if taken from a report prepared by HDR Engineering identifying some of the more severely eroded areas.

In addition, analyses have also documented shear stresses in some sections of the river that may not be exhibiting erosion at present, but are candidates for erosion. In some of these areas, existing invasive species vegetation is helping to stabilize the bank. Removal of invasive plant species is a recommendation the master plan, however, careful considered should be considered to balance the goals of bank stabilization, removal of invasive species, and habitat restoration.

Where required, channel bank stabilization should be designed to maintain, to the extent possible, the natural appearance of the undeveloped sections of the river in the park. The use of cast-in-place concrete and stone bulkheads should be avoided. Techniques such as vegetated rock slope stabilization, geogrid, soil-filled geo-textile “pillows” and vegetated gabion baskets can be used to stabilize eroded slopes while still maintaining a natural aesthetic. Whichever technique is utilized it is important to extend the “toe” an adequate depth below the river bottom to prevent scour.

There have been numerous technical studies of bank erosion problems, and USA Corps of Engineers permits have been obtained (2004 Rialto Studio/Adams Environmental for the area from Tuleta Avenue to Mulberry Avenue), but to date little has been done to stabilize the banks of the river, while still allowing public access to some areas of the river edges.

Any work on or between the banks of the San Antonio River are controlled by the San Antonio River Authority and the USA Corps of Engineers. The following describes the federal permitting process.

Federal Permitting: Clean Water Act Section 404 Permits
The San Antonio River is a recognized Water of the U.S., and any placement of fill material within the Ordinary High Water Mark (OHWM) or alteration or replacement of existing river walls will require coordination with the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (CWA).

Section 404 permits occur in two principle varieties:

- Nationwide General Permits (NWP) are general permits that are issued nationally and are valid for 5-year terms. These permits are viable for projects that typically impact less than 0.5 acres of surface waters or less than 300 linear feet of streams. There are currently 50 NWPs that are individually tailored to specific activities in jurisdictional waters. Requirements for USACE notification vary by NWP. Additionally, impacts exceeding 0.10 acres of impact or 300 linear feet of stream may be subject to requirements for mitigation.
- Individual Permits (IP) are used for activities that do not qualify for authorization under a NWP, typically because impacts exceed permissible limits designated in NWPs.

For work proposed in association with the BPMP, it is assumed that most activities will be permitted using NWPs. Common NWPs for park projects include the following:

- **NWP12 – Utility Line Activities.** This permit may be used to construct common utility lines such as water, wastewater, gas, fiber optics, etc. PCN and mitigation requirements are specific to utility length and orientation as well as the standard triggers associated with cultural resources (NHPA Section 106 resource or archaeological site), T/E species, and special aquatic sites.
- **NWP 13 – Bank Stabilization.** This permit may be used to stabilize up to 500 linear feet of stream bank (per project) so longs as the stabilization methods do not exceed 1 cubic yard per running foot of stream and no material is placed in a manner that will impair surface water flows or erode in high flows. PCN requirements must be evaluated on a project-by-project basis.
- **NWP 14 - Linear Transportation Projects.** This permit may be used to facilitate crossings of the San Antonio River for pedestrian, vehicle, or railroad bridges. A preconstruction notification (PCN) to the USACE may be required if the project exceeds 0.10 acre of surface water losses, affects a special aquatic site (i.e. wetland) or threatened/endangered (T/E) species, or results in an impact to a cultural resource. Mitigation will be required for permanent losses exceeding 0.10 acre.
- **NWP 18 – Minor Discharges.** This permit authorizes the deposition of up to 25 cubic yards of fill material for general purposes so long as the discharge does not cause the loss of greater than 0.10 acres of surface waters and is not placed for the purposes of stream diversion. A PCN is required if the discharge volume exceeds 10 cubic yard or impacts a special aquatic site.
- **NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities.** This permit authorizes activities in Waters of the U.S. associated with the restoration and enhancement. Because the use of this permit results in an improvement of surface waters, it is not limited by acreage impacts. Additionally, mitigation is not required for this permit, though a PCN and restoration plan are required prior to authorization.
- **NWP 39 – Commercial and Institutional Developments.** This permit is a general use permit for features such as building pads, roads, parking lots, garages, yards, utility lines, stormwater management facilities, and recreational facilities such as playgrounds a playing fields. A PCN is required for the use of this permit, and mitigation is required for actions that impact greater than 0.10 acres of surface waters or 300 linear feet of streams.
- In addition to those described above, other NWPs may be available for use on a project-specific bases. Also, please note that the general description of NWPs above is not exhaustive in regards to their application, reporting (PCN) triggers, and mitigation requirements. The use of a NWP must be evaluated on a project-by-project basis in full accordance with all specific and general conditions of the permit.

- As noted above, many NWPs will require coordination with the USACE if their application results in an impact to a NRHP Section 106 resource or archaeological site. Brackenridge Park is currently listed on the National Register and is also one of the most significant archaeological locations in San Antonio. A careful evaluation of potential permitting actions as they may affect cultural resources will be required for any needed Section 404 permits.

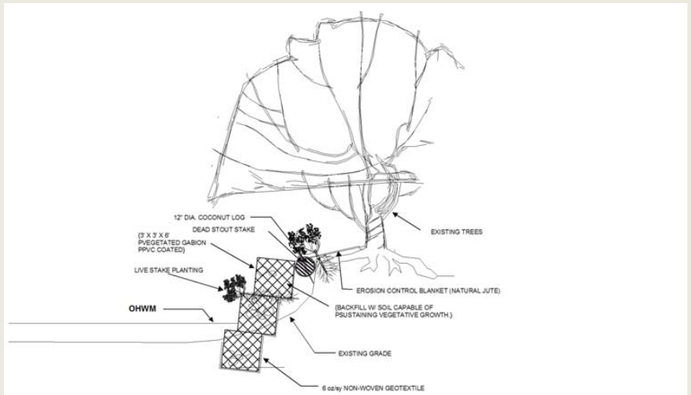


Figure 2. Configuration of area to be stabilized using gabions.

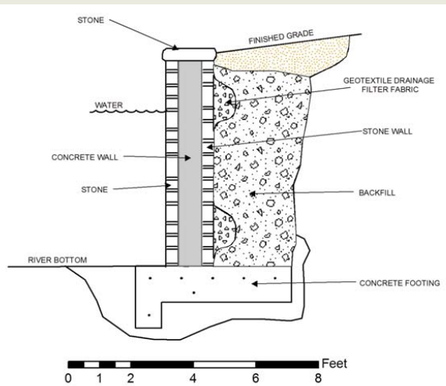


Figure 4. Design to be used for construction and repair of retaining walls along the river.

General Section 404 Permitting Process

1. Prior to determining if a Section 404 NWP or IP is necessary, the proposed project area should be evaluated for the presence of potentially jurisdictional waters and a Preliminary Jurisdictional Determination (PJD) report prepared to document the type and quantity (delineation) of any surface waters on the project site subject to USACE jurisdiction under the CWA. An evaluation of cultural resources and potential T/E species or T/E habitat should be conducted concurrent with the PJD.
2. If potentially jurisdictional waters are identified and delineated on a proposed project site, the next step is to quantify the impacts in relation to the preliminary design plan. It is important to note that producing a PJD report prior to initiating the design process can greatly reduce or potentially eliminate the need to coordinate with the USACE.
3. Avoidance and minimization of impacts to jurisdictional waters is a necessary component of the 404 permitting process. Effort to avoid or minimize impacts to the maximum extent practicable must be demonstrated or the USACE may not verify a permit for the proposed project.
4. Once avoidance and minimization protocols have been applied to a proposed project, a final calculation of anticipated impacts can be produced. An evaluation of the proposed impacts the design would impart to a surface water determines what type or types of NWP are available. An IP is required for projects that either fail to qualify for use of a NWP or exceed the impact area allowed in the NWP system.
5. Following the identification of available permits for a given project, the next step in the process is to determine what level of USACE coordination, if any, will be required. Permit requirements must be carefully evaluated to determine PCN requirements. It is important to note that a PCN may be required due to Brackenridge Park's listing on the NRHP regardless of other impact triggers.
6. If a NWP PCN is required, a permitting package must be prepared and submitted to the USACE. A typical PCN contains the following information:
   - (i) NWP Pre-Construction Notification
   - (ii) Delineation of Waters of the U.S. (PJD report)
   - (iii) Color Photographs
   - (iv) Engineering Drawings
   - (v) T/E Species Reports/Letters
   - (vi) Cultural Resources Reports/Letters
   - (vii) Conceptual Mitigation Plan (if needed)

   The USACE has 45 days to review a PCN and determine if it is complete. Complete PCNs packages are typically verified in 3 to 6 months.
7. If an IP is required, a permitting package must be prepared and submitted to the USACE. A typical IP contains the following information:
   - (i) Individual Permit Application
   - (ii) Delineation of Waters of the U.S. (PJD report)
   - (iii) Alternatives Analysis Report
   - (iv) Engineering Drawings
   - (v) T/E Species Reports/Letters
   - (vi) Section 401 Tier II Water Quality Certification
   - (vii) TxRAM Baseline Assessment
   - (viii) Mitigation Plan
   - (ix) Adjacent Property Owners List

Following receipt of a complete application, the USACE will issue public notices for both Section 404 and Section 401 (Water Quality Certification) and allow for a 15 to 30-day Public Notice comment period.

All individual permits must afford the opportunity for a public hearing, and the permitting process can take 12-18 months.

Water Quality

The discussion or water quality is pervasive throughout this document as it relates to improving habitat for living creatures, the dream some day of swimming in the river as was popular in the history of the park, and certainly regarding how limiting additional impervious cover (roads and parking) and dealing with rain run off should be dealt with through the implementation of Low Impact Design practices.

Decades of neglect and poor management practices have contributed to a condition where there is basically a “NO HUMAN CONTACT” policy regarding interacting with the life blood of San Antonio’s existence. It is the desire of the citizens of San Antonio, the San Antonio Water System, and the San Antonio River Authority that the neglect and poor practices end.

In 2006 the San Antonio River Authority (SARA), Bexar Regional Watershed Management Partnership (BRWMP) and the Texas Commission on Environmental Quality (TCEQ) published the Upper San Antonio River Watershed Protection Plan. The plan identified 25 management measures to reduce the concentration of E. coli bacteria in the river. One of the most important measures was the construction of a Ultra Violet (UV) disinfection facility at the drainage outfall from the San Antonio Zoo into the river, which was constructed in 2014. From late 2013 and through out 2014, the San Antonio River Authority conducted water sampling and testing to determine the effectiveness of the UV disinfection facility, and to look at other factors that contributed to the existence of E. coli in the river.

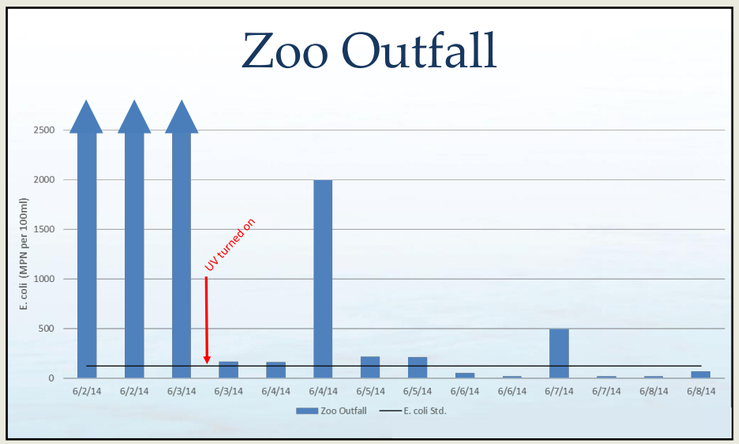
The results of SARA’s testing indicated that the bacteria disinfection facility made a remarkable difference in the concentration of E. coli immediately downstream of that facility (less than 10 bacteria per 100 ml of water).

In addition to the sampling at the Zoo outfall, sampling was taken upstream of “Bird Island”, through the park, and past Mission Road on the south side of San Antonio. At the Brackenridge Park testing sites high levels of E. coli were found between Hildebrand and Mulberry Avenues, even with the UV disinfection facility operating at the Zoo outfall. Upon investigation, it was noted that upstream of the pedestrian bridge near the Joske Pavilion, past Lambert Beach, and through the river segment adjacent to the Witte Museum, there exists a high concentration of water fowl (ducks and geese), and on a seasonal basis (although lately it seems almost year round) a large population of Egrets.

Waterfowl exist in these locations because they are fed regularly by the public, which as been a tradition for generations.

Solutions to “feeding the ducks and geese”, and dealing with migratory bird nesting have to be found in order to realize the goal of re-establishing the potential of human contact with the water of the San Antonio River in Brackenridge Park.

In addition to these natural impacts on water quality, the San Antonio Water System (SAWS) supplies a significant introduction of treated (recycled) water to the San Antonio River that is introduced on Tuleta Avenue near the corner of the Witte Museum. The current level of treatment makes the water safe, but not to the level of quality that would be need for safe human contact.



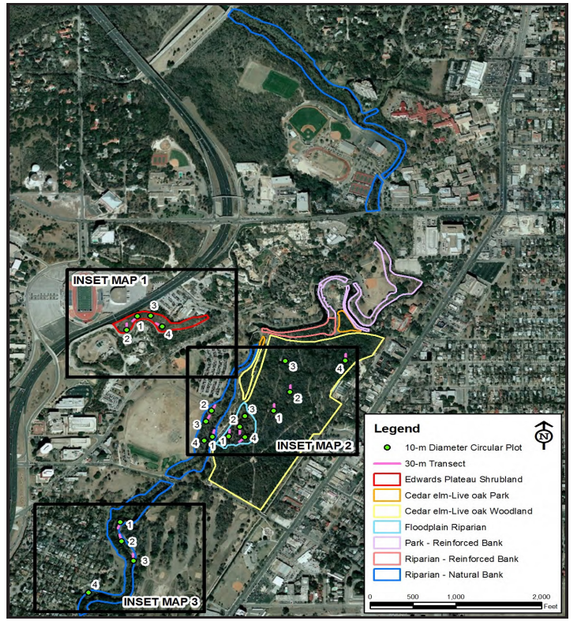


Figure 10. Map of vegetation community types delineated during 2011-2012 surveys.

Invasive species management and habitat restoration and habitat expansion

The recommendations of the 2012 Brackenridge Park Biodiversity Study should be implemented. These include:

The free-flowing stretch of the San Antonio River between Tuleta Drive and Mulberry Avenue should be preserved and enhanced.

- This recommendation is intended to enhance the diversity of aquatic habitat. It should be undertaken in conjunction with expansion of riparian buffers.

Steps should be taken to prevent further spread or introduction of non-native species [fauna].

- Non-native fishes, in particular, are an issue and potentially harmful to native species. Measures to prevent non-native fishes escaping from the Japanese Tea Garden and San Antonio Zoo should be implemented.

Continued seasonal or yearly fish sampling along with collection of additional water chemistry data (particularly, continuous water temperature) should be collected in this segment of the San Antonio River.

- Changes were seen from previous data collections, and information (including both water chemistry and aquatic species counts) should be collected on an ongoing basis to inform management decisions.

Wildlife habitat areas should be designated in appropriate portions of Brackenridge Park and managed to improve overall habitat conditions.

- The report overall found a dearth of small vertebrate species in the park. Part of the strategy to improve habitat conditions is to designate wildlife areas, which then should be managed to allow the development of dense near-ground cover and more dense understory shrub-level vegetation. Likely areas for designation include the Alpine Drive area, the Wilderness Area, and the river corridor along Avenue A.

Reducing feral cat densities within the park, or at least moving feral cat colonies/feeding stations away from designated wildlife habitat areas (and therefore reducing predation pressures), would likely have a positive influence on all small-bodied wildlife within these areas.

- Feline population density was identified as a likely factor in the lack of small vertebrates in the park. Managing the locations of the cat populations in the park (including moving them away from designated wildlife habitat) will mitigate this issue somewhat.

Using baseline data collected during this study, a vegetation management plan should be developed to set specific goals and identify vegetation enhancement and habitat restoration opportunities in Brackenridge Park.

- Sub-goals identified include:
- Continued monitoring of tree, shrub, and herbaceous vegetation recruitment.
- Enhancement of riparian buffer and other forested areas by removing invasive species and developing planting plans for native species.
- Develop and maintain lists of native/non-native vegetation for each area.
- Restore and enhance grasslands, wetlands, and wildflower slopes.
- Promote growth of understory, shrub, and herbaceous communities by discouraging disturbance in key areas
- Identify and prioritize site-specific restoration projects.

Expanding riparian buffers, planting native riparian trees, and modifying river access points are recommended to address bank stabilization in problem areas.

- Multiple areas of erosion were noted. Some are due to runoff, while others are caused by foot traffic. Limiting river access and planting riparian areas (and managing plantings and vegetation growth) will improve this situation.

Domesticated Species Population Management

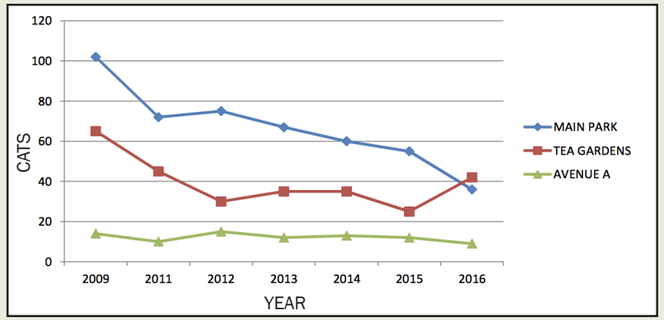
Discussion of feral cat management: issues, strategies, locations for feeding stations and typical appearance/details of feeding stations

Management of the feral cat population has risen in importance from casual feeding to a proper Trap-Neuter-Release (TNR) system managed according to current best practices. This strategy, which removes all adoptable cats from the park and neuters all cats, has reduced the feline population by 51% from 2009 to 2016.

The City of San Antonio officially endorses the TNR strategy for controlling cat populations, and groups working in the Brackenridge Park area have been in the forefront of developing and maintaining standards for feline management. The park has historically been a magnet for animal dumping, both because of the historic presence of the animal shelter (land now occupied by the Paul Jolly Adoption Center) and because of public perception that the park is an acceptable place to dump animals. TNR management should continue in the park, along with efforts to discourage and punish animal dumping in the park.

Part of the TNR strategy includes satellite colonies, where cats are fed, monitored, and (when necessary) trapped. A centralized storage location facilitates feeding and management operations, and is a critical part of a long-term maintenance plan which does not currently exist. In conjunction with the Brackenridge Community Cat Project, a volunteer group which manages most of the recognized colonies in the park, the design team has identified preferred locations for colonies which have been chosen for safety of cats, protection for small vertebrates and birds, and ease of management on the part of volunteers. Additionally, a prototype cat feeding station is presented here, along with design considerations.

In addition to the storage and colony structures, additional signage which informs park visitors about the feline management programs and discourages animal dumping should be installed. This signage should be focused on the colony locations themselves in order to educate people who happen upon the colonies.

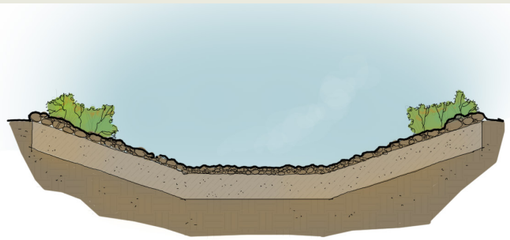


Community Cat Project - Facts 2016

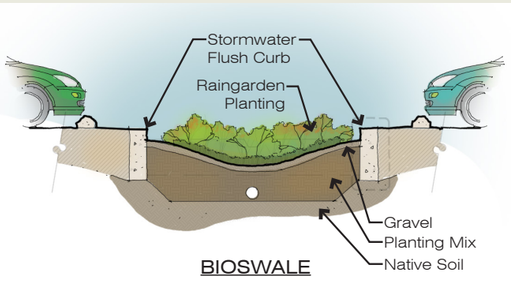
Brackenridge Community Cat Project	
Total Active Volunteers	20
Total Cats handled	55
Cats Requiring Vetting	38
Percentage requiring vetting 6	9%
Average Cost Per Cat for Vetting	$227
Number Removed and Adopted	44
Park Residents Handled - Vetted	12
Euthanized	5
Number of Volunteer Fosters Days -2016	1113
Average Foster Days per cat	20
Captured on Witte Grounds	5

Total Park including BPC, Zoo and ACS	
Total Animal Events during 2016	101
Zoo Surrenders to ACS	39
Cats Saved from Threatened Park Abandonment	13
Number of Kittens Involved (new arrivals all)	52
Number of Adult New Arrivals Involved	35
Total Estimated New Arrivals	87
Total Cat Population Removed from the Park	88
Net Population Change	-1

Species Involved	
Dogs	4
Roosters	1
Cats	96
Witnessed/Documented Cat Abandonment Cases	10
Convictions	0



VEGETATED OPEN CHANNEL



BIOSWALE

Low-Impact Development

All future development in the park will incorporate low impact development site planning principals described in the San Antonio River Basin Low Impact Development Technical Design Guidance Manual (LID Manual). This includes the protection of existing natural areas and drainage ways such as riparian areas, floodplains, stream buffers, wetlands, and soils with stormwater infiltration potential.

1. General Site Design per LID Manual application
   - a. Protection of natural drainage ways
   - b. Buffers with limited pedestrian access to waterways
   - c. Natural areas/habitat

2. Parking
   - a. Surface Lots
     - i. Conversion of remaining surface parking to pervious surfaces for existing perimeter or lower use parking areas
     - ii. Stormwater landscaping for all interior islands and perimeter landscaping around surface parking
     - iii. Parallel parking can be comprised of permeable pavements and can be separated by stormwater management features in bumpouts
   - b. Parking Structures
     - i. Underground retention for new structures
     - ii. Green roofs for parking structures
     - iii. Tree boxes/Planters for runoff from structures around base of buildings
     - iv. Vegetated screens combined with rain gardens

3. Pedestrian/Biking
   - a. Utilize permeable path treatments wherever possible to reduce new imperviousness
   - b. Utilize vegetated and permeable treatments for crossing areas, safety strips, medians etc.
   - c. Vegetated, stormwater management bumpouts can be used for traffic calming

4. River/Catalpa-Pershing Channel restoration
   a. Stream bank and bottom restoration of channelized portions
   b. Buffers (minimum of 25 feet) of native vegetation with limited pedestrian access and trails
   c. Greenway along river with pocket practices located along trails with interpretive signage

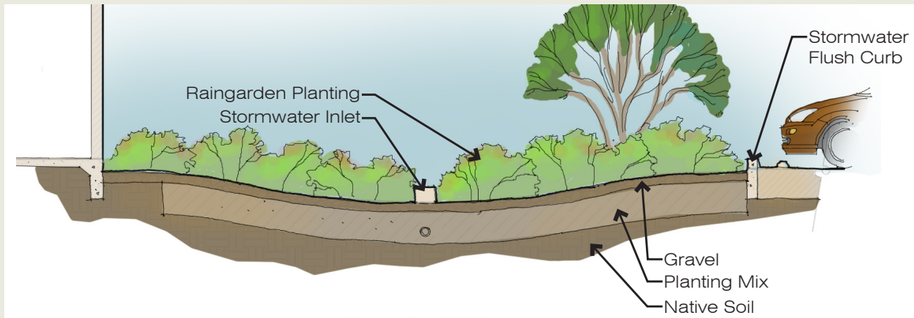
5. Golf Course
   a. Erosion remediation along water features and waterways within golf course
   b. Vegetation Management BMPs as per US Golf Association guidance (Audubon International Environmental Management Practices for Golf Courses).
   c. Buffers/Natural Area preservation
   d. Stormwater retention features incorporated into golf course design

6. Dog park
   a. Treatment features along edges of dog park prior to water features, storm drains
   b. Waste disposal education/receptacles

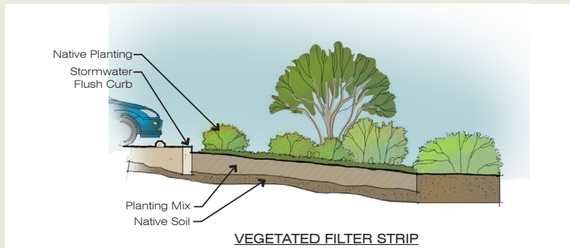
7. Entrance/Gateway/Event Spaces
   a. Bioretention features can be incorporated into vegetated gateway features to better connect surrounding neighborhoods and institutions
   b. Public art and seating features can include stormwater features
   c. Event spaces to utilize permeable treatments

8. Zoo/DoSeum connection
   a. Interpretive raingarden education
   b. Interpretive wetland education

9. Athletic fields
   a. Dual use athletic field/stormwater management features for both flood control and water quality.
   b. Grass covered sand filters/biofilters to reduce sediment and pollution.



RAINGARDEN



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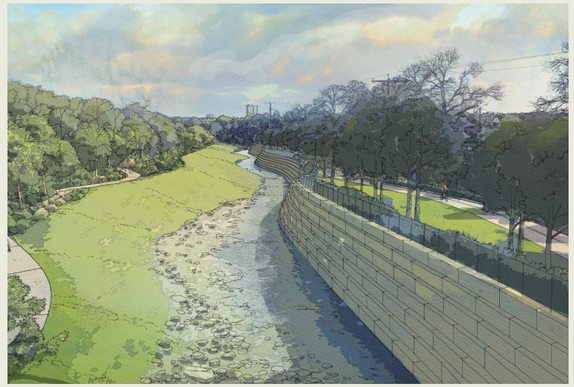

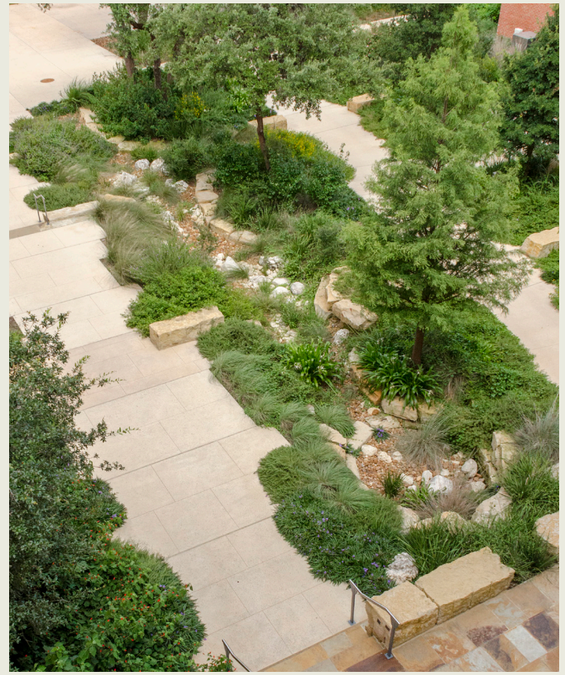

"While public sentiment is currently against two means of dealing with these problems... projects can lessen the visual and environmental impact of roadways and their associated paving without changing carrying capacity or circulation and parking patterns."

Materials and Standards

Roadways and Parking

Roadways and parking spaces should be rehabilitated to accomplish several things:

1) Prioritize the pedestrian over vehicles
2) Blend into the park's setting, de-emphasizing paving and incorporating plantings
3) Minimize paved area and implement low impact development standards

Traffic in Brackenridge Park is a problem. As developments around the park increase surrounding density, it will continue to worsen. While public sentiment is currently against two means of dealing with these problems (closure of roadways to simplify circulation and implementation of a tram or other circulator), the problems will not go away. Future studies should address this situation, but in the meantime, projects can lessen the visual and environmental impact of roadways and their associated paving without changing carrying capacity or circulation patterns.

Paths/paving

Pathways and non-roadway paving in the park must follow low-impact development standards. They should be made of materials which are durable, stable, and aesthetically consistent with their surroundings. Not all paths in the park should be the same. Paths in natural areas should be less conspicuous in character. Those in more heavily-used areas should be more resilient.

Paths should be sized according to use. Multi-use paths should be eight feet wide. Paths for pedestrian-only traffic should be considerably narrower. Less paving, not more, will best maintain the character of the park.

Restrooms

To the extent possible the existing historic restrooms should be renovated for use. Where new restrooms are desired consideration should be give to complete, manufactured restroom equipment that only need to be plumbed and powered. Prototypes of these manufactured restrooms are being tested in downtown San Antonio and show promise of being safe and sanitary for use by the general public.

Lighting

Park lighting should also reflect the character of the space it is placed: natural or developed. Lighting in natural areas (where present – most natural areas should not have lighting) should be hidden to the greatest extent possible. Lighting in developed areas should follow the standard set by the Park Segment improvements of the San Antonio River Improvements Project.

Seating and furniture

Park furniture should be selected according to the general character of the area in which it is placed: natural or developed. Natural areas should feature furnishings that are unobtrusive and/or natural in character (such as large stones that serve as benches). Developed areas should have furnishings which matches those which have been recently placed in the park.

Public Art
Public art has long been a feature of Brackenridge Park. Starting in the early 1930's with Dionicio Rodriguez sculpted concrete (faux boix or "false wood") pedestrian bridges, benches, mini-shelters. Other art includes the iron aquatic plant sculpture at the Funston entrance to the park crafted by George Schroeder, cast bronze pecan tree slices by Ann Wallace, and three ceramic sculptures mounted atop limestone river rock columns by Susan Budge. The most recent Mulberry Avenue bridge ceramic sculpture, depicting the evolution of a frog, is by Diana Kersey. This tradition of embracing public art should be continued as the park develops, as it enriches the lives of all who experience it.

Playground Equipment
Playgrounds are one of the most used features in the park. When playground equipment is being replaced, or where a new playground is being developed care should be given to select pieces that are durable and safety/ accessibility compliant . It is also recommended that equipment be selected from manufacturers that offer physically challenging and artistically styled pieces.

Dionicio Rodriguez Sculpture

Susan Budge Ceramic

Architectural Guidelines

New buildings in the park should be limited. In fact, this master plan calls for only a handful of new facilities, the majority of which are replacements for existing buildings. New usable square footage will primarily come in the form of restorations and repurposing of existing buildings.

The Department of the Interior's Standards for the Treatment of Historic Properties should be followed for rehabilitation of existing buildings. Not only are those guidelines best practices for work on historic buildings, the status of the park as a National Register-listed property is best protected by adhering to the Department of the Interior's standards.

Generally speaking, new facilities should be designed to complement existing buildings and to blend into their surroundings. Exterior materials should include limestone, with color and size selected to match limestone on older buildings in the park, and tile and metal roofing. Some variance is acceptable to achieve better compatibility with surrounding structures.

In very limited cases, some departure may be made from the material palette of the rest of the park. Such departures should be carefully considered to contrast appropriately with existing materials and to achieve design intent with regard to visibility, prominence, and other considerations.

Historic Permitting Requirements

Because Brackenridge Park is a designated historic landmark property at local, state, and federal levels, it is subject to certain reviews and approvals prior to the acquisition of permits for any demolition and/or construction in the park. Specifically, (1) the park holds local landmark status with the City of San Antonio, (2) it is listed as a State Antiquities Landmark (SAL) at the State of Texas level and, (3) at the federal level, the park is listed as a historic district in the National Register of Historic Places. Last, the San Antonio River Authority regulates Park river activity/water quality.

Concerning the local level of landmark regulation, all new construction, as well as alterations and demolitions must have approvals from the City of San Antonio's Office of Historic Preservation (OHP) prior to receipt of San Antonio building permits. The park is also a rich archaeological site and prior to any digging, especially near the San Antonio River and the acequias, must have clearance from the City Archaeologist. Last, signage in the park is also regulated by the OHP and must be approved. Thus, even seemingly minor alterations to buildings, sites, objects, and structures should be submitted to the OHP staff. However, the staff may be able to administratively approve and sign off on proposed construction work if it is minor maintenance or repair. If more complicated construction is planned, the project is reviewed and approved by the Historic and Design Commission (HDRC). After the HDRC gives approval, the staff issues a Certificate of Approval (COA). A COA is then used to acquire building permits. The City of San Antonio's website for the Office of Historic Preservation provides specific help in this local review process.
At the state level, the park is a State Antiquities Landmark (SAL). This designation stipulates that a property cannot be removed, altered, damaged, salvaged, or excavated without a permit from the Texas Historical Commission (THC). Before commencing work on an SAL, the property owner must notify the THC of the proposed project. For complex projects, THC staff should be consulted early in the planning or design process in order to avoid delays. If a permit is required, THC staff will respond within 30 days of notification by providing a permit application form and indicating any required attachments and application reports. The Antiquities Permit Application Forms for Archeology, and Historic Building and Structure Permits may also be downloaded from the THC Forms pages. Depending on the nature of the project, an archaeologist or architect with relevant professional qualifications and experience must oversee the permitted work and will be responsible for submitting any required reports. Permits are issued under the signature of the Executive Director of the THC or his representative, and include the terms and conditions governing the project work.

Concerning "federal reviews," because the park is listed in the National Register of Historic Places and is on City or public land, the National Historic Preservation Act (NHPA) of 1966 requires that federal agencies take into account the effects of their undertakings on a historic property like the park. In addition to direct actions of the federal government, federal undertakings are projects involving a permit or license, funding (such as federal grants), or other assistance or approval from a federal agency. Section 106 of the NHPA and its implementing regulations at 36 CFR Part 800 lay out review procedures that ensure historic properties are considered in federal planning processes. Ordinarily, local historic architects, archaeologists, or architectural historians who meet the Secretary of the Interior's Professional Qualification Standards are responsible for completing a "Section 106" review process on behalf of a federal grant recipient or federal development activity, ensuring there is no adverse effect on the park. Like the SAL review process, the Section 106 review process is completed in coordination with the staff of the Texas Historical Commission. The THC website provides specific guidance of on this process.

Last, because the San Antonio River flows through Brackenridge Park, any river-related work must be coordinated with the San Antonio River Authority (SARA). The River Authority owns and manages the riverbed and is responsible to environmental and water quality compliances.

TEXAS HISTORICAL COMMISSION
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Archaeological Permitting Requirements

City of San Antonio Historic and Design Review Commission (HDRC)

It is anticipated that any subsurface disturbances that are to take place as part of planned improvements within the boundaries of the Park will require pre-construction investigations and/or archaeological monitoring during construction. These requirements are initiated by the City of San Antonio's Unified Development Code (Chapter 35). The City of San Antonio's Office of Historic Preservation will be a signatory to any permit allowing such investigations to take place.

Texas Historical Commission (THC)

The overarching authority responsible for the granting of archaeological monitoring and/or pedestrian survey permits is the Archaeological Division of the Texas Historical Commission (THC) and specifically the Antiquities Committee of the THC. If undisturbed cultural deposits are identified during monitoring and/or unearthed during a pedestrian survey, such deposits may require National Register of Historic Places eligibility investigations. Such eligibility testing investigations will also require THC permitting. Coordination between the City of San Antonio Office of Historic Preservation and the Texas Historical Commission will be carried out as part of such investigations.

Finally, if any National Register-eligible or National Register-listed standing structures or historic properties (i.e., D. Rodriguez sculptures) are to be impacted by proposed construction, such potential impact will have to be reviewed by the Historic Programs staff of the COSA OHP and the staff of the Texas Historical Commission.

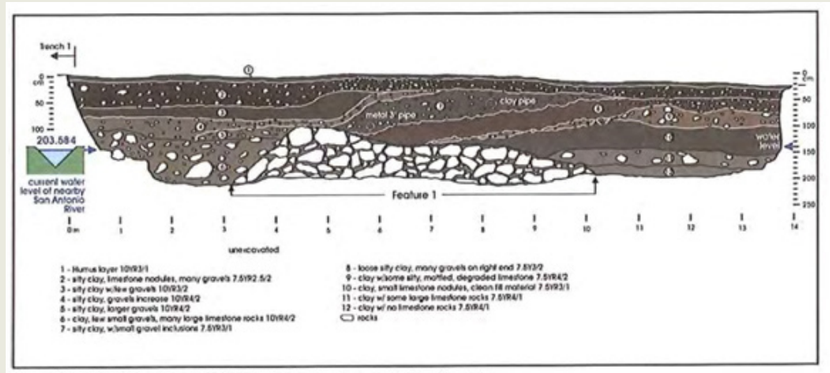

Figure 5-13. *Profile of the east wall of BHT 7 showing Feature 1, remnants of the Alamo Dam.*


Acequia Madre (Alamo) Dam Excavation near Witte Museum

Early Brackenridge Park Train Ride


Upper Labor Excavation