



Sam Houston State University

INNOVATION PLAZA MASTER PLAN

May 2014



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**SAM HOUSTON
STATE UNIVERSITY**

May 28, 2014

We at Sam Houston State University are excited about the establishment of Innovation Plaza and the extraordinary opportunity it provides for state-of-the-art facilities that will enable world-class training and development for criminal justice professionals.

The criminal justice program at Sam Houston State University has long been known and respected nationally and internationally for being “ahead of the curve” with its approach to teaching leaders who are responsible for public safety and security. With new facilities and the latest technology in place, the university will be able to provide an even better environment for professional growth, which will in turn benefit our society.

In addition to the cutting edge research and instruction at Innovation Plaza, the University will be able to promote and enhance the creation of 21st Century jobs and expansion of the local tax base through incubator projects that encourage new businesses that generate additional dollars for the community’s economic development. We are looking forward to strengthening existing partnerships and forging new relationships that will contribute to the betterment of the region and our state.

Much thought has gone into the design of Innovation Plaza, and we are especially proud that the site will have the look and feel of a beautifully planned, academic centric campus. We believe that the community will be pleased with the Plaza’s appearance, and those who receive training and conduct research and business at the facilities will have meaningful experiences at the location.

We genuinely appreciate the work of the planners who have shared their ideas during the development of the Innovation Plaza project. Because of their vision, we are able to fulfill the mission of the University, which is to provide high-quality education, scholarship, and service to students and to regional, state, national, and international constituencies.

Sincerely,



Dana L. Gibson

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INTRODUCTION

Part 1: Introduction

Impetus for Action

The impetus for this project is to establish a world class destination for criminal justice professional development, research, and service at Sam Houston State University (SHSU) on a recently acquired 78-acre parcel of land two miles northwest of its main campus in Huntsville, TX. The university is home to a unique assembly of programs dedicated to criminal justice professional development that will be relocating from the main campus to this new site---referred to herein as the “Innovation Plaza”. Two programs will anchor the Innovation Plaza: the Corrections Management Institute of Texas (CMIT) and the Law Enforcement Management Institute of Texas (LEMIT).



Location of the SHSU Innovation Plaza in relation to the SHSU Main campus and Downtown Huntsville

Several key factors have made this Innovation Plaza both possible and necessary and desirable for the university and community. These factors include:

- The transfer of 78-acres of land to Sam Houston State University from the Texas Department of Criminal Justice, the result of legislation passed by the state in 2013;
- Increased competition for attracting professionals from across the world as well as the state of Texas for advanced criminal justice professional development and research;
- Growth in the criminal justice program and the need for new facilities to support this;
- The need to replace the dated hotel on the main campus that is no longer meeting demand or adequately serving the needs of the university;
- The inadequacies of current facilities at the Beto Criminal Justice Center in supporting new and evolving teaching methods, development practices, and faculty research;
- Wider benefits for the Huntsville community with the provision of a new hotel and conference facility.

This is a critical moment in the university's history as it seeks to leverage one of its most exemplary components—its criminal justice program—into a world renowned program with state-of-the-art facilities. At a time when competition is at a peak among colleges and universities, two themes are pivotal for success: (1) capitalizing upon existing university resources and (2) seeking partnerships and recognizing shared opportunities with industry and other public entities.

Project Background

The university obtained the 78-acre parcel from the Texas Department of Criminal Justice (TDCJ) in 2013 in a land transfer supported by Texas State District 5 Senator Charles Schwertner. The parcel will continue to serve a public mission as it will support university academic, professional development, and research functions (while remaining public, non-taxable land). The near-term buildings will be criminal justice-focused as the existing criminal justice facility on the main campus, the Beto Criminal Justice Center, is not able to adequately support the growth in criminal justice professional development and enable modern practices.

In the near-term, the CMIT and LEMIT professional education programs will be relocating to the site along with a proposed hotel and conference center. These functions currently operate out of the Beto Criminal Justice Center and University Hotel on main campus. With functions moving out of the existing buildings, the College of Criminal Justice will expand within the Beto Criminal Justice Center, and the University Hotel will be utilized as flex space as other university buildings undergo renovation and as the need for temporary space arises.

As part of the land transfer, the university agreed to convey via long-term lease for 6.1 acres of land to the adjacent HEARTS Veterans Museum. Early on in the process of this project, the 6.1-acres were identified as a specific site south of the existing museum's land holdings extending south to the creek bed (a land survey confirms the exact coordinates for plat assembly). Finally, as part of the land transfer, the university will build a new training facility to be leased back to Texas Department of Criminal Justice (TDCJ).

The SHSU Vision and Goals

Vision

The vision for SHSU Innovation Plaza is to become a hub for advancing criminal justice-focused professional development, research enterprises and academic initiatives. The long-term vision will provide a flexible framework to serve other university missions as well. Overall, the Innovation Plaza will provide a sense-of-place, enhance the university brand, and be a welcoming learning environment for students, staff, faculty, and visitors.



Existing 78 Acre site of future Innovation Plaza



Long Term Innovation Plaza Concept Plan

Goals

The goals of this master planning project are:

- Optimize land to serve the university's academic and research missions with a special focus on criminal justice education, development, and research;
- Plan for near-term priority facilities while also establishing a vision for the long-term (50 plus year) development of the Innovation Plaza;
- Create a campus feel and establish a "sense of place" that is inviting for students, staff, faculty, visitors;
- Recognize the importance of 'being a good neighbor' by creating a plaza layout that is sensitive to its surroundings;
- Seek partnerships with other public entities and private industry with shared interest in developing the Innovation Plaza; and,
- Establish a new gateway to the university along Interstate 45 and State Highway 75.



Campus Attributes of existing SHSU Main campus

Near-term Priorities

The Innovation Plaza has three priority projects for the first five years of development. Importantly, these near-term projects will need to be considered as just the beginning of a long-range vision. Thus, it is crucial to create public open space to create a sense of place and foster pedestrian connections as the first buildings are constructed. The near-term projects will require transportation and utility infrastructure as well.

CMIT/LEMIT Facility

This building will house new professional development facilities for the Corrections Management Institute of Texas/Law Enforcement Management Institute of Texas (CMIT/LEMIT). A facility space program for this building was completed in November 2013. The program calls for an 83,000 gross square feet facility on 1.5 floors. Goals of the new facility include:

- Create a world class and state-of-the-art facility;
- Maintain the identity of both institutions;
- Create an environment for professional executive education;
- Enhance the university brand; and,
- Provide for flexibility to adapt to change.

Hotel and Conference Center

A hotel and conference center to serve professionals attending CMIT/LEMIT professional development programs as well as the broader university and Huntsville community. This facility will replace the current 70-room hotel, which operates adjacent to the existing Beto Criminal Justice Center. The hotel and conference center will likely be developed as a public-private partnership (P3) project. A market analysis and feasibility study will need to be conducted to determine overall demand and size of the new facility. For the purposes of this initial study, a 250-bed hotel at approximately 175,000 gross square feet and a 20,000 gross square feet conference center are envisioned with space planned for future expansion.



Phase 1 Innovation Plaza Concept Plan

TDCJ Facility

This building will house 47,500 gross square feet of correctional training facilities for the Texas Department of Criminal Justice. The goal of the new facility is to provide pre-service training for cadets and provide continuing education for TDCJ leadership. The new facility will be built by the university and leased back to the TDCJ for their use. The new facility will include several uses:

- Correctional training academic rooms;
- Housing accommodation for up to 150 cadets at a time; and,
- Shared support (gym, unit block mock setting).

Long Term Needs

Beyond the first three facilities, the university will need to prioritize facilities, infrastructure, and landscaping projects as need arises. The over-arching vision for this plaza is to fulfil the university's mission by providing space for future academic and research needs.

Planning Process and Methodology

The planning process was carried out in five phases over a five-month period. Each phase included time for meetings, presentations, community input, and fact finding. These phases were as follows:

- 1) Initiation: Began the project by aligning expectations, establishing planning goals, defining lines of communications and charting a clear path for the project.
- 2) Analysis: Involved the accumulation and analysis of quantitative and qualitative data necessary to generate a realistic portrait of the planning conditions.
- 3) Vision: Focused on early development of planning scenarios that holistically address the project's development for both the near-term and long-term. This phase also included a public community forum held at the HEARTS Veterans Museum.

4) Development: Involved further study of the preferred planning scenarios, including evaluation in greater detail of the site layout, adjacencies of uses and circulation, to obtain input, and build consensus from stakeholders. This phase also included the creation of architectural and landscape qualities of the Innovation Plaza.

5) Refinement: Included preparation of the final composite plan and artistic renderings to capture the intended character of the Innovation Plaza. The final plan roll-out presentation was made at the end of this phase.



Broaddus Planning Process Steps

Stakeholder Engagement

The project team's process was driven by stakeholder engagement. An overall structure of feedback and dialogue was set to obtain direction from key university leaders and input from community stakeholders. Over-arching decision making was provided by the Steering Committee, led by Executive Vice President for Administration Al Hooten. The Steering Committee was actively engaged during every phase of the project. The Advisory Committee, consisting of leadership involved with criminal justice training, provided recommendations and comments that influenced the development of the project.

University stakeholders included:

- Office of the President
- Office for Finance and Operations
- Office of the Provost
- Office of Research and Sponsored Programs
- College of Criminal Justice
- Facilities Management Department

Non-university stakeholders included:

- Corrections Management Institute of Texas
- Law Enforcement Management Institute of Texas
- Texas Department of Criminal Justice
- Texas Department of Transportation
- HEARTS Veterans Museum
- City of Huntsville
- Neighborhood Groups/General Public

The university and project team facilitated an open forum process to obtain input from the general public. Two public forums were conducted. Over 70 people attended the first forum and approximately 30 people attended the second forum. Both forums were an opportunity for the project team to brief the community on the project and to obtain input from individuals. Given the proximity of residential neighborhoods east of the Innovation Plaza, it was important to involve representatives from the neighborhood in the planning process.

The master planning process also established a positive relationship with the HEARTS Veterans Museum to the northwest of the site. The museum is a strong community asset and focal point. The university was clear that the master plan should respect the setting of the museum, its current Vietnam Memorial Walk and support future plans for military aircraft and presidential monument displays on a six-acre area south of the museum which is to be leased by the university to the museum.

City of Huntsville and Texas Department of Transportation officials were involved in discussions about the project early-on. Discussions covered issues including transportation circulation, roadway safety, utility infrastructure, and stormwater management.



HEARTS Aircraft Display

A Foundation to Guide Growth

This master plan provides a foundation to guide university growth for the near term (0-5 years), mid-term (6-10 years), and long-term (beyond 10 years and up to 50 years). University decision makers can refer directly to this document when making future physical improvement and capital investment decisions. As a guiding document, the master plan primarily addresses physical growth issues pertaining to land use, facility needs, student life, public open spaces, transportation and utilities, and environmental sustainability. Creating a positive and welcoming human experience at Innovation Plaza is a guiding principle behind this document

This master plan, however, is not a fixed, unalterable document. While it writes the script for long range development and prioritizes near-term projects based on the most accurate and current information, the master plan can be updated or altered in the future to accommodate changing circumstances in funding, strategic planning, enrollment, or any other major change. Universities are dynamic, evolving institutions and SHSU is no exception. Given the university's growth projections and ambitions, it is challenging for a master plan to anticipate every future development. It is common for universities to update their master plan every five years or so to address new issues that arise. This document should be re-evaluated and updated to address shifting priorities in the future.



High Quality, human-scale development envisioned for the Innovation Plaza by the Plaza Concept Plan



2

ANALYSIS

Part 2: Analysis

Context Analysis

City Context

The SHSU Innovation Plaza is set about 2 miles northwest of downtown Huntsville and the SHSU main campus. The site is at the edge of town near the intersection of Highway 75 and IH-45.

While the site is not adjacent to the main campus, good access exists along local roads and major highways. Highway 75 provides a local route between the main campus and the Innovation Plaza. Other visitors to the Innovation Plaza as well as commuters are likely to arrive on IH-45, where access to the south entrance can be gained along the northwest bound frontage road. Due to its nature as a limited access Highway, IH-45 is not as ideal for local trips, as motorists may have overshoot the plaza to achieve a turnaround that allows for access and/or exit depending on their direction of travel.



Context of future site of the SHSU Innovation Plaza

Land Use & Zoning

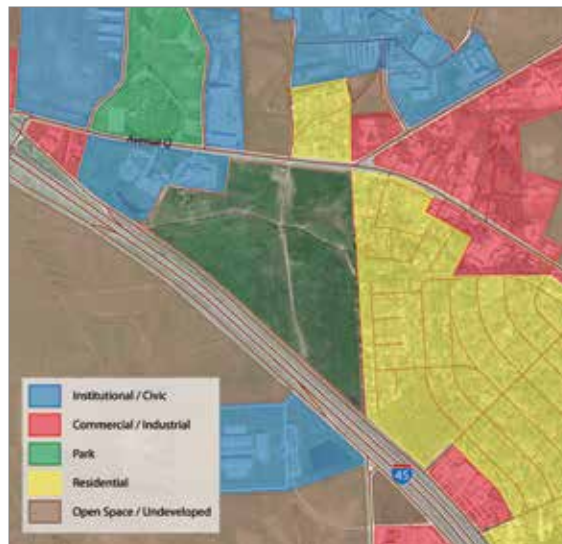
Surrounding Land Use

The site abuts an established residential neighborhood immediately to the east, consisting mostly of single family homes as well as some manufactured homes. Adjacent to the site at the northwest corner are several public use facilities; the HEARTS veteran' museum, which is an important community institution with both indoor and outdoor exhibitions and memorial spaces. Just beyond the HEARTS museum to the west is the Texas State Prison Museum. Across the street from these museum facilities is Kate Barr Ross Park, an athletic complex with numerous baseball and soccer fields that, along with the museum, create a large node of public use facilities in this area.

There is also a sprinkling of commercial uses along Highway 75 in the immediate area, some of which are local businesses while others are oriented to interstate travelers. Finally, the majority of land in the area across either highway to the north and south remains in TDCJ ownership, and contains correctional facilities, staff housing, and open land.

Zoning

The entire Innovation Plaza site falls within the 'Management' zone on the city's zoning map; the adjacent neighborhood to the east of the site is a designated Neighborhood Conservation zone.



Current Zoning context surrounding the Innovation Plaza Site

Transportation

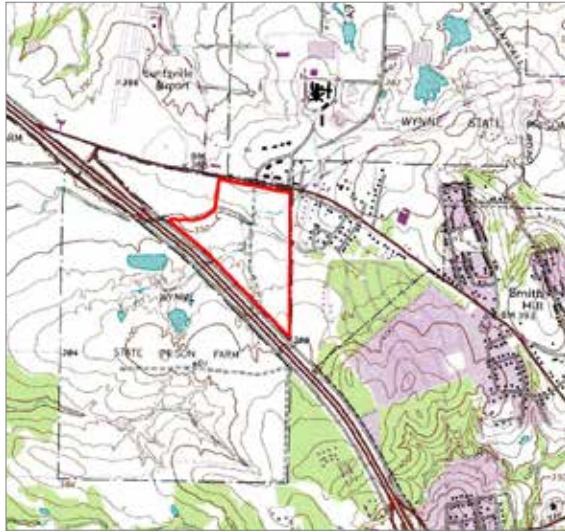
Though Huntsville is a small community, some congestion problems do exist in the area of the site at certain times of the day. The existing intersection at IH-45 and Hwy 75 gets backed up, and motorists sometimes wait through several cycles of lights before being able to proceed. To alleviate this, TxDOT is re-positioning the link road between IH-45 and highway 75 to alleviate traffic congestion at this intersection. In conjunction with this, the exit ramp from northwest bound lanes of IH-45 will be relocated further east. Neither under current conditions, nor following the relocated exit-ramp, will traffic



Highways connectivity to the Innovation Plaza

be able to access the site by exiting directly from IH-45. Travelers must approach either along the frontage road or exit at Hwy 75.

The City of Huntsville's 2007 Thoroughfare Plan shows a future secondary arterial being routed through the northern portion of the Innovation Plaza site and connecting across IH-45 County Road 1791. This alignment is not represented in this plan for the plaza, though future north-south connection between IH-45 and Hwy 75 is planned through the center of the plaza.



1975 USGS Survey



1995 Aerial Photograph of Huntsville (C. Google)



2005 Aerial Photograph of Huntsville (C. Google)

Plaza Analysis

Site History

- 1976 – Land as within State Prison ownership and only limited residential development to the east.
- 1995 – Pre-HEARTS Museum & Prison Museum
- 2005 – Prison Museum is built to the west of the Plaza
- 2009 – Storm Shelter and in progress HEARTS Museum

Current Use of the Site

The site is currently in use as a horse pasture managed by TDCJ employees and inmates as part of its renowned equine program. Currently, working offenders and TDCJ employees can access the site through a gate on to highway 75, and through a tunnel under Interstate 45 to the south.

With the deeding of this land over to SHSU for the Innovation Plaza, this use as horse pasture will cease, and along with it, the access and transit through the site is also likely to cease at this time, although some flexibility in retaining access may be beneficial in the short term. Once access has ceased the tunnel will be sealed, preventing future access.

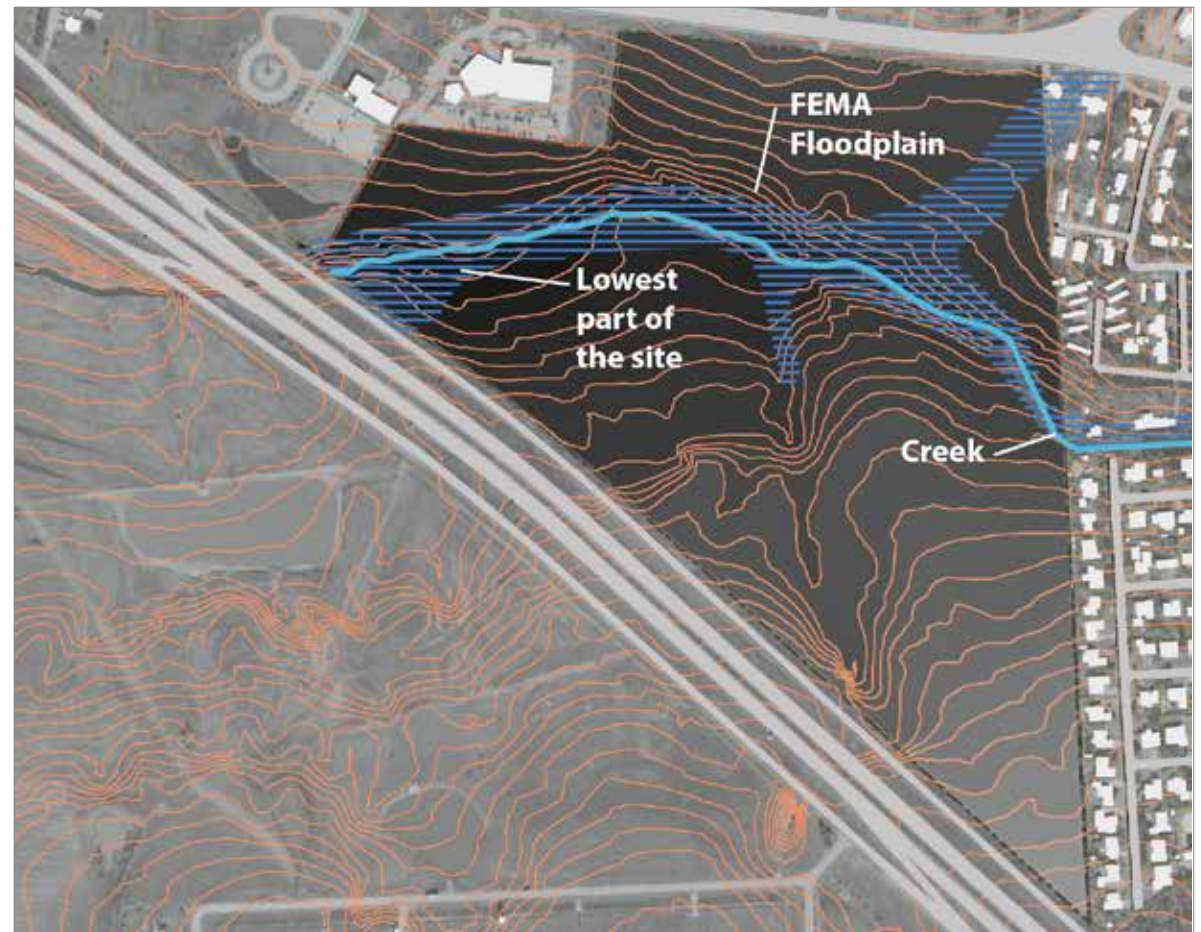
Environment & Ecology

The site falls within the Piney Woods ecoregion of East Texas, and receives an average of 48 inches of precipitation per year. The site itself has a long gradual slope from higher points at the northern and southern boundaries toward an intermittent creek running through the center of the site. Here, the creek flows toward a low point at the far western edge where it reaches a tunnel and passes under IH-45 and beyond. There is a total elevation change of about 56' from this low point to the highest point on the site at the southeastern corner.

Partially a result of its long standing use as horse pasture, the site is almost completely devoid of vegetation save for grasses and a few small scrubby trees in the creek bottom. The creek currently lacks stable banks and riparian vegetation. There is opportunity as the Innovation Plaza develops to reintroduce some of the native ecology of the region and integrate it into landscape features and stormwater management techniques.

Water & 100 year floodplain

The 100 year floodplain follows the creek bed, as and runs along two other smaller drainages or ditches that flow into the creek. The creek has clearly been engineered and channelized upstream within the existing neighborhood to the east, and anecdotal evidence suggests this creek has backed up and caused flooding issues on the western side of the Innovation Plaza.



Creek Floodplain (Source: Google Earth/FEMA)



SHSU Main campus



78 Acre Site Overlay on Main campus



Main campus Overlay on 78 Acre Site

Scale Comparison

The above images present a comparison between the existing SHSU Main campus and the 78 acre site for the Innovation Plaza expansion plan. This comparison illustrates several important ideas.

First, and very simply, its overall size represents a very significant land area. Second, while the total SHSU Main campus boundary contains roughly 250 acres (including all roads, parking, open space etc.) the campus core is reasonably similar in size to the Innovation Plaza parcel.

Many uses outside of this main core will not be needed at the Innovation Plaza, including large acreage facilities including athletics and recreation fields. Considering this, Innovation Plaza contains an even more substantial development potential than the overall area proportions may suggest.

Finally, while the plaza site is at the north-western edge of the City of Huntsville with low density development surrounding it, in order to build a campus feel, a higher level of density of development than the surrounding land uses will be necessary.

The sense of scale of appropriate development on the site can be judged by using the existing main campus as a comparison. The main campus has an established character and walkable configuration of streets and spaces with an appropriate density of development for the university.

Utilities Analysis

There are several existing utilities and utility easements within the site, including water, sanitary sewer, and electrical. The utility diagram at right shows locations and simple descriptions each of these as they exist today. Conceptual configurations based on the long-term plan for these utilities and others can be found in the appendix of this document.

Transmission Easement

Along the eastern boundary of the site against the existing neighborhood, there is a 100' wide electrical transmission line easement belonging to Entergy. The transmission line pole structures are centered in the easement. There can be no vertical structures located within the easement and Entergy has confirmed that:

"The easement was not designed for any vehicle traffic, therefore, any roadways would need to be designed outside of the right of way easement." Entergy Representative

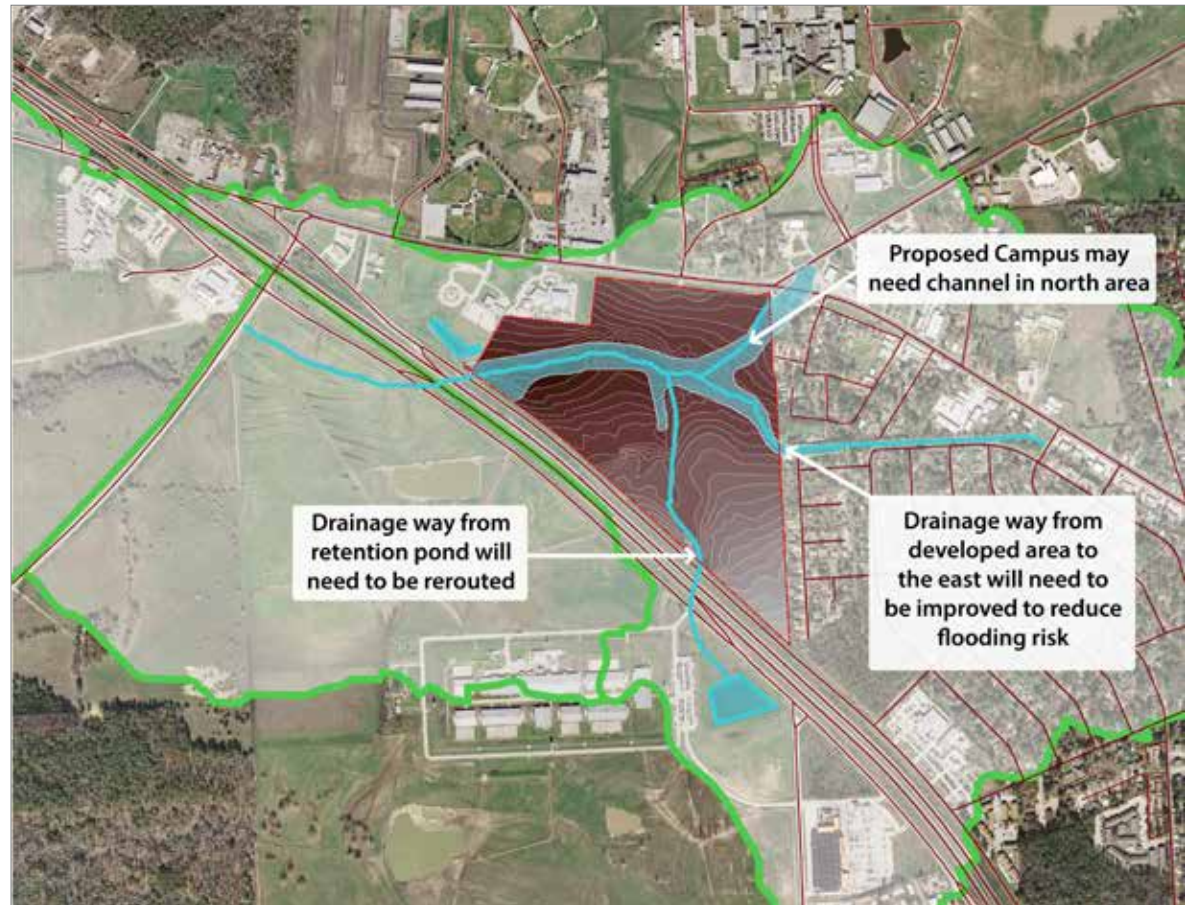


Utilities information affecting development on the Innovation Plaza

Storm Water Drainage Analysis

New development on the site, will necessarily increase the impervious cover and alter the existing floodplain map. There are a number of requirements which have to be met by any new development on the site:

- Rain water harvesting is required by the State Energy Conservation Office (SECO) on all roofs over 10,000 square feet, with either above or below ground cisterns;
- Low Impact Development ponds (LID) or bio-swales, in parking islands or green areas should be used to reduce run off; and,
- One hundred percent of run off will need to be attenuated through on site detention along the existing floodway, defined by the creek.



Storm Water Analysis

Site Requirements

In developing the Concept Plan in the following section, site requirements for several near-term and long-term facilities shaped the configuration of the plan. The Phase 1 facilities (CMIT/LEMIT, TDCJ, and Hotel & Conference Center) have existing programs and space requirements that were developed prior to this plan. The space requirements of these facilities and their locations on the site were given priority consideration in creating several phased development scenarios represented in the following chapter.

Vacated buildings on the main campus will be used for university academic growth. The current hotel on the main campus will be used as “surge” space, to provide flexibility during construction.

Phase 1

1: Corrections Management Institute of Texas / Law Enforcement Management Institute of Texas Center for professional/executive education

A new 83,000 gross square foot building will provide a new center for the CMIT/LEMIT programs. This building will replace the current facilities on the main campus with the goal of providing:

- A world class and state of the art facility;
- New flexible and adaptable facilities;
- Promotion of the identity of CMIT/LEMIT institutions; and,
- Promotion of SHSU brand.

The new facility will include appropriate levels of parking (200 spaces, with a further 200 spaces shared with the hotel / conference center).

2: A correctional training facility for TDCJ (approximately 47,500 gross square feet)

Huntsville is the central training facility for the entire state, with thirty staff at the current facility. TDCJ makes 6,000-7,000 new hires every year, all of whom must receive training.

An architectural program for the TDCJ will be developed for a correctional training facility in the future.

A general overview of program for the training facility is intended to serve three groups:

- Pre-service training – approximately 150 / 300 trainees at any given week;
- In-service training – 1 week a year professional development; and,
- Specialist training / leadership – 70-110 class sizes every two weeks.

The pre-service trainees require accommodation in a multi-use building. There will also need to be a location, potentially flexible space within the multi-use building to be used as dining room space during meal times. To accommodate these needs, the facility is intended to be an open layout with bunks and common dining room.

As a part of the training, there is a requirement for a physical appraisal test (PAT) quarter mile running track, push up station and other training equipment. These requirements can be accommodated on multi-use paved areas where cones and equipment can be set up as needed.

It is estimated that the facility would require 302 parking spaces total, including staff and trainees.

3: A hotel and conference center

The City of Huntsville has conducted a survey of hotel demand within the city which identified that there are currently no full-service hotels within Huntsville. This shortage of hotel beds means visitors often have to stay farther afield in College Station when there is a major event in Huntsville.

- The survey has informed the projected size of hotel at 250 beds.
- 250 beds at 700GSF/beds = approximately 175,00 GSF hotel needed.
- The current University Hotel has 70 rooms at 60,000 GSF (850 GSF/room).
- 17,000 - 20,000 GSF conference center facility to be contained within the hotel.
- 200 parking spaces needed (shared with CMIT/LEMIT).

Central Plant and Data Center

The Innovation Plaza will need to construct its own central plant and data center. No detailed facility programs exist for these two buildings, but the university has provided guidance based on conversations with facilities and information technology representatives on general sizes and needs.

Phase 1 Development Summary Table

Building Name	Total Area, Gross Square Feet (GSF)	Floors	Footprint	Parking Requirement	Number of Users (people/day)
CMIT / LEMIT Facility	83,000	2	60,000	200	At least 200 based on size of lobby; need to confirm
TDCJ Facility	47,547	2	23,774	302	30 staff; 220-410 trainees/students at any given time
Hotel	175,500	6	31,500	200	280 (250 guests + 30 staff)
Conference Center	20,000	2	15,000	Shared with other facilities	Based on events
Data Center	5,000	1	5,000		Minimal
Physical Plant	20,000	1	20,000		Minimal
TOTAL	271,047		155,274	702	500 – 900+
*702 parking spaces = 228,150gsf (5.2 acres) @ 325sf/space					

Phase 2

University Life Commons

Once the Innovation Plaza has achieved a reasonable level of development, a “Commons” building will be needed to provide space for gathering, study, dining, and other activities. This building should be at the heart of Innovation Plaza and will be key in contributing to a true campus feel.

Simulation Building

The concept for the simulation building would be a highly flexible space which allowed for a multitude of different corrections training scenarios to be set up and tested. This could include cell arrangements, dorm rooms, day room and dining rooms. This flexibility would allow training of all TDCJ users. It would also allow the testing of different configurations of built elements useful in the research of best practice in corrections facilities.

The building would require a flexible internal configuration with the ability to pull in a bus for hostage simulation. The upper floor of the building would be a viewing gallery to allow observation of training exercises by large classes of trainees.

University Police

A university police sub-unit would need to relocate to the plaza in order to provide security and other services as the Innovation Plaza grows in size.

Long Range Plan

The long term needs of the university are reviewed on a regular basis. The programmatic long term needs of the university will be subject to a wide number of influencing factors from changes in enrollment numbers to changes in pedagogical methods and technology. The Master Plan needs to remain flexible in the long term to accommodate these changes.

Other longer term potential growth areas under consideration at this time are:

- A future forensics research facility; and,
- Additional criminal justice development.



Sam Houston statue



3

CONCEPT PLAN

Part 3: Plaza Concept Plan

This section describes the agreed Plaza Concept Plan for the new Innovation Plaza. The concept plan directly uses information from the analysis of the site and requirements but also has been driven by working design sessions, and symposiums.

The creation of a master plan is an iterative process. The Plaza Concept Plan which is presented in this document is the product of several months of exploration of options, discussion, revision and refinement. This ensures that there is ample time to capture input from the various stakeholders and to carefully work through constraints to development on the site to allow a context-driven approach.

The evolution of the Plaza Concept Plan also seeks to maximize the potential opportunities of the site, of which there are many, by review of multiple scenarios in an iterative process of refinement.

These opportunities use the project goals as a starting point to capture the quality and character fitting of the new Sam Houston State University Innovation Plaza.



Design Team Meeting



Early concept option design forming part of the iterative design process

Stakeholder Input

Clear input has been expressed from the stakeholders regarding the drivers for the master plans as it evolved through the concept phase. The following key drivers were derived from discussion with stakeholders in the Visioning Workshop sessions in Phase 3 of the project.

University

- Plan for near-term facility needs for criminal justice uses;
- Plan for long-term academic and research growth;
- Create a “campus” feel with green open spaces;
- Create a gateway with focal features and memorable locations;
- Form adjacency between the near-term hotel/conference center and CMIT/LEMIT facility;
- Allow for potential conference center expansion; and,
- Need to include POP data center in near-term Phase 1.

Community

- Maintain visibility to HEARTS Veterans Museum from Hwy 75 and IH-45;
- Enhance setting of future HEARTS Presidential Park;
- Allow overflow parking within the Innovation Plaza with golf cart access;
- Ensure no development is within the 100' electric utility easement;
- Provide landscape separation/green buffer from neighborhood; and,
- Ensure there is no impact on storm water within the neighborhood.

Official Stakeholders

- The plaza has to meet TxDOT curb cut requirements:
 - » 250' from highway exit ramp
 - » 425' between driveways
 - » 45' maximum curb-to-curb of driveways



Stakeholder Meeting



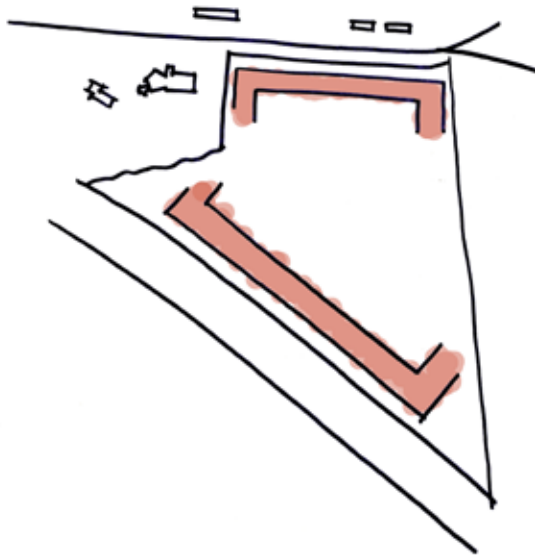
Community newspaper reporting on SHSU Innovation Plaza master planning process

Design Principles

Design principles were established early in the design process. These are in essence principles of good design which have been tailored to be specific to the SHSU Innovation Plaza. These design principles have evolved through the process into a framework which ensured that the Plaza Concept Plan met the functional requirements as well as the aspirational plaza character goals of the university.

Frontages

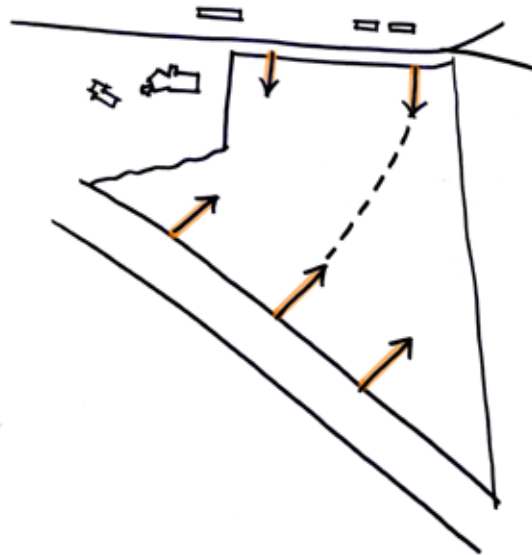
- The site's 'primary frontage' should guide initial phase of development with building addressing IH-45 and Highway 75.



Frontages

Vehicle Circulation

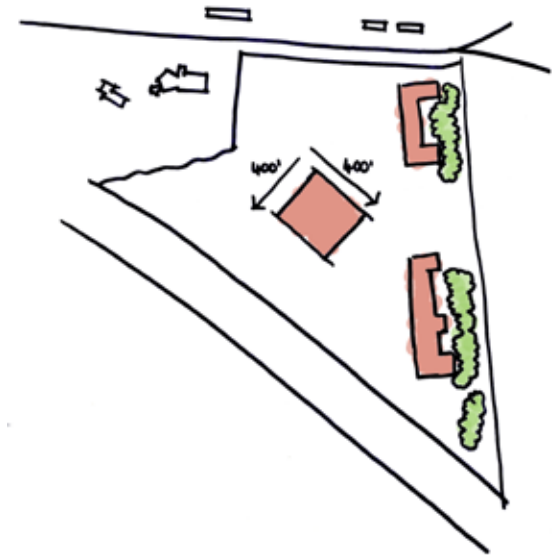
- A central access route through the site that connects Hwy 75 to the IH-45 frontage road;
- This central access should align with access to the TDCJ Wynne Unit mens prison to the north - to establish convenient junction alignment;
- Circulation within the plaza should be convenient and efficient, without being overly dominant; and,
- Accommodate bus access and circulation on the site to allow for potential future shuttle bus loop between the Innovation Plaza and the main campus.



Vehicle Circulation

Blocks

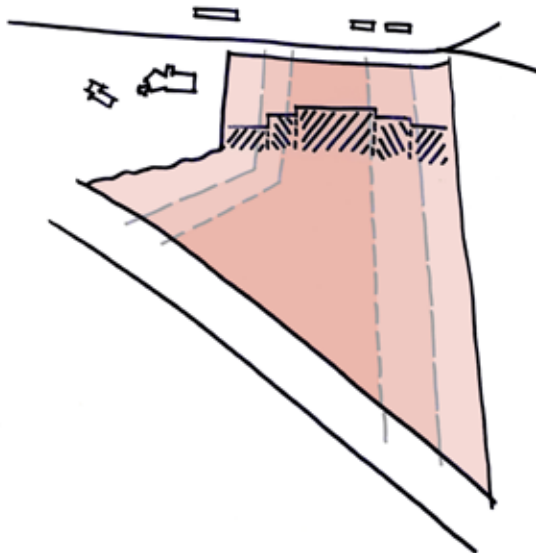
- Building orientation should create a 'soft' edge to neighboring properties, positioning entrances on main streets and rear 'garden' courts closest to residential and HEARTS boundaries;
- A general walkable block size 300-400' should be adopted; and,
- Larger blocks may be located adjacent to IH-45 for hotel/conference use location with smaller blocks located centrally.



Blocks

Building Heights

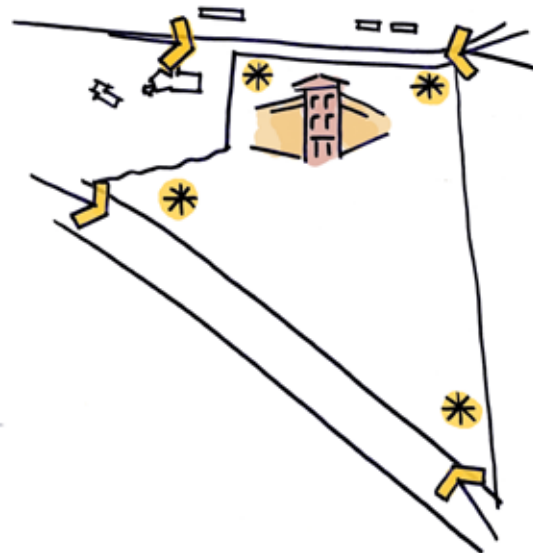
- Building heights adjacent to neighboring property should be limited to three stories on the eastern and western boundary, building heights up to 6 stories in central section of the plaza;



Building Heights

Views and Set Backs

- A setback of the building line should allow clear views to HEARTS military monuments to the south and to the north;
- The site design should address focal points at the entrances to the Innovation Plaza to aid circulation
- The Innovation Plaza should include a central focal point at its heart to create a strong landmark and aid orientation.



Views and Set Backs

Landscape

- The layout should create a landscape area around creek enhanced by an appropriate level of building enclosure;
- Allowance should be made for a low level landscape buffer along IH-45;
- Incorporate green infrastructure, environmental design, integrated and sustainable storm water management into site design.



Landscape

PROCESS: DESIGN EVOLUTION



Initial design concept



Concept development



Concept Refinement

Uses

- Uses should be positioned on the site relative to their requirement for a visible presence from IH-45;
- Shared parking opportunities between all facilities should be encouraged; and,
- The plaza should provide for a highly integrated mix of research, training and student life uses on the site as well as supporting administration and offices, even if final uses are currently unknown.

Pedestrian Movement

- Pedestrian routes should provide clear connections to HEARTS' landmarks to the north and south;
- The pedestrian network should be structured around a pedestrian mall supported by a walkable network of streets with sidewalks.

Plaza Concept Plan

This section provides a description of the proposed development for each of the phases of the Plaza Concept Plan. It also provides a narrative on the layout and provision of facilities from a site-specific design rationale developed from the design principles set out above. The creation of plaza character, beyond this functional rationale, is provided in Section 5: 'Plaza Character'.

The Plaza Concept Plan sets out the road map to development of the Innovation Plaza through a near-term Phase 1, and a medium-term development as Phase 2. The Plaza Concept Plan also provides long-term full build out potential to guide decisions regarding the location of longer term growth of the university.

The careful thought and discussion which has led to the design rationale commentary below should be the starting point for any future detailed architectural proposals for the Innovation Plaza.

Phase 1

Summary Overview

The first phase of the Plaza Concept Plan has been programmed and planned to accommodate the following facilities:

- CMIT/LEMIT (83,000 gross square feet);
- Hotel and Conference Center;
- TDCJ Facility (47,547 gross square feet); and,
- Initial road and utility infrastructure.



Design Rationale

The Phase 1 Plaza Concept Plan has been carefully choreographed with the later phases to account for specific commercial realities and efficiencies in development. These design decisions are broken into practical sections or buildings; roads and parking; pedestrian links; and landscape. In summary:

Buildings

- The hotel is located on IH-45 to be visible from and adjacent to site entrance;
- The distance between the Conference Center and the CMIT/LEMIT building is less than 100 feet allowing a high degree of connectivity between the two buildings. A dedicated crosswalk is identified where this could provide an emphasis for this connection and encourage pedestrian flows.
- The TDCJ facility is located close to Hwy 75, but only approximately 1000 feet walking distance from the CMIT/LEMIT building.
- The Central plant and data center are located adjacent to the secondary access to site for convenient service access.

Roads and Parking

- A loop road from the IH-45 frontage road is used to create convenient vehicle and servicing access to the Phase 1 buildings.

- The central boulevard within the Innovation Plaza is started in Phase 1, allowing the creation of an entrance gateway.
- For the Phase 1 development, construction of the northern section of the central boulevard would potentially over burden development costs, therefore an interim arrangement of direct access to the TDCJ surface parking lot has been provided.
- The parking for the CMIT/LEMIT facility is configured so this initial Phase 1 begins to establish the principle of a central pedestrian spine which will be continued as a structuring feature through Phase 2 and the longer term development of the Innovation Plaza.
- Parking for the Hotel and CMIT/LEMIT is shared as a majority of users for the CMIT/LEMIT will be hotel and conference center guests.
- Parking is located to the rear of the Hotel and Conference Center and the CMIT/LEMIT building allowing the early creation of a positive public realm between the building entrances and the Central Plaza space.
- The TDCJ parking lot provides overflow parking for the HEARTS museum for special events.
- The TDCJ facility is directly accessed from Hwy 75 to the north of the site. This location provides convenient access for staff from the Wynne Unit prison to the north of Hwy 75.
- Phase 1 allows for continued operation of the TDCJ tunnel under IH-45 in the short term. This access would be secured. With restricted timing and use, the existing bridge could still be used for transporting inmates across the site, exiting on to highway 75 from the current curb cut.
- Intersections with Hwy 75 and IH-45 have been designed to accommodate large vehicles. In particular, the Phase 1 loop has been designed to accommodate a large servicing vehicle entering the site and navigating to the service area of the hotel and conference center. This has resulted in the need for larger intersection widths on this loop.



Auto-Run Analyses of Phase 1 Plaza Circulation

Pedestrian Links

- The Central Plaza space is a key element in Phase 1, which sets the character of the whole plaza (this space is discussed more in the following section on Plaza Character).
- Continued pedestrian access over the creek using the existing bridge is envisioned. However, replacement with a pedestrian bridge may be necessary following more detailed assessment of the bridge structure. This establishes the route of the central boulevard in advance of requiring funding for the entire length of the boulevard and bridge over the creek.
- The Phase 1 layout includes two connected trail loops: a 0.4 mile loop to the north of the creek and a larger, one mile, loop on the south side of the creek.
- Direct sidewalk connections have been created between the surface parking lot and the HEARTS Vietnam Memorial Walk to provide convenient access. These sidewalks are designed to be a minimum of 12 feet wide to accommodate golf carts, where these are necessary to assist less mobile visitors' travel between the parking lot and the museum.

Landscape

The Phase 1 plan demonstrates early commitment to landscaping and tree planning on the site. This is focused in the following areas:

- Adjacent to IH-45 to provide a landscape buffer to future buildings;
- to the eastern boundary of the site to begin to establish a soft landscape boundary to the neighborhood;
- along the route of the trails; and,
- formal street tree planning on the initial section of the central boulevard, and other street tree locations.

The plan design is also deferential to its neighbors to the east - the closest building to the Forest Hill Neighborhood in the Phase 1 development is 395 feet from the property boundary.

The Phase 1 Concept Plan also shows the implementation of the HEARTS Museum's Presidents Park on the 6 acres of land leased by the University to the HEARTS Museum.



Detail of the Phase 1 Plaza Concept Plan showing close relationship of CMIT/LEMIT facility to the Hotel and Conference Center

Phase 2

Summary Overview

- Complete the central boulevard and bridge across the creek;
- Landmark building and tower for student life/academic uses;
- TDCJ Simulation Training Facility;
- 172,000 additional gross square feet of building; and,
- 240 additional parking spaces.

Design Rationale

The Phase 2 Concept Plan sets out the medium term (6-10 year) development of the Innovation Plaza.

Buildings

- Construction of the building to the south of the creek is intended to provide a landmark focus in the center of the Innovation Plaza. This building would be ideally suited to providing student life facilities. It is also likely to be able to accommodate relocated administration services, and research or additional education space. This building would even be appropriate for larger auditorium or performance spaces if these are likely to become a need in the long term programming for the Innovation Plaza.
- The simulation training facility built adjacent

to the TDCJ facility, will provide flexible space for training situations. The building has been shown to have a bus pull-in to allow for special training vehicles to be positioned within the building. This building shares and entrance with the TDCJ facility, which links through the TDCJ building to provide pedestrian access from the central boulevard. This configuration is directly intended to establish a clear structure of connections between near term and long term buildings as the Innovation Plaza develops.

Roads and Parking

- Completion of the central boulevard, including bridge and planting of street trees. The boulevard is median separated and has wide pedestrian cross walks at frequent intervals to help calm traffic speeds.
- The efficient grid structure to the south of the creek is partially formed with the creation of a street to the north of the CMIT/LEMIT building.
- Parking and servicing to the potential student life building to the south of the creek is provided to the east of the building. These parking lots are configured in preparation for their conversion to building sites in the long term build out of the Innovation Plaza.

Pedestrian Links

- The north running trail is increased to a 3/4 mile length.

Landscape

- The enhanced creek landscaping will accommodate 1 in 100 year storm water without impact beyond the site boundary. It is not anticipated that there will be any significant degree of standing water within the creek, the current minimal flow through the site will remain.
- Additional landscape and tree planting is added to the west of the Innovation Plaza in the area around the running trail, starting to establish greater biodiversity and range of habitats which will have ecological as well as storm water retention benefits.
- Landscaping and trees are also added around the extended northern running trail.



Phase 2 Plaza Concept Plan

Phase 3

Summary Overview

The Long Term Plaza Concept Plan responds to the university's goals in the following ways:

- “Campus” feel: The Innovation Plaza plan allows all buildings to be connected by a pedestrian network of paths, quads and open spaces with landscape improvements and branding opportunities.
- Fulfill the university's mission through: “Education – Training – Research”: The concept plan provides a mix of opportunities for research and education facilities in addition to the near term facility requirements.
- Long Term Growth: The plaza could conservatively provide 1.3 million square feet of floor space for new building projects., 2,992 parking spaces, 4 parking garages, and approximately 24 acres of open space.

Design Rationale

The long term plaza build-out may take between 10 and 50 years to achieve. It is therefore aspirational; setting out the potential for the Innovation Plaza when fully established.

Buildings

- The long term development identifies where future growth could complete the street frontage along the central boulevard. Placing building frontages which face this boulevard is a key element in the layout of the Plaza Concept Plan.

- A flexible use pavilion adjacent to the creek, for outdoor lessons or events.
- The closest building to the site boundary with the Forest Hill neighborhood is 180 feet. This is the 4th parking garage and can be screened with vegetated walls if necessary. The closest active academic building to the boundary with the neighborhood is 200 feet, and the academic buildings closest to the boundary are orientated at an angle to the boundary to avoid windows directly facing the neighborhood and thereby reducing the potential impacts on residential privacy.

Road and Parking

- Development within the long term Plaza Concept Plan is principally arranged around a street grid and blocks with internal courtyards. North of the creek this is expanded slightly to allow parking within larger courtyard arrangements providing convenient locations for ADA compliant parking spaces as well as servicing and loading.
- The Plaza Concept Plan accommodates areas of surface parking and some on street parking. These are in small clusters to avoid impacting on the streetscape. This provides flexibility in access to buildings; it allows for and accommodates essential circulation and use by maintenance and service teams as well as delivery and drop off. In the long term, these parking areas could be reduced or reconfigured (for example to provide additional bicycle parking) as appropriate.

Parking garages:

- » The largest parking garage in the long term plan is connected to the hotel and conference center. This structure has been configured to be developed at the same time as an extension to the conference facilities. This would allow for a doubling of the conference facility size on the site and adding significantly to the efficiency of the parking provided. The parking structure itself would be fronted by active office or commercial (coffee shops or book shop etc.) uses.
- » Two additional smaller parking structures are shown to the east and west sides of the Innovation Plaza providing convenient walking distance to the entire south side of the creek.
- » A parking structure is also identified to the north of the creek. This structure could accommodate parking for all the buildings to the north of the creek. However, in order to retain overflow parking to the HEARTS Museum, surface parking has been retained along the western boundary. This serves the dual benefit of minimizing the amount of development along this western boundary and therefore preserving the setting of the HEARTS Vietnam Memorial Walk.



Long Term Plaza Concept Plan

Pedestrian Links

- The pedestrian spine is continued through several building courtyards providing a quarter-mile long pedestrian link through the heart of the Innovation Plaza, culminating in a gathering point overlooking the creek and the HEARTS Museum Presidential Park

Landscape

- Landscaping of the entire Innovation Plaza is completed.
- The setback from the creek on the western side of the Innovation Plaza ranges from 795 feet to 300 feet in order to protect views to the HEARTS museum and to provide a reciprocal landscape setting to the future HEARTS President's Park.
- Average set back from IH-45 is 100 feet with landscaping along the length of the frontage road.
- Storm Water: Several factors were considered in designing the concept plan for the Innovation Plaza to mitigate the amount and speed of storm water reaching the creek. The expected flow from the developed areas to the east is between 1,000 and 1,400 cubic feet per second for the 100 year event; Large culverts will be needed for the central boulevard crossing; Channel improvements may include cascading detention ponds or natural channel design to create a more riparian environment.

Phasing Rationale

The following provides a summary of the phasing rationale for the Plaza Concept Plan.

- Minimize initial road investment;
- Allow for bridge to form a later phase;
- Set a clear path for a Phase 2 'focal' building with student life and other support facilities; and,
- All phases of development should seek the creation of a "Campus" feel for the site.

There are many other assumed phases inherent in the Plaza Concept Plan which can be reviewed and investigated further. Typically these allow for the creation of primary street frontages initially with parking to the rear of buildings and develop the Innovation Plaza from the central boulevard outward.

Master Plan 'Measures of Success'

The following measures relate back to the design principles and highlight where they have been successfully incorporated into the long term plaza plan.

- The Innovation Plaza is easily walkable;
- Setbacks have been provided to allow for views to the HEARTS Museum;
- Landscape buffers have been provided to the residential neighborhood to the east with no proposed development or highway in the transmission line easement;
- A central boulevard provides access through the site;
- Landmarks and branding are visible from IH-45; and,
- Building heights have been controlled to focus tallest buildings in the center of the plaza.



Analysis of Long Term Plaza Concept Plan



4

PLAZA
CHARACTER

Part 4: Plaza Character

The previous section set out the functional arrangements of the Plaza Concept Plan in meeting the objectives and goals of the university. Equally important is the ability for the plan to create character and exemplify the aspirations of the university. In essence, the task is to create a place that both feels part of the Sam Houston State tradition but also carries its own unique sense of identity and character.

Design Vision

Within the process of developing the Plaza Concept Plan, the design team established and agreed with the university a vision for the design and layout of the Innovation Plaza. This design vision is related to the overall vision of the plaza but relates specifically to the site design and layout. This vision is:

“We are creating an Innovation Plaza that centers on a formal main quad and is sewn together by a complete central boulevard. An active, intensely-used, pedestrian spine traverses the plaza providing an emphasis on walkability. Buildings will provide strong definition to formal spaces and site frontages and will fully capitalize on the site’s informal parkland/natural creek open space.” (Broadbuss Planning, March 2014)

Plaza Character Elements

This section of the master plan sets out the plaza character elements that are captured in the Plaza Concept Plan and describes how they achieve the design vision. Although not an architectural guide, the approaches to achieving plaza character can also be used as recommendations moving forward with development projects in order to achieve the university’s goals for the Innovation Plaza.

The approach to creating the intended plaza character is reliant on the following elements:

- Block;
- Street Types;
- Parking and Servicing;
- Urban Design;
- Views;
- Landscape Types;
- Plaza Features/Identity; and,
- Branding.

Blocks

The Plaza Concept Plan adopts a collegiate style development with perimeter blocks formed around enclosed quads. The character of the Innovation Plaza changes and become more intense with activity towards the center, which is matched by a gradation in density and scale of development. The streets and buildings are part of this coordinated character, which comprises identifiable places that complement each other to create a unified overall character. These blocks are between 300’ to 400’ in length to provide a similar scale to the highly successful main campus in downtown Huntsville.

Street Types

A street hierarchy has been identified which encourages a design-led approach to movement and control of vehicle speeds through the site through minimal lane widths and curb bulb-outs.

Central Boulevard

The boulevard is a key organizing element of the Innovation Plaza; it not only provides the main access and circulation route through the site between the two major highways, but should be an iconic public street that is integral to the identity of the Innovation Plaza. As the central thoroughfare, important public spaces and buildings front on and lead off from this axis.

At 80'-90' suggested width, this is the most comfortable and park-like of the streets designed for this Innovation Plaza, containing two 24' traffic lanes separated by a planted median along most of its length. This boulevard is intended to be a "complete street," with room for bicycle lanes and transit/shuttle stops along its length. Sidewalks are well-shaded and separated from vehicles by a planted curb strip, with a moderate setback to the building edge allowing room for building landscaping.



Illustrative Section and Plan of the Central Boulevard



Central Boulevard



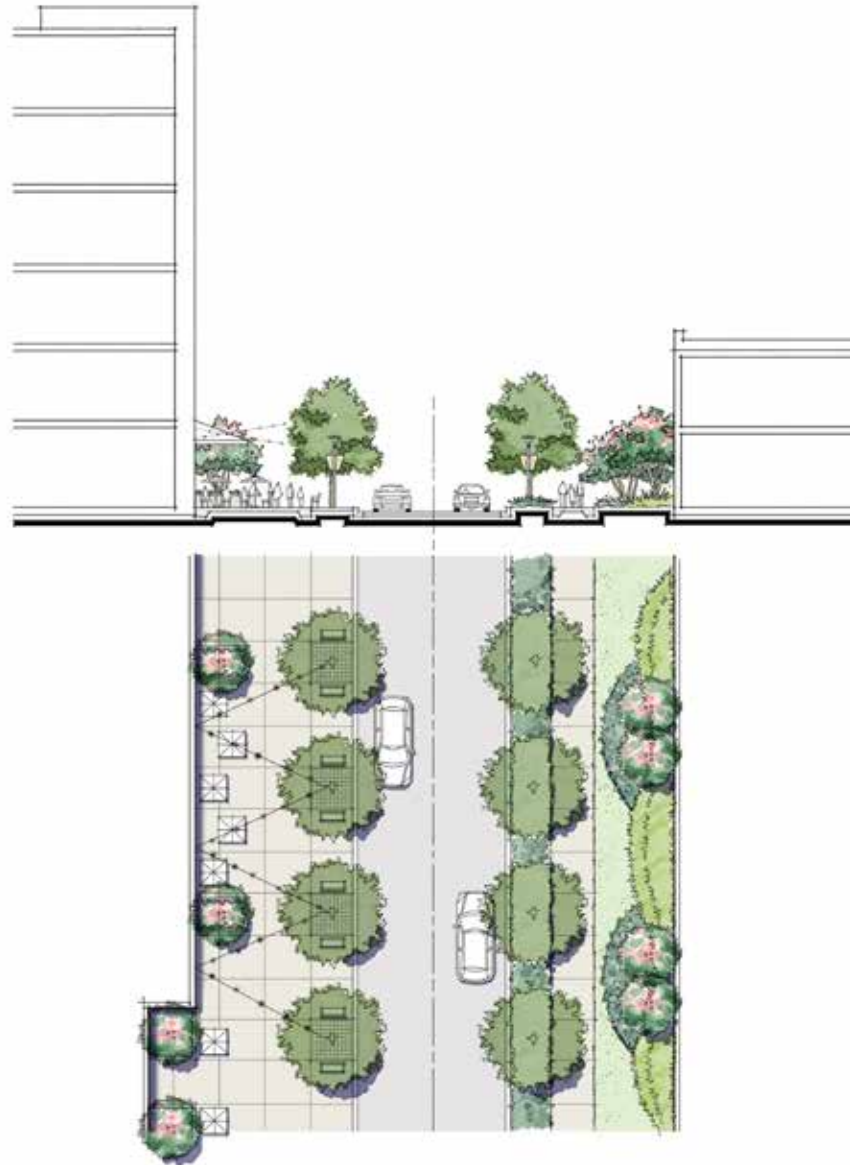
Illustrative view along Central Boulevard

Urban Street

This street is intended to have an urban or downtown feel, with minimal or nonexistent building setbacks and active street level uses. This type of street will have a generous sidewalk area with room for café seating and benches among street trees. The hotel and conference center in particular provide a good potential location for this type of building use and convivial public realm. The roadway itself is smaller, with one 12' lane of traffic in either direction.



Urban Street



Illustrative Section and Plan of the Urban Street

Campus Street

Like the urban street, the Campus Street is intended to have two lanes of travel, serving as a minor circulator for the Innovation Plaza. In contrast to the urban street, this street type is intended to have deeper building setbacks from the road and more ample landscaping area between the sidewalk and the building. The landscaped curb separating the sidewalk from the roadway may be cutaway in places to allow for bicycle racks and limited on street parking in areas that may require it, though most parking will be in off-street lots (or parking garages in the long-term). The buildings in this area are intended to contain mainly academic or research uses, and thus would not be expected to have active ground-level uses like buildings along the urban street may have.



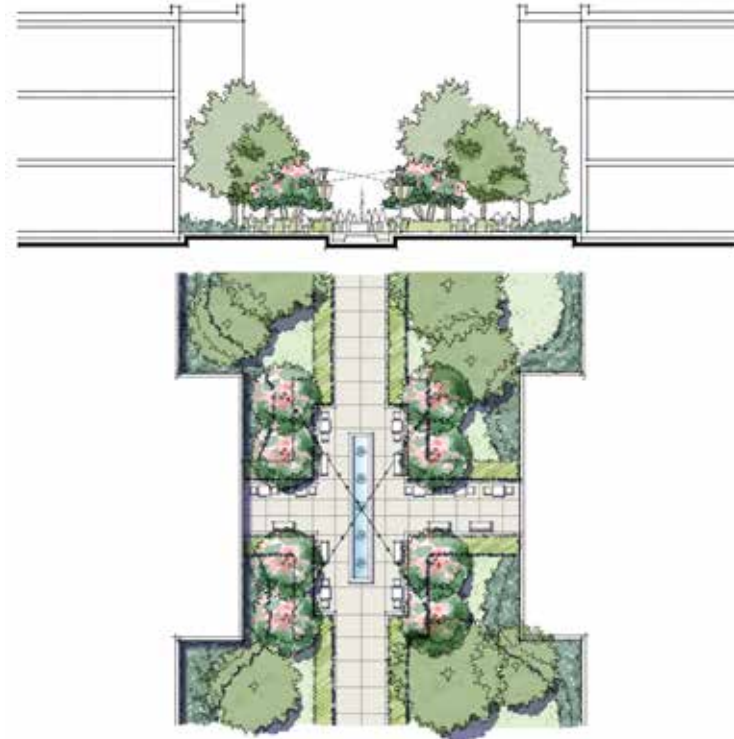
Illustrative Section and Plan of the Campus Street



Campus Street

Pedestrian Spine

The pedestrian spine is a main axial link bisecting the southern portion of the Innovation Plaza from southeast to northwest. It is intended to be a pedestrian only pathway that finds its way through several different types of spaces, from first floor building “pass-throughs”, to relatively narrow openings between buildings, interior courtyards, and the Central Plaza. Care should be taken in the design of the buildings along this axis such that servicing and loading entrances are thoughtfully situated to preserve a pleasant environment for walking, studying, and gathering along this route. The width of this pedestrian spine is expected to vary between 12'-20' as it passes through these different spaces.



Illustrative Section and Plan of the Pedestrian Spine



Pedestrian Spine



Illustrative view of the Pedestrian Spine

Parking and Servicing

Protecting plaza character from negative intrusion by aspects such as parking and servicing areas is key consideration in developing the site layout. However, this can be greatly advanced through consideration at the master planning stage. Parking and servicing provision is included to meet the needs of the Innovation Plaza without dominating the streetscapes or “campus” feel as a whole. Servicing and delivery zones for buildings shown on the Plaza Concept Plan are located away from the street frontage and the main pedestrian spine in order to minimize their potential negative impact on plaza character.



Servicing and building entrances

Pedestrian Network

The pedestrian network is highly important to the character of the Innovation Plaza. This focus on creating a walkable plaza is demonstrated by the significant proportion of the center of the plaza dedicated to either sidewalk or trail connections.



Servicing and building entrances

Urban Design

Key design devices such as gateways, views/focal points, and building orientation and frontages are used to add a sense of place to the plaza and define areas within it. Key approaches to these are set out below.

Gateways

Formal gates are shown at the entrances to the site on the Central Boulevard. These signify the entrance to the plaza and relate to the historic character of development on the main campus. Other gateway elements are used to mark the transition between the plaza core and the parkland open space to the west signifying the transition from formal lawns and quads to open space suitable for informal recreation and relaxation.



Entrance gateway

Views & Focal Points

Views both within the Innovation Plaza and from the surrounding streets have been carefully considered in the Plaza Concept Plan.

Plaza Views – How streets are terminated, whether with buildings or with open space, influences the apparent character of a place. The intention of the Plaza Concept Plan was to create vibrant active core to the new Innovation Plaza but to avoid a sense that the plaza was introverted and turning its back on its surroundings. Streets are therefore allowed to open out to views of the parkland and HEARTS museum adding to the plaza's sense of place. Some streets terminate with a deliberate continuation of the pedestrian walkway into the open space to encourage exploration beyond the grid. Within the plaza there are also numerous short views to focal points such as the Sam Houston statue and hotel entrance, which are created through careful alignment of the street grid and pedestrian network.



Pedestrian spine gateway into parkland

Long Views – careful consideration has also been given to views of the Innovation Plaza when approaching from all directions. In particular the approach from IH-45 has informed the positioning of the hotel building site with an opportunity for signage and building design to mark the entrance to the Innovation Plaza.

Landmark Building - The Phase 2 building in the center of the Innovation Plaza marks a key opportunity to create a focus of activity. The iconic focal tower element is a statement of this, which will be visible when approaching Huntsville from the west and north. This building takes full advantage of its location adjacent to the creek providing views out as well as an area of interaction and discussion around the natural gathering point of the tower.



Focal Tower

Building Orientation & Frontages

Building orientation and frontages are arranged to provide overlooking of pedestrian routes and spaces. Taller focal elements are used as landmarks to assist with navigation. These taller elements also allow coordination between building entrances and the proposed pedestrian network.

Frontages to IH-45 and Highway 75 provide, in part, the front door to the Innovation Plaza. The IH-45 frontage however will be viewed by moving traffic and therefore requires less human-scale detail and more bold focal points such as the hotel and gateway into the plaza. The Highway 75 frontage will require a more detailed approach as this frontage will be viewed by slower passing traffic and pedestrians on the Highway 75 sidewalk. All other frontage within the plaza should be activated with windows and entrances where they face a pedestrian route or Campus Street this will ensure a comfortable human-scale pedestrian environments are created within the plaza. In addition, particular attention should be given to the building elevations and frontages facing on to areas of open space such as the Central Plaza, the creek & parkland, and HEARTS Presidential Park.



Frontage to highway 75 continues within the Innovation Plaza to define spaces and streets

Landscape Types

Central Plaza

The Central Plaza space is intended to serve as an iconic and defining space for the Innovation Plaza. As the central public green space on plaza, it is an area where paths converge; plaza users will pass through, meet up, part company, people watch, study, eat lunch, and otherwise pass time here. While the design indicated for this space on the plan is conceptual, the landscape architect who ultimately takes on the detailed design of this space should acknowledge the paths indicated as a well-considered structure for the space as it relates to the other organizing features of the site, such as the pedestrian spine, Central boulevard, statue, and buildings that frame this green.



Central Plaza



Aerial Detail of Central Plaza

Building Quads

The building quad is the essential archetypal space of traditional campus design. These spaces are essentially outdoor rooms defined by buildings on several sides, and often take on a more formal and ordered feel than other areas of plaza. They also tend to be more intimate spaces, typically tucked away from streets, where people feel a sense of enclosure. In an effort to build the desired “campus” feel on this site, the plan provides for a number of different sizes and types of quads dispersed throughout the Innovation Plaza, where people may relax, study, meet, or hold discussion sessions on a nice day.



Quads



Aerial Detail of Quads



Aerial Detail of Parkland



Parkland Areas

Parkland

The parkland areas of the Innovation Plaza are intended to have an open feel, ideally landscaped with native grasses and small clusters of trees. Walking / jogging paths wind their way through these spaces, and small seating areas may provide quiet spaces to sit. These spaces may simultaneously function as recreational open space, and serve to detain, slow down, and filter storm water on its way to the creek. More recommendations on storm water management can be found in the appendix.



Aerial Detail of Riparian Growth Zone



Riparian Growth Zone

Riparian Growth Zone

The creek bed in its current state is in need of restoration and stabilization. The site's historic use as pasture land has likely contributed to a lack of typical riparian vegetation, which should be reintroduced to serve multiple functions for the Innovation Plaza. While a more detailed engineering study should be undertaken to detail the necessary alterations to this creek bed, the conceptual plan presented here imagines a series of detention areas that could slow water flow during a rain event, and support the introduction of riparian vegetation in the creek bed that would serve both as beautifying amenity and as a bank stabilization mechanism. Footpaths will pass through and along this riparian zone, which will take on the most natural/vegetated character of the areas within the Innovation Plaza.

Plaza Features/Identity

- The Sam Houston statue is located in a prominent position in the Central Plaza. This statue is intentionally placed within an accessible location in the pedestrian network to encourage interaction with the statue as a backdrop in photographs and meeting point for students.
- It will be important for the Innovation Plaza to generate its own identity. Although this will take time to emerge, it will be encouraged by creating memorable places such as the Central Plaza, the bridge over the creek, the landmark tower, and the outdoor pavilion.
- All materials and detailing used should be consistent with the University's character and image.



Sam Houston Statue



Creek View Pavilion



Long Term Plaza Concept Plan Aerial Illustration

A photograph of two horses in a large, open field under a clear blue sky. In the foreground, a dark brown horse stands facing right. In the background, a lighter brown horse stands facing left. The field is covered in dry, yellowish-brown grass. In the distance, there are some buildings and utility poles. A large white number '5' is overlaid on the left side of the image.

5

NEXT STEPS

Part 5: Next Steps

Funding for CMIT/LEMIT Facility

The 83,000 gross square foot facility will need to obtain funding for design and construction. Funding for this facility will be a combination of auxiliary / unexpended funds and Texas State University System (TSUS) Bonds. The facility will be leased to CMIT/LEMIT. SHSU will operate and maintain the facility.

Market Demand Study for Hotel and Conference Center

A market demand study will need to be completed to gauge demand for total number of rooms for the hotel and overall area for the conference center as well as number and types of meetings rooms in the conference center. The CMIT/LEMIT function will be the primary driver of demand as it can host professional education students as well as large conferences. In addition, other demand drivers include university conferences, athletic competitions (including university football games), weddings/banquets, and utilization by other community entities such as the HEARTS museum or TDCJ.

RFP/Q for Public-Private Partnership of Hotel and Conference Center

Upon completion of the market demand study, the university will need to solicit proposals to hire a private developer to build the hotel and conference center. The development agreement will need to stipulate the role and commitment of the public instruction in the new facility, and it will need to address the university's needs for a conference center.

Detailed Engineering Study of Concept Plan

Roadway, civil, mechanical, electrical, information technology, and stormwater infrastructure will need to be examined and calculated in greater detail. Developing engineering plans based on the Plaza Concept Plan will help assess capacity and costs of necessary infrastructure for the near-term facilities. When conducting the study, it will be important that the infrastructure plan follow the long-range roadmap outlined in this document so future plans aren't compromised by short-term decisions.

Coordination on Roadway Infrastructure with City of Huntsville

The design, construction, and maintenance of the primary boulevard and other streets through the plaza will need to be negotiated with the city. As this plaza will be used by people from outside the university community (e.g. people visiting from out of town for a football game or wedding) visitors will be traveling on roads within the development. The future roads will need to be coordinated with the City's Comprehensive Plan and Capital Improvement Plan if city-funding is part of the implementation strategy for the roads.

Discussion with Entergy on Three Phase Power Source along Interstate 45

Currently, there is only one-phase electricity along the Interstate 45 right-of-way. This power source is not sufficient to adequately supply power to the Phase 1 buildings. For the central plant and majority of Phase 1 development to occur on the south side of the creek near the highway, Entergy will need to install three-phase power.

Marketing/PR Outreach

Spreading the word about this exciting moment in the university's history is an important step in generating interest and support for this plan. The university should consider issuing press release announcing the completion of the plan, and it should reach out to students, faculty, and staff via social media and on-site displays describing the plans. For example, a small exhibit in the Lowman Student Center or the dining halls could display the project for people to view while passing by. Additionally, the university should consider attending conferences to present the outcomes of the plan to colleagues across the country.

Strategic Plan for Research

One primary long-range use for this plaza is research. While it is clearly a favorable location for criminal justice-focused research (e.g. forensics), a more strategic plan will need to be developed to identify other types of research suitable for the Innovation Plaza. At 1.4 million gross square feet for the total development, there is a lot of room for growth. Inserting a complementary mix of other types of research activity might be one way to best utilize the Innovation Plaza.

Long-Range Transportation and Parking Network Plan

As the Innovation Plaza grows and additional uses are added that increase traffic between the plaza and main campus, a transportation and parking network plan will need to be commenced. Thinking holistically about transportation of students, staff, faculty, and visitors for both locations will be important. Is parking provision adequate? Will there need to be a shuttle bus between SHSU locations? These are the types of questions that cannot be answered by this plan. Most importantly, transportation demand management strategies will need to be utilized to reduce private automobile demand. Shuttles, car sharing, pedestrian accessibility, and bicycle infrastructure are all strategies to be considered. Parking strategies that reduce the overall need for spaces and optimize efficiency will need to be explored to limit the amount of investment required for building parking facilities.

Creek

Potential filling and dredging in the creek (a natural stream) may require 404 Corps of Engineers Permit. Jurisdictional determination will be needed.

Program and Develop TDCJ Facility

An architectural program will need to be developed for the TDCJ correctional training facility in the future. Further, the facility will be funded by a combination of auxiliary / unexpended funds and Texas State University System (TSUS) Bonds. The facility will be leased to TDCJ to cover debt payments. SHSU will operate the facility and TDCJ will maintain the facility.

Monitor/Assess/Maneuver

It is important from the outset to establish monitoring to ensure that the master plan is both being implemented successfully and that it is able to respond to potentially unforeseen changes in the future. Monitor/Assess/Maneuver is a strategy of building in these metrics to measure success and respond where necessary. Providing this up front gives confidence to the students and the community that the university is committed to implementing plans with a high degree of quality and that the goals set out in this master plan will be successfully met.



APPENDIX

Part 6: Appendix

Stormwater Management

Prior to any storm water design a detailed drainage study of the site will be required to fully understand the storm water flow characteristics that affect site. It is expected that all storm water will be designed to sheet flow off the site on the perimeter areas and flow from the interior of the building complex will be directed to inlets and Low Impact Development (LID) ponds/basins and storm piping that will discharge into the new improved drainage channel/stream.

- The expected flow from the developed areas is between 1,000 and 1,400 cubic feet per second for the 100 year event;
- A revision to the floodplain maps(LOMR) will be required to remove the buildings from the regulatory floodplain;
- Potential filling and dredging in the creek (natural stream) may require 404 Corps of Engineers Permit. Jurisdictional determination will be needed; and,
- Channel improvements will include cascading detention ponds or natural channel design to create a natural channel environment.





Rainwater Catchment and Storage

Rainwater harvesting will be part of the storm water design as required by the SECO regulations for any roof over 10,000 sf. The storm water from the roofs will be directed to underground cisterns and catchment basins that will collect the storm water for reuse as site irrigation. The site can easily be broken down into three areas.

The area to the northeast side of the site near Highway 75 can all be captured and harvested into an underground cistern located near the north side of the area under a parking lot. The southwest side of the site can be separated into two areas with the main hotel and convention roofs being harvested and piped to a cistern located at the northern end of the area and the area near the middle of the site could easily be harvested and routed to a cistern located in the center.

Water

Domestic water will be accessed from the City of Huntsville water system along highway 75 and will be looped around the site on the northeast side of the channel.

A crossing will be required near the proposed channel crossing to allow the water distribution system to feed the south side of the site. This line will also be looped around this portion of the site to create easy access and service lines as required. Another connection to the southwest side of interstate 45 is proposed and must be coordinated with TxDOT and the City of Huntsville. This connection is proposed to cross under Interstate 45 through the existing culvert used by TDCJ for access from pasture to pasture.





Chilled Water

Chilled water for the site will be provided from the on site Central Plant located near the southwest corner of the site along the Interstate 45 feeder road.

The line will be looped around the hotel and convention area buildings and routed across the channel to the northeast to loop around and serve that portion of the campus. Sizes will be determined in the preliminary design phase of the project by the MEP.

Sanitary Sewer

An existing 12 inch sanitary sewer bisects the site along the northeastern side of the channel and this will be the main sanitary sewer trunk that will service the entire site.

The northeast side of the site will have two to three connections into this existing line. The southwestern side of the site will have one connection that may require the design and installation of a sanitary lift station in order to cross the existing channel and meet the existing flow line elevation of the existing trunk line. The main 12 inch lateral flows off site to the northwest and towards the sanitary treatment plant.





Electricity

Separate three phase electrical will be brought into the site via underground electrical conduit from highway 75 and along Interstate 45. The electrical will loop around the northeast side of the site from highway 75 and service that portion of the campus.

The Interstate 45 tie in location is still to be determined by Entergy the electrical provider. At this time three phase power does not exist along Interstate 45 and this must be constructed prior to electrical connection being available along the southwest side of the site.

Data

Data communication lines will be brought into the site from a location located on the southeast side of the site and they will be routed over to the central plant location.

From the central plant the communication lines will be looped around the southwestern portion of the campus and a feeder will be routed across the channel near the crossing point to the northeast side of the campus with two legs each running north and south. This will all be underground communication duct bank.





Potential Shuttle Bus Loop

In the long term for the Innovation Plaza, consideration should be given to the potential for a shuttle bus loop for students and staff.

This loop would provide efficiency in use of land at the Innovation Plaza by reducing the need to accommodate parking and would offer sustainable travel alternatives to students based on or near the main campus.



Signalized Intersections

In the long term plan, a signalized intersection is recommended for the intersection between the Central Boulevard and Hwy 75. This will require the introduction of a dedicated left turn lane on Hwy 75.

All other junctions within the Innovation Plaza can be adequately controlled with stop signs.

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