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Texas House of Representatives Committee on Higher Education Interim Charge Two, Request for Information

The University of Texas System

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Interim Charge 2:

Evaluate current and future capital infrastructure needs at Texas public universities, healthrelated institutions, and Texas State Technical Colleges in preparation for potential legislation to be considered by the 87th Legislature. Identify and evaluate alternatives to tuition revenue bonds for the State's funding of higher education capital infrastructure needs, including options for addressing deferred maintenance needs at aging campuses.

1. As a result of the pandemic, have institutions' infrastructure needs changed? The University of Texas at Arlington

For face-to-face instruction, UTA will need larger classrooms and class labs to accommodate social distancing – but this is an immediate need, not a long-term infrastructure need. Longer term, as enrollment grows in a hybrid modality, we anticipate an increased need for multi-purpose teaching space, teaching studios for online learning, and multi-use classrooms that can accommodate student growth while maintaining social distancing.

The University of Texas at Austin

Based upon the situation and condition on Aug 12, 2020, The University of Texas at Austin's infrastructure needs have not changed.

The University of Texas at Dallas

No. Although UT Dallas enrollment for the fall will be lower, our campus will continue to grow as we come out of the COVID-19 pandemic. In addition, our research programs have continued – to the extent possible – throughout the summer 2020. UT Dallas is continuing to expand the number and value of externally sponsored research activities and our demand for research facilities will continue to grow. In addition, some academic buildings may need to be retrofitted while new building designs will need to allow for additional social distancing modalities for a "different normal" that will be with us for some time to come.

The University of Texas at El Paso

In the short term during the pandemic, the University has focused on infrastructure needs to expand remote learning course capacity. The vast change in instructional delivery has spurred the University to expand online course development and the corresponding technological infrastructure to support the expected virtual traffic. The University has increased the wireless (Wi-Fi) infrastructure footprint around campus to ensure those students on campus can continue remote learning while social distancing without disruption of services while on site. There has been an additional investment focused on learning management systems (Blackboard and others) to address student needs and related access to software to support the increase in virtual instruction. The pandemic posed challenges in identifying specific classrooms/instructional areas that have the ability to adhere to the recommended CDC guidelines. Additional technological investments were made in support of

online course delivery, such as laptops, hot spots, and some cameras to support students and faculty who did not have access to the items required. These upgrades and changes were made to accomplish the transition to on-line or remote education to prevent the spread of COVID-19 during the pandemic. The long-term will require more classroom space as we transition back to on-campus instruction when a vaccine is created.

The University of Texas Permian Basin

UT Permian Basin's outdated classrooms with chalk boards no longer meet the demand for virtual teaching and learning. As a result of the pandemic, our infrastructure needs are for AV technology, upgrading classrooms with portable smart boards, camera and speakers installed with tracking devices that will follow a speaker across the front of a lecture hall, more computers, and more laptops to provide loaners to students who don't own a laptop. Other infrastructure needs would include better Wi-Fi connectivity for classrooms, as well as outdoor spaces, and more power and data ports in many classrooms.

UT Permian Basin's immediate needs that are currently being addressed are:

- Updating all the Classrooms A/V equipment allowing faculty to do asynchronous classes, both online and with students who are face-to-face or hybrid.
- Retooling computing devices for staff to work remotely while still maintaining a secure environment. To do this we are focusing on building virtual desktops that can be accessed from any device securely.
- Student access to specialty software that is only available on-campus. To solve this, we are focusing on virtualizing the classrooms.

UT Permian Basin has an exceptional item request for this that includes the following information. To align with the new guidelines for safe educational environments due to COVID 19 modernizing our classrooms will enhance our ability to deliver classes in person and on-line simultaneously. The new equipment will also provide the ability to record classes as a resource to the students, while meeting ADA guidelines for delivering closed captioning of verbal content and opening the doors for all students to participate. This enables the university to make maximum use of our space, provide our students the flexibility to attend class in the format they choose, and maintain social distancing while enhancing the educational experience for students regardless of venue.

The University of Texas Rio Grande Valley

The pandemic has highlighted the need for both a new Nursing Facility and a Health Affairs Building in that order of priority. The Rio Grande Valley is medically underserved and has been a hot spot for COVID-19 cases and hospitalizations within Texas. Nurses have had to be imported from other areas in order to meet the hospitalization demand. The proposed Nursing Building would be located on donated land in central Hidalgo County in a faculty support and program development partnership with the City of Pharr and the PSJA School District. It would serve the entire Rio Grande Valley's hospitals and healthcare facilities. A Health Affairs Building would allow UTRGV to expand its health science programs and address the RGV's high demand for physician assistants, occupational therapists and speech pathologists among others. The facility would accommodate planned doctoral degree programs in pharmacy, physical therapy, social work, occupational therapy, and communication sciences disorders. Both buildings would grow the Rio Grande Valley and Texas' medical workforce which, in turn, would reduce the local and state health disparities.

The legislature should also consider using TRB funds for deferred maintenance. The benefit to institutions would be taking deferred maintenance costs off the of the balance sheet and renewing state assets. Deferred maintenance should include major renovation of existing buildings making them more viable for decades to come. This especially makes sense if the pandemic slows down enrollment in the long run, thereby reducing the need for additional buildings and increasing the need to update existing space. An added benefit would be a reduction of the cost of space formula for which the State of Texas pays.

The University of Texas at San Antonio

UTSA completed a master plan in 2019 that tied infrastructure needs to our planned strategic growth in enrollment to 45,000 students by 2028. Our strategic plan and three destinations--- exemplar for student success, becoming a great research university, and becoming a larger, more efficient institution--- remain unchanged. Some of the earlier capital projects articulated in the campus master plan remain essential to our strategic plan and to our trajectory as a university. These projects include an expansion of our College of Business to our Downtown Campus, a residential Honors College, a Performing Arts Center, and a student success center. All are still deemed critical to our strategic plan. We will be undertaking additional strategic planning next year to explore campus use and facilities repurposing under the new normal post COVID, but the above-mentioned projects remain core needs.

The University of Texas at Tyler

The information technology infrastructure needs at The University of Texas at Tyler have changed as a result of the pandemic. Although the institution was able to quickly adapt to provide work- and learn-at-home access for all systems, the pandemic has caused the institution to re-prioritize the following:

 Unified Communication System – UT Tyler needs an enhanced unified communication system to bridge all of our phone and electronic collaboration features to provide "anywhere" access soft phones so that campus phone numbers can be routed and user cell or home phone numbers would not be exposed to customers, clients, etc.

- Classroom Technology UT Tyler needed to update 44 classroom and meeting spaces used for academic purposes to allow Zoom capabilities. Much of this work (\$125,000) has been completed with CARES Act funds.
- WiFi Coverage UT Tyler needs to expand WiFi to more outdoor spaces and some remote areas in buildings where signal strength is difficult to maintain. This would enhance access for students and faculty in outdoor spaces, deemed safer during the pandemic.

In addition to IT infrastructure, UT Tyler's physical infrastructure needs changed in the following ways as a result of the pandemic:

- Reduced space utilization to allow for appropriate physical distancing.
- Provision of physical barriers at all service points.
- Addition of toe pulls and automated entry doors to restroom facilities.
- Potential installation of ultra violet lights in the air stream of air handlers.

While the physical barriers and toe pulls/automated doors are one-time expenses (understanding updates/repairs will be necessary over time), the reduced space utilization could pose ongoing costs due to a less efficient use of space. UT Tyler's consideration of installing ultra violet lights in the HVAC system to sanitize the air supply entail an additional infrastructure change and expense as a result of the pandemic.

The University of Texas Southwestern Medical Center

- UTSW's space needs have experienced evolving demands due to COVID-19 related social distancing and patient isolation requirements.
- Academic and Research Missions: At UTSW, the Education and Research missions have traditionally been supported by the State Legislature. Currently, social distancing requirements are being met in academic and research space by establishing class schedules and lab shifts to limit occupancy at any given time. If space usage in these areas remains modified for the long term to accommodate physical distancing safety protocols and the current and future pandemic and healthcare workforce demands warrant, UTSW will make long-term adjustments to academic program requirements to minimize space usage yet might need to request State support for an incremental ~25% more academic space to maintain the breadth and quality of our programs. In an effort to minimize the space needs, alternative distance learning and communication options could be further implemented requiring enhanced IT infrastructure and software.
- Patient Care Mission: UTSW has also made modifications to use of clinical space in order to isolate COVID-19 patients and persons under investigation. While our Patient Care mission is not funded by the State, our Clements University Hospital (designed during the Ebola health emergency) was built with isolation space to support public health infectious diseases emergency

needs. Future inpatient hospital and outpatient clinic space will likely integrate additional spacing needs, but the expanse is to be determined and would be expected to be supported by UTSW clinical revenue.

The University of Texas Medical Branch at Galveston

Yes, UTMB's infrastructure needs have changed over time, in large part due to the COVID-19 pandemic and the financial strain it has put on our institution. During the 86th Legislature, UTMB requested a \$157M multi-use building at our League City Campus. While the multi-use building at League City remains on our master facility plan and is important to UTMB's future, we have reassessed our building needs and priorities in light of the coronavirus. If a TRB is considered, UTMB has construction needs to support and enhance our research enterprise that we hope would be considered. Our request will upgrade critical mechanical systems in four key research buildings on the Galveston Campus for greater reliability and energy efficiency; reconfigure existing space to better support current research; and build out shelled space in UTMB's newest research building to create an fMRI core to benefit growing neurosciences and addiction research programs.

The University of Texas Health Science Center at Houston

The UTHealth Houston two proposals are for a research building connected to the new TMC3 project that would be the new home to the UTHealth School of Public Health and a Digital Innovation Tower on the south research campus for the UTHealth School of Biomedical Informatics. These two schools have seen an explosion in enrollment due to the pandemic and students wanting to enter into the public health field or the informatics/artificial intelligence fields.

- SBMI Summer 2020: +26.6% over last summer
- SPH Summer 2020: +21.1% over last summer

And both schools are seeing large increases in Fall enrollment as well.

These are two workforces that are facing shortages in Texas highlighted by the pandemic. It is estimated that more than 4/5 of all public health workforce are not formally trained in public health. Informatics and use of artificial intelligence are the ways future epidemics can be contact traced successfully without many of the privacy concerns. These demands for expanded public health and informatics workforces stress the needs for funding for this infrastructure.

The University of Texas Health Science Center at San Antonio

Yes. Infrastructure needs for testing, instruction, and research are greater now than ever.

In partnership with the Southwest Texas Regional Advisory Council (STRAC) and University Hospital System, UT Health San Antonio (UTHSA) assisted with community-wide testing and stood up the state's first testing site in San Antonio on our north campus. This campus testing site has been expanded to offer testing to the families of our workforce and students. The Department of Pathology made and manufactured testing kits when there were none available nationally. The research community scaled-down research activities in order to strategize the use of PPE to reduce demand and in response to social distancing. Where excess inventory was available, PPE was diverted to clinics. While the supply chain is loosening for basic PPE items, KN-95s, swabs and reagents continue to be challenging to acquire and will make it difficult to continue providing community testing of the COVID-19 virus. UTHSA employees are collecting COVID-19 tests at our Wellness 360 Employee and Student Clinic and other primary care clinics. The UTHSA Department of Pathology Lab is processing these community COVID-19 tests. Efforts are expanding to accommodate the testing of students, athletes, faculty, and staff at our sister institution, UTSA, as well as to other surrounding healthcare facilities with overflow needs. We anticipate these testing efforts to continue until an effective vaccination is discovered and widely introduced into the population.

Starting at the end of April, UTHSA gradually reintroduced students to their clinical curriculum such that our medical, dental, nursing, and allied health students are successfully integrated into a phased return of their clinical education and training. The didactic education component of the students' programs did not stop as we transition to an online delivery platform. Enrollments for 2020 Fall remain largely on target, although there may be fewer nursing students seeking advanced degrees and training (master's or doctoral degrees) because nurses are in such high demand in the employment marketplace.

Significant investment in our information technology infrastructure was urgently needed to migrate to an online educational platform as well as to support a large portion of our workforce that began telecommuting as a result of the pandemic. Current year funds were redirected to make critical purchases for an online environment, but the new equipment, software, and licensing requires annual maintenance and renewal for which no future funding has been secured, but will be desperately needed.

Infectious disease physicians at UTHSA were among the first in the nation to test an investigational drug developed to treat the novel coronavirus. We are among one of the few sites around the world participating in a clinical trial sponsored by the National Institutes of Health's Institute of Allergy and Infectious Diseases to test Remdesivir, an investigational drug to treat hospitalized COVID-19 patients who are critically ill. Additionally, we have 50 plus ongoing basic and clinical studies including: (a) development of animal models to understand the pathophysiology of SARS-CoV-2, test novel therapeutic targets and develop new vaccine platforms and pharmacological interventions; (b) treatment protocols using convalescent plasma from patients that have recovered from COVID-19; (c) a comparative analysis of nasopharyngeal swabs with other non-invasive sampling methods for the detection of SARS-CoV-2; (d) epidemiological studies on risk factors, immune/inflammatory

response and clinical course of COVID-19 patients; (e) strategies for early detection of asymptomatic COVID-19 patients; (f) quality improvement studies to assess the burden of the infection on adult day-care programs, primary care physicians and other practices, pediatric hospitals, and mental health.

Given the urgent need for a reliable, high-throughput test that can quantitatively measure antibodies that provide protection against the infection, we have signed an MOU with UT System, our Clinical and Translational Science Award (CTSA) and other UT institutions to actively enroll human subjects in a clinical trial designed to test the cross-reactivity of a new SARS-CoV-2 antibody assay. In addition, multiple teams of investigators, including immunologists, cell biologists, structural biologists, and clinical trialists, are looking at different strategies to prevent the coronavirus infection, by monitoring the immune response of coronavirus survivors over time and identify the type of antibodies responsible for the virus neutralization. We anticipate these efforts to continue until an effective vaccination is discovered and widely introduced into the population. To fully sustain COVID-19 testing efforts, investments in a BSL3 Infectious Diseases (ID) facility and cryopreservation services are needed. Current funds are supporting testing instrumentation, equipment, and supplies, and storage repositories for samples. However, new funding would leverage efforts to further research progress and secure new NIH grants.

The University of Texas M.D. Anderson Cancer Center

No, the institution infrastructure needs have not changed. In the 86th Legislative Session, HB 2000 allocated \$100 million to MD Anderson for a joint project with Texas A&M University System and The University of Texas Health Science Center at Houston for a construction of a biomedical research facility. The total project cost is estimated at \$500 million, with the majority of the funding coming from hospital revenues demonstrated by the strong institutional commitment even during this challenging time of the pandemic.

MD Anderson's need to move forward with this, the South Campus Research Building 5, has not changed. As part of the TMC3 Collaboration, this facility provides MD Anderson and UT Health with new research labs designed to meet new and evolving research technologies. It will facilitate unique collaborations with other renowned and accomplished institutions and will further support the creation of a research and drug discovery program that identifies and optimizes combinations of therapeutic modalities.

The TMC3 Collaboration forecasts a \$5.4 billion impact to the State of Texas. This includes MD Anderson's participation in this invaluable project. Overall, the TMC3 is estimated to bring 23,000 new permanent jobs to the Houston area and 26,000 jobs to the State of Texas. The success of this project is directly tied to the success of each founding institution's ability to participate.

In order to attract key industry venture partners, support of the TMC3 project must not wane. As a leader in the Texas Medical Center, UT MD Anderson should pave the way for this vital project. The continued support from the State of Texas is key in the success of this overall development.

The University of Texas Health Science Center at Tyler

Infrastructure needs at UTHSCT remain largely unchanged by the COVID-19 pandemic and continue to be driven by growth of the institution and the pending establishment of a medical school. Early in pandemic response UTHSCT undertook a rapid renovation and retrofitting of 22 negative pressure and 14 ICU rooms to prepare for COVID-19 patients. Currently, renovations are underway to increase capacity and update mechanical systems at the Public Health Laboratory of East Texas (PHLET), which is administered by UTHSCT. In both cases, federal CARES Act funds have been utilized to cover costs.

2. How have institutions' needs changed since the 86th Legislature? Are there projects that were included in HB 2000 that are no longer needed; i.e., were funded through other means? Are there projects that were not included in HB 2000 that now are a need? If so, why?

H.B. 2000, as engrossed, included 17 projects across our 14 institutions. The four following projects were included in the engrossed version of HB 2000 but were at least partially funded with the Permanent University Fund.

Institution	Facilities Priorities
UT Arlington	Social Work & College of Nursing Academic Building
UT Dallas (jointly with UT	UTD-UTSW Translational Biomedical Engineering and
Southwestern)	Science Building
UT Tyler	College of Nursing & Health Sciences Building
UT Southwestern Medical	UTD-UTSW Translational Biomedical Engineering and
Center (jointly with UT	Science Building
Dallas)	

UT institutions have identified the following capital funding priorities.

Institution	Facilities Priorities
UT Arlington	1. Life Science Building Addition and Renovation*
	2. Improvements/Additions for Performing and Visual Arts
UT Austin	Renovation of Physics, Math, and Astronomy building
UT Dallas	1. Student Success Center*
	2. Bioengineering and Sciences Building
UT El Paso	1. Advanced Teaching and Learning Complex*
	2. Student Success Building

UT Permian Basin	1.	MESA Building Renovations/Campus Transformation*
	2.	Multi-Disciplinary Academic/Research Building
UT Rio Grande Valley	1.	Health Affairs Building*
	2.	School of Nursing Pharr Facility
UT San Antonio	1.	Innovation, Entrepreneurship & Careers Building*
	2.	Student Success Center
	3.	Creative Arts Education & Engagement Building
UT Tyler		Sciences Building
UT Southwestern	1.	North Campus Phase 6 Brain Institute Shell Space Build-out
	2.	School of Health Professions & Bass Institutional Support
		Space Replacement
UT Medical Branch –		Infrastructure and Research Space Upgrade for Research
Galveston		Buildings
UT Health Science Center –	1.	Public Health Education and Research Building*
Houston	2.	UTHealth Houston Digital Innovation Tower
UT Health Science Center –	1.	Institute for Alzheimer's & Neurodegenerative Diseases
San Antonio		Building*
	2.	Facilities Renewal and Modernization
UT MD Anderson Cancer		New Research Building*
Center		
UT Health Science Center –		Health Professions Education Center
Tyler		
* denotes H B 2000 projects		

* denotes H.B. 2000 projects

3. If the pandemic has changed institutional needs, are there federal funds that could qualify to help offset COVID-related changes?

The CARES Act provided limited federal funds to address the pandemic's impact on our institutions. The funds can be used to cover some pandemic-related changes to the delivery of academic instruction; however, they cannot be used for capital projects unless they are related to the pandemic.

4. Has the economic recession impacted borrowing costs for a potential Tuition Revenue Bond? Are there any anticipated changes to the costs of borrowing in the future, should conditions remain as they are?

The economic recession driven by COVID-19 has caused a collapse in interest rates across all sectors. Borrowing costs are currently among the lowest on record. Authorizing TRBs in the current environment would allow the State of Texas to finance much-needed capital projects at the lowest possible cost and to spread the cost over many future years.

5. Are there financial or other benefits to paying for TRBs with cash rather than borrowing money?

Higher education institutions across the country have been negatively impacted due to a variety of factors including revenue losses from the COVID-19 pandemic, the collapse of oil prices due to the Saudi/Russian price war, likely general revenue reductions, enrollment and tuition revenue challenges including more discounting of tuition, auxiliary refunds to students for unused housing, parking, dining and other services, as well as from increased expenses due to acquiring personal protective equipment, temperature screening equipment, etc. As a result of these unforeseen circumstances, the credit profiles of higher education institutions are generally weaker in the view of the credit rating agencies.

Tuition revenue bonds (TRBs) have been a critical source of capital funding for higher education across many decades providing additional facilities to expand access to accommodate additional students. While TRBs play a critical role in higher education capital funding, TRBs weaken institutions' financial ratios calculated by the credit rating agencies as the TRB debt is carried on each institution's financial statements. As a result, TRBs use up a portion of each higher education institution's debt capacity.

In order to continue assisting higher education institutions with providing necessary capital infrastructure while avoiding further weakening each institution's credit profile, the Legislature could consider making direct appropriations to fund capital projects during these unprecedented times rather than have institutions add additional TRB debt to their already weakened financial condition due to the factors outlined above.

Making direct appropriations (i.e. cash) rather than authorizing TRB debt to pay for needed capital projects provides benefit to U. T. System and its institutions in that it preserves debt capacity and helps to preserve the System's bond rating. Whether paid with cash or with issued TRB debt, authorized capital projects provide an economic stimulus to the State. Should the cash approach be taken, the Legislature could consider accessing the Economic Stabilization Fund (ESF) for one-time capital funding of projects. While a direct appropriation from general revenue rather than the ESF would provide the debt capacity benefit, institutions are currently facing difficult times and need appropriations for operations to maintain services and preserve jobs. Any redirection of general revenue from operations to capital projects would likely negate the potential stimulus of the capital projects.

6. What kinds of longer-term impacts will we see to institutions if TRBs continue to be pushed off?

The University of Texas at Arlington

At UTA, with significant capital construction expansion now completed, in the immediate term we have a greater need to address capital renewal and deferred maintenance of our existing infrastructure, which now has an average age exceeding

32 years. If TRBs continue to be pushed off, it further delays much needed reinvestment in the existing infrastructure, causing certain inefficiencies in the annual operating budgets.

The University of Texas at Austin

The University of Texas at Austin lacks the capacity to independently financially manage and fund all of the institution's needs in support of the academic mission. If infrastructure needs continue to go unaddressed, the mission success of the university will be negatively impacted.

The University of Texas at Dallas

Existing campus infrastructure will continue to be strained, funding will not be available to retrofit technology in older buildings, and growing campuses will continue to see over crowded facilities and use of older, possibly unsafe, facilities.

The University of Texas at El Paso

Further delaying TRBs for the existing Liberal Arts (60 years old) and Academic Advising buildings (42 years old) will result in 'critical' deferred maintenance needs that require 'immediate' replacement in order to address today's teaching. The footprint of the existing Liberal Arts Building will require demolition of the existing buildings because renovation is both cost prohibitive and of limited benefit.

The University of Texas Permian Basin

Long term impacts to UT Permian Basin if Tuition Revenue Bonds are pushed back would be the delay in new construction or renovation projects. Our current TRB requests include a new Multi-Disciplinary Academic Research Building and the renovations to the Mesa Building/Campus Transformation. The one project that would be most impacted would be delays to Mesa Building Renovations. The longer we delay upgrades to the existing facility to address deferred maintenance, the costlier the repairs will be and the more impact and disruption to faculty and staff will occur. Some of the key projects in the Campus Transformation Project, particularly signage, way finding, and ADA upgrades are critical to get accomplished as soon as possible.

The University of Texas Rio Grande Valley

Pushing off TRBs will limit UTRGV's ability to expand health science programs which reduces our ability to reduce local and state health disparities. It also continues to add to the state's list of deferred maintenance items and their costs and in the long run, creates unsafe spaces for students, faculty and staff.

The University of Texas at San Antonio

We have three TRB projects that remain critical to our strategic growth. These include the Innovation, Entrepreneurship and Careers Building as part of the expansion of the College of Business to the Downtown Campus, a new performing

arts center on the main campus, and a new student success center for the main campus. These were on our list in the last biennium and remain on our current list. The delay of TRB opportunities, especially for the Innovation, Entrepreneurship and Careers Building – and the expansion of the College of Business – on the Downtown Campus will affect our strategic enrollment plans, our opportunities for experiential learning under our SACSCOC QEP around classroom to career, and our efforts to meet 60x30 targets and workforce benefits here in San Antonio.

The University of Texas at Tyler

UT Tyler has experienced steady, sustained growth over the last decade in both students and high-demand programs. With this growth has come significant need for additional facilities for high need areas like Nursing and Engineering. For example, our engineering program in Houston (in partnership with Houston area community colleges) has outgrown its current space and requires additional investment to meet its ever-increasing demand. "Big ticket" items like this are met with equally important projects like much-needed sidewalks and interior access roads that will improve student safety on campus and renovations to buildings like our library and University Center that enhance student success.

By postponing TRB funding, campus needs will continue to multiply and currently minor projects may become more significant. Additionally, we will miss opportunities to grow high-need programs, improve student safety, and enhance student success which will likely result in long-term negative impacts.

The University of Texas Southwestern Medical Center

Without State support for appropriate Academic and Research infrastructure to accommodate new spacing requirements and the quality and appropriate program growth in these areas, UTSW will be unable to meet the growing demand for students to train in the critically needed healthcare worker professions and for research to help lead our communities out of the current pandemic and future health needs with more effective patient therapies and treatments.

The University of Texas Medical Branch at Galveston

Long term impacts will include our inability to maintain critical facility systems, as well as slowing down our ability to make strategic investments that will be necessary to advance research and stay competitive in the healthcare and academic fields. Lack of the State's assistance with infrastructure needs could also place a higher reliance on our patient revenue streams to support these facility systems, which may in turn put pressures on our clinical workforce to operate at less than optimal staffing levels.

The University of Texas Health Science Center at Houston

The delaying of funding for these infrastructure projects will continue to cap enrollment growth in these two vital workforce areas. More than 100,000 viruses have been discovered in animals that with a simple mutation could infect humans. Texas needs the public health and informatics workforces to reduce the health, economic, and social impacts of this and future epidemics.

The University of Texas Health Science Center at San Antonio

UT Health San Antonio has improved its overall financial condition over the past ten years, but is hindered by small annual operating margins from making the kind of investments needed to address deferred maintenance issues. Limited funding is currently available through operating margins, indirect cost recovery revenues earned on federal grants, capital project contingencies, and Library, Equipment, Repair and Rehabilitation (LERR) allocations to direct toward the facility needs of our newer buildings such as the Greehey Children's Cancer Research Institute (GCCRI), the Medical Arts & Research Center (MARC), the South Texas Research Facility (STRF), the Mays Cancer Center (which will require significant remediation/renovations to comply with The Joint Commission (JCo) standards for healthcare organization certification and accreditation), and the Professional Administration and Research Center (PARC), all of which are nearing 20-30 years in age. More than a refresh is necessary to replace significant building systems such as mechanical, electrical, plumbing, elevator, security, and other safety features in these buildings in order to repurpose the space and improve its functionality for new uses. TRBs funding would allow UTHSA to address deferred maintenance items that have needed attention for many years and would continue to significantly reduce the current deferred maintenance backlog. Life safety elements such as fire sprinklers and egress systems are deficient or non-existent in some of the older buildings, and the roofs need to be replaced to prevent further leaks and water damage where current renovations to research and classroom space are underway. Currently, UTHSA's institutional deficiencies threaten to impair training the next generation of health care providers. Deficiencies related to the "newer" buildings have escalated in criticality. Thus, TRBs are imperative to address facilities renewals and modernization needs. UTHSA has invested over \$20M of its own resources to address deferred maintenance issues over the past five years. Deferred maintenance items that have needed attention for many years will reduce the current deferred maintenance backlog 60-70%. Energy consumption cost per square foot will be significantly reduced.

UTHSA houses and supports comprehensive medical research that will transform the world. The work and discoveries that occur at the institution have the power to educate, unite, and transform the culture of South Texas. These significant improvements will result in a more productive and stimulating environment for students, faculty, and staff, which will help attract the world-class talent necessary for continued success in San Antonio and South Texas. Key milestones targeting these deficiencies need to be addressed within the next two to three years to foster future growth.

The University of Texas M.D. Anderson Cancer Center

MD Anderson's ability to complete this project relies on the use of TRB funding. Deferral of the construction of the South Campus Research Building 5 may impact the institution's ability to construct a future inpatient care facility to serve the projected growing population of patients. Currently, two other aging buildings are located on the most desirable site for the bed tower. Strategies to vacate those buildings, in part, rely on the construction of the South Campus Research Building 5. Alternative strategies may be explored, however will result in duplicative and disruptive moves to the research enterprise.

Without this funding, Hospital Revenues will be required, which will, in turn, impact the institution's ability to move forward with a vitally needed hospital. This new hospital will replace the Lutheran Pavilion which has been failing due to aging infrastructure. In addition, it is anticipated that the institution's projected census will exceed the number of available beds by 2026-27. The new hospital is planned to include additional beds to meet those needs.

The University of Texas Health Science Center at Tyler

UTHSCT is the public health and healthcare leader for East Texas and is growing to meet the healthcare delivery and workforce needs of the region. Absent tuition revenue bond support, growth in critical programs such as graduate medical education and a future medical school could be slowed. To meet infrastructure needs, UTHSCT would rely more heavily on philanthropic sources, which are insufficient to cover the entirety of capital needs.