



Audit & Business Committee
September 18, 2018
Roaden University Center, Room 282

AGENDA

- I. Call to Order and Roll Call
- II. Approval of Minutes
- III. Discussion of Pending Campus Master Plan Update
- IV. Five-Year Strategic Financial Plan Update
- V. Disclosed Capital Projects
- VI. Adjournment of Open Session and Call to Order of Executive Closed Session to Discuss Audits, Investigations, Litigation, and Matters Deemed Not Subject to Public Inspection Pursuant to T.C.A. § 4-35-108(b)(1)-(3)
- VII. Adjournment



Board of Trustees Meeting Audit & Business Committee

June 26, 2018

Bell Hall 260

MINUTES

AGENDA ITEM 1—CALL TO ORDER

The Tennessee Tech Board of Trustees Audit & Business Committee met on June 26, 2018, in Bell Hall 260. Chair Tom Jones called the meeting to order at 9:40 a.m.

Chair Jones asked Ms. Kae Carpenter, Secretary, to call the roll. The following members were present:

- Purna Saggurti
- Rhedona Rose
- Tom Jones

Other board members and members of the public were also in attendance. Trustee Teresa Vanhooser was not in attendance.

AGENDA ITEM 2—Approval of Minutes of March 22, 2018

Chair Jones asked for approval of the minutes of the March 22, 2018 Audit & Business Committee meeting. Chair Jones asked if there were questions or comments regarding the minutes. There being none, Trustee Saggurti moved to recommend approval of the March 22, 2018 Audit & Business Committee minutes. Trustee Rose seconded the motion. The motion carried unanimously.

AGENDA ITEM 3—Tenure and Promotion Recommendations

Chair Jones asked Dr. Mark Stephens to present the tenure and promotion recommendations. Dr. Stephens advised for the 2018-19 Academic Year eighteen faculty members received recommendations for tenure. One faculty administrator, Dr. Lori Bruce, Provost and Vice President for Academic Affairs, joined TTU this past year and has been recommended for tenure. One faculty member is being recommended for tenure upon appointment, Dr. J.W. Bruce, Associate Professor for Electrical and Computer Engineering. Dr. Stephens advised that during the 2018-19 Academic Year thirty one faculty members received affirmative recommendations for promotion.

Trustee Saggurti inquired if there was a limit on each department for the number of faculty that could have tenure. Dr. Stephens said there was no strict limit on each department. However, that was part of the discussion prior to commencing a search for an open faculty position. When replacing a faculty member that has left the university, retired or if creating a new position, it is considered whether the search should be for a tenure track, assistant professor or lecturer. Based on the department needs, they may begin with a one-year appointment.

Trustee Fleming wanted clarification on the 74% tenure figure. Dr. Stephens explained that it was composed of full-time tenured faculty and tenure track, including the newly tenured, it does not include lecturer or one-year contracts. It was not a percentage of total faculty.

Chair Jones asked for motion to place the tenure and promotion recommendations on the Board's consent agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. The motion carried unanimously.

AGENDA ITEM 4—Policy 205 (Faculty Tenure)

Dr. Lori Bruce stated this policy describes the process by which a faculty member acquires tenure and the process by which a faculty member's tenure is relinquished, revoked, or otherwise removed. Dr. Bruce advised two versions of the policy were provided in Diligent: (1) the policy as approved thru Academic Council, Administrative Council and University Assembly (2) version with tracked changes for consistency and clarity edits. The changes were vetted with the faculty committee that led the original effort of revising the policy.

Chair Jones asked for a motion to accept the policy to the regular agenda then proceeded with discussion. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion.

Trustee Stites asked if there was anything in the policy that prohibited faculty raises to be linked to performance. Dr. Bruce advised there was nothing in this policy to prohibit that. Trustee Stites asked if any part of the policy encouraged the performance expectations the Board desired. Dr. Bruce advised the policy discussed in detail examples of excellence in teaching, scholarship and service.

Trustee Harper stated she agreed the policy needed to be approved because it was imperative we have a tenure policy in place. She stated since she was not an Audit & Business Committee member, she would wait until the Board meeting to make the recommendation for revisions to be done that addresses how tenure is obtained, maintained and what steps to take if someone does not maintain expectations.

Chair Jones stated the policy included a process for termination with adequate cause and that process was very elaborate and cumbersome and wanted a revision to make that more efficient. He stated he would approve the policy as is due to the fact we were lacking a tenure policy but agreed with Trustee Harper that some modifications are to be made.

Chair Jones clarified the motion was to accept this tenure policy and move it to the Board's regular agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. The motion carried unanimously.

AGENDA ITEM 5—Institutional Compensation Plan

Dr. Leslie Crickenberger advised the university was in year three of the new evaluation system for non-faculty employees based on performance. Performance was tied directly to the employee's specific job duties and allowed the supervisor to determine specific goals. Non-faculty positions were reviewed each year by the employee and supervisors to make sure they aligned with duties the employee performed. There was a 2.5% salary increase distribution. Any non-faculty employee hired before May 1st was eligible if they were not on an active performance improvement plan and if they received a rating of meets expectations or higher on their performance evaluation. Employees hired prior to January 1, 2018 were eligible for a maximum of 6%. Employees hired after January 1 were eligible for a maximum of 2.5%. Supervisors were given spreadsheets that included the current year evaluation rating to enter raise information. Human Resources reviewed the completed spread sheet to make sure raises were correlated to actual performance.

Dr. Crickenberger stated that the category of faculty (tenure and non-tenure) were evaluated annually by the department chair and the college dean on the following items: teaching, advisement, research, scholarship, service outreach, administration and other duties. Faculty had to receive an acceptable or higher in the most recent evaluation to receive the raise. Full time faculty reappointed as one-year instructors were eligible for increases up to 1%. Full time tenure, tenure track and lecturers were eligible up to 6%. The average raise was 1.86% which did not include promotions or one-time bonus. The raise was correlated to a three-year average evaluation performance score.

Chair Jones stated that evaluations could be subjective. He expressed concern that the scale between departments could differ greatly. Dr. Bruce stated the raises were at the discretion of the department chair. The raise had to be correlated to that three-year average but it didn't have to be perfectly correlated. Department Chairs could take into account context. Chair Jones agreed that was a good approach. President Oldham added that even though each Department Chair may grade differently, the salary pool dollars were pro-rated to each department. The ranking within each department can be viewed independently from another department.

Dr. Crickenberger proceeded to advise the faculty performance bonus was a permanent funding pool of about \$150,000. To be eligible for this bonus, the score of their current evaluation had to be in the 70th percentile for the university. 116 faculty members (30% of faculty) received bonuses that ranged from \$924 to \$3,273.

Trustee Stites stated he wanted a report back to the Board of the effectiveness of this evaluation process. Chair Jones gave direction directly to President Oldham for this request. Chair Jones stated he will leave the decision up to Dr. Oldham on how he wants to report back the data as the desire of the Board was understood.

Chair Jones called for a motion to accept the institutional plan for the Board's regular agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. Ms. Carpenter took a roll call vote. The motion carried unanimously.

AGENDA ITEM 6—Campus Master Plan Amendment

Dr. Oldham explained the severance from Tennessee Board of Regents for Capital Project Management would be effective July 1, 2018. This amendment to include the engineering building needs to be proposed to the state next month. Dr. Oldham introduced Garry Askew, architect.

Mr. Askew presented the PowerPoint that was provided in Diligent. He began with stating the vision of the master plan implementation began with the Tech Village demolition, parking moved to the perimeter of campus and making more of a green inner campus. Current projects include the science building, fitness center and addition to Roaden University Center.

Mr. Askew stated the amendment would add the Engineering building in the area across from Prescott Hall in Sherlock Park. Once Board approved, it would go to the Tennessee Higher Education Commission and State Building Commission for approval. The amendment includes a 200 classroom space, atrium and project area for an Engineering building in the current space of east Sherlock Park. Dr. Oldham added that the request was high on the list because it is a cornerstone college of the campus and strategically important to have curb appeal.

Trustee Stites asked if the master plan specified that all buildings must be Georgian Architecture. Mr. Askew advised that it did not. President Oldham added every conversation regarding any new buildings included making sure the architecture was consistent with the remainder of campus.

Mr. Askew stated future plans possibly included Innovation Housing, the vision included housing on upper levels with the lower levels consisting of maker spaces and lab spaces. President Oldham stated innovative housing could be the first public- private partnership project proposed from this campus. President Oldham added he was not asking for a vote on the housing but just wanted feedback from the Trustees if they agreed with the route he was pursuing with this option. Trustee Harper stated she was interested in the concept.

Chair Jones asked for a motion to accept the amendment to the Master Plan and moved to the board's regular agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. The motion carried unanimously.

Trustee Stites wanted it clarified if the architectural standard was to be included or not. President Oldham stated he would take the suggestion and develop an architectural standard for the campus in the near future when the master plan is updated.

AGENDA ITEM 7—Capital Budget

Dr. Stinson advised that THEC asked the LGI schools to submit one priority capital outlay project and the engineering building was our selection. Two capital maintenance projects were proposed for approval. One being roof replacements for several buildings including the Craft Center. The other priority was several buildings receiving upgrades which includes Bruner Hall.

Chair Jones asked for a motion to approve the 2018-19 Disclosed Project and Capital Budget request to the regular board agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. Ms. Carpenter took a roll call phone. The motion carried unanimously.

AGENDA ITEM 8—2017-18 Estimated and 2018-19 Proposed Budgets

Dr. Stinson advised the estimated and proposed budget balanced. Reserves last year were about \$80 million with a portion of the funds already obligated to projects. This year reserves were about \$63 million as projects have been moved forward such as the fitness center, Roaden University Center and football digital board. The university received \$3,772,000 state appropriations which included \$700,000 for Carnegie classification. Tuition revenue projections for the upcoming year will be down about \$2,361,000 based on reduction in enrollment. Maintenance fee increase of 2.66% will be proposed that would produce \$1,900,000 of revenue which would leave an unfunded request of roughly \$2,800,000. Dr. Stinson proposed to continue to provide the 2% fund balance from one-time resources. In regard to the \$800,000 unfunded request, they would be reviewed to see if funds can be reallocated or if the items have to happen right now.

The university received reoccurring \$3 million state appropriations for the College of Engineering. It was not included in any budget figures presented. Trustee Saggurti asked if the \$3 million was for buildings. Dr. Oldham replied the funds should be invested very strategically but at this time there were no restrictions. Dr. Bruce has been looking into ways to best use those funds.

Chair Jones asked for motion to move the 2017-18 Estimated and 2018-19 Proposed Budgets to the board regular agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. Ms. Carpenter took a roll call vote. The motion carried unanimously.

AGENDA ITEM 9—Maintenance and Mandatory Fees

Dr. Stinson stated that THEC had the authority to set binding rates on maintenance and mandatory fee increases. THEC set the 2018-19 binding rate at 0-3% which equated to a maximum maintenance increase of \$230 and \$266 maximum increase for maintenance and mandatory fees for Tennessee Tech. Dr. Stinson recommended a 2.66% tuition increase which equaled an \$8 increase per credit hour. Proposed mandatory fees were a \$10 increase for SGA SOLO fee. These fees would be used to fund concerts, to attract better performers and to fund a quarter of a position to help with clerical duties associated with concerts. The second proposed fee was a student mental health and wellness fee in the amount of \$3.00. This request stemmed from the Counseling Center grant funding ending.

Dr. Stinson advised some of the fees were not subject to the THEC binding rate such as graduate maintenance fees, out-of-state tuition and non-mandatory fees. Dr. Stinson proposed a 2.9% graduate maintenance fee increase, \$3 over base increase and \$140 increase for base 10 hours. No increase in out-of-state tuition was being requested.

Chair Jones asked if the budget that was just approved assumed the 2.66% tuition increase. Dr. Stinson stated it did include some of the tuition increase but did not have the full 2.66% built into it and also stated it was a proposed budget and approved by this board budget will be adjusted as needed dependent upon tuition rate.

Chair Jones asked for a motion on maintenance and mandatory fees be placed on the board's regular agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. Ms. Carpenter took a roll call vote. The motion carried unanimously.

AGENDA ITEM 10—Master of Science in Nursing Non-Mandatory Fees

Dr. Stinson explained the goal was to replace the TN e-Campus Master's in Nursing with TTU's own specific degree. Currently there was a \$122 online fee which 60% goes to the Board of Regents. TTU specific courses would be \$150 per credit hour fee and the university would keep 100%. The second fee requested was a \$30 increase for the nursing graduate specialized academic course fee, the current fee is \$30. The School of Nursing proposed a \$30 increase to bring the total fee to \$60. The additional resources would be used to develop the Masters in nursing program.

Chair Jones asked for a motion to place this item on the board's regular agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. Ms. Carpenter took a roll call vote. The motion carried unanimously.

AGENDA ITEM 11—Presidents Emeriti Contracts

Dr. Stinson presented two emeriti contracts for Dr. Angelo Volpe and Dr. Robert Bell. These contracts were an obligation that was made to these two previous presidents when they were hired as a benefit if they stayed 10 years with the university.

Chair Jones asked for a motion to place the emeriti contracts on the board's regular agenda. Trustee Saggurti moved to recommend. Trustee Rose seconded the motion. The motion carried unanimously.

AGENDA ITEM 12—Internal Audit Quality Assurance Review

Ms. Deanna Metts advised state laws required that internal audit departments follow the institute of internal auditors' standard. One of the standards required an external review every five years which was completed in May. The self-assessment report stated the university generally complied with the standards. The report was provided in Diligent. Chair Jones advised this was an informational only item.

AGENDA ITEM 13—Adjournment of Open Session & Call to Order of Executive Closed Session

There being no further business, the meeting adjourned at 12:15 p.m. After a short break, the Executive Closed Session began at 12:25 p.m. All Tennessee Tech Board Trustees were present with the exception of Trustee Teresa Vanhooser.

The following were also present for the meeting:

- President Philip Oldham
- Kae Carpenter, Board Secretary
- Deanna Metts, Director of Internal Audit
- Dr. Claire Stinson, Vice President for Planning and Finance
- Janice Scarlett, Internal Audit Administrative Associate
- Lee Wray, Chief of Staff
- Yvette Clark, IT Executive Director
- Debra Zsigalov, Chief Information Security Officer
- Paul Gogonelis, Assistant Director of Internal Audit

AGENDA ITEM 14—Adjournment

There being no further business, the Executive Closed Session adjourned at 1:05 p.m.

Approved,

Audit & Business Committee Chair



Agenda Item Summary

Date: September 18, 2018

Division: Planning and Finance

Agenda Item: Discussion of Pending Campus Master Plan Update

Review

Action

No action required

PRESENTERS: Dr. Claire Stinson, Vice President for Planning and Finance & Garry Askew

PURPOSE & KEY POINTS: Discussion of Pending Campus Master Plan Update.

2014 MASTER PLAN UPDATE REFINEMENT

31 OCTOBER 2013

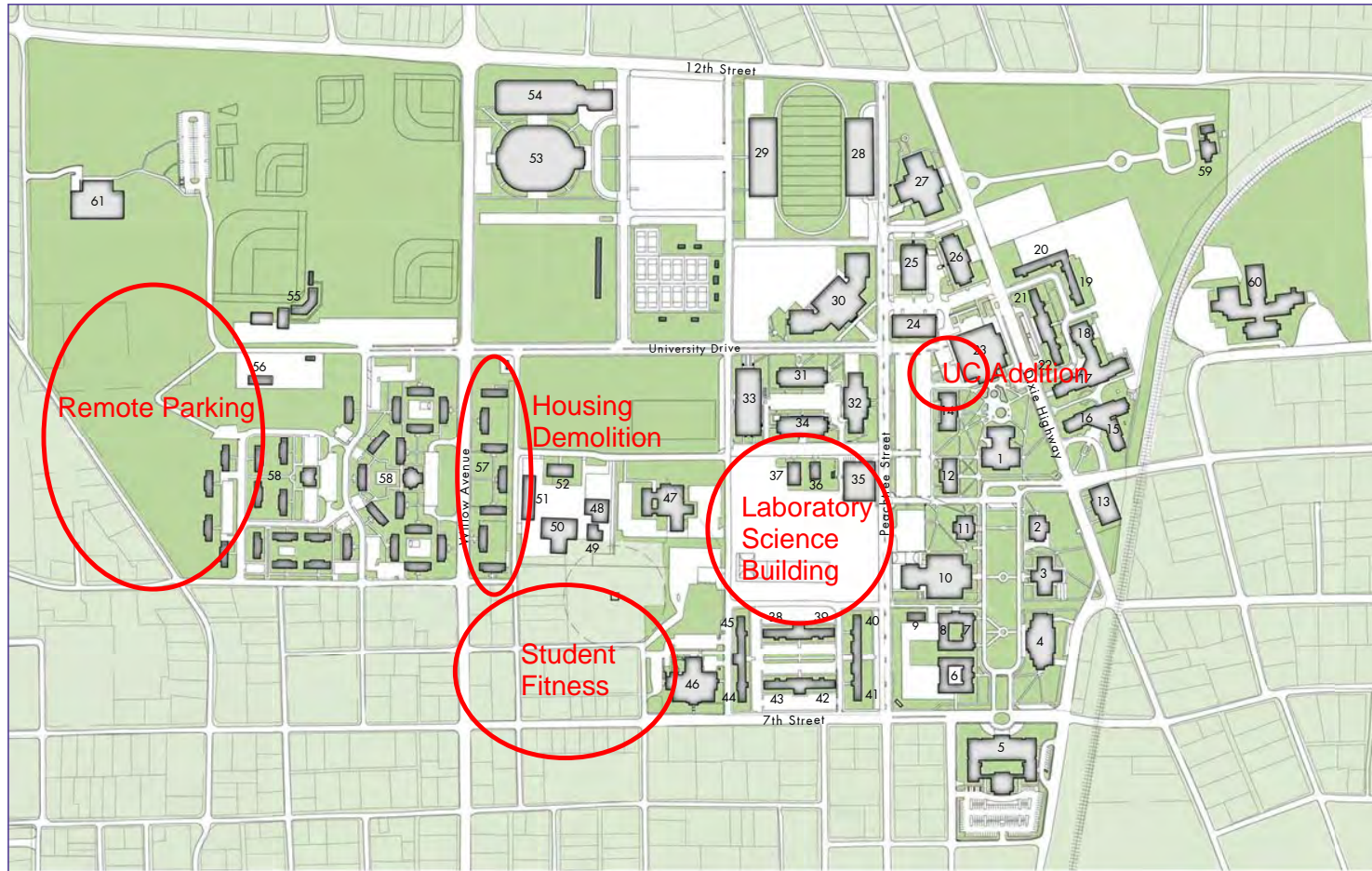


Tennessee Tech
UNIVERSITY

A
TENNESSEE BOARD of REGENTS
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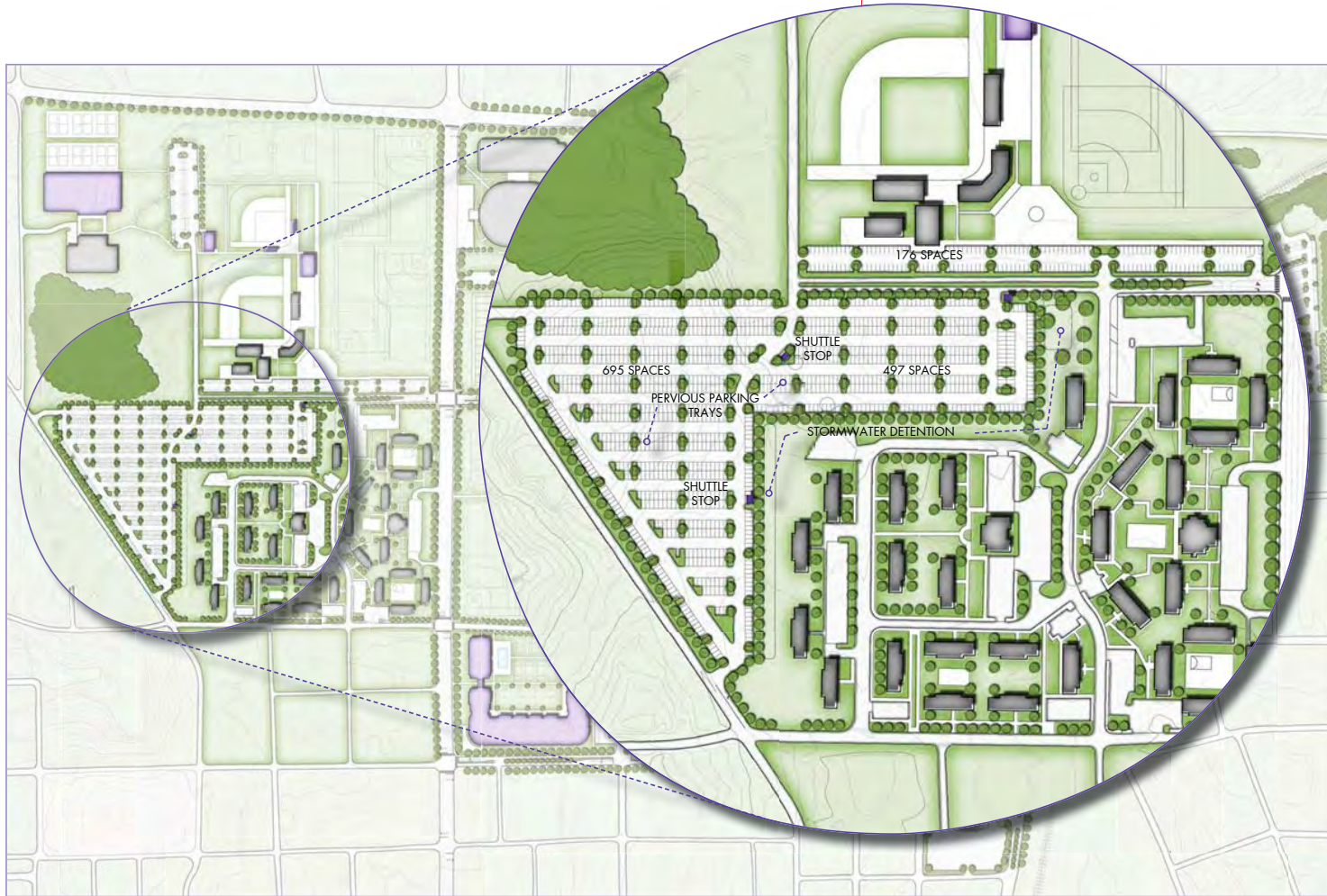
BAUER ASKEW
architecture . pllc





EXISTING BUILDINGS:

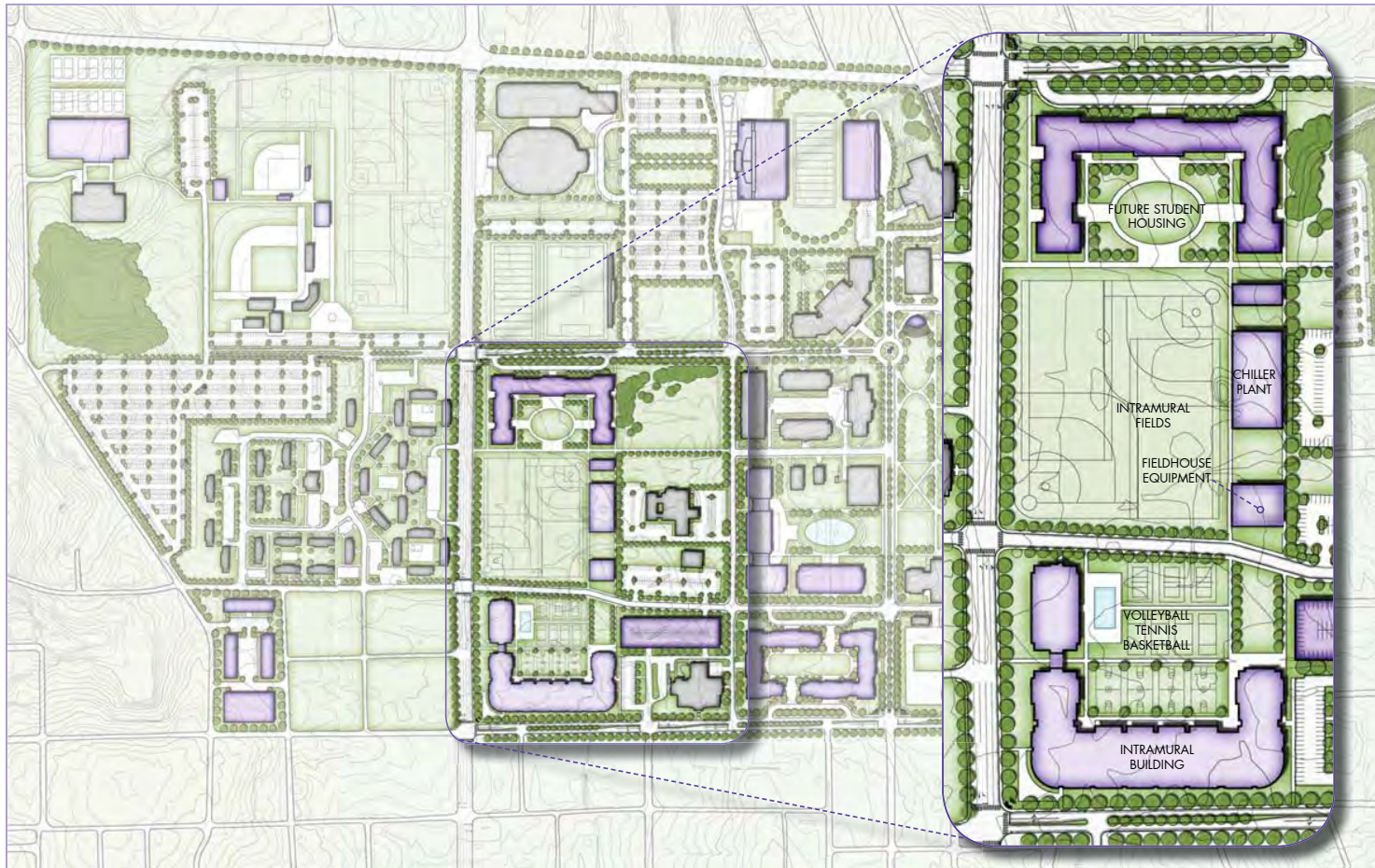
1. Derryberry Hall
2. Kittrell Hall
3. Jere Whitson Building
4. South Hall
5. Nursing & Health Sciences Building
6. Crawford Hall
7. Daniel Hall
8. Mathews Hall
9. University Police
10. Health & P.E. Building
11. Bartoo Hall
12. T. J. Farr Building
13. University Services Building
14. Henderson Hall
15. New Hall South
16. New Hall South
17. New Hall North
18. New Hall North
19. Murphy Hall
20. Jobe Hall
21. Pinkerton Hall
22. Mattie Sue Cooper Hall
23. Roaden University Center
24. Foster Hall
25. Johnson Hall
26. Pennebaker Hall
27. Bryan Fine Arts Building
28. East Stadium
29. West Stadium
30. Volpe Library and Media Center
31. Bruner Hall
32. Clement Hall
33. Prescott Hall
34. Brown Hall
35. Lewis Hall
36. Foundry Hall
37. Old Maintenance Building
38. Ellington Hall
39. Warf Hall
40. McCord Hall
41. Maddux Hall
42. Cooper Hall
43. Dunn Hall
44. Browning Hall
45. Ewins Hall
46. Ray Morris Hall
47. Southwest Hall
48. Otis Carroll Building
49. Motor Pool Garage
50. Warehouse
51. George S. Ridley Carr Building
52. Facilities Services Offices
53. The Hooper Eblen Center
54. University Rec & Fitness Center
55. Clubhouse & Press box
56. Boat Storage
57. Tech Village East
58. Tech Village West
59. Walton House (President's Residence)
60. Foundation Hall
61. Athletic Performance Center



WEST CAMPUS PARKING

In order to meet TTU's growing parking needs as well as relocate parking spaces displaced by the planned Science Mall, a remote commuter lot is planned at the western-most edge of the campus property. The project could be divided into three phases and may be implemented incrementally or constructed at one time. The initial phase is proposed to be completed prior to the initiation of the Science building project and serve as a relocation of the existing parking capacity in that location and could include 695 parking spaces. The reconstruction of the current Athletic parking lot of 176 spaces and the refinement of University Drive could also be considered at this time. The third phase with 497 parking spaces can be considered based upon the campus needs. This third phase will require issues related to the relocation of the boat storage, elimination of the coal storage areas and storm water management to be resolved. The improvements are proposed to incorporate pervious paving at the parking areas and to avoid wetland areas.

To support the relocation of parking to the perimeter of the campus, a shuttle service to transport commuters into TTU's central campus should be implemented as well. Improvements to the adjoining section of University Drive will become necessary with the construction of these two parking lots and implementation of the shuttle route (please refer to the following pages).

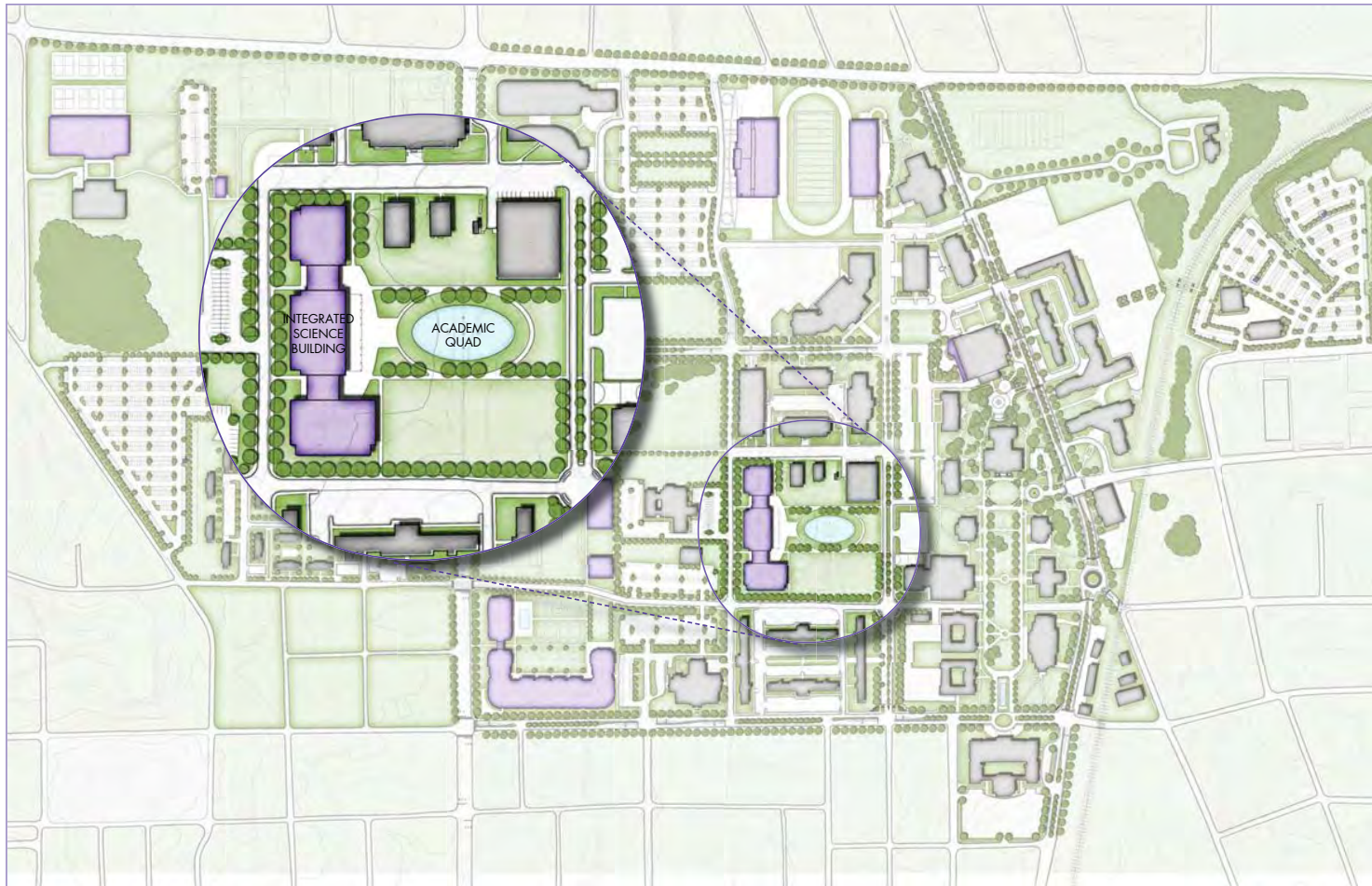


SOUTHWEST QUADRANT AND INTRAMURAL BUILDING

The southwest quadrant bordered by North Willow Avenue and West Seventh Street offers the prime expansion area for the campus. Currently, much of this area is designated as Acquisition Area #1 and consists of small businesses, a small apartment complex and a radio tower site. The anticipated acquisition of these properties along with the demolition of Tech Village East and the relocation of the Facilities operations will allow for the development of this area. Depending upon the timing of Property Acquisition and, the Housing and Intramural projects may need to swap sites.

The initial primary function for the area is the new Intramural Building and related intramural fields. The new Intramural Building is proposed on the corner of North Willow Avenue and West Seventh Street. This will provide a significant student oriented function on this prominent corner and provide an engaging first impression for the arriving students and others approaching the campus. New fields for soccer, football and softball are proposed adjacent to the Intramural building to supplement the current intramural fields on the west side of Willow. Future Student Housing is shown on the corner of Willow and University which will provide a significant presence at this main entry to the campus.

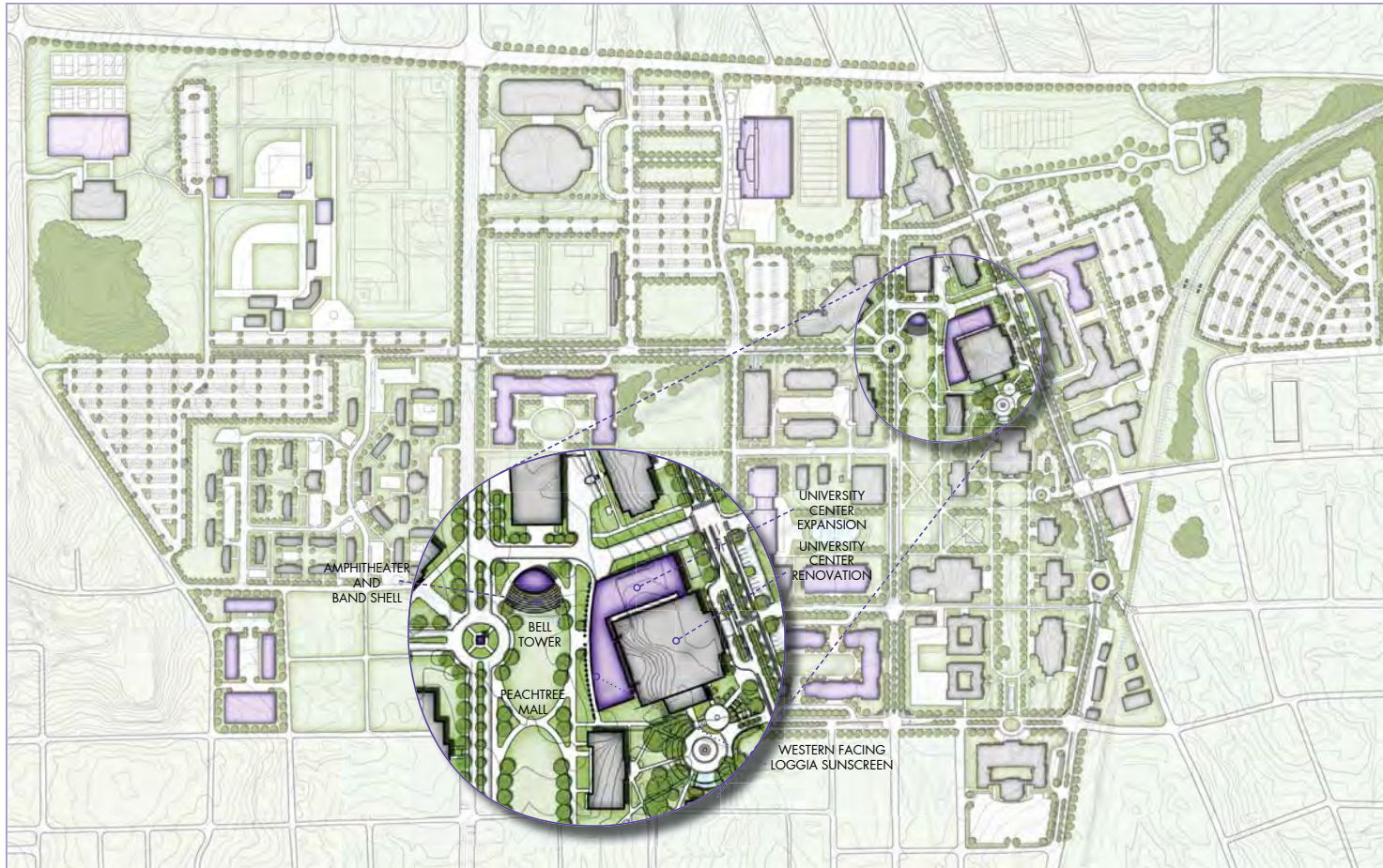
West Eighth Street is proposed to connect with West Ninth Street across the Southwest Quadrant allowing a path for the new Campus Shuttle. The current STEM Building, newly renovated Southwest Hall, Sherlock Park, and campus Chiller Plant are projected to be maintained within the site until a greater campus need for those properties becomes apparent.



INTEGRATED SCIENCE BUILDING

The proposed site for the new Science building is the block between Peachtree and Stadium drives and between the engineering complex and Capitol Quad housing. The site currently accommodates 859 cars which are highly visible to visitors travelling through TTU's campus along Peachtree Street. The placement and form of TTU's future Integrated Science Building will play a critical role in the successful joining of the campus's eastern and western halves. The placement of the science building is critical to the development and expansion of a cohesive academic core for the campus. Currently, the perceivable heart of the academic campus is contained within the Historic Quadrangle with the remainder of the academic buildings as disjointed groupings to the west and north.

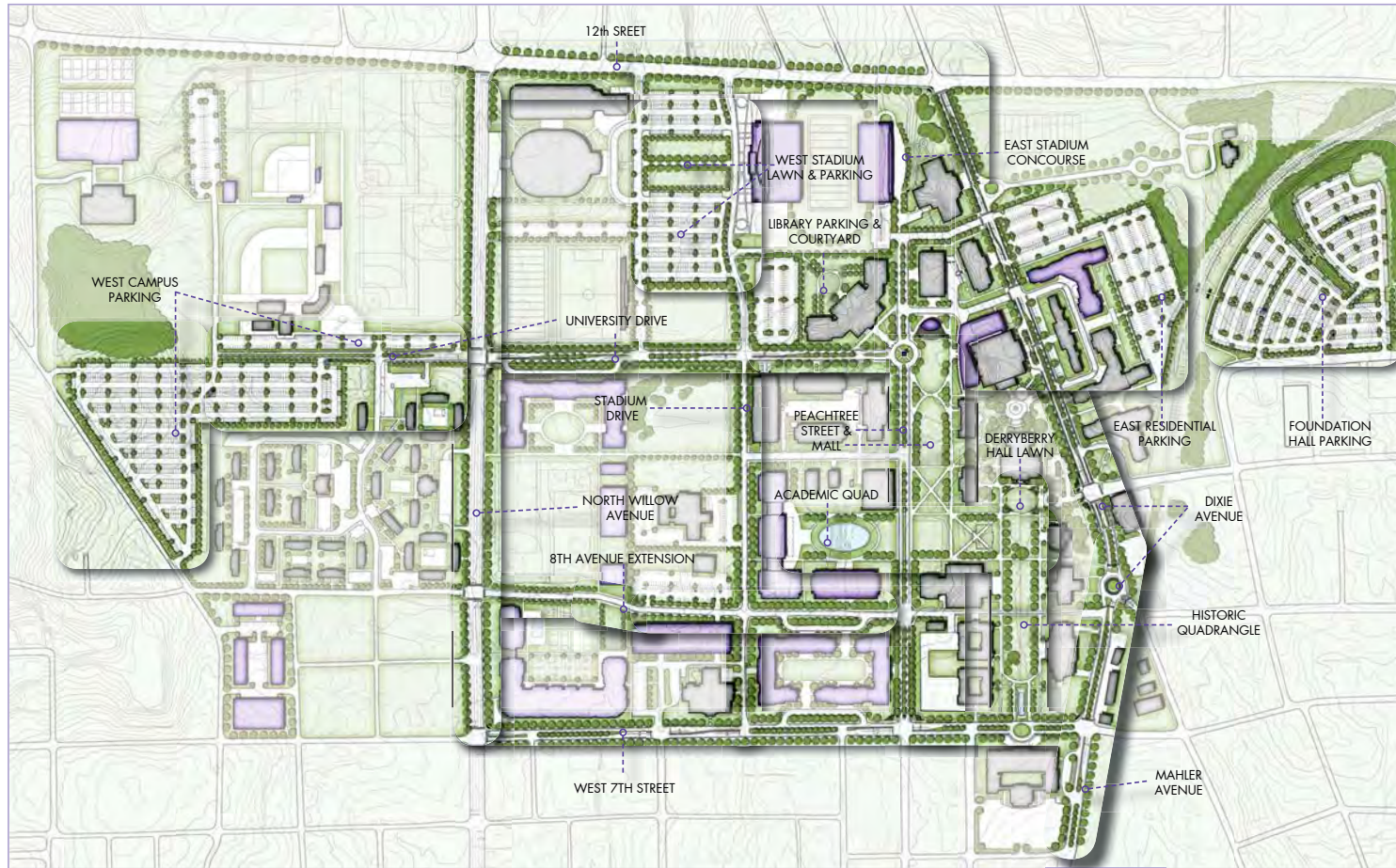
Placing the Science Building at the western end of the chosen site and aligning its center with Bartoo and Kittrell Halls will allow the new structure to both establish an edge for the academic campus while responding to and extending the Campus's historic organization. The proposed Science Building and campus Mall will also provide future opportunities to increase connectivity throughout campus as it expands westward while creating a new, positive focal point for campus visitors and travelers moving along Peachtree Street.



ROADEN UNIVERSITY CENTER

The University Center building is ranked very low on the Facilities Assessment survey. Based upon a Building Envelope Investigation by Richard Rinks and Associates in June of 2013, the building has significant issues on the western facing facade and adjoining areas. Coupled with the need for more space, a renovation and addition is proposed for the building. Within its current site, an addition of ~60% may be added to the current building with the elimination of the parking area to the immediate west, as illustrated on the adjacent drawing.

An addition to the University Center provides the opportunity for the building to respond to and enhance the proposed Peachtree Mall. By allowing the addition to wrap the northern and western sides of the current building and centering the western facade on the University Bell Tower and University Avenue, the addition would provide an impressive face to travelers entering the campus along University. Supplemental space, if needed by the program, could be gained by extending the building into the north end of the Peachtree Mall. However, at this point, an amphitheater with a north side stage and bandstand is proposed to provide a conclusion to the Peachtree Mall prior to encountering the end of Johnson Hall. The replacement of the University Center could also be considered as a viable option.

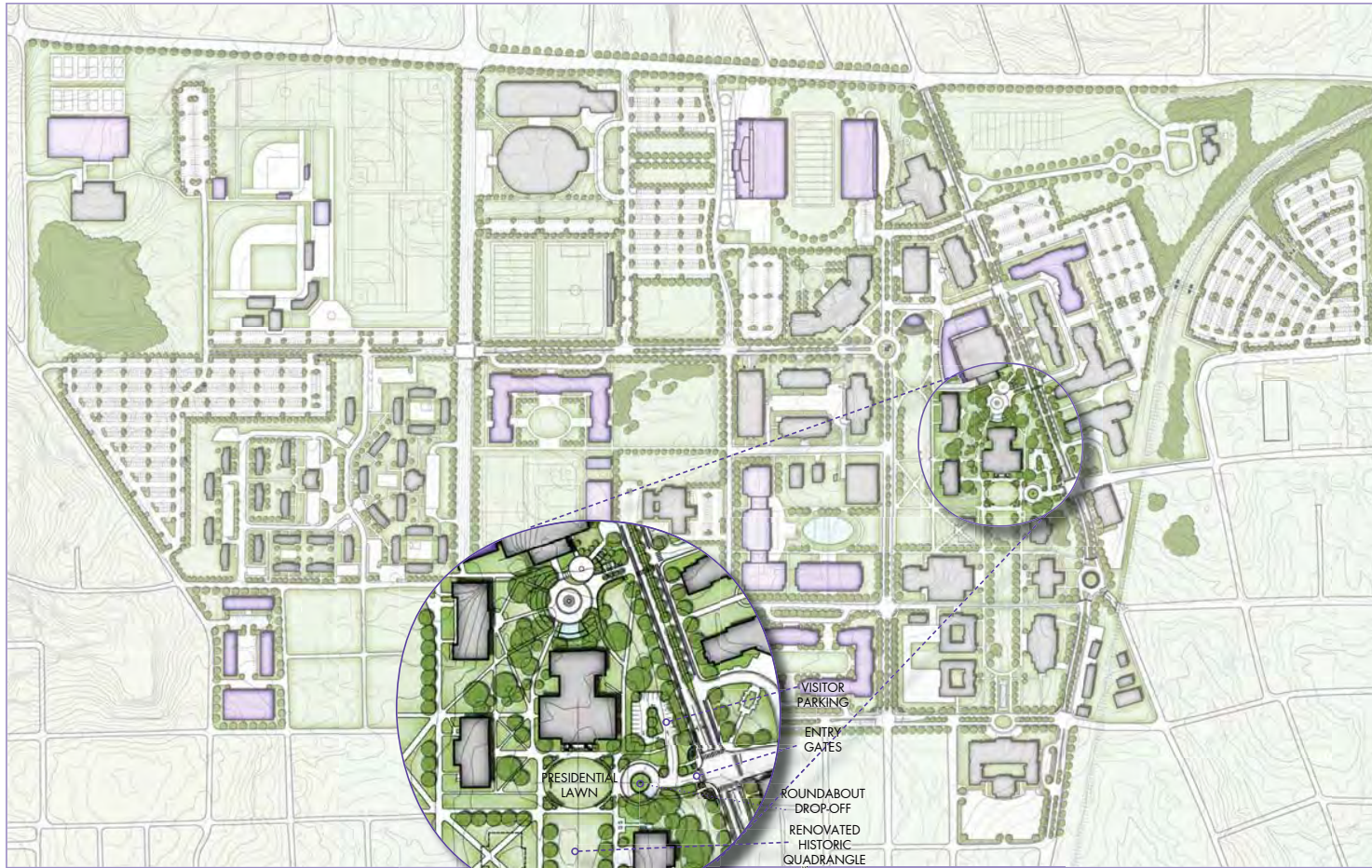


GREENING OF THE CAMPUS

A major initiative of the update refinements is the greening of the campus. This includes a progressive series of projects to maximize the green space opportunities and, in most cases, includes the removal, modification or elimination of parking spaces. As part of the process, two major collegiate mall spaces are proposed: the Peachtree Mall and the Academic Quadrangle associated with the new Science building. In each case, a significant parking area will be relocated to another portion of the campus. This will allow for the shift from personal convenience of a near-by parking space to the betterment of the on-campus environment and collegiate experience.

In an effort to drastically reduce the use of cars within the core of the campus, a series of parking space removals and relocations is also proposed. This includes removal of on-street parking and some parking lots. To provide greener and less crowded parking areas, the remaining and new parking lots are proposed to be provided with tree islands, straightened parking spaces and adequate drive aisles. New parking is also proposed to be constructed with pervious paving at the parking space areas to help the management of storm water.

The progression of greening efforts associated with parking is addressed in a summary in the appendix.



DERRYBERRY HALL LAWN

The initial effort in greening the campus through the removal of traffic and parking is proposed at the front of Derryberry Hall. The existing front parking area and cross drives are proposed to be removed to create a Presidential Front Lawn. This new formal outdoor gathering space will complement the ongoing work to develop student plazas to the north between Derryberry and the University Center.

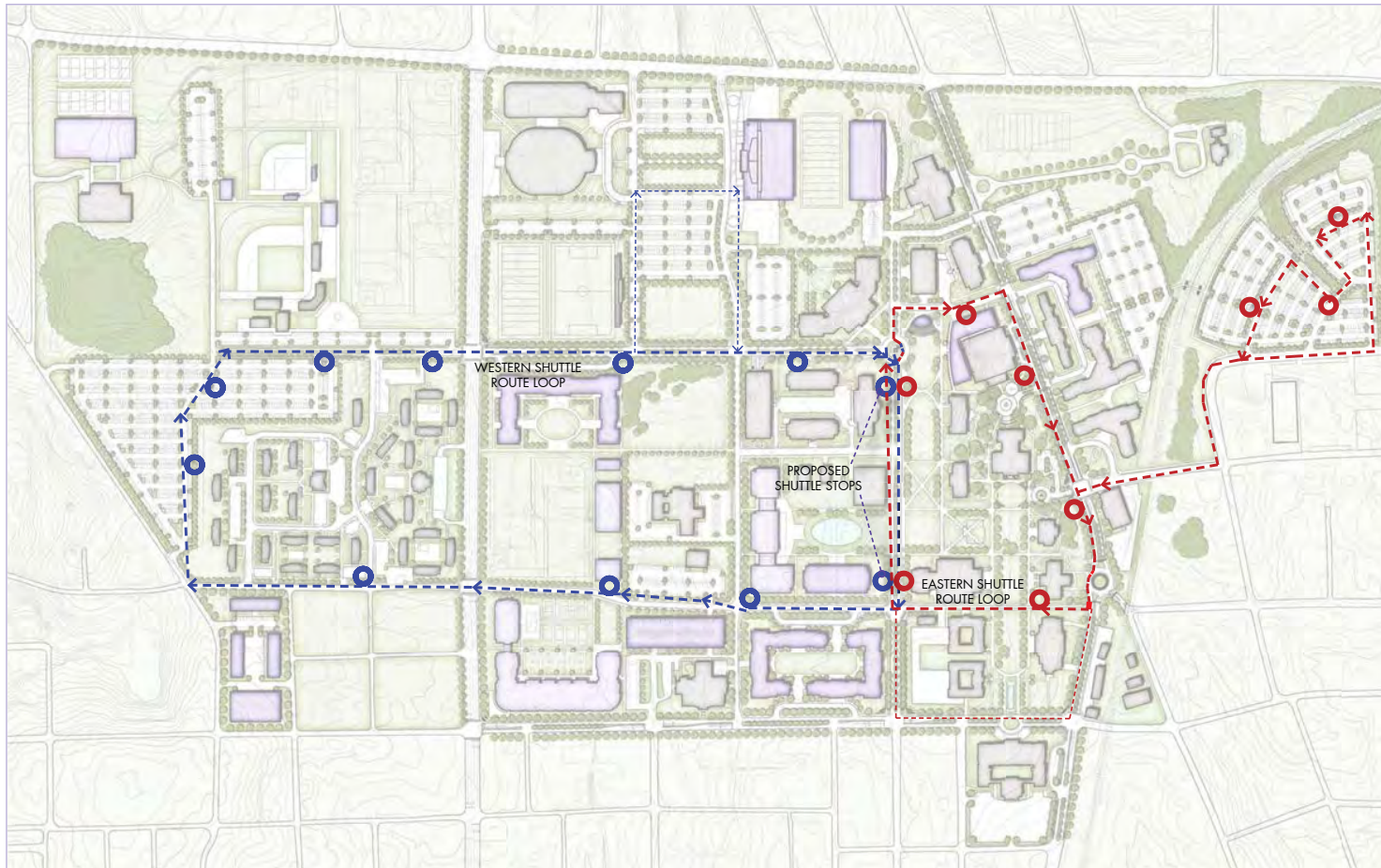
A roundabout abutting the newly placed Presidential Lawn will provide a drop off point and allow visitors to glimpse into the Historic Quadrangle as they arrive. An adjacent parking lot is provided for visitors, admissions and presidential parking needs. This lot will be tucked discretely between tree lined North Dixie Avenue and preserved trees currently surrounding Derryberry Hall.



FOUNDATION HALL EAST PARKING

Based upon the parking study and anticipated greening efforts, as the student body approaches 13,000 students, a second remote parking lot and corresponding shuttle route will become necessary. Ultimately, over 900 parking spaces are proposed at the current Foundation Hall property on the eastern edge of the campus. The implementation of this project can also be divided into separate phases to be accomplished incrementally. Initial phases can include the northeast lot with 353 parking spaces at the lower field area as well as a 93 space lot at the southeastern corner of the property. This will allow the existing parking on the western portion of the property to remain in use with the Foundation Hall in the near future. As the Foundation Hall use as a surge space building is completed, it can be demolished and the full parking scheme completed. Should portions of Foundation Hall be used as a Facilities Services Building on an interim or long term basis, the parking areas would be reduced accordingly.

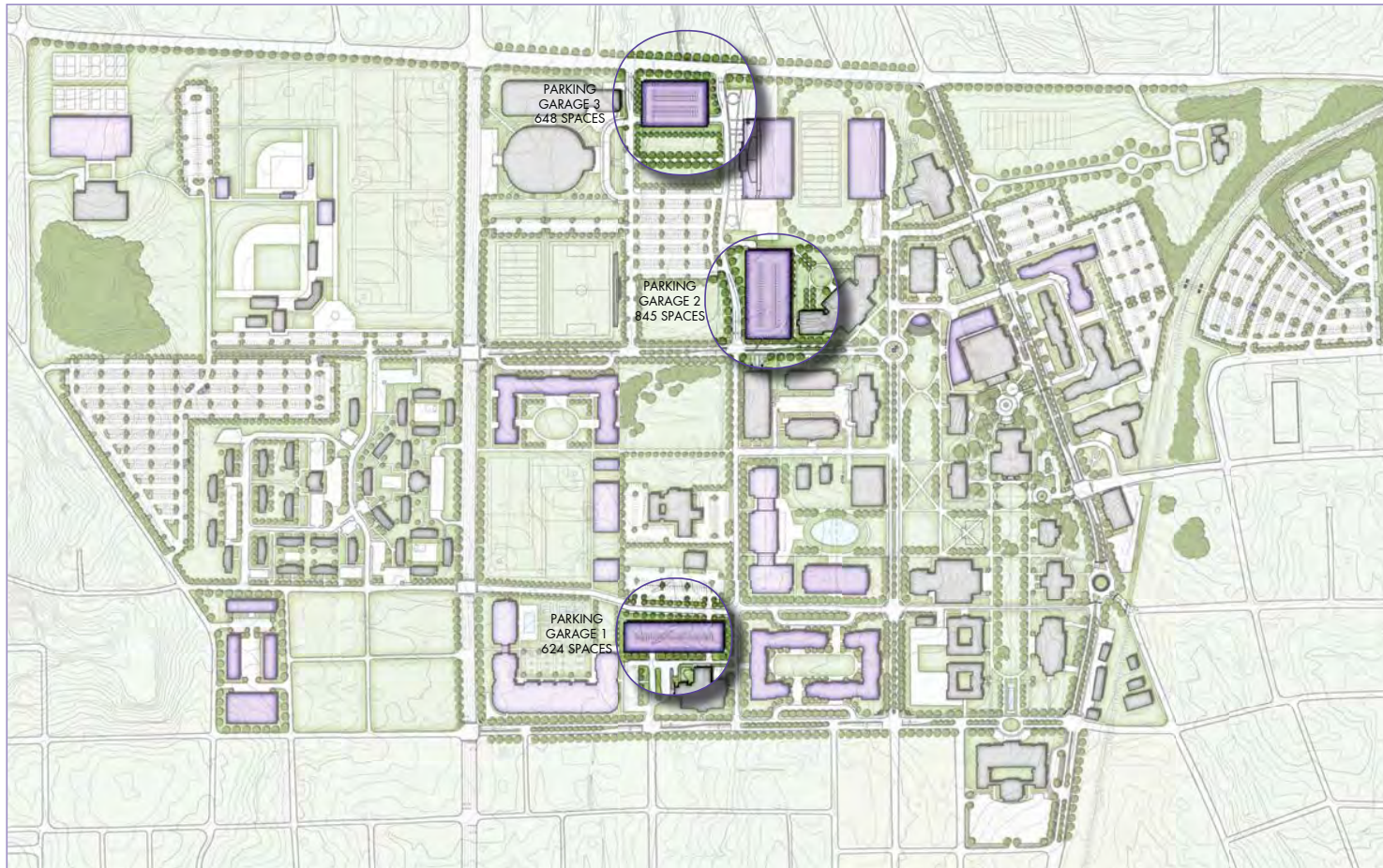
The proposed development of the Foundation Hall property should include pervious paving at the parking areas, tree islands, areas for shuttle stops and adequate storm water detention and treatment areas. The proposed Rail Trail has been incorporated on the western edge of the property. In addition, a pedestrian cross walk is shown to provide a limited and controlled access point to cross the train tracks.



SHUTTLE ROUTES

To support the large parking areas on the western and eastern edges of the campus, a shuttle system is proposed to be developed. This would include the development of a series of shuttle stops, controlled shuttle routes (dedicated to the degree possible) and a service area for parking and maintenance of the shuttle vehicles. The western route is proposed to utilize a renovated University Drive and a dedicated southern drive along a new realigned and extended Eighth Street with shuttle only light to control access across Willow Avenue (which will require coordination and approval by TDOT and the City of Cookeville). The north to south connection of the clockwise route is proposed to be along Peachtree Street. As Peachtree evolves over time, this route through the western core of the campus may remain as a dedicated drive. If it is desired by the university to eliminate all traffic adjacent to the Peachtree Mall, the route may loop around the eastern portion of the campus.

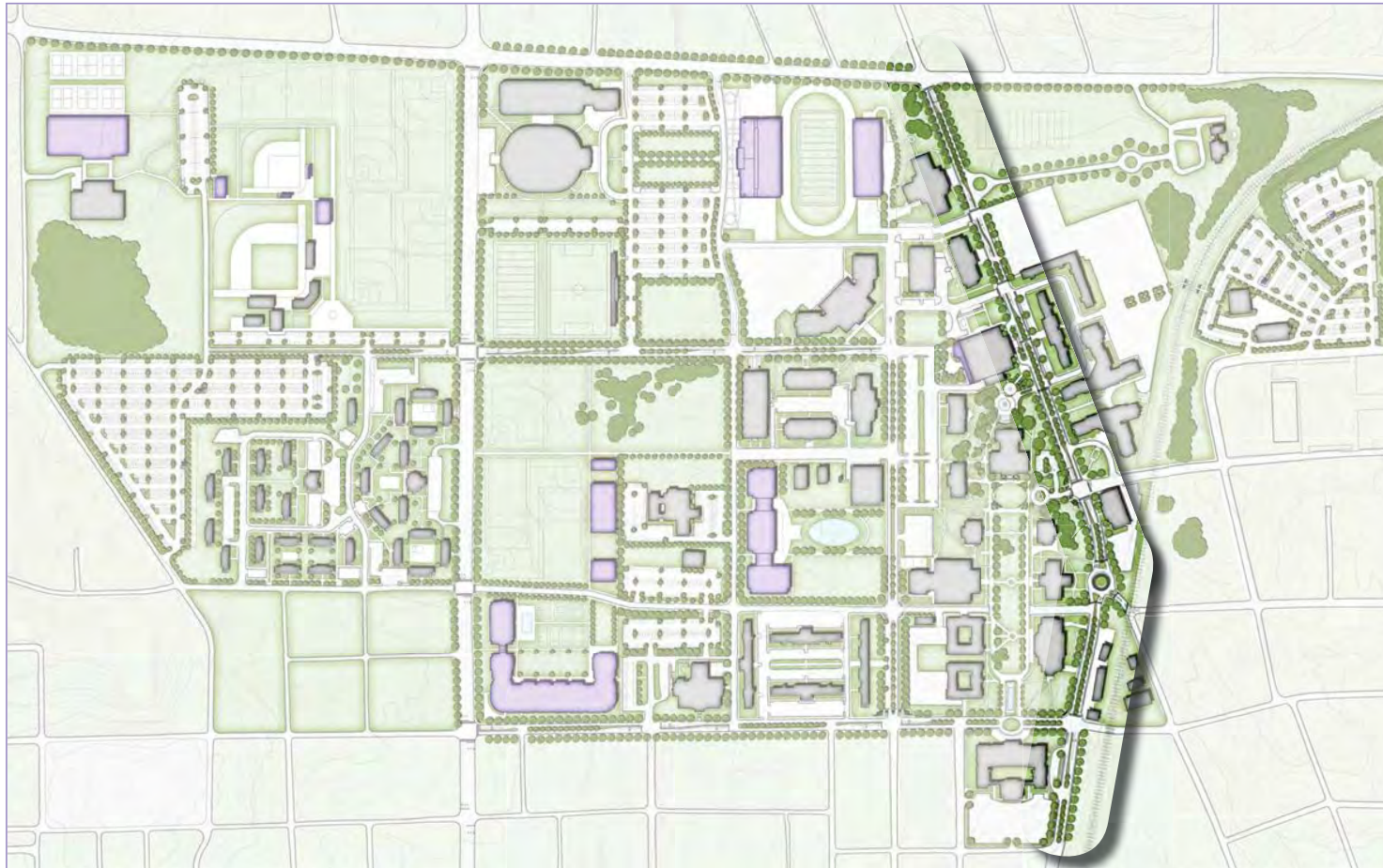
The Eastern Shuttle Route is anticipated to serve the Foundation Hall parking areas. To provide an efficient route, it is proposed to have a dedicated shuttle only access across the Historic Quadrangle. The route is proposed to intersect the western route to provide transfer opportunities to extend the ride to the west. The route is currently proposed to run along the Peachtree Mall with a reduced traffic volume; however it can also be extended to Stadium Avenue to avoid the Peachtree mall if desired.



PARKING GARAGES

Following the experience of other universities, the master plan update assumes that the on grade parking options will need to be exhausted prior to funding structured parking. Therefore, developing a cultural shift from convenient parking next to a destination to remote parking with the use of a shuttle, as described on the previous pages, would be the first step in the parking plan. As the required parking increases with the campus growth to 15,000 students, parking garages will need to be considered. With a cost in the range of 5-6 times that of surface parking, funding for this parking will be a consideration. At this point, it is anticipated that a graduated scale for parking permits closer to the core of campus would be more acceptable than implementing a fee to fund garages in today's environment with inexpensive central campus surface lots.

Three parking structures are projected to meet the need of the 15,000 student campus. The initial garage is projected to be near the proposed Intramural building. This garage could support the intramural activities as well as Capital Quad student housing, the STEM center and the western academic areas. The second garage is proposed at the opposite side of the campus to support the northern end of the academic areas as well as the athletic venues. The placement of these garages along Stadium Drive with primary access from perimeter roadways discourages heavy traffic from proceeding into the heart of campus as commuters would park and continue into campus on foot or via shuttle route. The third garage is proposed adjacent to the library to also support the athletic venues as well as the center of the campus.



NORTH DIXIE AVENUE

North Dixie Avenue currently lines the eastern edge of the TTU campus and, with improvements, will aid in defining the University District. The road's current conditions are not conducive to provide safe passage by the large amount of students crossing daily. The Master Plan proposes to remedy the situation by calming North Dixie with a reduction of the road from a four lane road to a two lane, tree-lined boulevard with left turn and bike lanes. A tree-lined median would run along the center of the boulevard and contain fencing and landscaping to restrict pedestrian traffic across Dixie with dedicated crossing points. These crossing points would be controlled with speed mounds and potentially crossing signals which will alert drivers to potential student pedestrian traffic. In addition, the number of vehicular access drives along Dixie is proposed to be reduced. The same concepts would be applied to the blocks of Mahler between Sixth Street and Eighth Street and include the elimination of on-street parking.

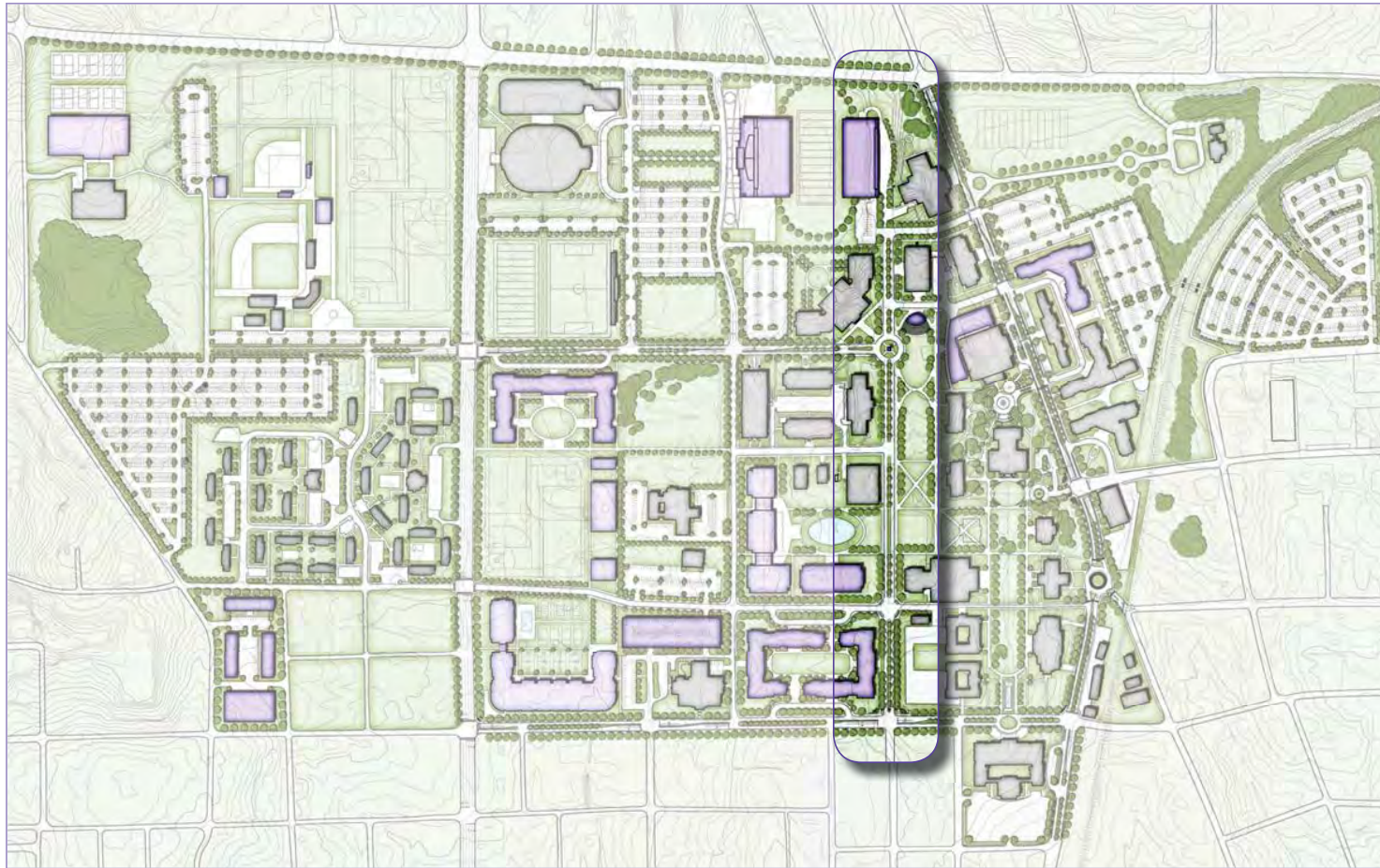
The proposed Dixie Roundabout, centers on the Eastern face of the Jere Whitson Building, would reconcile the complicated intersection of Mahler Avenue, East Eighth Street, and North Dixie Avenue while calming traffic travelling through the University District from the south. Lighting standards, banners, and signage could all match city standards, as along Mahler Avenue to downtown, and should be developed in conjunction with the city. An engineering study is provided in the appendix.



PROJECT C:
MAHLER STREETScape
& CALMING

PROJECT B:
DIXIE ROUNDABOUT

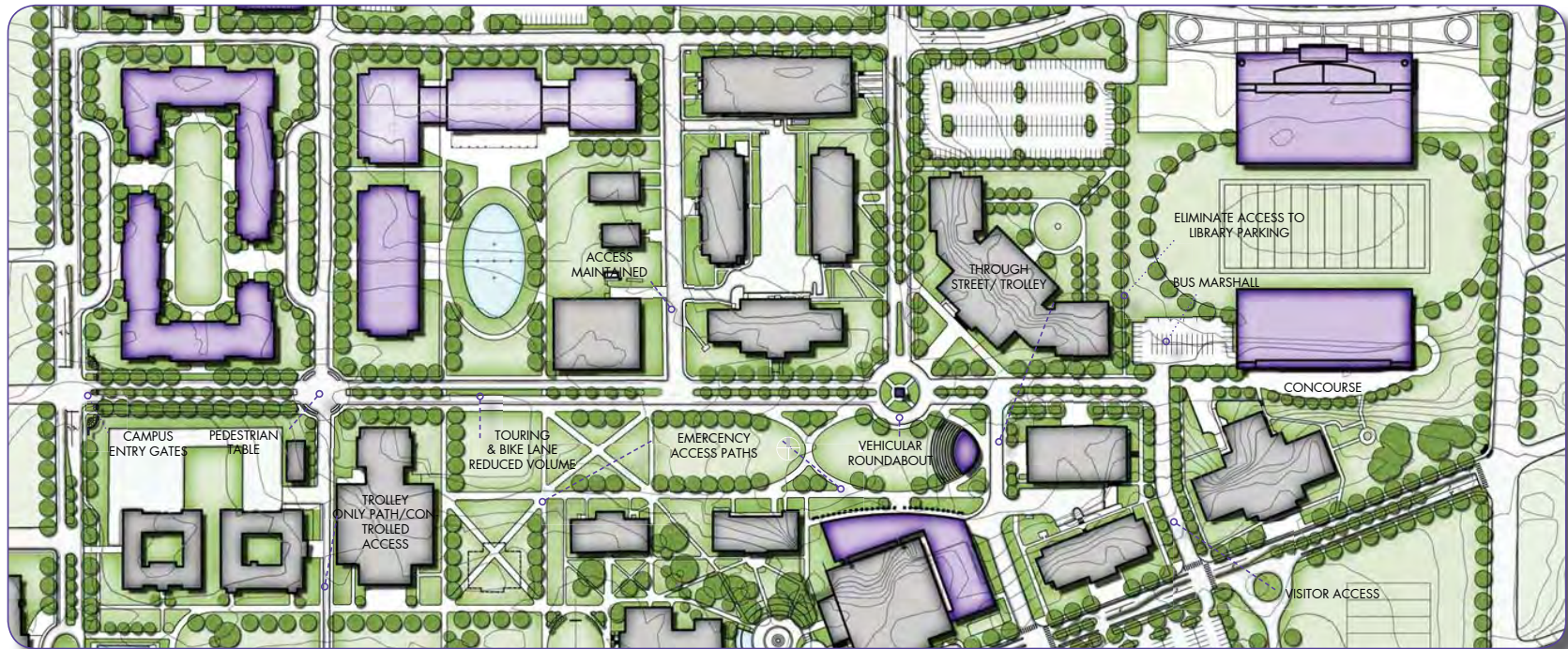
PROJECT A:
DIXIE STREETScape & CALMING



PEACHTREE STREET & MALL

As further improvements occur within the campus, the development of Peachtree Street and the adjacent parking areas will become essential to the unification and expansion of the Campus as a whole. In conjunction with the removal and relocation of all parking central and adjacent to Peachtree Street and therefore no end destinations to draw additional heavy traffic, the central section of Peachtree Street is proposed to be reduced to two non-oversized lanes and serve as touring and shuttle drive. Bike lanes and a tree lined median running along its center will aid in calming Peachtree and transforming the street's current asphalt dominant character into that of a landscaped, pedestrian friendly boulevard. This central section of Peachtree could also evolve to a pedestrian only concourse in the future. The proposed Peachtree improvements are divided into five sections: Southern, Central, Roundabout, Northern and Stadium sections. These areas are outlined on the long range plan on the following page. The southern and central section improvements are proposed to be implemented by 2020 leaving the other three sections and the development of the Peachtree Mall to be developed within the second phase of the master plan.

The Peachtree Mall will act as the third arm of an overlapping greenway system completed by the Science Mall and Historic Quadrangle. These three grand mall spaces will layer to create vistas and work to connect the campus from North to South and from East to West, thus creating a new, expanded center for the campus. Pathways within these malls are proposed to be pedestrian only but will be constructed to accommodate emergency vehicles as well as service vehicles.



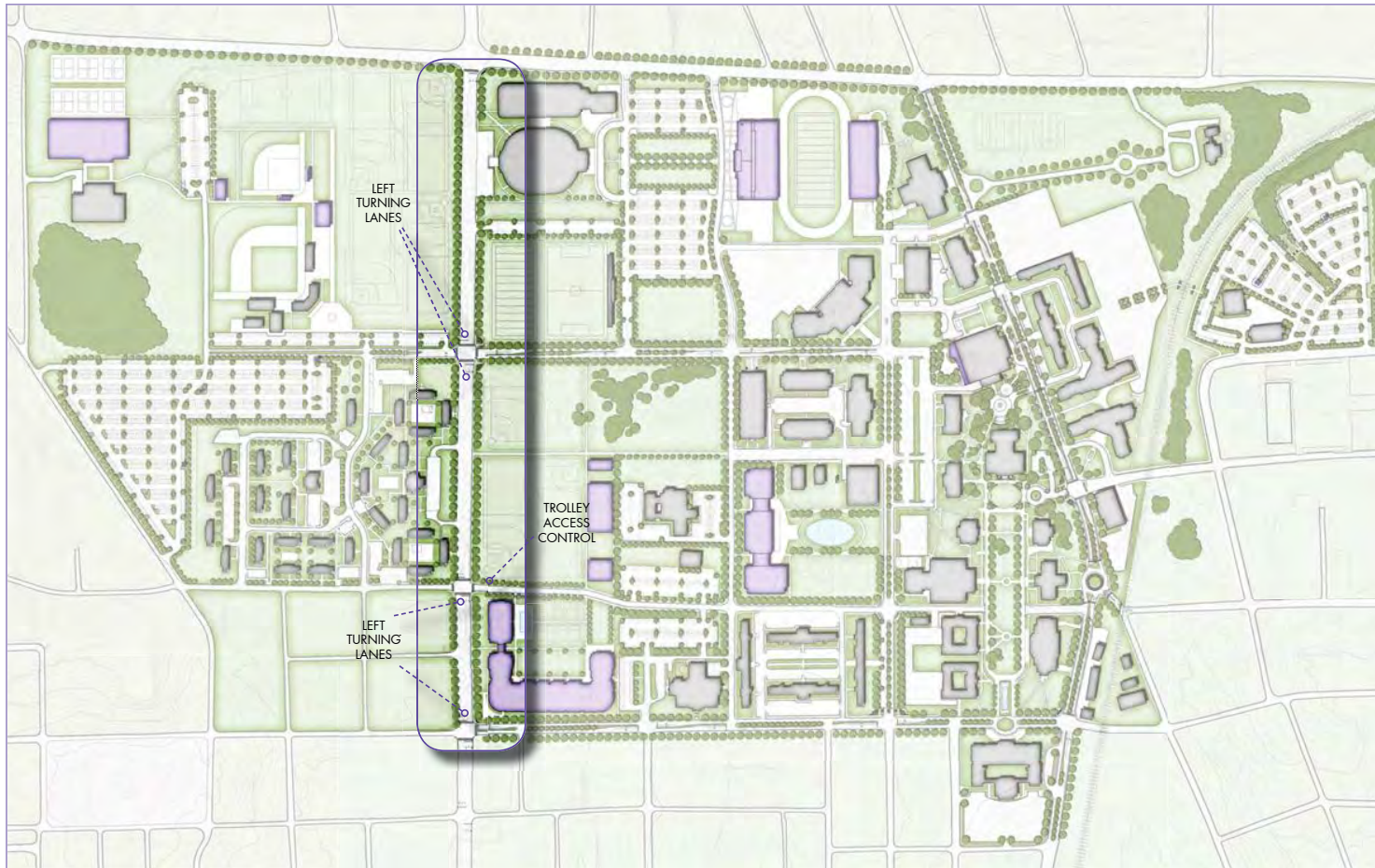
SOUTHERN SECTION
VEHICULAR TRAFFIC & BIKE

CENTRAL SECTION
TOURING AND BIKE LANE WITH EMERGENCY ACCESS

NORTHERN SECTION
VEHICLE & BIKE

STADIUM SECTION
CONCOURSE

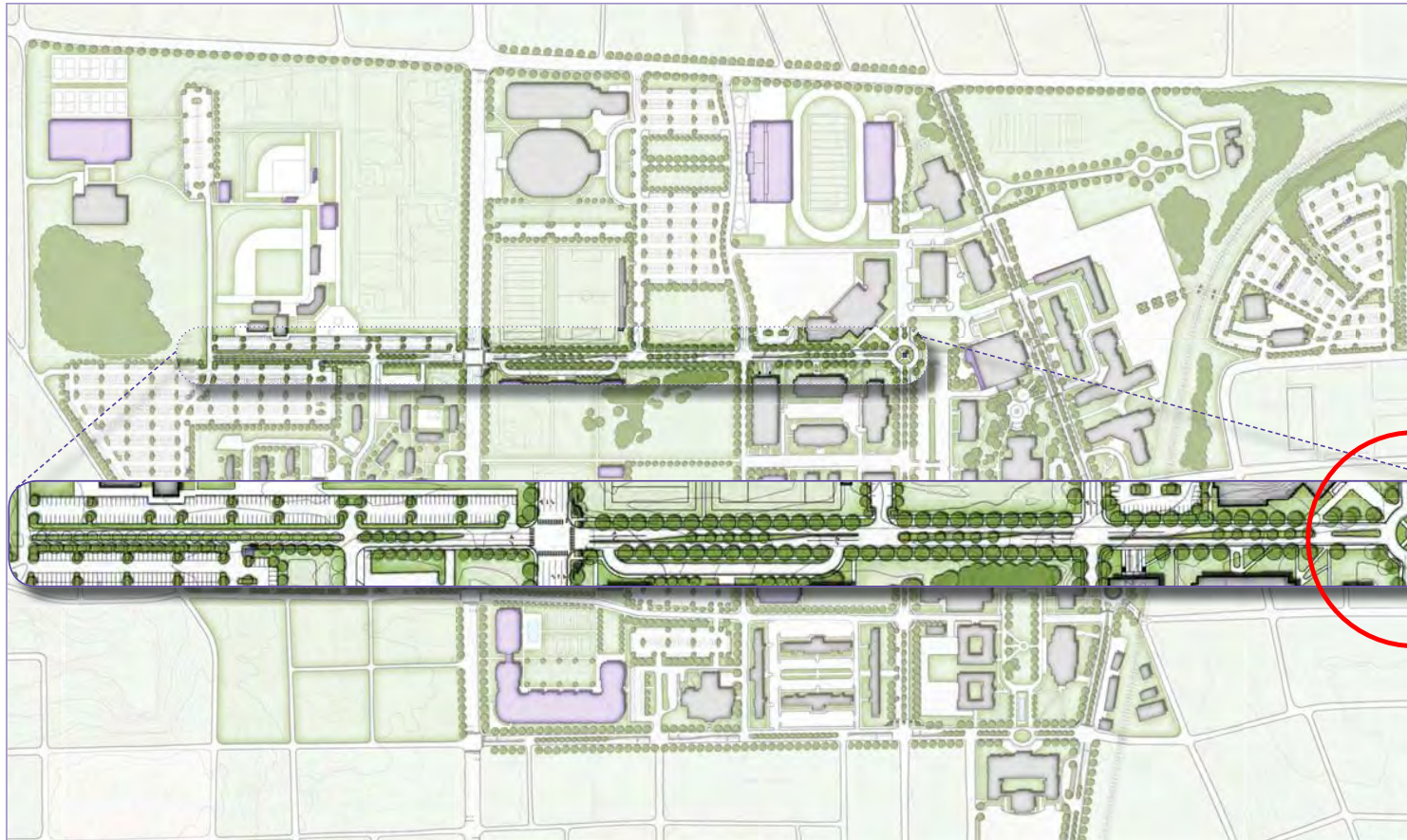
TOURING & BIKE LANE



NORTH WILLOW AVENUE

As a campus edge street similar to West Seventh Street, improvements to North Willow Avenue will be instrumental in helping to establish a recognizable University District. The proposed widening of the road will require right of way to be provided along Willow. Widening to the east side will require some utility relocation but will not adversely effect the Tech Village Housing. The widening will allow for left turn lanes onto the campus from each direction. Combined with the addition of trees at the street's edges, this will help to ease the flow of traffic while establishing the desired sense of entrance into the University area. Provisions for the addition of a tree-lined median through the center of North Willow would be advisable for calming purposes; however the viability of this concept will need to be reviewed with the city and the state.

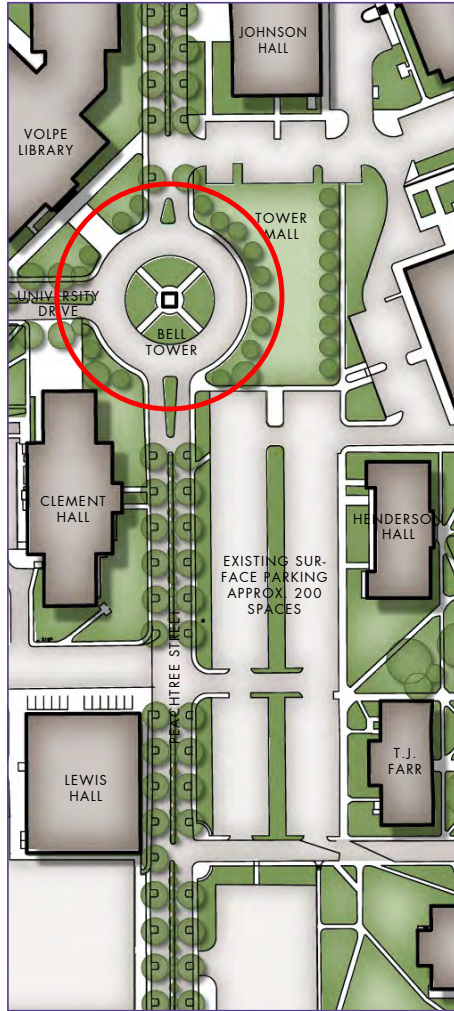
The Willow Avenue improvements will require coordination with the city of Cookeville and the state should incorporate city standards for lighting and signage, as well as traffic controls and calming elements for pedestrian access. As the section of Willow Avenue to the south provides the most significant entrance to the campus, the perception of the road, in particular from the railroad overpass painted with TTU colors and inscription, is part of the initial impression of the campus. Therefore, the widening of Willow Avenue South with a center turn lane to the railroad overpass (and elimination of some structures) would be highly desirable and should be pursued with the city and the state.



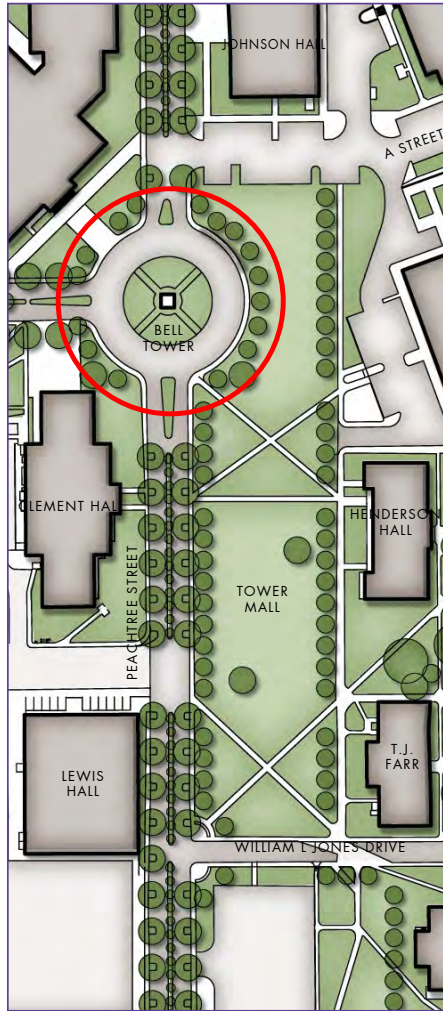
UNIVERSITY DRIVE

As the main vehicular entrance and processional path into the heart of the TTU campus, University Drive is proposed to be developed as a grand boulevard lined along each side with large hardwood canopy trees. In lieu of concrete medians, the center medians would be landscaped with flowering understory trees and ground cover. Left turn lanes and bicycle lanes would be implemented as well to aid in traffic calming. Smaller scale campus standard lighting is proposed to give a more intimate scale and frame vistas towards the historic campus center to create a dynamic procession into campus. As indicated in the Campus Gates section, the entry to the campus from Willow Avenue should be treated a prominent celebrated entry into the campus.





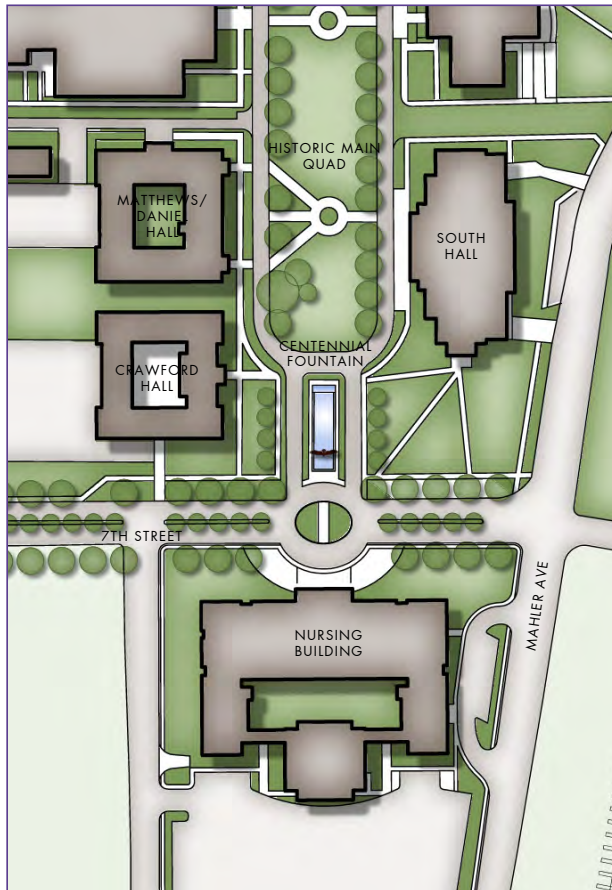
TOWER MALL



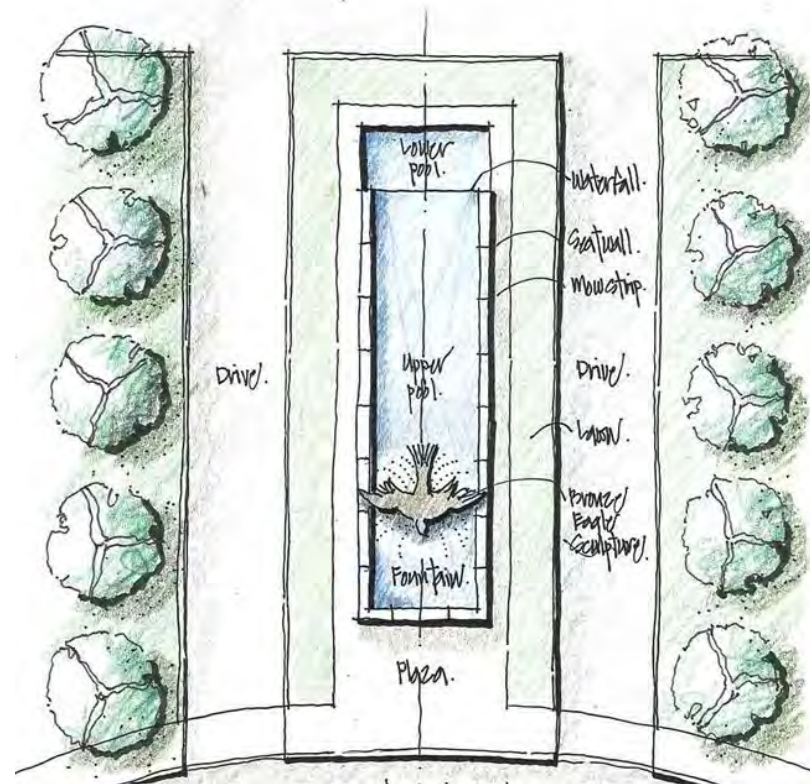
TOWER MALL - PROPOSED



BELL TOWER



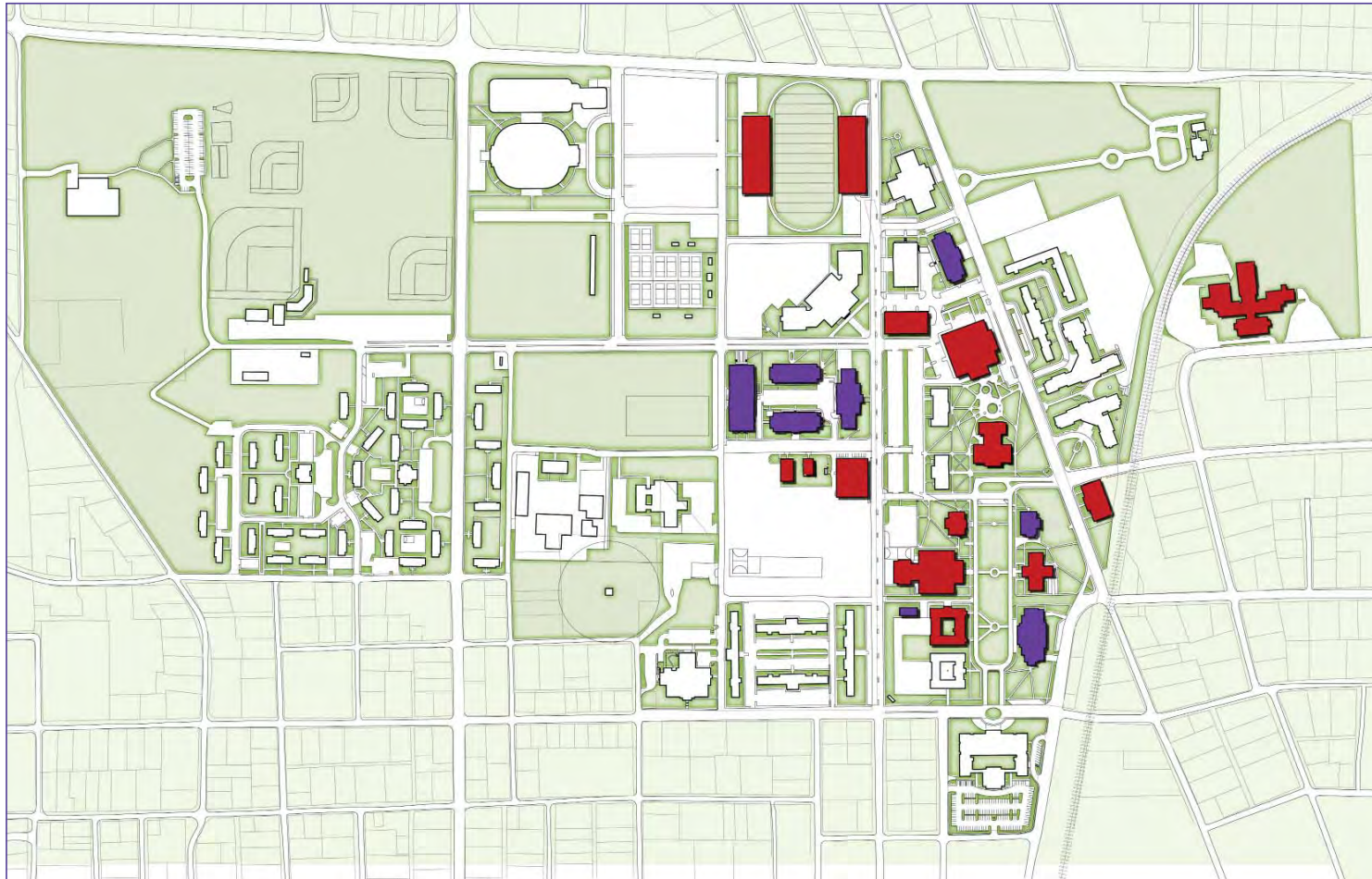
CENTENNIAL FOUNTAIN



PROPOSED CENTENNIAL FOUNTAIN



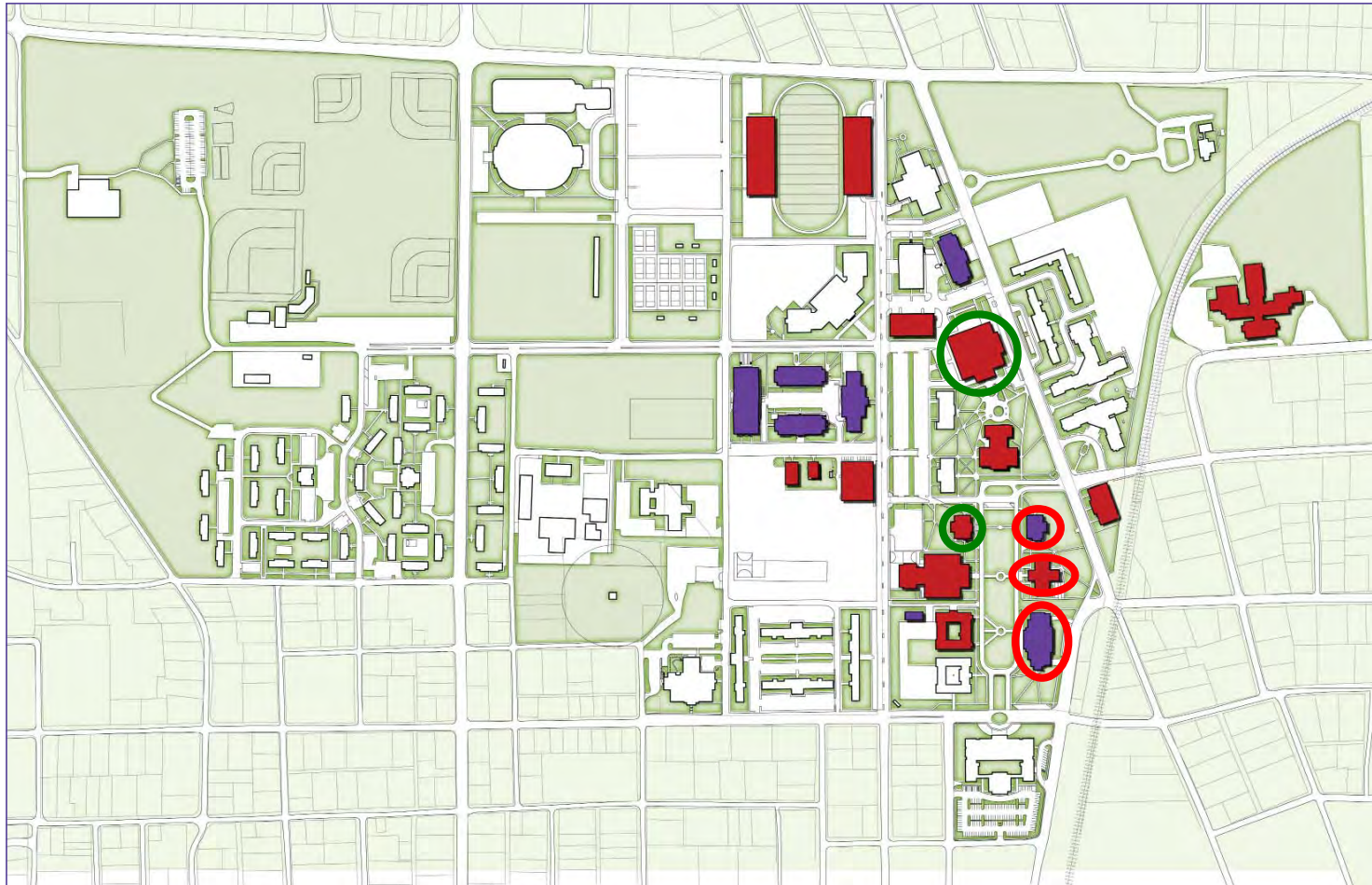




BUILDING ASSESSMENT

Attached within the Appendix is the current Facilities Survey itemizing the ratings of the physical condition of each academic building on the campus. Typically, an overall rating below 70 indicates a building in need of significant renovation or consideration for removal and replacement. The diagram to the left indicates each of the academic and core campus buildings with a score below 70. Non Educational and Core buildings such as Athletic and Housing are not included in this assessment. As this includes the majority of the campus buildings, it represents a staggering and nonviable prospect for replacement. Many of the buildings with ratings in the 60's were reviewed as a separate Six Building Assessment study during the 2010 Update process (available as a separate document) and are part of an ongoing comprehensive incremental renovation and maintenance program. Therefore, the buildings with an overall rating below 60 have been highlighted in red to bring a focus to those in the most need.

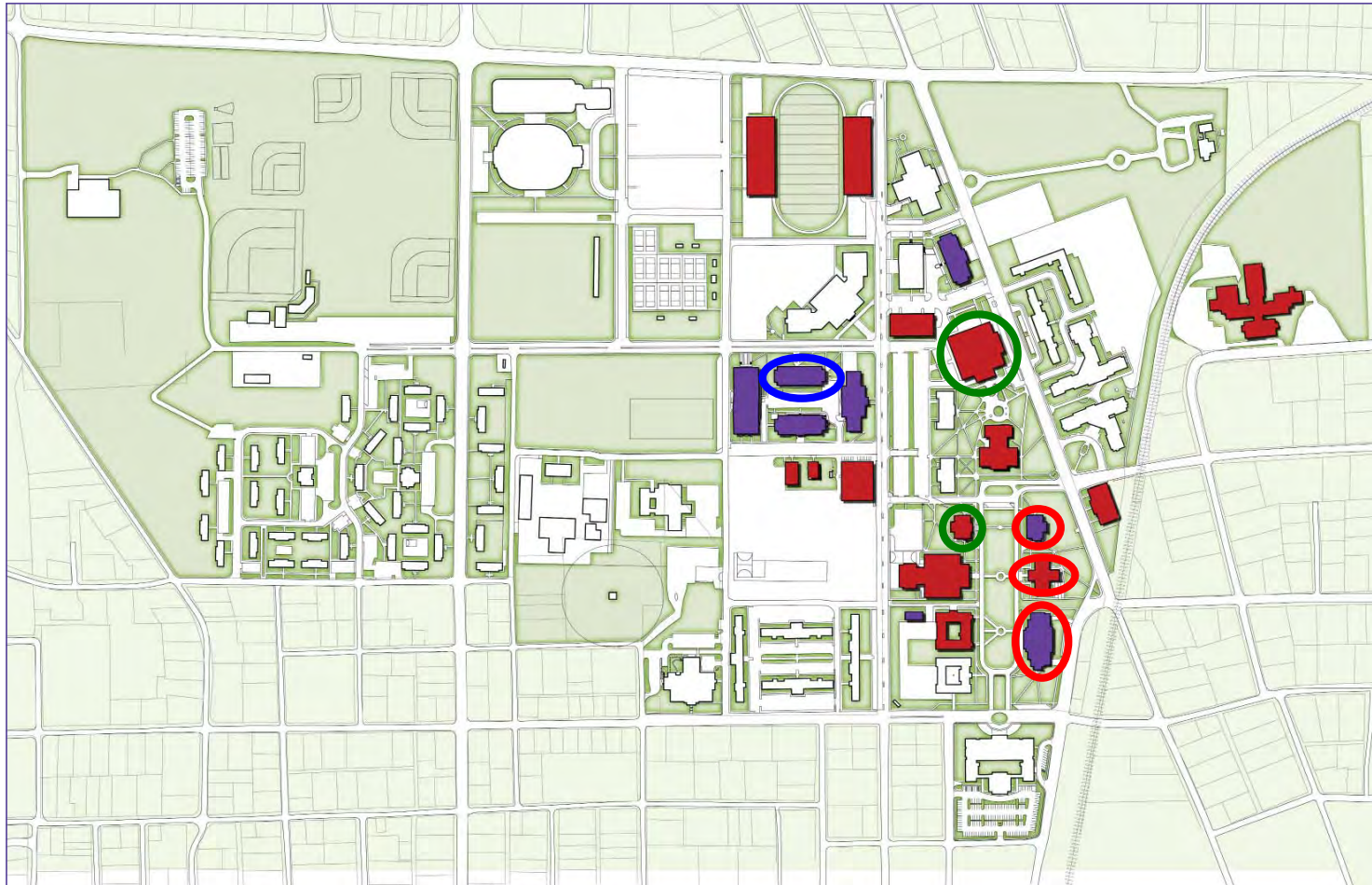
Of the thirteen buildings with a rating below 60, the lowest rated buildings, Matthews, Daniels and the East Stadium Lab spaces should be considered for immediate replacement. Foster Hall is scheduled for demolition after the new Science building and Pennebaker renovations are completed. Foundation Hall's use a flex space should not deter it's future as providing parking. Lewis Hall, the Foundry and the Old Maintenance are considered as place holders for academic expansion along the new Science Quad. The most challenging opportunities will be the repurposing or replacement of Jere Whitson and the Health and PE Building. As keynote buildings, The University Center and Derryberry Hall should be significantly renovated.



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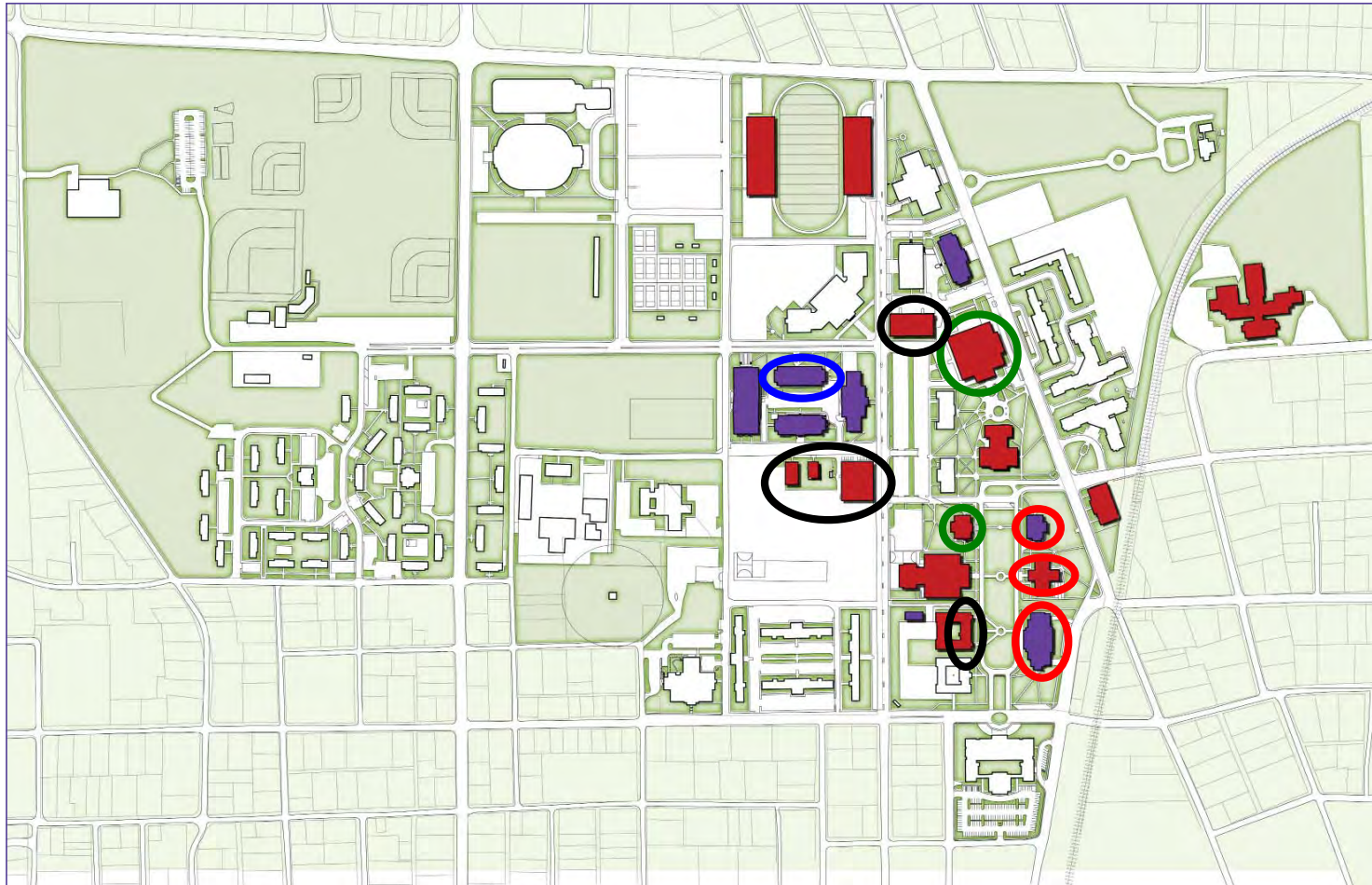
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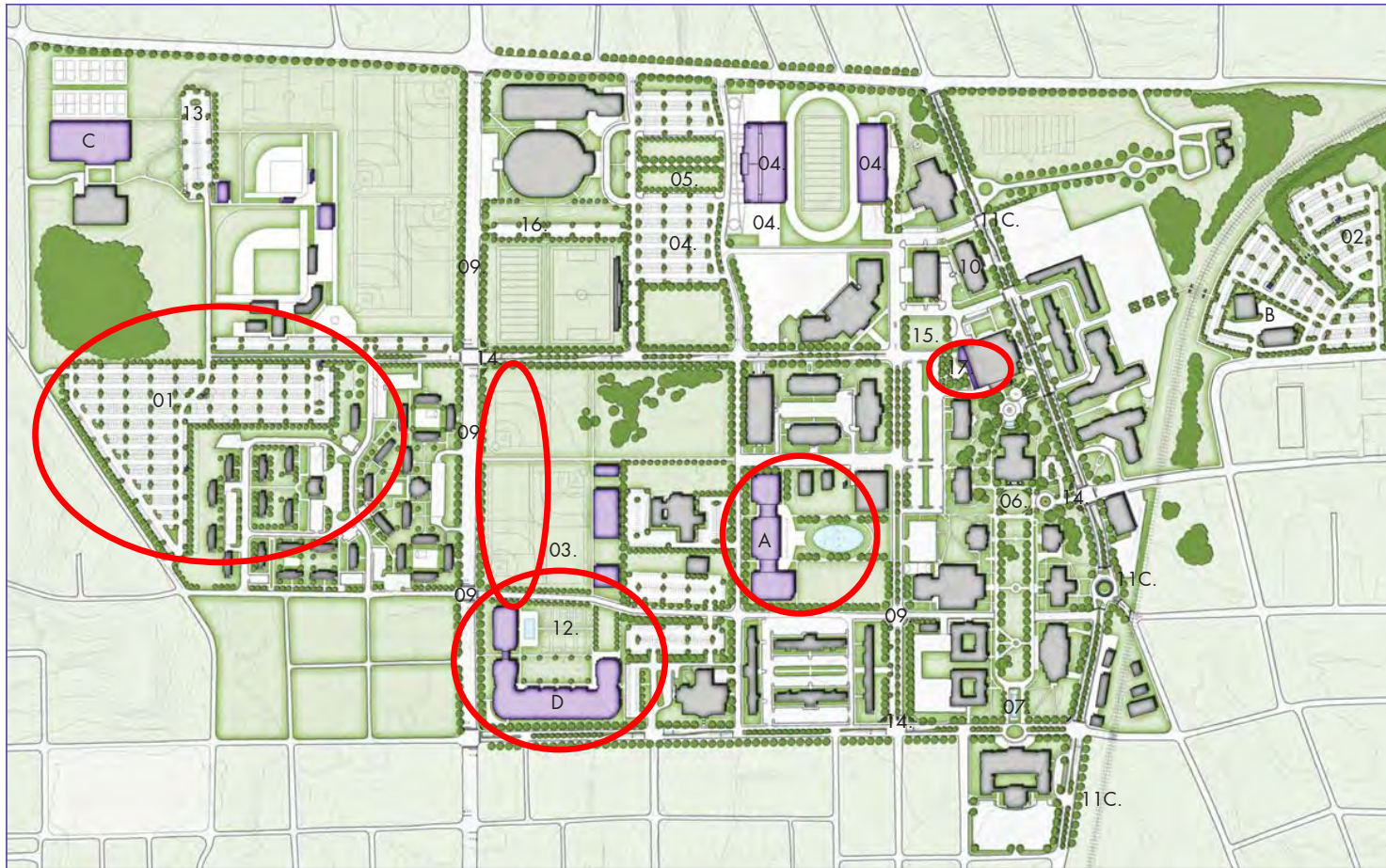
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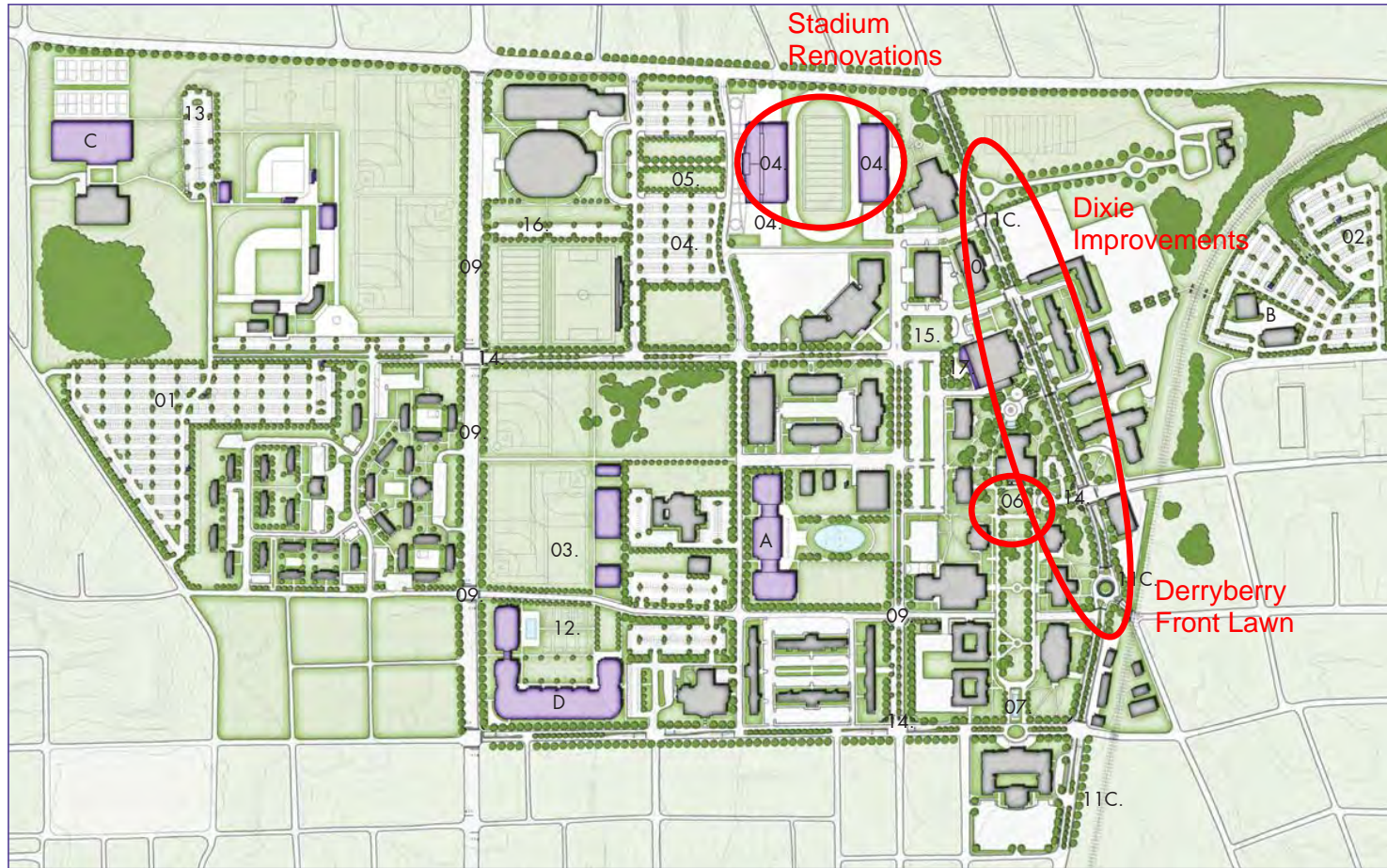


NEW BUILDINGS:

- A. Integrated Science Building
- B. Facilities Services Temporary Relocation
- C. Tennis Court Facility
- D. Intramural Building with corresponding fields

CAMPUS IMPROVEMENTS:

- 01. West Campus Parking Lot
 - a. University Drive Upgrades
 - b. Current Athletic Lot Upgrades
 - c. Shuttle Route I
- 02. Foundation Hall Parking
- 03. Southwest Intramural Quad
- 04. West Stadium Renovations
 - Stadium West Parking Greening
 - Stadium Southwest Parking Removed
- 05. Tailgate Lawn Implemented
- 06. Derryberry Front & Rear Lawn Improvements
- 07. Centennial Fountain
- 08. Peachtree Central & South Sections with Pedestrian Rotary
- 09. Willow Improvements
- 10. Pennebaker Renovations
- 11. Dixie Improvements
 - a. Dixie Avenue
 - b. Roundabout
 - c. Mahler Avenue
- 12. Rec. Tennis Courts relocated
- 13. Tennis Facility parking extended
- 14. Campus Gates established
- 15. Foster Demolition
- 16. Hooper Eblen Parking Greening
- 17. UC Improvements

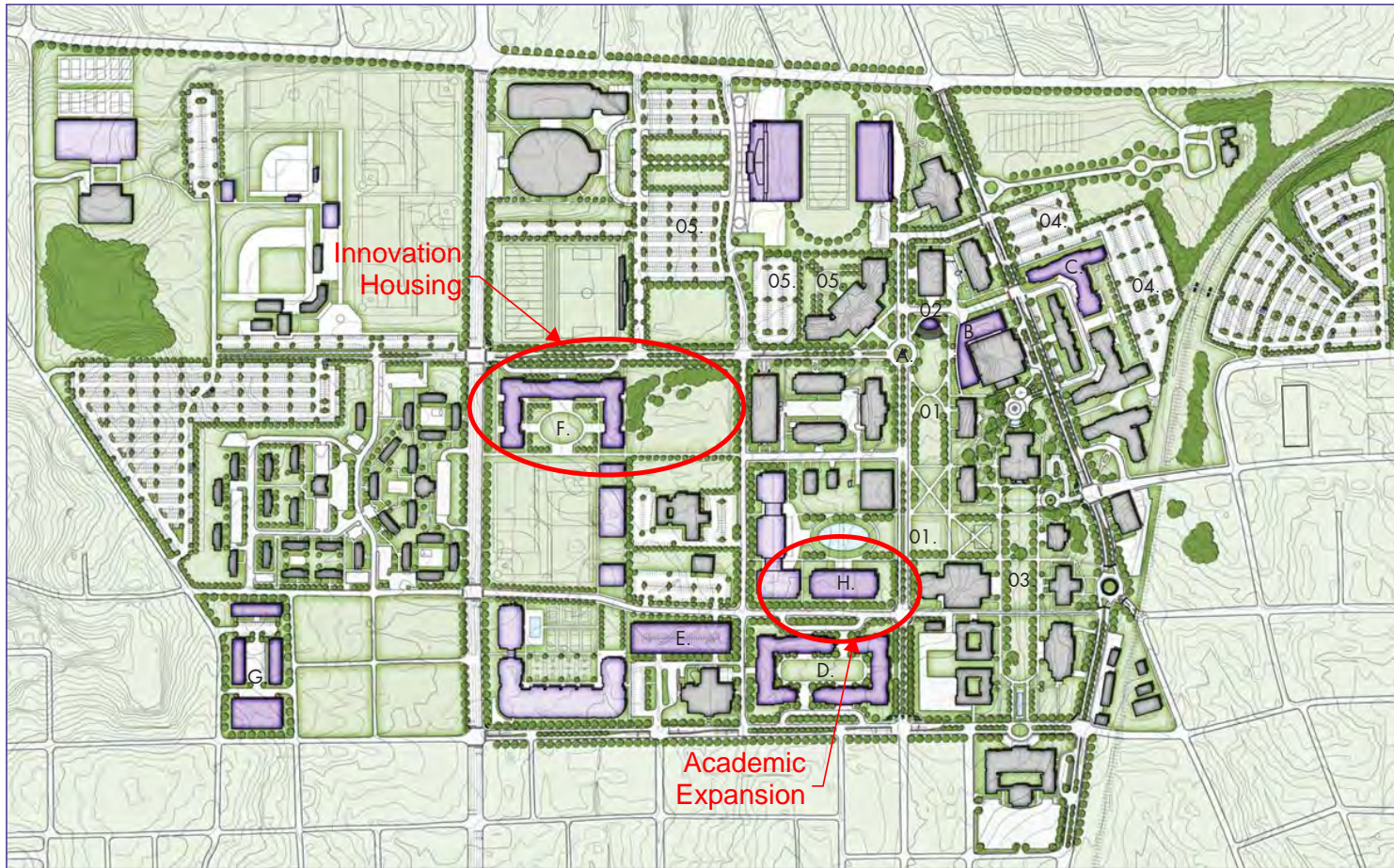


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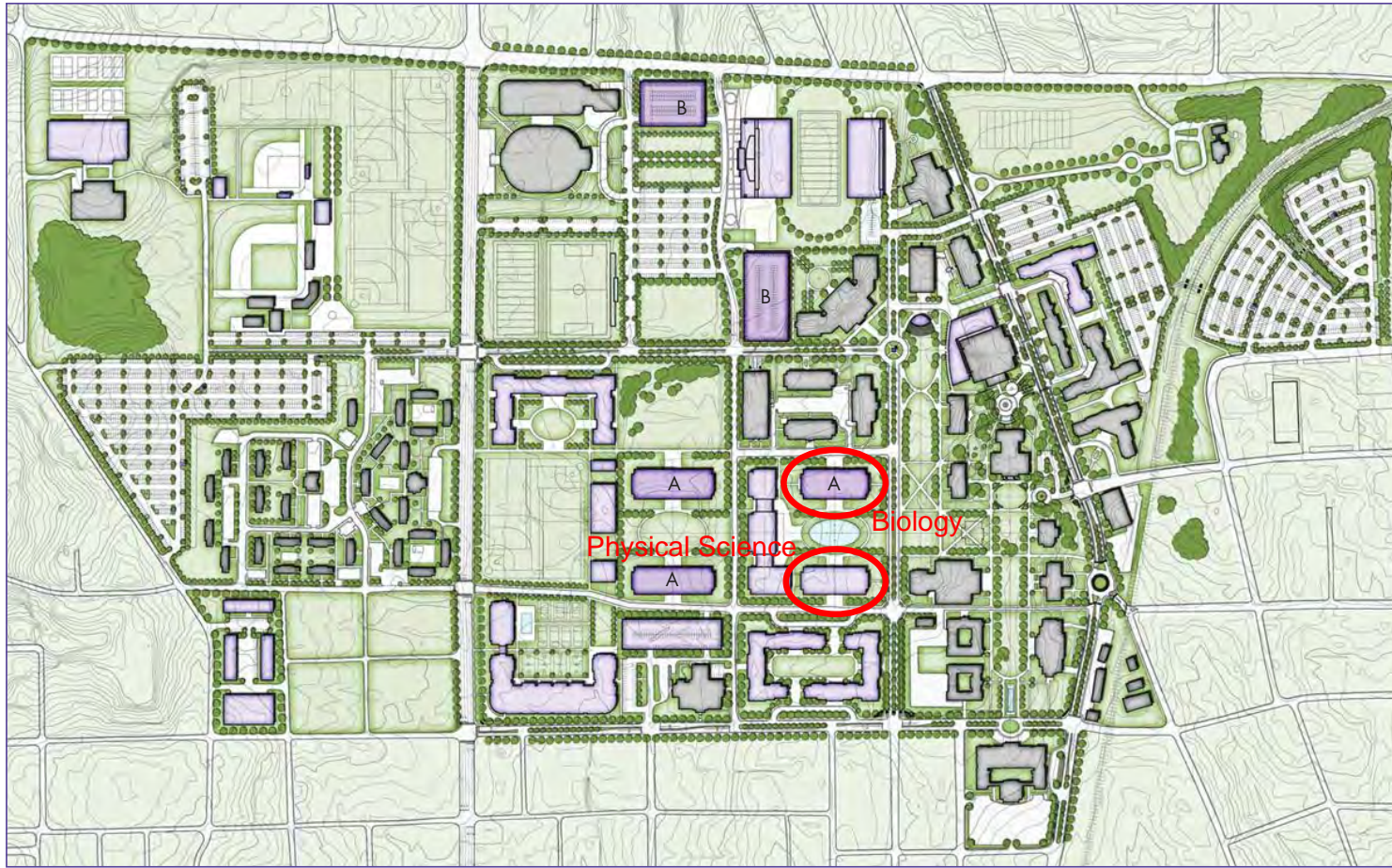


NEW BUILDINGS:

- A. TTU Bell Tower
- B. University Center Expansion
- C. New Jobe/Murphy Student Housing
- D. Capital Quad Housing Replacement
- E. 8th Street Parking Garage
- F. Campus Housing Expansion at University & Willow
- G. Facilities Services Relocation
- H. Academic Expansion
- J. West Stadium Expansion
- K. East Stadium Improvements

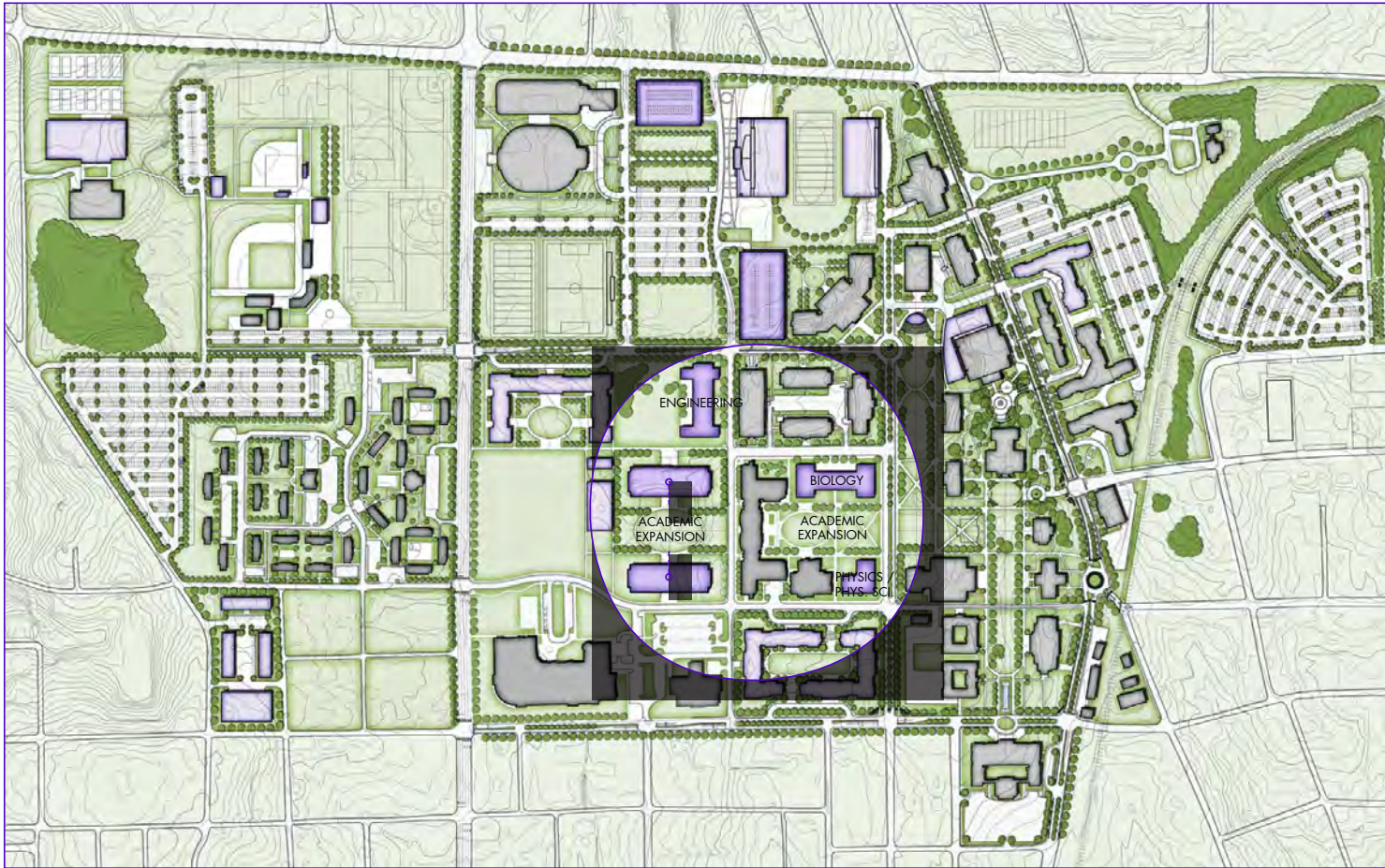
CAMPUS IMPROVEMENTS:

- 01. Peachtree Street and Mall
- 02. Peachtree Mall Amphitheater
- 03. Historic Quad Renovations
 - a. 8th Street Extension
- 04. Jobe/Murphy Housing Parking Improvements
- 05. Library parking improvements & outdoor classroom.
- 06. Track and Soccer Developed Off-campus



NEW BUILDINGS:

- A. Future Academic Expansion
- B. Additional Parking Structures



ACADEMIC EXPANSION

As academic space is required in the future, the replacement of buildings with low assessment scores should be considered. The opportunity for new building sites is primarily focused on the areas west of Stadium Drive and within the new Laboratory Science Building Block. It is envisioned that the Laboratory Science Building currently under construction could be flanked by other related science buildings along West 8th Street and along West 10th Street. This block could be developed as a “Science” Quadrangle with a Biology building and a Physics | Physical Science building on the north and south respectively.

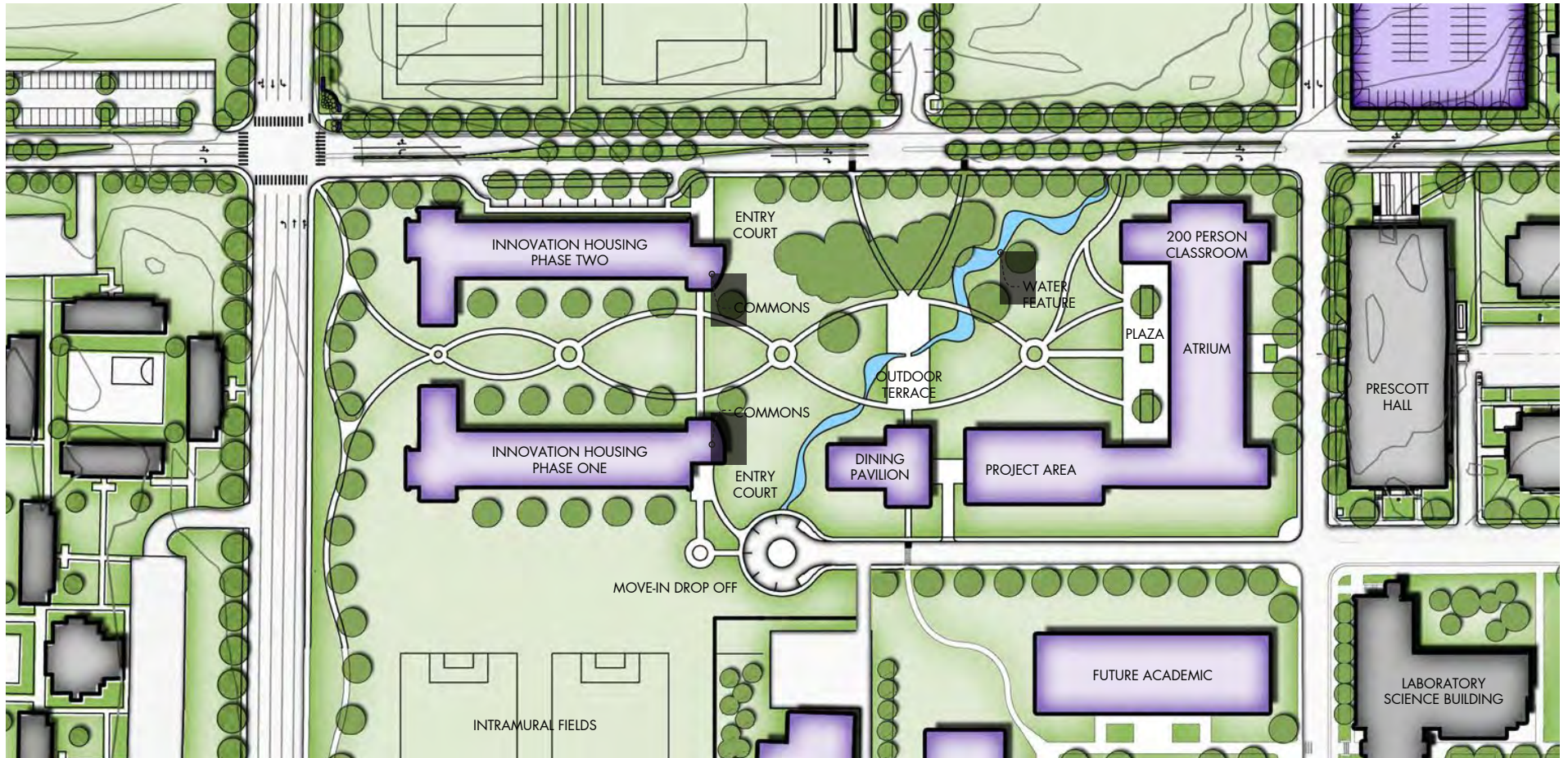
The next building to be developed on the campus is anticipated to be the new Engineering building. A desire of the university for the Engineering Building is that it present a progressive and engaging image at the forefront of the university. The development of the proposed quadrangle to the west of the new Laboratory Science Building is a long-term vision, as it is envisioned that Southwest Hall will be retained for the immediate future and significant infrastructure and maintenance relocations will be required in the remaining area. Given the significance of the Engineering Building to the University, a highly visible site was selected at the primary entry to the campus from Willow Avenue along University Drive. The future engineering building is proposed to be located on Stadium Drive opposite Prescott Hall. The proposed site extends the existing engineering focused Quad, which includes Bruner, Clement, Brown and Prescott, westward into Sherlock Park. While the front of the building will address Prescott Hall and the Stadium Drive, the highly visible western side will engage Sherlock Park and provide a distinctive image at this keynote entry into the campus. The band practice area currently utilizing Sherlock Park is proposed to be relocated to the front lawn of the Walton House across from the Bryan Fine Arts Building.

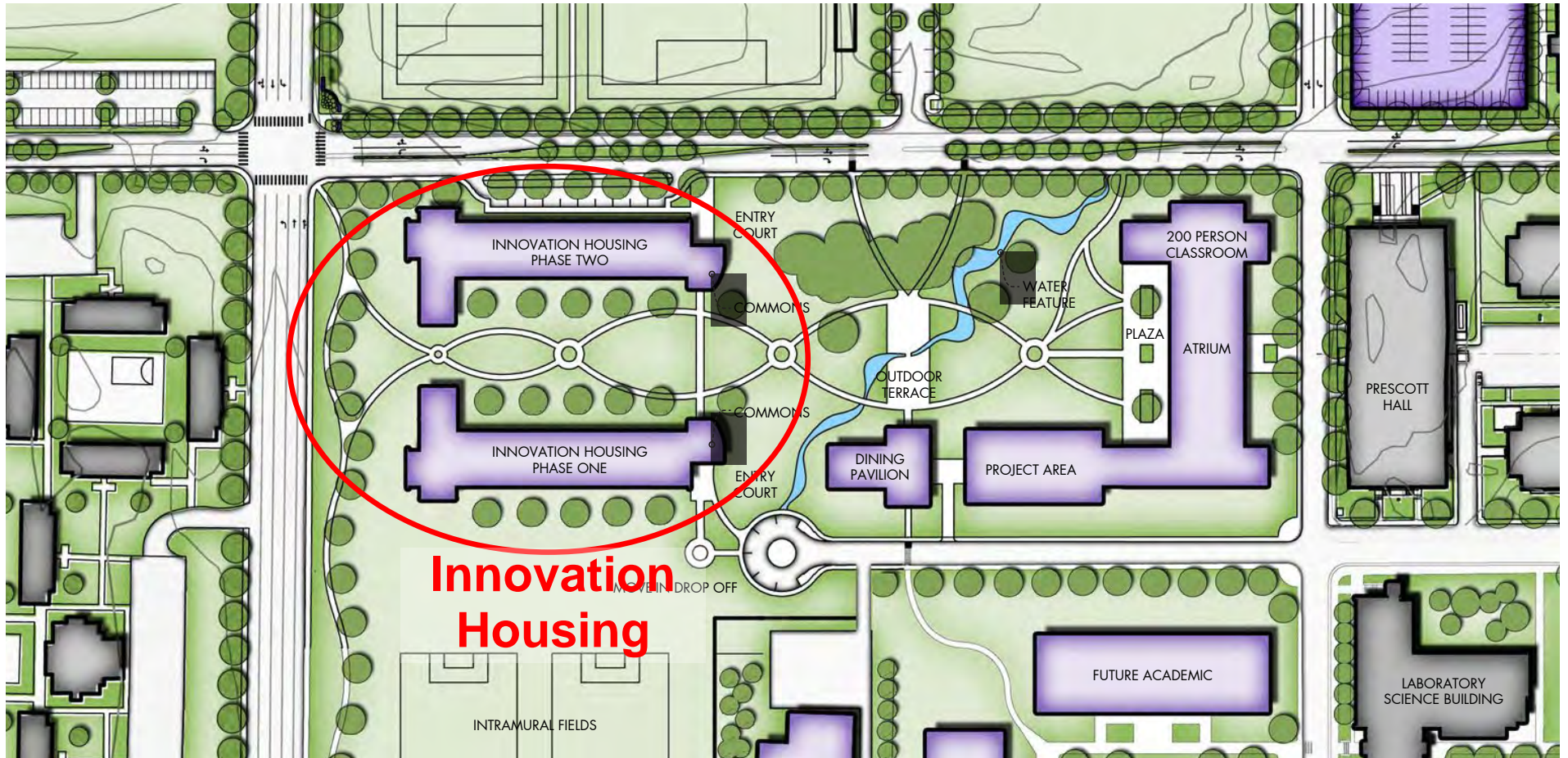


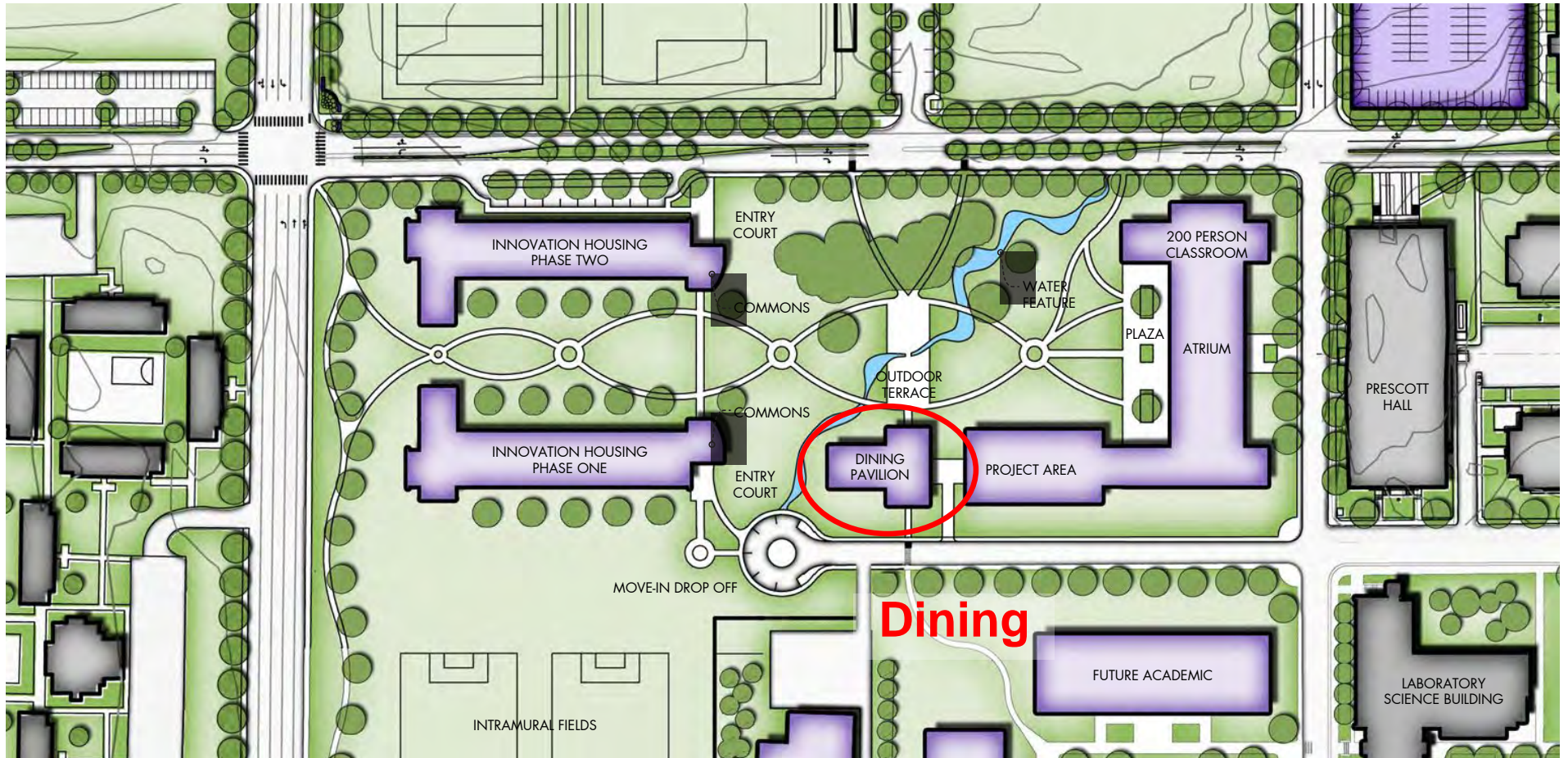
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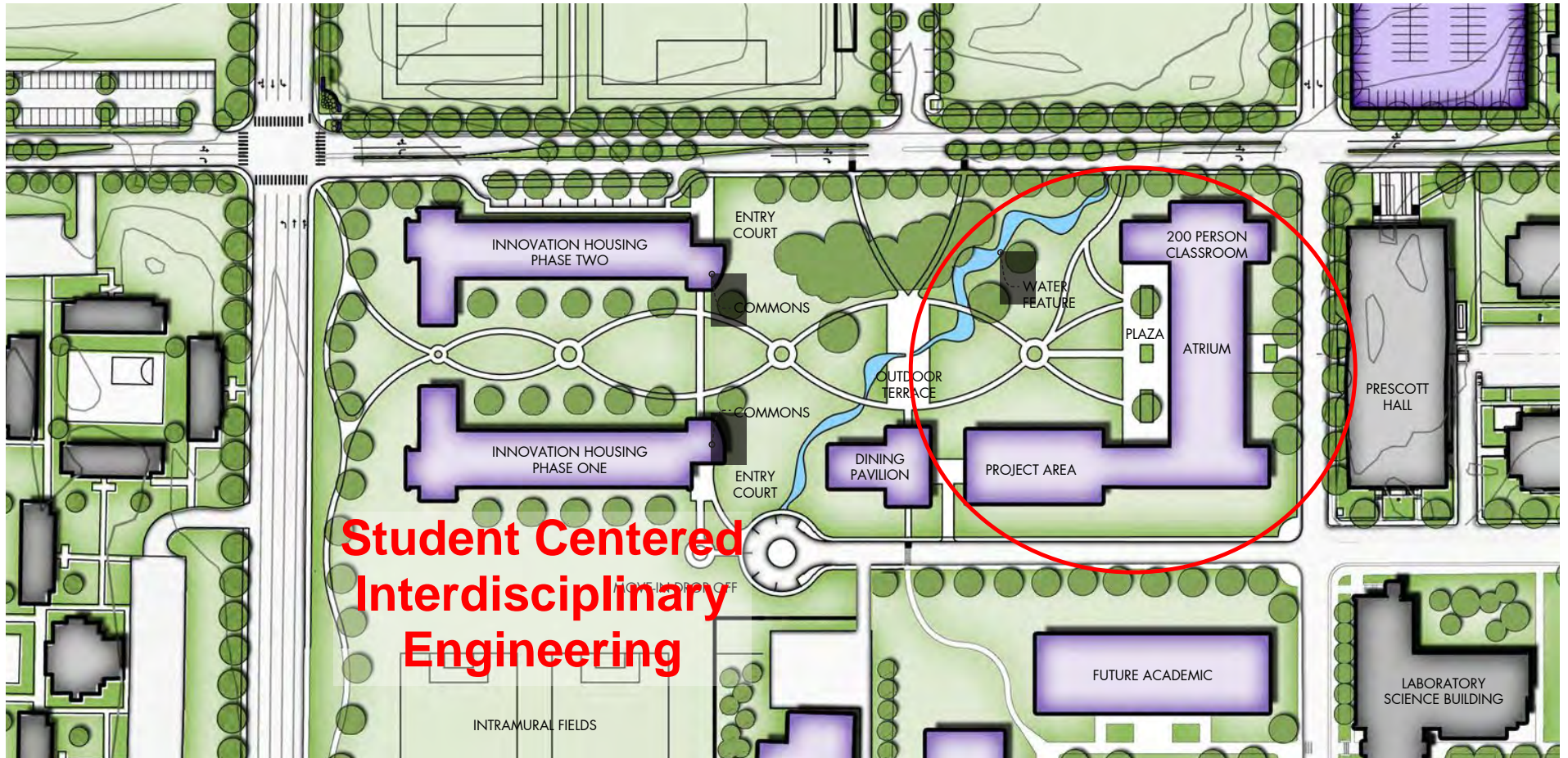
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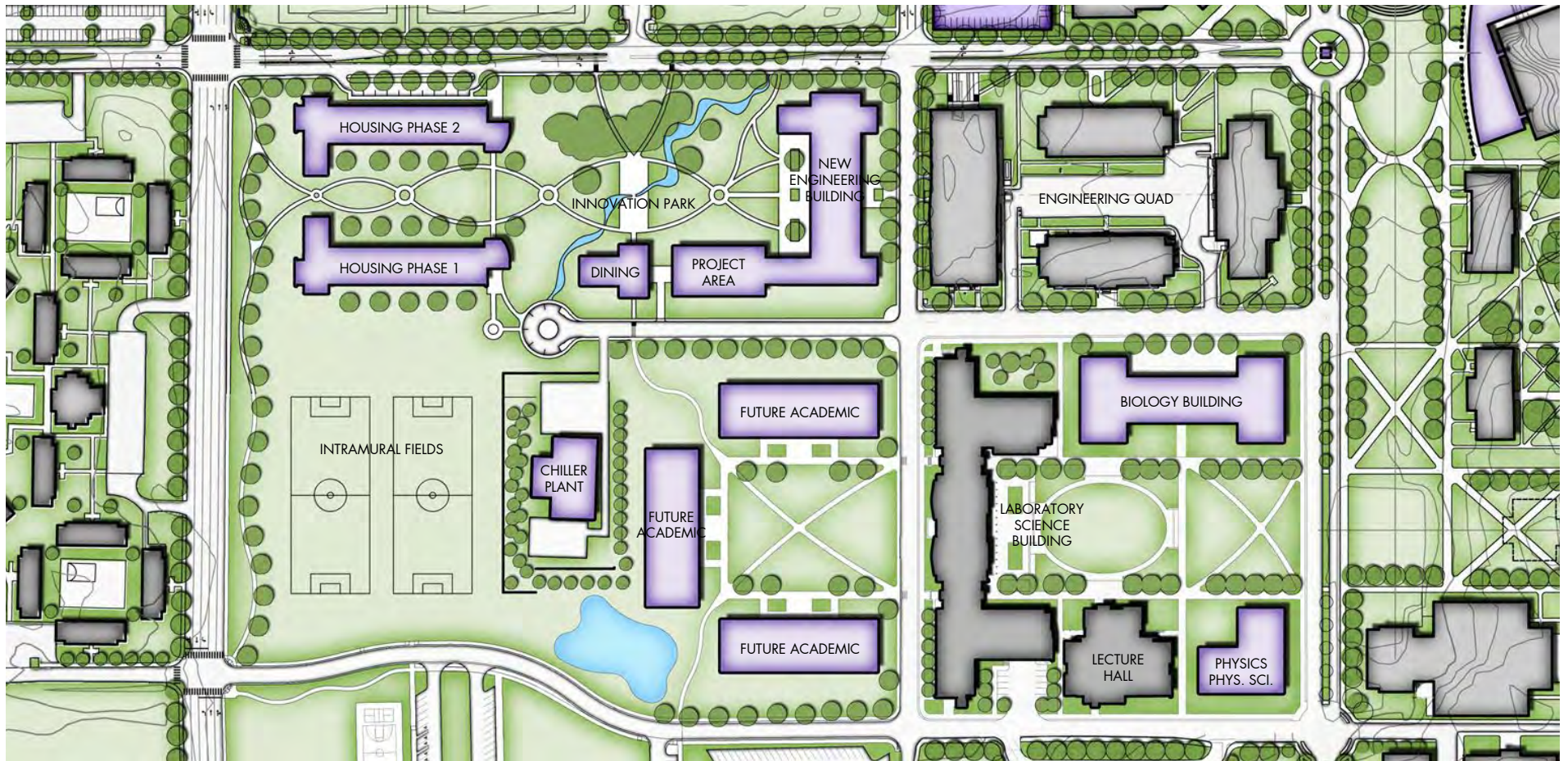
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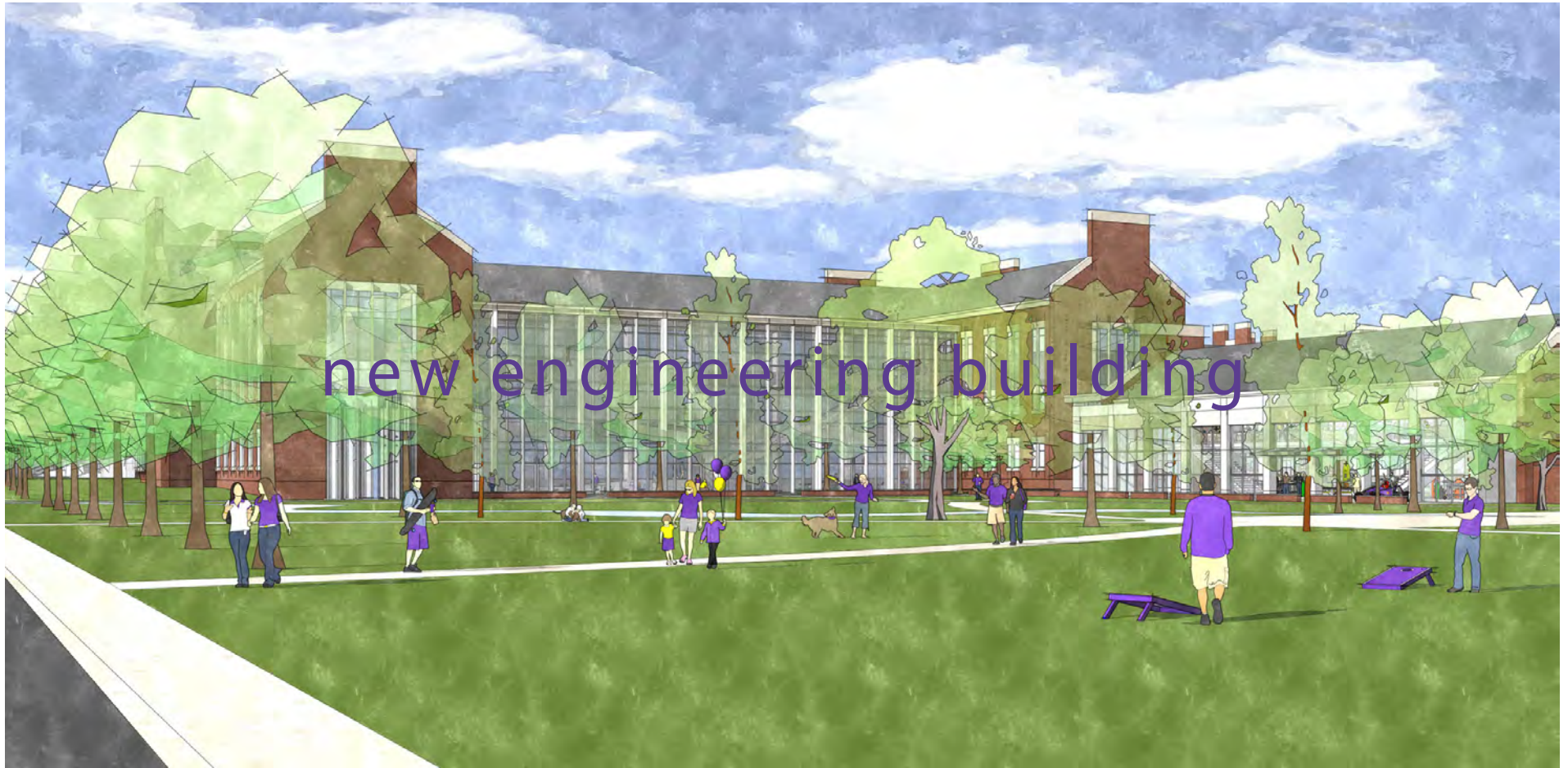






























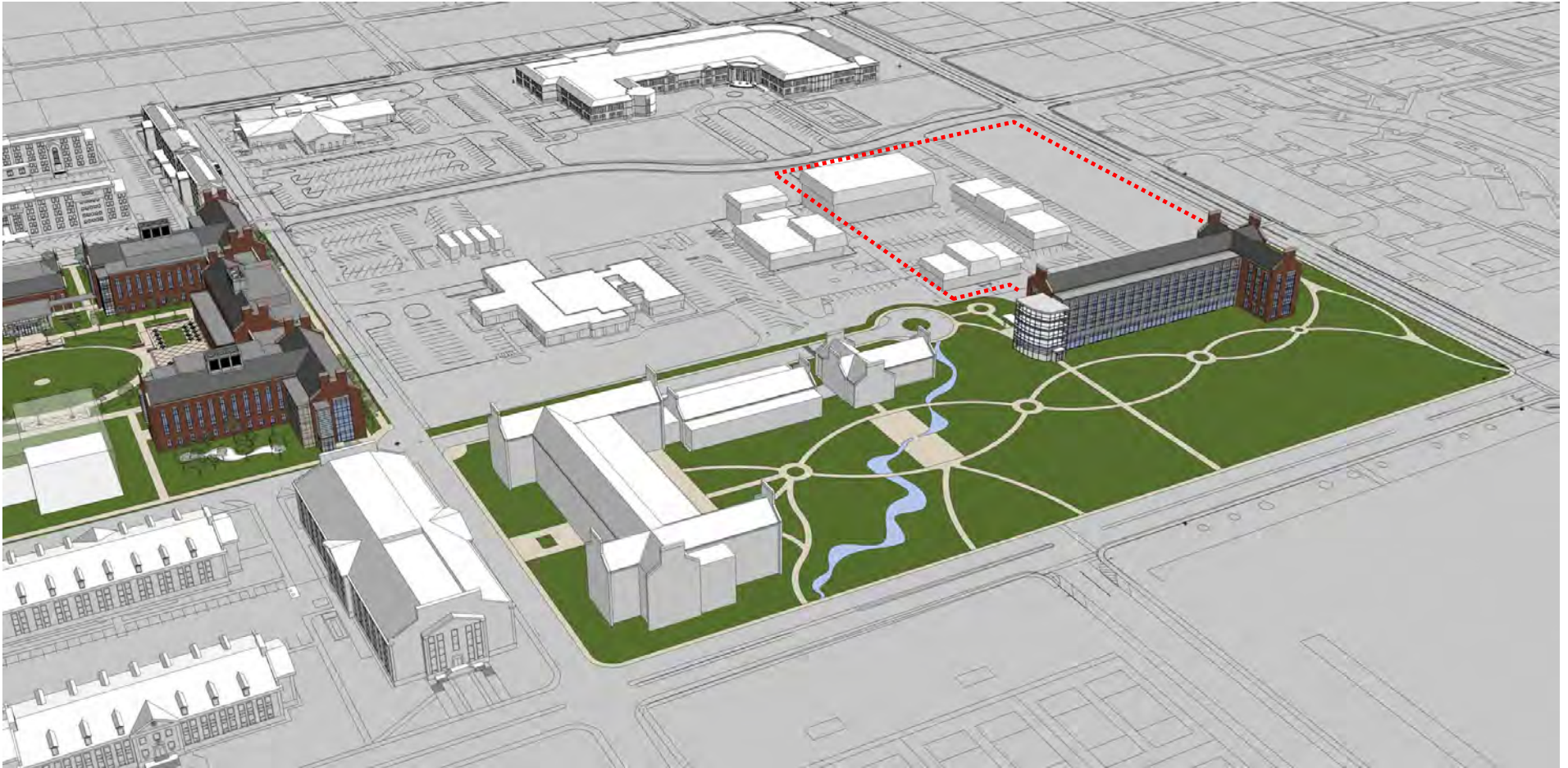




















Agenda Item Summary

Date: September 18, 2018

Division: Planning and Finance

Agenda Item: Five-Year Strategic Financial Plan Update

Review

Action

No action required

PRESENTERS: Dr. Claire Stinson, Vice President for Planning and Finance

PURPOSE & KEY POINTS: Update on progress toward a Five-Year Strategic Financial Plan.

The 4% Solution



BY DUANE KILTY

Ensuring stable operating margins in uncertain times

THE CHALLENGES FACING HIGHER education today are well documented. The cost of delivering high-quality programs continues to rise, and the expectations of students have never been higher. Reliance on tuition to cover costs is increasingly unsustainable: Demographics for traditional-age prospects are unfavorable in many parts of the country, making it difficult to recruit students. Income from private giving has not kept pace, nor has the spending from endowment funds. And state support for public institutions has declined in most areas of the country. Discount rates are increasing as prospective students shop for more affordable options. The pressure to change is significant and not likely to end anytime soon.

Governing board members bear responsibility for oversight of the financial and strategic health of the colleges and universities they serve. To enjoy long-term financial health, an institution should experience a 4 percent operating margin, according to *Strategic Financial Analysis for Higher Education* by Prager & Co. LLC. That means enrollments are growing or at least are stable, costs are being controlled to ensure they don't rise faster than revenues, and debt is kept within threshold limits. It also means that institutions must offer academic programs that match student interests and teach the skills that are necessary in the workplace, as long as they are consistent with institutional mission and educational purpose.

RON_THOMAS/GETTY IMAGES

Some schools are strong and robust with an optimistic forecast. Many others are struggling and need to make significant changes to compete successfully in the marketplace. Even if things are going well today, the demands of the public and the challenges facing higher education are likely to ensure change will be needed in the future.

To be prepared, trustees and campus leaders need to think carefully about the future of higher education and the changes the institution should make to be competitive. The process should be comprehensive and robust. The ultimate objective is to create and implement a strategic plan that will help the institution become stronger.

From my perspective, campus leaders will need to take risks because the required changes will be significant. Alterations are likely to include innovative programs, delivery modalities, and new business models. At the same time, leaders will need the discipline to execute strategic plans with high levels of accountability. Throughout the change process, trustees and the administration must maintain a steadfast commitment to the institution's mission. The question is, will institutions be proactive or will they react after the institution is in decline?

Because annual operating health is a prerequisite for overall financial and strategic health, I approach strategic finance from a planning perspective. If the annual operating budget is producing a 4 percent margin and enrollments are growing, the balance sheet will become stronger with good management. In my experiences as a longtime CFO, campus leader, and consultant, a six-step planning framework can be helpful to create systemic change and strengthen the financial

and strategic health of an institution. The approach, which draws from my experiences as a longtime chief financial officer, a campus leader, and a consultant, is designed to create systemic change to strengthen the financial and strategic health of an institution.

Through long experience with 11 institutions, I have proposed a six-step financial planning model that works well in practice.

SIX-STEP PLANNING FRAMEWORK

The six-step framework for strategic finance planning is:

1. Reevaluate
2. Reimagine
3. Reduce
4. Reinvest
5. Resolve
6. Results

STEP 1: REEVALUATE

The purpose of the analysis in Step 1 is to get everyone to agree on the starting line. There are six sub-steps. Step 1A, Environmental Analysis, comprises a SWOT (strengths, weaknesses, opportunities, and threats) analysis. The gross price, net price, retention, and enrollment funnel study occurs in Step 1B, Market Position. Step 1C, Financial Analysis, reviews financial health and follows the AGB publication *The Board's Role in Financial Oversight* by Natalie Krawitz. Mission, vision, and values are reviewed and changed, if necessary, in Step 1D, Mission/Vision/Values.

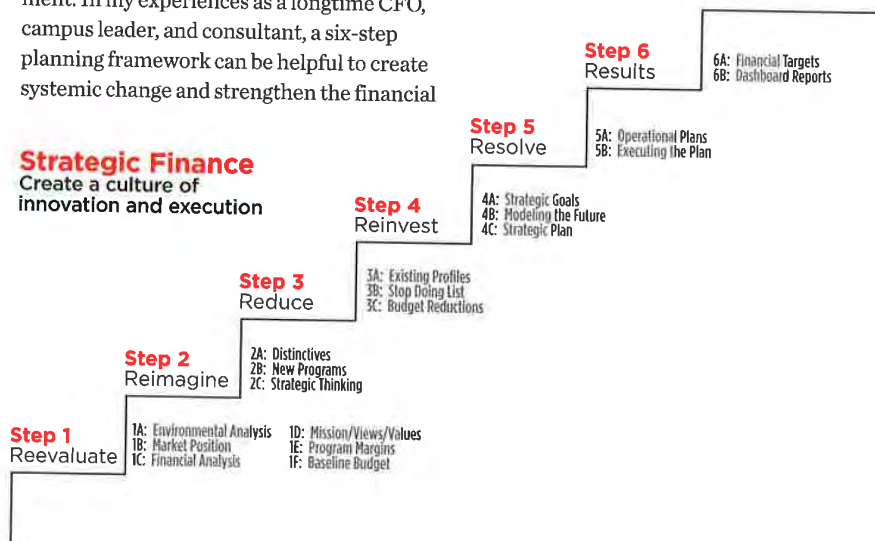
TAKEAWAYS

1 To enjoy long-term financial health, a higher education institution should experience a 4 percent operating margin. That means enrollments are growing, or at least are stable, costs are being controlled, and debt is kept within its threshold limits.

2 Trustees and campus leaders need to think carefully about the future of higher education and the changes the institution should make to be competitive.

3 A six-step planning model—reevaluate, reimagine, reduce, reinvest, resolve, and results—can be helpful to create systemic change to strengthen the financial and strategic health of the institution.

Strategic Finance Create a culture of innovation and execution



The creation of profit-and-loss statements in Step 1E, Program Margins, reveals the operating margin each program generates. This exercise provides good data for decision making. Plus, it shows how much each program contributes or draws from the bottom line.

The aim is to use the data from the analysis to improve programs and identify ones for elimination. Decisions must be rooted in the culture and history of the school. Sometimes weak programs should be kept for pedagogical or mission-related reasons. At other times they are essential to the identity of the institution.

In Step 1F, baseline budgets are prepared to reflect the current plan for the next five years. The enrollment, pricing, staffing, compensation, and other assumptions should be explicit. The discussion of the baseline budget and financial statements should include any real or perceived unfunded budget needs. These issues are elephants in the room later in the process and should be addressed at the front end.

For Step 1, governing boards should ensure:

- Trustees reviewed mission, vision, and values.
- The academic committee and student life committee processed the data generated in the various sub-steps.
- The finance committee reviewed the baseline budget for realism.
- Everyone is comfortable with the data and process.

STEP 2: REIMAGINE

Now that everyone involved has a common understanding of the starting line, attention is turned to communicating the academic mission, developing new programs, and thinking carefully about the future. It is important to reimagine what is ahead before diving into the hard work of potential budget reductions and other important changes.

The aim of Step 2A, Distinctives, is to communicate the school's academic mission. To ensure students consistently experience the academic mission, the elements should be mapped to the curriculum and co-curriculum. That is the only way to be sure the institution fulfills its commitment to students.

Step 2B, New Programs, puts a process and decision-making model in place to

develop and launch new programs. When done well, this model serves as the innovation engine that drives the institution into the future.

Trustees should partner with the administration in Step 2C, Strategic Thinking, and create an understanding of the future of higher education. The list would include changes in student demographics, educational delivery channels, the business model, and student expectations. In addition, the changes required for the institution to remain competitive are identified. Even though the future is uncertain, a working understanding serves as the roadmap for the strategic plan. Having a clear direction aids decision making and improves productivity.

For Step 2, governing boards should ensure:

- The curriculum and co-curriculum have a clear and consistent articulation of the academic mission.
- The administration can scan the environment and launch new programs that interest students and meet the needs of employers.
- The administration understands the future landscape of higher education, along with the institution's standing.

STEP 3: REDUCE

With two steps completed, the starting and ending points of the process are in place. For schools that must reduce their budgets, now is the time to do the hard work.

This step has three sub-steps. The aim of Step 3A is to clarify existing priorities. Faculty and staff have long memories. Every promise made by the administration is expected to be funded someday. Outstanding issues can impede strategic planning and should be resolved before continuing.

Creating a "stop doing" list in Step 3B is a good business practice. By freeing up funds, institutions can invest in the future.

For some institutions, Step 3C, Budget Reductions, is the only way to fund new ideas. For others, it is a good business practice. Schools that have budget deficits need to cut enough to balance the budget and allow funds for reinvestment. Cost cutting, without reinvesting, is likely to turn into a death spiral. Reducing to reinvest in new ideas creates hope for the future.

Schools that are doing well and do not need to cut costs to free up funds for reinvestment should consider doing so anyway. Good times don't last forever. Leaders need to stay alert and not let any waste slip into the system.

For Step 3, governing boards should ensure:

- Clarification of existing priorities and elimination of those that are not important.
- Identification by the administration of programs, people, systems, and processes that will be discontinued.
- A viable plan to close the gap between available resources and the cost to fund the new strategic plan.

STEP 4: REINVEST

After three steps, half of the process is complete and funds for reinvestment have been identified. The focus of Step 4 is to develop a strategic plan that will guide the institution into the future. Step 4A completes strategic goals, which should commit to a clear direction. Because people fear change and want certainty over the outcome, it is much easier for leaders to make minor adjustments than to alter the direction of the institution. Great leaders transform the fear of the unknown into confidence.

The outcome of Step 4B, Modeling the Future, is a forecast that shows cost reductions and changes. Plus, it identifies the cost of each element of the strategic plan. The table on page 28 shows the multi-year impact of each decision organized by category so leaders understand the impact.

Step 4C entails writing the strategic plan. It should be easy to read and formatted like other important documents. Each goal should include strategies, target dates, measures, and the person responsible.

For Step 4, governing boards should ensure:

- They have reviewed and approved the strategic plan.
- The administration has committed to a clear direction.
- Financial projections are realistic and achieve the overarching financial goals of the institution.
- They are comfortable with the amount of risk the administration is taking, and that new programs align with the mission.

Strategic Plan Financial Model						
	Budgeted 2016-17	Projected 2017-18	Projected 2018-19	Projected 2019-20	Projected 2020-21	Projected 2021-22
Beginning Surplus (Deficit) - Base	(1,800,000)	(1,166,863)	(263,436)	(110,877)	553,249	1,471,310
Total Changes to Income	133,137	(117,971)	152,559	664,126	918,061	622,005
Total Changes to Expenses	(500,000)	(1,021,399)	-	-	-	-
Ending Surplus (Deficit)—Base	(1,166,863)	(263,436)	(110,877)	553,249	1,471,310	2,093,315
Total Stop Doing List	-	500,000	500,000	500,000	500,000	500,000
Total Impact of New Goals	-	(828,943)	62,029	750,000	1,000,000	1,250,000
Surplus (Deficit)	(1,166,863)	(592,378)	451,152	1,803,249	2,971,310	3,843,315
Target	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000

STEP 5: RESOLVE

Completing Step 4 puts the strategic plan in place. Now it is time to do the hard work of implementation. The purpose of Step 5A is to create operational plans that will help accomplish the strategic goals. Each major unit of the institution should create its own plan aligned with the strategic plan. Employee plans should align with the unit and the strategic goals.

Step 5B, Executing the Plan, has two activities. First, the administration and operational leaders should meet. This

happens at least four times per year. Key faculty are included, and every element of the plan is reviewed. Roadblocks are removed and any confusion about what is most important is clarified.

When discussions are frank, these meetings work well and help to get things done. Leaders must create an open environment for people to speak honestly. If not, they won't share their ideas.

Second, administrative and operational leaders need to instill new habits that will change the culture

and incentivize the right behavior. I recommend that every employee send his or her goals for the next week to their supervisor. The email should review the accomplishments from the week before. The reason for missed goals should be explained and discussed in person. Like the strategy execution meetings, the purpose is to remove roadblocks and solve problems. I call this process "implementation emails." Everyone should be included, especially the senior administration.

Some Practical Advice

Trusteeship asked Conrad Clemens, MD, chair of the Goshen College board of directors, to comment on his experience with Duane Kilty's strategic finance process and offer advice for board members undergoing a similar analysis. Dr. Clemens is associate dean for graduate medical education at the University of Arizona College of Medicine.



Conrad Clemens, MD

1. Why did your board get involved with strategic

finance? What had it been doing previously? Like other small, private liberal-arts institutions, Goshen College has been buffeted by the swirling winds of change in higher education. As Duane mentions in his article, the increased scrutiny regarding the value of a liberal-arts

degree in light of rising tuition costs, coupled with alternative educational models (i.e., online programs, community colleges), has posed a challenge for maintaining enrollment levels. Because Goshen College traditionally has been a tuition-driven institution, this deeply affected our bottom line. Although Goshen has a fairly robust endowment, the need to balance a budget with fewer tuition dollars fell increasingly and ominously on draws from the unrestricted endowment.

Goshen's board and leadership had an

unrealistic hope that this unstable higher education landscape was only temporary. As the endowment draws became larger and more frequent, we realized our usual annual budgeting process was not strategic but only nibbled around the edges. We periodically made painful, reactionary cuts, hoping we "wouldn't have to do that again." We needed a strategic plan that was agile and reality-based.

2. What, in particular, is happening at small, private institutions that makes this work critical?

For Step 5, governing boards should ensure:

- The institution has, or is developing, a culture of execution.
- Strategy execution meetings are being held regularly.
- Operating plans are properly interconnected.
- Implementation emails, or something similar, are used to foster a culture of execution.

STEP 6: RESULTS

After five steps of the process, everything is in place except for the scorecard. Step 6A, Strategic Targets, sets financial goals for the various measures the administration and trustees use in their governance roles. These targets guide decision making. Action is required for any measure below its desired level. The solution is likely to involve addressing operational issues.

A great practice is to create a strategic finance fact book and include every measure being tracked. The measures should include historical trends and projections for the future. My goal as a chief financial officer was to include the answer to every question the finance committee ever asked because if members

inquired once, they were likely to check again. New questions were added to the fact book with historical trends and projections.

The aim of Step 6B is to create a dashboard report, which includes measures essential to the institution’s financial health, along with definitions, trend data, comparisons with other institutions, and strategic targets. Trustees help create the report. It contains only a few key indicators whereas the strategic financial targets are comprehensive. Once in place, it serves as the financial GPS. A good dashboard report helps trustees quickly assess how well things are going.

For Step 6, governing boards should ensure:

- Regular review of the strategic plan.
- Regular review of the strategic financial plan.
- The administration understands why measures are doing better or worse than the target.
- Questions receive appropriate answers that are not defensive.
- Finance committee involvement in dashboard report development.
- Every trustee understands the dashboard report.

Implementing the six-step planning framework can cause staff problems to surface. Some mid- and upper-level leaders won’t be able to make hard decisions and produce at the level necessary. As a result, they could choose, or be asked, to leave their positions. In my experience, this has not been disruptive, but beneficial. A stronger person assumes the role, and the institution moves forward.

No one knows what the higher education landscape will be in a decade, but if the past 10 years are instructive, it will markedly change. As schools implement the framework, they will:

- Find ways to lower the price and maintain quality.
- Develop new business models that are more sustainable than the current one.
- Develop expertise in scanning the market and implementing innovative programs that meet market needs.
- Improve processes to be more productive.
- Experiment with and implement creative new delivery modalities. ■

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The smaller the institution, the less cushion there is to withstand changes in the higher education landscape. Most of these institutions are driven by enrollment. Any downtick can lead to a downward spiral with less income and, as a result, fewer programs or faculty for students. The competition for students is fierce, resulting in attempts to woo them with larger and larger discount rates as well as a reactionary temptation to add programs. Compounding this challenge is the desire for students to have immediately translatable job skills upon graduation.

Smaller private institutions tend to have smaller, close-knit faculties. While making strategic cuts is difficult anywhere, these close relationships, coupled with intense pressure to keep programs considered “sacred cows,” require a board and institutional leaders who are strategic, clear-headed, and strong.

3. What advice would you give other boards undertaking a similar analysis?

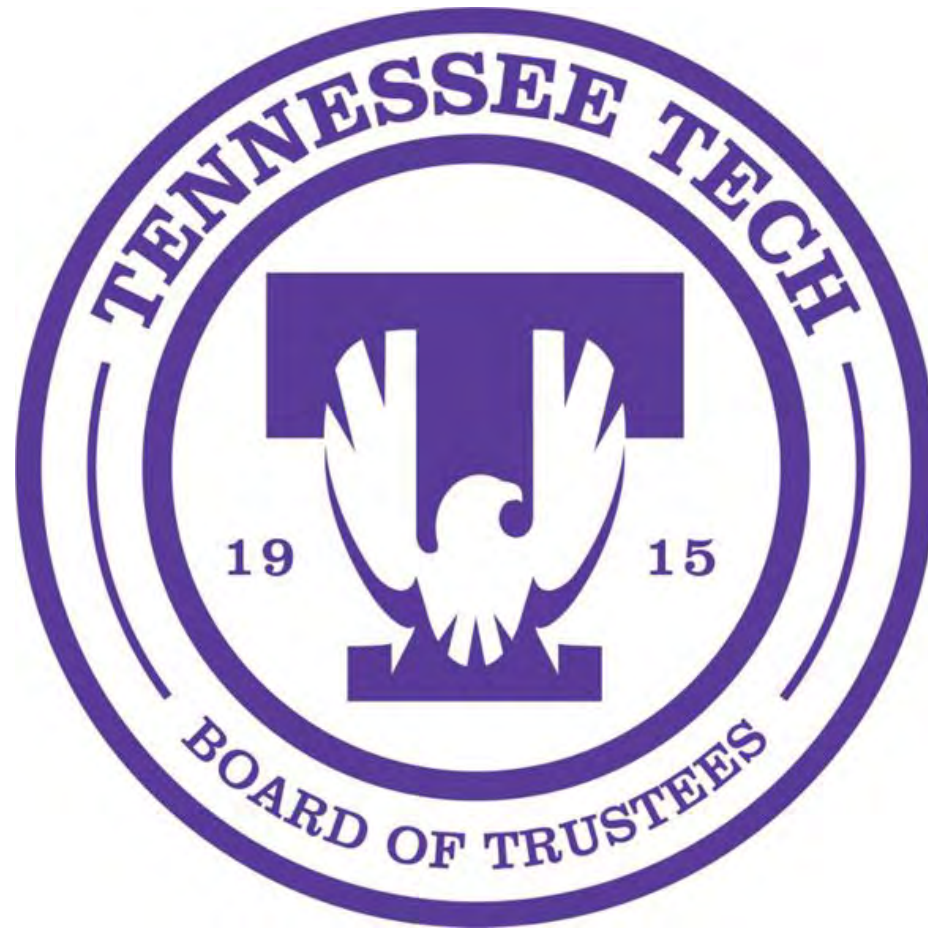
I have three pieces of advice that stem from this process. First, accept the fact that the “swirling headwinds”

in higher education are not temporary. For many, the hope was to simply hunker down and outlast them. The challenges that we are facing in higher education are the new normal. And they may become more difficult. Institutions that refuse to accept this fact do so at their own peril and risk becoming obsolete.

Second, institutions need a strategic plan that is agile. Given the unpredictability of higher education, setting an immutable five-year plan is unwise. Agility is critical.

Finally, since these changes can be deeply

disruptive for small institutions, open, trusting, and frequent communication between board and institutional leadership is a must. Both must be fully on board with the plan. This communication provides mutual support during difficult (and emotional) times. It provides the ability to review the strategy frequently and decide when to continue the course and when to tweak a program or make a major change. A categorical statement that the board supports the leadership’s strategic plan is very powerful and must be substantiated.





Five Year Strategic Financial Plan

Presentation to Audit & Business Committee
Board of Trustees

September 18, 2018



5-Year Strategic Financial Plan

- Responds to request from Audit and Business Committee of the Tennessee Tech Board of Trustees
- Consistent with the Tech Tomorrow Strategic Plan
 - Goal 3: Exceptional Stewardship, Priority Action C: “Continue to develop, implement, and evaluate a dynamic long-term budget model that informs effective financial management and consistent strategic investment.”



Objective

- Strengthen financial and strategic health
- Target 4-5% margin in operating budget with growing enrollments



Outcomes

- Find ways to contain tuition increases and maintain quality
- Develop new business models that are more sustainable than current ones
- Develop expertise in scanning the market and implementing innovative programs that meet market needs
- Improve processes to be more productive
- Experiment with and implement creative new delivery modalities



5-Year Plan Ad Hoc Committee

Committee Members

Dr. Claire Stinson	VP for Planning and Finance
Dr. Lori Mann Bruce	Provost
Dr. Brandon Johnson	VP for Enrollment Management and Career Placement
Dr. Paul Semmes	Dean, College of Arts and Sciences
Dr. Steve Isbell	Professor, Economics, Finance and Marketing
Dr. Deborah Ballou	Associate Professor, Decision Sciences and Management
Ms. Emily Wheeler	Associate VP for Business
Dr. Joseph Chappell	Budget Analyst



Goal of the Committee

- To develop a unified framework for projecting future university budgets in broad categories, using **best estimates** for enrollments, tuition rates, state appropriations and expenses, including costs of existing activities and new initiatives.
- This framework will allow **testing different models and scenarios** and can include **confidence intervals** from predictive modeling.
- This effort will help inform “*effective financial management and consistent strategic investment.*”



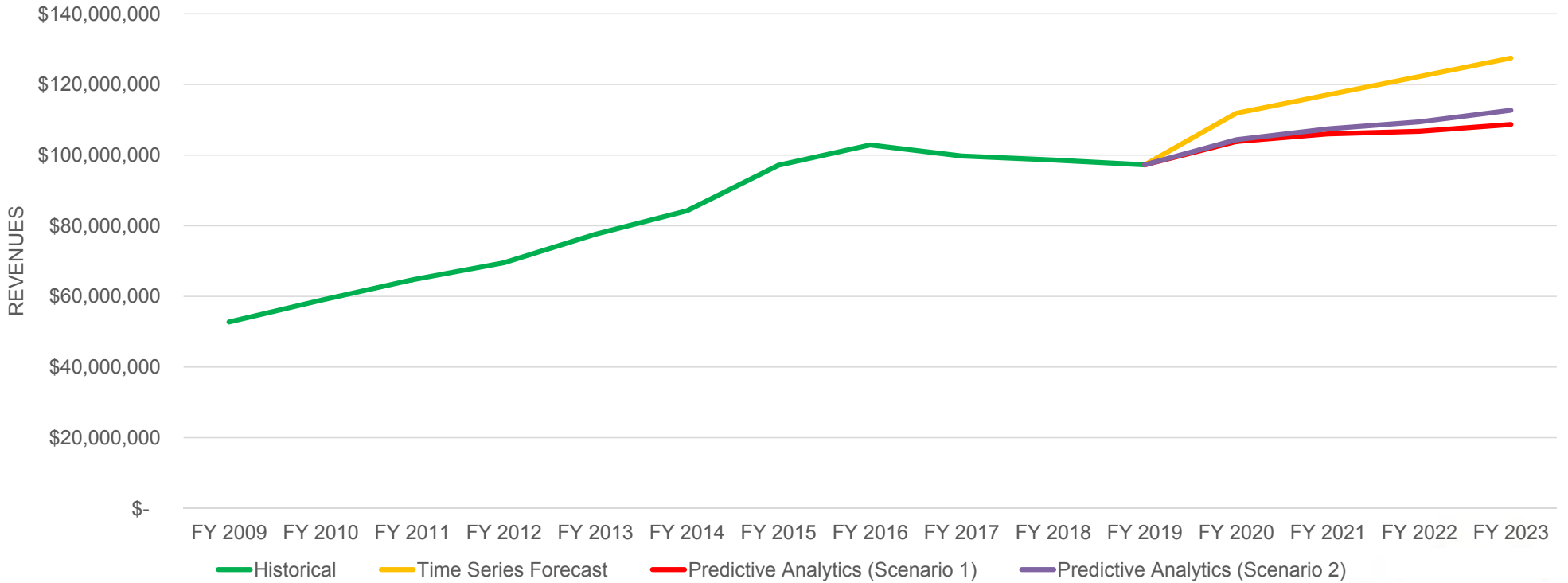
Reevaluate – Agree on a Starting Line

- Market position
 - Gross price: current maintenance fees for UG \$3,744; Out of state \$7,932 per semester
 - Net price for UG: 21% discount rate
 - 250R rate option for out-of-state \$2,618
 - Retention and enrollment funnel
 - Predictive analytics model
 - Time series forecast model
 - Undergraduate enrollment model



Revenue Projections

Tuition and Fee Revenues



Composite Financial Index (CFI)

- Four ratios weighted and scored on a single scale to create a financial health score
 - Primary reserve ratio
 - Viability ratio
 - Return on net assets ratio
 - Net operating revenues ratio
- Single score allows weakness in one ratio to be offset by strength in another ratio
- Expected value is national comparison (KPMG – Prager, Sealy & Co., LLC)
- Trend is over 5 years

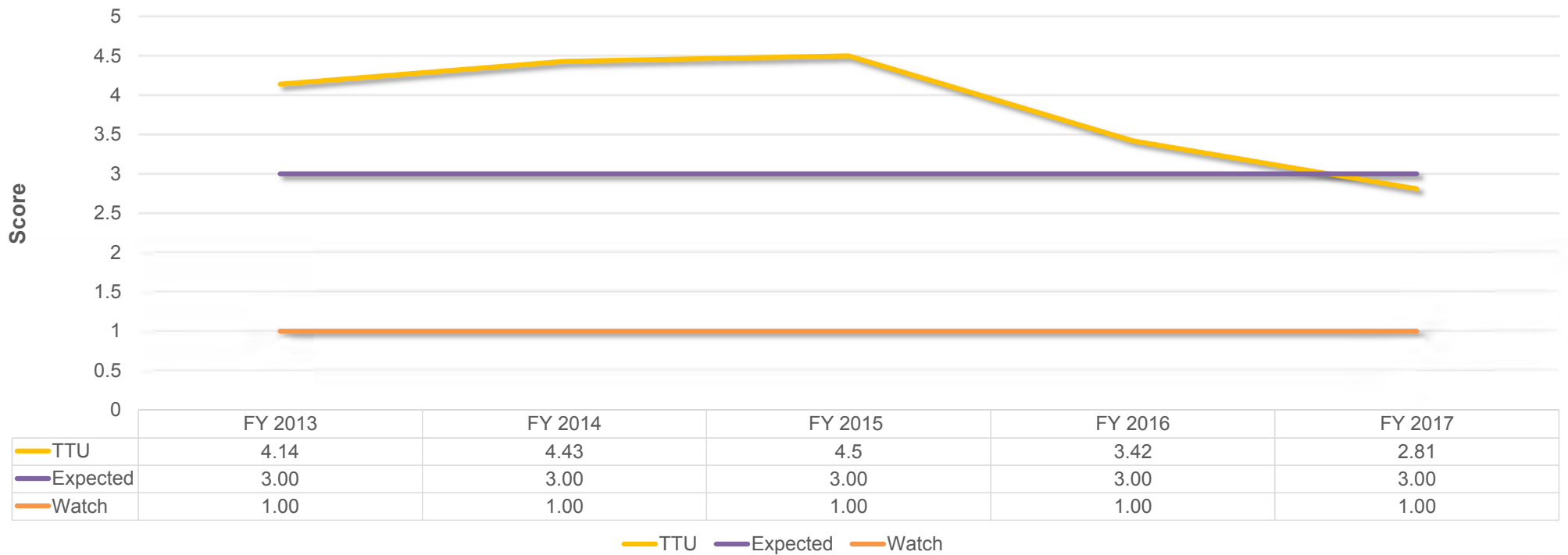


Measuring and monitoring financial health

Strategic Risk Question	Related Ratio
1. Overall – What is the institution’s overall financial health?	Composite Financial Index (CFI)
2. Liquidity – Does the institution have sufficient liquidity in the near and medium term?	Primary reserve ratio
3. Viability – Is debt managed strategically?	Viability ratio
4. Return on Assets – Does the institution have adequate return on all assets?	Return on net assets ratio
5. Net Operating Revenues – Is the institution generating adequate resources in excess of its operational costs?	Net operating revenues ratio

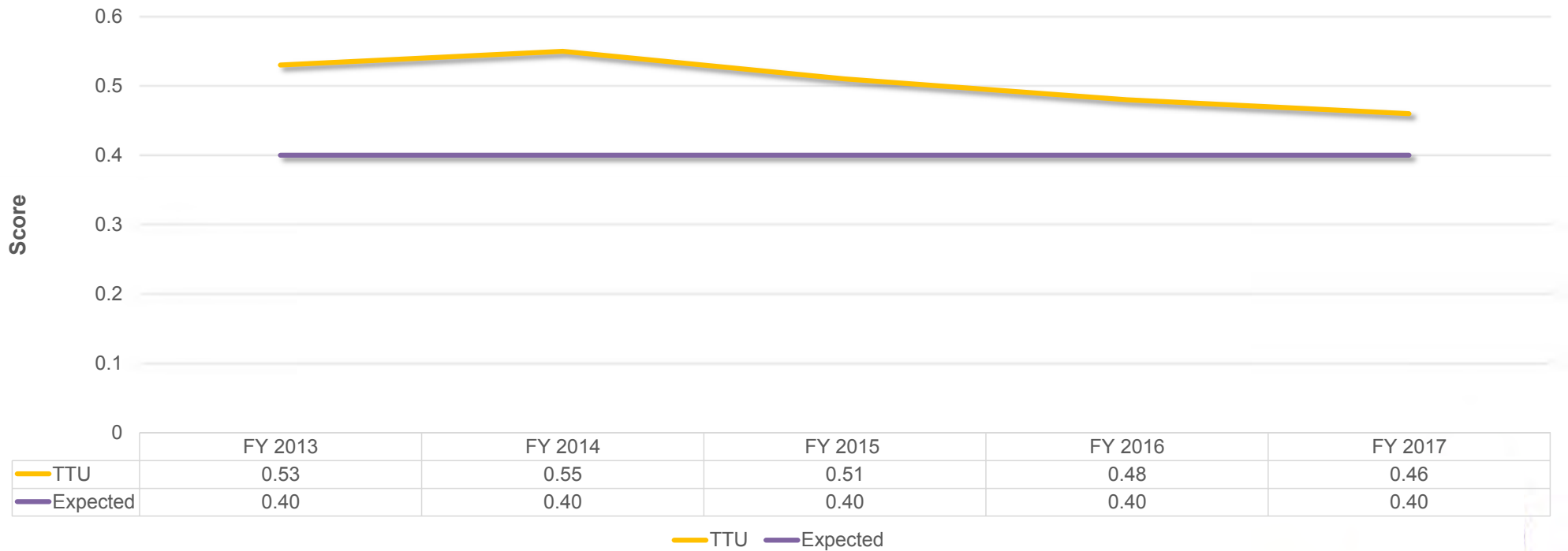
What is Tennessee Tech's overall financial health?

Composite Financial Index (CFI)



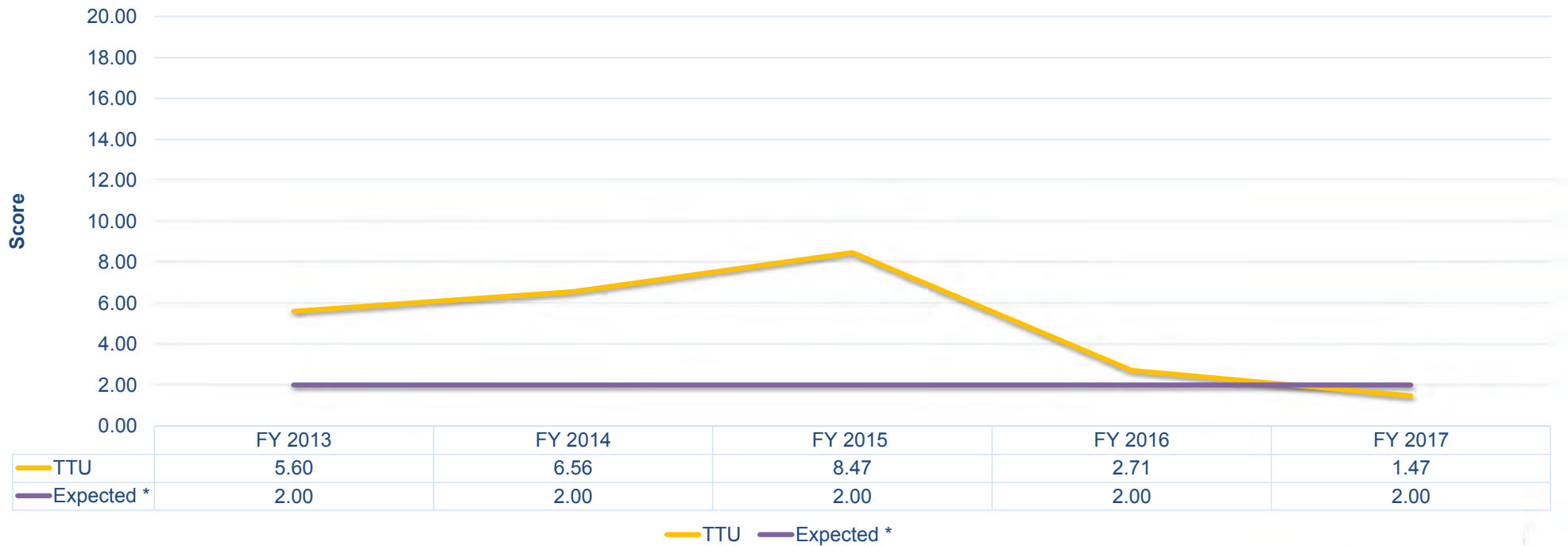
Does Tennessee Tech have sufficient liquidity in the near and medium term?

Primary Reserve Ratio (Liquidity)



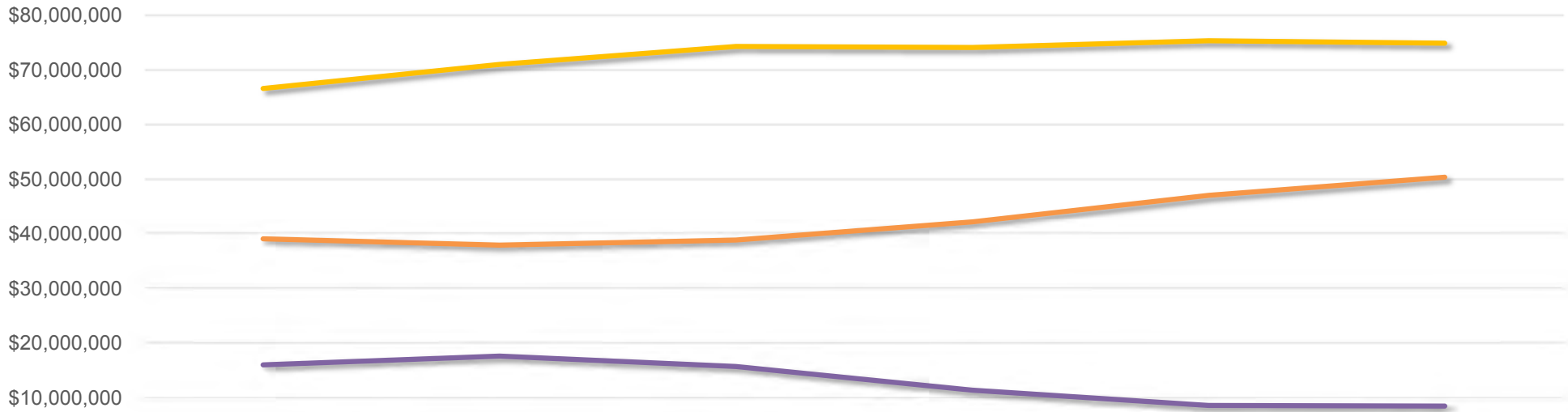
Is Tennessee Tech generating adequate resources in excess of its operational costs?

Net Operating Revenues Ratio



Maintenance fees, out-of-state tuition and state appropriations

Trend of Select Revenues

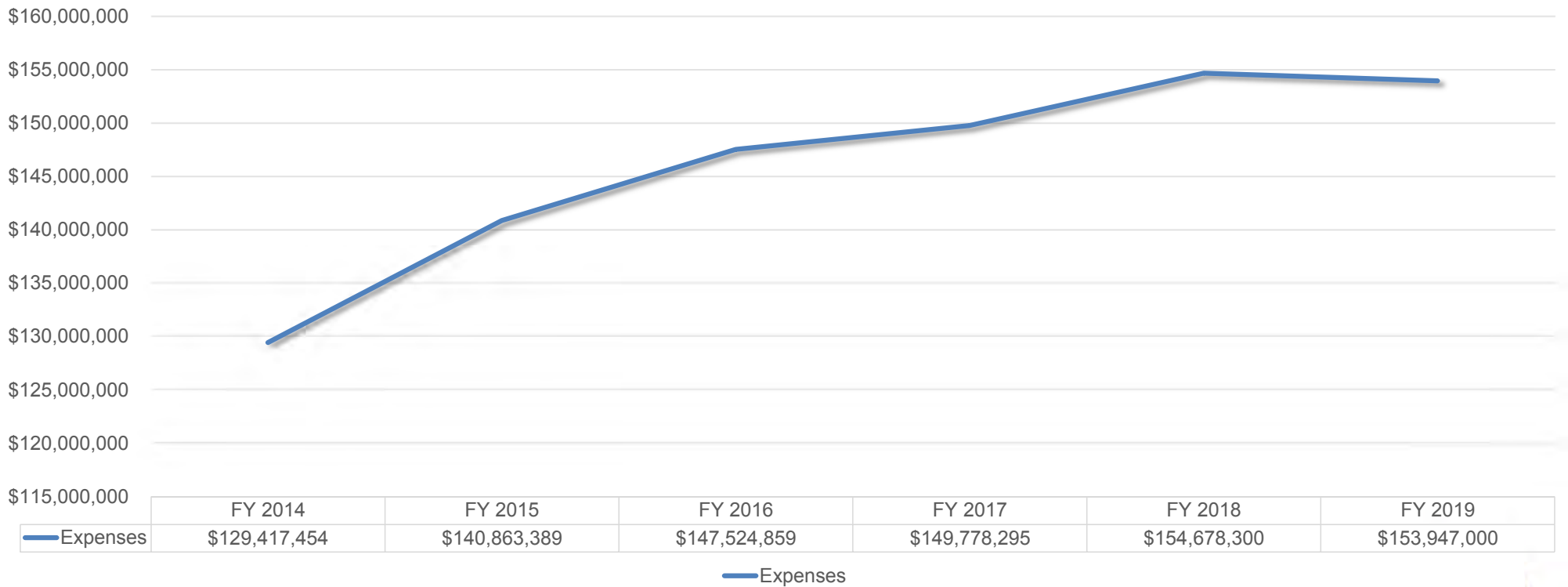


	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Maint Fees	\$66,594,847	\$71,021,821	\$74,292,901	\$74,106,011	\$75,336,000	\$74,906,000
Out-of-state	\$16,019,782	\$17,632,577	\$15,709,396	\$11,399,172	\$8,573,500	\$8,463,500
State Approp	\$39,080,184	\$37,928,913	\$38,849,188	\$42,172,363	\$47,030,200	\$50,365,800

— Maint Fees — Out-of-state — State Approp

Trend of Expenses 2014-2019

Expenses



Base Budget Assumptions

- Revenues
 - 2% increase in first-time, full-time freshmen and 2% transfers each year
 - 2.44% maintenance fee increase
 - State appropriations to cover 60% of 2.5% salary increase
- Expenses
 - New Costs (utilities for new buildings, faculty promotions, software escalation costs)
 - Inflationary costs based on Higher Education Price Index (2.44%) average
 - Graduate Assistantships, Athletic Scholarships and Legislatively Mandated Scholarships increase by 2.44%
 - University Academic and Transfer Scholarships reduce to 6% of gross maintenance fees
 - Reinvestment fund of 2% is established
 - Fund balance is reestablished at 2% of E&G revenues



Alternative Budget Assumptions

- Revenues
 - 3% increase in first-time, full-time freshmen and 4% transfers each year
 - 3% maintenance fee increase each year
 - State appropriations continue at average rate of past 5 years
- Expenses
 - New Costs (utilities for new buildings, faculty promotions, software escalation costs)
 - Inflationary costs based on Higher Education Price Index (2.44%) average
 - Graduate Assistantships, Athletic Scholarships and Legislatively Mandated Scholarships increase by 2.44%
 - University Academic and Transfer Scholarships reduce to 6% of gross maintenance fees
 - Reinvestment fund of 2% is established
 - Fund balance is reestablished at 2% of E&G revenues



Possible Reinvestment Strategy

- Lapsed Salaries
- Right size budgets based on budget model
 - Academic Units
 - Non-Academic Units
- Strategically identify “stop doing” activities



Financial Model for New Programs

New Recurring Instructional Costs

- Faculty Promotions
- New/Revised Academic Programs

Previously Unbudgeted

Historical Analysis --> Next Year's Budget

- Faculty Hires
 - Timelines to Promotions
 - Salary Increase Rates
- } Past 20 Years
- Proposed/Approved New Academic Programs
 - Proposed/Approved Budgets
- } Past 3-5 Years

Establish Budgeting Process --> Future Years



Academic Program Budget Model Ad Hoc Committee

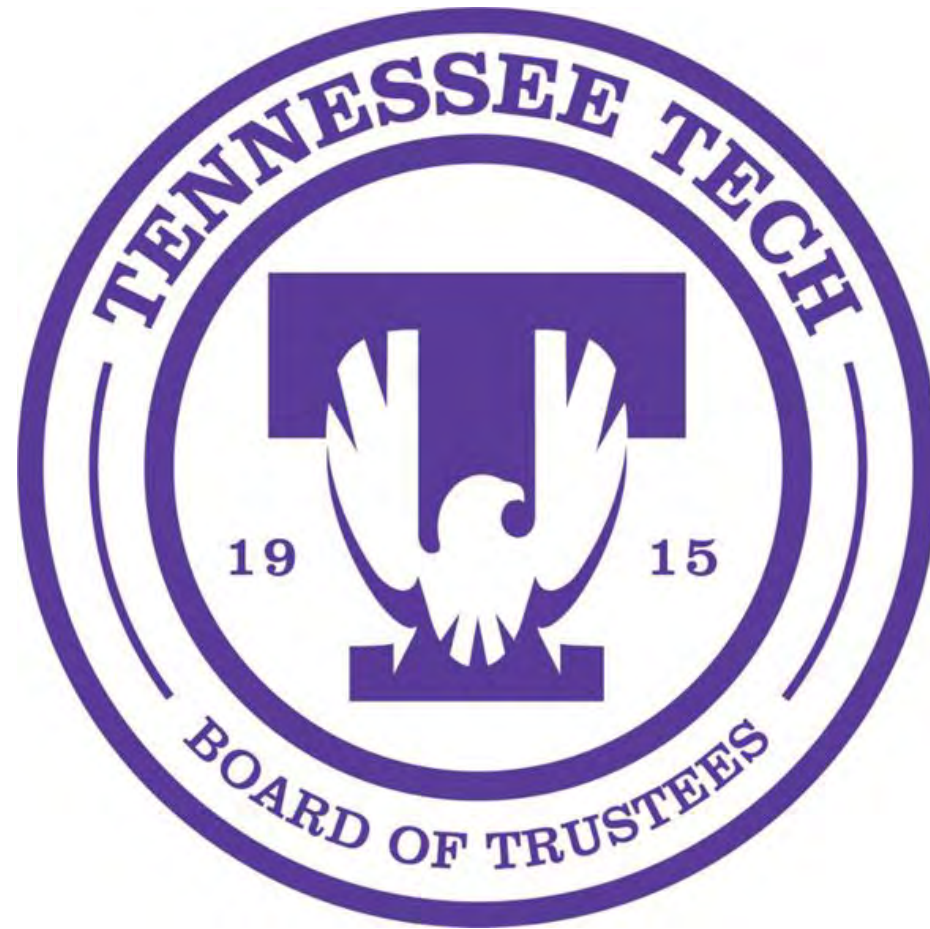
Committee Members	Department
Dr. Barry Stein	Counseling & Psychology
Dr. Kim Hanna	Nursing
Dr. Dennis Duncan	Agriculture
Dr. Jessica Oswalt	Engineering
Dr. Debbie Ballou	Decision Sciences & Management
Dr. Stephen Robinson	Physics
Dr. Jennifer Shank	Fine Arts
Ms. Carol Holley	Academic Affairs



Current Investments

- Technology Faculty: \$1 million investment
- Master of Science in Nursing: \$150,000 for 2 years
- Master of Science in Engineering Management
- Ph.D. in Counseling and Supervision





Strategic Plan Financial Model - Educational & General (E&G)						
	Budgeted 2017-18	Projected 2018-19	Projected 2019-20	Projected 2020-21	Projected 2021-22	Projected 2022-23
Beginning Surplus (Deficit) - Base	\$ 6,003,368	\$ 3,179,694	\$ 782,352	\$ 4,353,318	\$ 6,001,346	\$ 6,706,321
Change in Income	\$ 156,943,800	\$ 3,143,200	\$ 5,643,081	\$ 3,808,443	\$ 2,385,669	\$ 3,544,017
Change in Expenses	\$ (156,191,300)	\$ (4,023,151)	\$ (3,627,269)	\$ (3,791,397)	\$ (3,389,466)	\$ (3,707,524)
Change in Mandatory Transfers (Debt Service)	\$ (325,000)					
Change in Non-Mandatory Transfers	\$ (3,251,100)	\$ -				
Ending Surplus (Deficit) - Base	\$ 3,179,768	\$ 2,299,743	\$ 2,798,164	\$ 4,370,364	\$ 4,997,549	\$ 6,542,814
Re-establish R&R for equipment, deferred maint		\$ (4,721,680)	\$ (1,721,680)	\$ (1,721,680)	\$ (1,721,680)	\$ (1,721,680)
Establishment of reinvestment fund		\$ 3,204,289	\$ 3,276,834	\$ 3,352,662	\$ 3,430,452	\$ 3,514,602
Total Impact of New Goals						
Surplus (Deficit)	\$ 3,179,694	\$ 782,352	\$ 4,353,318	\$ 6,001,346	\$ 6,706,321	\$ 8,335,736
Target (4% of E&G revenues)*	\$ 6,277,752	\$ 6,403,480	\$ 6,629,203	\$ 6,781,541	\$ 6,876,968	\$ 7,018,728
Dollars needed to cover deficit plus establish 4%		\$ 5,621,128	\$ 2,275,885	\$ 780,195	\$ 170,647	\$ (1,317,008)
*Info note: Required 2% reserved fund balance	\$ 3,138,876	\$ 3,201,740	\$ 3,314,602	\$ 3,390,770	\$ 3,524,897	\$ 3,509,364

E&G Revenues	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Tuition & Fees	\$ 98,560,500	\$ 97,176,200	\$ 4,027,216	\$ 2,204,102	\$ 739,811	\$ 1,886,999
State Appropriations	\$ 47,030,200	\$ 50,365,800	\$ 1,615,865	\$ 1,604,341	\$ 1,645,858	\$ 1,657,018
Federal Grants & Contracts	\$ 869,700	\$ 869,700				
Local Grants & Contracts	\$ 3,200	\$ 3,200				
State Grants & Contracts	\$ 59,400	\$ 59,400				
Private Grants & Contracts	\$ 39,100	\$ 39,100				
Private Gifts	\$ -	\$ -				
Sales & Serv Ed Activities	\$ 878,000	\$ 878,000				
Sales & Serv Other Activities	\$ 8,637,700	\$ 8,637,700				
Other Sources	\$ 866,000	\$ 866,000				
	\$ 156,943,800	\$ 158,895,100				
		\$ 1,951,300	\$ 5,643,081	\$ 3,808,443	\$ 2,385,669	\$ 3,544,017
Addtl Approp		\$ 700,000				
0.66% addtl		\$ 491,900				
		\$ 3,143,200				

Unfunded Budget Needs						
	Projected 2018-19	Projected 2019-20	Projected 2020-21	Projected 2021-22	Projected 2022-23	
New costs:						
Utilities - New buildings		\$ 500,000	\$ 500,000	\$ -	\$ -	
Faculty Promotions (\$190,861 in FY2017-18)	\$ 376,685	\$ 118,711	\$ 215,952	\$ 223,821	\$ 286,163	
Software escalation costs	\$ 226,612	\$ (10,205)	\$ 59,540	\$ 60,744	\$ 64,390	
	<u>\$ 603,297</u>	<u>\$ 608,506</u>	<u>\$ 775,492</u>	<u>\$ 284,565</u>	<u>\$ 350,553</u>	
Inflationary costs (HEPI)						
Utilities (1.22%)	\$ 5,842,480	\$ 71,278	\$ 72,148	\$ 73,028	\$ 73,919	
Academic salaries (2.5%)	\$ 40,413,167	\$ 1,010,329	\$ 1,035,587	\$ 1,061,477	\$ 1,088,014	
Less promotion amt above	\$ (376,685)	\$ (118,711)	\$ (215,952)	\$ (223,821)	\$ (286,163)	
Administrative/Professional salaries (2.5%)	\$ 6,027,750	\$ 150,694	\$ 154,461	\$ 158,323	\$ 162,281	
Supporting salaries (2.5%)	\$ 10,925,841	\$ 273,146	\$ 279,975	\$ 286,974	\$ 294,148	
Professional salaries (2.5%)	\$ 20,775,136	\$ 519,378	\$ 532,363	\$ 545,672	\$ 559,314	
Fringe benefits (3%)	\$ 31,704,590	\$ 951,138	\$ 979,672	\$ 1,009,062	\$ 1,039,334	
Supplies/Capital/Travel (2.44%)	\$ 18,434,042	\$ 449,791	\$ 460,766	\$ 472,008	\$ 483,525	
	<u>\$ 133,746,321</u>	<u>\$ 3,307,043</u>	<u>\$ 3,299,019</u>	<u>\$ 3,382,723</u>	<u>\$ 3,414,372</u>	
		2.47%	2.41%	2.41%	2.38%	
Projected Maint and OS Tuition Revenue	\$ 83,369,500	\$ 87,396,716	\$ 89,600,818	\$ 90,340,629	\$ 92,227,628	
Graduate Assistanceships (2.44%)	\$ 1,644,060	\$ 40,115	\$ 41,094	\$ 42,097	\$ 43,124	
Athletic Scholarships (2.44%)	\$ 5,022,815	\$ 122,557	\$ 125,547	\$ 128,610	\$ 131,749	
Legislatively Mandated Fee Waivers (2.44%)	\$ 2,010,183	\$ 49,048	\$ 50,245	\$ 51,471	\$ 52,727	
UAS and CC Transfer Sch	\$ 7,321,560	\$ (500,000)	\$ (500,000)	\$ (500,000)	\$ (285,000)	
UAS and CC Transfer as % of Maint & OS	8.78%	7.81%	7.06%	6.44%	6.00%	
		<u>\$ (288,280)</u>	<u>\$ (283,114)</u>	<u>\$ (277,822)</u>	<u>\$ (57,401)</u>	\$ (906,616)
Change in expenses	<u>\$ 603,297</u>	<u>\$ 3,627,269</u>	<u>\$ 3,791,397</u>	<u>\$ 3,389,466</u>	<u>\$ 3,707,524</u>	
2.5% salary increase plus fringe benefits		\$ 2,785,974	\$ 2,766,106	\$ 2,837,687	\$ 2,856,928	
2.5% salary increase funded by state approp		\$ 1,615,865	\$ 1,604,341	\$ 1,645,858	\$ 1,657,018	\$ 6,523,083

Strategic Plan Financial Model - Educational & General (E&G)						
	Budgeted 2017-18	Projected 2018-19	Projected 2019-20	Projected 2020-21	Projected 2021-22	Projected 2022-23
Beginning Surplus (Deficit) - Base	\$ 6,003,368	\$ 3,179,694	\$ 782,352	\$ 5,683,988	\$ 9,071,672	\$ 8,362,333
Change in Income	\$ 156,943,800	\$ 3,143,200	\$ 6,973,751	\$ 5,548,099	\$ 4,401,807	\$ 5,709,089
Change in Expenses	\$ (156,191,300)	\$ (4,023,151)	\$ (3,627,269)	\$ (3,791,397)	\$ (3,389,466)	\$ (3,707,524)
Change in Mandatory Transfers (Debt Service)	\$ (325,000)					
Change in Non-Mandatory Transfers	\$ (3,251,100)	\$ -				
Ending Surplus (Deficit) - Base	\$ 3,179,768	\$ 2,299,743	\$ 4,128,834	\$ 7,440,690	\$ 10,084,013	\$ 10,363,898
Re-establish R&R for equipment, deferred maint		\$ (4,721,680)	\$ (1,721,680)	\$ (1,721,680)	\$ (1,721,680)	\$ (1,721,680)
Establishment of reinvestment fund		\$ 3,204,289	\$ 3,276,834	\$ 3,352,662	\$ -	\$ -
Total Impact of New Goals						
Surplus (Deficit)	\$ 3,179,694	\$ 782,352	\$ 5,683,988	\$ 9,071,672	\$ 8,362,333	\$ 8,642,218
Target (4% of E&G revenues)*	\$ 6,277,752	\$ 6,403,480	\$ 6,682,430	\$ 6,904,354	\$ 7,080,426	\$ 7,308,790
Dollars needed to cover deficit plus establish 4%		\$ 5,621,128	\$ 998,442	\$ (2,167,318)	\$ (1,281,907)	\$ (1,333,428)
*Info note: Required 2% reserved fund balance	\$ 3,138,876	\$ 3,201,740	\$ 3,341,215	\$ 3,452,177	\$ 3,619,424	\$ 3,654,395

E&G Revenues	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Tuition & Fees	\$ 98,560,500	\$ 97,176,200	\$ 4,539,251	\$ 3,113,599	\$ 1,967,307	\$ 3,274,589
State Appropriations	\$ 47,030,200	\$ 50,365,800	\$ 2,434,500	\$ 2,434,500	\$ 2,434,500	\$ 2,434,500
Federal Grants & Contracts	\$ 869,700	\$ 869,700				
Local Grants & Contracts	\$ 3,200	\$ 3,200				
State Grants & Contracts	\$ 59,400	\$ 59,400				
Private Grants & Contracts	\$ 39,100	\$ 39,100				
Private Gifts	\$ -	\$ -				
Sales & Serv Ed Activities	\$ 878,000	\$ 878,000				
Sales & Serv Other Activities	\$ 8,637,700	\$ 8,637,700				
Other Sources	\$ 866,000	\$ 866,000				
	\$ 156,943,800	\$ 158,895,100				
		\$ 1,951,300	\$ 6,973,751	\$ 5,548,099	\$ 4,401,807	\$ 5,709,089
Addtl Approp		\$ 700,000				
0.66% addtl		\$ 491,900				
		\$ 3,143,200				

Unfunded Budget Needs				
Projected 2018-19	Projected 2019-20	Projected 2020-21	Projected 2021-22	Projected 2022-23

New costs:

Utilities - New buildings		\$ 500,000	\$ 500,000	\$ -	\$ -
Faculty Promotions (\$190,861 in FY2017-18)	\$ 376,685	\$ 118,711	\$ 215,952	\$ 223,821	\$ 286,163
Software escalation costs	\$ 226,612	\$ (10,205)	\$ 59,540	\$ 60,744	\$ 64,390
	<u>\$ 603,297</u>	<u>\$ 608,506</u>	<u>\$ 775,492</u>	<u>\$ 284,565</u>	<u>\$ 350,553</u>

Inflationary costs (HEPI)

Utilities (1.22%)	\$ 5,842,480	\$ 71,278	\$ 72,148	\$ 73,028	\$ 73,919
Academic salaries (2.5%)	\$ 40,413,167	\$ 1,010,329	\$ 1,035,587	\$ 1,061,477	\$ 1,088,014
Less promotion amt above	\$ (376,685)	\$ (118,711)	\$ (215,952)	\$ (223,821)	\$ (286,163)
Administrative/Professional salaries (2.5%)	\$ 6,027,750	\$ 150,694	\$ 154,461	\$ 158,323	\$ 162,281
Supporting salaries (2.5%)	\$ 10,925,841	\$ 273,146	\$ 279,975	\$ 286,974	\$ 294,148
Professional salaries (2.5%)	\$ 20,775,136	\$ 519,378	\$ 532,363	\$ 545,672	\$ 559,314
Fringe benefits (3%)	\$ 31,704,590	\$ 951,138	\$ 979,672	\$ 1,009,062	\$ 1,039,334
Supplies/Capital/Travel (2.44%)	\$ 18,434,042	\$ 449,791	\$ 460,766	\$ 472,008	\$ 483,525
	<u>\$ 133,746,321</u>	<u>\$ 3,307,043</u>	<u>\$ 3,299,019</u>	<u>\$ 3,382,723</u>	<u>\$ 3,414,372</u>

2.47% 2.41% 2.41% 2.38%

Projected Maint and OS Tuition Revenue \$ 83,369,500 \$ 87,396,716 \$ 89,600,818 \$ 90,340,629 \$ 92,227,628

Graduate Assistanceships (2.44%)	\$ 1,644,060	\$ 40,115	\$ 41,094	\$ 42,097	\$ 43,124
Athletic Scholarships (2.44%)	\$ 5,022,815	\$ 122,557	\$ 125,547	\$ 128,610	\$ 131,749
Legislatively Mandated Fee Waivers (2.44%)	\$ 2,010,183	\$ 49,048	\$ 50,245	\$ 51,471	\$ 52,727
UAS and CC Transfer Sch	\$ 7,321,560	\$ (500,000)	\$ (500,000)	\$ (500,000)	\$ (285,000)
UAS and CC Transfer as % of Maint & OS	8.78%	7.81%	7.06%	6.44%	6.00%

\$ (288,280) \$ (283,114) \$ (277,822) \$ (57,401) \$ (906,616)

Change in expenses \$ 603,297 \$ 3,627,269 \$ 3,791,397 \$ 3,389,466 \$ 3,707,524

2.5% salary increase plus fringe benefits	\$ 2,785,974	\$ 2,766,106	\$ 2,837,687	\$ 2,856,928	
2.5% salary increase funded by state approp	\$ 1,615,865	\$ 1,604,341	\$ 1,645,858	\$ 1,657,018	\$ 6,523,083



Agenda Item Summary

Date: September 18, 2018

Division: Planning and Finance

Agenda Item: Disclosed Capital Projects

Review

Action

No action required

PRESENTERS: Dr. Claire Stinson, Vice President for Planning and Finance

PURPOSE & KEY POINTS:

Review and approval of amendment to the FY2018-19 Capital Disclosure list and Master Plan for the following two projects:

1. Vehicular Engineering Shop Building
2. Ag. Engineering Technology Shop Building

September 18, 2018, Audit & Business Committee Agenda and Materials - Disclosed Capital Projects

Capital Disclosure: FY2018-19										
Institution	Project	Project Cost	New Sq. Ft.	Funding Source					Project Description	
				Plant-Funds - Non-Auxiliary	Plant Funds - Auxiliary	TSSBA	Gifts	Contractor Funds		
1	TTU	Vehicular Engineering Shop Building	\$490,000	2600 (Approximate)	\$ 490,000.00					This will be startup shop space for the new Vehicular Engineering program.
2	TTU	Ag. Engineering Technology Shop	\$235,000	1200 (Approximate)	\$ 235,000.00					This shop will replace their current space in the Old Maintenance Bldg. that is scheduled for demolition.
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4										
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DB70 Form - Project Request

1 Department: Tennessee Higher Education Commission
Institution: Tennessee Tech University
Project: Vehicular Engineering Shop Building
City/County: Cookeville/Putnam

2 Fiscal Year: 2019/ 2020

3		New		Reno/Maint
<input type="checkbox"/>	Capital Outlay			
<input type="checkbox"/>	Capital Maintenance	2,600	Gross Sq.Ft.	0
<input checked="" type="checkbox"/>	Disclosure	0	Net Sq.Ft.	0
<input checked="" type="checkbox"/>	Designer Required	150.00	Cost/Sq.Ft.	0.00

4 Project Description:

Construct a Vehicular Engineering Shop Building for the College of Engineering.

5	Total Project	Allocation	Estimated Building Construction Cost:	
	400,000.00	400,000.00	Building Construction	390,000
	20,000.00	20,000.00	Site & Utilities	
	0.00	0.00	Built-in Equipment	
	420,000.00	420,000.00	Bid Target	
	21,000.00	21,000.00	Contingency: 5.00 percent	
	441,000.00	441,000.00	MACC (Maximum Allowable Construction Cost)	
	34,342.00	34,342.00	Fee: 35/LogP-1.15 = 7.78740199	New
	0.00	0.00	Movable Equipment	
	0.00	0.00	first other	
	0.00	0.00	second other	
	14,658.00	14,658.00	Administration & Miscellaneous	
	490,000.00	490,000.00	Total Cost	

6 Funding Request:	THIS REQUEST	
0.00	0.00	STATE funds
0.00	0.00	FEDERAL funds
490,000.00	490,000.00	Local and Institutional Funds Plant Funds - non auxiliary

7 Sources of Available Funding:	fund year	description
already approved for existing SBC project	0.00	
	0.00	
0.00	0.00	
plus This Request	0.00	
490,000.00	0.00	

8 SBC Action: If an existing project, SBC Project No.: n/a

9 Designer: tba

Project Support Documentation - 1

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Vehicular Engineering Shop Building

A. Program Scope:

Construct a Vehicular Engineering Shop Building for the College of Engineering. Lab courses for the recently approved vehicle engineering program will be taught in the facility. Shop space for the BAJA team and the SAE Formula team will also be provided. The building will be constructed at Shipley Farm.

B. Evidence of Physical Facility Need:

The facility is required to meet the needs of our recently approved Vehicular Engineering program.

BAJA and SAE space is located in East Stadium. This space is underneath concrete bleachers and constantly battles severe moisture issues. The space is less than desirable and certainly not suited as outstanding shop space due to moisture intrusion issues.

C. Historical Profile:

The Vehicular Engineering program was approved by the TTU Board of Trustees at its December 2017 meeting and by THEC at its January 2018 meeting. The program is a concentration in Vehicle Engineering within our existing B.S. degrees in Mechanical Engineering and Electrical Engineering.

D. Related Requirements:

Project Support Documentation - 2

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Vehicular Engineering Shop Building

E. Cost Information - Basis for SF Cost and Other Costs:

The type of building proposed for this project is similar to the proposed Ag. Engineering Technology Facility, therefore the same cost per square foot was used. The cost estimate was prepared by our architectural and structural consultants who evaluated the building needs of our Ag. Engineering Technology program. Equipment costs are not included in this project. Existing equipment will be relocated from shops in the East Stadium.

F. Project Schedule:

Estimated at 9 months (3 months - design, 2 months - bidding and contract execution, 4 months - construction). Targeted completion is the beginning of the 2019 Fall Semester.

G. Total Campus FTE , FTE directly Impacted, Majors: (current & projected)

Total campus FTE, Fall 2018 = 8833

FTE directly impacted, 2,752 students in the College of Engineering

Majors, current = 11 (Engineering)

30 students are expected to enroll in the Vehicle Engineering concentration the first year, and the program is expected to grow to 120 students in five years.

H. Other Campus or Program Impact:

Schedule of Movable Equipment

Department: Tennessee Higher Education Commission

Institution: [Tennessee Tech University](#)

Project: [Vehicular Engineering Shop Building](#)

Total Equip: **0.00**

Description of Equipment Types	Life	Qty	Unit Cost	Total Cost
N/A				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00

I. Explanation of Equipment Costs:

First-Year Operating Costs

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Vehicular Engineering Shop Building

	Existing Budgeted Costs	New & Future Costs Required for Program Support		Existing Budgeted Positions	New & Future Position Requests
Regular Salaries:	0	0	Positions:		
Longevity:	0	0	Full-Time:	0	0
Overtime:	0	0	Part-Time:	0	0
Benefits:	0	0	Seasonal:	0	0
Personnel Total:	0	0	Total Positions:	0	0

Utilities and Maintenance			Revenues to defray costs:		
	Existing	New		Existing	New
Utilities base rate:	4.45	4.50	Tuition:	0	0
Maintenance base rate:	6.15	6.04	Fees:	0	0
Square footage:	0	2,600	Grants:	0	0
Util & Maint Total	0	27,404	Counties:	0	0
			Cities:	0	0
			Non-Government:	0	0
			Current Services:	0	0
			Inter-Departmental:	0	0
			Reserves:	0	0
				0	0
				0	0
				0	0
Operational Total:	0	0	State Total	0	0

Operational Costs:	0	0		0	0
	0	0		0	0
	0	0		0	0

Federal Revenue:	0	0		0	0
	0	0		0	0
Federal Total	0	0		0	0

Total Expense:	0	0	Total Revenue:	0	0
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Space Needs

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Vehicular Engineering Shop Building

Date of Data:

Space Guideline Compiled by:

Summary NASF - Info from THEC Space Guideline					This Project		
Part	Equiv FICM	Modeled	Exist E&G SF	Difference from Model	Net Change NASF	Result Net E&G SF	Difference from Model
I - Classrooms	1xx	0	0	0	0	0	0
II - ClassLab	210, 215	0	0	0	0	0	0
III - Open Lab	220, 225	0	0	0	0	0	0
IV - Research	250, 255	0	0	0	0	0	0
V - Office	3xx	0	0	0	0	0	0
VI - Library	4xx	0	0	0	0	0	0
VII - Phys Ed	520 523 525	0	0	0	0	0	0
Totals:		0	0	0	0	0	0
		Input Data from THEC Guideline	Input Data from THEC Guideline		Input NASF Info from This Project		

The three digit numbers are from the "Postsecondary Education Facilities Inventory and Classification Manual (FICM)" 2006

K. Notes or Comments on Above Data, or Describe Need for Non-Formula Space

Modeled and Existing E & G are blank because this facility will be constructed at Shipley Farm.

L. Summary Results and Date of Physical Facilities Survey:

East Stadium was rated at 51.7%, January 2018.

M Migration Plan

BAJA and SAE Formula programs will be moved from East Stadium to the new facility. The space in East Stadium vacated by these programs will be taken off line or used for storage space.

Tabulation of Affected Space

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Vehicular Engineering Shop Building

Space Description	Net Assignable Square Feet					Net Increase
	Demolition	Renovation		New Construction	Net	
		Former Use	New Use			
Classrooms 100's	0	0	0	0	0	0
Class Lab / Studio 210, 215	0	0	0	2,500	2,500	2,500
Open Laboratories 220, 225	0	0	0	0	0	0
Research 250, 255	0	0	0	0	0	0
Offices 300's	0	0	0	0	0	0
Study facilities 400's	0	0	0	0	0	0
Physical education 520, 523, 525	0	0	0	0	0	0
Subtotal THEC Formula Space All of the above FICM Use Codes	0	0	0	2,500	2,500	2,500
General use facilities 600's	0	0	0	0	0	0
Non Formula Use	0	0	0	0	0	0
Sub-Total Net Assignable:	0	0	0	2,500	2,500	2,500
plus Non-Assignable:	0	0	0	100	100	100
Total Gross:	0	0	0	2,600	2,600	2,600

The three digit numbers are from the "Postsecondary Education Facilities Inventory and Classification Manual (FICM)" 2006

Space Detail Information

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Vehicular Engineering Shop Building

Space Name	Room Use	Activity Description	Occupant Count	Area (NASF)	Number of Spaces	Area (NASF)
Classrooms	100's		0	0	0	0
			0	0	0	0
			0	0	0	0
			0	0	0	0
Classroom Total	(All 100s)		0	0	0	0
Laboratories	200's	Vehicle Engr. Teaching Lab	16	2,500	1	2,500
			0	0	0	0
			0	0	0	0
			0	0	0	0
			0	0	0	0
ClassLab Total	(All 200s)		16	2,500	1	2,500
Office	300's		0	0	0	0
			0	0	0	0
			0	0	0	0
			0	0	0	0
Office Total	(All 300s)		0	0	0	0
Study Facilities	400's		0	0	0	0
			0	0	0	0
			0	0	0	0
Study Fac. Total	(All 400s)		0	0	0	0
Special Use	500's		0	0	0	0
			0	0	0	0
			0	0	0	0
Special Use Total	(All 500s)		0	0	0	0
General Use	600's		0	0	0	0
			0	0	0	0
			0	0	0	0
General Use Total	(All 00s)		0	0	0	0
Support	700's		0	0	0	0
Helath	800's		0	0	0	0
			0	0	0	0
Support & Health	(700s & 800s)		0	0	0	0
Grand Total Net SF:			16	2,500	1	2,500

DB70 Form - Project Request

1 Department: Tennessee Higher Education Commission
Institution: Tennessee Tech University
Project: Ag. Engineering Technology Facility
City/County: Cookeville/Putnam

2 Fiscal Year: 2019/ 2020

3		New		Reno/Maint
<input type="checkbox"/>	Capital Outlay			
<input type="checkbox"/>	Capital Maintenance	1,200	Gross Sq.Ft.	0
<input checked="" type="checkbox"/>	Disclosure	0	Net Sq.Ft.	0
<input checked="" type="checkbox"/>	Designer Required	150.00	Cost/Sq.Ft.	0.00

4 Project Description:

Construct an Agriculture Engineering Technology Facility to replace the laboratory program space lost due to the demolition of the Old Maintenance Building.

5	Total Project	Allocation	Estimated Building Construction Cost:	180,000
	180,000.00	180,000.00	Building Construction	
	20,000.00	20,000.00	Site & Utilities	
	0.00	0.00	Built-in Equipment	
	200,000.00	200,000.00	Bid Target	
	10,000.00	10,000.00	Contingency: 5.00 percent	
	210,000.00	210,000.00	MACC (Maximum Allowable Construction Cost)	
	17,616.00	17,616.00	Fee: 35/LogP-1.15 = 8.38882080	New
	0.00	0.00	Movable Equipment	
	0.00	0.00	first other	
	0.00	0.00	second other	
	7,384.00	7,384.00	Administration & Miscellaneous	
	235,000.00	235,000.00	Total Cost	

6 Funding Request:	THIS REQUEST	
0.00	0.00	STATE funds
0.00	0.00	FEDERAL funds
235,000.00	235,000.00	Local and Institutional Funds Plant Funds - non auxiliary

7 Sources of Available Funding:	fund year	description
already approved for existing SBC project	0.00	
	0.00	
0.00	0.00	
plus This Request	0.00	
235,000.00	0.00	

8 SBC Action: If an existing project, SBC Project No.: n/a

9 Designer: tba

Project Support Documentation - 1

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Ag. Engineering Technology Facility

A. Program Scope:

Construct an Agriculture Engineering Technology Facility. The facility will be constructed at Shipley Farm. The space will be used primarily as a teaching lab for Small Power Equipment and Agricultural Machinery & Tractors.

B. Evidence of Physical Facility Need:

The program space was housed until recently in the Old Maintenance Building, which is being demolished as part of the Laboratory Sciences Project. The program space needs to be replaced.

The existing Loafing Barn at Shipley Farm, constructed in 1970, was evaluated by our architectural and structural consultants to determine the feasibility of converting the space for AGET lab use. Due to the condition of the building and current building code requirements, the consultants determined the conversion would be cost prohibitive and suggested constructing a new facility.

C. Historical Profile:

The Old Maintenance Building was constructed in 1949.

D. Related Requirements:

The Old Maintenance Building demolition is included in the scope of the Laboratory Sciences Building, SBC 166/011-11-2013.

Project Support Documentation - 2

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Ag. Engineering Technology Facility

E. Cost Information - Basis for SF Cost and Other Costs:

The cost estimate was prepared by our architectural and structural consultants who evaluated the building needs of our Ag. Engineering Technology program.

Equipment costs are not included in this project. Existing equipment will be relocated from the lab in the Old Maintenance Building.

F. Project Schedule:

Estimated at 9 months (3 months - design, 2 months - bidding and contract execution, 4 months - construction). Targeted completion is the beginning of the 2019 Fall Semester.

G. Total Campus FTE , FTE directly Impacted, Majors: (current & projected)

Total campus FTE, Fall 2018 = 8833

FTE directly impacted, 550 students in the College of Agriculture and Human Ecology

Majors - Agriculture (1) with 13 concentrations

- Human Ecology (1) with 7 concentrations

H. Other Campus or Program Impact:

Schedule of Movable Equipment

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Ag. Engineering Technology Facility

Total Equip: **0.00**

Description of Equipment Types	Life	Qty	Unit Cost	Total Cost
N/A				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
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				0.00
				0.00
				0.00
				0.00
				0.00

I. Explanation of Equipment Costs:

First-Year Operating Costs

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Ag. Engineering Technology Facility

	Existing Budgeted Costs	New & Future Costs Required for Program Support		Existing Budgeted Positions	New & Future Position Requests
Regular Salaries:	0	0	Positions:		
Longevity:	0	0	Full-Time:	0	0
Overtime:	0	0	Part-Time:	0	0
Benefits:	0	0	Seasonal:	0	0
Personnel Total:	0	0	Total Positions:	0	0

Utilities and Maintenance			Revenues to defray costs:		
	Existing	New		Existing	New
Utilities base rate:	4.45	4.50	Tuition:	0	0
Maintenance base rate:	6.15	6.04	Fees:	0	0
Square footage:	0	1,200	Grants:	0	0
Util & Maint Total	0	12,648	Counties:	0	0
			Cities:	0	0
			Non-Government:	0	0
			Current Services:	0	0
			Inter-Departmental:	0	0
			Reserves:	0	0
				0	0
				0	0
				0	0
Operational Total:	0	0	State Total	0	0

Operational Costs:	0	0		0	0
	0	0		0	0
	0	0		0	0
Operational Total:	0	0		0	0

Federal Revenue:	0	0		0	0
	0	0		0	0
Federal Total	0	0		0	0

Total Expense:	0	0	Total Revenue:	0	0
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Space Needs

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Ag. Engineering Technology Facility

Date of Data:

Space Guideline Compiled by:

Summary NASF - Info from THEC Space Guideline					This Project		
Part	Equiv FICM	Modeled	Exist E&G SF	Difference from Model	Net Change NASF	Result Net E&G SF	Difference from Model
I - Classrooms	1xx	0	0	0	0	0	0
II - ClassLab	210, 215	0	0	0	0	0	0
III - Open Lab	220, 225	0	0	0	0	0	0
IV - Research	250, 255	0	0	0	0	0	0
V - Office	3xx	0	0	0	0	0	0
VI - Library	4xx	0	0	0	0	0	0
VII - Phys Ed	520 523 525	0	0	0	0	0	0
Totals:		0	0	0	0	0	0
		Input Data from THEC Guideline	Input Data from THEC Guideline		Input NASF Info from This Project		

The three digit numbers are from the "Postsecondary Education Facilities Inventory and Classification Manual (FICM)" 2006

K. Notes or Comments on Above Data, or Describe Need for Non-Formula Space

Modeled and Existing E & G are blank because this facility will be constructed at Shipley Farm.

L. Summary Results and Date of Physical Facilities Survey:

The Old Maintenance Building rating is 47.1 as of July 2018.

M Migration Plan

N/A

Tabulation of Affected Space

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Ag. Engineering Technology Facility

Space Description	Net Assignable Square Feet					Net Increase
	Demolition	Renovation		New Construction	Net	
		Former Use	New Use			
Classrooms 100's	0	0	0	0	0	0
Class Lab / Studio 210, 215	1,178	0	0	1,100	-78	-78
Open Laboratories 220, 225	0	0	0	0	0	0
Research 250, 255	0	0	0	0	0	0
Offices 300's	0	0	0	0	0	0
Study facilities 400's	0	0	0	0	0	0
Physical education 520, 523, 525	0	0	0	0	0	0
Subtotal THEC Formula Space All of the above FICM Use Codes	1,178	0	0	1,100	-78	-78
General use facilities 600's	0	0	0	0	0	0
Non Formula Use	0	0	0	0	0	0
Sub-Total Net Assignable:	1,178	0	0	1,100	-78	-78
plus Non-Assignable:	0	0	0	100	100	100
Total Gross:	1,178	0	0	1,200	22	22

The three digit numbers are from the "Postsecondary Education Facilities Inventory and Classification Manual (FICM)" 2006

Space Detail Information

Department: Tennessee Higher Education Commission

Institution: Tennessee Tech University

Project: Ag. Engineering Technology Facility

Space Name	Room Use	Activity Description	Occupant Count	Area (NASF)	Number of Spaces	Area (NASF)
Classrooms	100's		0	0	0	0
			0	0	0	0
			0	0	0	0
			0	0	0	0
Classroom Total	(All 100s)		0	0	0	0
Laboratories	200's		15	1,200	1	1,200
			0	0	0	0
			0	0	0	0
			0	0	0	0
			0	0	0	0
ClassLab Total	(All 200s)		15	1,200	1	1,200
Office	300's		0	0	0	0
			0	0	0	0
			0	0	0	0
			0	0	0	0
Office Total	(All 300s)		0	0	0	0
Study Facilities	400's		0	0	0	0
			0	0	0	0
			0	0	0	0
Study Fac. Total	(All 400s)		0	0	0	0
Special Use	500's		0	0	0	0
			0	0	0	0
			0	0	0	0
Special Use Total	(All 500s)		0	0	0	0
General Use	600's		0	0	0	0
			0	0	0	0
			0	0	0	0
General Use Total	(All 00s)		0	0	0	0
Support	700's		0	0	0	0
Helath	800's		0	0	0	0
			0	0	0	0
Support & Health	(700s & 800s)		0	0	0	0
Grand Total Net SF:			15	1,200	1	1,200