

APPENDIX G

CONCEPT PLAN DEVELOPMENT

Appendix G: Concept Plan Development Documents

- Appendix G1: Challenges & Opportunities**
- Appendix G2: Visions and Goals**
- Appendix G3: Site Program Opportunities**
- Appendix G4: Approach to Sustainable Sites Initiative**

APPENDIX G1

CHALLENGES & OPPORTUNITIES

	NATURAL RESOURCES		RECREATION	
	CHALLENGES	OPPORTUNITIES	CHALLENGES	OPPORTUNITIES
North of 28th Street	<ul style="list-style-type: none"> + Invasive species + Limited water resources + Reduction in size of riparian vegetation at Lamar Terrace + High water velocity during storm events at Lamar Lawn + Low woody plant regeneration + Erosion and invasive species 	<ul style="list-style-type: none"> + Restoration of native species + Greywater collection + Riparian restoration + Reforestation + Rain swales 	<ul style="list-style-type: none"> + Un-programmed lawn at Lamar Terrace + Lacks bike racks 	<ul style="list-style-type: none"> + Program lawn at Lamar Terrace + Bike racks + Re-establish views of creek at Split Rock + Nature programming
24th-28th Streets	<ul style="list-style-type: none"> + Eroded trails + Invasive vegetation + Fragmented tree canopy + Soil erosion + Degraded habitat + Most of park in floodplain 	<ul style="list-style-type: none"> + Enhance trail performance + Enhance canopy integrity + Increase canopy continuity + Establishment of ground cover and understory plants + Preservation of tree grove 	<ul style="list-style-type: none"> + Lacks bike racks at entry + Lacks restrooms + Lacks dog waste stations + Limited seating opportunities 	<ul style="list-style-type: none"> + Bike racks + More restrooms + Dog waste stations + More benches and picnic tables
15th-24th Streets	<ul style="list-style-type: none"> + Low wood plant regeneration + Eroded creek banks + Stormwater erosion + Tree mortality + Invasive species + Substantial human impact along riparian zone + Steep slopes + Non-contiguous parcels + Del Rio clay 	<ul style="list-style-type: none"> + Reforestation + Enhance riparian corridor + Rain swales + Heavy woody species restoration underway + Riparian restoration + Direct use in sensitive areas 	<ul style="list-style-type: none"> + Disjointed paths + Incoherent recreation amenity organization at the Big Field + Lacking bike racks at entry at Kingsbury + Splash pad in floodway + Restrooms in floodway + Poor quality baseball field + Un-programmed lawn + Unimaginative play equipment at Kingsbury Commons + Limited seating opportunities 	<ul style="list-style-type: none"> + Improve path + Organize amenities + More bike racks at entry + Improve baseball backdrop + Program lawn + Enhance playscape + More benches and picnic tables + Amphitheater at Polecat Hollow + Enhance birding experience at Windsor Hillside + More fitness station at the Hillside/Kingsbury Commons

	CULTURAL AMENITIES		INFRASTRUCTURE	
	CHALLENGES	OPPORTUNITIES	CHALLENGES	OPPORTUNITIES
North of 28th Street		+ Interpretive signage	+ Trail surface and safety rail at the Bluffs in poor shape + Use of area as staging for sewer infrastructure improvements	+ Develop understanding of operations and plan improvements accordingly + Enhance N-S gateway north of 29 th Street + Add trailheads and hiking trails + Possible SWM on east side of Lamar along the East Bank + Improve crosswalks
24th – 28th Streets		+ Bridge is opportunity for preservation and enhancement + Interpretive signage	+ Car-dominated landscape + Parking lot is worn out + Long distance to cross Lamar at X with dangerous alignments and no pedestrian crossings + Car/pedestrian conflict + Draining impacts erosion + Unsafe underside of bridge at 24 th Street + Shoal Creek Trail washing out/eroding	+ Improve pedestrian access + Improve parking lot + Enhance gateway with safer crossings; Improve crosswalk and east-west gateway at 24 th Street + Trail crossing access improvements + Drainage impacts slope and access + Add lighting under bridge + Develop sustainable surface material + Relocate sewer lines at Live Oak Terrace along Lamar +
15th - 24th Streets	+ Poor streetscape design + Gates outside boundary	+ Tudor cottage could be a restaurant + Gates are opportunity for streetscape enhancement + Kingsbury as park entrance + Expand historic boundary + Interpretive signage	+ No park identity to serve as entrance + Lamar is hot and barren + Limited parking; poor pedestrian access + Undefined road character + Issues with irrigation water due to drought + Creek divides public use access + Utility poles degrade view of park + Limited access to park from MLK + Poor visual quality at park entrance at Kingsbury + Poor arrival experience + Limited parking near Custer's Oak + Unattractive steel barrier and dumpster + Narrow pedestrian bridge + Limited visibility of park at 15 th Street	+ Develop gateway identity + Consider street trees to reduce heat island effect and to improve appearance and visual experience + Address pedestrian access along parkway + Define parkway character and park edge + Install non-potable lines to replace potable + Build bridge to connect east and west sides of creek + Bury utilities to allow unimpeded views of park + Improve bus shelter at MLK; define gateway to park; Improve crosswalk across MLK + Improve pedestrian access and appearance at Kingsbury + Improve edge at Kingsbury; improve gateway + Widen bridge for 2-way bike traffic + Explore possible crosswalk north of 15 th Street + Enhance N-S gateway at 15 th Street + Trails at Windsor Hillsides
Site-wide		+ Entire area could be a cultural landscape		

APPENDIX G1: CHALLENGES & OPPORTUNITIES

APPENDIX G2

VISIONS AND GOALS

Vision: Pease Park and Shoal Creek Greenbelt is:

- a green, urban oasis whose natural artery, Shoal Creek, and its forest, open spaces and cultural history are protected and enhanced.
 - a safe, well-maintained and beautiful destination that is easily accessible for all, and serves the adjoining neighborhoods and all Austinites.
 - a hub of Austin's trail system, where people gather as a community to enjoy recreation and respite.
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Goal 1: Preserve and Enhance the Natural Environment

- Restore ecological processes
 - Support the re-establishment of native vegetation where appropriate through plantings and seeding that includes groundcover, understory and canopy species
 - Increase the diversity of and widen riparian areas to improve water quality in the creek and water absorption outside the creek
 - Use vegetation and grading to increase storm water absorption and utilization where appropriate
 - Manage and/or remove invasive species as appropriate
 - Revitalize soils where depleted, compacted or washed away
- Enhance the visitor experience
 - Formalize visitor experiences with the creek to create access, views and to reduce informal trampling, erosion and degradation
 - Use plantings to help guide and enhance the visitor experience
 - Use vegetation to frame views of the creek and other amenities, while screening views and noise of unsightly and loud elements such as Lamar Boulevard
 - Create protocols for re-establishing vegetation in areas heavily impacted by human and pet traffic
 - Create areas of botanical interest, aesthetic appeal, and identity
- Create sustainable landscapes
 - Plant and seed appropriate native and adapted species taking into account soils, terrain, impacts, and solar orientation
 - Use Sustainable Sites Initiative (SITES) documentation as a guide for making landscape decisions
 - Create efficient landscapes that return value through shading, water absorption, soil creation, water purification and aesthetic appeal
 - Restore lawn areas with native grass blend
 - Capture gray water and/or storm water for irrigation
 - Protect and preserve heritage trees
 - Protect Shoal Creek
 - Protect seeps and springs
 - Create five-year management plan with best practices and prioritization of tasks
 - Minimize floodplain development
- Provide opportunities for stewardship
 - Develop interpretive plan with a strong emphasis on the ecology of Shoal Creek
 - Incorporate volunteer activities into long-term management plans and tasks
 - Promote citizen science to increase general awareness and document biodiversity
 - Utilize volunteer monitoring for early detection of invasive species

Goal 2: Preserve and Enhance the Cultural Environment

- Develop unified park character sensitive to the site's designation within Old West Austin and the National Register of Historic Districts
- a cultural landscape under the Old West Austin Historic District as part of the National Register
- Preserve/restore historic and cultural features
 - Develop adaptive re-use for Tudor Cottage
 - Restore stone walls, pylons, benches
 - Explore options for better integrating entry into park
- Preserve/restore historic bridges
 - Add lighting
 - Remove graffiti
 - Seek official designation for historic bridges and develop a restoration and maintenance plan
- Provide opportunities for public art
- Instill a sense of stewardship
 - Develop interpretive plan with a strong emphasis on the history of Pease Park
 - Incorporate volunteer activities into long-term management plans and tasks

Goal 3: Provide Appropriate Recreation

- Create opportunities to connect with nature
 - Add natural play opportunities for children
 - Create creek play opportunities
 - Create creek overlooks
- Maximize potential of play
 - Add amenities to enhance existing play equipment
 - Create imaginative playscapes
 - Provide multi-generational play
 - Tie play elements into overall park character
 - Maximize recreation functionality and carrying capacity
 - Distribute play opportunities throughout the site
- Provide opportunities for fitness
 - Add multi-generational fitness stations
 - Add flexible space for exercise boot camps, yoga, etc.
 - Add fitness walk/loop
- Add/enhance opportunities for court and field games
 - Restore baseball field
 - Restore basketball court
 - Restore volleyball fields
 - Add petanque courts
- Accommodate large events
 - Provide staging for large events
 - Add amphitheater
- Enhance comfort
 - Add seating and picnic areas
 - Add shade trees and trellises
 - Add water fountains and restrooms
 - Add opportunities for food (temporary and/or permanent), considering food truck parking and electricity needs
- Provide security
 - Maximize visibility for parental surveillance
 - Add lighting
 - Address dog leash policy
 - Add emergency phones
- Develop trail system and maintenance standards
 - Ensure ADA accessible path options throughout the park
 - Shared use – paved
 - Excursion – decomposed granite
 - Hiking – mulch
- Instill a sense of stewardship
 - Develop interpretive plan
 - Coordinate public/private partnership

Goal 4: Provide and Advocate for Infrastructure to Support Use and Access

- Provide safe access to the park

Motorists:

- Provide adequate parking for everyday traffic
- Coordinate adequate transportation and/or parking for larger events

Bus riders:

- Add bus shelters with signature, unique appearance
- Advocate for a city-wide bus circulator
- Advocate for rapid bus route stops

Pedestrians:

- Widen sidewalks along Lamar Boulevard
- Slow/calm traffic around park
- Add/enhance pedestrian crosswalks
- Realign/relocate pedestrian bridge to Kingsbury Street

Bikers:

- Widen Shoal Creek Trail to accommodate bikers
- Consider bikers when making trail material decisions
- Add bike racks

- Provide access to park amenities
 - Add ADA bridge from Polecat Hollow to Custer's Meadow and bridge from Polecat Hollow to Big Field
 - Add low water crossings across creek
 - Provide ADA paths
- Provide gateways to welcome people to the park
 - Add pedestrian gateways
 - Add vehicular gateways
 - Add transit gateways
- Manage storm water
 - Implement Great Streets ("Great Parkways")
 - Daylight storm drains/explore rain gardens on east side of Shoal Creek
 - Remove concrete encasements in creek
- Provide signage
 - Add identity signage
 - Add way-finding signage
 - Add interpretive signage
 - Add regulatory signage
- Consider lighting possibilities
 - Gateway lighting
 - Use-areas lighting
 - Trail lighting
- Provide information technology
 - Provide wi-fi hotspot
 - Provide smart system for efficient lighting and irrigation
- Instill a sense of stewardship
 - Develop interpretive plan
 - Coordinate public/private partnerships

APPENDIX G3

SITE PROGRAM OPPORTUNITIES

The Chart Categories:

- + This program chart is divided into four categories, based on the four main goals for the Pease Park Master Plan:
 - 1) Preserve and Enhance the Natural Environment
 - 2) Preserve and Enhance the Cultural Environment
 - 3) Provide Appropriate Recreation
 - 4) Provide and Advocate for Infrastructure to Support Use and Access
- + It is then further divided by rows, including a “park-wide” row with elements that apply across the site, and then geographically by each of the landscape character zones of the park moving south to north along Shoal Creek. In addition to examining the project by geographic zones, the site has also been investigated on a system-by-system basis. These systems include:
 - o Vehicular Circulation
 - o Parking
 - o Pedestrian Circulation
 - o Transit
 - o Utilities
 - o Storm Water
 - o Vegetation
 - o Soils
 - o Hydrology
 - o Lighting
 - o Site Furnishings
 - o Structures
- + The chart incorporates public input (online survey results, on-site clipboard survey results and feedback from the November 21, 2013 public meeting in Austin), the TAG team, the client Pease Park Conservancy and the WRT Design Team.

The Chart Legend:

- + At the bottom of each page is a color-coded legend that references the five program elements described below:

1) Restoration Efforts in Progress by the Watershed Department:

- o The City of Austin Watershed Protection Department has developed restoration plans along Shoal Creek west of Lamar Boulevard between 15th and 28th Streets. Construction begins in the spring of 2014 and will continue until the fall of 2015. The efforts of this restoration project are highlighted here to demonstrate plans already in place.

2) Civic Gateway Standard Elements:

- o The Pease Park Master Plan includes implementing civic gateways into Pease Park and the Shoal Creek Greenbelt. Each gateway is developed in the same language and will include these elements:
 - Plantings
 - Signage
 - **Crosswalks:**
 - a. Timed lights
 - b. Flashing lights
 - c. Striping
 - d. Material change
 - e. ADA compliance
 - f. Median enhancements

3) Vehicular Gateway Standard Elements:

- o The Pease Park Master Plan includes implementing vehicular gateways into Pease Park and the Shoal Creek Greenbelt. Each gateway is developed in the same language and will include these elements:
 - Plantings
 - Signage
 - Signature walls
 - Lighting
 - Parking
 - Porous paving
 - Pedestrian Gateway (see below)

4) Pedestrian Gateway Standard Elements:

- o The Pease Park Master Plan includes implementing pedestrian gateways into Pease Park and the Shoal Creek Greenbelt. Each gateway is developed in the same language and will include these elements:
 - Plantings
 - Signage
 - Signature walls
 - Lighting
 - Seating
 - Trash/recycling

5) Activity Hub Standard Elements:

- o The Pease Park Master Plan includes implementing hubs throughout the trail network of Pease Park and the Shoal Creek Greenbelt. The five hubs have been identified as: 1) Kingsbury Commons; 2) Polecat Hollow; 3) Custer's Meadow; 4) Gaston Green; and 5) Lamar Terrace. Each hub is developed in the same language and will include:
 - Plantings
 - Signage
 - Signature walls
 - Expanded special pavement area
 - Lighting
 - Trash cans/recycling
 - Water fountain
 - Shade trellis
 - Storm water feature
 - Bike racks
 - Signature planting
 - Public art
 - Emergency phone
 - Energy generation

6) Trail Node Standard Elements

- o The Pease Park Master Plan includes implementing trailheads throughout the trail network of Pease Park and the Shoal Creek Greenbelt. Each trailhead is developed in the same language and will include these elements:
 - Signage/way-finding
 - Trash cans/recycling
 - Seating

7) Bus Shelter Standard Elements:

- o The Pease Park Master Plan includes adding bus shelters along Lamar Boulevard at each existing southbound bus stop. Each bus shelter is developed in the same language and will include these elements:
 - Expanded special pavement area
 - Seat walls
 - Signage
 - Lighting
 - Trash/recycling
 - Water fountain
 - Shade structure
 - Storm water feature
 - Bike racks
 - Bike Share
 - Signature plantings
 - Emergency phone

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Park-Wide	<ul style="list-style-type: none"> + Increase ecological integrity of the study area + Restore ecological processes where appropriate + Create protocols for re-establishing vegetation in areas heavily impacted by human and pet traffic + Manage invasive species + Mitigate compacted soils + Develop a sustainable planting strategy that takes into account human use patterns and low water needs + Preserve and enhance viewsheds + Supplement riparian restoration efforts of Watershed Protection project south of Gaston Bridge and create equivalent recommendations north of Gaston Bridge + Create design solutions that enhance recreation and allow for interaction with natural areas + Create schedule and prioritization of tasks + Limit use of mown turf; where needed use native grass blend 	<ul style="list-style-type: none"> + Park Identity: <ul style="list-style-type: none"> o Integrate cultural and historical information with other signage/way-finding + Public Art: <ul style="list-style-type: none"> o Option 1: Integrated art o Option 2: Freestanding art o Option 3: Eco-art + Bridges: <ul style="list-style-type: none"> o Preserve/restore bridges o Remove graffiti o Frame bridge views 	<ul style="list-style-type: none"> + Add mile markers along hiking trails and Shoal Creek Trail (coordinate with City of Austin and Shoal Creek Conservancy) + Add Pease Park Loop from Kingsbury Commons through Big Field to Polecat Hollow and Custer's Meadow—a paved, smooth-surface loop for roller bladers, parents with strollers and joggers 	<ul style="list-style-type: none"> + Create activity hubs (Kingsbury Commons, Custer's Meadow, Polecat Hollow, Gaston Green, Lamar Terrace) + Add trail nodes throughout trail network + Parking: <ul style="list-style-type: none"> o Accommodate weekday parking o Accommodate weekend parking o Coordinate special event parking + Lighting Elements: <ul style="list-style-type: none"> o Underside of historic bridges o Kingsbury Parkway o Lamar Boulevard o Trailheads o Tudor Cottage o Shoal Creek Trail o Pedestrian crosswalks at Lamar Boulevard o Bus shelters + Irrigation: <ul style="list-style-type: none"> o Option 1: Capture rainwater o Option 2: Use City water (City extension of non-potable water delivery system to main irrigated areas at the park) o Option 3: Use well water

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Kingsbury Commons Entry Threshold	<ul style="list-style-type: none"> + Add signature plantings at arrival gateway + Prune and repair older cedar elm in playground area to enhance tree health and prevent large limb failures 	<ul style="list-style-type: none"> + Add historical interpretation: Governor Pease + Create larger paved area at gate to signify threshold + Relocate/compose recreational program to create large view into park + Remap historic boundaries to include the gates <p>Design Character:</p> <ul style="list-style-type: none"> + Create trailhead character identity + Create landing gateways at pedestrian bridge at Kingsbury Street 		<ul style="list-style-type: none"> + Create activity hub + Roads: <ul style="list-style-type: none"> o Rethink parking at Kingsbury Street o Address the gates o Implement road diet on Parkway—add curb bump-outs, sidewalks o Redesign street with porous pavement o Screen/relocate dumpster o Maximize parking efficiencies o Accommodate school bus parking + Trails: <ul style="list-style-type: none"> o Create arrival trailhead o Widen Shoal Creek Trail to city-wide bike standards + Create arrival space at intersection of realigned bridge and Parkway (offset from view into park) + Coordinate with City gateway at 15th Street + Add pedestrian stop light and crosswalk at Lamar Boulevard and 15th Street (part of gateway identity) + Remove bollards and open up 8-10 parallel parking spaces
Kingsbury Pedestrian Bridge	<ul style="list-style-type: none"> + Reforest riparian areas + Remove invasive species 	<ul style="list-style-type: none"> + Add historical interpretation: 1981 Flood 		<ul style="list-style-type: none"> + Modify/replace bridge: <ul style="list-style-type: none"> o Option 1: Widen in place o Option 2: Realign or relocate pre-fabricated bridge based on conditions of 15th Street Gateway o Option 3: Construct new bridge based on proposed conditions of 15th Street Gateway
Kingsbury Commons Playground	<ul style="list-style-type: none"> + Add signature plantings for botanical interest—lend identity to this zone through native species plantings that are exceptional, memorable and ecologically sound 	<ul style="list-style-type: none"> + Restore picnic tables if needed + Integrate play equipment/splash pad into cultural language of park 	<ul style="list-style-type: none"> + Add petanque courts + Cluster program + Extend language of tables elsewhere + Add shade trellis + Enhance play equipment/splash pad + Add opportunity for children's creek play 	<ul style="list-style-type: none"> + Develop irrigation alternatives or methods, including City extension of non-potable water delivery system + Add restroom/equipment and maintenance storage + Add water fountains + Develop alternative locations for splash pad, restroom facilities and mechanical room, considering

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Kingsbury Commons Playground			<ul style="list-style-type: none"> + Integrate recreation equipment into landscape + Add equipment with additional play challenges + Add seating/picnic areas for parents + Relocate restrooms + Maximize experiential play potential: <ul style="list-style-type: none"> o Option 1: Leave in place/enhance equipment o Option 2: Reorganize/shift location and enhance play equipment o Option 3: Customize designed adventure 	critical sight lines for police security
Tudor Cottage	<ul style="list-style-type: none"> + Preserve heritage trees + Add signature plantings for botanical interest-- lend identity to this zone through native species plantings that are exceptional, memorable and ecologically sound 	<ul style="list-style-type: none"> + Tudor Cottage Elements: <ul style="list-style-type: none"> o Option 1: Add meeting space o Option 2: Add café 	<ul style="list-style-type: none"> + Add seating/trellises + Add terraces and ADA path 	<ul style="list-style-type: none"> o Add ADA path to Tudor Cottage
Big Field	<ul style="list-style-type: none"> + Limit use of mown turf; where needed use native grass blend + Ensure natural areas management complements and responds to recreational and programming use in this area + Widen vegetative buffer to Shoal Creek through native tree and herbaceous cover plantings 	<ul style="list-style-type: none"> + Restore stone walls + Add historical interpretation: Eeyore's Birthday 	<ul style="list-style-type: none"> + Restore Ball Field: <ul style="list-style-type: none"> o Add new backstop o Add seating o Re-grade o Add water fountain o Add trash cans/recycling + Restore Courts: <ul style="list-style-type: none"> o Add trash cans/recycling o Add water fountain + Add picnic area + Add seating area + Maintain flexible space to accommodate Eeyore's Birthday 	<ul style="list-style-type: none"> + Utilities: <ul style="list-style-type: none"> o Connect Big Field to Polecat Hollow with ADA foot bridge o Remove concrete encasements in creek + Hike/Bike Trail: <ul style="list-style-type: none"> o Stabilize trail edging o Stabilize trail material o Revise grading to improve storm water management and reduce erosion

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
North Ramble and Hillside	<ul style="list-style-type: none"> + Ensure plant selection for seeding and planting is appropriate for the Del Rio clay where present + Supplement establishment of reforested upland areas + Create invasive species removal and monitoring protocols + Increase understory vegetation diversity that attracts wildlife, pollinators and birds + As area matures, ensure a defined human use pattern to allow for enjoyment but also to reduce overall human impacts + Ensure cleared areas in woodlands are replanted + Effectively remove Ligustrum, bamboo and other invasive species populations + Ensure establishment of native riparian plants along creek edge + Use natural areas management in this area to inform passive recreation opportunities + Remove dumped road fill along upper Parkway that envelopes trees + Add low water crossings at Shoal Creek 	<ul style="list-style-type: none"> + Add historical interpretation: Capitol viewshed + Add flora and fauna interpretation along trails for birders and nature walkers 	<ul style="list-style-type: none"> + Add seating/picnic tables 	<ul style="list-style-type: none"> + Develop hike/bike trail maintenance + Address erosion and sediment control at trails + Improve pedestrian connection at intersection of Kingsbury Street and Parkway to Windsor gateway + Add trail connection to Windsor gateway + Add trail node at hiking trail/Shoal Creek Trail intersection + Remove concrete encasements in creek + Add French drains and storage tanks + Remove paving and guardrail at blocked portion of Kingsbury Spur
Windsor Hillside	<ul style="list-style-type: none"> + Control invasive species + Create land management plan appropriate for desired programming + Ensure plant selection for seeding and/or planting is appropriate for the Del Rio clay where present + Create restoration plan for the elimination of Kingsbury Spur + Seed and plant vegetation to attract specific bird species 	<ul style="list-style-type: none"> + Add historical interpretation: Old Enfield/Old West Austin neighborhood 	<ul style="list-style-type: none"> + Add hiking trails for birders + Add seating/picnic tables + Add plant species identification 	<ul style="list-style-type: none"> + Kingsbury Parkway Road Standard Elements: <ul style="list-style-type: none"> o Traffic calming (Public Works) o Sidewalk on eastern edge o Curb edge o Street lighting o Way-finding signage o Parking o Stone walls o Storm water management + Eliminate interior Kingsbury spur + Add pedestrian gateway at Lorrain Street

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Windsor Hillside				<ul style="list-style-type: none"> + Windsor Gateway: <ul style="list-style-type: none"> ○ Remove the street, remove the guard rail and re-vegetate ○ Add gateway at Kingsbury Spur and connect to staircase/path to parking ○ Remove and reforest Kingsbury Spur and create gateway/paths to Parkway at Lorrain Street + Irrigation: <ul style="list-style-type: none"> ○ Explore irrigation options, including City extension of non-potable water delivery system ○ Add water storage containers
Polecat Hollow	<ul style="list-style-type: none"> + Add rain garden + Stabilize banks + Remove fill/address grading issues + Add low water crossings at Shoal Creek + Preserve and add to mesquite grove + Limit use of mown turf; where needed use native grass blend + Create riparian edge where bank stabilization is completed + Increase riparian buffer and native plantings outside of programmed areas + Ensure natural areas management complements and responds to recreational and programming use in this area + Add signature plantings for botanical interest across from MLK intersection 	<ul style="list-style-type: none"> + Implement signature public art + Enhance skyline vista along Lamar Boulevard 	<ul style="list-style-type: none"> + Amphitheater with Storm Water Detention Capacity: <ul style="list-style-type: none"> ○ Option 1: Bowl ○ Option 2: Terraces with lawn ○ Option 3: Terraces with stone steps and seats + Restore Volleyball Courts: <ul style="list-style-type: none"> ○ Consider location ○ Optimize the orientation ○ Add seating/picnic tables ○ Add water fountains ○ Add outdoor shower + Add large picnic table area + Add fitness stations + Add nature play area 	<ul style="list-style-type: none"> + Create activity hub + Add bus shelter at Lamar Boulevard and MLK + Intercept storm water on east side + Add trail at western edge of Polecat Hollow + Add lighting + Remove concrete encasements in creek + Bury overhead electric and telecommunications wires + Create driveway/parking aligned with MLK + Add parking + Add restroom/equipment and maintenance storage + Add bridge from Polecat Hollow to Custer's Meadow

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Caswell Shoals	<ul style="list-style-type: none"> + Add street trees + Reforest upland areas + Add signature plantings for botanical interest—lend identity to each zone, or “room,” within Pease Park through native species plantings that are exceptional, memorable and ecologically sound + Increase riparian woodland experience in flood terrace + Increase native flora through plantings and seedings including groundcover, understory and canopy species + Remove invasive species + Implement natural areas management to inform passive recreation opportunities + Utilize vegetative buffer to shield trail experience from Lamar Boulevard traffic 	<ul style="list-style-type: none"> + Add historical Interpretation: Caswell Shoals and Shoal Creek 	<ul style="list-style-type: none"> + Add seating/picnic tables + Create connection to creek overlook 	<ul style="list-style-type: none"> + Explore irrigation options, including City extension of non-potable water delivery system + Add solar pump/water storage <p>Trails:</p> <ul style="list-style-type: none"> + Add pedestrian gateway at 24th Street with connection to Shoal Creek Trail + Create Shoal Creek Trail gateway to Caswell Shoals and Polecat Hollow creek trail
Custer's Meadow	<ul style="list-style-type: none"> + Create protocols for re-establishing groundcover and understory vegetation in areas heavily impacted by human and pet traffic + Create seeding and planting recommendations + Increase soil stability and health through supplementing with organic material and reducing compaction + Use native vegetation to frame views and define interface with creek—ensure planting choices can sustain and formalize human interaction with the creek + Open up views to creek + Ensure native plantings are compatible with Del Rio clay soils + Add native plantings appropriate for wetter areas created by rain gardens and swales 	<ul style="list-style-type: none"> + Add historical interpretation: Custer's Encampment + Add flora and fauna display + Restore/stabilize historic culverts + Restore/stabilize benches 	<ul style="list-style-type: none"> + Add seating/picnic tables + Add connection to creek overlook + Add opportunity for children’s creek play at Fossil Bend + Add overlook at Fossil Bend with stone wall and seating + Add children’s nature play at meadow or upland area + Address dog leash policy 	<ul style="list-style-type: none"> + Create activity hub + Add ADA bridge to Polecat Hollow + Add ramp for access to creek; terraced path + Remove concrete encasements in creek <p>Parking:</p> <ul style="list-style-type: none"> o Reduce per watershed plan o Relocate parking to Polecat Hollow <p>Kingsbury Parkway Road Standard:</p> <ul style="list-style-type: none"> o Add sidewalk on east side along park o Add curb edge o Add street lighting o Add way-finding signage o Add parking <ul style="list-style-type: none"> o Day-to-day o Event o Add stone walls o Add storm water management

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Custer's Meadow	<ul style="list-style-type: none"> + Widen riparian vegetative buffer with plants that will discourage off-trail activities, but will still allow views of creek (except in official creek access areas) + Ensure natural areas management complements and responds to recreational and programming use in this area + Add low water crossings at Shoal Creek + Add rain gardens and drainage improvements at riparian buffer 			
24 th Street Bridge	<ul style="list-style-type: none"> + Remove invasive species 	<ul style="list-style-type: none"> + Add historical interpretation: 24th Street Bridge 		<ul style="list-style-type: none"> + Coordinate ramp and steps on west side of creek + Supplement Watershed: Add ramp and steps from 24th Street intersection to new Shoal Creek Trail segment (east) + Add bus shelter at existing bus stop at 24th Street + Add lighting: <ul style="list-style-type: none"> o Historic/bridge lighting o Gateway lighting (vehicular and pedestrian) + Remove graffiti + Stabilize erosion of abutments + Create pedestrian access at 24th Street to Wooten Woods + Add paved link from Kingsbury to shared-use trail
Wooten Woods	<ul style="list-style-type: none"> + Create protocols for re-establishing groundcover and understory vegetation in areas heavily impacted by human and pet traffic + Create seeding and planting recommendations + Increase soil stability and health through supplementing with organic material and reducing compaction + Define user interaction with creek including low water crossing + Preserve oak grove (stabilize mulch around trees at island between 	<ul style="list-style-type: none"> + Add historical interpretation: Goodall Wooten + Add historical interpretation: Shoal Creek Greenbelt + Add historical interpretation: 1981 Floods + Add flora and fauna display 	<ul style="list-style-type: none"> + Add dog waste stations + Add seating/picnic tables 	<ul style="list-style-type: none"> + Supplement Shoal Creek Trail to match city standards + Add Creekside walking trail + Create more stable pathways to formalize human and pet use

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Wooten Woods	<p>creekside trail and Shoal Creek Trail)</p> <ul style="list-style-type: none"> + Enhance canopy integrity + Enhance canopy continuity + Remove invasive plants + Implement natural areas management to inform passive recreation opportunities 			
Live Oak Terrace	<ul style="list-style-type: none"> + Add low water crossing at Shoal Creek + Add street trees along Lamar Boulevard + Increase riparian woodland and native plantings in areas outside of programmed areas + Reduce turf grass where not associated with recreation or sightlines + Utilize vegetative buffer to shield trail experience from Lamar Boulevard traffic + Create wider “no-mow” buffer along Shoal Creek 	<ul style="list-style-type: none"> + Restore historic walls + Restore stone bench triangle + Enhance historic steps/access to creek 	<ul style="list-style-type: none"> + Add seating/picnic tables 	<ul style="list-style-type: none"> + Relocate sewer lines + Daylight storm drains
Gaston Green	<ul style="list-style-type: none"> + Ensure plant selection for seeding and planting is appropriate for the Del Rio clay where present + Add flora and fauna interpretation + Add signature plantings for botanical interest-- lend identity to this zone through native species plantings that are exceptional, memorable and ecologically sound + Remove invasive species + Limit use of mown turf; where needed use native grass blend + Increase riparian woody species in appropriate locations + Use native vegetation to frame views and define interface with creek— ensure planting choices can sustain 	<ul style="list-style-type: none"> + Add historical interpretation: O. Henry House + Restore stone walls and benches + Add lighting under bridges along Shoal Creek Boulevard 	<ul style="list-style-type: none"> + Add seating/picnic tables + Add dog waste stations + Add children’s play opportunity + Address dog leash policy 	<ul style="list-style-type: none"> + Create activity hub + Ensure trail is in accordance with city standards + Improve parking lot paving materials + Add pedestrian gateway at Pemberton Heights

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Gaston Green	<p>and formalize human interaction with creek</p> <ul style="list-style-type: none"> + Create protocols for re-establishing groundcover and understory vegetation in areas heavily impacted by human and pet traffic + Ensure natural areas management responds to recreational and programming use in this area 			
East Bank	<ul style="list-style-type: none"> + Collect gray water + Address springs + Mitigate erosion and debris + Remove invasive species + Manage storm water in PARD parcel + Restore upland plantings + Add street trees that are compatible with native soil + Manage invasive plant species + Develop partnership with UT Office of Student Affairs, Intra-Fraternity Council and Austin Apartment Association so that residents do not dump debris on bluffs above the east side of Lamar Boulevard 		<ul style="list-style-type: none"> + Add other seasonal use at Christmas tree site + Neighborhood Amenities: <ul style="list-style-type: none"> o Add small playground o Add petanque court 	<ul style="list-style-type: none"> + Enhance PARD parking lot/manage storm water + Add vehicular gateway at 28 ½ Street + Add pedestrian tunnel under Lamar Boulevard going from Gaston Green to East Bank/grade change + Advise PARD office building ways to serve as LEED/Sustainable Sites model prototype + Consider irrigation—capturing storm water at safe downhill location (French drain to storm water tank) and City extension of non-potable water delivery systems
Ramble Scramble	<ul style="list-style-type: none"> + Ensure plant selection for seeding and planting is appropriate for the Del Rio clay where present + Restore upland plantings—develop partnership between Shoal Creek Conservancy, Tree Folks, City of Austin Watershed Department and PARD for winter of 2014-2015 planting restoration + Restore riparian corridor + Address erosion issues + Manage invasive species 	<ul style="list-style-type: none"> + Add historical interpretation: Sarah Hibbins/Comanche Camp + Add historical interpretation: Janet Long Fish + Add flora and fauna interpretive signage + Establish views of Split Rock + Restore stone walls 	<ul style="list-style-type: none"> + Add nature programming + Add nature trails + Add birding opportunities + Add children's play opportunities with views of creek + Add bike racks 	<ul style="list-style-type: none"> + Create pedestrian gateway at West 29th and new hiking trail + Create pedestrian gateway at Gaston to neighborhood + Ensure Shoal Creek Trail meets city standards + Elevate Janet Long Fish Bridge to avoid flooding access issues
Lamar Lawn	<ul style="list-style-type: none"> + Add street trees + Restore and widen riparian corridor + Maintain and add diversity to established long-grass prairie 	<ul style="list-style-type: none"> + Add historical interpretation: Lamar Boulevard 	<ul style="list-style-type: none"> + Add seating/picnic areas + Add opportunities to get to the creek 	<ul style="list-style-type: none"> + Add tunnel under Lamar Boulevard for park access/grade separation + Daylight storm water drainage from East Bank

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Lamar Lawn	+ Remove invasive species			
29th Street Bridge		+ Add historical interpretation: 29 th Street Bridge		+ Add lighting + Improve crosswalk at 29 th Street
Lamar Terrace	+ Restore and widen riparian corridor + Add street trees + Limit use of mown turf; where needed use native grass blend + Remove invasive species	+ Restore stone walls + Add lighting at historic bridges + Add permanent picnic structure visible from Lamar Boulevard and West 29 th Street Bridge	+ Add bike racks + Add fitness stations + Add children's play opportunities + Add petanque/bocce courts + Create overlook toward Split Rock + Add seating/picnic tables	+ Create activity hub + Add restroom/equipment and maintenance storage + Time crosswalks for senior citizens + Address/respect waste water infrastructure R.O.W. + Enhance pedestrian gateway
Shoal Creek Blvd. Bridges		+ Add historical interpretation: Shoal Creek Boulevard Bridges		+ Add lighting
Bluffs	+ Remove invasive species + Reforest riparian areas + Implement natural areas management to inform passive recreation opportunities + Use native vegetation to frame views and define interface with creek—ensure planting choices can sustain and formalize human interaction with creek + Create protocols for re-establishing groundcover and understory vegetation in areas heavily impacted by human and pet traffic	+ Add historical interpretation: Blue Hole and Cat Hole + Add historical interpretation: Native American and outlaws hideout + Restore pylons	+ Create views of creek + Add children's play opportunities	+ Create pedestrian gateway at 31 st Street + Expand Shoal Creek Trail to include deck, railing and boardwalk where necessary + Enhance safety railing and guardrail at Lamar Boulevard sidewalk above bluffs + Add bus shelter

	1 NATURAL RESOURCES	2 CULTURAL RESOURCES	3 RECREATION	4 INFRASTRUCTURE
Lamar Boulevard R.O.W. (Advocate for Changes)	<ul style="list-style-type: none"> + Add reforestation enhancements at public right-of-way + Change mowing regime to reflect ecological process and a desire for a larger riparian area + Evaluate programmatic areas along Lamar Boulevard + Maintain restored tall grass prairie on west side of Lamar Boulevard just north of Gaston Bridge + Add street trees along Lamar Boulevard: <ul style="list-style-type: none"> o Option 1: Both east and west side o Option 2: East side only o Option 3: West side only + Add signature plantings for botanical interest—lend identity to each zone, or “room,” within Pease Park through native species plantings that are exceptional, memorable and ecologically sound + Create Lamar Boulevard Property Owner’s Association role along east edge of Pease Park, with the goal to improve quality of Park and Parkway to reduce storm water runoff and urban heat island effect + Utilize storm water in natural landscape where possible + Increase riparian areas and native plantings outside of programmed areas 	<ul style="list-style-type: none"> + Develop cultural park identity along edge of park + Create views along and across Lamar Boulevard; civic gateway 	<ul style="list-style-type: none"> + Use day-lighted pipes as overlook opportunities 	<ul style="list-style-type: none"> + Sidewalk: <ul style="list-style-type: none"> o Widen west sidewalk as per city shared-use standard o Improve east sidewalk + Utilities: <ul style="list-style-type: none"> o Bury overhead electric and telecommunications lines to enhance views: o Option 1: City view o Option 2: 24th Street south o Option 3: whole length of Lamar Boulevard + Add Pedestrian Gateways at 15th, MLK, 24th, 29th, 31st Streets, Shoal Creek Blvd. + Bus System: <ul style="list-style-type: none"> o Advocate for rapid bus route o Advocate for city-wide bus circulator stops + Add bus shelters at existing bus stops at MLK Street, 24th Street and 29th Street + Storm Water: <ul style="list-style-type: none"> o Implement Great Streets (“Great Parkway”) o Daylight storm drains o Explore rain gardens on east side o Explore storm water aeration cascades on west side o Consider grated crossings along Lamar walkway o Manage storm water from Caswell Tennis Center

APPENDIX G4

APPROACH TO SUSTAINABLE SITES INITIATIVE

This memo describes the approach to **Task 2.7 Establish Sustainability Baseline Condition:**

Based on the inventory and analysis performed in the preceding Tasks, the WRT Team will establish baseline metrics and goals for economic, societal, and environmental sustainability. These metrics will be used to develop and evaluate the conceptual alternatives to be prepared in Phase 3 and master plan development in Phase 4.

These baseline conditions will be based on the principles of the Sustainable Sites Initiative to the extent to which they are applicable for the master plan level of work. The WRT Team will work with the Conservancy and PARD to determine the best approach for this master plan. These baseline conditions will serve as a management tool, a project advocacy tool and a fundraising tool.

Deliverable: Written description of sustainability baseline metrics and goals.

To address this task, WRT has reviewed the Sustainable Sites Initiative (SITES), its applicability to the development of Pease Park in general and to the master plan in specific, the ramifications of obligating to participate in the program, and the merits of using SITES for baseline sustainability metrics and goals. In the course of this, we have examined other environmental achievement programs and confirmed that SITES is the most relevant. We also address the involvement of the UT class with LBJWC.

Below is our analysis, and attached is a matrix that shows the relationship to SITES to the site development goals, the work products required, credits and points and likely totals.

Summary of Findings

In general, Pease Park is well suited to the use of SITES due to the general goals of the project, presence of two of the program authors and stewards, Ladybird Johnson Wildflower Center and the University of Texas, and local familiarity with the program. SITES advantage is the thoroughness of its scope in relation to site development in contrast to the building-focused Leadership in Energy and the Environment program by the United States Green Building Council, and other, broader communitywide programs. It is applicable to the master plan stage. It is definitely reasonable to use as a non-binding guideline, and plausible to recommend considering officially seeking SITES certification for at least one project. It is useful to use as a guide for baseline metrics.

Scope of Application

SITES is an implementation-based system that is applied to construction projects – not master plans. However, the best time to address the use of SITES is in the master planning process, and SITES provides an assessment tool to aid in that. The master plan stage is a time to assess the fit between SITES and the project, and to provide an opportunity to evaluate the costs and benefits of using SITES.

Participant Obligations

The entity(s) that choose to participate in SITES are obligated to provide written documentation to support the degree of attainment to which they are committed. This documentation takes the form of maps, calculations, and narratives, which are based on record-keeping and monitoring. Some of this information is unique to the SITES program and some is obtained through typical construction administration processes.

Construction Cost Impact

Some of the points are based on decisions, and are “free” to the project in that they are best practices or obligations anyway (such as providing erosion control, or avoiding building in floodplains). Some of the points have a cost value, but are within the tolerances of typical construction costs (basic water conservation measures, for example). And some of the points have a construction premium due to the higher construction values (such as higher degrees of renewable energy or water conservation measures.)

Professional Consulting and Staff Costs

The obligation to provide additional documentation above accepted construction contract requirements has a cost value to the services on the client, contractor and consultant sides. This varies from point to point, and could be expected to increase as higher point values are sought. Although no standard exists, 5% of the basic service value has been a very rough estimate of the cost value for the consulting team. We do not have a record of contractor or client costs, but the additional attention to record keeping is a contractor cost, and the additional attention to SITES in meetings, report reviews, etc. is a client cost. The ongoing client commitments to maintenance of, say, solar panels or water reclamation systems and invasive plant removal, are a cost that might be already built into expectation or may exceed them depending on the owner/client decisions.

Phasing

SITES is a project based system. Master plans are comprised of individual projects implemented over time. SITES can be applied to any or all projects, in two ways: Isolated project(s) which are not linked to each other, and would receive an official rating at the conclusion of each project or aggregated projects that would cumulatively build to a point total target which would not be approved until the last project.

Relation of Water Protection Project to Master Plan and SITES

LBJWC should be consulted to determine how best to address SITES in relation to the project: has it been already explored as a potential SITES project? If not, could it be considered as a phase one implementation? This project would be an ideal first stage SITES submission due to all its beneficial intent. However, if it cannot be achieved, it is to be hoped that the project could be counted in favor of SITES ranking.

Degree of Risk in Committing

At a master plan level, the owner has the opportunity to commit to SITES in a range from total obligation (and all that entails in terms of professional, capital and operational costs) to use of the system as a non-binding informal guideline (which limits all of the above to what is desired at the point of each project), to rejection of the system in its entirety. Some owners choose to invest in program and staff costs rather than the additional SITES costs. Others find that the “seal of approval” is an asset for institutional commitment, public stature or for use in seeking funding via grants from entities that demand a tangible commitment to sustainability.

Measurement Categories

SITES measures the degree of achievement of point values for the following nine categories:

1. Site Selection
2. Pre-Design Assessment and Planning
3. Site Design – Water
4. Site Design – Soil and Vegetation
5. Site Design – Materials Selection
6. Site Design – Human Health and Wellbeing
7. Construction
8. Operation and Maintenance
9. Monitoring and Innovation

Point Values

SITES is set up to allow the participants to reach varying levels of attainment with obligatory prerequisites followed by individual “credits” up to a total of 250 points. The scale ranges from a base level of 100 points for one star to 200 points for four stars.

We have performed an initial scan of the potential for attainment for Pease Park based on our present understanding of the master plan, and believe that the project, can easily reach a one star rating. With modest effort, the project , could reach a three or even four star rating.

SITES is undergoing a significant change from its present 2009 edition.

Due to issues at the SITES administration, we are not able to obtain the 2014 edition, so our observations are limited to this document.

UT-LBJWFC SITES Class

Application of SITES to Pease Park has been proposed as project by the architectural class at UT to be run by LBJWC. This provides an opportunity to advance the master plan level of SITES by delegating the preparation of Site Assessment to the class, under the auspices of UT and LBJWC.

Given that the UT class is a “third party” not bound by contract to the project, it may be necessary for someone in the project team to officially take responsibility for the veracity of any data developed by the students. It may be necessary for SITES administrators to take a position on and/or advise as to how student work products can be incorporated into official documentation.

WRT can provide to the UT/LBJWC files and work products that are part of the project deliverable, for use by the students. Because WRT and the client group were not aware of this effort at the time of contract scoping, WRT has no task or fee for interacting or monitoring the student work, beyond minimal phone calls or a meeting.

Sustainability Goals and Baseline Metrics

Based on the above, WRT recommends the use of SITES as a framework for baseline metrics and to enlist UT as the provider of the “site assessment”.

Considering the most important and easiest to measure baseline conditions, WRT recommends that tree canopy cover, extent of invasive species, riparian buffering, and water quality/ conservation be considered as the primary baselines. This should be coordinated with PARD, Water Protection and the Shoal Creek Conservancy to make sure that there is concurrence on the measures, and to determine what else has already been done (such as water quality and flow monitoring.) Some of this may be very long term (water quality) and some very short, such as the riparian buffer in the restoration project.

Draft Master Plan Text Regarding Commitment to Sustainability and SITES

Below is the possible text to be included in the master plan, for review, indicating the degree of commitment to sustainability and SITES:

Pease Park Sustainability Goal: Pease Park will be developed and managed to achieve community, environmental and financial sustainability.

SITES Commitment:

Austin PARD and the Pease Park Conservancy are committed to participating in the SITES initiative and **will use the Sustainable SITES program as a tool** to measure and ensure sustainability for implementation of park improvements on project by project basis.

or

Austin PARD and the Pease Park Conservancy **will use the Sustainable SITES program as a guideline** to measure and ensure sustainability for implementation of park improvements on project by project basis.

or

Austin PARD and the Pease Park Conservancy **will consider the Sustainable SITES program as a tool** to measure and ensure sustainability for implementation of park improvements on project by project basis.

Or other?

CREDIT	CREDIT GOAL	CREDIT POINTS	REQUIRED MAPS/DOCUMENTS*
1 SITE SELECTION			
Prerequisite 1.1	Limit development of soils designated as prime farmland, unique farmland and farmland of statewide importance.	Required	Soils
Prerequisite 1.2	Protect floodplain functions.	Required	100-year floodplain
Prerequisite 1.3	Preserve wetlands.	Required	Wetlands
Prerequisite 1.4	Preserve threatened or endangered species and their habitats.	Required	Threatened/endangered species habitat
Credit 1.5	Select brownfields or greyfields for redevelopment.	5-10 Points	Brownfields or greyfields
Credit 1.6	Select sites within existing communities.	6 Points	Walk distance to shops, services, facilities
Credit 1.7	Select sites that encourage non-motorized transportation and use of public transit.	5 Points	Public transit opportunities
		21 POSSIBLE POINTS	
2 PRE-DESIGN ASSESSMENT AND PLANNING			
Prerequisite 2.1	Conduct a pre-design site assessment and explore opportunities for site sustainability.	Required	2.1 Worksheet Document
Prerequisite 2.2	Use an integrated site development process.	Required	Documentation of participants
Credit 2.3	Engage users and other stakeholders in site design.	4 Points	
		4 POSSIBLE POINTS	
3 SITE DESIGN - WATER			
Prerequisite 3.1	Reduce potable water use for landscape irrigation by 50 percent from established baselines.	Required	Average annual rainfall and temperature conditions
Credit 3.2	Reduce potable water use for landscape irrigation by 75 percent or more from established baseline.	2-5 Points	Average annual rainfall and temperature conditions
Credit 3.7	Design rainwater/stormwater features to provide a landscape amenity.	1-3 Points	
Credit 3.3	Protect and restore riparian, wetland and shoreline buffers.	3-8 Points	Watershed conditions, existing local watershed plans
Credit 3.4	Rehabilitate lost streams, wetlands and shorelines.	2-5 Points	Historic conditions and dimensions of stream
Credit 3.5	Manage stormwater on site.	5-10 Points	Seasonal groundwater elevations
Credit 3.6	Protect and enhance on-site water resources and receiving water quality.	3-9 Points	Pollution sources
Credit 3.8	Maintain water features to conserve water and other resources.	1-4 Points	Water features
		44 POSSIBLE POINTS	
4 SITE DESIGN - SOIL AND VEGETATION			
Pre-requisite 4.3	Create a soil management plan.	Required	Healthy soils
Prerequisite 4.1	Control and manage known invasive plants on site.	Required	Invasive plants
Prerequisite 4.2	Use appropriate, non-invasive plants.	Required	
Credit 4.6	Preserve or restore appropriate plant biomass on site.	3-8 Points	Plant communities
Credit 4.8	Preserve plant communities native to the region.	2-6 Points	
Credit 4.9	Restore plant communities native to the ecoregion.	1-5 points	
Credit 4.4	Minimize soil disturbance in design and construction.	6 Points	Identify reference soil: organic matter content and depth, textures, bulk density, infiltrations rate
Credit 4.5	Preserve all vegetation designated as special status.	5 Points	Special status plants
Credit 4.7	Use native plants.	1-4 Points	Native plants
Credit 4.10	Use vegetation to minimize building heating requirements.	2-4 Points	Building orientation
Credit 4.11	Use vegetation to minimize building cooling requirements.	2-5 Points	
Credit 4.12	Reduce urban heat island effects.	3-5 Points	Tree canopy on site
Credit 4.13	Reduce the risk of catastrophic wildfire.	3 Points	Potential risk of catastrophic wildfires
		51 POSSIBLE POINTS	

CREDIT	CREDIT GOAL	CREDIT POINTS	REQUIRED MAPS/DOCUMENTS*
5 SITE DESIGN - MATERIALS SELECTION			
Prerequisite 5.1	Eliminate the use of wood from threatened tree species.	Required	Documentation
Credit 5.2	Maintain on-site structures, hardscape, and landscape amenities.	1-4 Points	Existing landscape materials
Credit 5.3	Design for deconstruction and disassembly.	1-3 Points	Documentation
Credit 5.4	Reuse salvaged materials and plants.	2-4 Points	Local suppliers that may have materials vegetation salvaged for use on site
Credit 5.5	Use recycled content materials.	2-4 Points	Suppliers of material with recycled content
Credit 5.6	Use certified wood.	1-4 Points	Suppliers of wood-based materials that are third-party certified
Credit 5.7	Use regional materials	2-6 Points	Materials, plants and soil that are extracted, manufactured or grown in the region
Credit 5.8	Use adhesives, sealants, paints and coatings with reduced VOC emissions.	2 Points	Product documentation
Credit 5.9	Support sustainable practices in plant production.	3 Points	Plant nurseries
Credit 5.10	Support sustainable practices in material and manufacturing.	3-6 Points	Materials manufacturers
			36 POSSIBLE POINTS
6 SITE DESIGN - HUMAN HEALTH AND WELL-BEING			
Credit 6.1	Promote equitable site development.	1-3 Points	Document local labor force
Credit 6.2	Promote equitable site use.	1-4 Points	Public events (by event type and community participation)
Credit 6.3	Promote sustainability awareness and education.	2-4 Points	Current educational programs and signage
Credit 6.4	Protect and maintain unique cultural and historic places.	2-4 Points	Significant cultural/historic building and landscape features
Credit 6.5	Provide for optimum site accessibility, safety and way finding	3 Points	Unique features (shade trees, view corridors, landmarks)
Credit 6.6	Provide opportunities for outdoor physical activity.	4-5 Points	Active recreational amenities
Credit 6.7	Provide views of vegetation and quiet outdoor spaces for mental restoration.	3-4 Points	Passive recreational amenities
Credit 6.8	Provide outdoor spaces for social interaction.	3 Points	Social interaction spaces
Credit 6.9	Reduce light pollution	2 Points	Areas of light pollution
			32 POSSIBLE POINTS
7 CONSTRUCTION			
Prerequisite 7.1	Control and retain construction pollutants.	Required	Construction documentation
Prerequisite 7.2	Restore soils disturbed during construction.	Required	Construction documentation
Credit 7.3	Restore soils disturbed during construction.	2-8 Points	Disturbed soils
Credit 7.4	Divert construction and demolition materials from dispersal.	3-5 Points	
Credit 7.5	Reuse or recycle vegetation, rocks and soil generated during construction.	3-5 Points	
Credit 7.6	Minimize generation of greenhouse gas emissions and exposure to localized air pollutants during construction.	1-3 Points	Construction documentation

CREDIT	CREDIT GOAL	CREDIT POINTS	REQUIRED MAPS/DOCUMENTS*
8 OPERATIONS AND MAINTENANCE			
Prerequisite 8.1	Plan for sustainable site maintenance.	Required	Maintenance plan
Prerequisite 8.2	Provide for storage and collection of recyclables.	Required	Maintenance plan
Credit 8.3	Recycle organic matter generated during site operations and maintenance.	2-6 Points	Maintenance plan
Credit 8.4	Reduce outdoor energy consumption for all landscape and exterior operations.	1-4 Points	Maintenance plan
Credit 8.5	Use renewable sources for landscape electricity needs.	2-3 Points	Possible locations for wind, solar, geothermal energy
Credit 8.6	Minimize exposure to environmental tobacco smoke.	1-2 Points	Policy documentation
Credit 8.7	Minimize generation of greenhouse gases and exposure to localized air pollutants.	1-4 Points	Maintenance plan
Credit 8.8	Reduce emissions and promote the use of fuel-efficient vehicles	4 Points	
		23 POSSIBLE POINTS	
9 MONITORING AND INNOVATION			
Credit 9.1	Monitor performance of sustainable design practices.	10 Points	Monitor plan
Credit 9.2	Innovation in site design.	8 Points	Narrative description
		18 POSSIBLE POINTS	

* Maps/documents that would be needed to comply with submission requirements.

Items in **red text** indicate an item that WRT has already mapped during the Master Plan process.

Very certain credit can be attained
Moderately certain credit can be awarded

TOTAL

MINIMUM CREDITS	MAXIMUM CREDITS
55 Points	88 Points
+ 79 Points	+ 150 Points
134 Points (3 Stars)	238 (4 Stars)

	Very certain credit can be awarded
	Moderately certain credit can be awarded
	Credits that do not apply to the project and cannot be awarded

After completing the matrix, we are very certain the project can be awarded a range of 55-88 Points, with moderate certainty of obtaining an additional 79-150 Points, reaching a grand total of between 134 Points and 238 Points (3-4 Stars on the 2009 Sustainable Sites Rating).