PURDUE
UNIVERSITY

OFFICE OF THE PRESIDENT

September 5, 2014

Mr. Brian Bailey
Director
Indiana State Budget Agency
State House, Room 212
Indianapolis, Indiana 46204

Ms. Teresa Lubbers
Commissioner
Indiana Commission for Higher Education
101 West Ohio Street, Suite 550
Indianapolis, Indiana 46204

Dear Partners in Education,

On behalf of the Trustees of Purdue University, our faculty, staff and students, it is my pleasure to submit Purdue University's FY 2015-17 operating, capital, fee replacement, and special state appropriation request. This compilation represents countless hours of effort and is submitted consistent with the direction of the State Budget Agency and the Indiana Commission for Higher Education.

It is an extraordinary time in higher education. Never have so many benefited from the advancements made by our great institutions, yet never have so many questioned the value of the higher education experience, both to individual students and to the state we serve.

Purdue accepts the legitimacy of these questions, and the responsibility to answer them. We have committed ourselves to an action program, the Purdue Moves, that will forge our path of innovation, achievement and growth. Purdue will invest in the disciplines that have the greatest potential to change the world, such as drug discovery and plant science. We will lead the way in STEM education by expanding our College of Engineering, transforming our College of Technology and strengthening our work in Computer Science. We will be a national leader in how learning occurs by disposing of the old norms and becoming a year round University, by increasing our international experiences, and by challenging the traditional way classes are taught based on how today's students learn best. During these transitions, it is paramount that both value and quality are considered at every step.

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Purdue is recognized as a national leader in the value of its degrees, and we intend to increase that value. Affordability and accessibility have never been more important to higher education. Purdue has held tuition constant for the last two years, and is planning on freezing tuition again for the 2015-2016 academic years. Additionally, we have lowered the cost of living on campus, provided innovative solutions to textbook expenses, pursued administrative streamlining and cost reductions, as well as increased our institutional aid. We will steadily enhance our value by controlling the costs of a Purdue education to ensure that students of all income levels can afford access to a world class education.

We know from our investment in the Gallup-Purdue Index that the most important factor to graduates' long term well-being is not where they went to college, but how they went to college. Purdue is changing the way students go to college and these concepts were continually incorporated in our decision making, planning and prioritization of this appropriation request. The State is an important partner in implementing these changes and as we continue to build an entrepreneurial environment of discovery, learning and outreach, Indiana will benefit for generations to come.

We contend that in the technology-driven world of this century, there is no asset any state would rather have than a STEM-focused, entrepreneurial and engagement-minded research university like Purdue. We look forward to opportunities to discuss this request and the details within, as well as to share our vision of the future of Purdue University.

Sincerely,

Mitchell E. Daniels Jr.
President

Purdue University
Narratives for 2015-2017 Operating and Capital Budget Request

Purdue University West Lafayette

One hundred and forty years ago, five years after its founding as Indiana's land-grant university, the first 39 students enrolled in classes at Purdue University. Since then, the institution has educated thousands of Hoosiers, and brought thousands more to live and invest their lives in the state of Indiana. At perhaps no other moment in history has Purdue been more focused on aggressive action to benefit the state, Hoosier students and Indiana families.

Through a series of initiatives known as the Purdue Moves, the university is poised to offer higher education at the highest proven value. Through these initiatives, the campus is finding efficiencies, generating savings, reducing the financial burden on students and investing in areas that are most likely to generate jobs and attract new businesses to the Hoosier economy.

The Purdue Moves are West Lafayette's answer to the changing higher education environment, and they are at the heart of our 2015-17 budget request. These initiatives can be grouped into four areas: STEM Leadership, World Changing Research, Transformative Education, and Affordability and Accessibility.

STEM Leadership

At least 20 percent of all jobs today require a high-level knowledge in at least one STEM discipline.[1] To compete in the future as the U.S. economy becomes even more technology-based, Indiana will need more STEM-trained residents and more STEM employers. To help the state in both the supply and demand sides of its STEM economy, Purdue is committed to the goals of:

- Expanding engineering student enrollment by about 1,500 graduate and undergraduate students and hiring more than 100 new engineering faculty. *See section on Line Items for more information.*
- Increasing enrollment by approximately 25 percent in computer science.
- Developing Purdue's expertise and leadership in the growing field of data science.
- Transforming the Purdue College of Technology into a Purdue Polytechnic Institute that teaches the science of demand-driven innovation and entrepreneurship. This new approach includes a greater emphasis on business startups and workforce development.

Compared with other professionals, STEM professionals are more likely to generate jobs and new economic growth. As the Brookings Institution has concluded, "job growth, employment rates, patenting, wages, and exports are all higher in more STEM-based economies."[2] Purdue's leadership in STEM will help drive the state's future economic outlook.

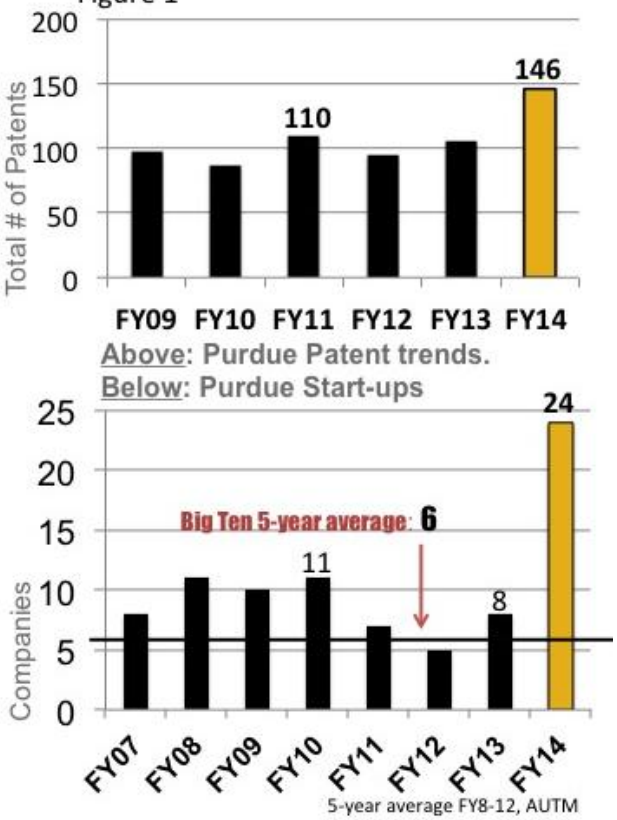
[1] Rothwell, Jonathan. "The Hidden STEM Economy." *Brookings Institution*, 2013. http://www.brookings.edu/~/media/research/files/reports/2013/06/10 stem economy rothwell/thehiddenstemeconomy610.pdf

[2] Rothwell, 2013

World Changing Research

Purdue's leadership in STEM is already reaping rewards for Indiana's economy. In the last fiscal year, our faculty and students started 24 businesses that are based on Purdue research. This is more than double the previous school record and four times the Big Ten five-year average. Likewise, Purdue researchers in the past year obliterated the previous school record for the number of U.S. and global patents issued in a fiscal year. Figure 1 shows both of these records in a historical context.

Figure 1



The goal of Purdue's World Changing Research initiative is to continue the kind of vital research that is both important to our state and helpful to society. Investing in drug discovery and advancing plant science research are two areas of current emphasis. Included among Purdue's specific goals are:

- Attracting new researchers of international reputation and proven ability.
- Fostering research, clinical translation, education and commercialization in the development of life-saving and life-enhancing drugs.
- Creating a Plant Commercialization Incubator facility that will enhance the value of Purdue intellectual property and make Purdue the "go-to" place for industry partners.
- Developing student leaders in the plant sciences.
- Leading the world in understanding plant biology, translating those discoveries to commercially important crops, using automation to assess the performance of these crops under field conditions and moving these improved plants or plant products through a pipeline for commercialization.

Few universities can match the depth and breadth of Purdue's research capabilities and talent in these areas.

Transformative Education

Purdue's strength in research extends to investigations into how students best learn. The result is a university that is challenging traditional teaching methods and developing new ways to incorporate active learning into the classroom. Purdue is the national leader in the development of student-centered courses that are empirically proven to better generate confidence and competence in the curriculum.

The transformation of the traditional educational approach on the West Lafayette campus extends to other areas as well, including:

- Using incentives and policies to facilitate more international learning experiences for Purdue students.

- Developing ways to leverage university residences to better support the academic mission (Purdue data show that students who live on campus have better retention rates and GPAs).
- Becoming a year-round university (Undergraduate summer credit hour enrollment is up more than 20 percent over the last two summers). *See section on Line Items for more information.*

Affordability and Accessibility

The overarching goal of Purdue Moves is affordability and accessibility. By streamlining administrative structures, modernizing procurement and limiting increases in tuition and fees, Purdue has become the national leader in the movement for college affordability. Our approach is comprehensive:

- Purdue's commitment to freeze tuition for at least three years means that four-year graduates from the class of 2016 will be the first in 40 years to enjoy one base tuition rate throughout their entire undergraduate experience.
- Participants in the most popular dining court meal plans now pay 10 percent less than they would have under rates approved two years ago.
- Because of a first-of-its-kind partnership with a major online retailer, students are saving on average one-third on the costs of textbooks — the third-largest student expense.

Through the Purdue Moves, the West Lafayette campus has committed to use every dollar it receives, from students, taxpayers and donors, in an efficient and strategic way that delivers higher education at the highest proven value. The campus has progressed toward this vision over the last biennium, and with continued support from the state, will continue to generate results in the next.

Regional Campuses

Purdue's regional campuses play an integral role in advancing student access, affordability, and quality of education while increasing college completion rates and productivity. Each offers courses through a variety of flexible delivery models and scheduling options designed to accommodate the unique needs of their student populations and, importantly, focus on the workforce needs of local employers. Research and scholarly activities, as defined and authorized by the Commission for Higher Education, are central to the needs of the regional economies.

In February 2014, Purdue University Calumet and Purdue University North Central announced a collaboration that would unify the administration of Purdue's two northwest Indiana campuses. The combined entity has been renamed Purdue Northwest, but each will retain its historic identity. The goal: one strong Purdue with two campuses in the region dedicated to the creation of a single, combined institution. The unification will reap significant savings, which will be reallocated and reinvested into educational quality, faculty, student success initiatives and ultimately, the establishment of an extraordinary Purdue presence in northwest Indiana that best serves students, families, business, industry and the economy of northwest Indiana.

Purdue University Calumet

Nearly 9,500 students attend Purdue University Calumet's 17-building, 172-acre neighborhood campus. Established in 1946, the institution offers professional certificates, baccalaureate and master's degrees in more than 80 fields of study. Purdue Calumet is one of the few universities in the nation to have formally adopted experiential learning — the structured integration of traditional classroom learning combined with the applied learning that occurs in a work-related, real-world environment. The experiential learning component is a requirement for all baccalaureate degree-seeking students.

Four University goals describe our framework for institutional growth:

1. Academic Excellence
2. Learning through Engagement and Discovery
3. Inclusivity
4. Community and Business Partnerships

Academic Excellence

Faculty and student quality are key factors in achieving academic excellence. To recruit and retain a distinguished faculty, we must provide competitive compensation and benefits as well as financial support for professional development. We also seek support for a variety of activities critical to student success, including curriculum, instruction, academic risk management, enrollment management, student engagement and other important elements. All savings realized as a result of consolidating administrative positions with Purdue North Central will be used to support academic excellence.

Learning through Engagement and Discovery

Learning through engagement and discovery has been a strategic differentiator and focal point of Purdue University Calumet programs. Experiential learning is a hallmark of Purdue Calumet. Our comprehensive offering of experiential learning-based courses enriches learning and makes academic content relevant to real life and the world of work. The university's ambitious program of

undergraduate research adds another dimension to the academic experience of our students. The emphasis on student research dovetails with experiential learning and results in an education that straddles the classroom, the laboratory and the world.

Inclusivity

Inclusivity means that all individuals are welcomed and feel a part of the University community. At Purdue Calumet, we strive to build a community where persons are respected and diverse perspectives are not just tolerated but encouraged. The university is also globalizing its curriculum and classrooms by enhancing its coursework with international perspectives and resources, including study abroad programs, as we continue efforts to make and keep our campus richly diverse and inclusive.

Community and Business Partnerships

Community and business partnerships provide our university with an opportunity to engage the world beyond campus. These partnerships take many forms and help not only those with whom we partner but also faculty, students and staff. State dollars support the partnerships that Purdue Calumet pursues with its various private and public constituencies. This financial support advances the academic enterprise on campus and helps propel economic development throughout our region.

Purdue University North Central

Purdue University North Central continues to mature and evolve as a regional campus within the Purdue system. Founded in 1946, its current demographics show that more and more students are taking a full load of courses and enrollment continues to increase in dual credit/concurrent courses. PNC has encouraged its full-time students to enroll in 15 credit hours by offering a 10 percent rate reduction in tuition for each credit hour a student takes over 12 hours. To date, over 1,600 students of 3,170 registered for fall semester — close to 54% — are taking advantage of the program, enrolling in at least 15 hours for the semester and putting them on a path to on-time graduation. Collectively, Purdue University North Central students have saved in excess of $100,000. The increase in programmatic offerings has given students more choices for baccalaureate degrees, and therefore students are remaining at PNC throughout the completion of their degree. With these increases in degree options, fewer and fewer students are part-time, a significant shift that began in 2003-04. With both core and dual credit/concurrent enrollment, the campus has enrolled more than 6,000 students.

Purdue North Central continues to place great emphasis on the following areas:

1. Student Access and Success
2. Enrichment of the Student Experience
3. Collaboration & Community Involvement
4. Economic Development

Student Access and Success

The campus now offers 24 bachelor's degree programs, including three in engineering. PNC engineering graduates are highly sought in Northwest Indiana.

PNC is dedicated to student success. PNC was the first campus in the state to adopt the state-mandated 120-credit-hour limit for nearly all of its degree programs except where accreditation requirements mandate a greater number of hours. PNC has also implemented a 30-credit general education core.

The campus is participating in the Indiana Commission for Higher Education's "15 to Finish" campaign to increase student degree completion rates. PNC initiatives include:

- An improved and expanded new student orientation program.
- A mandatory first-year experience course.
- Implementation of a degree audit software program that enables students and parents to track progress toward a degree.
- Encouraging students to register for a year at a time.
- A large network of dual credit/concurrent enrollment courses for high school students.
- Development of 1+3 programs that will help these students apply these dual credit/concurrent enrollment courses.
- Increasing online courses in order to facilitate scheduling and degree progress.
- Adding a supplemental instruction program for courses that have high rates of D/F and withdrawal.
- Development of an Honors Program to challenge high-achieving students.

Enrichment of the Student Experience

- Service learning has expanded and is now embedded with several degree programs.
- Student participation in undergraduate research continues to grow and provides students with the opportunity to present their work at state and national conferences.
- Special programming has been developed to support the special needs of veterans who are completing their education.
- Construction of the Student Services and Activities Center (SSAC) is scheduled to begin in fall 2014. It is anticipated to take 18 months. This facility will allow the campus to hold graduation ceremonies on campus and will be used to enhance the quality of student life at PNC. In addition, it will offer a venue for conventions and workshops for the local communities served.

Collaboration & Community Involvement

- PNC continues to maintain and develop mutually beneficial relationships with area schools, other institutions of higher education and local businesses. For example, PNC has been a partner with the Michigan City Area Schools for the past several years in the establishment of magnet schools in Fine Arts and Science and Technology.
- The Odyssey contemporary sculpture exhibit continues to attract many visitors to campus and is frequently the site for elementary and secondary student field trips.
- Dual Credit/Concurrent Enrollment increases continue to rise. Now 30% of all admitted students come to PNC with college credits from over 40 high schools. We are offering a variety of 1+3 degrees aimed at students who are taking advantage of dual credit/concurrent enrollment.

Economic Development

- Purdue University North Central has developed a strong reputation as a leader in the area of economic development throughout its service region. The campus continues to assist existing and new businesses and industry with finding skilled employees and providing training opportunities to hone the skills of their workforce.
- Under the Center for Economic Development and Research (CEDaR), PNC business faculty have taken leadership roles in the development and reporting of important economic indicators for Northwest Indiana.
- With the construction of the Student Services and Activities Center, PNC will help the local economy through the creation of jobs for this important project. It is estimated that over 250 skilled trades workers will be employed during the construction of the SSAC.

Purdue North Central will continue to be a good steward of the investment made in it by the State of Indiana. Enrollment funding and continued support for dual credit/concurrent enrollment will assist the campus in moving forward. The construction of the Student Services and Activities Center will enhance the student experience at the campus and will provide an outstanding resource for Northwest Indiana.

Indiana University-Purdue University Fort Wayne

As Indiana University-Purdue University Fort Wayne (IPFW) embarks on its 50th anniversary as an institution of higher learning, it also embarks on the implementation of a new comprehensive yet focused strategic plan (Plan 2020). To operationalize the plan and align the institution to its strategic goals, IPFW has started a "University Strategic Alignment Process" (USAP). This is an integrated strategic planning and institutional effectiveness approach whereby every IPFW organizational unit/program will demonstrate its direct linkage with the institution's plan and resources and show how it is achieving both its own and the institutional performance measures.

The mission of IPFW is to meet the higher education needs of northeast Indiana. Through Indiana University and Purdue University undergraduate and graduate programs and the scholarship of IPFW faculty, the campus advances knowledge and drives the economic, cultural and intellectual development of Northeast Indiana.

The IPFW Strategic Plan has four overarching goals:

1. Foster Student Success
2. Promote the Creation, Integration and Application of Knowledge
3. Serve as a Regional Intellectual, Cultural and Economic Hub for Global Competitiveness
4. Create a Stronger University through Improving the Support of Stakeholders and the Quality and Efficiency of the Organization

Foster Student Success

IPFW will improve the quality and strength of its assessment process and effectively utilize data to improve student learning outcomes through the continuous improvement of course, curricular, and co-curricular offerings. We will increase student participation in high-impact instructional practices and advising interventions, support the development of activities and experiences that celebrate

multiculturalism and the broad array of human differences, and promote programs featuring international and interdisciplinary curricula.

Promote the Creation, Integration and Application of Knowledge
IPFW will expand the production of high-quality and high-impact scholarship by students, faculty, and staff by encouraging student participation in research, seeking external funding for scholarly activity, and promoting additional academic collaboration.

Serve as a Regional Intellectual, Cultural, and Economic Hub for Global Competitiveness
IPFW will expand collaborations with regional partnerships in government, social service, and business sectors. We will provide leadership in regional economic development efforts as well as provide access to outstanding intellectual, cultural, and artistic programming.

Create a Stronger University through Improving the Support of Stakeholders and the Quality and Efficiency of the Organization
IPFW will establish a culture of assessment through a set of appropriate performance metrics for all units as well as an integrated system of program reporting, review, assessment, and accreditation that is aligned with institutional performance metrics. We will establish priorities for resource allocation in order to create, expand, merge, or reduce activities as appropriate.

IPFW Goals	Selected IPFW Performance Measures
Foster Student Success	• Retention and graduation rate • Post-graduation success • Achievement of learning outcomes (Baccalaureate Framework) • A more diverse campus • Signature programs • Honors Program
Promote the Creation, Integration and Application of Knowledge	• Peer-reviewed scholarly products • Students participating in research and scholarly activity • External grants and contracts and competitive awards in support of scholarly activity • Internal and external academic collaborations
Serve as a Regional, Cultural, and Economic Hub for Global Competitiveness	• Intellectual, cultural, and artistic events • Regional, national, and global collaborations
Create a Stronger University through Improving the Support of Stakeholders and the Quality and Efficiency of the Organization	• Reallocations as a percent of general fund budget • Efficiency ratios (expense/revenue) of revenue generating units • Philanthropic and public support for university priorities

Line Items

Purdue's commitment to its land-grant mission remains unwavering. Our line item requests are particularly focused on the purposes for which Purdue was founded: growing our educational and economic impact on Indiana and its citizens.

College of Engineering Expansion

FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
	$ Increase	%	$ Total	$ Increase	%	$ Total
0	6,000,000	100.0%	6,000,000	0	0%	6,000,000

Background Information and Progress

In April 2012, Purdue's College of Engineering embarked on an aggressive expansion of student enrollment and faculty size. The plan will increase undergraduate enrollment from 7,087 in fall 2011 to 7,778 in fall 2016, and builds on the 15% enrollment growth between 2006 and 2011. Faculty size will increase by 30% from 358 to 465. Graduate student enrollment will grow by 25-30% (750-800 students), in tandem with growth in faculty and the college's research enterprise.

The planned expansion will make Purdue Engineering one of the largest colleges of engineering in the country. Purdue will be an important part of the national call to graduate 10,000 more engineers per year — a goal directly tied to our state and national capacity for innovation, economic development, and job creation.

Engineering has already made significant progress toward the student and faculty targets. Fall 2014 undergraduate enrollment is estimated at ~7,700. Graduate student enrollment is projected to increase from 2,738 in fall 2011 to 3,100 in fall 2014. By January 2015, Engineering's hiring will result in net growth of ~50 faculty toward the planned increase of 107.

Line Item and Leverage

In recognition of the innovation and economic development benefits and to continue the momentum of the Engineering expansion, Purdue proposes that Indiana provide a $6M line item investment beginning in 2015-16. This allocation will fund the annual compensation of ~35 (one-third) of the 107 new faculty positions estimated to cost $18.3M.

The proposed $6M investment will be leveraged through funds committed by Purdue as well as by external funding. Purdue's investment in the Engineering expansion includes support for the remaining faculty lines, facility costs, faculty start-up funding and related support costs. Engineering also has a private fundraising goal of $150M to support the increased needs for scholarship and fellowship endowments, professorship endowments, and facilities.

Impact of Investment in Engineering Expansion

Indiana's investment in expanding Engineering will pay economic dividends for decades. The increased numbers of talented Purdue Engineering faculty and students will attract research funding, encourage business investment in the state, increase the number of engineering students employed in Indiana following graduation, and spur growth of new companies from faculty and student entrepreneurs.

Purdue produces the highest number of graduates with degrees in engineering or engineering-related technology fields of any institution in the United States, according to yearly data from the U.S. Department of Education's Integrated Postsecondary Education Data System. As such, and with a determined focus on constant innovation, "Purdue Pathmaker," was recently launched and is a unique program where students can get real-world work experience, part-time engineering jobs or internships without leaving campus. Charter partners include Intel, HP and EMC. As we grow our College of Engineering, this program can only benefit our students and those who seek to employ them. Purdue appreciates the state's continued partnership in our shared effort to achieve national STEM and economic development leadership.

Summer session expansion at West Lafayette

FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
	$ Increase	%	$ Total	$ Increase	%	$ Total
0	5,000,000	100.0%	5,000,000	0	0%	5,000,000

As part of Purdue's efforts in transformative education and student affordability, an initiative to expand the educational opportunities for students during summer has been launched. A new line item is requested from the state to enhance and accelerate this student-focused initiative. Besides expanding summer course offerings, this initiative recognizes the importance of providing students more flexibility to incorporate internships, study abroad, and undergraduate research into their Purdue experience both during the summer and the academic year.

A greater focus on summer led to a 20 percent increase in undergraduate summer credit hour enrollment from 2012 to 2014. Going forward, the plan is to at least double undergraduate summer credit hours by 2018. This will help students accelerate their time to degree completion and increase four-year graduation rates. Not only will students benefit academically from a more robust year-round university, this will increase utilization of campus resources and benefit the local economy.

The success to date has been achieved by a careful examination of which courses to offer during summer resulting in an expanded course roster; a campaign to urge students to actively consider the option of summer school attendance; implementation of a year-round housing plan with summer discounts and a summer meal plan; and initial summer programming improvements. These early efforts have shown a positive response by increased enrollments. It is believed that greater investments in three areas: 1) summer financial aid; 2) summer student employment; and 3) summer campus life, will allow further enrollment increases.

Currently, over half of financial aid available for Purdue students comes from federal sources. However, current federal policies limit the availability of this aid during the summer. The dollars available for summer financial aid were completely utilized this past summer. The focus will be for resident at-risk students through programs for new students and targeting transfers and continuing students to accelerate degree progression, with the goal of supporting the performance formula metrics and further expanding the summer session. ($4M)

Second, students often feel the need to work during summer. Providing a student employment center that would facilitate employment opportunities for individual students would allow them to earn income while continuing to make progress to their degrees. The goal is not only to increase the number of student jobs on campus, but also to increase the responsibility of student workers from the freshman to the senior year. Providing more student jobs, and more meaningful jobs during summer will lead to more students combining employment and academics, allowing students to rely less on students loans to fund their education. ($500K)

Finally, compared with the academic year, the pace of student life is significantly different in the summer. Organized student activities during the summer are limited including lack of athletic events, cultural programs, entertainment, and student organization activities. Thus, the third goal is to expand and enhance summer programming to provide opportunities for learning outside the classroom, including research activities, and to provide student life experiences in the summer that students enjoy during the academic year and that complete the academic experience. ($500k)

Center for Paralysis Research

FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
	$ Increase	%	$ Total	$ Increase	%	$ Total
522,558	7,838	1.5%	530,396	7,956	1.5%	538,352

Since its founding in 1987, the Center for Paralysis Research (CPR) has been the foundation piece in the College of Veterinary Medicine for discovery in the area of traumatic neurological injury and subsequent treatment. Over the past quarter century, research in the CPR has evolved from its early work with the oscillating field stimulator to drug therapy (4-aminopyridine), polymers and nanotechnology. The researchers of the CPR conduct groundbreaking work resulting in novel therapies undergoing human clinical trials and ultimately producing licensed technologies. In early 2012, researchers began a study to determine the role of acrolein, a toxin that causes nerve damage, in spinal cord injury and to learn whether reducing its concentration in the days following trauma also decreases damage that can lead to paralysis.

Historically, the mission of the Center for Paralysis Research has been to develop therapies for human spinal cord and brain injury. In recent years this mission has expanded to include other diseases of the central nervous system, in particular Parkinson's disease and multiple sclerosis.

Another major aim of the center is to enhance the quality of life of paralyzed individuals. The center has engineered devices to solve practical problems faced by those with traumatic brain and spinal cord injuries or other neurological disorders. Assistive technology allows people with disabilities to more independently perform daily living, educational, or occupational activities and to be more self-sufficient and productive which is crucial for emotional well-being.

Agricultural Research and Extension – Crossroads

FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
	$ Increase	%	$ Total	$ Increase	%	$ Total
8,492,325	127,385	1.5%	8,619,710	129,296	1.5%	8,749,006

Background
Indiana's agricultural industries contribute $38 billion and nearly 190,000 jobs to the Indiana economy, 103,000 of which are directly involved in crop production and processing. Indiana's agriculture and agricultural sciences industries need a strong university partner that can provide the research and the human capital they need to drive economic growth and jobs for our state. As Indiana positions itself for a future that demands adequate nutrition and energy for 9 billion people, continued investment in the Purdue University College of Agriculture research and extension mission is essential to help support one of the cornerstones of future economic development for the state.

Crossroads
With its initiation in 1991, the State of Indiana's Crossroads investment helped position Purdue Agriculture as a national powerhouse in the agricultural sciences (currently ranked number 8 in the world in the QS Rankings of Colleges of Agriculture and Forestry). We have been able to leverage Crossroads funds to dramatically increase research and extension funded by external sources, growing from $22 million in 1992 to an average of $63 million annually over the last three years. Some 20-25% of these external funds come from the private sector annually. Examples of Crossroads investments include:
Purdue Agricultural Centers: Hosted over 140 events involving about 8,000 participants in 2013.
Purdue Plant Disease and Diagnostic Laboratory: 3,612 diagnoses on 2,584 samples submitted in 2013.
On-Farm Research: Our faculty have been engaged in large plot on-farm research since 2006, both at Purdue Agricultural Centers and cooperatively with farmers.
Bee Research: Extension efforts are aimed at teaching queen-rearing and breeding techniques to promote a Midwest queen breeding industry and the use of locally adapted, resistant bees.

Crossroads: AgSEED
In 2013, the State of Indiana invested an additional $1.25m in Crossroads through the AgSEED initiative (Agriculture Research and Extension for Economic Development) — the first substantive increase in Crossroads since 1998. This investment was focused on two priority areas: 1) innovation in Indiana plant and animal agriculture; and 2) innovation in rural entrepreneurship.

As promised in our FY 2013-15 budget request, this incremental investment is being used to fund high-priority projects in the areas of innovation in Indiana plant and animal agriculture and innovation in rural entrepreneurship through a competitive proposal process. In the fall of 2013, some 95 proposals were considered for funding, with 19 selected. Another set of high priority AgSEED projects will be funded in Fall 2014.

Our budget request for FY 2015-16 and 2016-17 is to provide a 1.5% increase in each year to the Crossroads line item (including AgSEED), enabling the College of Agriculture to continue to support innovation and economic development in the Indiana food and agriculture sector.

Field Educator Budget Request

FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
	$ Increase	%	$ Total	$ Increase	%	$ Total
7,487,816	112,317	1.5%	7,600,133	114,002	1.5%	7,714,135

Through a network of county-based educators and campus specialists, Purdue Extension delivers research-based information and educational programming in the areas of Agriculture and Natural Resources; Health and Human Sciences; Economic and Community Development; and 4-H Youth Development. Our educators, specialists, and volunteers live and work in all 92 Indiana counties. We provide the link between land-grant research and Indiana citizens, providing practical information, resources, and insight to help local citizens address local issues.
Purdue Extension is funded through a partnership of federal, state, and county resources. State funds are used to match federal funding for Cooperative Extension. In addition to supporting program delivery, state and county funds provide the capacity needed for Purdue Extension to successfully compete for grant opportunities that fund additional educational programming in Indiana.

The current funding base for our county-based Extension model is:

State Field Educator line item	$7,487,816
County contractual services	$8,020,616
Program and office operations (funds provided by the county)	$9,096,904
Total	$24,605,336

In our current economic climate, governments at all levels are challenged with slower revenue growth and rising expenses. Indiana's counties are no exception. After reducing financial commitments to Purdue Extension in 2012, Indiana's counties have increased funding in 2013 and 2014, but the expanded funding at the county and the state Field Educator line item has not kept up with inflation. To sustain our Extension program, we have implemented extensive cost-saving measures. County budget challenges make the budget committed by the State of Indiana even more important as we work to provide high-impact Extension programming at the local level. Our budget request for FY 2015-16 and 2016-17 is to provide a 1.5% increase in each year to the Field Educator Line item to help us compensate for inflationary cost increases.

Specifically, these funds will help Purdue Extension:

1. Sustain our 4-H Youth Development program by fully implementing our 4-H staffing model.
2. Build our commitment to delivering on-farm applied research and demonstration projects that help farmers adopt useful technology.
3. Solidify our health and wellness programs focused on diabetes, obesity and physical activity.
4. Engage local government officials with educational programming that provides insight into tax revenue and budget management.

Indiana Next Generation Manufacturing Competitiveness (IN-MaC) Center

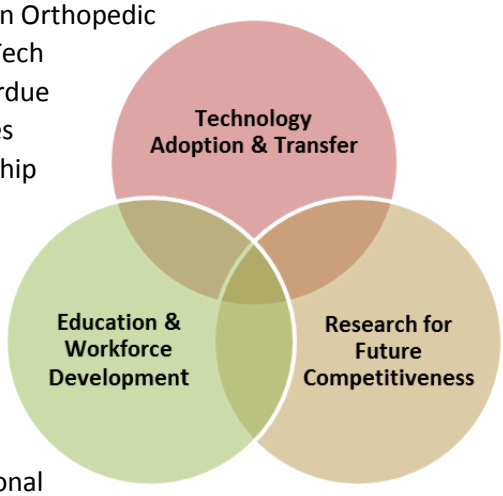
FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
	$ Increase	%	$ Total	$ Increase	%	$ Total
2,500,000	37,500	1.5%	2,537,500	38,063	1.5%	2,575,563

Background

Competitiveness and sustainability of the manufacturing sector are essential to ensure job growth and economic prosperity in Indiana. IN-MaC was proposed by Purdue, Ivy Tech, and Vincennes University in response to the accelerating trend of manufacturing jobs returning to the U.S., a strong need to develop the next generation of manufacturing workforce as retirements occur, and the opportunities presented by new emerging manufacturing technologies. The legislature provided $5 million in the 2013-15 biennium budget.

Results: Successful Launch in Year One

- 17 Indiana companies under Tech Adoption contracts; 22 more in discussions.
- Engaged with Ivy Tech, Vincennes, Purdue Calumet & IPFW. Education/Workforce Development projects launched in year 1 include development of an Orthopedic and Advanced Manufacturing Training Center at Ivy Tech Warsaw, training for Mechatronics Technicians at Purdue Calumet, workforce development efforts at Vincennes University, and the Advanced Manufacturing Leadership Development Program at Purdue.



- Five IN-MaC Research Fellows named from Engineering, Technology, and Science. IN-MaC Fellows are supported over two years and are charged with connecting their research to IN-MaC's education and technology adoption thrusts.
- Purdue is a tier-1 partner in the $70 million federally funded Digital Manufacturing Digital Innovation National Network for Manufacturing Innovation (NNMI) center awarded to UI Labs.
- Purdue is university lead on a $70 million Composites NNMI proposal with Oak Ridge National Lab focused on automotive and wind energy materials and structures.

We Request Continued Support for 2015-17

- $2.5 million/year through 06/30/2017 plus inflation allowances
- Moves IN-MaC towards long-term sustainability
- Target objective is a 5:1 leverage of state funds with a long-term stretch goal of 8:1

Vision: IN-MaC will be a statewide resource that provides access to state-of-the-art knowledge and practice in manufacturing processes, materials, systems, and information sciences for the state's manufacturing companies and workforce. The center will focus on three thrusts: 1) knowledge creation to support growth of Indiana's manufacturing base with a focus on the Digital Enterprise and

Personalization of Manufacturing; 2) efficient technology transfer to enhance competitiveness of Indiana manufacturing companies; and 3) education, professional development, and training of the workforce for competitive global manufacturing enterprises.

Key Elements: IN-MaC is a unique public-private partnership that provides full-spectrum engagement with Indiana's manufacturing industry. IN-MaC addresses the big-M, systems view of manufacturing enterprises by integrating Purdue's leading-edge discoveries with computing technologies for enterprise integration, and educational programming. The center partners with Purdue's Technical Assistance Program (TAP), which currently serves over 400 Indiana manufacturers each year, to reach Indiana's manufacturing community. TAP also hosts Indiana's Manufacturing Extension Partnership (MEP). IN-MaC's Technology Adoption thrust adds a crucial element to the TAP/MEP tool kit by allowing extended projects focused on helping Indiana companies adopt new technologies they need to remain competitive.

The workforce development efforts cover the entire range of educating undergraduate and graduate manufacturing engineers, scientists and technologists: offering certificates and continuing education programs, both on-site and online, to current state manufacturing workforce, and delivering job training programs to keep Indiana's workforce current. The center will ultimately be a home for STEM-related educational pathways by creating a seamless bridge between high schools, community colleges, and universities to address the state's skilled workforce needs in manufacturing that require post-secondary education.

Impact: IN-MaC's strength in manufacturing will be a significant differentiator in attracting high-technology manufacturing to Indiana. Attracting and keeping manufacturing in Indiana will have significant impact on innovation and market growth in the state. First-year IN-MaC results suggest that another major advantage could be the emergence of new industry clusters in the state, such as personalized medical devices based on digital manufacturing and prototyping, or roll to roll manufacturing. The center has the ability to attract significant national research and development funding with its success in the NNMI DMDI proposal. Summer 2014 will demonstrate a successful launch of a partnership with PTC, a leading provider of manufacturing IT solutions, which allows IN-MaC to deliver a customized Product Lifecycle Management Certificate, the first of many planned continuing education programs.

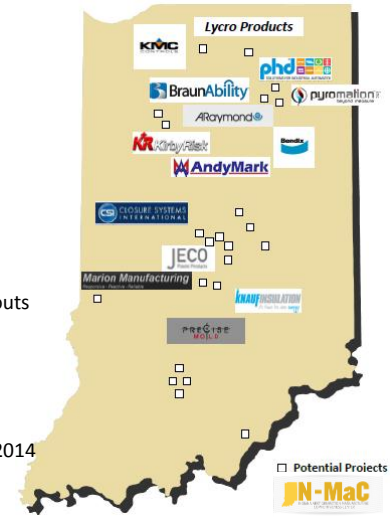
Technology Adoption & Transfer

Projects Underway, Completed, or Under Consideration

- ***Digital Engineering (8)***
  - Finite element methods
  - Materials characterization
  - Computational fluid dynamics
- ***Product Lifecycle Management (10)***
  - Supply chain integration
  - Inventory optimization
  - ERP/CAD data integration
- ***Production Systems and Modeling (19)***
  - Manufacturing floor optimization and layouts
  - Production line simulations
  - Warehouse systems

Notes:

1. Activity Inception (Sept 2013) through March 2014



College of Technology's Statewide Technology System (STS) and Academic Growth Plan for the Purdue Polytechnic Institute (PPI)

	FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
		$ Increase	%	$ Total	$ Increase	%	$ Total
STS	6,695,258	100,428	1.5%	6,795,686	101,936	1.5%	6,897,622
PPI	0	3,000,000	-	3,000,000	-	-	3,000,000
Total	**6,695,258**	**3,100,428**	**46.3%**	**9,795,686**	**101,936**	**1.0%**	**9,897,622**

The College of Technology's Statewide Technology System continues to serve about 1,100 students each year at its eight locations across the state. These students earn Purdue degrees and, without Statewide Technology, they would not have access to a Purdue education because these students are "place-bound." Continuing state funding at current levels at these sites, plus a small increase for inflation, is crucial to maintain current service levels and to support planned student headcount growth and new programs.

Over the 2012-14 academic years, we hired seven new Statewide location directors so that there is a director immersed in each of the communities the locations serve. We also hired seven additional student services coordinators who serve as the local admissions and advising representatives for Statewide Technology. The Statewide team of eight directors and fifteen coordinators work with high schools and businesses across the state to promote College of Technology degrees and services. In addition, eight new faculty have been hired and other searches are underway to add faculty across the state in key engineering technology areas crucial to the state's economy. These faculty support existing degrees plus four new degree programs recently added at various locations

To ensure efficiency and administrative accountability, a zero-based budget was implemented at each of the Statewide locations. To control student costs, two of our locations, Anderson and Lafayette, follow Purdue's tuition freeze while the six other locations follow IU or Vincennes University's tuition increase schedule in accordance with our agreements with IU and VU.

The College of Technology Statewide plays a crucial role in preparing Indiana's workforce of the future. Already, a high percentage of its graduates stay in the state, and the even closer alignment of its PPI curriculum to the workforce needs of the state will make it an even greater asset going forward. Having College of Technology graduates across the state is vital in attracting and retaining high-technology, high-wage companies and jobs. About 51 percent of Statewide students are full-time, and 49 percent are part-time with the enrollment trend toward more full-time, traditional-age students. Most Statewide graduates remain in the community where they received their degree, bolstering the local economy.

ACADEMIC GROWTH PLAN FOR THE PURDUE POLYTECHNIC INSTITUTE

With enthusiastic support of Purdue University's Board of Trustees and as part of "Purdue Moves," the College of Technology has embarked upon an unprecedented transformation that will lead to the

establishment of the Purdue Polytechnic Institute, which will offer extraordinary opportunities to Purdue students and faculty in West Lafayette, and eventually to all Statewide Technology sites. Each will serve as a model in higher education in preparing the workforce necessary for an economy driven by technology and innovation. Areas of academic focus will be advanced manufacturing, computing and information technology, and health care. Currently two Statewide locations, South Bend and New Albany, are launching Polytechnic pilot programs in Fall 2014.

The Polytechnic Institute is but one item in a multifaceted approach to dramatically increase enrollment in the College of Technology, focusing on preparing the workforce of tomorrow and addressing the serious skills gap that is not being filled through traditional higher education programs. An integral part of this initiative is the engagement in strategic partnerships by bringing in outside expertise from educational and industrial environments.

For Fall 2014, Purdue Polytechnic Institute has accepted a pioneering cohort of 36 students. Their first year studies will be delivered through the institute's proposed degree program, which will be refined as the academic year progresses. With the necessary state support, by Fall 2015 Purdue will be able to admit students directly to the institute.

Technical Assistance Program

FY 2015 $ Total Approp.	FY 2016 Request			FY 2017 Request		
	$ Increase	%	$ Total	$ Increase	%	$ Total
1,930,212	28,954	1.5%	1.959,166	29,388	1.5%	1,988,554

Mission

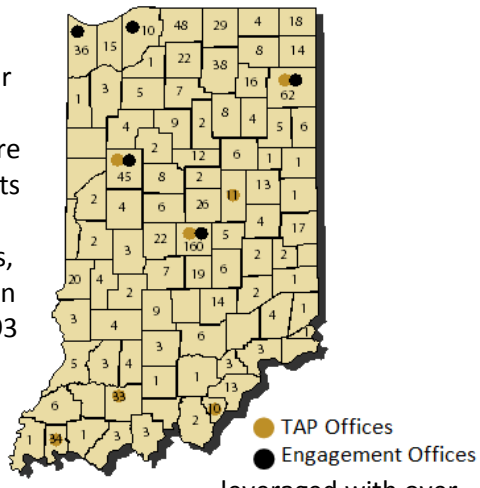
To advance economic prosperity, health and quality of life in Indiana and beyond.

Background

The Technical Assistance Program (TAP) was established in 1986 with a mission of advancing Indiana's economic prosperity, health and quality of life. Current initiatives include the National Institute for Standards and Technology's Manufacturing Extension Partnership Center (manufacturing competitiveness); the Health and Human Services Health Information Technology Extension Center (meaningful use of electronic health records); Purdue Healthcare Advisors (hospital and health care provider quality, safety and productivity); Energy Efficiency and Sustainability, advanced manufacturing technology adoption, and faculty business assistance.

A Purdue team comprising over 150 faculty, students and staff located throughout the state serves approximately 950 Indiana businesses, manufacturers, governmental units and health care providers each year, achieving significant economic development and health care system impacts. Fiscal year 2013-14 company-reported impacts on costs, sales and capital investments exceed $180 million and the Medicare and Medicaid electronic health record incentive payments earned exceed $138 million. Some 8,842 business executives, manufacturing employees, displaced workers, physicians, nurses and health care workers participated in TAP workshops, training and certification programs; 3,193 physicians received assistance with electronic health record adoption.

Business, Industry, Government and Healthcare Providers Served by County
FY 13-14 Total: 965



Funding request

TAP's FY 2014-15 state funding of $1,930,212 is highly leveraged with over $10,000,000 of total funding from 200 sponsors from the private sector, foundations, communities, and federal initiatives. In FY 2015-16 this line item will leverage significantly increased manufacturing sector funding through the National Institute of Standards and Technology's Manufacturing Extension Partnership center at Purdue. The expanded center will double the annual impacts on costs, sales, capital investments, and other factors.

Purdue University
2015-2017 Capital Request

INTRODUCTION

The Purdue University system is hard at work developing strategies to address student affordability and to position the University for long-term financial sustainability. Part of this planning effort is our system-wide facility needs, our 10-Year Capital Plan and our 2015-2017 Legislative Capital Request. This document highlights our plan for stewardship and renewal of the University's physical infrastructure to initiate our strategic vision for the next 10 years.

Through our 10-Year Capital Plan and 2015-2017 Legislative Capital Request, we look to accomplish three goals:

1. **Renewal through renovation and replacement** – Renovating and repurposing of existing space to allow our campuses to increase efficiency, sustainability, and safety.
2. **Development through private, public, and institutional partnerships** – Leveraging resources and aligning partners to create modern and efficient facilities that support emerging scientific methods and evolving instructional techniques, and providing improved opportunities for cross-disciplinary collaboration.
3. **Impact through investment, reinvestment, and sustainability** – Maximizing return on investment by focusing resources toward facility deficiencies, reducing the deferred R&R backlog, and achieving both environmental and financial sustainability.

PROCESS

The framework to guide the growth, development, and reinvestment in Purdue's physical infrastructure is rooted in each campus's master plan. Purdue's capital project planning and the development of our 2015-2017 capital request involves:

1. A biennial (once every two years) process to establish the 10-Year Capital Plan, and
2. An annual process to develop a repair and rehabilitation (R&R) and infrastructure plan

Purdue's capital project approval processes, including new construction, facility renovation, leases, and property acquisition are governed by State statute and the Bylaws of the University.

As part of this process, Purdue's Physical Facilities Office is charged with meeting internally with each campus and major campus unit to identify and collect needs and priorities for campus facilities and infrastructure and is supported by the Capital Coordinating Committee and Capital Projects Committee.

Physical Facilities and these two committees review all types of capital projects proposed by the various campuses and units before Purdue makes a request to the Indiana Commission for Higher Education (ICHE) and the State Budget Agency/Committee. They rely on broad awareness and understanding of system-wide master planning goals, facility and infrastructure needs, and strategic plan goals and priorities.

BALANCED CAPITAL APPROACH FOR PRIORITY PROJECTS

Purdue continues to work on a strategy aimed at achieving our strategic vision in the current challenging economic climate, as well as ensuring financial sustainability related to stewardship of our physical infrastructure.

The total replacement value across the entire physical plant for all four campuses (including Athletics and Auxiliary facilities) exceeds $8.0 billion. Academic and administrative buildings and infrastructure have a current replacement value (CRV) estimated at more than $5.6 billion. Purdue has estimated that the academic and administrative facilities and infrastructure have a deferred R&R backlog of at least $575 million ($450 million for the West Lafayette campus).

According to the Association of University Physical Plant Administrators (APPA), today's buildings, grounds, infrastructure, and equipment — which have been built to house and support academic programs — are the legacy of the dramatic growth of new and existing campuses over the past 60 years. During that time, two forces have converged to present higher education with a substantial maintenance backlog:

1. Normal aging of capital facilities and the subsequent need for cyclical renewal of building and infrastructure sub-systems.
2. The obsolescence of facilities to meet dynamic needs of the academic enterprise, including changing pedagogy, information technology, and a shift from traditional college-aged students to a more diverse student profile.

Deferred R&R is not unique to Purdue. It is one of the most significant and growing facilities issues currently facing public higher education institutions. To address our campus needs for new and replacement facilities and to address our annual R&R needs (including the deferred R&R backlog), Purdue has adopted a balanced capital program approach for system-wide facility and infrastructure investments. This approach consists of the following core principles:

- Renovate existing facilities, where feasible.
- Replace existing facilities with new, where appropriate.
- Add new space only when needed.

Over the past seven years this approach combined with bonding authority to address R&R, the American Recovery and Reinvestment Act (ARRA), our R&R matching funds, and the Discovery Learning Laboratory (DL2) and classroom R&R program allocations have allowed Purdue to:

- Stop the growth in the R&R backlog.
- Reduce operating costs.
- Eliminate old, inefficient space.
- Add newer, more energy-efficient space while sustaining and renewing current investments.
- Develop all capital projects with an eye to both environmental and financial sustainability.

Our 2015-2017 legislative capital request and 10-Year Capital Plan are built on these fundamental core principles.

2015-2017 CAPITAL REQUEST PRIORITY RANKING

The 2015-2017 legislative capital request includes the following projects requesting State funding in the near term. With the passage of Construction Manager as Constructor legislation during the 2014 session of the Indiana General Assembly, we anticipate that we will be able to demonstrate significant taxpayer savings. In addition, we anticipate utilizing other unique types of partnerships that will also yield demonstrable savings. Projects requesting State support require prioritization on the system-wide request. The University is proposing the following rank order for the projects submitted for inclusion in the 2015-2017 request. The outline below is the summary proposal, impact statement, and funding plan for each of our seven priority projects.

Priority 1

Proposal: The **Agricultural and Life Sciences Building** represents the third phase of an anticipated multiphase effort to improve and/or replace outdated facilities serving the Life and Health Sciences, primarily Lilly Hall of Life Sciences. The first phase, completed in 2009, included the construction of Hockmeyer Hall for Structural Biology. The second phase included space in the soon-to-be-constructed Active Learning Center to replace classroom and library space in Lilly Hall. The third phase will replace Animal Sciences research space with space that can support emerging scientific techniques and provide better opportunities to collaborate on cross-disciplinary research. Future phases will replace the remaining space used by Biology and classroom/study spaces.

Impact: The total impact of this project will build 51,000 square feet of teaching and research labs, classrooms, and office facilities to support Animal Sciences. This space will result in the demolition of 55,284 square feet of space in five buildings, and elimination of $19.9 million of deferred R&R.

Funding Plan: We are requesting $30 million from Student Fee Bond Proceeds – Fee Replaced, in addition to our own contribution of $10 million in Gift Funds, and $10 million in Facility and Administrative Cost Recovery Funds, for a total project cost of $50 million.

Priority 2 and 3

Proposal: The proposed new **Emerging Technologies Building** will address several crucial facilities and infrastructure issues at Purdue University Calumet, including the relocation of programs and services currently housed in the Gyte Annex to a new facility; construction of new offices, research and teaching labs for the Department of Biology; and creation of a home for Purdue University Calumet Centers and Institutes. The new building would prepare students for 21st century jobs in nursing and life sciences while advancing economic development in Northwest Indiana.

The colleges of Nursing and Education are currently housed in the Gyte Annex, which was constructed in 1953 as the Industrial Research Building for Inland Steel Corporation. Over the years, it was converted in phases to house academic functions. Building evaluations completed in 1997 and 2000 concluded the building was in need of major renovations; however, history has shown it difficult to remodel a building with antiquated internal and structural systems. Furthermore, the building provides poor ventilation,

uncomfortable working conditions and an obsolete learning environment. Since the building has no architectural significance and the infrastructure to support modern technology is nonexistent, investing resources in this facility offers a limited return at best.

The project received planning authorization in 2007; however, it did not receive full authorization even though it has continued to be the top priority for the Calumet Campus since the 2007-2009 Capital Budget Request. A significant portion of deferred R&R can be addressed for the Calumet campus with this project.

In order for the University to meet curricular requirements, accreditations and the goals of the strategic plan, the University requires the use of campus facilities that support modern technology and evolving instructional techniques. Having facilities of this nature is key to attracting and retaining contemporary and leading-edge faculty, who in turn will attract and retain students who typically choose other larger educational institutions.

Impact: The project will provide 48,673 ASF that will generate collaborative learning environments and much needed laboratory space. With the demolition of the Gyte Annex, the net change in campus ASF will be a gain of 24,011 ASF. In addition, the demolition of the annex will reduce Calumet's deferred R&R by $7 million or 13.6 percent.

Funding Plan: Planning funds of $2.4 million were authorized in the 2007 Legislative Session (Priority 2). Approval and appropriation of these funds are still pending and are included in this year's request. The Emerging Technologies building itself becomes Priority 3. The $2.4 million from the prior planning authorization and an additional $38.1 million for the building combine to create a total project cost of $40.5 million, which we request be funded with Student Fee Bond Proceeds – Fee Replaced.

Priority 4

Proposal: The **Brown Teaching Labs Renovation** was recently identified as a project for the West Lafayette campus recognizing the Brown Laboratory of Chemistry's significance in the overall teaching mission of the campus and the long-term plan to maintain Brown in the University's facility inventory. The proposal is to renovate 20 teaching labs in Brown over a two-year period and improve the energy profile of the facility while also upgrading the ingress-egress before and after class periods.

Nearly 9,000 students annually take laboratory sections in Brown, so updating these laboratories is critical to the success of both the Engineering Expansion Plan and the overall educational plan for Chemistry.

Impact: The need to upgrade the chemistry instructional facilities that were opened in the 1970s is heightened in light of the pending expansion of the College of Engineering and the move toward more interactive learning in both classrooms and laboratories. The need to be more efficient in ventilation, hoods, and lighting springs from the desire to provide a modern, safe environment for students to discover chemical principles and enhance their laboratory experience.

Funding Plan: We are requesting that the total project cost of $30.4 million be funded from Student Fee Bond Proceeds – Fee Replaced.

Priority 5

Proposal: The **South Campus Renovations Phase II** project on the Indiana Purdue Fort Wayne (IPFW) campus will continue the renovations to Helmke Library and Kettler Hall. This project represents the second half, or phase II, of the request to repair and or replace building infrastructure on these two buildings. While their physical structures are sound and space configurations still viable, the mechanical, electrical, and plumbing (MEP) systems are failing and in need of repair or replacement. Fire protection systems, telecommunication cabling, an upgraded fire alarm system and some electrical distribution that has not been able to be completed with phase I funding will be installed. Upgrades to classrooms and teaching labs with improved technology to assist faculty with newer pedagogical approaches are also included. There are two passenger elevators in Kettler and three in Helmke that will need to be modernized. This will not only improve accessibility to all students and staff, but also will reduce labor cost to transport materials and large equipment items between floors. Replacing exterior windows and doors will help improve environmental conditions in Kettler and help to reduce energy consumption. There are two 24" chilled water mains (supply and return) that extend from the chiller plant at the north end of campus to the south end where our older buildings exist. In recent years these two mains have suffered numerous leaks and repairs. A solution is to line the pipes to eliminate all of the leaks while improving the efficiency of the system.

Renovations to the Helmke Library were requested in the 2011-2013 Capital Request, carried forward and combined with renovations to Kettler Hall to form the 2013-2015 request. That request was authorized and funded in the amount of $21.35 million, half of the original request. Completion of these second phase renovations to Kettler Hall and the Helmke Library remain the highest priority for IPFW, and this project, when completed, would eliminate $19 million of deferred maintenance.

Impact: The estimated replacement value of all IPFW facilities is approximately $800 million and the current total deferred maintenance amount is about $75 million. Conventional maintenance models suggest there should be an annual reinvestment in capital assets for maintenance of at least 1 percent of the total replacement value. For IPFW, this means there should be $8 million expended in R&R on an annual basis. This is far more than the current internally funded budget of $1.3 million. This project would simultaneously modernize two buildings and substantially reduce deferred maintenance cost.

Funding Plan: We are requesting that the total project cost of $26.9 million be funded under Student Fee Bond Proceeds – Fee Replaced.

Priority 6

Proposal: The **Central Power Plant Expansion & Replacement** on the Purdue North Central campus includes installing one new chiller, replacing the cooling tower and replacing electrical cabling between the primary transformer and the power plant's secondary transformer.

The present chilled plant consists of two chillers. This new chiller must be in place prior to the completion of the planned Science Building. Currently, the cooling tower capacity is inadequate to serve

an additional chiller and is approximately 40 years old and well beyond its life expectancy. The cabling between the primary transformer and power house is not adequate to support the additional demand.

Impact: This project will ensure a reliable, safe and cost-effective source of utilities that will provide chilled plant capacity for programmed campus growth. This project is consistent with the approved campus master plan and supports the mission of the campus by expanding utility capacity in proportion to the growth of campus facilities.

Funding Plan: We request $3.8 million from Student Fee Bond Proceeds – Fee Replaced.

Priority 7

Proposal: The proposed **Animal Disease Diagnostic Laboratory (BSL-3)** on the West Lafayette campus would serve as a statewide resource for Indiana by establishing a laboratory for research, training, and diagnostic investigations with highly contagious microorganisms that cause disease in humans and animals.

Emerging and re-emerging infectious diseases continue to plague humans, threaten food supply, and threaten agricultural economy. Most human infectious diseases originate in wild or domestic animals. These diseases can be costly both in human disease, death, and economic impact. Infectious diseases affecting animals alone can have a huge economic impact. Defense and prevention strategies depend upon diagnostic, research, and training capabilities, which in turn require Biosafety Level 3 (BSL-3) facilities to protect humans and animals.

Purdue brings an exceptionally strong multidisciplinary team of established investigators to the study of infectious diseases (from the colleges of Engineering, Science, Pharmacy, and Veterinary Medicine, and from the interdisciplinary centers of Discovery Park), but lacks the animal housing facilities and laboratories to carry out studies with animals infected with BSL-3 type organisms.

Impact: The State of Indiana Animal Disease Diagnostic Laboratory (ADDL) at Purdue is a state-of-the-art diagnostic laboratory with a world-class staff of pathologists, microbiologists, and virologists. However, it also lacks BSL-3 laboratory space and an adequate means of disposal of material exposed to highly infectious organisms should Indiana be the site of a naturally occurring or bioterror-induced zoonotic disease outbreak.

Funding Plan: This facility was requested by the Indiana Board of Animal Health during the 2007-2009 biennial budget through the Indiana Department of Administration in the amount of $30 million. On July 9, 2007, the Purdue Board of Trustees submitted the project *Animal Disease Diagnostic Laboratory (BSL-3)* to the State for approval. It has been pending review by ICHE since that time. The $30 million project would be debt-financed by Purdue University and we are requesting the debt service coverage to be supported through an agreement with the Department of Administration over a 20-25 year period. Under section 9, page 87, of HEA1001-2007 CC2, the annual payment for the BSL-3 in the amount of $2.6 million was appropriated to the Department of Administration for the 2008-2009 fiscal year; however, this appropriation was deleted from subsequent State budgets.

Other Projects

In addition to the State-funded priority projects, the West Lafayette campus is proposing to self-fund the following projects: Interdisciplinary Research Facility – Flex Lab Facility Phase 1; Agronomy Center Automated Phenotyping & Seed Processing Facility; Innovation Design Center – Student Projects Facility Phase I; Jischke Hall Addition – Biomedical Engineering; Honors College and Residences; and Zucrow High Pressure Research Test Cells and Control Center. Self-funded projects on the other campuses include the Student Wellness and Recreation Center project on the Calumet campus, and the Art Gallery on the Fort Wayne campus.

FINANCIAL SUSTAINABILITY

Purdue values our partnership with the State, especially in terms of our mission as Indiana's land-grant university, but we are keenly aware of the demands on State resources. To fully achieve our financial sustainability vision, the following actions are required and will demand continued partnership with the State. Moving forward, we must augment the level of support for our existing facilities and campus infrastructure by establishing a sustainable level of funding for R&R and utility infrastructure. We must also invest in facilities with high levels of deferred R&R through grants, gift funds, and State support.

CONCLUSION

Purdue is dedicated to developing a plan that supports our objectives in an innovative and sustainable way. Our 10-Year Capital Plan and 2015-2017 Legislative Capital Request incorporate projects and strategies that renovate facilities where feasible, replace facilities where appropriate, and add new facilities only when needed. It also provides renewal, impact, and development on our campuses, ensuring the long-term success of our institution.

PURDUE UNIVERSITY
SUMMARY OF CAPITAL PROJECT REQUESTS FOR THE 2015-17 BIENNIUM - ALL PROJECTS

	Budget Agency Number	Institution Priority Ranking	State Funding	Other Funding	Total Capital Request
A. PREVIOUSLY AUTHORIZED CAPITAL PROJECTS (4)					
a. West Lafayette Campus					
Animal Disease Diagnostic Laboratory (BSL-3)	B-1-08-1-02	**7**	$ 30,000,000		$ 30,000,000
b. Calumet Campus					
Emerging Technologies Building Planning Funds	B-2-09-1-10	**2**	$ 2,400,000		$ 2,400,000
B. NEW CAPITAL PROJECTS					
1. SPECIAL R&R PROJECTS					
a. West Lafayette Campus					
Brown Teaching Labs	B-1-15-2-10	**4**	$ 30,400,000		$ 30,400,000
b. Fort Wayne Campus					
South Campus Renovations Phase II	B-3-15-2-11	**5**	$ 26,900,000		$ 26,900,000
2. NEW CONSTRUCTION					
a. West Lafayette Campus					
Agricultural and Life Sciences Facility Phase 1	B-1-13-1-02	**1**	$ 30,000,000	$ 20,000,000	$ 50,000,000
Interdisciplinary Research Facility - Flex Lab Facility	B-1-15-1-04			$ 54,000,000	$ 54,000,000
Auto. Field Phenotyping Lab & Plant Seed Processing Facility	B-1-15-1-05			$ 10,000,000	$ 10,000,000
Innovation Design Center - Student Projects Facility Phase 1	B-1-15-1-06			$ 20,000,000	$ 20,000,000
Jischke Hall Addition – Biomedical Engineering	B-1-15-1-07			$ 14,000,000	$ 14,000,000
Honors College and Residences	B-1-13-1-05R			$ 90,000,000	$ 90,000,000
Zucrow High Pressure Research Test Cells and Control Center	B-1-15-1-09			$ 8,200,000	$ 8,200,000
b. Calumet Campus					
Emerging Technologies Building	B-2-05-1-05R	**3**	$ 38,100,000		$ 38,100,000
Student Wellness and Recreation Center	B-2-13-1-08R			$ 17,000,000	$ 17,000,000
c. Fort Wayne Campus					
Art Gallery	B-3-15-1-12			$ 3,000,000	$ 3,000,000
d. North Central Campus					
Central Power Plant Expansion & Replacement	B-4-15-1-13	**6**	$ 3,800,000		$ 3,800,000
TOTAL CAPITAL PROJECT BUDGET REQUEST			**$ 161,600,000**	**$ 236,200,000**	**$ 397,800,000**

2015-2017 Budget Proposal:

University Budget Requests (Operating EXAMPLE ONLY inc. 7% PFF in FY16 8% PFF in FY17 w/2% New Funds)

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Purdue University System
2015-2017 Biennium
Overall Summary

	FY 2015	FY 2016			FY 2017		
	Appropriation	**Appropriation**	**$ Change from FY 2015**	**% Change from FY 2015**	**Appropriation**	**$ Change from FY 2015**	**% Change from FY 2015**
OPERATING							
Base		$327,108,565			$327,108,565		
Reallocation		$16,355,427			$19,626,514		
New Funding		($6,173,329)			($7,986,662)		
PFF Total		$10,182,098			$11,639,852		
Appropriation	$327,108,565	$320,935,236	($6,173,329)	-1.9%	$319,121,903	($7,986,662)	-2.4%
DEBT SERVICE							
Existing		$29,182,432			$25,580,034		
New		$13,804,436			$13,804,436		
Total	$29,637,225	$42,986,868	$13,349,643	45.0%	$39,384,470	$9,747,245	32.9%
LINE ITEMS							
General Fund	$31,943,315	$48,171,593	$16,228,278	50.8%	$48,652,594	$16,709,279	52.3%
Dedicated Funds	$673,851	$6,567,244	$5,893,393	874.6%	$6,628,196	$5,954,345	883.6%
REPAIR & REHABILITATION							
Total	$9,264,974	$10,567,440	$1,302,466	14.1%	$10,567,440	$1,302,466	14.1%
General Fund Total	**$397,954,079**	**$422,661,137**	**$24,707,058**	**6.2%**	**$417,726,407**	**$19,772,328**	**5.0%**
All Funds Total	**$398,627,930**	**$429,228,381**	**$30,600,451**	**7.7%**	**$424,354,603**	**$25,726,673**	**6.5%**

Purdue University-West Lafayette
2015-2017 Biennium
Overall Summary

	FY 2015	FY 2016			FY 2017		
	Appropriation	**Appropriation**	**$ Change from FY 2015**	**% Change from FY 2015**	**Appropriation**	**$ Change from FY 2015**	**% Change from FY 2015**
OPERATING							
Base		$244,792,248			$244,792,248		
Reallocation		$12,239,612			$14,687,535		
New Funding		($6,717,737)			($8,375,179)		
PFF Total		$5,521,875			$6,312,356		
Appropriation	$244,792,248	$238,074,511	($6,717,737)	-2.7%	$236,417,069	($8,375,179)	-3.4%
DEBT SERVICE							
Existing		$20,814,754			$19,177,140		
New		$7,722,284			$7,722,284		
Total	$20,821,980	$28,537,038	$7,715,058	37.1%	$26,899,424	$6,077,444	29.2%
REPAIR & REHABILITATION							
Total	$7,508,667	$8,612,203	$1,103,536	14.7%	$8,612,203	$1,103,536	14.7%
General Fund Total	**$273,173,345**	**$275,223,752**	**$2,050,407**	**0.8%**	**$271,928,696**	**($1,244,649)**	**-0.5%**

Purdue University-Calumet Campus
2015-2017 Biennium
Overall Summary

	FY 2015	FY 2016			FY 2017		
	Appropriation	Appropriation	$ Change from FY 2015	% Change from FY 2015	Appropriation	$ Change from FY 2015	% Change from FY 2015
OPERATING							
Base		$27,843,362			$27,843,362		
Reallocation		$1,392,168			$1,670,602		
New Funding		$129,011			$68,391		
PFF Total		$1,521,179			$1,738,993		
Appropriation	$27,843,362	$27,972,373	$129,011	0.5%	$27,911,753	$68,391	0.2%
DEBT SERVICE							
Existing		$1,477,771			$574,365		
New		$3,459,651			$3,459,651		
Total	$1,478,484	$4,937,422	$3,458,938	234.0%	$4,034,016	$2,555,532	172.8%
REPAIR & REHABILITATION							
Total	$651,894	$720,285	$68,391	10.5%	$720,285	$68,391	10.5%
General Fund Total	**$30,022,640**	**$33,630,080**	**$3,607,440**	**12.0%**	**$32,666,054**	**$2,643,414**	**8.8%**

Purdue University-North Central Campus
2015-2017 Biennium
Overall Summary

	FY 2015	FY 2016			FY 2017		
	Appropriation	Appropriation	$ Change from FY 2015	% Change from FY 2015	Appropriation	$ Change from FY 2015	% Change from FY 2015
OPERATING							
Base		$13,453,989			$13,453,989		
Reallocation		$672,699			$807,239		
New Funding		$218,440			$211,513		
PFF Total		$891,139			$1,018,752		
Appropriation	$13,453,989	$13,672,429	$218,440	1.6%	$13,665,502	$211,513	1.6%
DEBT SERVICE							
Existing		$1,579,307			$1,575,682		
New		$324,609			$324,609		
Total	$2,024,538	$1,903,916	($120,622)	-6.0%	$1,900,291	($124,247)	-6.1%
REPAIR & REHABILITATION							
Total	$237,587	$251,661	$14,074	5.9%	$251,661	$14,074	5.9%
General Fund Total	**$16,082,264**	**$15,828,006**	**($254,258)**	**-1.6%**	**$15,817,454**	**($264,810)**	**-1.6%**

Indiana University-Purdue University-Fort Wayne
2015-2017 Biennium
Overall Summary

	FY 2015	FY 2016			FY 2017		
	Appropriation	Appropriation	$ Change from FY 2015	% Change from FY 2015	Appropriation	$ Change from FY 2015	% Change from FY 2015
OPERATING							
Base		$41,018,966			$41,018,966		
Reallocation		$2,050,948			$2,461,138		
New Funding		$196,957			$108,613		
PFF Total		$2,247,905			$2,569,751		
Appropriation	$41,018,966	$41,215,923	$196,957	0.5%	$41,127,579	$108,613	0.3%
DEBT SERVICE							
Existing		$5,310,600			$4,252,847		
New		$2,297,892			$2,297,892		
Total	$5,312,223	$7,608,492	$2,296,269	43.2%	$6,550,739	$1,238,516	23.3%
REPAIR & REHABILITATION							
Total	$866,826	$983,291	$116,465	13.4%	$983,291	$116,465	13.4%
General Fund Total	**$47,477,215**	**$49,807,706**	**$2,330,491**	**4.9%**	**$48,661,609**	**$1,184,394**	**2.5%**

Purdue University System
2015-2017 Biennium
Peformance Funding Summary

	Output	FY 2016		FY 2017	
	Per Unit Value	Funding	% of PFF	Funding	% of PFF
Overall Degree Completion Metric					
1 Yr Cert					
Associate					
Bachelor	486	$2,804,220	27.5%	$3,206,142	27.5%
Master	137	$395,245	3.9%	$451,826	3.9%
Doctoral	18	$25,974	0.3%	$29,682	0.3%
		$3,225,439	**31.7%**	**$3,687,650**	**31.7%**
At-Risk Degree Completion Metric					
1 Yr Cert					
Associate					
Bachelor	754	$3,263,312	32.0%	$3,730,038	32.0%
		$3,263,312	**32.0%**	**$3,730,038**	**32.0%**
High Impact Degree Completion Metric					
Bachelor	86	$1,240,636	12.2%	$1,418,312	12.2%
Master	83	$838,134	8.2%	$958,152	8.2%
Doctoral	15	$75,735	0.7%	$86,580	0.7%
		$2,154,505	**21.2%**	**$2,463,044**	**21.2%**
Student Persistence Metric					
15 CH					
30 CH (2 YR)					
30 CH (4 YR)	0	$0	0.0%	$0	0.0%
45 CH					
60 CH	0	$0	0.0%	$0	0.0%
		$0	**0.0%**	**$0**	**0.0%**
Remediation Success Metric					
Math					
English					
Math & English					
On-Time Graduation Rate Metric					
2 Year					
4 Year	61	$1,011,990	9.9%	$1,156,865	9.9%
		$1,011,990	**9.9%**	**$1,156,865**	**9.9%**
Institution Defined					
> 0%	77	$83,314	0.8%	$95,249	0.8%
>= 5%					
>= 10%	246	$443,538	4.4%	$507,006	4.4%
		$526,852	**5.2%**	**$602,255**	**5.2%**
TOTAL		**$10,182,098**		**$11,639,852**	

Purdue University-West Lafayette
2015-2017 Biennium
Peformance Funding Summary

	Output		FY 2016		FY 2017	
	Actual	Per Unit Value	Funding	% of PFF	Funding	% of PFF
Overall Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	124	124	$715,480	13.0%	$818,028	13.0%
Master	53	53	$152,905	2.8%	$174,794	2.8%
Doctoral	18	18	$25,974	0.5%	$29,682	0.5%
			$894,359	**16.2%**	**$1,022,504**	**16.2%**
At-Risk Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	366	366	$1,584,048	28.7%	$1,810,602	28.7%
			$1,584,048	**28.7%**	**$1,810,602**	**28.7%**
High Impact Degree Completion Metric						
Bachelor	86	86	$1,240,636	22.5%	$1,418,312	22.5%
Master	83	83	$838,134	15.2%	$958,152	15.2%
Doctoral	15	15	$75,735	1.4%	$86,580	1.4%
			$2,154,505	**39.0%**	**$2,463,044**	**39.0%**
Student Persistence Metric						
15 CH						
30 CH (2 YR)						
30 CH (4 YR)						
45 CH						
60 CH						
Remediation Success Metric						
Math						
English						
Math & English						
On-Time Graduation Rate Metric						
2 Year						
4 Year	5.0% / 35	35	$580,650	10.5%	$663,775	10.5%
			$580,650	**10.5%**	**$663,775**	**10.5%**
Institution Defined						
> 0%						
>= 5%						
>= 10%	15.0%	171	$308,313	5.6%	$352,431	5.6%
			$308,313	**5.6%**	**$352,431**	**5.6%**
TOTAL			**$5,521,875**		**$6,312,356**	

Purdue University-Calumet Campus
2015-2017 Biennium
Peformance Funding Summary

	Output		FY 2016		FY 2017	
	Actual	Per Unit Value	Funding	% of PFF	Funding	% of PFF
Overall Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	106	106	$611,620	40.2%	$699,282	40.2%
Master	41	41	$118,285	7.8%	$135,218	7.8%
Doctoral	0	0	$0	0.0%	$0	0.0%
			$729,905	**48.0%**	**$834,500**	**48.0%**
At-Risk Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	90	90	$389,520	25.6%	$445,230	25.6%
			$389,520	**25.6%**	**$445,230**	**25.6%**
High Impact Degree Completion Metric						
Bachelor						
Master						
Doctoral						
Student Persistence Metric						
15 CH						
30 CH (2 YR)						
30 CH (4 YR)	-2	0	$0	0.0%	$0	0.0%
45 CH						
60 CH	-356	0	$0	0.0%	$0	0.0%
			$0	**0.0%**	**$0**	**0.0%**
Remediation Success Metric						
Math						
English						
Math & English						
On-Time Graduation Rate Metric						
2 Year						
4 Year	1.8% / 19	19	$315,210	20.7%	$360,335	20.7%
			$315,210	**20.7%**	**$360,335**	**20.7%**
Institution Defined						
> 0%						
>= 5%						
>= 10%	14.8%	48	$86,544	5.7%	$98,928	5.7%
			$86,544	**5.7%**	**$98,928**	**5.7%**
TOTAL			**$1,521,179**		**$1,738,993**	

Purdue University-North Central Campus
2015-2017 Biennium
Peformance Funding Summary

	Output		FY 2016		FY 2017	
	Actual	Per Unit Value	Funding	% of PFF	Funding	% of PFF
Overall Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	89	89	$513,530	57.6%	$587,133	57.6%
Master	0	0	$0	0.0%	$0	0.0%
Doctoral	0	0	$0	0.0%	$0	0.0%
			$513,530	**57.6%**	**$587,133**	**57.6%**
At-Risk Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	76	76	$328,928	36.9%	$375,972	36.9%
			$328,928	**36.9%**	**$375,972**	**36.9%**
High Impact Degree Completion Metric						
Bachelor						
Master						
Doctoral						
Student Persistence Metric						
15 CH						
30 CH (2 YR)						
30 CH (4 YR)	-38	0	$0	0.0%	$0	0.0%
45 CH						
60 CH	-17	0	$0	0.0%	$0	0.0%
			$0	**0.0%**	**$0**	**0.0%**
Remediation Success Metric						
Math						
English						
Math & English						
On-Time Graduation Rate Metric						
2 Year						
4 Year	-0.1% / 13	0	$0	0.0%	$0	0.0%
			$0	**0.0%**	**$0**	**0.0%**
Institution Defined						
> 0%						
>= 5%						
>= 10%	16.9%	27	$48,681	5.5%	$55,647	5.5%
			$48,681	**5.5%**	**$55,647**	**5.5%**
TOTAL			**$891,139**		**$1,018,752**	

Indiana University-Purdue University-Fort Wayne
2015-2017 Biennium
Peformance Funding Summary

	Output		FY 2016		FY 2017	
	Actual	Per Unit Value	Funding	% of PFF	Funding	% of PFF
Overall Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	167	167	$963,590	42.9%	$1,101,699	42.9%
Master	43	43	$124,055	5.5%	$141,814	5.5%
Doctoral	0	0	$0	0.0%	$0	0.0%
			$1,087,645	**48.4%**	**$1,243,513**	**48.4%**
At-Risk Degree Completion Metric						
1 Yr Cert						
Associate						
Bachelor	222	222	$960,816	42.7%	$1,098,234	42.7%
			$960,816	**42.7%**	**$1,098,234**	**42.7%**
High Impact Degree Completion Metric						
Bachelor						
Master						
Doctoral						
Student Persistence Metric						
15 CH						
30 CH (2 YR)						
30 CH (4 YR)	-216	0	$0	0.0%	$0	0.0%
45 CH						
60 CH	-80	0	$0	0.0%	$0	0.0%
			$0	**0.0%**	**$0**	**0.0%**
Remediation Success Metric						
Math						
English						
Math & English						
On-Time Graduation Rate Metric						
2 Year						
4 Year	0.8% / 7	7	$116,130	5.2%	$132,755	5.2%
			$116,130	**5.2%**	**$132,755**	**5.2%**
Institution Defined						
> 0%	2.5%	77	$83,314	3.7%	$95,249	3.7%
>= 5%						
>= 10%						
			$83,314	**3.7%**	**$95,249**	**3.7%**
TOTAL			**$2,247,905**		**$2,569,751**	

Purdue University System
Operating Funding Per FTE
2015-2017

	2012-13 Resident FTE	FY 2015			FY 2016				FY 2017			
		Approp	Approp FTE Adjustment	Approx. Approp per FTE	Approp	Approp FTE Adjustment	Approx. Approp per FTE	FY 2016 vs FY 2015	Approp	Approp FTE Adjustment	Approx. Approp per FTE	FY 2017 vs FY 2015
PUWL	19,369	$244,792,248	($78,886,749)	$8,566	$238,074,511	($80,070,050)	$8,158	-4.8%	$236,417,069	($81,271,100)	$8,010	-6.5%
PUC	5,265	$27,843,362	$0	$5,288	$27,972,373	$0	$5,313	0.5%	$27,911,753	$0	$5,301	0.2%
PUNC	2,717	$13,453,989	$0	$4,952	$13,672,429	$0	$5,032	1.6%	$13,665,502	$0	$5,030	1.6%
IPFW	8,103	$41,018,966	$0	$5,062	$41,215,923	$0	$5,087	0.5%	$41,127,579	$0	$5,076	0.3%
PU TOTAL	**35,454**	**$327,108,565**	**($78,886,749)**	**$7,001**	**$320,935,236**	**($80,070,050)**	**$6,794**	**-3.0%**	**$319,121,903**	**($81,271,100)**	**$6,709**	**-4.2%**

Purdue University System
2015-2017 Biennium
Capital Project Request Summary (State Funded Projects Only)

Project Request							Proposed		FY 2016		FY 2017	
Project Name	**SBA Project Number**	**Priority**	**Prev Apprvd By General Assembly**	**Campus**	**Total Project Cost**	**Requested State Funds**	**Funding**	**Funding Method**	**Debt Service**	**Cash**	**Debt Service**	**Cash**
Agricultural and Life Sciences Facility Phase I	B-1-13-1-02	1	No	PUWL	$50,000,000	$30,000,000	$30,000,000	Debt Service	$2,562,705		$2,562,705	
Emerging Technologies Building Planning Funds	B-2-09-1-10	2	Yes	PUC	$2,400,000	$2,400,000	$2,400,000	Debt Service	$205,016		$205,016	
Emerging Technologies Building	B-2-05-1-05	3	No	PUC	$38,100,000	$38,100,000	$38,100,000	Debt Service	$3,254,635		$3,254,635	
Brown Teaching Labs Renovation	B-1-15-2-10	4	No	PUWL	$30,400,000	$30,400,000	$30,400,000	Debt Service	$2,596,874		$2,596,874	
South Campus Renovations Phase II	B-3-15-2-11	5	No	IPFW	$26,900,000	$26,900,000	$26,900,000	Debt Service	$2,297,892		$2,297,892	
Central Power Plant Expansion and Replacement	B-4-15-1-13	6	No	PUNC	$3,800,000	$3,800,000	$3,800,000	Debt Service	$324,609		$324,609	
Animal Disease Diagnostic Laboratory (BSL-3)	B-1-08-1-02	7	Yes	PUWL	$30,000,000	$30,000,000	$30,000,000	Debt Service	$2,562,705		$2,562,705	
Purdue University System Total					**$181,600,000**	**$161,600,000**	**$161,600,000**		**$13,804,436**		**$13,804,436**	

Purdue University System
2015-2017 Biennium
Line Item Request Summary

	FY 2015		FY 2016						FY 2017					
			General Fund			Dedicated Funds			General Fund			Dedicated Funds		
	General Fund	Dedicated Funds	Requested	Proposed	FY 2016 vs FY 2015	Requested	Proposed	FY 2016 vs FY 2015	Requested	Proposed	FY 2017 vs FY 2015	Requested	Proposed	FY 2017 vs FY 2015
Agricultural Research and Extension - Crossroads	$8,492,325	$0	$8,619,710	$8,619,710	1.5%	$0	$0		$8,749,006	$8,749,006	3.0%	$0	$0	
Animal Disease Diagnostic Lab System	$3,570,446	$1,800,000	$4,062,002	$4,062,002	13.8%	$1,800,000	$1,800,000	0.0%	$4,122,362	$4,122,362	15.5%	$1,800,000	$1,800,000	0.0%
Center for Paralysis Research	$522,558	$0	$530,396	$530,396	1.5%	$0	$0		$538,352	$538,352	3.0%	$0	$0	
County Agriculture Extension Educators	$7,487,816	$0	$7,600,133	$7,600,133	1.5%	$0	$0		$7,714,135	$7,714,135	3.0%	$0	$0	
Dual Credit: Purdue University System	$744,700	$0	$2,067,000	$2,067,000	177.6%	$0	$0		$2,067,000	$2,067,000	177.6%	$0	$0	
IN-MaC (IN Next Generation Manufacturing Compet. Center)	$2,500,000	$0	$2,537,500	$2,537,500	1.5%	$0	$0		$2,575,563	$2,575,563	3.0%	$0	$0	
Statewide Technology	$6,695,258	$4,003,412	$9,795,686	$9,795,686	46.3%	$4,063,463	$4,063,463	1.5%	$9,897,622	$9,897,622	47.8%	$4,124,415	$4,124,415	3.0%
University-Based Business Assistance	$1,930,212	$0	$1,959,166	$1,959,166	1.5%	$0	$0		$1,988,554	$1,988,554	3.0%	$0	$0	
Veterinary Research	$0	$150,000	$0	$0		$150,000	$150,000	0.0%	$0	$0		$150,000	$150,000	0.0%
Wine and Grape Market Fund	$0	$523,851	$0	$0		$553,781	$553,781	5.7%	$0	$0		$553,781	$553,781	5.7%
Engineering Expansion*	$0	$0	$6,000,000	$6,000,000		$0	$0		$6,000,000	$6,000,000		$0	$0	
Summer Expansion*	$0	$0	$5,000,000	$5,000,000		$0	$0		$5,000,000	$5,000,000		$0	$0	
Purdue University System Total	**$31,943,315**	**$6,477,263**	**$48,171,593**	**$48,171,593**	**50.8%**	**$6,567,244**	**$6,567,244**	**1.4%**	**$48,652,594**	**$48,652,594**	**52.3%**	**$6,628,196**	**$6,628,196**	**2.3%**

* Not funded in the previous biennium

Purdue University System
Dual Credit Line Item Funding
2015-2017

	FY 2015	2012-13 T+HP Credit Awarded	FY 2016		FY 2017	
			Per Credit Value $50	FY 2016 vs FY 2015	Per Credit Value $50	FY 2017 vs FY 2015
PUWL	$50,450	1,818	$90,900	80.2%	$90,900	80.2%
PUC	$48,900	2,027	$101,350	107.3%	$101,350	107.3%
PUNC	$366,150	25,091	$1,254,550	242.6%	$1,254,550	242.6%
IPFW	$279,200	12,404	$620,200	122.1%	$620,200	122.1%
PU TOTAL	**$744,700**	**41,340**	**$2,067,000**	**177.6%**	**$2,067,000**	**177.6%**

Purdue University System
Repair and Rehabilitation Funding
2015-2017

	FY 2015 Funding	R&R Asset Total	Infrastructure Asset Total	Funding			FY 2016		FY 2017	
				R&R 0.5%	Infrastructure 0.5%	Total	Approp	FY 2016 vs FY 2015	Approp	FY 2017 vs FY 2015
PUWL	$7,508,667	$2,932,126,615	$512,754,366	$14,660,634	$2,563,772	$17,224,406	$8,612,203	14.7%	$8,612,203	14.7%
PUC	$651,894	$248,652,270	$39,461,543	$1,243,262	$197,308	$1,440,570	$720,285	10.5%	$720,285	10.5%
PUNC	$237,587	$92,164,330	$8,500,127	$460,822	$42,500	$503,322	$251,661	5.9%	$251,661	5.9%
IPFW	$866,826	$359,741,864	$33,574,226	$1,798,710	$167,872	$1,966,582	$983,291	13.4%	$983,291	13.4%
PU TOTAL	**$9,264,974**	**$3,632,685,079**	**$594,290,262**	**$18,163,428**	**$2,971,452**	**$21,134,880**	**$10,567,440**	**14.1%**	**$10,567,440**	**14.1%**

APPENDIX: Capital Project Requests

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

General Project Information

Project Name/Title:	Agricultural and Life Sciences Facility Phase I	Institutional Priority:	1
Budget Agency Project No:	B-1-13-1-02	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

The Agricultural and Life Sciences Building will be a state-of-the-art facility that will consolidate Animal Sciences students, faculty and staff into a unified complex that will facilitate synergies in learning, outreach, and discovery in a collaborative environment. The Agricultural and Life Sciences Building will address research, extension and education in animal and life sciences. The project will construct modern research and teaching space serving the Department of Animal Sciences and provide researchers with an environment for scientific preeminence and a world class teaching facility. This facility will replace part or all of four facilities thereby eliminating $19.9M of deferred R&R.

Summary of the Impact on the Educational Attainment of Students

This facility will provide students with rigorous, relevant, cutting edge education that will prepare them for a lifetime of learning and career achievement. External reviews of the Department of Animal Sciences have acknowledged the department's progress, but point to a major critical limitation – the quantity and quality of space for educational programs and for research. New, state-of-the-art facilities are essential to attract top tier students and continue as a premier Animal Sciences program on a national level. New facilities will foster greater multidisciplinary collaboration among faculty in a variety of departments within the Colleges of Agriculture, Engineering, Health and Human Sciences, and Veterinary Medicine.

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	92,727	51,000	55%
Net Change in Overall Campus Space:	19,946	-2,008	

Project Cost Summary

Total Project Cost:	$50,000,000	Cost Per GSF/ASF:	$539 **GSF** $980 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$30,000,000	State	Student Fee Bond Proceeds - Fee Replaced
	$10,000,000	Gift	Gift
	$10,000,000	Institution	Facility and Administrative Cost Recovery
Total Funding	**$50,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$728,972
Estimated annual repair and rehabilitation investment:	$750,000

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Detail Description of Project

The Agricultural and Life Sciences Building will be a state of the art facility that will consolidate Animal Sciences students, faculty and staff into a unified complex that will facilitate synergies in learning, outreach, and discovery in a collaborative environment. The Agricultural and Life Sciences Building will address research, extension and education in animal and life sciences. The project will construct modern research and teaching space serving the Department of Animal Sciences and provide researchers with an environment for scientific preeminence and a world class teaching facility.

A major focus of Purdue's long term Capital Plan is to co-locate Life Sciences education and research into the Life and Health Sciences Park on Purdue's South Academic Campus. Replacement of Animal Sciences program space in Lilly Hall (LILY) is a prerequisite to demolishing the south wing of this structure and eliminating its deferred R&R liability ($19.9M) as part of a balanced capital approach. Also, the replacement of Animal Sciences space in Poultry Science (POUL), Poultry Science Annex (POAN), and Smith Hall (SMTH) will move Purdue closer to decommissioning outdated facilities, as part of the 10-Year Capital Plan.

Over the past several years, other campus locations were explored for the Agricultural and Life Sciences Building; but options were limited by the magnitude of the current and future needs of Animal Sciences, the purposeful adjacency to other Agriculture Programs as stated in the College of Agriculture Master Plan, and the planned proximity to other Life Sciences departments and colleges.

Although renovation of existing space is a preferred approach for meeting the space needs of academic departments, there was no single facility that could accommodate the Animal Sciences program. The University investigated renovating Lilly Hall to continue to house a part of the program but found that it did not lend itself to state-of-the-art renovations and the long-term cost was prohibitive.
The Agricultural and Life Sciences Building will be the first step in a three-phase project to consolidate the Animal Sciences program into a cohesive complex. Animal Sciences is currently scattered across six buildings, not including the farms. The new facility will consolidate departmental space now located in four of those buildings: LILY, SMTH, the POUL and POAN. In future phases, Animal Sciences Teaching Lab (ASTL) and the Life Sciences Animal Facility (LSA) will be removed and replaced as part of the future consolidated complex.

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Need & Purpose

As a land-grant institution, Purdue continues to honor its historic mission, as set forth in the 1862 Morrill Act, to focus on the teaching of practical agriculture, as well as science and engineering. The Department of Animal Sciences facilitates scientific research and technology transfer for efficient and sustainable production of high quality animal and their products; and provides leadership and inspiration to educate individuals to anticipate and respond to challenges facing global animal industries. Indiana agricultural industries rely on Purdue faculty and staff to deliver up to date knowledge to maintain Indiana's vibrant livestock economy. This facility will position our students in the forefront of the Animal Sciences field, preparing them for a lifetime of learning and career achievement.

New facilities will foster greater multidisciplinary collaboration among faculty in a variety of departments within the Colleges of Agriculture, Engineering, Health and Human Sciences, and Veterinary Medicine. External reviews of the Department of Animal Sciences have acknowledged the department's progress, but point to a major critical limitation – the quantity and quality of space for educational programs and for research. New, state-of-the-art facilities are essential to attract top tier students and continue as a premier Animal Sciences program on a national level.

The impact of not moving forward with this project would be detrimental to the advancement of the Animal Sciences program; causing it to fall below the expectations of future students, the Indiana agricultural community and Purdue University.

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Space Utilization

The Agricultural and Life Sciences Building will slightly decrease the overall area of campus by 2,028 assignable square feet (asf). The project will add a 51,000 asf new facility, but requires the demolition of Building Services and Grounds (BSG) and the Food Stores Building (FOOD) to clear the site, and includes the subsequent demolition of Poultry Science (POUL) and Poultry Science Annex (POAN). This project also clears the way for the planned demolition of the south wing of Lilly Hall (LILY), and the east wing of Smith Hall (SMTH), as part of an informed capital plan. The Agricultural and Life Sciences Building will create an improvement in functional utilization by collocating facilities and replacing outdated labs and offices that no longer meet the needs of our students and investigators with modern and efficient research, teaching and office space.

Comparable Projects

Bindley Bioscience Center Addition - this project is a disease research-focused building that will enhance the existing capabilities of Birck Nanotechnology, Center for Cancer Research, Biomedical Engineering and Structural Biology to integrate scientific expertise from the molecular level through animal disease modeling. The project is 28,603 GSF, $555.89/GSF; 18,503 ASF, $859.32/ASF. Total Project Cost is $15.9M; Construction Cost $12.4M.

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	291,541	0	52,250	343,791	0	2,160	345,951
Class Lab (210, 215, 220, 225, 230, 235)	550,932	0	-2,571	548,361	0	4,390	552,751
Non-class Lab (250 & 255)	1,509,665	0	-628	1,509,037	-5,872	23,440	1,538,349
Office Facilities (300)	2,184,456	0	-24,083	2,160,373	-12,636	15,600	2,188,609
Study Facilities (400)	393,077	0	31,873	424,950	0	0	424,950
Special Use Facilities (500)	1,154,891	9,578	0	1,164,469	0	0	1,164,469
General Use Facilities (600)	844,240	1,065	4,000	849,305	-777	0	850,082
Support Facilities (700)	3,301,156	0	-763	3,300,393	-33,723	5,410	3,339,526
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,328,142	0	0	2,328,142	0	0	2,328,142
Unclassified (000)	66,925	0	-4,478	62,447	0	0	62,447
TOTAL SPACE	12,708,621	10,643	55,600	12,774,864	-53,008	51,000	12,878,872

Space Detail Notes

Space under construction includes: Softball Stadium
Space planned and funded includes: Active Learning Center
Space to be terminated includes: BSG, FOOD, POAN, POUL

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Anticipated Construction Schedule

Bid Date:	March	2016
Start Construction:	July	2016
Occupancy (End Date):	February	2018

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$1,620,000	$0	$1,620,000
	Architectural	$1,296,000	$0	$1,296,000
	Consulting	$486,000	$0	$486,000
Construction	Structure	$16,465,680	$0	$16,465,680
	Mechanical (HVAC, plumbing, etc.)	$17,315,100	$0	$17,315,100
	Electrical	$3,811,500	$0	$3,811,500
Other	Movable Equipment	$1,001,880	$0	$1,001,880
	Fixed Equipment	$1,599,440	$0	$1,599,440
	Site Development/Land Acquisition	$3,704,400	$0	$3,704,400
	PM and S&T Fees, Insurance, Contingencies	$2,700,000	$0	$2,700,000
	Total Estimated Cost	**$50,000,000**	**$0**	**$50,000,000**

Cost Detail Notes

Includes $1,130,000 of demolition costs

Institution:	Purdue University-West Lafayette	**Project:**	Agricultural and Life Sciences Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-13-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$324,018	$42,075	$366,093	$3.95
Maintenance	$98,709	$10,345	$109,054	$1.18
Fuel	$0	$146,038	$146,038	$1.57
Utilities	$0	$107,787	$107,787	$1.16
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$422,727**	**$306,245**	**$728,972**	**$7.86**

Cost Detail Notes

Note: Does not include the net reduction in operating costs due to terminated space.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

General Project Information

Project Name/Title:	Emerging Technologies Building Planning Funds	Institutional Priority:	2
Budget Agency Project No:	B-2-09-1-10	Project Type:	New Construction
Previously Approved by General Assembly:	Yes	Previously Recommended by CHE:	No

Project Summary

Planning for the proposed new Emerging Technologies Building will address several crucial facilities and infrastructure issues at Purdue University Calumet, including the relocation of programs and services currently housed in the Gyte Annex to a new facility; construction of new offices, research and teaching labs for the Department of Biology; and creation of a home for Purdue University Calumet Centers and Institutes. The new building would prepare students for 21st century jobs in nursing and life sciences while advancing economic development in Northwest Indiana.

Summary of the Impact on the Educational Attainment of Students

The Colleges of Nursing and Education are currently housed in the Gyte Annex which was constructed in 1953 as the Industrial Research Building for Inland Steel Corporation. Over the years it was converted in phases to house academic functions. Separate building evaluations completed in 1997 and 2000 concluded the building was in need of major renovations; however, experience has shown it difficult to remodel a building with antiquated internal and structural systems. Furthermore, the building provides poor ventilation, uncomfortable working conditions and an obsolete learning environment. Since the building has no architectural significance and the infrastructure to support modern technology is non-existent, investing resources in this facility offers a limited return at best.

In order for the University to meet curricular requirements, accreditations and the goals of the strategic plan, the University requires the use of campus facilities that support modern technology and evolving instructional techniques. Having facilities of this nature is key to attracting and retaining contemporary and leading edge faculty which in turn will attract and retain students who typically choose other larger educational institutions.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	0	0	
Net Change in Overall Campus Space:	0	0	

Project Cost Summary

Total Project Cost:	$2,400,000	Cost Per GSF/ASF:	**GSF** **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$2,400,000	State	2007 Student Fee Bond Proceeds - Fee Replaced
Total Funding	**$2,400,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$0
Estimated annual repair and rehabilitation investment:	$0

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Detail Description of Project

Planning for the proposed new Emerging Technologies Building will address several crucial facilities and infrastructure issues at Purdue University Calumet, including the relocation of programs and services currently housed in the Gyte Annex to a new facility; construction of new offices, research and teaching labs for the Department of Biology; and, creation of a home for Purdue University Calumet Centers and Institutes. The new building would prepare students for 21st century jobs in nursing and life sciences while advancing economic development in Northwest Indiana.

The Colleges of Nursing and Education are currently housed in the Gyte Annex, which was constructed in 1953 as the Industrial Research Building for Inland Steel Corporation. Over the years, it was converted in phases to house academic functions. Building evaluations completed in 1997 and 2000 concluded the building was in need of major renovations; however, history has shown it difficult to remodel a building with antiquated internal and structural systems. Furthermore, the building provides poor ventilation, uncomfortable working conditions and an obsolete learning environment. Since the building has no architectural significance and the infrastructure to support modern technology is non-existent, investing resources in this facility offers a limited return at best.

To meet curricular requirements, accreditation standards, and the goals of the strategic plan, the University requires facilities that support modern technology and evolving instructional techniques. Facilities of this nature are key to attracting and retaining leading edge faculty, which in turn will attract and retain high quality students.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Need & Purpose

Planning funding for Emerging Technologies Biulding - In order for the University to meet curricular requirements, accreditations and the goals of the strategic plan, the University requires the use of building facilities that support modern technology and evolving instructional techniques. Having facilities of this nature is key to attracting and retaining contemporary and leading edge faculty which in turn will attract and retain students who typically choose other larger educational institutions. The Colleges of Nursing and Education are currently housed in the Gyte Annex which was constructed in 1953 as the Industrial Research Building for Inland Steel Corporation. Over the years it was converted in phases to house academic functions. Separate building evaluations completed in 1997 and 2000 concluded the building was in need of major renovations; however, experience has shown it difficult to remodel a building with antiquated internal and structural systems. Furthermore, the building provides poor ventilation, uncomfortable working conditions and an obsolete learning environment. Since the building has no architectural significance and the infrastructure to support modern technology is non-existent, investing resources in this facility offers a limited return at best.

If this project is not approved, Calumet will continue to use outdated classroom and research space that lacks the technological requirements for a 21st century learning environment for the Colleges of Nursing and Education and the Department of Biological Sciences. In particular, the College of Nursing is finding it increasingly difficult to meet the demographic demand for growth.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Space Utilization

The project will provide 48,673 ASF that will generate collaborative learning environments, much needed laboratory space and a contemporary home to help meet with growth in College of Nursing and help sustain the College of Education. With the demolition of the Gyte Annex, the net change in campus ASF will be a gain of 24,011 ASF. In addition, the demolition of the Annex will reduce Calumet's deferred R&R by 13.6% ($7,032,484).

Comparable Projects

Purdue University West Lafayette recently bid a project to construct a 111,717 GSF /60,836 ASF Health and Human Science (HHS) building. This facility will combine the departments of Speech Language and Hearing Sciences, Clinical Facilities and Medical Education. The total project cost is $40,642,900...construction cost $30,4456,750.

Background Materials

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	63,445	0	0	63,445	2,533	3,951	64,863
Class Lab (210, 215, 220, 225, 230, 235)	100,728	0	0	100,728	7,411	21,265	114,582
Non-class Lab (250 & 255)	14,119	0	0	14,119	425	5,348	19,042
Office Facilities (300)	178,227	0	0	178,227	11,430	11,537	178,334
Study Facilities (400)	53,498	0	0	53,498	0	0	53,498
Special Use Facilities (500)	42,155	0	0	42,155	0	0	42,155
General Use Facilities (600)	80,590	0	0	80,590	0	0	80,590
Support Facilities (700)	302,900	0	0	302,900	0	0	302,900
Health Care Facilities (800)	1,314	0	0	1,314	1,314	0	0
Resident Facilities (900)	165,242	0	0	165,242	0	0	165,242
Unclassified (000)	50,536	0	0	50,536	1,651	6,572	55,457
TOTAL SPACE	1,052,754	0	0	1,052,754	24,764	48,673	1,076,663

Space Detail Notes

Planning funding for project - no space included.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Anticipated Construction Schedule

Bid Date:	June	2016
Start Construction:	August	2016
Occupancy (End Date):	March	2018

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$1,200,000	$0	$1,200,000
	Architectural	$1,200,000	$0	$1,200,000
	Consulting	$0	$0	$0
Construction	Structure	$0	$0	$0
	Mechanical (HVAC, plumbing, etc.)	$0	$0	$0
	Electrical	$0	$0	$0
Other	Movable Equipment	$0	$0	$0
	Fixed Equipment	$0	$0	$0
	Site Development/Land Acquisition	$0	$0	$0
	Other - Please List	$0	$0	$0
	Total Estimated Cost	**$2,400,000**	**$0**	**$2,400,000**

Cost Detail Notes

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building Planning Funds
Biennium:	2015-2017	**Project No:**	B-2-09-1-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$0	$0	$0	
Maintenance	$0	$0	$0	
Fuel	$0	$0	$0	
Utilities	$0	$0	$0	
Other	$0	$0	$0	
Total Estimated Cost	**$0**	**$0**	**$0**	

Cost Detail Notes

Planning funds - no operating costs incurred.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

General Project Information

Project Name/Title:	Emerging Technologies Building	Institutional Priority:	3
Budget Agency Project No:	B-2-05-1-05	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

The proposed new Emerging Technologies Building will address several crucial facilities and infrastructure issues at Purdue University Calumet, including the relocation of programs and services currently housed in the Gyte Annex to a new facility; construction of new offices, research and teaching labs for the Department of Biology; and creation of a home for Purdue University Calumet Centers and Institutes. The new building would prepare students for 21st century jobs in nursing and life sciences while advancing economic development in Northwest Indiana.

The Colleges of Nursing and Education are currently housed in the Gyte Annex, which was constructed in 1953 as the Industrial Research Building for Inland Steel Corporation. Over the years, it was converted in phases to house academic functions. Building evaluations completed in 1997 and 2000 concluded the building was in need of major renovations; however, history has shown it difficult to remodel a building with antiquated internal and structural systems. Furthermore, the building provides poor ventilation, uncomfortable working conditions and an obsolete learning environment. Since the building has no architectural significance and the infrastructure to support modern technology is non-existent, investing resources in this facility offers a limited return at best.

To meet curricular requirements, accreditation standards, and the goals of the strategic plan, the University requires facilities that support modern technology and evolving instructional techniques. Facilities of this nature are key to attracting and retaining leading edge faculty, which in turn will attract and retain high quality students.

Summary of the Impact on the Educational Attainment of Students

The Colleges of Nursing and Education are currently housed in the Gyte Annex which was constructed in 1953 as the Industrial Research Building for Inland Steel Corporation. Over the years it was converted in phases to house academic functions. Separate building evaluations completed in 1997 and 2000 concluded the building was in need of major renovations; however, experience has shown it difficult to remodel a building with antiquated internal and structural systems. Furthermore, the building provides poor ventilation, uncomfortable working conditions and an obsolete learning environment. Since the building has no architectural significance and the infrastructure to support modern technology is non-existent, investing resources in this facility offers a limited return at best.

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Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	78,000	48,673	62%
Net Change in Overall Campus Space:	33,612	24,011	

Project Cost Summary

Total Project Cost:	$38,100,000	Cost Per GSF/ASF:	$488 **GSF** $783 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$38,100,000	State	Student Fee Bond Proceeds - Fee Replaced
Total Funding	**$38,100,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$468,780
Estimated annual repair and rehabilitation investment:	$571,500

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Detail Description of Project

The proposed new Emerging Technologies Building will address several critical facilities and infrastructure issues at Purdue University Calumet, including the relocation of programs and services currently housed in the Gyte Annex to a new facility; construction of new offices, research and teaching labs for the Department of Biology; and, creation of a home for Purdue University Calumet Centers and Institutes. The new building would prepare students for 21st century jobs in nursing and life sciences while advancing economic development in Northwest Indiana.

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Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Need & Purpose

In order for the University to meet curricular requirements, accreditations and the goals of the strategic plan, the University requires the use of building facilities that support modern technology and evolving instructional techniques. Having facilities of this nature is key to attracting and retaining contemporary and leading edge faculty which in turn will attract and retain students who typically choose other larger educational institutions. The Colleges of Nursing and Education are currently housed in the Gyte Annex which was constructed in 1953 as the Industrial Research Building for Inland Steel Corporation. Over the years it was converted in phases to house academic functions. Separate building evaluations completed in 1997 and 2000 concluded the building was in need of major renovations; however, experience has shown it difficult to remodel a building with antiquated internal and structural systems. Furthermore, the building provides poor ventilation, uncomfortable working conditions and an obsolete learning environment. Since the building has no architectural significance and the infrastructure to support modern technology is non-existent, investing resources in this facility offers a limited return at best.

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Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Space Utilization

The project will provide 48,673 ASF that will generate collaborative learning environments, much needed laboratory space and a contemporary home to help meet with growth in College of Nursing and help sustain the College of Education. With the demolition of the Gyte Annex, the net change in campus ASF will be a gain of 24,011 ASF. In addition, the demolition of the Annex will reduce Calumet's deferred R&R by 13.6% ($7,032,484).

Comparable Projects

Purdue University West Lafayette recently bid a project to construct a 111,717 GSF /60,836 ASF Health and Human Science (HHS) building. This facility will combine the departments of Speech Language and Hearing Sciences, Clinical Facilities and Medical Education. The total project cost is $40,642,900...construction cost $30,4456,750.

Background Materials

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	63,445	0	0	63,445	2,533	3,951	64,863
Class Lab (210, 215, 220, 225, 230, 235)	100,728	0	0	100,728	7,411	21,265	114,582
Non-class Lab (250 & 255)	14,119	0	0	14,119	425	5,348	19,042
Office Facilities (300)	178,227	0	0	178,227	11,430	11,537	178,334
Study Facilities (400)	53,498	0	0	53,498	0	0	53,498
Special Use Facilities (500)	42,155	0	0	42,155	0	0	42,155
General Use Facilities (600)	80,590	0	0	80,590	0	0	80,590
Support Facilities (700)	302,900	0	0	302,900	0	0	302,900
Health Care Facilities (800)	1,314	0	0	1,314	1,314	0	0
Resident Facilities (900)	165,242	0	0	165,242	0	0	165,242
Unclassified (000)	50,536	0	0	50,536	1,651	6,572	55,457
TOTAL SPACE	1,052,754	0	0	1,052,754	24,764	48,673	1,076,663

Space Detail Notes

Space to be terminated includes: ANNX

Please Note: The 1,314 listed to be terminated will not be demolished; however, it will remain vacant until such time as the Gyte Annex is demolished.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Anticipated Construction Schedule

Bid Date:	June	2016
Start Construction:	August	2016
Occupancy (End Date):	March	2018

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$0	$0	$0
	Architectural	$0	$0	$0
	Consulting	$0	$0	$0
Construction	Structure	$14,206,720	$0	$14,206,720
	Mechanical (HVAC, plumbing, etc.)	$8,706,880	$0	$8,706,880
	Electrical	$5,678,400	$0	$5,678,400
Other	Movable Equipment	$0	$0	$0
	Fixed Equipment	$2,271,360	$0	$2,271,360
	Site Development/Land Acquisition	$4,164,160	$0	$4,164,160
	PM fee, inspection, contingency, etc.	$3,072,480	$0	$3,072,480
	Total Estimated Cost	**$38,100,000**	**$0**	**$38,100,000**

Cost Detail Notes

Cost does not include the planning funds of $2.4m.

Institution:	Purdue University-Calumet Campus	**Project:**	Emerging Technologies Building
Biennium:	2015-2017	**Project No:**	B-2-05-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$134,160	$14,040	$148,200	$1.90
Maintenance	$81,120	$17,160	$98,280	$1.26
Fuel	$0	$0	$0	$0.00
Utilities	$0	$192,660	$192,660	$2.47
Other	$0	$29,640	$29,640	$0.38
Total Estimated Cost	**$215,280**	**$253,500**	**$468,780**	**$6.01**

Cost Detail Notes

The estimated annual change in the cost of building operations is based on the GSF of the Emerging Technologies Building (78,000) times the cost per GSF ($6.01). The net increase deducts the GSF of the Gyte Annex (44,388) times the cost per GSF ($6.01).

78,000 x $6.01 = $468,780
44,388 x $6.01 = $266,772
Net Increase = $202,008.

The difference is based on the savings generated when the Annex is demolished.

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

General Project Information

Project Name/Title:	Brown Teaching Labs Renovation	Institutional Priority:	4
Budget Agency Project No:	B-1-15-2-10	Project Type:	Major Repair and Rehabilitation
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

Remodel 20 teaching laboratories in Brown totalling 35,000 ASF to provide the most innovative teaching laboratories for undergraduate students. Scope includes 13 general chemistry labs, 4 organic labs, 1 advanced organic/instrument room and 2 analytical/biochemistry labs. Build flexibility within the lab spaces to meet the enrollment demand. Modernize the lab setting to that which they would see in their profession - the current labs were designed in the 1960's, opened in 1972, and haven't been remodeled since. Project will be phased over multiple semesters and summers to allow the Department to continue to meet course needs.

Summary of the Impact on the Educational Attainment of Students

It is critical for students across multiple disciplines to have a key understanding of basic molecular principles. Chemistry is an experimental science and laboratory work is an essential component of learning and understanding chemistry. However, our students' ability to do active and interactive learning in laboratory settings is severely limited in the current facility. Our goal is to provide a newly designed safe environment for students to discover chemical principles in an active learning laboratory that will enhance the overall laboratory experience for our students. We envision a laboratory of island benches where groups can work safely on projects. We plan to utilize smart board technology for students to work on their reports and display data and concepts interactively with their group and the class as a whole. In addition to providing a safer environment we seek energy efficiency in ventilation, hoods and lighting.

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	68,709	35,000	51%
Net Change in Overall Campus Space:	0	110	

Project Cost Summary

Total Project Cost: $30,400,000

Cost Per GSF/ASF: $442 **GSF**; $869 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$30,400,000	State	Student Fee Bond Proceeds - Fee Replaced
Total Funding	**$30,400,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$61,769
Estimated annual repair and rehabilitation investment:	$456,000

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Detail Description of Project

Remodel 20 teaching laboratories in Brown Laboratory totaling 35,000 ASF to provide the most innovative teaching laboratories for undergraduate students. The project scope includes redesigning 13 general chemistry labs, 4 organic labs, 1 advanced organic/instrument room and 2 analytical/biochemistry labs. This project will allow for flexibility within the lab spaces to meet the enrollment demand. The labs will be modernized to a standard that which students would see in their profession - the current labs were designed in the 1960's, opened in 1972, and haven't been remodeled since. Project will be phased over multiple semesters and summers to allow the Department to continue to meet course needs.

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Need & Purpose

It is critical for students across multiple disciplines to have a key understanding of basic molecular principles. Chemistry is an experimental science and laboratory work is a critical component of learning and understanding chemistry. However, our students' ability to do active and interactive learning in laboratory settings is severely limited. Our goal is to provide a newly designed safe environment for students to discover chemical principles in an active learning laboratory that will enhance the overall laboratory experience for our students. We envision a laboratory of island benches where groups can work safely on projects. We plan to utilize smart board technology for students to work on their reports and display data and concepts interactively with their group and the class as a whole. We seek energy efficiency in ventilation, hoods and lighting. As a world-wide leader in the field of Chemical Education, and a world class faculty in all areas of chemistry, we believe that our chemistry faculty can transform the traditional chemistry laboratory into a very meaningful experience for students at all levels. We believe remodeled facilities will promote a culture of group learning and team building within our curriculum, connecting molecular science to its interdisciplinary counterparts. To this end we would like to include in this project a conceptual study engaging faculty and students with world class teaching laboratory consultants to design the most innovative laboratory classroom for Purdue students. Our goal is to provide flexibility for the future as teaching in the laboratory continues to evolve. We believe this will result in a revision to our existing curriculum promoting student learning of essential chemistry content and development of conceptual understanding through an inquiry based model wherein students learn to coordinate knowledge and laboratory skills to accomplish a goal or task. Through these activities students will develop their experimental and reasoning skills. Thus, this model will promote practices which enable students to establish lines of evidence and use them to develop and refine testable hypotheses and predictions.

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Space Utilization

There will be a reduction of office space and a gain of class space by 110 sqft.

Comparable Projects

Lilly Hall Lab Renovations - this project included labs, offices and corridors. Supply air and exhaust air systems also were upgraded. This project was 69,780 GSF, $409.14/GSF; 46,520 ASF, $614/ASF. Total project cost was $28,550,000.

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	291,541	0	52,250	343,791	0	0	343,791
Class Lab (210, 215, 220, 225, 230, 235)	550,932	0	-2,571	548,361	0	975	549,336
Non-class Lab (250 & 255)	1,509,665	0	-628	1,509,037	0	0	1,509,037
Office Facilities (300)	2,184,456	0	-24,083	2,160,373	-648	0	2,161,021
Study Facilities (400)	393,077	0	31,873	424,950	-217	0	425,167
Special Use Facilities (500)	1,154,891	9,578	0	1,164,469	0	0	1,164,469
General Use Facilities (600)	844,240	1,065	4,000	849,305	0	0	849,305
Support Facilities (700)	3,301,156	0	-763	3,300,393	0	0	3,300,393
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,328,142	0	0	2,328,142	0	0	2,328,142
Unclassified (000)	66,925	0	-4,478	62,447	0	0	62,447
TOTAL SPACE	12,708,621	10,643	55,600	12,774,864	-865	975	12,776,704

Space Detail Notes

Space under construction includes: Softball Stadium
Space planned and funded includes: Active Learning Center
Space to be terminated includes: BRWN 1125B, 1130, 1131, 1135A, 1171, 2130, 2131, 2170, 2171 (study space and offices to be repurposed as class labs)

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Anticipated Construction Schedule

Bid Date:	December	2015
Start Construction:	January	2016
Occupancy (End Date):	January	2018

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$1,000,000	$0	$1,000,000
	Architectural	$300,000	$0	$300,000
	Consulting	$1,000,000	$0	$1,000,000
Construction	Structure	$18,000,000	$0	$18,000,000
	Mechanical (HVAC, plumbing, etc.)	$3,000,000	$0	$3,000,000
	Electrical	$2,000,000	$0	$2,000,000
Other	Movable Equipment	$164,114	$0	$164,114
	Fixed Equipment	$500,000	$0	$500,000
	Site Development/Land Acquisition	$0	$0	$0
	Insurance, PM fees, contingency, parking	$4,435,886	$0	$4,435,886
	Total Estimated Cost	**$30,400,000**	**$0**	**$30,400,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Brown Teaching Labs Renovation
Biennium:	2015-2017	**Project No:**	B-1-15-2-10
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$2,561	$43,026	$45,587	$0.66
Maintenance	$0	$0	$0	$0.00
Fuel	$3,608	$2,580	$6,188	$0.09
Utilities	$1,223	$1,735	$2,958	$0.04
Other	$0	$7,036	$7,036	$0.10
Total Estimated Cost	**$7,392**	**$54,377**	**$61,769**	**$0.90**

Cost Detail Notes

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

General Project Information

Project Name/Title:	South Campus Renovations Phase II	Institutional Priority:	5
Budget Agency Project No:	B-3-15-2-11	Project Type:	Major Repair and Rehabilitation
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

This project is the second phase of a larger project started in 2013-15 to replace, repair and upgrade portions of the building infrastructure in older existing buildings on the south end of the main campus. In phase I of this project, funds were used to repair and rehabilitate most of the Helmke Library and some deficient critical elements in Kettler Hall. Phase II is to complete the renovation of Helmke, primarily with toilet rooms, stairs and elevator rehabilitation. The first phase of funding was used to address the replacement and upgrade of the High Voltage service to Kettler Hall and to replace four primary HVAC units. In this second phase of this project domestic water, electrical, telecommunication, fire protection and alarm systems will be replaced. Public spaces such as toilet rooms, lobbies, elevators, classrooms and some teaching and research labs will be renovated. Some elements of the building envelop will be addressed such as replacement of entrance doors and some windows. Both of these buildings are 40 - 50 years old, and with these upgrades are still viable buildings. One additional element that will need to be addressed at this time is the repair or replacement of the original campus chilled water mains.

Summary of the Impact on the Educational Attainment of Students

Current pedagogical methods employ new technologies that are creating more demand on the capacity of the buildings to deliver. There is an expectation that computer oriented teaching and learning will continue to expand. Both hardwired and wireless access to the campus network and the internet has become increasingly difficult to deliver in these two buildings, because the systems were not built into the building in the 60's and 70's. Work in Helmke with phase II will primarily focus on toilet rooms and vertical circulation systems, stairs and elevators. Work in Kettler Hall with phase II funding will replace aging and unreliable infrastructure such as domestic water distribution piping, fire alarms and telecommunication cabling and to extend fire protection into areas of the building that do not have fire protection. Primarily, however, there will be an emphasis on upgrading classrooms and teaching labs. This work will restore the facility to a level consistent with the demands of a 21st Century learning environment.

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	348,537	222,840	64%
Net Change in Overall Campus Space:	0	0	

Project Cost Summary

Total Project Cost:	$26,900,000	Cost Per GSF/ASF:	$77 **GSF** $121 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$26,900,000	State	Student Fee Bond Proceeds - Fee Replaced
Total Funding	**$26,900,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$0
Estimated annual repair and rehabilitation investment:	$403,500

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Detail Description of Project

Several campus buildings constructed on the IPFW campus in the 1960's and 1970's are in need of renovation. The structures are sound and the arrangement of space is still usable. Mechanical, Electrical and Plumbing (MEP) systems are failing and in need of repair and or replacement. Some areas of these buildings will need to be modified to accommodate new programs or technology that did not exist in the 60's and 70's. The two buildings on the south campus that are in the greatest need of repair and renovation are Helmke Library and Kettler Hall. This is the second half or phase II of the request to repair and or replace building infrastructure on these two buildings. The need for this project is based in part on insufficient R&R funding, thus the accumulated deferred maintenance has left us with very few alternatives other than to continue to leave the facilities to deteriorate. This project, when completed, will eliminate $19M of deferred R&R, approximately 25% of the total for the campus. Some areas of these buildings, like public corridors, toilet rooms, elevators, stairs and lobbies need to be modernized or upgraded and in some cases exterior doors and windows will need to be replaced because of wear or the need to improve energy efficiency.

As with most other University facilities, the buildings have been constructed as "100 year life" buildings. Reinforced concrete structures, with brick and stone exteriors can last more than 100 years, but mechanical, electrical, and plumbing (MEP) systems normally need to be replaced after 35 years or so. Some of our buildings are approaching 50 years old and with the exception of some small upgrades or remodeling, the original MEP systems are still in place and in need of replacement. In the case of Kettler Hall the plumbing lines are buried in masonry walls (rather than in pipe chases). As a result, to replace the piping which is badly corroded and leaking, walls will need to be demolished to access the piping for repairs. Fire Protection systems, telecommunication cabling, an upgraded fire alarm system and some electrical distribution that was not completed with phase I funding will be installed. Upgrades to classrooms and teaching labs with improved technology to assist faculty with newer pedagogical approaches will be made. There are two passenger elevators in Kettler and three in Helmke that will need to be modernized. Ultimately this will not only improve accessibility to all students and staff, but also will reduce labor cost to transport materials and large equipment items between floors. Kettler does not have a service elevator so one of the passenger elevators might be converted to a service elevator or a new combination service/passenger elevator could be installed to the exterior of the building as an alternative. Replacing exterior windows and doors will help improve environmental conditions in Kettler and help to reduce energy consumption. There are two 24 " chilled water mains, (supply and return) that extend from the chiller plant at the north end of campus to the south end where our older buildings exist. In recent years these two mains have suffered numerous leaks and repairs. A leak in underground piping is difficult to find until they bubble to the surface. We have a possible solution to line the pipes to eliminate all of the leaks while improving the efficiency of the system and eliminate the loss of water.

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Need & Purpose

The programs and departments that are currently occupying these two buildings will, for the most part, remain the same. There will be some upgrading of technology in the Helmke Library as the building infrastructure is improved to support the demand for this new service. As incremental shifts and expansions of departments and divisions occur over time the overall trend for both Helmke and Kettler is for improved telecommunication infrastructure, power distribution, cooling, and because of new expectations for energy efficiency there will be a concentrated effort to reduce energy use.

If this project is not approved or recommend by the State, finishes and systems will continue to deteriorate and fail causing disruption to the academic mission. We are experiencing problems with air quality and environmental controls, which is a health concern.

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Space Utilization

Kettler Hall was built in the early 1960's as the first structure on the IPFW campus. Over time as divisions and a departments have moved out of Kettler into new campus buildings, the vacated spaces were renovated to meet the new user's needs. Overall, however, the main MEP systems Mechanical (HVAC), Electrical, and Plumbing have not been replaced and need to be replaced and/or extended. Public spaces such as toilet rooms, stairs, elevators, and lobbies need to be upgraded. No significant space change is anticipated with this project.

Comparable Projects

Repair and Rehabilitation of sections of buildings is normally managed within a wing of a building or of a particular floor of a building where construction can be isolated. The work that is being planned for this project is to replace building air handling equipment effecting large areas, replace plumbing throughout the building(s), extend fire protection (sprinkler) systems to practically all areas of at least one building, replace or expand telecommunication systems and replace or expand electrical power distribution, all while the buildings are occupied. The scope of this project will be bid with several alternates so as to ensure that complete work can be accomplished with the funds that are available. Obviously some work may need to be completed in phases.

Background Materials

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	66,035	0	0	66,035	0	0	66,035
Class Lab (210, 215, 220, 225, 230, 235)	131,947	0	0	131,947	0	0	131,947
Non-class Lab (250 & 255)	41,313	0	0	41,313	0	0	41,313
Office Facilities (300)	195,299	0	0	195,299	0	0	195,299
Study Facilities (400)	75,875	0	0	75,875	0	0	75,875
Special Use Facilities (500)	71,753	0	0	71,753	0	0	71,753
General Use Facilities (600)	107,908	0	0	107,908	0	0	107,908
Support Facilities (700)	577,599	0	0	577,599	0	0	577,599
Health Care Facilities (800)	3,139	0	0	3,139	0	0	3,139
Resident Facilities (900)	188,144	0	0	188,144	0	0	188,144
Unclassified (000)	4,770	0	0	4,770	0	0	4,770
TOTAL SPACE	1,463,782	0	0	1,463,782	0	0	1,463,782

Space Detail Notes

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Anticipated Construction Schedule

Bid Date:	February	2016
Start Construction:	May	2016
Occupancy (End Date):	August	2017

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$540,000	$0	$540,000
	Architectural	$300,000	$0	$300,000
	Consulting	$80,000	$0	$80,000
Construction	Structure	$11,900,000	$0	$11,900,000
	Mechanical (HVAC, plumbing, etc.)	$9,800,000	$0	$9,800,000
	Electrical	$3,500,000	$0	$3,500,000
Other	Movable Equipment	$100,000	$0	$100,000
	Fixed Equipment	$680,000	$0	$680,000
	Site Development/Land Acquisition	$0	$0	$0
	Other - Please List	$0	$0	$0
	Total Estimated Cost	**$26,900,000**	**$0**	**$26,900,000**

Cost Detail Notes

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	South Campus Renovations Phase II
Biennium:	2015-2017	**Project No:**	B-3-15-2-11
Submitted:	Yes	**Last Updated:**	9/5/2014 3:08 PM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$0	$0	$0	$0.00
Maintenance	$0	$0	$0	$0.00
Fuel	$0	$0	$0	$0.00
Utilities	$0	$0	$0	$0.00
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$0**	**$0**	**$0**	**$0.00**

Cost Detail Notes

This project is a partial renovation of existing space that is already included in our operating cost budget, therefore there is no appreciable increase or decrease in current operating costs.

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

General Project Information

Project Name/Title:	Central Power Plant Expansion and Replacement	Institutional Priority:	6
Budget Agency Project No:	B-4-15-1-13	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

This project includes installing one new chiller, replacing the cooling tower and replacing electrical cabling between the primary transformer and the power plant's secondary transformer.

Summary of the Impact on the Educational Attainment of Students

The present chilled plant consists of two chillers. The installation of a new chiller will provide needed chilled water capacity for campus growth. This new chiller must be in place prior to the completion of the planned Science Building. Currently, the cooling tower capacity is inadequate to serve an additional chiller and is approximately 40 years old and well beyond its life expectancy. The cabling between the primary transformer and power house is not adequate to support the additional demand.

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	0	0	
Net Change in Overall Campus Space:	0	0	

Project Cost Summary

Total Project Cost: $3,800,000

Cost Per GSF/ASF: **GSF** **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$3,800,000	State	Student Fee Bond Proceeds - Fee Replaced
Total Funding	**$3,800,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$0
Estimated annual repair and rehabilitation investment:	$57,000

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Detail Description of Project

This project will include installing one new chiller, replacing the cooling tower and the electrical cabling between the primary transformer and the power plant's secondary transformer.

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Need & Purpose

This project will ensure a reliable, safe and cost effective source of utilities that will provide chilled plant capacity for programmed campus growth. The addition of a chiller must be completed prior to the completion of the planned Science Building. This project is consistent with the approved campus master plan and supports the mission of the campus by expanding utility capacity in proportion to the growth of campus facilities.

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Space Utilization

Comparable Projects

Background Materials

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	30,918	0	0	30,918	0	0	30,918
Class Lab (210, 215, 220, 225, 230, 235)	38,309	0	0	38,309	0	0	38,309
Non-class Lab (250 & 255)	4,800	0	0	4,800	0	0	4,800
Office Facilities (300)	66,963	0	7,248	74,211	0	0	74,211
Study Facilities (400)	24,755	0	991	25,746	0	0	25,746
Special Use Facilities (500)	4,531	0	43,046	47,577	0	0	47,577
General Use Facilities (600)	34,176	0	20,346	54,522	0	0	54,522
Support Facilities (700)	11,480	0	0	11,480	0	0	11,480
Health Care Facilities (800)	0	0	0	0	0	0	0
Resident Facilities (900)	0	0	0	0	0	0	0
Unclassified (000)	0	0	0	0	0	0	0
TOTAL SPACE	215,932	0	71,631	287,563	0	0	287,563

Space Detail Notes

Space planned and funded includes: Student Services & Activities Complex

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Anticipated Construction Schedule

Bid Date:	March	2016
Start Construction:	May	2016
Occupancy (End Date):	August	2016

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$105,100	$0	$105,100
	Architectural	$252,700	$0	$252,700
	Consulting	$0	$0	$0
Construction	Structure	$429,900	$0	$429,900
	Mechanical (HVAC, plumbing, etc.)	$842,700	$0	$842,700
	Electrical	$965,200	$0	$965,200
Other	Movable Equipment	$0	$0	$0
	Fixed Equipment	$1,204,400	$0	$1,204,400
	Site Development/Land Acquisition	$0	$0	$0
	Other - Please List	$0	$0	$0
	Total Estimated Cost	**$3,800,000**	**$0**	**$3,800,000**

Cost Detail Notes

Institution:	Purdue University-North Central Campus	**Project:**	Central Power Plant Expansion and Replacement
Biennium:	2015-2017	**Project No:**	B-4-15-1-13
Submitted:	Yes	**Last Updated:**	9/5/2014 3:12 PM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$0	$0	$0	
Maintenance	$0	$0	$0	
Fuel	$0	$0	$0	
Utilities	$0	$0	$0	
Other	$0	$0	$0	
Total Estimated Cost	**$0**	**$0**	**$0**	

Cost Detail Notes

Additional operating costs will be associated with new facilities, such as the Student Services and Activities Complex and the proposed Science building. No additional costs are anticipated for this infrastructure improvement.

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

General Project Information

Project Name/Title:	Animal Disease Diagnostic Laboratory (BSL-3)	Institutional Priority:	7
Budget Agency Project No:	B-1-08-1-02	Project Type:	New Construction
Previously Approved by General Assembly:	Yes	Previously Recommended by CHE:	No

Project Summary

Establish a laboratory for research, training, and diagnostic investigations with highly contagious microorganisms that cause disease in humans and animals. The laboratory will be a stand-alone building situated in a secure area proximal to the Animal Disease Diagnostic Laboratory (ADDL) on the Purdue University West Lafayette Campus. The building will have necropsy facilities for small and large animals, virology and microbiology laboratories, housing for rodents, avian species, and intermediate size mammals (pigs and sheep). The entire building will be properly ventilated. Containment tanks and alkaline digestion units will be installed to dispose safely of contaminated carcasses and manure. Autoclaves will be included for sterilization of lab equipment and animal cages. A perimeter fence and video cameras will be installed along with secure access.

Summary of the Impact on the Educational Attainment of Students

Knowledge gained through diagnosis and research in this facility will be used in expanding the knowledge base of the university.

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	34,420	9,744	28%
Net Change in Overall Campus Space:	34,420	9,744	

Project Cost Summary

Total Project Cost:	$30,000,000	Cost Per GSF/ASF:	$872 **GSF** $3,079 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$30,000,000	State	2007 Student Fee Bond Proceeds - Fee Replaced
Total Funding	**$30,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$173,101
Estimated annual repair and rehabilitation investment:	$450,000

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

Detail Description of Project

Establish a laboratory for research, training, and diagnostic investigations with highly contagious microorganisms that cause disease in humans and animals. The laboratory will be a stand-alone building situated in a secure area proximal to the Animal Disease Diagnostic Laboratory (ADDL) on the Purdue University West Lafayette Campus. The building will have necropsy facilities for small and large animals, virology and microbiology laboratories, housing for rodents, avian species, and intermediate size mammals (pigs and sheep). The entire building will be properly ventilated. Containment tanks and alkaline digestion units will be installed to dispose safely of contaminated carcasses and manure. Autoclaves will be included for sterilization of lab equipment and animal cages. A perimeter fence and video cameras will be installed along with secure access. This project has no relationship to any other capital improvement project.

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

Need & Purpose

The ADDL is the only facility in Indiana dedicated to diagnostic work in food and fiber animals. The addition of BSL-3 space will allow the ADDL to be at the forefront of detection of and response to outbreaks of highly infectious diseases with devastating economic impact such as avian influenza and Foot and Mouth Disease. Without BSL-3 facilities, diagnostic samples will have to be sent out of state, delaying diagnosis and therefore response. BSL-3 research laboratories and animal housing will allow scientists in central Indiana (Purdue, IU, companies) to compete for federal funds aimed at research with BSL-3 type organisms. Without BSL-3 facilities we are not competitive resulting in a potential loss of millions of research dollars. In some cases collaborative agreements with other facilities can be struck (e.g., CDC in Atlanta) but is inefficient, uncertain, dilutes potential income from licensing of newly developed product and directs research funds from Indiana. BSL-3 facilities will also place Purdue University on a more competitive position to attract federal funds on projects of interest to the Department of Homeland Security, NIH, and the USDA.

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

Space Utilization

Purdue University brings an exceptionally strong multidisciplinary team of established investigators to the study of infectious diseases (from the Colleges of Engineering, Science, Pharmacy, and Veterinary Medicine and from the interdisciplinary centers of Discovery Park) but lacks the animal housing facilities and laboratories to carry out studies with animals infected with BSL-3 type organisms. The State of Indiana Animal Disease Diagnostic Laboratory (ADDL) at Purdue is a state-of-the-art diagnostic laboratory with a world class staff of pathologists, microbiologists, and virologists. However, it also lacks the BSL-3 laboratory space and an adequate means of disposal of material exposed to highly infectious organisms should Indiana be the site of a naturally occurring or bioterror induced zoonotic disease outbreak. There is an urgent need to develop BSL-3 diagnostic and research laboratory capabilities in association with the ADDL and Purdue University. The proposed combined BSL-3 research and diagnostic facility makes sense because a diagnostics only facility would sit idle much of the time. The dual purpose assures that the facility will be continuously used and that qualified and experienced personnel are available in case of an infectious disease outbreak.

Comparable Projects

There is currently no state-owned facility in Indiana that is comparable.

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	291,541	0	52,250	343,791	0	0	343,791
Class Lab (210, 215, 220, 225, 230, 235)	550,932	0	-2,571	548,361	0	0	548,361
Non-class Lab (250 & 255)	1,509,665	0	-628	1,509,037	0	4,631	1,513,668
Office Facilities (300)	2,184,456	0	-24,083	2,160,373	0	552	2,160,925
Study Facilities (400)	393,077	0	31,873	424,950	0	0	424,950
Special Use Facilities (500)	1,154,891	9,578	0	1,164,469	0	1,728	1,166,197
General Use Facilities (600)	844,240	1,065	4,000	849,305	0	337	849,642
Support Facilities (700)	3,301,156	0	-763	3,300,393	0	2,496	3,302,889
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,328,142	0	0	2,328,142	0	0	2,328,142
Unclassified (000)	66,925	0	-4,478	62,447	0	0	62,447
TOTAL SPACE	12,708,621	10,643	55,600	12,774,864	0	9,744	12,784,608

Space Detail Notes

Space under construction includes: Softball Stadium.

Space planned and funded includes: Active Learning Center.

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

Anticipated Construction Schedule

Bid Date:	October	2015
Start Construction:	January	2016
Occupancy (End Date):	July	2018

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$0	$0	$0
	Architectural	$2,100,000	$0	$2,100,000
	Consulting	$0	$0	$0
Construction	Structure	$21,000,000	$0	$21,000,000
	Mechanical (HVAC, plumbing, etc.)	$0	$0	$0
	Electrical	$0	$0	$0
Other	Movable Equipment	$1,740,000	$0	$1,740,000
	Fixed Equipment	$2,000,000	$0	$2,000,000
	Site Development/Land Acquisition	$0	$0	$0
	PM&ST fees, insurance, contingency, printing, etc.	$3,160,000	$0	$3,160,000
	Total Estimated Cost	**$30,000,000**	**$0**	**$30,000,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Animal Disease Diagnostic Laboratory (BSL-3)
Biennium:	2015-2017	**Project No:**	B-1-08-1-02
Submitted:	Yes	**Last Updated:**	9/5/2014 3:15 PM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$64,221	$13,781	$78,002	$2.27
Maintenance	$25,189	$3,704	$28,893	$0.84
Fuel	$0	$36,757	$36,757	$1.07
Utilities	$0	$29,449	$29,449	$0.86
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$89,410**	**$83,691**	**$173,101**	**$5.03**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

General Project Information

Project Name/Title:	Agronomy Center Automated Phenotyping and Seed Processing Facility	Institutional Priority:	
Budget Agency Project No:	B-1-15-1-05	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

A new 25,000 s.f. Automated Field Phenotyping Laboratory and Seed Processing facility is proposed at the Agronomy Center for Research and Education (ACRE) farm. With this new research facility, Purdue will create an innovation hub for students and has the opportunity to be a world leader in the area of automated field phenotyping. Investment in this new technology will provide billions of field measurements for detailed assessment of important traits such as canopy development, leaf area index, height, photosynthetic ability, etc. that are important for both research and commercialization.

Summary of the Impact on the Educational Attainment of Students

This facility will allow Purdue University to provide educational opportunities, including across STEM disciplines, which are unavailable elsewhere and which will lead to the necessary increase in the world's food production. Students will attain skills in plant and seed processing and analysis that meet, and in many cases, exceed industry standards for automation, health and safety, workplace satisfaction, and performance. The functional layout specifically promotes collaboration among undergraduate, graduate, doctoral and professional levels, across commodity and discipline research. STEM students' collaboration in the development of new and prototype phenomic tools will allow Purdue to speed up research, with the added benefit of drawing bright minds to science, math, engineering, and technology career opportunities in Agriculture.

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	25,000	20,244	81%
Net Change in Overall Campus Space:	25,000	20,244	

Project Cost Summary

Total Project Cost:	$10,000,000	Cost Per GSF/ASF:	$400 **GSF** $494 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$10,000,000	Institution	Institutional Reserves - F&A Cost Recovery
Total Funding	**$10,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$42,278
Estimated annual repair and rehabilitation investment:	$150,000

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Detail Description of Project

A new 25,000 s.f. Automated Field Phenotyping Laboratory and Seed Processing facility is proposed at the Agronomy Center for Research and Education (ACRE) farm. With this new research facility, Purdue will create an innovation hub for students and has the opportunity to be a world leader in the area of automated field phenotyping. Investment in this new technology will provide billions of field measurements for detailed assessment of important traits such as canopy development, leaf area index, height, photosynthetic ability, etc. that are important for both research and commercialization.

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Need & Purpose

This facility will allow Purdue University to provide educational opportunities, including across STEM disciplines, which are unavailable elsewhere and which will lead to the necessary increase in the world's food production. Students will attain skills in plant and seed processing and analysis that meet, and in many cases, exceed industry standards for automation, health and safety, workplace satisfaction, and performance. The functional layout specifically promotes collaboration among undergraduate, graduate, doctoral and professional levels, and across commodity and discipline research. STEM students' collaboration in the development of new and prototype phenomic tools will allow Purdue to speed up research, with the added benefit of drawing bright minds to science, math, engineering, and technology career opportunities in Agriculture. Should this facility not be approved, students, faculty, and researchers will likely select other institutions for their education and research due to substandard facilities at ACRE. Currently unheated pole barns, with no air filtration are being used to process materials, which is an inadequate work or study environment. There should be no cost impact to students.

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Space Utilization

This project will increase research space, significantly advance research capabilities, and extend the processing and analysis seasons at ACRE. No comparable space exists on campus. No ACRE space will be removed initially; however, construction of this facility will allow renovation and retirement of existing pole barns in use beyond life expectancy. Obsolete pole barns will be phased out and remaining will accommodate research expansion, a fundamental goal of this project.

Comparable Projects

This project is not on the main campus; it is on the Agronomy farm (ACRE). It is an innovative space unlike any college or commercial facility known due to multiple commodity research lines and the phenomic tool development component. The closest comparison is the ACRE Beck Center, built in 2007 at $266/ GSF. This project is higher per s.f. due to inflation, increased laboratory functions and required addional access road from US 52. Without the US 52 access and new drive our GSF lowers to $297/ GSF.

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	294,244	2,827	52,250	349,321	0	0	349,321
Class Lab (210, 215, 220, 225, 230, 235)	546,637	8,118	-2,571	552,184	0	19,444	571,628
Non-class Lab (250 & 255)	1,471,419	47,001	-628	1,517,792	0	0	1,517,792
Office Facilities (300)	2,101,481	58,143	-24,083	2,135,541	0	800	2,136,341
Study Facilities (400)	388,215	5,949	31,873	426,037	0	0	426,037
Special Use Facilities (500)	1,133,431	24,113	0	1,157,544	0	0	1,157,544
General Use Facilities (600)	823,097	31,757	4,000	858,854	0	0	858,854
Support Facilities (700)	3,020,680	281,093	-763	3,301,010	0	0	3,301,010
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,271,095	57,047	0	2,328,142	0	0	2,328,142
Unclassified (000)	20,164	9,395	-4,478	25,081	0	0	25,081
TOTAL SPACE	12,154,059	525,443	55,600	12,735,102	0	20,244	12,755,346

Space Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Anticipated Construction Schedule

Bid Date:	January	2015
Start Construction:	February	2015
Occupancy (End Date):	January	2016

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$294,500	$0	$294,500
	Architectural	$294,500	$0	$294,500
	Consulting	$0	$0	$0
Construction	Structure	$3,000,000	$0	$3,000,000
	Mechanical (HVAC, plumbing, etc.)	$1,500,000	$0	$1,500,000
	Electrical	$1,500,000	$0	$1,500,000
Other	Movable Equipment	$0	$0	$0
	Fixed Equipment	$0	$0	$0
	Site Development/Land Acquisition	$2,000,000	$0	$2,000,000
	Survey, testing, PM fee, printing, contingency, etc.	$1,411,000	$0	$1,411,000
	Total Estimated Cost	**$10,000,000**	**$0**	**$10,000,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Agronomy Center Automated Phenotyping and Seed Processing Facility
Biennium:	2015-2017	**Project No:**	B-1-15-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$0	$0	$0	$0.00
Maintenance	$0	$0	$0	$0.00
Fuel	$0	$0	$0	$0.00
Utilities	$0	$42,278	$42,278	$1.69
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$0**	**$42,278**	**$42,278**	**$1.69**

Cost Detail Notes

This project is at ACRE, not on the main campus. It is served by third party vendors, not Purdue utilities.

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

General Project Information

Project Name/Title:	Art Gallery	Institutional Priority:	
Budget Agency Project No:	B-3-15-1-12	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

This project is to construct a new addition to the Visual Arts Building that will house a new art gallery with space for storage, archiving, and curator office and work space. This facility will provide a space for revolving student, faculty, and professional art exhibits. The facility will also provide a home for the IPFW campus permanent art collection. There will need to be space to store and restore art works that have been donated to the University.

Summary of the Impact on the Educational Attainment of Students

The current exhibition space for student and faculty art exhibits is comprised of the lobby of the Visual Arts Building and is undersized and suffers from exposure to environmental elements such as excess sun and temperature variations. There is virtually no way to provide security for art objects exhibited in the lobby space, therefore, the more expensive or fragile pieces are often not displayed. In this new space students, would be able to display new work in a larger facility that is environmentally conditioned to protect their artwork and provide an atmosphere equivalent to a commercial grade gallery space.

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	6,500	4,000	62%
Net Change in Overall Campus Space:	6,500	4,000	

Project Cost Summary

Total Project Cost:	$3,000,000	Cost Per GSF/ASF:	$462 **GSF** $750 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$3,000,000	Gift	Gift Funds
Total Funding	**$3,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$25,863
Estimated annual repair and rehabilitation investment:	$45,000

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

Detail Description of Project

This project is to construct a new addition to the Visual Arts Building that will house a new art gallery with space for storage and archiving and curator offices. Current gallery space is not conditioned with humidity control and temperature control conducive to art exhibition. Specialty lighting and sunlight control will provide a space comparable to professional art gallery space. This facility will also provide a space for revolving student, faculty, and professional art exhibits and will provide a home for the IPFW campus permanent art collection and the means to store and restore art works that have been donated to the University. Traveling exhibits will have room to display along side of the student work. The space will also house offices for the curator and archive assistants, and provide cooperative and/or internship opportunities for IPFW Art students interested in archiving and restoring.

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

Need & Purpose

The quantity of art objects in the permanent collection exceeds the space where they can be appropriately displayed. A formal Art Gallery with appropriate security and environmental conditions will provide a venue to not only feature valuable objects from the permanent collection, but also space to rotate in shows of student and faculty work. As IPFW seeks accreditation from the National Association of Schools of Art and Design, adequate exhibition, storage and restoration spaces will have a significant impact in the decision process of the Association. The only location that currently serves this need is the lobby of the Visual Arts Building. Since the lobby is also a major entrance/exit way for the building this site has significant limitations and restrictions environmentally and from a security perspective.

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

Space Utilization

The site for this project is between the Visual Arts Building and the Williams Theater. The original planning for these two buildings included a connecting unit that was omitted for budget constraint reasons. That original connecting link would have provided at least an expanded lobby for the Theater and a common entrance for both buildings. This project is to restore that original idea and build upon it the a gallery that will provide additional space for functions related to storage, restoration, and preparation of exhibits. There is an existing concrete plaza and transitional steps and ramps that have deteriorated and will be removed to make room for the gallery. The addition will provide the transition between the two different building floor elevations and create a high quality space to display art.

Comparable Projects

Background Materials

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	79,672	0	0	79,672	0	0	79,672
Class Lab (210, 215, 220, 225, 230, 235)	138,502	0	0	138,502	0	0	138,502
Non-class Lab (250 & 255)	41,313	0	0	41,313	0	0	41,313
Office Facilities (300)	211,408	0	0	211,408	0	400	211,808
Study Facilities (400)	75,875	0	0	75,875	0	0	75,875
Special Use Facilities (500)	71,753	0	0	71,753	0	0	71,753
General Use Facilities (600)	107,908	0	0	107,908	0	3,600	111,508
Support Facilities (700)	577,599	0	0	577,599	0	0	577,599
Health Care Facilities (800)	3,139	0	0	3,139	0	0	3,139
Resident Facilities (900)	188,144	0	0	188,144	0	0	188,144
Unclassified (000)	5,930	0	0	5,930	0	0	5,930
TOTAL SPACE	1,501,243	0	0	1,501,243	0	4,000	1,505,243

Space Detail Notes

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

Anticipated Construction Schedule

Bid Date:	March	2015
Start Construction:	May	2015
Occupancy (End Date):	September	2016

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$100,000	$0	$100,000
	Architectural	$120,000	$0	$120,000
	Consulting	$0	$0	$0
Construction	Structure	$825,000	$0	$825,000
	Mechanical (HVAC, plumbing, etc.)	$1,050,000	$0	$1,050,000
	Electrical	$225,000	$0	$225,000
Other	Movable Equipment	$50,000	$0	$50,000
	Fixed Equipment	$90,000	$0	$90,000
	Site Development/Land Acquisition	$0	$0	$0
	Inspection fee, PM fee, contingencies, printing	$540,000	$0	$540,000
	Total Estimated Cost	**$3,000,000**	**$0**	**$3,000,000**

Cost Detail Notes

Institution:	Indiana University-Purdue University-Fort Wayne	**Project:**	Art Gallery
Biennium:	2015-2017	**Project No:**	B-3-15-1-12
Submitted:	Yes	**Last Updated:**	9/5/2014 11:03 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$9,486	$684	$10,170	$1.56
Maintenance	$4,897	$700	$5,597	$0.86
Fuel	$0	$3,876	$3,876	$0.60
Utilities	$0	$5,467	$5,467	$0.84
Other	$0	$753	$753	$0.12
Total Estimated Cost	**$14,383**	**$11,480**	**$25,863**	**$3.98**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

General Project Information

Project Name/Title:	Honors College and Residences	Institutional Priority:	
Budget Agency Project No:	B-1-13-1-05	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

This project will construct a new residence hall facility for the Honors College that will promote academic success through development of a living learning community. It will be located on the southwest corner of Russell and Third Street with a minimum of 800 beds and approximately 40,000 square feet of academic space.

Summary of the Impact on the Educational Attainment of Students

The residential Honors College at Purdue will provide a multi-year living-learning community that attracts high ability students and promotes academic and life-long success in leadership and citizenship. Honors students are retained in residence hall housing at twice the rate of the overall campus and have a four year graduation rate of nearly twice the University average. Thus, 500 first-year honors students results in 1000+ residential honors students over the four year experience, creating demand beyond the residence hall system's current capacity.

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	308,050	183,499	60%
Net Change in Overall Campus Space:	308,050	183,499	

Project Cost Summary

Total Project Cost: $90,000,000

Cost Per GSF/ASF: $292 **GSF**; $490 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$90,000,000	Institution	Funding combination: To Be Determined
Total Funding	**$90,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$440,047
Estimated annual repair and rehabilitation investment:	$1,350,000

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

Detail Description of Project

This project will construct a new residence hall facility for the Honors College that will promote academic success through development of a living learning community. It will be located on the southwest corner of Russell and Third Street with a minimum of 800 beds and approximately 40,000 square feet of academic space. This facility will support the residential Honors College learning environment. This physical space launches a new model that integrates living and learning with a goal of enhancing student academic success. The most favorable site for this facility also helps to bridge the academic and residential parts of campus. This facility also will tie programmatically with Third Street Suites which also will house Honors students.

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

Need & Purpose

As part of the University's Purdue Moves initiatives, this project is a key part of the overall academic strategic plan to improve student success and graduation rates. The facilities component of the strategic plan focuses on creating academic and residential integration along the Third Street corridor. Related projects include the Krach Leadership Center, Third Street Suites, future undergraduate laboratory space and the existing Black Cultural Center. Honors students are retained in residence hall housing at twice the rate of the overall campus and have a four year graduate rate of nearly twice the University average. Thus, 500 first-year honors students results in 1000+ residential honors students over the four year experience, creating demand beyond the residence hall system's current capacity. The integrated academic and residential multi-year environment is a key component to promote academic success. The Honors College will be a model for experimentation and academic integration for the entire Purdue residential life community. The Honors College residential space will be designed with multiple housing options within the same facility. The Honors College at Purdue will be a low-cost option for high ability Indiana students as compared to private and out-of-state alternatives. It will also be an attractive option to continue to recruit outstanding out-of-state students. This project is financially modeled upon the current Third Street Suites project at a break-even cost with additional capacity for donor funds to underwrite a portion of the project. There should be little or no impact on student cost of attendance at Purdue.

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

Space Utilization

This project would add a minimum of 800 beds to the existing stock of approximately 11,800 on-campus beds within the University Residences, along with support space typical of a residence hall (student activity spaces and office/operational spaces for housing staff). Additionally, the project would include office and related spaces for Honors College staff along with +/- five multi-purpose classrooms that would support instructional activity. Recent demand studies have suggested there would be demand for these additional beds, although the additional capacity, in the short run, might be used to allow some other, older residence halls to be taken off line for renovation work. This project includes demolition of Brownstone Apartments to make way for this new construction. The Brownstone site is ideally situated between the academic campus and the residential campus and thus provides easy access to both for faculty and student interaction.

Comparable Projects

The project is the first to truly integrate residential and academic life and will serve as a model for future integration of academic and residential student learning. The building will contain multiple residential room types, classrooms and academic offices. Vawter Field Housing and the renovated Windsor facilities are somewhat comparable.

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	291,541	0	52,250	343,791	0	7,949	351,740
Class Lab (210, 215, 220, 225, 230, 235)	550,932	0	-2,571	548,361	0	3,870	552,231
Non-class Lab (250 & 255)	1,509,665	0	-628	1,509,037	0	0	1,509,037
Office Facilities (300)	2,184,456	0	-24,083	2,160,373	0	7,292	2,167,665
Study Facilities (400)	393,077	0	31,873	424,950	0	3,238	428,188
Special Use Facilities (500)	1,154,891	9,578	0	1,164,469	0	0	1,164,469
General Use Facilities (600)	844,240	1,065	4,000	849,305	0	21,468	870,773
Support Facilities (700)	3,301,156	0	-763	3,300,393	0	12,220	3,312,613
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,328,142	0	0	2,328,142	0	127,462	2,455,604
Unclassified (000)	66,925	0	-4,478	62,447	0	0	62,447
TOTAL SPACE	12,708,621	10,643	55,600	12,774,864	0	183,499	12,958,363

Space Detail Notes

Space under construction includes: Softball Stadium
Space planned and funded includes: Active Learning Center

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

Anticipated Construction Schedule

Bid Date:	January	2015
Start Construction:	January	2015
Occupancy (End Date):	August	2016

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$2,009,100	$0	$2,009,100
	Architectural	$2,695,650	$0	$2,695,650
	Consulting	$896,500	$0	$896,500
Construction	Structure	$40,944,810	$0	$40,944,810
	Mechanical (HVAC, plumbing, etc.)	$18,252,952	$0	$18,252,952
	Electrical	$13,878,546	$0	$13,878,546
Other	Movable Equipment	$4,800,000	$0	$4,800,000
	Fixed Equipment	$0	$0	$0
	Site Development/Land Acquisition	$1,325,500	$0	$1,325,500
	PM & ST fees, insurance, printing, contingencies, etc.	$5,196,942	$0	$5,196,942
	Total Estimated Cost	**$90,000,000**	**$0**	**$90,000,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Honors College and Residences
Biennium:	2015-2017	**Project No:**	B-1-13-1-05
Submitted:	Yes	**Last Updated:**	9/5/2014 11:09 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$58,366	$37,483	$95,849	$0.31
Maintenance	$0	$0	$0	$0.00
Fuel	$139,839	$0	$139,839	$0.45
Utilities	$204,359	$0	$204,359	$0.66
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$402,564**	**$37,483**	**$440,047**	**$1.43**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

General Project Information

Project Name/Title:	Innovation Design Center - Student Projects Facility Phase I	Institutional Priority:	
Budget Agency Project No:	B-1-15-1-06	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

A multidisciplinary, curricular and extracurricular facility. Phase I is a collaborative effort between the College of Engineering and College of Technology, including input from the College of Liberal Arts. Phase II will include all three of the participating Colleges. This two-phase project is on a single footprint in order to take advantage of continuity of design.

Summary of the Impact on the Educational Attainment of Students

This facility will provide students with hands-on create-design-build-display opportunities while nurturing important team, organizational, and management skills through classroom projects and student organization-based initiatives that complement classroom instruction. This facility will support students from the College of Engineering, the College of Technology, and the School of Visual and Performing Arts in the College of Liberal Arts by providing spaces for short-term to multi-year, collaborative, design-build projects.

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	24,000	17,300	72%
Net Change in Overall Campus Space:	24,000	17,300	

Project Cost Summary

Total Project Cost:	$20,000,000	Cost Per GSF/ASF:	$833 **GSF** $1,156 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$20,000,000	Gift	Gift Funds
Total Funding	**$20,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$103,526
Estimated annual repair and rehabilitation investment:	$300,000

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

Detail Description of Project

The Innovation Design Center will be a new student project facility, an inspiring and hands-on environment that provides collaborative learning opportunities across disciplines and encourages creativity and the development of teamwork, problem-solving and leadership skills through curricular and student-led projects. The facility will support students from the College of Engineering, College of Technology, and in Phase II, Visual & Performing Arts within the College of Liberal Arts. The Innovation Design Center will provide for short-term and multi-year create-design-build-display activities, expanding students' collaborative and hands-on learning experiences through their college careers. The goal is to also foster "intellectual collisions" within and across disciplines, and helping to further equip students for the dynamic, project-oriented environment of the professional world. Capital Project Cost based on projected inflation in 2017.

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

Need & Purpose

The Innovation Design Center builds on the educational success experienced by students in programs such as Engineering Projects in Community Service (EPICS) and the First-Year Engineering Ideas to Innovation (i2i) Learning Laboratory, which reinforce educational concepts through experiential learning. EPICS and engineering service learning have helped significantly improve the retention of female first-year engineering students. The i2i Learning Lab has played a significant role in increasing retention rates for first-year engineering students across the board.

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

Space Utilization

The project location is currently proposed at the south corner of Russell and Third Streets. This will require purchasing four lots. The existing lots consist of; Purdue Research Foundation (PRF) owned apartment home, a gravel parking lot owned by Delta Epsilon, and lots owned by the Baptist Student Foundation. Purchasing these four lots to construct a single building for Phase I and Phase II will reduce the duplication of costs associated with building two facilities, one for each Phase, as was originally proposed.

Comparable Projects

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	291,541	0	52,250	343,791	0	0	343,791
Class Lab (210, 215, 220, 225, 230, 235)	550,932	0	-2,571	548,361	0	12,780	561,141
Non-class Lab (250 & 255)	1,509,665	0	-628	1,509,037	0	0	1,509,037
Office Facilities (300)	2,184,456	0	-24,083	2,160,373	0	1,580	2,161,953
Study Facilities (400)	393,077	0	31,873	424,950	0	1,940	426,890
Special Use Facilities (500)	1,154,891	9,578	0	1,164,469	0	0	1,164,469
General Use Facilities (600)	844,240	1,065	4,000	849,305	0	1,000	850,305
Support Facilities (700)	3,301,156	0	-763	3,300,393	0	0	3,300,393
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,328,142	0	0	2,328,142	0	0	2,328,142
Unclassified (000)	66,925	0	-4,478	62,447	0	0	62,447
TOTAL SPACE	12,708,621	10,643	55,600	12,774,864	0	17,300	12,792,164

Space Detail Notes

Space under construction includes: Softball Stadium
Space planned and funded includes: Active Learning Center

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

Anticipated Construction Schedule

Bid Date:	June	2017
Start Construction:	July	2017
Occupancy (End Date):	March	2019

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$475,000	$0	$475,000
	Architectural	$375,000	$0	$375,000
	Consulting	$100,000	$0	$100,000
Construction	Structure	$6,000,000	$0	$6,000,000
	Mechanical (HVAC, plumbing, etc.)	$3,250,000	$0	$3,250,000
	Electrical	$3,250,000	$0	$3,250,000
Other	Movable Equipment	$650,000	$0	$650,000
	Fixed Equipment	$1,500,000	$0	$1,500,000
	Site Development/Land Acquisition	$2,200,000	$0	$2,200,000
	includes utility costs not in construction, contingency, pm & st fees, insurance, printing, etc.	$2,200,000	$0	$2,200,000
	Total Estimated Cost	**$20,000,000**	**$0**	**$20,000,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Innovation Design Center - Student Projects Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-06
Submitted:	Yes	**Last Updated:**	9/5/2014 11:06 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$0	$26,798	$26,798	$1.12
Maintenance	$45,000	$19,500	$64,500	$2.69
Fuel	$5,905	$3,306	$9,211	$0.38
Utilities	$2,231	$786	$3,017	$0.13
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$53,136**	**$50,390**	**$103,526**	**$4.31**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

General Project Information

Project Name/Title:	Interdisciplinary Research Facility - Flex Lab Facility Phase I	Institutional Priority:	
Budget Agency Project No:	B-1-15-1-04	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

This project will construct a new multidisciplinary research facility designed to support the growth of the College of Engineering and to meet the ever changing research needs of the University. The facility will provide a transformative environment which encourages collaboration, team based research, learning, and engagement among peers with diverse research interests. Both wet and dry lab types will be accommodated in this facility designed to address the needs of today's diverse research portfolio and to adapt to the changing needs of the future. Infrastructure will be built-out to accommodate future expansion of this facility on this site.

Summary of the Impact on the Educational Attainment of Students

Purdue's College of Engineering is embarking on a period of remarkable growth. To accomplish this growth, it is necessary to dedicate core campus facilities to academia and migrate research programs currently located within that core to Discovery Park. A flexible laboratory building is needed to accommodate displaced research as well as to provide additional laboratory space and capabilities to accommodate expansion of the College. This new laboratory is crucial in the recruitment of high-quality faculty hires and high caliber students, will enhance Purdue's research capabilities, and will increase opportunities for undergraduate and graduate students by providing hands-on experiential learning which is essential in training the next generation of engineers and scientists. Furthermore, the multi-disciplinary and collaborative nature of this facility will provide a broader base of experience for students and faculty alike.

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	75,000	60,000	80%
Net Change in Overall Campus Space:	18,841	20,734	

Project Cost Summary

Total Project Cost:	$54,000,000	Cost Per GSF/ASF:	$720 **GSF** $900 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$38,000,000	Other	Support & Research Facility Revenue Bonds under IC 21-35-3-7
	$13,500,000	Gift	Gift
	$2,500,000	Institution	Central Reserves
Total Funding	**$54,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$445,557
Estimated annual repair and rehabilitation investment:	$720,000

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Detail Description of Project

The new facility will expedite high impact translational research, providing both state of the art efficiency which encourages cross disciplinary collaboration, team based research, and engagement among peers with diverse research interests. Flexible, transparent, open wet and dry lab types will be accommodated in this facility designed to address the needs of today's diverse research portfolio and to adapt to the changing needs of the future. Infrastructure will be built-out to accommodate future expansion of this facility on this site.

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Need & Purpose

Purdue's College of Engineering (CoE) is embarking on a period of remarkable growth. With the support of the Provost and Board of Trustees, we expect to increase the size of CoE faculty by as much as 30% over the next five years with staff levels increasing as well. Growth on this scale is an opportunity for transformational change. Hiring high-quality new faculty to accomplish this change requires additional research capacity. In addition, the University needs to dedicate the campus core to academia and relocate current research located in the core to Discovery Park which is in alignment with the University's Master Plan. Without sufficient research space, the goals of the expansion of the College of Engineering with a primary goal of enhancing the student experience will not be possible.

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Space Utilization

To facilitate the 30% expansion of the College of Engineering, additional space is needed to accommodate both academic and research needs. Academic needs such as classrooms, teaching labs, and offices are planned to be accommodated in the core of campus while research needs will be accommodated in Discovery Park. This new flexible research facility constructed in Discovery Park will provide capacity for both the displacement of research capacity currently housed on campus as well as the additional needs generated through the growth in faculty and students.

Comparable Projects

The 28,603 SF Bindley Bioscience Center Addition was bid in 2012 at $430 / GSF. The current construction budget includes demolition of existing building and utility infrastructure extension. If we exclude these extra costs, this will lower the cost per GSF to $593/GSF. (Calculations are based upon the construction cost only)

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	294,244	2,827	52,250	349,321	0	0	349,321
Class Lab (210, 215, 220, 225, 230, 235)	546,637	8,118	-2,571	552,184	0	0	552,184
Non-class Lab (250 & 255)	1,471,419	47,001	-628	1,517,792	0	51,000	1,568,792
Office Facilities (300)	2,101,481	58,143	-24,083	2,135,541	0	9,000	2,144,541
Study Facilities (400)	388,215	5,949	31,873	426,037	0	0	426,037
Special Use Facilities (500)	1,133,431	24,113	0	1,157,544	0	0	1,157,544
General Use Facilities (600)	823,097	31,757	4,000	858,854	0	0	858,854
Support Facilities (700)	3,020,680	281,093	-763	3,301,010	0	0	3,301,010
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,271,095	57,047	0	2,328,142	39,266	0	2,288,876
Unclassified (000)	20,164	9,395	-4,478	25,081	0	0	25,081
TOTAL SPACE	12,154,059	525,443	55,600	12,735,102	39,266	60,000	12,755,836

Space Detail Notes

Space under construction includes: Ralph and Bettye Bailey Hall, Center for Student Excellence and Leadership, Drug Discovery, Harrison Street Parking Garage,Lyles-Porter Hall, Softball Stadium, Third Street Suites, Seng-Liang Wang Hall

Space planned and funded includes: Active Learning Center

Space to be terminated includes: Purdue Village Apts #134, 135, 136, 137, and 138

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Anticipated Construction Schedule

Bid Date:	May	2015
Start Construction:	June	2015
Occupancy (End Date):	November	2017

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$2,300,000	$0	$2,300,000
	Architectural	$1,500,000	$0	$1,500,000
	Consulting	$0	$0	$0
Construction	Structure	$48,000,000	$0	$48,000,000
	Mechanical (HVAC, plumbing, etc.)	$0	$0	$0
	Electrical	$0	$0	$0
Other	Movable Equipment	$0	$0	$0
	Fixed Equipment	$0	$0	$0
	Site Development/Land Acquisition	$0	$0	$0
	contingencies, pm & st fees, insurance, printing, existing facility demo	$2,200,000	$0	$2,200,000
	Total Estimated Cost	**$54,000,000**	**$0**	**$54,000,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Interdisciplinary Research Facility - Flex Lab Facility Phase I
Biennium:	2015-2017	**Project No:**	B-1-15-1-04
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$19,088	$21,525	$40,613	$0.54
Maintenance	$210,480	$0	$210,480	$2.81
Fuel	$0	$0	$0	$0.00
Utilities	$194,464	$0	$194,464	$2.59
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$424,032**	**$21,525**	**$445,557**	**$5.94**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

General Project Information

Project Name/Title:	Jischke Hall Addition - Biomedical Engineering	Institutional Priority:	
Budget Agency Project No:	B-1-15-1-07	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

Construction will include a three-story addition and basement to the existing Jischke Hall and will house research-type labs, an expanded multidisciplinary student design lab, additional instructional spaces that support innovative active-learning pedagogy, office space, grad office areas, and support spaces for instructional and research laboratories.

Summary of the Impact on the Educational Attainment of Students

In order to keep pace with the need for innovation and translation of medical technologies, as well as strategic growth within the College of Engineering, Biomedical Engineering (BME) anticipates expanding by ten faculty members within five years and by an additional five faculty hires within five-to-ten years. Undergraduate and graduate programs are rapidly expanding and partnerships with regional medical device companies and the Indiana University School of Medicine continue to prosper and grow. Jischke Hall, built in 2006, has already been filled to capacity and all basement space has been built out to accommodate current demand. Expansion of physical space is necessary for this impactful field of engineering and related regional engagement and partnerships.

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	32,000	21,500	67%
Net Change in Overall Campus Space:	32,000	21,500	

Project Cost Summary

Total Project Cost: $14,000,000

Cost Per GSF/ASF: $438 **GSF**; $651 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$14,000,000	Gift	Gift Funds
Total Funding	**$14,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$222,779
Estimated annual repair and rehabilitation investment:	$210,000

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Detail Description of Project

Construction will include a three-story addition and basement to the existing Jischke Hall and will house research-type labs, an expanded multidisciplinary student design lab, additional instructional spaces that support innovative active-learning pedagogy, office space, grad office areas, and support spaces for instructional and research laboratories.

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Need & Purpose

Growth of Biomedical Engineering necessitates a major facility expansion. The Innovation Wing will support the larger undergraduate class size; contain an expansive senior design prototyping and testing space, and a large, multipurpose active-learning center. It will provide a nexus for the robust translation of ground-breaking discoveries and technologies into novel medical products and therapies that will move to the market quicker and transform lives. It will promote increased interdisciplinary synergies across campus and strong working partnerships with medical device companies, fostering regional economic growth and the creation of new jobs.

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Space Utilization

This addition will create an additional 32,000 GSF to the college campus and no existing space will be removed as part of this project. Research labs will be provided on the 2nd and 3rd floors based on the modern open lab concept, utilizing lab modules similar to those in the existing building. The basement will primarily include Animal Facilities, including surgeries and animal holding. The animal holding space will be for rodents, the surgeries will be for larger animals as well (pigs and sheep). Private offices and open offices will be added to house the additional staff and Graduate Research Assistants. Conference rooms and teaming rooms will also be added to allow for collaboration between individuals.

Comparable Projects

The original Martin Jischke Hall of Biomedical Engineering was opened in 2006 at a cost of $25,000,000, being funded by private donations and state funding. The building added 95,000 GSF and 54,097 ASF consisting of Research and Teaching Labs, Classrooms, Offices, and meeting spaces, all very similarly to the proposed addition.

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	294,244	2,827	52,250	349,321	0	0	349,321
Class Lab (210, 215, 220, 225, 230, 235)	546,637	8,118	-2,571	552,184	0	5,100	557,284
Non-class Lab (250 & 255)	1,471,419	47,001	-628	1,517,792	0	8,000	1,525,792
Office Facilities (300)	2,101,481	58,143	-24,083	2,135,541	0	3,960	2,139,501
Study Facilities (400)	388,215	5,949	31,873	426,037	0	720	426,757
Special Use Facilities (500)	1,133,431	24,113	0	1,157,544	0	3,720	1,161,264
General Use Facilities (600)	823,097	31,757	4,000	858,854	0	0	858,854
Support Facilities (700)	3,020,680	281,093	-763	3,301,010	0	0	3,301,010
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,271,095	57,047	0	2,328,142	0	0	2,328,142
Unclassified (000)	20,164	9,395	-4,478	25,081	0	0	25,081
TOTAL SPACE	12,154,059	525,443	55,600	12,735,102	0	21,500	12,756,602

Space Detail Notes

Space under construction includes: Bailey Hall, Center for Student Excellence and Leadership, Drug Discovery Facility, Harrison Street Parking Garage,Lyles-Porter Hall, Softball Stadium, Third Street Suites, Wang Hall.

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Anticipated Construction Schedule

Bid Date:	April	2015
Start Construction:	May	2015
Occupancy (End Date):	December	2016

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$400,000	$0	$400,000
	Architectural	$400,000	$0	$400,000
	Consulting	$199,510	$0	$199,510
Construction	Structure	$3,210,000	$0	$3,210,000
	Mechanical (HVAC, plumbing, etc.)	$2,782,500	$0	$2,782,500
	Electrical	$2,782,500	$0	$2,782,500
Other	Movable Equipment	$1,280,000	$0	$1,280,000
	Fixed Equipment	$500,000	$0	$500,000
	Site Development/Land Acquisition	$0	$0	$0
	PM & ST fees, contingency, insurance, printing, etc.	$2,445,490	$0	$2,445,490
	Total Estimated Cost	**$14,000,000**	**$0**	**$14,000,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Jischke Hall Addition - Biomedical Engineering
Biennium:	2015-2017	**Project No:**	B-1-15-1-07
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$9,575	$10,732	$20,307	$0.63
Maintenance	$105,240	$0	$105,240	$3.29
Fuel	$0	$0	$0	$0.00
Utilities	$97,232	$0	$97,232	$3.04
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$212,047**	**$10,732**	**$222,779**	**$6.96**

Cost Detail Notes

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

General Project Information

Project Name/Title:	Student Wellness and Recreation Center	Institutional Priority:	
Budget Agency Project No:	B-2-13-1-08	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

The Purdue University Calumet Student Wellness and Recreational Center and related fields is a project initiated at the request of the Student Governance Association (SGA) Leadership. SGA Leadership, in order for the university to provide the educational experiences worthy of a Purdue degree, sees the need for additional recreational opportunities for undergraduate students as well as additional support for wellness initiatives for these students. As such, SGA Leadership is supportive of the creation of a designated recreational and wellness fee, above tuition fees increases necessary for general university operations (at the % increase recommended by ICHE). This designated fee would support the construction and operation of this building and related fields and the activities within and on it/them. The increased level of functions and activities within this building and related fields would assist the University in progressing toward its Strategic Goal III “Improve Student Success” by improving retention and graduation rates resulting from improved mental and physical health. It also would address the needs of Strategic Goal V “Develop a Vibrant Campus Community” by providing additional opportunities for student involvement in campus life and making the campus more attractive to a diverse and better qualified student body.
The 49,000 GSF, two-story facility will contain an expanded Student Fitness Center, 2 multi-purpose fitness classrooms, intramural gymnasium and elevated running track, 2 racquetball courts, new and more appropriately designed office space for the Student Health Center, the Student Counseling Center and the Student Wellness Office, and space for functions in support of these operations. The facility would be located on the southern end of the campus, north side of 173rd street, across from University Housing and in the area designated by the 2008 Campus Master Plan as the on-campus starting point for a Campus Village development continued by the potential of private developers on non-university land. Currently, existing campus parking would support the facility.
The related recreational fields would be located east of existing university housing on the south side of 173rd Street about two and one-half blocks from the proposed recreational building location. This is the location identified in the 2008 Campus Master Plan. The fields would be composed of an artificial turf playing field suitable for both soccer and softball intramural use, a basketball court, tennis court, sand volleyball court and a quarter mile jogging path. Please Note: The total project cost ($17,000,000) includes the development of three (3) acres of land to create recreation fields at a total cost of $1,567,779. The 'Cost Per ASF/GSF' reported below is based on the total project cost. If you deduct the total cost of the recreation fields from the total project cost and recalculate, the 'Cost Per ASF/GSF' would decrease to $390/ASF and $315/GSF.

Summary of the Impact on the Educational Attainment of Students

This project will support the mental and physical wellbeing of the PUC student body thereby improving their academic performance and persistence (and therefore graduation). The project also provides adequate office space for the service units of Student Health Center, Counseling Center and Student Wellness Office.

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	49,000	39,604	81%
Net Change in Overall Campus Space:	49,000	39,604	

Project Cost Summary

Total Project Cost:	$17,000,000	Cost Per GSF/ASF:	$347 **GSF** $429 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$17,000,000	Institution	Student Fee Bond Proceeds - Non-Fee Replaced
Total Funding	**$17,000,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$720,833
Estimated annual repair and rehabilitation investment:	$191,398

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Detail Description of Project

In the 2008 Purdue Calumet Campus Master Plan (Plan) prepared by Sasaki Associates Inc., the need for facilities to support additional student activities and services was clearly identified. The report states “A lively and active campus attracts good students, faculty, staff, and visitors, and helps retain and energize the current population, fostering a sense of community and continued growth.” The report notes that the space available for student recreation needs to be expanded and recommended a highly visible location along 173rd Street near the existing residential section of campus. The Plan also called for the development of outdoor recreational fields in the undeveloped space east of current University Housing along 173rd street. While the Plan envisioned a 55,200 GSF expansion of an existing facility on the south side of 173rd Street, this project calls for the creation of a new similar sized facility (49,000 GSF) on the north side of 173rd Street to allow for the inclusion of the Student Health Center and Counseling Center and to remove the use conflicts between student recreation and the expanding intercollegiate athletic program. The proposed site for this project was identified within the Plan as the on-campus anchor site for the development of a privately developed Campus Village that would serve and expand the residential campus population and provide incentives for commuter students to remain on or near campus. The proposed facility would be able to serve this same purpose.

The 2008-2014 Purdue Calumet Strategic Plan set out goals to “Improve Student Success” (Goal III) and to “Develop a Vibrant Campus Community” (Goal V). Steps to achieve these goals included the improvement of retention and graduation rates, the development of additional opportunities for student involvement in campus life, and the expansion and improvement of facilities to meet the needs of students. It is believed that this project will assist the university in meeting these goals by increasing our students’ connection to campus and their commitment to completing their education.

The Purdue University Calumet Student Wellness and Recreation Center would be located on the southern end of the campus, facing 173rd Street northwest of the 746 bed University Village Housing complex. The facility would be designed to create a strong “street presence” along 173rd street and would allow visual access to those driving by, providing an indication of the vibrant and exciting activities taking place inside. The entranceway and lobby along with supporting facilities would provide an inviting location for students to congregate in this area of the campus. This 49,000 GSF two-story facility would contain an expanded Student Fitness Center, 2 multi-purpose fitness classrooms, intramural gymnasium and elevated running track, 2 racquetball courts, new homes for the Student Health Center, the Student Counseling Center and the Student Wellness Office, and space for functions in support of these operations. This facility would allow for greatly expanded Intramural activities. Currently existing parking would support the facility.

The related recreational fields would be located east of existing university housing on the south side of 173rd Street about two and one-half blocks from the proposed recreational building location. The fields would be composed of an artificial turf playing field suitable for both soccer and softball intramural use, a basketball court, tennis court, sand volleyball court and a quarter mile jogging path. The facility would allow for the expansion of organized intramural activities along with increased casual play. Use of artificial turf would expand the playing season for all activities. The project is estimated to cost $17 million, including planning costs, project management, insurance and other soft costs. The project is to be funded by a student-supported student recreation and wellness fee sufficient to construct, maintain, and operate the facility, as well as the Fitness Center and Intramural activities taking place within these facilities. (Operational support for the Student Health Center, Counseling Center, and Student Wellness Center would continue from current sources.) It is the Student Government Association Leadership’s intention that the creation of this student recreation and wellness fee would be phased in over a three year period and be in addition to any increase in general tuition and fee rates necessary for regular university operations. It is estimated that a fee equal to about 3.6% of current in-state undergraduate hourly tuition and fee rates spread over three years (1.2% per each year) would be sufficient for this purpose. The student recreation and wellness fee would only be applicable to undergraduate students, with individual graduate students eligible for membership upon payment of a semester based membership fee at a rate slightly higher than full-time undergraduates. If capacity allows, memberships for university employees and community members may be allowed upon payment of appropriate membership fees.

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Need & Purpose

The project is a fulfillment of the goals of the 2008-2014 Strategic Plan and is consistent with the 2008 Campus Master Plan. The project should facilitate the goal of improving student retention (and therefore graduation) by providing student activity opportunities that should increase student connection to the campus. Students better connected to the campus are considered to be more likely to persist in their studies. This project also fulfills the goals laid out in the 2008 Campus Master Plan specific to student recreation and wellness. The project addresses the identified need for additional indoor and outdoor recreation space. It also brings together the primary offices responsible for student wellness: Student Health Center, Counseling Center, and Student Wellness Office. This project will support the mental and physical well being of the PUC student body thereby improving their academic performance and persistence. The project provides adequate office space for the service units of Student Health Center, Counseling Center and Student Wellness Office. (Relocating the Student Health Center from its current location in the Gyte Annex, constructed in 1953, helps eliminate the health and safety risks associated with continued occupancy in the Gyte Annex.) If this project is not approved, students will be left to use the cramped and inadequate space that currently houses the Health, Counseling and Wellness functions. The Purdue University Calumet Student Government Association's leadership is promoting the creation of a student recreation and wellness fee that would be phased in over a three year period and be above and in addition to any increase in general tuition and fee rates necessary for regular university operations.

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Space Utilization

This project supports the pressing need to remove the Gyte Annex from the university's building inventory by removing one occupant of that building; Student Health Center. The space 1,314 ASF vacated by the Student Health Center will be left unassigned until such time as the Gyte Annex is demolished. The 891 ASF vacated by the Counseling Center will be repurposed into a classroom and the 7,064 ASF vacated by Wellness function will be repurposed into needed space for the growing athletics program.

Comparable Projects

IU South Bend constructed a Student Activities building in 2001 with a construction cost of $16,726,340. Data was not available on the total cost of the 109,353 GSF/97,477 ASF facility; however, applying 30% for soft costs would generate a total project cost of $21,744,242 in 2001. Please note that Calumet used 30% for soft costs when determining the total project cost.

Background Materials

N/A

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	63,445	0	0	63,445	0	0	63,445
Class Lab (210, 215, 220, 225, 230, 235)	100,728	0	0	100,728	0	0	100,728
Non-class Lab (250 & 255)	14,119	0	0	14,119	0	0	14,119
Office Facilities (300)	178,227	0	0	178,227	0	1,150	179,377
Study Facilities (400)	53,498	0	0	53,498	0	0	53,498
Special Use Facilities (500)	42,155	0	0	42,155	0	31,284	73,439
General Use Facilities (600)	80,590	0	0	80,590	0	1,150	81,740
Support Facilities (700)	302,900	0	0	302,900	0	320	303,220
Health Care Facilities (800)	1,314	0	0	1,314	0	5,700	7,014
Resident Facilities (900)	165,242	0	0	165,242	0	0	165,242
Unclassified (000)	50,536	0	0	50,536	0	0	50,536
TOTAL SPACE	1,052,754	0	0	1,052,754	0	39,604	1,092,358

Space Detail Notes

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Anticipated Construction Schedule

Bid Date:	June	2016
Start Construction:	August	2016
Occupancy (End Date):	August	2017

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$456,828	$0	$456,828
	Architectural	$456,828	$0	$456,828
	Consulting	$0	$0	$0
Construction	Structure	$7,482,000	$0	$7,482,000
	Mechanical (HVAC, plumbing, etc.)	$3,080,018	$0	$3,080,018
	Electrical	$1,303,085	$0	$1,303,085
Other	Movable Equipment	$0	$0	$0
	Fixed Equipment	$0	$0	$0
	Site Development/Land Acquisition	$1,205,984	$0	$1,205,984
	PM & ST fees, contingency, printing, etc.	$3,015,257	$0	$3,015,257
	Total Estimated Cost	**$17,000,000**	**$0**	**$17,000,000**

Cost Detail Notes

Institution:	Purdue University-Calumet Campus	**Project:**	Student Wellness and Recreation Center
Biennium:	2015-2017	**Project No:**	B-2-13-1-08
Submitted:	Yes	**Last Updated:**	9/5/2014 11:05 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$349,573	$67,600	$417,173	$8.51
Maintenance	$93,929	$36,528	$130,457	$2.66
Fuel	$0	$0	$0	$0.00
Utilities	$0	$162,100	$162,100	$3.31
Other	$0	$11,103	$11,103	$0.23
Total Estimated Cost	**$443,502**	**$277,331**	**$720,833**	**$14.71**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

General Project Information

Project Name/Title:	Zucrow High Pressure Research Test Cells and Control Center	Institutional Priority:	
Budget Agency Project No:	B-1-15-1-09	Project Type:	New Construction
Previously Approved by General Assembly:	No	Previously Recommended by CHE:	No

Project Summary

The project will consist of a new 9600 GSF building containing five test cells, a laser lab and associated preparation space for research, and renovate and expand the existing High Pressure Research Laboratory (ZL3) to approximately 5000 GSF including control center, research offices and new parking lot.

Summary of the Impact on the Educational Attainment of Students

The Maurice J. Zucrow Laboratories was founded in 1946 and has a rich heritage of research in aerospace propulsion, combustion, thermal sciences, two-phase flows, atomization and sprays, and other research areas. Over its 60+ year history, the lab has produced over 500 graduates that include several astronauts, Outstanding Engineering Alumni, DEAs and many leaders of industry and academe.

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Project Size

	GSF	ASF	ASF/GSF
Project Size:	14,600	8,500	58%
Net Change in Overall Campus Space:	14,600	8,500	

Project Cost Summary

Total Project Cost:	$8,200,000	Cost Per GSF/ASF:	$562 **GSF** $965 **ASF**

Project Funding

	Funding Amount	Funding Type	Funding Source Description
Funding Sources:	$7,450,000	Gift	Gift Funds
	$750,000	Other	Repair & Rehabilitation - ARRA Funds F&A
Total Funding	**$8,200,000**		

Annual Cost

Estimated annual change in cost of building operations based on the project:	$92,931
Estimated annual repair and rehabilitation investment:	$123,000

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Detail Description of Project

The project will consist of a new 9600 GSF building containing five test cells, a laser lab and associated preparation space for research; and renovate and expand the existing High Pressure Research Lab (ZL3) to approximately 5000 GSF including control center, research offices and new parking lot.

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Need & Purpose

Our team has been conducting high pressure combustion experiments for over a decade at the High Pressure Lab complex and has worked with virtually every government organization (several NASA centers, Sandia National Lab, AEDC, DARPA, AFOSR, ARO, NRO, Crane NSWC) and most large propulsion and prime contractor companies (Northrop Grumman, Pratt & Whitney, Aerojet, Rolls-Royce, Boeing Phantom Works, GE Aerospace, Lockheed Martin) in research totaling more than $30M. Our Managing Director of Maurice Zucrow Laboratories (MZL) has been a participant in the Rocket Test Facilities Working Group (a group of government and industry representatives who operate rocket test facilities) and presently serves as President of this organization. Our faculty and staff have visited nearly every propulsion testing site in the U.S. and many of the major sites in Europe. We maintain strong relationships with some of the world's top laboratories such as the DLR labs in Lampoldshausen and Stuttgart, Germany. With this experience base, we have conceived a new building to house test cells that will function as one of the world's truly great laboratories.

Over the past 1.5 years, the Managing Director has been working with faculty and senior MZL students to conceive the design of the additional test cell space that is so desperately needed. The Managing Director has substantial expertise in facility development given prior experience at Arnold Engineering Development Center and Beal Aerospace where he developed large test facilities of similar function to the desired application.

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Space Utilization

The MZL is located on a 25-acre campus directly adjacent to the Purdue University Airport. The area is comprised of eight buildings that make up the facility. The remote location and adjacency to the Purdue airport is ideal in that it provides a proper venue for high pressure combustion and fluid flow experiments. This factor is notable as many of Purdue's competitors do not have access to remote spaces as their universities may be surrounded by housing, high density classrooms, city residential areas and businesses.

Comparable Projects

Although this is a unique facility for Purdue the cost per GSF falls into range with what is expected.

Background Materials

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Overall Space in ASF

Space Type Name	Current Space In Use	Space Under Construction	Space Planned And Funded	Subtotal Current And Future Space	Space to be Terminated	New Space In Capital Request	Net Future Space
Classroom (110 & 115)	294,244	2,827	52,250	349,321	0	0	349,321
Class Lab (210, 215, 220, 225, 230, 235)	546,637	8,118	-2,571	552,184	0	0	552,184
Non-class Lab (250 & 255)	1,471,419	47,001	-628	1,517,792	1,174	6,310	1,522,928
Office Facilities (300)	2,101,481	58,143	-24,083	2,135,541	789	3,209	2,137,961
Study Facilities (400)	388,215	5,949	31,873	426,037	0	0	426,037
Special Use Facilities (500)	1,133,431	24,113	0	1,157,544	0	0	1,157,544
General Use Facilities (600)	823,097	31,757	4,000	858,854	0	0	858,854
Support Facilities (700)	3,020,680	281,093	-763	3,301,010	0	1,181	3,302,191
Health Care Facilities (800)	83,596	0	0	83,596	0	0	83,596
Resident Facilities (900)	2,271,095	57,047	0	2,328,142	0	0	2,328,142
Unclassified (000)	20,164	9,395	-4,478	25,081	0	0	25,081
TOTAL SPACE	12,154,059	525,443	55,600	12,735,102	1,963	10,700	12,743,839

Space Detail Notes

Space under construction includes: Ralph and Bettye Bailey Hall, Center for Student Excellence and Leadership, Drug Discovery, Harrison Street Parking Garage, Lyles-Porter Hall, Softball Stadium, Third Street Suites, Seng-Liang Wang Hall

Space planned and funded includes: Active Learning Center

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Anticipated Construction Schedule

Bid Date:	March	2015
Start Construction:	April	2015
Occupancy (End Date):	June	2016

Estimated Cost for Project

		Cost Basis	Escalation Factors	Project Cost
Planning Costs	Engineering	$250,000	$0	$250,000
	Architectural	$250,000	$0	$250,000
	Consulting	$200,000	$0	$200,000
Construction	Structure	$2,200,000	$0	$2,200,000
	Mechanical (HVAC, plumbing, etc.)	$1,900,000	$0	$1,900,000
	Electrical	$2,100,000	$0	$2,100,000
Other	Movable Equipment	$100,000	$0	$100,000
	Fixed Equipment	$100,000	$0	$100,000
	Site Development/Land Acquisition	$600,000	$0	$600,000
	PM & ST fees, insurance, pnrinting, contingency, etc.	$500,000	$0	$500,000
	Total Estimated Cost	**$8,200,000**	**$0**	**$8,200,000**

Cost Detail Notes

Institution:	Purdue University-West Lafayette	**Project:**	Zucrow High Pressure Research Test Cells and Control Center
Biennium:	2015-2017	**Project No:**	B-1-15-1-09
Submitted:	Yes	**Last Updated:**	9/5/2014 11:08 AM

Annual Operating Cost/Savings

	Personnel Services	Supplies and Expenses	Total Operating Cost	Cost per GSF
Operations	$3,981	$4,490	$8,471	$0.58
Maintenance	$43,900	$0	$43,900	$3.01
Fuel	$0	$0	$0	$0.00
Utilities	$40,560	$0	$40,560	$2.78
Other	$0	$0	$0	$0.00
Total Estimated Cost	**$88,441**	**$4,490**	**$92,931**	**$6.37**

Cost Detail Notes

APPENDIX: Line Item Requests

Agricultural Research and Extension - Crossroads

Agricultural Research and Extension – Crossroads

Background

Indiana's agricultural industries contribute $38 billion and nearly 190,000 jobs to the Indiana economy, 103,000 of which are directly involved in crop production and processing. Indiana's agriculture and agricultural sciences industries need a strong university partner that can provide the research and the human capital they need to drive economic growth and jobs for our state. As Indiana positions itself for a future that demands adequate nutrition and energy for 9 billion people, continued investment in the Purdue University College of Agriculture research and extension mission is essential to help support one of the cornerstones of future economic development for the state.

Crossroads

With its initiation in 1991, the State of Indiana's Crossroads investment helped position Purdue Agriculture as a national powerhouse in the agricultural sciences (currently ranked number 8 in the world in the QS Rankings of Colleges of Agriculture and Forestry). We have been able to leverage Crossroads funds to dramatically increase research and extension funded by external sources, growing from $22 million in 1992 to an average of $63 million annually over the last three years. Some 20-25% of these external funds come from the private sector annually. Examples of Crossroads investments include:

Purdue Agricultural Centers: Hosted over 140 events involving about 8,000 participants in 2013.

Purdue Plant Disease and Diagnostic Laboratory: 3,612 diagnoses on 2,584 samples submitted in 2013.

On-Farm Research: Our faculty have been engaged in large plot on-farm research since 2006, both at Purdue Agricultural Centers and cooperatively with farmers.

Bee Research: Extension efforts are aimed at teaching queen-rearing and breeding techniques to promote a Midwest queen breeding industry and the use of locally adapted, resistant bees.

Crossroads: AgSEED

In 2013, the State of Indiana invested an additional $1.25m in Crossroads through the AgSEED initiative (Agriculture Research and Extension for Economic Development) — the first substantive increase in Crossroads since 1998. This investment was focused on two priority areas: 1) innovation in Indiana plant and animal agriculture; and 2) innovation in rural entrepreneurship.

As promised in our FY 2013-15 budget request, this incremental investment is being used to fund high-priority projects in the areas of innovation in Indiana plant and animal agriculture and innovation in rural entrepreneurship through a competitive proposal process. In the fall of 2013, some 95 proposals were considered for funding, with 19 selected. Another set of high priority AgSEED projects will be funded in Fall 2014.

Our budget request for FY 2015-16 and 2016-17 is to provide a 1.5% increase in each year to the Crossroads line item (including AgSEED), enabling the College of Agriculture to continue to support innovation and economic development in the Indiana food and agriculture sector.

Agricultural Research and Extension - Crossroads
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$6,334,600	$6,378,511	$6,474,189	$6,571,302
Fringe Benefits									
Other Personnel Services									
Total Personnel Services						**$6,334,600**	**$6,378,511**	**$6,474,189**	**$6,571,302**
Other Operating									
Services by Contract									
Materials and Supplies						$1,914,549	$2,113,814	$2,145,521	$2,177,704
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel						$81,850			
Out-of-State Travel						$161,326			
Internal Transfers									
Total Other Operating						**$2,157,725**	**$2,113,814**	**$2,145,521**	**$2,177,704**
TOTAL OPERATING BUDGET						**$8,492,325**	**$8,492,325**	**$8,619,710**	**$8,749,006**
LINE ITEM FUNDING									
General Fund						$8,492,325	$8,492,325	$8,619,710	$8,749,006
Dedicated Funds									
Federal Funds									
TOTAL FUNDING						**$8,492,325**	**$8,492,325**	**$8,619,710**	**$8,749,006**

* Data entry for these years was optional

Animal Disease Diagnostic Lab System

The **Mission** of the Indiana Animal Disease Diagnostic Laboratory (ADDL) at Purdue University is to aid in the prevention, control, and eradication of animal diseases for the State of Indiana, to provide prompt and accurate diagnostic services, and to add to the wealth of the State by working with local, state, federal, and international partners to meet current and future needs.

Existing Program

The Indiana ADDL at Purdue University is the only veterinary diagnostic laboratory in the state and consists of the main laboratory at West Lafayette (ADDL-WL) and the southern branch of the ADDL at the Southern Indiana Purdue Agricultural Center in Dubois County (Heeke ADDL/SIPAC). The present ADDL was established in 1945 to serve the people of Indiana by working with veterinarians, owners of livestock and companion animals, and state officials through diagnosing diseases of livestock, poultry, companion animals, and wildlife. The branch laboratory at Heeke ADDL/SIPAC opened in 1969 as a diagnostic laboratory primarily to serve the poultry industry in southern Indiana.

State support of the ADDL is critical as it enables us to offer diagnostic testing in support of the Indiana Board of Animal Health; testing required for Indiana livestock, poultry and companion animal owners to move their animals around the U.S. and to foreign countries; testing in support of Indiana and USDA surveillance programs; and critical tests needed by veterinarians and animal owners that are not offered by private laboratories. State support allows the ADDL to remain a full-service diagnostic testing laboratory and helps keep fees for services at an affordable and cost-effective level for Indiana livestock owners, enabling them to effectively compete in the world market.

State support also allows the ADDL to perform disease surveillance for the Indiana Board of Animal Health, the Department of Natural Resources, and the USDA. This service is critical for the early diagnosis and treatment of diseases such as bacterial and viral infections, e.g., Influenza Virus, Monkey Pox and West Nile Virus that affect people and animals; diseases of companion animals such as canine parvovirus and equine infectious anemia; and prevention of potentially economically devastating foreign animal diseases such as foot and mouth disease, classical swine fever, and avian influenza.

The ADDL must have adequate staffing, equipment and facilities to provide high quality diagnostic services, disseminate knowledge to veterinary professionals, and develop new, more accurate and more sensitive diagnostic tests and testing methodologies for the State of Indiana. **To meet this goal and maintain quality services, the ADDL must be able to hire and retain highly trained, motivated personnel and provide them with the equipment and facilities that are needed to serve Indiana's food animal industries and companion animal owners.**

Budget Narrative

The ADDL plays a vital role in maintaining the health of dogs, cats, horses, other companion animals, livestock, and wildlife in Indiana. It also plays an important role in strengthening the state economy by helping the Indiana livestock industry compete in U.S. and world markets.

Equipment that was purchased with funds appropriated to the ADDL by the State during the 2013 legislative session has provided Indiana with state-of-the-art instruments that are being used to shorten the time required for identification of bacteria in infectious diseases; to rapidly and precisely identify toxins responsible for poisoning in animals; to rapidly and efficiently determine mineral content of animal tissues; to test for and provide surveillance for Chronic Wasting Disease in deer and Scrapie in sheep; and to develop powerful tests that can identify known and even previously unknown infectious diseases through DNA sequencing.

During the past decade, escalating personnel costs have outpaced inflation as the increased sophistication of testing procedures requires hiring staff with more training and higher skill sets at higher salary levels. Salaries of ADDL technical staff are substantially below those in the private sector, leading some staff to leave for higher paying jobs elsewhere. In addition, over the past 15 years, the cost of simply providing inflationary increases in staff compensation have increased faster than state appropriations. Since 1999**, the ADDL workforce has been reduced by 8 technical positions, 1 diagnostician, and 3 faculty positions (1 pathologist, 1 molecular diagnostician, and 1 toxicologist) through attrition, retirements, and reductions-in-force.**

Although we remain confident of the accuracy of the results of testing performed at the ADDL, this reduction in staff has had a number of adverse effects: 1) The timeliness of results has been slowed; 2) It is extremely difficult to cross-train staff in critical areas; 3) Faculty and staff are not available to develop and validate new tests; and 4) There is minimal surge capacity to meet temporary increases in testing or to respond in times of emergency, which has affected the quality of services that the lab's clients expect and deserve. A few critical positions are currently being filled by temporary staff because funds are not available to hire permanent technical staff.

As a consequence of several years of reduced staffing levels, the ADDL cannot always meet the needs and expectations of veterinarians, animal owners and livestock producers for their animal disease testing requirements. For instance, during the past year, there have been pressing needs to develop PCR tests for Turkey Coronavirus and Porcine Epidemic Diarrhea Virus (PEDv), and other diseases. The ADDL did not have trained staff members to quickly develop and validate the new tests for use in a timely fashion. With a properly trained, stable staff, this would only have taken several weeks to accomplish rather than the many months that it has taken.

The staffing situation at the ADDL is below what is needed to meet the needs of the State and to provide clients with the quality of service that is required. Therefore, we are requesting recurring funds for positions that will replace some of those lost over the past decade. Specifically, the ADDL requests:

1. **Head, Molecular Diagnostics Section**. The Molecular Diagnostics section of the ADDL performs rapid PCR-based DNA testing for viral and bacterial diseases. This faculty position is needed because specialized expertise and knowledge are required to recognize where new tests are needed, and to develop, validate and offer those PCR-based tests. Importantly, the addition of this faculty position will distribute supervisory responsibilities across more faculty which will free up other faculty to also devote more time to new test development. Faculty members in positions such as this can become drivers of new technology and information and contribute to increasing client services and satisfaction. This position was collapsed in June 2011 when the former section head became the Head of the Department of Comparative Pathobiology. Since then, one of the other ADDL section heads has been serving as the interim head of the Molecular Diagnostics Section, supervising two other laboratory sections and leading new test development in those sections, in addition to the Molecular Diagnostics section. A new faculty member who can supervise the Molecular section is urgently needed.

2. **Veterinary Diagnostician, DVM** – Diagnostic Client Services. To improve customer services, a dedicated veterinary diagnostician is needed to help veterinarians and animal owners choose the appropriate tests to help with their disease problems and communicate with them regarding test results and their interpretation. This type of position has been very well received at veterinary diagnostic laboratories in other states and improves client service and satisfaction. This position is key to providing the quality of customer service expected by today's clients.

3. **Diagnostic Assistant, B.S./RVT Heeke Laboratory at SIPAC**. Following the retirement of the avian diagnostician at the Heeke Laboratory in 2011, the position was collapsed and not refilled due to budgetary constraints. The remaining veterinary pathologist was required to perform necropsy examinations on all animals presented to the laboratory. The caseload at the Heeke Laboratory includes significant numbers of adult livestock. An assistant is needed to physically manage the necropsy examinations of these animals by the veterinary pathologist.

4. **2 Level VII technicians** for Molecular Diagnostics and DNA Sequencing. Technicians perform and support diagnostic disease testing in the ADDL. Due to budget constraints, the number of technicians has steadily decreased over the past 15 years. Currently, the ADDL is filling critical open positions with temporary service technicians. The people filling these positions are often seeking permanent employment elsewhere, which leads to a transitory group of technicians who are trained at the ADDL in advanced, marketable skills and then move on to other jobs. We are requesting recurring funds for 1 additional permanent technical position in Molecular Diagnostics to keep up with increasing demand for these tests, to allow rapid turnaround time that is needed by clients, and for the extended time period

required for training (6 months to one year), and 1 additional permanent technical position in DNA Sequencing to work with the Section Head to develop these next generation DNA tests for disease.

Budget Request

In accordance with the budget instructions issued, the ADDL is requesting recurring funding per annum in the state appropriation for S&W for FY 2016 and FY 2017 for the following positions.

1. Faculty, DVM, PhD – Head, Molecular Diagnostics Section

2. Veterinary Diagnostician, DVM – Diagnostic Client Services

3. Diagnostic Assistant, B.S./RVT, Heeke

4. Two (2) Level VII technicians, one each for Molecular Diagnostics and DNA Sequencing

5. Inflationary increase on the full line item in each year.

I. Inflationary Request

In accordance with the budget instructions issued, the ADDL is requesting an increase of 1.5% per annum in the state appropriation for Salaries and Fringe Benefits for FY 2015 and FY 2016.

II. Recurring Incremental Request for Additional Positions and Expenses

	2015-16	2016-17
Salaries	$293,000	$0
Fringe Benefits	$107,000	$0
Materials and Supplies	$8,000	$0
Travel	$30,000	$0
Total	$438,000	$0

III. Summary of 2015-2017 ADDL Budget Request

Summary of ADDL Budget Request			
	2015-16		2016-17
Beginning Recurring Balance - Appropriation	$3,570,446		$4,062,002
Additional Positions and Expenses	$438,000		$0
Personnel Services Inflationary Increase @ 1.5%	$53,556		$60,360
Total Recurring Budget Request	$4,062,002		$4,122,362

Animal Disease Diagnostic Lab System
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$2,653,745	$2,691,023	$3,024,388	$3,069,754
Fringe Benefits						$887,867	$879,423	$999,614	$1,014,608
Other Personnel Services									
Total Personnel Services						**$3,541,612**	**$3,570,446**	**$4,024,002**	**$4,084,362**
Other Operating									
Services by Contract									
Materials and Supplies						$2,818		$8,000	$8,000
Equipment						$879,260			
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel						$4,528		$5,000	$5,000
Out-of-State Travel						$21,488		$25,000	$25,000
Internal Transfers						$1,949,585	$1,828,000	$1,855,000	$1,855,000
Total Other Operating						**$2,857,679**	**$1,828,000**	**$1,893,000**	**$1,893,000**
TOTAL OPERATING BUDGET						**$6,399,291**	**$5,398,446**	**$5,917,002**	**$5,977,362**
LINE ITEM FUNDING									
General Fund						$4,449,706	$3,570,446	$4,062,002	$4,122,362
Dedicated Funds						$1,898,465	$1,800,000	$1,800,000	$1,800,000
Federal Funds						$51,120	$28,000	$55,000	$55,000
TOTAL FUNDING						**$6,399,291**	**$5,398,446**	**$5,917,002**	**$5,977,362**

* Data entry for these years was optional

Center for Paralysis Research

Center for Paralysis Research

Since its founding in 1987, the Center for Paralysis Research (CPR) has been the foundation piece in the College of Veterinary Medicine for discovery in the area of traumatic neurological injury and subsequent treatment. Over the past quarter century, research in the CPR has evolved from its early work with the oscillating field stimulator to drug therapy (4-aminopyridine), polymers and nanotechnology. The researchers of the CPR conduct groundbreaking work resulting in novel therapies undergoing human clinical trials and ultimately producing licensed technologies. In early 2012, researchers began a study to determine the role of acrolein, a toxin that causes nerve damage, in spinal cord injury and to learn whether reducing its concentration in the days following trauma also decreases damage that can lead to paralysis.

Historically, the mission of the Center for Paralysis Research has been to develop therapies for human spinal cord and brain injury. In recent years this mission has expanded to include other diseases of the central nervous system, in particular Parkinson's disease and multiple sclerosis.

Another major aim of the center is to enhance the quality of life of paralyzed individuals. The center has engineered devices to solve practical problems faced by those with traumatic brain and spinal cord injuries or other neurological disorders. Assistive technology allows people with disabilities to more independently perform daily living, educational, or occupational activities and to be more self-sufficient and productive which is crucial for emotional well-being.

Center for Paralysis Research
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$443,595	$450,580	$457,338	$464,198
Fringe Benefits									
Other Personnel Services									
Total Personnel Services						**$443,595**	**$450,580**	**$457,338**	**$464,198**
Other Operating									
Services by Contract									
Materials and Supplies						$78,963	$71,978	$72,000	$72,000
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel									
Out-of-State Travel								$1,058	$2,154
Internal Transfers									
Total Other Operating						**$78,963**	**$71,978**	**$73,058**	**$74,154**
TOTAL OPERATING BUDGET						**$522,558**	**$522,558**	**$530,396**	**$538,352**
LINE ITEM FUNDING									
General Fund						$522,558	$522,558	$530,396	$538,352
Dedicated Funds									
Federal Funds									
TOTAL FUNDING						**$522,558**	**$522,558**	**$530,396**	**$538,352**

* Data entry for these years was optional

County Agriculture Extension Educators

Field Educator Budget Request

Through a network of county-based educators and campus specialists, Purdue Extension delivers research-based information and educational programming in the areas of Agriculture and Natural Resources; Health and Human Sciences; Economic and Community Development; and 4-H Youth Development. Our educators, specialists, and volunteers live and work in all 92 Indiana counties. We provide the link between land-grant research and Indiana citizens, providing practical information, resources, and insight to help local citizens address local issues.

Purdue Extension is funded through a partnership of federal, state, and county resources. State funds are used to match federal funding for Cooperative Extension. In addition to supporting program delivery, state and county funds provide the capacity needed for Purdue Extension to successfully compete for grant opportunities that fund additional educational programming in Indiana.

The current funding base for our county-based Extension model is:

State Field Educator line item	$7,487,816
County contractual services	$8,020,616
Program and office operations (funds provided by the county)	$9,096,904
Total	$24,605,336

In our current economic climate, governments at all levels are challenged with slower revenue growth and rising expenses. Indiana's counties are no exception. After reducing financial commitments to Purdue Extension in 2012, Indiana's counties have increased funding in 2013 and 2014, but the expanded funding at the county and the state Field Educator line item has not kept up with inflation. To sustain our Extension program, we have implemented extensive cost-saving measures. County budget challenges make the budget committed by the State of Indiana even more important as we work to provide high-impact Extension programming at the local level. Our budget request for FY 2015-16 and 2016-17 is to provide a 1.5% increase in each year to the Field Educator Line item to help us compensate for inflationary cost increases.

Specifically, these funds will help Purdue Extension:

1. Sustain our 4-H Youth Development program by fully implementing our 4-H staffing model.
2. Build our commitment to delivering on-farm applied research and demonstration projects that help farmers adopt useful technology.
3. Solidify our health and wellness programs focused on diabetes, obesity and physical activity.
4. Engage local government officials with educational programming that provides insight into tax revenue and budget management.

County Agriculture Extension Educators
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$7,487,816	$7,487,816	$7,600,133	$7,714,135
Fringe Benefits									
Other Personnel Services									
Total Personnel Services						**$7,487,816**	**$7,487,816**	**$7,600,133**	**$7,714,135**
Other Operating									
Services by Contract									
Materials and Supplies									
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel									
Out-of-State Travel									
Internal Transfers									
Total Other Operating									
TOTAL OPERATING BUDGET						**$7,487,816**	**$7,487,816**	**$7,600,133**	**$7,714,135**
LINE ITEM FUNDING									
General Fund						$7,487,816	$7,487,816	$7,600,133	$7,714,135
Dedicated Funds									
Federal Funds									
TOTAL FUNDING						**$7,487,816**	**$7,487,816**	**$7,600,133**	**$7,714,135**

* Data entry for these years was optional

Engineering Expansion

College of Engineering Expansion

Background Information and Progress

In April 2012, Purdue's College of Engineering embarked on an aggressive expansion of student enrollment and faculty size. The plan will increase undergraduate enrollment from 7,087 in fall 2011 to 7,778 in fall 2016, and builds on the 15% enrollment growth between 2006 and 2011. Faculty size will increase by 30% from 358 to 465. Graduate student enrollment will grow by 25-30% (750-800 students), in tandem with growth in faculty and the college's research enterprise.

The planned expansion will make Purdue Engineering one of the largest colleges of engineering in the country. Purdue will be an important part of the national call to graduate 10,000 more engineers per year — a goal directly tied to our state and national capacity for innovation, economic development, and job creation.

Engineering has already made significant progress toward the student and faculty targets. Fall 2014 undergraduate enrollment is estimated at ~7,700. Graduate student enrollment is projected to increase from 2,738 in fall 2011 to 3,100 in fall 2014. By January 2015, Engineering's hiring will result in net growth of ~50 faculty toward the planned increase of 107.

Line Item and Leverage

In recognition of the innovation and economic development benefits and to continue the momentum of the Engineering expansion, Purdue proposes that Indiana provide a $6M line item investment beginning in 2015-16. This allocation will fund the annual compensation of ~35 (one-third) of the 107 new faculty positions estimated to cost $18.3M.

The proposed $6M investment will be leveraged through funds committed by Purdue as well as by external funding. Purdue's investment in the Engineering expansion includes support for the remaining faculty lines, facility costs, faculty start-up funding and related support costs. Engineering also has a private fundraising goal of $150M to support the increased needs for scholarship and fellowship endowments, professorship endowments, and facilities.

Impact of Investment in Engineering Expansion

Indiana's investment in expanding Engineering will pay economic dividends for decades. The increased numbers of talented Purdue Engineering faculty and students will attract research funding, encourage business investment in the state, increase the number of engineering students employed in Indiana

following graduation, and spur growth of new companies from faculty and student entrepreneurs. Purdue produces the highest number of graduates with degrees in engineering or engineering-related technology fields of any institution in the United States, according to yearly data from the U.S. Department of Education's Integrated Postsecondary Education Data System. As such, and with a determined focus on constant innovation, "Purdue Pathmaker," was recently launched and is a unique program where students can get real-world work experience, part-time engineering jobs or internships without leaving campus. Charter partners include Intel, HP and EMC. As we grow our College of Engineering, this program can only benefit our students and those who seek to employ them. Purdue appreciates the state's continued partnership in our shared effort to achieve national STEM and economic development leadership.

Engineering Expansion
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages								$4,580,153	$4,580,153
Fringe Benefits								$1,419,847	$1,419,847
Other Personnel Services									
Total Personnel Services								**$6,000,000**	**$6,000,000**
Other Operating									
Services by Contract									
Materials and Supplies									
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel									
Out-of-State Travel									
Internal Transfers									
Total Other Operating									
TOTAL OPERATING BUDGET								**$6,000,000**	**$6,000,000**
LINE ITEM FUNDING									
General Fund								$6,000,000	$6,000,000
Dedicated Funds									
Federal Funds									
TOTAL FUNDING								**$6,000,000**	**$6,000,000**

* Data entry for these years was optional

IN-MaC (IN Next Generation Manufacturing Compet. Center)

Indiana Next Generation Manufacturing Competitiveness (IN-MaC) Center

Background

Competitiveness and sustainability of the manufacturing sector are essential to ensure job growth and economic prosperity in Indiana. IN-MaC was proposed by Purdue, Ivy Tech, and Vincennes University in response to the accelerating trend of manufacturing jobs returning to the U.S., a strong need to develop the next generation of manufacturing workforce as retirements occur, and the opportunities presented by new emerging manufacturing technologies. The legislature provided $5 million in the 2013-15 biennium budget.

Results: Successful Launch in Year One

- 17 Indiana companies under Tech Adoption contracts; 22 more in discussions.
- Engaged with Ivy Tech, Vincennes, Purdue Calumet & IPFW. Education/Workforce Development projects launched in year 1 include development of an Orthopedic and Advanced Manufacturing Training Center at Ivy Tech Warsaw, training for Mechatronics Technicians at Purdue Calumet, workforce development efforts at Vincennes University, and the Advanced Manufacturing Leadership Development Program at Purdue.
- Five IN-MaC Research Fellows named from Engineering, Technology, and Science. IN-MaC Fellows are supported over two years and are charged with connecting their research to IN-MaC's education and technology adoption thrusts.
- Purdue is a tier-1 partner in the $70 million federally funded Digital Manufacturing Digital Innovation National Network for Manufacturing Innovation (NNMI) center awarded to UI Labs.
- Purdue is university lead on a $70 million Composites NNMI proposal with Oak Ridge National Lab focused on automotive and wind energy materials and structures.

We Request Continued Support for 2015-17

- $2.5 million/year through 06/30/2017 plus inflation allowances
- Moves IN-MaC towards long-term sustainability
- Target objective is a 5:1 leverage of state funds with a long-term stretch goal of 8:1

Vision: IN-MaC will be a statewide resource that provides access to state-of-the-art knowledge and practice in manufacturing processes, materials, systems, and information sciences for the state's manufacturing companies and workforce. The center will focus on three thrusts: 1) knowledge creation to support growth of Indiana's manufacturing base with a focus on the Digital Enterprise and Personalization of Manufacturing; 2) efficient technology transfer to enhance competitiveness of Indiana manufacturing companies; and 3) education, professional development, and training of the workforce for competitive global manufacturing enterprises.

Key Elements: IN-MaC is a unique public-private partnership that provides full-spectrum engagement with Indiana's manufacturing industry. IN-MaC addresses the big-M, systems view of manufacturing enterprises by integrating Purdue's leading-edge discoveries with computing technologies for enterprise integration, and educational programming. The center partners with Purdue's Technical Assistance Program (TAP), which currently serves over 400 Indiana manufacturers each year, to reach Indiana's manufacturing community. TAP also hosts Indiana's Manufacturing Extension Partnership (MEP). IN-MaC's Technology Adoption thrust adds a crucial element to the TAP/MEP tool kit by allowing extended projects focused on helping Indiana companies adopt new technologies they need to remain competitive.

The workforce development efforts cover the entire range of educating undergraduate and graduate manufacturing engineers, scientists and technologists: offering certificates and continuing education programs, both on-site and online, to current state manufacturing workforce, and delivering job training programs to keep Indiana's workforce current. The center will ultimately be a home for STEM-related educational pathways by creating a seamless bridge between high schools, community colleges, and universities to address the state's skilled workforce needs in manufacturing that require post-secondary education.

Impact: IN-MaC's strength in manufacturing will be a significant differentiator in attracting high-technology manufacturing to Indiana. Attracting and keeping manufacturing in Indiana will have significant impact on innovation and market growth in the state. First-year IN-MaC results suggest that another major advantage could be the emergence of new industry clusters in the state, such as personalized medical devices based on digital manufacturing and prototyping, or roll to roll manufacturing. The center has the ability to attract significant national research and development funding with its success in the NNMI DMDI proposal. Summer 2014 will demonstrate a successful launch of a partnership with PTC, a leading provider of manufacturing IT solutions, which allows IN-MaC to deliver a customized Product Lifecycle Management Certificate, the first of many planned continuing education programs.

IN-MaC (IN Next Generation Manufacturing Compet. Center)
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$1,604,370	$1,675,605	$1,700,739	$1,726,250
Fringe Benefits						$482,500	$529,250	$537,189	$545,247
Other Personnel Services									
Total Personnel Services						**$2,086,870**	**$2,204,855**	**$2,237,928**	**$2,271,497**
Other Operating									
Services by Contract						$250,000	$125,000	$126,875	$128,778
Materials and Supplies						$126,500	$124,000	$125,860	$127,748
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel						$20,875	$22,250	$22,584	$22,923
Out-of-State Travel						$15,755	$23,895	$24,253	$24,617
Internal Transfers									
Total Other Operating						**$413,130**	**$295,145**	**$299,572**	**$304,066**
TOTAL OPERATING BUDGET						**$2,500,000**	**$2,500,000**	**$2,537,500**	**$2,575,563**
LINE ITEM FUNDING									
General Fund						$2,500,000	$2,500,000	$2,537,500	$2,575,563
Dedicated Funds									
Federal Funds									
TOTAL FUNDING						**$2,500,000**	**$2,500,000**	**$2,537,500**	**$2,575,563**

* Data entry for these years was optional

Statewide Technology

College of Technology's Statewide Technology System (STS) and Academic Growth Plan for the Purdue Polytechnic Institute (PPI)

The College of Technology's Statewide Technology System continues to serve about 1,100 students each year at its eight locations across the state. These students earn Purdue degrees and, without Statewide Technology, they would not have access to a Purdue education because these students are "place-bound." Continuing state funding at current levels at these sites, plus a small increase for inflation, is crucial to maintain current service levels and to support planned student headcount growth and new programs.

Over the 2012-14 academic years, we hired seven new Statewide location directors so that there is a director immersed in each of the communities the locations serve. We also hired seven additional student services coordinators who serve as the local admissions and advising representatives for Statewide Technology. The Statewide team of eight directors and fifteen coordinators work with high schools and businesses across the state to promote College of Technology degrees and services. In addition, eight new faculty have been hired and other searches are underway to add faculty across the state in key engineering technology areas crucial to the state's economy. These faculty support existing degrees plus four new degree programs recently added at various locations.

To ensure efficiency and administrative accountability, a zero-based budget was implemented at each of the Statewide locations. To control student costs, two of our locations, Anderson and Lafayette, follow Purdue's tuition freeze while the six other locations follow IU or Vincennes University's tuition increase schedule in accordance with our agreements with IU and VU.

The College of Technology Statewide plays a crucial role in preparing Indiana's workforce of the future. Already, a high percentage of its graduates stay in the state, and the even closer alignment of its PPI curriculum to the workforce needs of the state will make it an even greater asset going forward. Having College of Technology graduates across the state is vital in attracting and retaining high-technology, high-wage companies and jobs. About 51 percent of Statewide students are full-time, and 49 percent are part-time with the enrollment trend toward more full-time, traditional-age students. Most Statewide graduates remain in the community where they received their degree, bolstering the local economy.

ACADEMIC GROWTH PLAN FOR THE PURDUE POLYTECHNIC INSTITUTE

With enthusiastic support of Purdue University's Board of Trustees and as part of "Purdue Moves," the College of Technology has embarked upon an unprecedented transformation that will lead to the establishment of the Purdue Polytechnic Institute, which will offer extraordinary opportunities to Purdue students and faculty in West Lafayette, and eventually to all Statewide Technology sites. Each will serve as a model in higher education in preparing the workforce necessary for an economy driven by technology and innovation. Areas of academic focus will be advanced manufacturing, computing and information technology, and health care. Currently two Statewide locations, South Bend and New Albany, are launching Polytechnic pilot programs in Fall 2014.

The Polytechnic Institute is but one item in a multifaceted approach to dramatically increase enrollment in the College of Technology, focusing on preparing the workforce of tomorrow and addressing the serious skills gap that is not being filled through traditional higher education programs. An integral part of this initiative is the engagement in strategic partnerships by bringing in outside expertise from educational and industrial environments.

For Fall 2014, Purdue Polytechnic Institute has accepted a pioneering cohort of 36 students. Their first year studies will be delivered through the institute's proposed degree program, which will be refined as the academic year progresses. With the necessary state support, by Fall 2015 Purdue will be able to admit students directly to the institute.

Statewide Technology
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$7,243,203	$7,595,962	$10,088,901	$10,204,550
Fringe Benefits						$2,221,196	$1,988,548	$2,639,376	$2,669,652
Other Personnel Services									
Total Personnel Services						**$9,464,399**	**$9,584,510**	**$12,728,277**	**$12,874,202**
Other Operating									
Services by Contract						$8,972	$8,972	$9,106	$9,243
Materials and Supplies						$782,556	$145,573	$147,757	$149,973
Equipment						$41,699	$30,000	$30,450	$30,907
Land and Structures - Rental						$580,674	$580,675	$589,385	$598,225
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.						$210,665	$218,940	$222,224	$225,557
In-State Travel						$107,342	$100,000	$101,500	$103,023
Out-of-State Travel						$38,056	$30,000	$30,450	$30,907
Internal Transfers									
Total Other Operating						**$1,769,964**	**$1,114,160**	**$1,130,872**	**$1,147,835**
TOTAL OPERATING BUDGET						**$11,234,363**	**$10,698,670**	**$13,859,149**	**$14,022,037**
LINE ITEM FUNDING									
General Fund						$6,695,258	$6,695,258	$9,795,686	$9,897,622
Dedicated Funds						$4,539,105	$4,003,412	$4,063,463	$4,124,415
Federal Funds									
TOTAL FUNDING						**$11,234,363**	**$10,698,670**	**$13,859,149**	**$14,022,037**

* Data entry for these years was optional

Summer Expansion

Summer session expansion at West Lafayette

As part of Purdue's efforts in transformative education and student affordability, an initiative to expand the educational opportunities for students during summer has been launched. A new line item is requested from the state to enhance and accelerate this student-focused initiative. Besides expanding summer course offerings, this initiative recognizes the importance of providing students more flexibility to incorporate internships, study abroad, and undergraduate research into their Purdue experience both during the summer and the academic year.

A greater focus on summer led to a 20 percent increase in undergraduate summer credit hour enrollment from 2012 to 2014. Going forward, the plan is to at least double undergraduate summer credit hours by 2018. This will help students accelerate their time to degree completion and increase four-year graduation rates. Not only will students benefit academically from a more robust year-round university, this will increase utilization of campus resources and benefit the local economy.

The success to date has been achieved by a careful examination of which courses to offer during summer resulting in an expanded course roster; a campaign to urge students to actively consider the option of summer school attendance; implementation of a year-round housing plan with summer discounts and a summer meal plan; and initial summer programming improvements. These early efforts have shown a positive response by increased enrollments. It is believed that greater investments in three areas: 1) summer financial aid; 2) summer student employment; and 3) summer campus life, will allow further enrollment increases.

Currently, over half of financial aid available for Purdue students comes from federal sources. However, current federal policies limit the availability of this aid during the summer. The dollars available for summer financial aid were completely utilized this past summer. The focus will be for resident at-risk students through programs for new students and targeting transfers and continuing students to accelerate degree progression, with the goal of supporting the performance formula metrics and further expanding the summer session. ($4M)

Second, students often feel the need to work during summer. Providing a student employment center that would facilitate employment opportunities for individual students would allow them to earn income while continuing to make progress to their degrees. The goal is not only to increase the number of student jobs on campus, but also to increase the responsibility of student workers from the freshman to the senior year. Providing more student jobs, and more meaningful jobs during summer will lead to more students combining employment and academics, allowing students to rely less on students loans to fund their education. ($500K)

Finally, compared with the academic year, the pace of student life is significantly different in the summer. Organized student activities during the summer are limited including lack of athletic events, cultural programs, entertainment, and student organization activities. Thus, the third goal is to expand and enhance summer programming to provide opportunities for learning outside the classroom, including research activities, and to provide student life experiences in the summer that students enjoy during the academic year and that complete the academic experience. ($500k)

Summer Expansion
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages									
Fringe Benefits									
Other Personnel Services									
Total Personnel Services									
Other Operating									
Services by Contract								$1,000,000	$1,000,000
Materials and Supplies									
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.								$4,000,000	$4,000,000
In-State Travel									
Out-of-State Travel									
Internal Transfers									
Total Other Operating								**$5,000,000**	**$5,000,000**
TOTAL OPERATING BUDGET								**$5,000,000**	**$5,000,000**
LINE ITEM FUNDING									
General Fund								$5,000,000	$5,000,000
Dedicated Funds									
Federal Funds									
TOTAL FUNDING								**$5,000,000**	**$5,000,000**

* Data entry for these years was optional

University-Based Business Assistance

Technical Assistance Program

Mission

To advance economic prosperity, health and quality of life in Indiana and beyond.

Background

The Technical Assistance Program (TAP) was established in 1986 with a mission of advancing Indiana's economic prosperity, health and quality of life. Current initiatives include the National Institute for Standards and Technology's Manufacturing Extension Partnership Center (manufacturing competitiveness); the Health and Human Services Health Information Technology Extension Center (meaningful use of electronic health records); Purdue Healthcare Advisors (hospital and health care provider quality, safety and productivity); Energy Efficiency and Sustainability, advanced manufacturing technology adoption, and faculty business assistance.

A Purdue team comprising over 150 faculty, students and staff located throughout the state serves approximately 950 Indiana businesses, manufacturers, governmental units and health care providers each year, achieving significant economic development and health care system impacts. Fiscal year 2013-14 company-reported impacts on costs, sales and capital investments exceed $180 million and the Medicare and Medicaid electronic health record incentive payments earned exceed $138 million. Some 8,842 business executives, manufacturing employees, displaced workers, physicians, nurses and health care workers participated in TAP workshops, training and certification programs; 3,193 physicians received assistance with electronic health record adoption.

Funding request

TAP's FY 2014-15 state funding of $1,930,212 is highly leveraged with over $10,000,000 of total funding from 200 sponsors from the private sector, foundations, communities, and federal initiatives. In FY 2015-16 this line item will leverage significantly increased manufacturing sector funding through the National Institute of Standards and Technology's Manufacturing Extension Partnership center at Purdue. The expanded center will double the annual impacts on costs, sales, capital investments, and other factors.

University-Based Business Assistance
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$1,672,185	$1,672,185	$1,697,268	$1,722,727
Fringe Benefits									
Other Personnel Services									
Total Personnel Services						**$1,672,185**	**$1,672,185**	**$1,697,268**	**$1,722,727**
Other Operating									
Services by Contract									
Materials and Supplies						$234,456	$234,456	$237,973	$241,543
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel						$10,660	$10,660	$10,820	$10,982
Out-of-State Travel						$12,911	$12,911	$13,105	$13,302
Internal Transfers									
Total Other Operating						**$258,027**	**$258,027**	**$261,898**	**$265,827**
TOTAL OPERATING BUDGET						**$1,930,212**	**$1,930,212**	**$1,959,166**	**$1,988,554**
LINE ITEM FUNDING									
General Fund						$1,930,212	$1,930,212	$1,959,166	$1,988,554
Dedicated Funds									
Federal Funds									
TOTAL FUNDING						**$1,930,212**	**$1,930,212**	**$1,959,166**	**$1,988,554**

* Data entry for these years was optional

Veterinary Research

General Fund revenue is from pari-mutuel racing taxes recovered at the race tracks.

The Equine Sports Medicine Center (ESMC) at Purdue University is dedicated to the education and support of Indiana horse owners and veterinarians through the study of the equine athlete. Funded in part by the state line item "veterinary research", the center offers comprehensive evaluations for equine patients suffering from poor performance and pioneering leading-edge equine research, including research on the effects of drugs on the performance of race horses.

Veterinary Research
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$67,000	$64,500	$67,000	$68,000
Fringe Benefits						$25,300	$24,500	$25,500	$26,000
Other Personnel Services									
Total Personnel Services						**$92,300**	**$89,000**	**$92,500**	**$94,000**
Other Operating									
Services by Contract									
Materials and Supplies						$57,700	$61,000	$57,500	$56,000
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel									
Out-of-State Travel									
Internal Transfers									
Total Other Operating						**$57,700**	**$61,000**	**$57,500**	**$56,000**
TOTAL OPERATING BUDGET						**$150,000**	**$150,000**	**$150,000**	**$150,000**
LINE ITEM FUNDING									
General Fund									
Dedicated Funds						$150,000	$150,000	$150,000	$150,000
Federal Funds									
TOTAL FUNDING						**$150,000**	**$150,000**	**$150,000**	**$150,000**

* Data entry for these years was optional

Wine and Grape Market Fund

General Fund Revenue comes from the state and is based on bottles of wine sold.

The College of Agriculture receives a portion of the tax from the sale of wine in the state of Indiana. The funds are used for education, extension and marketing purposes in support of the wine industry in the state of Indiana.

Wine and Grape Market Fund
BRS XI: Line Item Appropriation Request
2015-2017

	ACTUAL 2008-09*	ACTUAL 2009-10*	ACTUAL 2010-11*	ACTUAL 2011-12*	ACTUAL 2012-13*	PROJ 2013-14	BUDGET 2014-15	PROP 2015-16	PROP 2016-17
SUMMARY OF BUDGET REQUEST									
Personnel Services									
Salary and Wages						$315,046	$323,839	$323,839	$323,839
Fringe Benefits						$102,116	$100,726	$100,726	$100,726
Other Personnel Services									
Total Personnel Services						**$417,162**	**$424,565**	**$424,565**	**$424,565**
Other Operating									
Services by Contract									
Materials and Supplies						$88,582	$99,286	$129,216	$129,216
Equipment									
Land and Structures - Rental									
Grants, Subsidies, Refunds, Awards, Scholarships, Etc.									
In-State Travel						$11,404			
Out-of-State Travel						$6,703			
Internal Transfers									
Total Other Operating						**$106,689**	**$99,286**	**$129,216**	**$129,216**
TOTAL OPERATING BUDGET						**$523,851**	**$523,851**	**$553,781**	**$553,781**
LINE ITEM FUNDING									
General Fund									
Dedicated Funds						$523,851	$523,851	$553,781	$553,781
Federal Funds									
TOTAL FUNDING						**$523,851**	**$523,851**	**$553,781**	**$553,781**

* Data entry for these years was optional