



**Table of Contents**

	<b>Team Acknowledgements</b>	<b>Page</b>
I		
II	<b>Vision and Goals</b> Regional Aerial and Vicinity Map	07
III	<b>Project Overview</b>	09
IV	<b>Planning Principles</b> Identity, Character and First Impressions Site Orientation Opportunities Campus Community and Connectivity Mix of Uses Walkability	13
V	<b>Master Plan Design Vision</b> Campus Evolution Geometry and Architectural Connections Phase I Development Phase II Development Phase III Development Site Dimension Plan	17
VI	<b>Implementation Strategies</b> Connections Community Interconnectedness Site Integrated Water and the Columbia Inner Campus Connectedness Circulation Vehicular Circulation Pedestrian Circulation and Safety Vocabulary Architectural Aerial Perspective Vignettes Landscape Hardscape Vertical Site Elements	39
VII	<b>Summary</b>	60



## I Team Acknowledgments

### Client Team

**Washington State University**  
Capital Planning and Development

Bobbie Ryder, Senior Campus Planner  
Cynthia Arbour, Campus Planner

Dr. Elson S. Floyd, President, Washington State University  
Gregory P. Royer, Vice President, Business and Finance  
Gerald R. Schlatter, AIA/AIA, University Architect,  
Associate Vice President, Capital Planning and Development



### Washington State University Tri-Cities

Dr. Vicky L. Carwein, Chancellor  
Lori Selby, Vice Chancellor  
LoAnn Ayers, Director, Community Outreach



### Design Team

**Architecture and Urban Design**  
TVA Architects Inc.

RJ Johnson, AIA, Managing Principal  
Tim Wybenga, Design  
Jeremy Webber, Graphics



ROBERT THOMPSON, FAIA

**Landscape Architect and Planning**  
Mayer/Reed

Carol Mayer-Reed, FASLA  
Jon Dijkhuizen, Landscape Designer





## **II Vision and Goals**

This master plan seeks to identify and promote a direction for future development that will attract new students and faculty, foster new educational opportunities and collaborative partnerships, and promote growth for the Washington State University Tri-Cities Campus (WSUTC).

This master planning effort evolved from the collaborative relationships between the University, Battelle, the Port of Benton, and Solaris, a private-sector developer. The aforementioned entities are the shareholders in the recently completed Tri-Cities Research District (TCRD) Master Plan, which consists of property adjacent to the University that is predominantly west and northwest of the campus.

A vibrant University campus, in concert with the TCRD development, is an integral component to the continuing success of the Tri-Cities region. It is anticipated that the TCRD Master Plan will attract new research, engineering and science-based companies, heightening the continued collaboration between these industry leaders and the University.

The collaborative success of this dynamic community of science, innovation, research, development and industry is a legacy on which to build. The University's central role in intellectual, academic, and scientific development in the Tri-Cities is and will continue to be a key component of its own success.

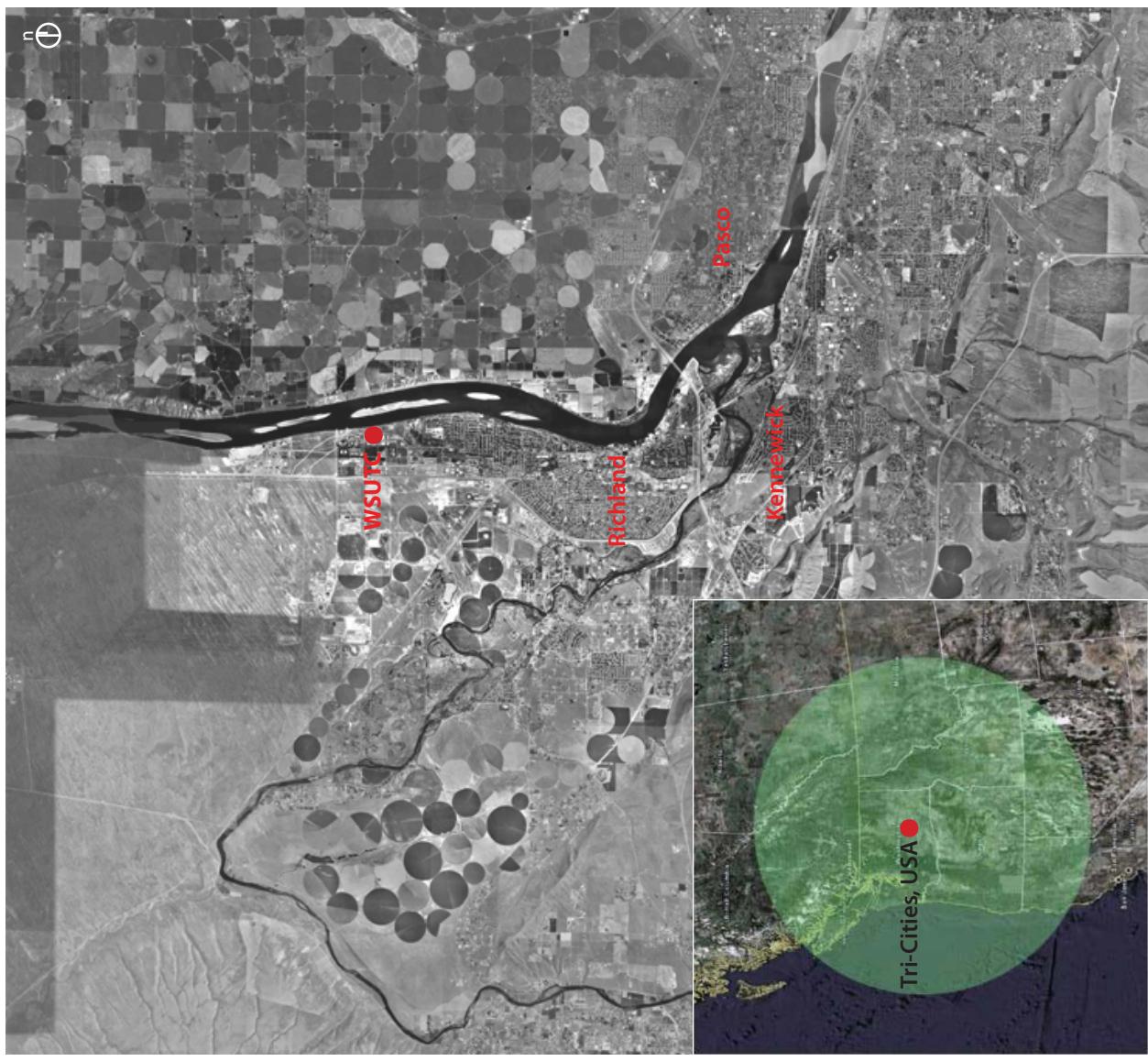
The master plan will first and foremost adhere to the University's four master plan goals:

- 1) Achieve national and international preeminence in innovation, discovery, and creativity;
- 2) Provide a premier education and transformative experience that prepares students to excel in a global society;
- 3) Lead in relevant local, national, and global outreach and engagement;
- 4) Embrace an environment of diversity, integrity, and transparency.

As this institution evolves, the past, present and future needs must be continuously assessed and supported in adopting and creating a lasting Washington State University Campus image. The campus environment must bolster the University's fundamental curricular principles while maintaining flexibility for future development that embraces high performance design.



## Regional Aerial



## Vicinity Map



### III Project Overview

#### Tri-Cities Washington

The WSUTC Campus is located in the southeastern part of the state, near the confluence of the Yakima, Snake and Columbia Rivers. The campus resides in the city of Richland, which joins neighbor cities Pasco and Kennewick in completing the Tri-Cities designation.

#### Washington State University Tri-Cities

The WSUTC campus is comprised of 200 acres; 110 acres is located on the main campus east of George Washington Way (GWW), 55 acres of property west of GWW and 30 acres south of Sprout Road which is currently leased to Hanford High School as their athletic fields. The main campus is bordered by 1st Street to the north, the beautiful Columbia River to the east, Sprout Road to the south and GWW to the west. North of 1st Street is the Port of Benton's Technical and Business Campus and the Penford Foods processing plant. Views to the east are primarily of Pasco's agriculture and an island belonging to the McNary National Wildlife Refuge. South of Sprout Road is a residential neighborhood and Hanford High School. West of GWW is the remainder of the University property which is bordered primarily by the City of Richland's well fields to the south and west, and 1st Street to the north. Beyond the well fields to the south are single and multiple family housing. Beyond the well fields to the west is the Port of Benton's Richland Innovation Center. North of 1st Street is the Solaris property and the planned center of the TCRD. North of the Solaris is the Battelle property.

#### Program

The master plan includes program elements primarily for the University, with some unique private sector proposals which are a result of the TCRD planning process. The University program includes a Student Activity Center, Academic Buildings, Student Housing and a Crime Laboratory, a joint venture with the Washington State Police Forensics Laboratory. The master plan also identifies public/private enterprise opportunities, including an amphitheater, student housing and other mixed-use development. All of these program components have been identified as future needs to support University growth, and will take their cues from market demand. This master plan will outline phasing concepts as broad guidelines for the University.

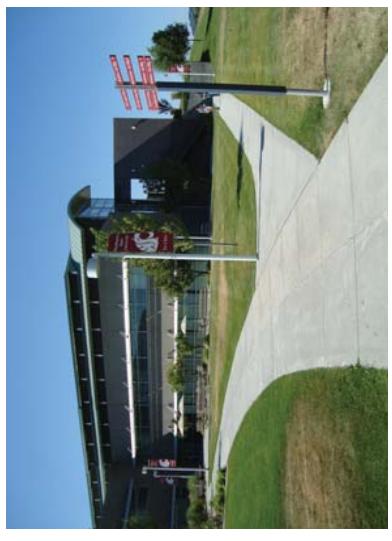
Supporting the extended growth of the current undergraduate and graduate degree programs, and the bio-products, bio-engineering and information technology progress will enhance the overall vision of the University and District. The established synergies of the Pacific Northwest National Laboratory (PNNL), Battelle and other regional enterprises are excellent examples of collaborative success for the University.



9



**Images of the Existing Campus**



## Washington State University Tri-Cities

The WSUTC Campus Master Plan (June 2008), with site plan identified below, has been an integral component in the advancement of the design team's effort for the master plan vision presented in this report.





## IV Planning Principles

### Identity, Character and First Impressions

Visual impressions will play a pivotal role in shaping the experience for each person visiting the University. The unique qualities of the campus must be readily apparent upon arrival and must communicate a vision that expresses the distinct identity of the Tri-Cities Campus as well as the Washington State University system.

That identity begins at the campus thresholds. The current entry points occur at the intersection of 1st Street and GWW, which is the University's preferred main entrance, and at GWW and Sprout Road, which is the common entrance due to this being the most direct route between the regional population center to the south and the current campus density. The University envisions the 1st Street entry point becoming the main entrance as the campus matures.

These campus thresholds should initiate a progression that lead people through the campus in a simple and effective manner. The curvilinear University Drive establishes unique opportunities as it serpentine's through the campus. Future development must be cognizant of visual connections into the main campus, as well as to geographical and landscape features beyond.

The quality of the landscape will have a significant impact on visitors' first impressions, with the palette of all planting and hardscape materials complementing the region and evoking the character of the Columbia Basin Eco-Region. The character of the campus perimeter landscaping should blend with adjacent natural open spaces, and become increasingly detailed with proximity to the campus center. This landscape treatment will announce a heightened level of quality and detail, and will include wayfinding signage and opportunities to promote WSUTC identity.

Vehicular access and pavement treatment will present key opportunities along the arrival sequence and in announcing pedestrian crossings, passenger drop-off zones and parking.

### Site Orientation Opportunities

The master plan axial orientation is a critical component in the support of proper alignment with annual solar and prevailing wind patterns. To maximize the potential for natural daylighting, the predominate orientation of the buildings needs to be on an east-west axis, which works quite well with the original east-west campus axis. This orientation reduces building exposure and associative heat gain from the intense sun, in addition to maximizing daylighting from the northern and southern exposures. Additional opportunities may capitalize on daylighting from the top with monitors and prismatic skylights, which can help achieve greater energy efficiency.

Solar input can activate and assist passive ventilation throughout the site or within buildings; note that extensive analysis is to be given to passive ventilation systems in buildings due to airborne dust particulate generated by prevailing winds. The landscape design should filter particulate, accept the prevailing northwest winds, and reject gusts that occur from the southwest.

Proper design of the building and site environments enables reduced exposure to the effects of the sun and wind, and creates positive experiences for those on campus. This master plan anticipates the need for supplemental sun and wind protection via vertical walkway screens (vegetation or architectural) and horizontal canopies.



## Campus Community and Connectivity

The University is a leader in the community, whether solidifying its current partnerships, creating new partnerships, or widening its open door to the Tri-Cities residents and region beyond. The TCRD development may present new collaborative opportunities that could expedite the University's growth in many aspects, including technology and innovation programs, as well as student and faculty recruitment.

Connectivity can be achieved with the use of a simple and clear pedestrian circulation, on-campus bike network with off-campus connections, increased transit frequency and river access. The strategic placement of programmatic elements ensures a campus that is both walkable and convenient. Opportunities are provided for spontaneous interaction and outdoor living, connecting the campus on a social level and lessening the perceived travel distances between program elements.

The landscape will provide the connective tissue that visually links the campus and ties it to the region and community. WSUTC's landscape character should create identity by using a palette of materials that references the flora and cultural land use of the region. Preservation of the current open and natural areas should be a common goal of all future development.

Landscape gestures such as water features, rows and groupings of trees will extend through the site, breaking down the visual scale of expansive spaces and visually referencing connections to amenities such as the Columbia River, Rattlesnake Mountain, Pasco's White Bluffs, and agricultural vistas beyond. Pedestrian and streetscape components such as wayfinding signage, lighting, trees and landscaping should maintain and reinforce a consistent identity.

The continuation of WSUTC's art program is to be supported and reinforced through the evolution of the campus planning. Creating connections with the Tri-Cities community and the District may play an important role in solidifying the University's image as a community resource. The integration of art throughout the campus should be a celebrated theme that highlights the unique traits of WSU and the Tri-Cities campus in particular.

Implementation of a hierachal, coherent and interconnected pedestrian network that supports and eases walkability within the campus is of utmost importance. A clear and intuitive system of pedestrian routes, service access, trail networks, local transit, and bicycle circulation will create cohesion and vitality on campus.

Connecting the campus to the outlying Research District via wayfinding and site organization opportunities by visual or interconnected water features, linking parks and open space, sports and recreation, trail networks, habitat, Columbia River, events and performance spaces are to be a priority.

Flexible space used as spontaneous interaction, recreation, study/ outdoor classrooms, events, celebrations, showcasing technology, dining and refuge convey campus livability.

The University vehicular circulation will remain relatively unchanged, with University Drive as the main conduit through campus and parking kept to the perimeter. Parking will evolve as required as the campus moves towards full build-out.

The vitality of a mature campus can be bolstered by well-integrated amenities for students, faculty and visitors. A mix of visible, centralized and active common spaces that offer dining, retail, and convenience opportunities will help reinforce the perception of livability and eliminate the need to leave campus for simple necessities.

A master planning goal is to create a learn-and-play culture with a future 'live' component as on-campus student housing becomes established, all in an effort to retain its student body for longer periods of time after class.



## Walkability

The holistic effort to reduce walking distances on campus will be an ongoing design effort for the University and its future planning/development teams. Walkable environments encourage a sense of community and offer a quality of life that is safe, healthy, and convenient.

Pedestrian safety will be accomplished via paving textures, curb extensions, and traffic tables which make pedestrians more visible, increase driver awareness and calm traffic.

Vertical elements such as street trees, vegetation and site walls will be utilized to visually break down the scale of the site into less daunting units that complement pedestrian scale. Climatic extremes will be mitigated with landscape design to increase human comfort levels and facilitate outdoor living opportunities.





## V Master Plan Design

### Campus Evolution

There are numerous influences that may impact or direct the master plan, so the evolution identified within is conveyed as three separate phases to simplify its organization and story. Those three phases have been associated with a theoretical student population as outlined below, rather than linking them to an arbitrary time line:

- Phase I: up to 2500 students
- Phase II: 2500 – 5000 students
- Phase III: 5000 students plus

### Geometry and Architectural Connections

Two essential features being carried over from the previous master plan are the primary east-west and secondary north-south axes. These axes will be enhanced by landscape, hardscape, art reserves, water features and amenities.

The campus currently suffers from some extensive walking distances between buildings, primarily between the East/West Buildings and the Consolidated Information Center (CIC). This vastness helped establish a directive for the design team to reduce these distances and make the campus more walkable by increasing the building density in all future development. This density will help establish a sense of connectedness on campus while creating knowledge area clusters. Covered walkways and landscaping screens will serve dual purposes by providing protection from sun and wind, and creating an architectural vocabulary of interconnectedness. The geometry of the buildings and site circulation strategies are to be enhanced by the landscape design, which will help mitigate the harsh seasonal temperatures and impacts due to sun and wind.

The following pages present the master plan in three phases.





## Phase I Development

### Axes and Alignments

The primary east-west axis will extend to the west and become the future connection to the TRCD. This pedestrian axis would be supplemented by the planting of trees as a legacy, protection and permanence to this developing axial quad.

An identifying threshold, or 'introductory space', along George Washington Way represents an opportunity to reinforce the University's presence to visitors or commuters. This tree lined boulevard allows views into the campus, until presented with an opening which is aligned with the campus east-west axis. This strategic threshold creates an uninterrupted connection over the open and natural shrub-steppe landscape down to the developing campus and river beyond.



A	Parking (existing)
B	Parking (new)
C	Academics
D	East Building
E	West Building
F	BSEL
G	Amphitheater
H	Facility Operations
I	Student Activity
J	Recreation Fields
K	Forensics Laboratory
L	Boat Launch
M	Central Plant
N	Facilities Center
O	Mixed-Use
P	Recruitment Center
Q	Facilities Center
R	Forensics Laboratory

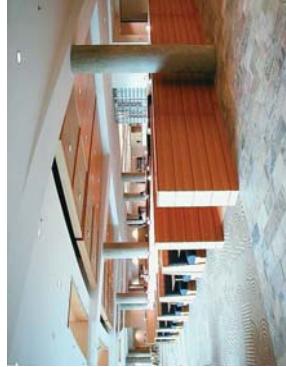
## **Phase I Development**

### **Student Activity Center (H)**

The Student Activity Center is envisioned as an active and inviting building in the heart of the campus. The Center acts as a strong symbol of WSUTC student life. Here shown as an addition to the existing CIC, its prominence as an open, highly transparent structure encourages views to the river and along the primary campus axis. This addition accomplishes one of the design teams objectives of reducing the distance between the original campus structures and reinforcing walkability and campus connectivity. The center is best described as an open, light, and visible 24-hour student life center.

This Center is an excellent opportunity to create a campus icon, the center conveys clarity as the campus heart while setting the stage for future development to the west. The center is to be designed to accommodate the University's immediate needs with built-in flexibility for future improvements and academic requirements as additional facilities are constructed.

### **Student Activity Center Program Options and Opportunities:**



**Academic classrooms** - This program would fill an immediate campus need until future academic buildings are implemented. The classrooms are intended to be flexible to accommodate multiple University programs and functions.

**Student Commons** - This multiple functioning space is envisioned as the student living room, and will house a lounge, game rooms, wired rooms, multi-media, quiet rooms, food court, vendors, multiple purpose spaces, tele-conferencing and video-conferencing spaces.

**Bookstore** - The bookstore is a central fixture on every campus. This location reinforces its prominence while offering a multitude of support programs; i.e. convenience items, copy center, etc.

**New colleges or academic programs** - The Student Activity Center could be used to help launch new programs within the University, such as the Computational Sciences Program, prior to the development of permanent facilities.

**Outdoor Program** - Close proximity to the river may provide excellent placement for the outdoor program, for student use in renting kayaks, canoes, recreational equipment, camping equipment, etc.

**Child Development Center** - This program is proposed to support the needs of part and full-time students with families and can also be developed in cooperation with early childhood development programs.

## Phase I Development



## **Phase I Development**

### **University Drive**

As a legacy to the current administration, this drive has the opportunity to be exceptionally landscaped and tree-lined as a lasting icon and first impression of the University. This legacy should be established as soon as possible so that generations to come will have the benefit of its beauty and maturity. One only has to look at the Sycamore trees that line the Battelle roadways and property perimeter to understand the positive impacts this could make on the campus and the surrounding community.

### **Bio-products, Sciences and Engineering Laboratory (E)**

Even in the infancy of the collaborative effort between WSU and PNNL, and its Stars' program enhanced by Dr. Birgitte Ahring's recent arrival, the BSEL laboratory is requesting improvements and additions to its facilities. With the pronounced influence within the scientific community, the Bio-products program and its faculty, and other like synergies will help shape future programs and the growth of the University.

### **Academic Growth (K)**

Academic building development will occur to the West along the primary axis of the BSEL and CIC Buildings, and help reinforce the secondary north-south axes. The academic buildings will support the current and near-future program requirements of the University, and are envisioned as tight groupings of buildings which help to reinforce walkability and campus community.

### **Recreation Fields (J)**

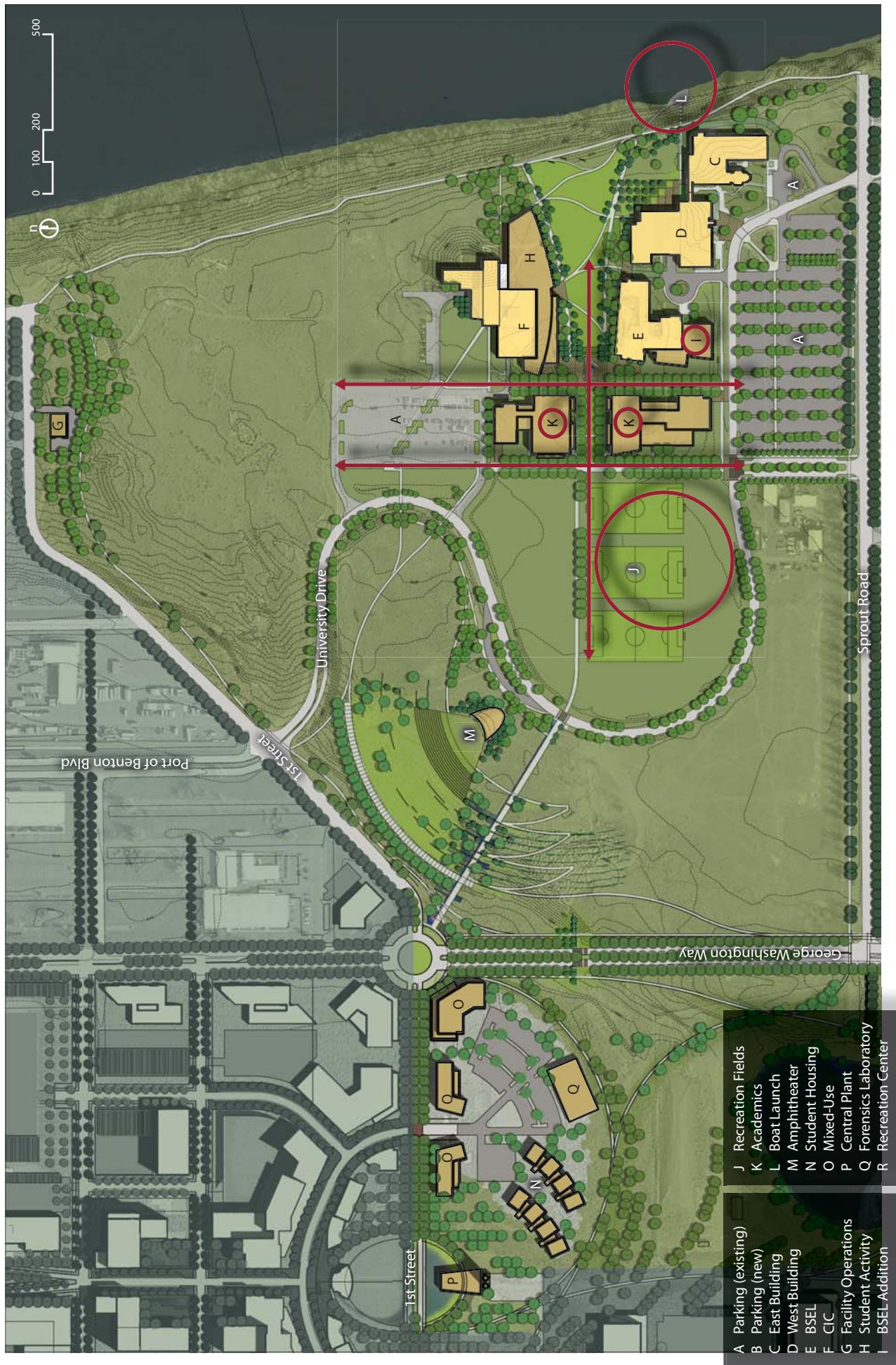
The University recreation fields are currently between the East and CIC buildings, but only cater to basketball, beach volleyball and open lawn activities. These existing recreation spaces would remain in place; however much needed play fields are to be located west of these Phase I buildings, and south of the primary axis. Since recreation fields promote community interaction, student life, and a visual attraction, this location is seen as central to the campus, while inviting the community onto the campus for youth or adult league games and tournaments. The fields' lushness is visually attractive, even when not active with sport, and will be a further visible reinforcement of campus life and student activity.

### **Boat Launch (L)**

The University's siting on the Columbia is phenomenal. In conjunction with the Student Activity Center's Outdoor Program, a non-motorized boat launch is an excellent opportunity in allowing students, faculty and visitors access to the river's rich amenities. The University owns the southern-most section of waterfront property as identified on the vicinity map, which is the most ideal location in order to simplify the approval process with the Corps of Engineers and the Joint Aquatic Resource Permits Application (JARPA).



## Phase I Development



## Phase I Development

### Amphitheater (M)

The Amphitheater has been identified as a potential public/private enterprise between WSUTC, Solaris and the Port of Benton. Solaris, a local developer, has envisioned the Amphitheater as an economic generator that could jointly be used as a venue for both University and community events. In addition, the Port of Benton owns the northwest section of this property, which must be assessed in the Amphitheater's feasibility.

Multiple use space: primarily a University amenity, the space is anticipated as an open park, small to mid-sized concert venue, showcase for District innovative technology, outdoor classroom, commencement ceremonies, and shared community space for University, regional, City theater or summer movies.

The structure above the stage is envisioned as protection and rigging, in addition to the possibility to showcase clean energy production via a PV array. The lower fixed seating areas are to have tension cables overhead that support taut interchangeable 'crimson and grey' fabric shading panels during events that will reinforce 'place.' The upper lawn seating bowl is intended as flexible general seating and a year-round park creating an active amenity at this prominent location.

With high visibility from a major regional thoroughfare, the amphitheater should become a regional icon. Therefore, its character must be consistent with the University identity and speak of the region's positive attributes. The design identifies a stepped promenade and cascading water feature that are primary wayfinding components that facilitate pedestrian flow between the campus and the future District center. The water feature provides evaporative cooling and sound masking opportunities. Interwoven into this western edge are intermittent trees which provide shade, screening and a subtle gesture of permanence. An accessible ramp works in concert with the promenade to navigate the substantial slope, giving access to various levels of Amphitheater seating.

A terraced garden area southwest of the Amphitheater provides seating and prominent views to the campus and Columbia River. It creates opportunities to incorporate cultural land use patterns into the design.

As the campus evolves west in Phase II of the master plan, the amphitheater could provide a strong connection to future University performing arts and auditorium functions.



## Phase I Development



## **Phase I Development**

### **Market Driven Public-Private Partnership Opportunities (O,P,Q,N)**

WSU owns property west of GWW and south of 1st Street which border the City of Richland Well Fields. The northern portion of this property provides opportunity for additional development in concert with TCRD mixed use zoning. This property would be conceived as market driven and long-term land lease partnerships with prospective developers.

The University has already developed concepts for the Washington State Police Forensics Laboratory, proposed for location on this property. Additional uses for this site include the following:

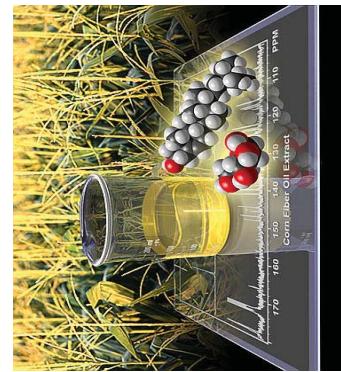
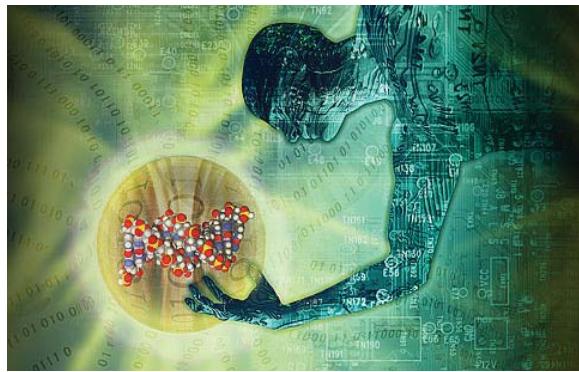
**Housing (N)** - This type of market-rate apartments could provide close to campus living opportunities for students and link University and District amenities. This type of phased approach provides solutions until on-campus student housing is required.

**Mixed-use (O)** - The property could also support student housing over retail or office over retail.

**Flexible office (O)** - These types of spaces could be utilized as market-rate office or as University 'swing-space' during construction and renovation projects. This program element provides a flexible mix of short term off-campus suites, or long-term lease options.

**District central power plant (P)** - During the TCRD Master Plan sustainability charrettes, a central power plant or bio-fuels demonstration project was identified as a possible program for this property. The central plant would be operated by a third party utility which could supply chilled and hot water to the District. These program elements were developed to support the high performance and sustainable vision of the TCRD Master Plan.

These entrepreneurial endeavors are considered to be a phased, long-term public/private enterprise approach, intended to locate housing or approved program elements in closer proximity to the District mixed-use center. With this proximity, the District center could provide very attractive amenities to the University student body, faculty and associative recruitment.



## Phase I Development



## **Phase II Development**

The development in this phase primarily extends the main campus academic buildings and quad space to the west. This development ultimately displaces the recreational fields, which will establish permanent residence adjacent to the river, north of the CLC. Depending on the University's phasing time-line, the fields could find the river location as a permanent home in Phase I to reduce capital expenditures, though this would have the disadvantage of not occupying central, highly visible spaces.

The property closest to the river belongs to the City of Richland and is zoned for Parks and Public Facilities, which will require an agreement allowing the University to develop the fields. This location will occupy prime land adjacent the University which would otherwise not have much development appeal for the city. The fields will start to create a new direction for the north campus which will be described in the Phase III Development section and will reinforce visual and physical connections to the Columbia.

## **Academic Growth (K)**

The first development may occur on the north side of the primary axis so that the recreation fields may be preserved in conjunction with the mature tree-lined pedestrian walkway. These buildings are envisioned as tight groupings of classroom, laboratory and faculty buildings, which will reinforce walkability and campus community.

The buildings are aligned in the east-west direction along the primary axis, capitalizing on the most efficient solar orientation. The building orientations are reinforced by overhangs and connective walkways, sheltering and guiding pedestrians to visible and clearly identifiable building entries.

The western most of these academic buildings is immediately adjacent to the amphitheater and is intended to be a performing arts, lecture hall or auditorium. It is not known at this time if such a program requirement is desired, but this adjacency represents an opportunity for exploration.



## Phase II Development



## **Phase II Development**

### **WSUTC Arrival - South**

As development of the academic buildings progresses, University Drive will start to endure significant increases in vehicular and transit traffic loads. These loads will create congestion if not properly mitigated with pedestrian safe drop-off, pick-up and transit stops. Wazzu Place is envisioned as an ideal location for the southern transition node with its proximity to Sprout Road, University Drive and directly south of what is developing into the heart of the academic campus. Wazzu Place would be transformed into a short boulevard which visually extends northward along the campus's north-south axis. The boulevard would consist of a tree-lined median with vehicular and transit pull-outs on the north and southbound lanes. The redesign of this roadway would implement direct and simple connections to University Drive and parking, which would be further defined as visually open and safe. Simple but unique textured hardscaped materials and finishes at crossings will remind drivers and pedestrians alike to exercise caution.



### **Increased Perimeter Parking (B)**

Increased parking will be established at the campus perimeter, and west of University Drive. This is conceived as a complementary reinforcement to the curvilinear drive design, with careful integration of visible entrances and buffered landscaping screening the parked automobiles. The eastern edge of University Drive will be populated with academic buildings with associative service access, which will also require earth-formed or landscaped screening while carefully maintaining important views into the campus.

## Phase II Development



## Phase III Development

### Campus Maturation

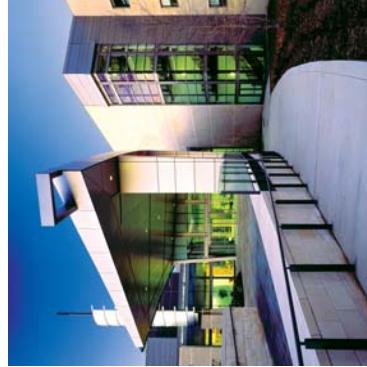
As this development phase nears reality, the campus will have undergone substantial evolution and maturation. As universities nimbly advance academically and accommodate the growing needs of students and faculty, their facilities must also evolve. The Student Activity Center of Phase I may require program modifications or improvements to adapt to the needs of the current time.

With a supporting student population and the adjacency of the recreation fields now located by the river, Student Recreation, Student Life, and Housing are envisioned as the primary program focus on the north side of the campus. As these programmatic elements pull campus activity and student life to the north end of the campus, the 1st Street entry will be reinforced as the main campus entrance.

### WSUTC Arrival - North

In support of the Phase II and III development, a new northern node is introduced to support the increase in vehicular and pedestrian activities. This threshold must make an emblematic statement in support of the main entrance that announces arrival through a visual and physical textured landscape and hardscape. All thresholds to the campus should be open and safe, descriptive and evocative, or simply WAZZU!

As vehicles approach this juncture, the roadway will transform with textured banding that convey rhythmic indications to calm vehicular speed. Traffic tables at pedestrian crossings with distinct pavement changes alert drivers and pedestrians alike to use caution. The arrival will clearly communicate to drivers that there is a visible and separate area where vehicles may pull out to drop-off/pick-up passengers and obtain wayfinding information; in addition, this will form the north campus transit stop, minimally disrupting traffic flow on University Drive. This elliptical raised entry court is open with well designed landscape separation islands that creates waiting areas, human scale and safety.



## Phase III Development - 5,000+ Students



## **Phase III Development**

### **Recreation and Student Life Center (R)**

Quality recreational facilities and University support for student life and activity centers are requirements on today's campuses and are a huge part of University recruitment efforts. Locating these facilities as the first development on the north edge of the campus will place it directly adjacent to the recreation fields with uninterrupted views to the river and surrounding geographical amenities. The center will draw from the intellectual, physical and social needs of students at the time of realization, and will offer strong recreational and engaging social amenity spaces, including casual food and drink opportunities.

The center will be a transparent gateway for students and the regional community; a transitional threshold to and from future student housing and academics. The prominence of the centers location as the northern bookend to this north-south campus axis should be developed as an iconic campus structure.

### **Student Housing (N)**

When on-campus housing is required, the northern limits of the campus is recommended as the most appropriate site. This isolated property is well-positioned with easy river access, adjacent to the recreation fields, and the Student Recreation and Life Center will serve as a gateway to the academic core. The concepts shown in this diagram are placeholders, accommodating student housing trends of the future.

### **Parking (B)**

Increases to parking are proposed to the north in support of the University's perimeter parking directive. Additional strip parking is located west of the northern entrance node, to provide convenient visitor parking and support the amphitheater and CIC. The north-south axes extend into this parking zone providing convenient visual and physical orientation for all.



## Phase III Development

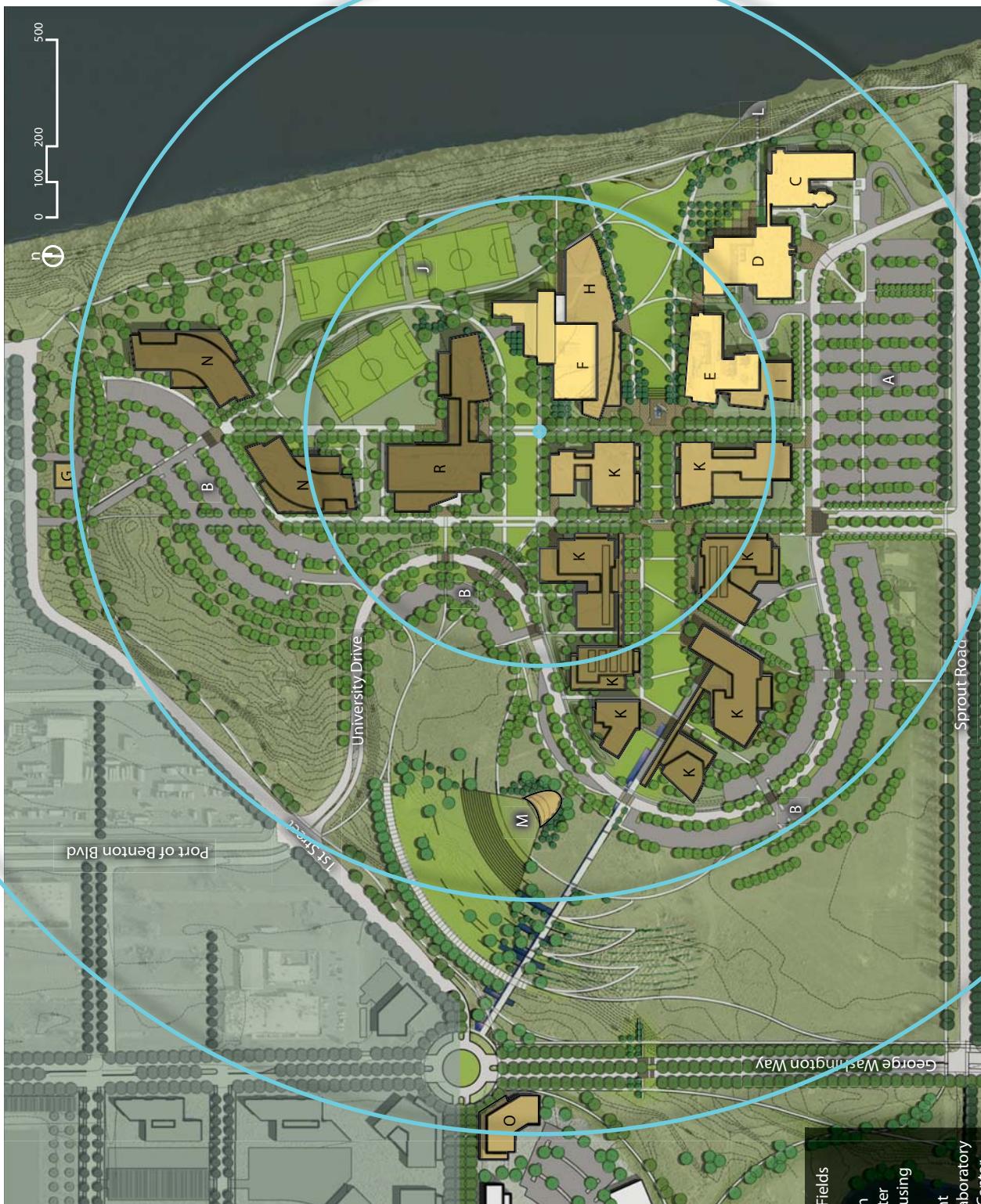




## Site Dimension Plan

This site plan diagram is graphically represented with a circular overlay to inform the reader of site distances. The distance between the circular rings is 1/8th of a mile, or 1 city block.

The intent of this diagram is to provide clarity to the proximity of the buildings, how they relate and their corresponding entrances.



A	Parking (existing)
B	Parking (new)
C	Academics
D	East Building
E	West Building
F	BoatLaunch
G	Amphitheater
H	Facility Operations
I	Student Housing
J	Mixed-Use
K	Central Plant
L	Forensics Laboratory
M	Recreation Center
N	Recreation Fields
O	BSEL Addition
P	CIC
Q	Facility Operations
R	Student Activity



## **VI Implementation Strategies**

### **Connections**

Community

Interconnectedness

Site Integrated Water and the Columbia  
Inner-Campus Connectedness

### **Circulation**

Vehicular Circulation

Pedestrian Circulation and Safety

### **Vocabulary**

Architectural

Landscape

Hardscape

Vertical Site Elements



## Connections

### Community

As University development evolves, so must the partnerships, collaborations and connections to the Tri-Cities and local technological and scientific communities. Within its community, the University is a responsible partner as an open, shared and lifetime resource.

Vehicular, bicycle and pedestrian access are very important connections that must be carefully planned, maintained and allowed to develop with the campus. As the community surrounding the campus develops, the University should embrace this passage via reinforcement of its own circulation systems as it embraces this development and reaches outward.

### Interconnectedness

The collaborative work and lifestyles within this region include residents, past, present and future students, the technological high school, and businesses and industry supporting technology, science and innovation. The campus must convey a sense of this collaboration in the form of both physical and intellectual connections by providing easy movement for students, researchers, and professionals, but also by providing spaces for collaboration on campus.

Internal and external spaces are designed to encourage spontaneous interaction, fostering a sense of community and encouraging connectivity and the cross-pollination of ideas among students and faculty. The master plan provides the framework for this interaction in the form of informal meeting areas, small and large, including outdoor rooms and spaces, casual food establishments, water feature nodes and recreational areas.



## **Site Integrated Water and the Columbia**

Water will provide aesthetic and functional benefits to the University and its occupants, especially when utilized in a responsible and sustainable manner. Levels of consumption must consider changes in future water rights agreements, increased costs, reduction in availability, and the cumulative effects on the environmental health of the watershed. The University may wish to lead joint water efficiency or reclaimed water demonstration projects in conjunction with the TCRD master plan.

Water will be utilized as a wayfinding element in various forms which may provide a visual or physical connection to the TCRD. In concert with the amphitheater and the stepped promenade, the cascading flow of water will direct pedestrians from the intersection of 1st and GWW through the campus. The design of this water system must render it equally attractive whether fully operational, dry or frozen.

The water system may serve to connect a series of small scale water features that act as visual cues, enhance art or architecture via reflectance, or periodic destinations to psychologically break down the expansive scale of the site. The passive and active evaporative cooling benefits of water will contribute to the human comfort levels of outdoor spaces, as well as the cooling psychology provided by the sight and sound of water in the heat of summer. Water also provides opportunities to metaphorically reference the Columbia River in the absence of direct views, consistent with the project goal of showcasing regional amenities.

The opportunities of spontaneous play or education through science and technology demonstrations offer special features that will enhance the University.



## Inner-Campus Connectedness

In the future development of the campus built-environment, distinct landscape cues and an architectural vocabulary that encourage connections between buildings, program areas, student activity zones and campus amenities will be critical.

Buildings can offer shelter through covered entries and through the incorporation of arcades, loggia, and other covered walkways, the campus will begin to establish a vocabulary that is uniquely tailored to WSUTC. Clearly visible and easily understood building entries have the benefit of mitigating perceived distance.

Landscape cues to campus connectivity can come in the form of patterned hardscape, clearly organized landscape elements such as banks of trees or windrows, and of course water features and art installations.





**Campus Vehicular Circulation**  
This diagram provides detail to the circulation patterns for vehicular traffic, including pick-up, drop-off, transit, parking, service and emergency access.

This tried and true approach certainly complicates building service issues and requires increased attention to emergency vehicle access, but it also marks an important shift from a commuter-based campus to a thriving living/learning environment.

## Parking Opportunities

At final build-out, parking will be entirely at the perimeter of the central campus and developed in conjunction with the phases, or as dictated by program requirements. The new parking in support of Phase I and II will flow with the circuitous University Drive and will ensure well-distributed parking opportunities for faculty and students.

The Amphitheater presents some unique parking challenges for the campus and region. In the early phases, the intent is to utilize existing central University parking, the new University Drive parking lots, south Port of Benton parking, and TCRD or Crime Lab parking as it becomes available. Phase III will present an increase of available on-campus and TCRD opportunities. A shuttle bus system is envisioned to support the Amphitheater patrons and reduce vehicular congestion and carbon. These issues will have to be studied in-depth in conjunction with the developer's feasibility study.

### Building Area and Parking Stall Quantities:

	Gross Building sf:	Parking stalls:
Existing	256,000	950
Phase I	250 - 350,000	0
Phase II	250 - 350,000	278 (182 - reserved for future expansion)
Phase III	100 - 150,000	329 (326 CIC stalls removed / 137 - reserved for future expansion)

\*Building areas do not include public/private or student housing.

Existing (624) New (607) Future (319) Demo (326)



## Pedestrian Circulation

This diagram provides detail to pedestrian circulation patterns on and off-campus.

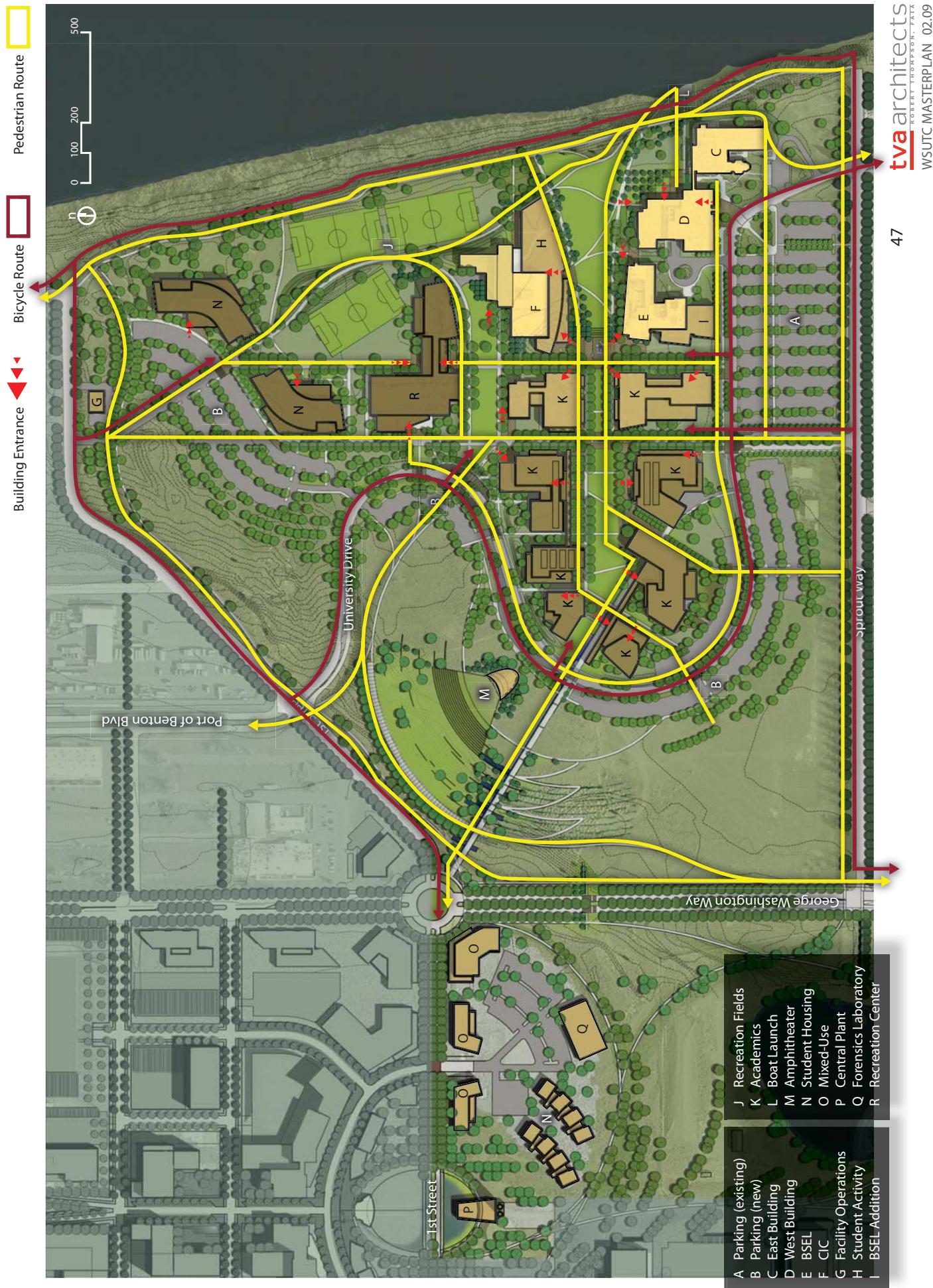
## Pedestrian Safety

The safety of pedestrians on campus is of utmost importance. Pedestrian crossings are to be developed with clear line-of-sight, refuge zones, and elevated with 'traffic tables' which are further articulated with textured pavement changes. This master plan has identified safe passage at all crossings along University Drive and Wazzu Place. It is recommended that the University provide additional analysis on improving the following intersections or crossings:

- GWW at Sprout Road, Roundabout at 1st and GWW.
- 1st Street crossing at University Drive.
- Sprout Road crossings between parking and campus.

As the campus evolves over time, traffic calming improvements to University Drive and other key vehicular circulation zones on campus will be required. Recommendations include raised traffic tables at critical pedestrian crossings, which will include textured and pavement pattern changes to help inform drivers to reduce speed and exercise caution.





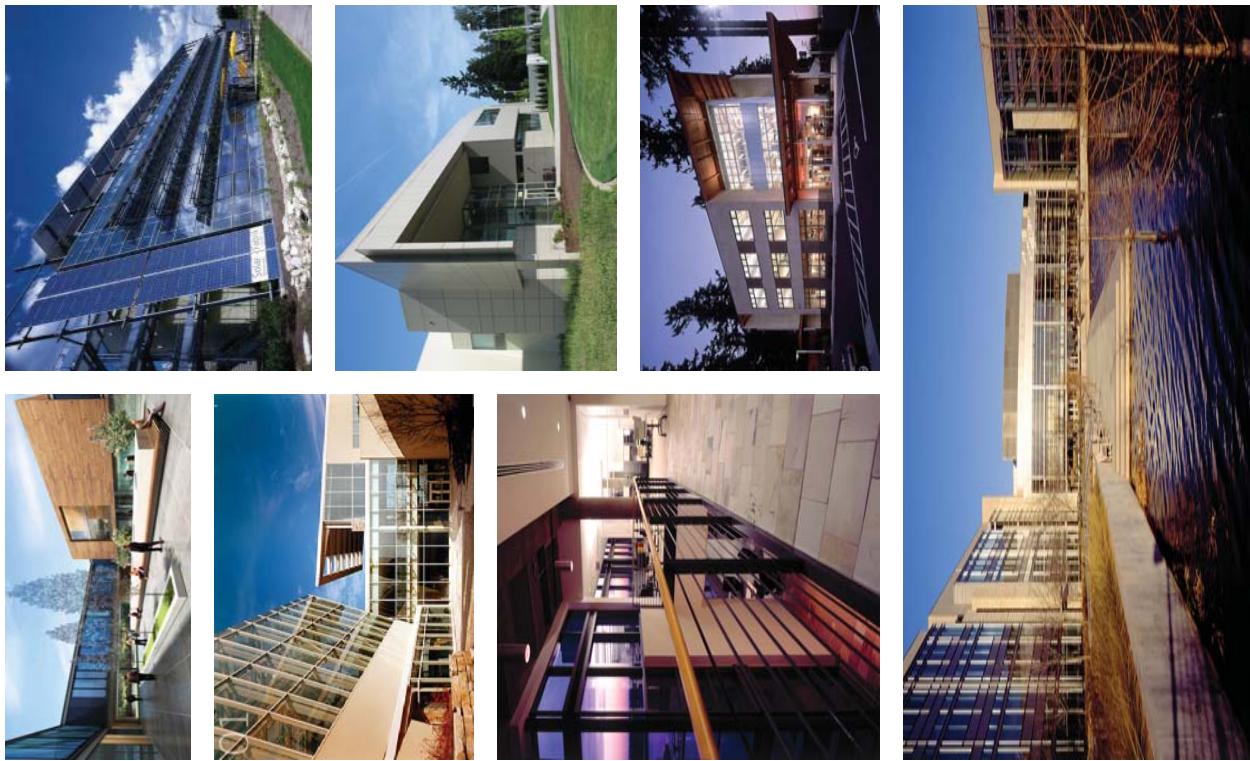


## Architecture

The campus's evolution started in 1969 when the East Building was constructed; the West and CIC Buildings followed in the 1990's, and most recently, the BSEL Building in 2008. These buildings exhibit a somewhat disparate architectural vocabulary, so this master plan encourages the University to establish architectural guidelines and design review to help unify the campus. This architectural unification starts with the siting of its buildings in creating a walkable campus that is compact yet open and inviting. The buildings should exhibit a high degree of transparency, particularly in shared or public spaces, fostering a merging of interior and exterior. Exterior building materials must be durable, of local origin and aesthetically compelling. Campus buildings will have a visual and physical connection, with clearly visible entrances. Connections may serve dual functionality by offering refuge from intense climatic conditions, with covered walkways or vertical screens for sun and wind protection.

The design team recommends establishing a distinct and cohesive vocabulary between the landscape and architecture to create a sense of place unique to WSUTC. The University is fortunate to not be constricted with any historical or thematic architecture and thus has the opportunity to find an architecture that is regionally distinct, environmentally responsible, and aesthetically pleasing while representing dynamic student life and the incredible innovation and technology, that is so significant to the institution and the region.

The narrative and images on the following pages offer possibilities for the University to explore.



## Sustainability

Sustainable design is to be developed strategically to achieve high-performance, low energy, and cost-effectiveness; by a careful ground-up consideration of how the program, siting, design, materials, systems, and products of a building connect, interact, and affect one another. The campus development is to be advanced by integrated design that considers building types, budgets, climate, and locale. It is paramount that the development, design and construction teams work together to create sustainable spaces that acknowledge the critical role of architecture in our shared global community, economy, and eco-system.

Washington State University has reinforced setting high sustainable standards that maintain a minimum LEED Silver Certification threshold for all buildings. Sustainable practice is an important recruiting tool that the University should adopt in developing holistic built environments that consider both site and buildings.

## Sustainable Vernacular

The ideal building orientation is east-west, which allows for the integration of architectural vertical sun shades on the east and west facades, and southern horizontal light shelves and canopies. Where a north-south building orientation is unavoidable, top daylighting via visible sawtooth light monitors or prismatic skylights will help direct the envelope design. These elements could start to establish a campus vernacular.

Beauty, inspiration and human scale! A sustainable campus should visibly and aesthetically support its core foundation based on innovation and sustainability, yet be extremely well-designed and constructed.



## Palette

The predominate exterior skin materials are to express permanence in a contemporary context. Local sourced materials are expected to play an important role in the campus development, with exposed concrete, metal panel, and other regionally appropriate materials such as stone. Glazing will provide transparency, yet be effective and efficiently tuned to meet the integrated design approach. Roofing materials are to be a single-ply membrane that provides cool roofing designation meeting a high-albedo rating or eco-roof technology may be implemented as a showcase.

## Integrated Design

Vertical and horizontal sun shades can act as light shelves, bringing daylight deeper into the building, and PV panels generating clean energy, can all become a part of the campus architectural vocabulary.

Optimum daylighting can provide access to natural light and views, more efficient lighting and mechanical systems, and increase occupant productivity.

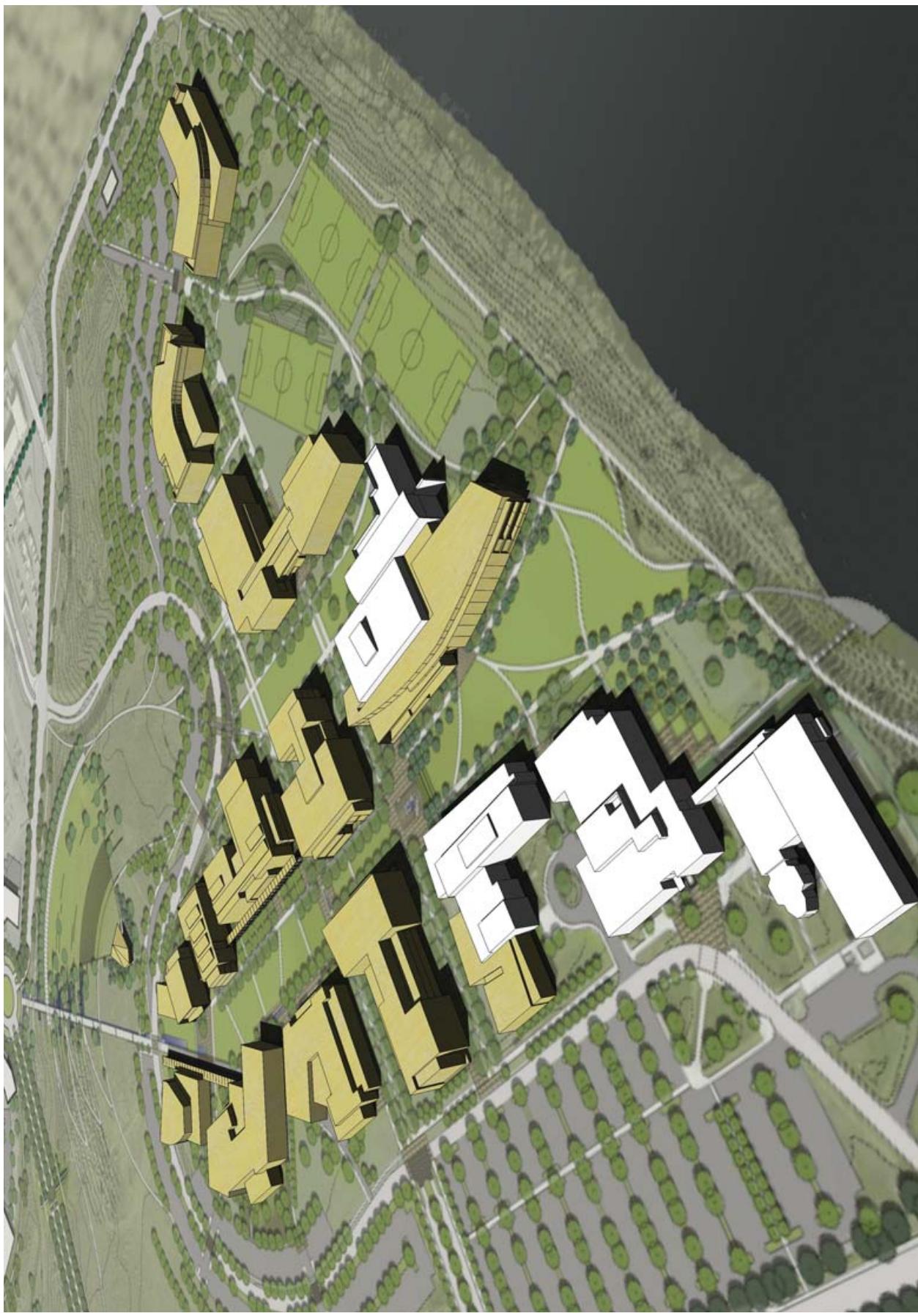
Dual skin systems act as "solar collectors" while maintaining connections to views and the exterior environment.

Increase the R-value (measure of thermal resistance) effectiveness and reduce the U-value (rate of heat transfer through a building element) of all existing and new building assemblies for increased efficiencies and energy load reduction.





Aerial Perspective



53

**Vignette - Connectivity**



**Vignette - Transparency and Openness**



55



56



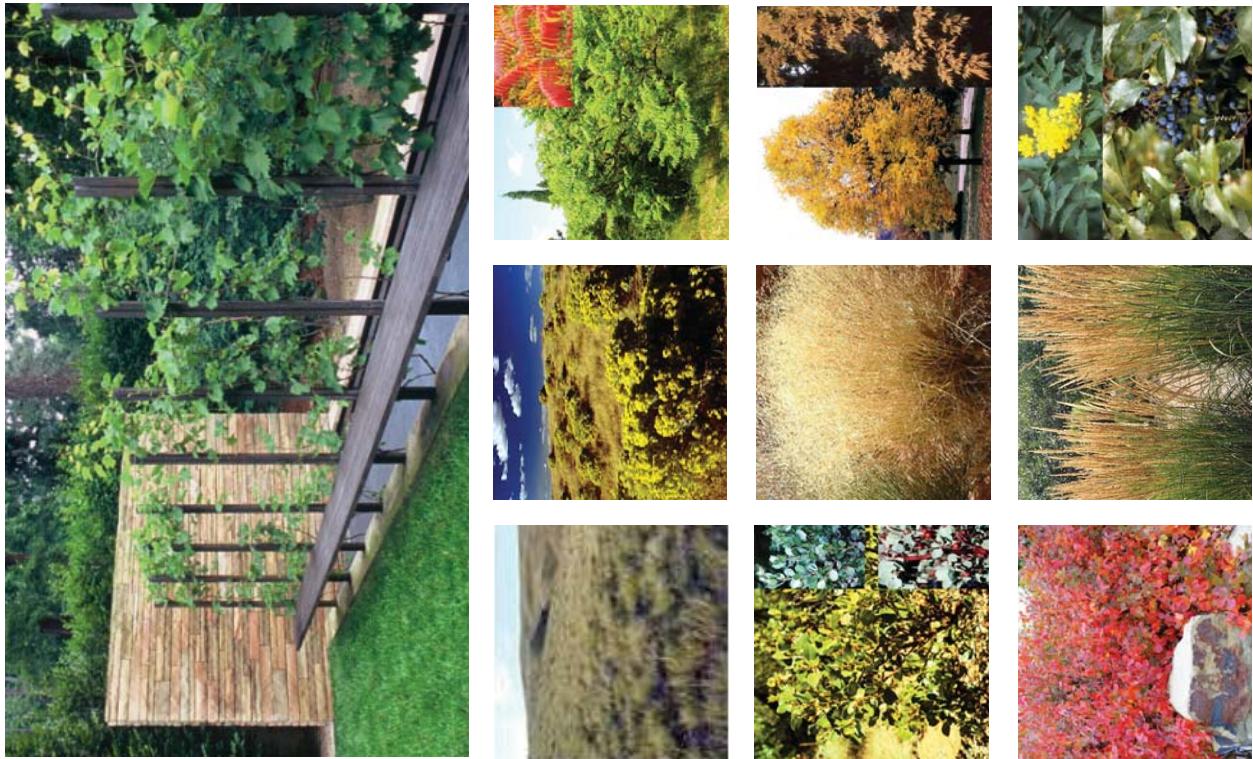
## Landscape Character

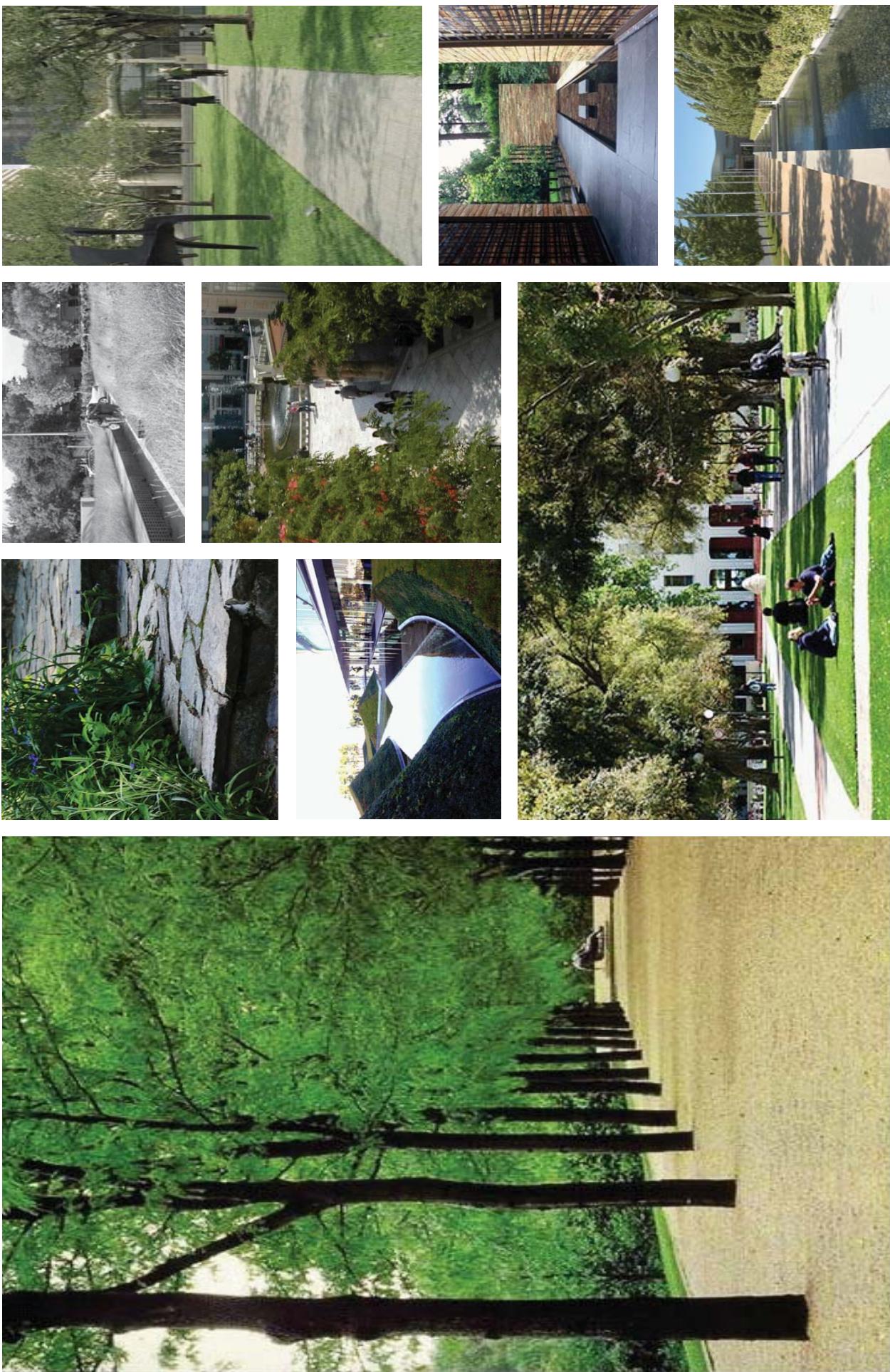
Drawing from the inspiration and beauty of the Columbia Basin Eco-Region, the identity and character of the landscape will always have place. The design aesthetic created by the palette of planting and hardscape materials will celebrate and interpret the qualities of the local flora, cultural land use, regional materials, landforms, and geology. This aesthetic will influence all new construction and retrofit projects.

The gradient of landscape intensities will increase as one proceeds towards the campus. As the landscape gradient increases, so will the plant diversity and design. The core landscape will incorporate plants that evoke the character of the region and adapt to the climate. They will be tolerant of drought, resistant to fire, and functionally mitigate climatic extremes. Perimeter areas adjacent to open space and recreational corridors will visually merge with the natural shrub-steppe habitat and generally require the least maintenance and irrigation. In general, the landscape planting will be supplemented with sustainable water conservative methods of irrigation, such as drip systems that utilize recycled greywater, or waterless xeriscape methodology. Within this open environment, development must be respectful of the climate and provide refuge opportunities to reinforce walkability.

Cultural patterns of land use such as orchards and viticulture can be interpreted in the new design vocabulary and reinforce the connection to the region. The same applies to natural landforms such as dunes and striations in the landscape caused by prevailing winds and geologic processes. Water features will reference the Columbia River in creative ways, serving as a reminder of its presence in the absence of direct views. The sight, sound, and cooling psychology of water in the landscape will mitigate the climatic extremes, creating outdoor spaces that are invigorating.

Capitalizing on early site improvements, planting large-caliper drought tolerant trees at the inception of the project, to complement Battelle's Sycamore trees, along all major University roads will enhance the campus micro-climate and livability for generations.





## Hardscape

The design aesthetic created by the palette of hardscape materials will celebrate and interpret the qualities of the local and regional materials, landforms and geology. This aesthetic will influence all new construction and retrofit projects, creating a strong consistent connection which will be perceived by all. In addition, it will differentiate this campus from other institutions of its type.

The images herein identify some of the possibilities of integrating soft and hardscape materials. These materials, in conjunction with well designed landscaping, create unique opportunities that create a dynamic interplay of select materials.

## Vertical Site Elements

Vertical elements in a predominantly flat site will create a complementary scale for those enjoying the campus. Verticality may be achieved with the water features, landscaping, site walls, benches, screen walls, architectural elements, earthen forms and art.



## VII Summary

WSU Tri-Cities is a campus ripe with opportunity and well-suited for growth. The campus's natural amenities and ample room for expansion, combined with opportunities to interface with regional technology research, and design entities make WSUTC uniquely qualified to fill a specific niche in the Tri-Cities region. The addition of four-year degree programs in 2007 and the completion of the BSEL facility in 2008 have given the campus substantial momentum towards future growth, while exhibiting a unique ability to adapt to the needs of both the local community and regional technological innovators. The incorporation and consideration of the university within the 2008 TCRD master plan, as well as allowing that master plan to influence this document, demonstrates a spirit on collaboration that will be crucial to the growth of the Tri-Cities campus.

During the course of this master planning exercise, it has been made clear that WSUTC seeks to reach out to the Tri-Cities community and beyond, attracting a growing population to the campus through prioritized opportunities such as the proposed public/private amphitheater or the more modest goal of incorporating play fields in highly visible areas, available to students and the local community alike. This need for a sense of community calls for an increase in recreational programming, such as the incorporation of outdoor activities that emphasize connection to the Columbia River, an increase in connections to vibrant living areas, as in the proposed TCRD district center, and for tangible displays of the priority placed on student life, as embodied in the Student Activity Center.

This master plan cannot yet identify the specific programs that will fill each individual structure, particularly in the academic clusters. WSUTC itself cannot yet foresee which programs will rise to prominence at WSUTC in the next ten to twenty years. Rather, the intent is to build a framework of good architecture and planning principles, to be used along with broad-reaching sustainability guidelines and a strong, consistent architectural vocabulary to develop a campus that can flex with the demands of future student and staff populations while maintaining a cohesive and unique sense of place.



## Full Build-Out



A	Parking (existing)
B	Parking (new)
C	East Building
D	West Building
E	BSEL
F	CIC
G	Facility Operations
H	Student Activity
I	BSEL Addition
J	Recreation Fields
K	Academics
L	Boat Launch
M	Amphitheater
N	Student Housing
O	Mixed-Use
P	Central Plant
Q	Forensics Laboratory
R	Recreation Center