Renovating the Forum
Building a Better Education
A LEGACY TO BUILD THE FUTURE

The Reconstruction of the Forum Building

PARTNERS

PennState

Office of Physical Plant
BUILDING A BETTER EDUCATION

A Formal Report to The Pennsylvania State University’s Board of Trustees

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Date of submission: November 11, 2015
Memo of Transmittal

To: The Pennsylvania State University Board of Trustees  
From: Taylor Esterly and Casey Guernsey  
Date: November 5, 2015  
Subject: Renovating the Forum: Building a Better Education

This is our report regarding the recent donation Penn State has received and how those funds should be allocated.

The Forum Building has been an eyesore on this campus for decades. Its uncomfortable structure and outdated features negatively impacts students’ learning experience. Forum cannot compete with other class buildings on campus, therefore, must be completely demolished and rebuilt with classrooms similar to the lecture hall 100 Thomas. The Forum cannot sustain an effective learning environment for Penn State students and a change is necessary to improve this issue.

A solution to this problem is feasible. Forum must be torn down so a new building can be constructed in its place. Instead of assembling our new building into a circular shape, we will propose a more practical structure and include updated features. Buildings with these aspects already exists on campus, such as lecture hall 100 Thomas, providing us a model to go off of when constructing the building. 100 Thomas provides students with an outlet at every seat for laptops, a strong WiFi connection enabling more efficient presentations from professors, adequate spacing between sections and rows, comfortable seating, and stable desks. Overall, the lecture hall 100 Thomas has everything that the current lecture halls in Forum lack.

We may run into issues when it comes to accommodating this project. The Forum is a major building that thousands of students attend class in every day. By demolishing this building, Penn State will temporarily lose major classrooms. Consequently, we will need to plan to provide temporary classrooms to contain students. We are confident that these temporary classrooms will succeed because the same strategy was used when the HUB Bookstore was being renovated. Additionally, we realize Curtin is a popular road, and closing it down even temporarily would cause complications for professors and students trying to get to a separate building. However, the impermanent problems associated with reconstructing the Forum will not exceed the benefits students and professors will receive.

We contacted the Office of Physical Plant’s Assistant Director of Design and Construction Division, John Bechtel, and are grateful for his expertise on logistical processes for construction projects at Penn State University. We will further discuss his objectives on the renovation of the Forum Building throughout the course of this report.

Thank you for giving us the opportunity to work on this project and develop an idea that will use this money in a way to greatly improve Penn State’s campus and student livelihood. We are open to further discussing any ideas or concerns you may have, and Taylor can best be reached at tle5076@psu.edu, or Casey at cjg5396@psu.edu.
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Executive Summary

This report analyzes Penn State’s recent monetary donation and presents a recommendation to demolish and reconstruct the Forum Building to equip it with updated and improved lecture halls.

Forum is Insufficient
The Forum Building hinders students’ learning experience. It is an outdated building lacking new technological resources, a comfortable learning environment, and an accommodating layout. In a student survey we conducted of over 100 students, we found that 66% of students agree that Forum causes learning difficulties, and another 68% believe this building is in need of renovation. 97% of the students we surveyed have had at least one class in Forum, proving this is a building that sees high volumes of traffic on a daily basis. These large lecture halls hold over 300 students, and there are 4 lecture halls inside Forum. That means that about 1,200 students are moving in and out of the Forum just in one class period. This building lacks basic necessities including student safety, large hallways, and accommodating restrooms for such a high volume of traffic.

Renovation is Necessary
Students’ educations are suffering because of this building. The Forum Building must be completely demolished and rebuilt to accommodate both students and professors. We spoke with John Bechtel, the Assistant Director of the Design and Construction Division at the Penn State Office of Physical Plant, and he informed us that the renovation would best be taken place during the spring and summer months. Reconstruction during this time would avoid the harsh winter, and additionally University Park would be less populated during Penn State’s summer break. Although remodeling the Forum building may cause temporary issues during the school year, these problems can be limited through the use of large trailers for classrooms. We are confident this tactic will work because of the same process implicated during the renovation of the HUB Robeson Center Bookstore. Reconstruction of the Forum is required because it lacks updated, working technology. Remodeling the building will provide the students and faculty of Penn State University with an improved learning atmosphere.

A New Building Will Solve Problems
Our plan is to design a new and more modern building to better accommodate students. This new building will mimic the newer and more appropriate lecture halls on campus, for example, 100 Thomas. This change will improve learning for students. They will be more comfortable and able to pay attention in class. Class attendance will go up, as well as academic performance. The new Forum Building will address all of the concerns students have with the current building. A few of these issues include:

- Small desks
- Uncomfortable seating
- Few restrooms
- Outdated technology
- Size of classrooms and hallways

This project will use up the generous donation Penn State has received, but it will be worth the expense. This new building will improve our campus and students’ and professors’ experience. Accommodations will have to be made to account for classrooms that will be temporarily lost during construction. However, this improvement will be worth any accommodation the school has to temporarily make.
Renovating The Forum

Introduction

The Forum Building has served as a class building on campus for several decades, and it has not been updated since its construction years ago. Forum still has the same wooden desks and uncomfortable chairs that a few of our professors have sat in as students. The major issue with the Forum is that it is outdated and is consequently affecting students’ learning. In order to improve the Forum’s learning environment, it requires immediate attention and needs renovated.

The Pennsylvania State University has recently received a generous $75 million donation from an anonymous donor. The Board of Trustees has asked us to produce a formal report outlining a project to best utilize this money and improve this campus. A complete demolition and reconstruction of the Forum Building would benefit current and future Penn State students and faculty.

This new building would possess resources that the current Forum Building lacks. For example, the rooms would be more spacious, chairs would be more comfortable, and desks would be larger. Technologically, the new building would be equipped with updated devices to ensure more efficient presentations from professors. Additionally, with the new technology, students will have stronger WiFi to allow access to teaching materials. These advancements in technology will promote improved academic performance because students will be able to take notes quickly from their laptops.

Structurally, the new building would make more sense than the old one. The Forum currently lacks room to navigate in and out of aisles, which poses safety hazards. The renovation would construct wider aisles, hallways, and bigger restrooms in order to accommodate to the high volume of students attending class in the Forum.

After surveying students and interviewing with a project manager from the Penn State Office of Physical Plant (OPP), we are confident that this report contains an efficient solution to a current problem. These statistics and opinions will be discussed throughout our project.

The purpose of this report is to analyze the significant issues with the Forum Building, and additionally determine the specific logistics this project entails. Finally, the research conducted to create this report will be laid out.
The Challenge

As you already know, the Forum Building has been prevalent on campus for several decades. Several members on the Board of Trustees may recall having class in Forum during their time at Penn State. Unfortunately, the building has had the same consistent layout for the duration of these years. It has not been updated since its first construction, and it is taking a toll on student’s ability to learn. Additionally, it is effecting teacher’s presentations, due to the lack of technology that makes it difficult for professors to engage their students.

In an article on Onward State, a student-run, independent Penn State blog titled “The 5 Worst Buildings on Campus” the Forum Building was ranked number 2. The article reads:

“Forum feels like it was built as the indoctrination center of a Soviet-era prison. Instead, you’re supposed to learn Econ 102 in there! From the tiny, cramped desks and rows upon rows of seating with only two aisles, making entry to the middle as inefficient as possible, there really is nothing to love about Forum. The outside is an eyesore in its own right, with weirdly slanted roofing, ugly, shoddy design on the outside, gross fountain, and a walkup that situates it in an otherwise beautiful part of campus, making it even uglier. Oh, and navigating its weird room numbering system is infuriating no matter how many times you’ve walked that stupid circle.”

Additionally, not only was it ranked as one of the worst buildings on campus, Onward State further noted that the Forum Building contains the 4th worst bathroom on campus. In the article “Power Ranking The Best and Worst Bathrooms On Campus” states:

“On a typical day the four lecture halls in this building have classes of 300+ moving in and out every hour. For some reason, the architects who designed this masterpiece decided it would be prudent to only have three stalls put in the bathroom to accommodate the thousands of students that come through each day.”

This article emphasizes the argument that the Forum Building is outdated and is inadequate to compensate the high volume of students in these lecture halls.

Unfortunately, thousands of students are required to attend class in this building every single day. The Forum Building has many issues involving concerns with safety and education. These are the two problems found to be most prevalent in the survey we conducted.

“Forum feels like it was built as the indoctrination center of a Soviet-era prison.”

Safety

Large classrooms with few and narrow aisle ways pose as an issue if evacuation were necessary. As you may recall, each of the 4 lecture halls in the Forum Building are triangular in design. The seating is arranged stadium-style; students sit toward the top and the professor presents from the bottom. Each room is compromised of 300 seats, yet only 2 aisle ways. A high capacity of students and limited walk way creates substantial safety concerns should evacuation be necessary. An anonymous student who took our survey expressed her concerns as:

“It’s very hard to leave class in the Forum Building. If a tragedy occurred, it would be difficult to leave the building in a sufficient time.”

The hallways outside the lecture halls are small in width and create difficulty to navigate in a large crowd.
Education
As an institution for higher learning, Penn State is concerned with education. Right now, the Forum Building is inadequate to sustain a functional learning environment. In fact, it presents three obstacles that deter students’ from learning:

- Technology
- Distractions
- Comfort

Technology
The technological aspect of the Forum Building is lacking compared to other buildings on campus. These lagging resources impact students’ learning. The classrooms are so large that most professors opt to use a microphone so students can hear.

Oftentimes the speakers do not work and professors end up shouting at students who cannot hear them.

Technology limits the ability to use iClickers, causing the lectures to not be as efficient when professors have to pause and attempt to reconnect to the server.

The WiFi connection inside Forum is also an issue. The poor connection inside the building makes it difficult for students to access ANGEL and any online documents the professor requires for class. The poor connection consequently results in students not being able to take as efficient notes when following along with the professor’s slides.
Distractions
The Forum Building creates a variety of distractions for students. The walls in Forum are very thin, resulting in students being able to hear the lectures from surrounding classrooms. “It is especially distracting when the student choir is practicing next door to your class,” as one student survey response put it. They added, “It’s extremely hard to pay attention in there. I’ve had other large classes where I did just fine.” These factors limit professors’ ability to engage students during lectures, and inhibit academic performance.

Additionally, it is very easy to hear side conversations due to the acoustics of the room. It is distracting for students trying to pay attention in class when all they can hear are other students whispering conversations during the professor’s lecture. This issue is prominent in the Forum Building because of its structure and causes noises to be heard more often.

Students noted that the desks inside the building are too small for a sheet of paper; this makes taking notes on laptops troublesome. Due to the age of this building, a majority of the desks wobble, creak, or are broken. Some of the chairs do not even have a desk attached anymore. “The seats are uncomfortable and many of the desktops are falling off their hinges,” as one student explained.

As we touched on before, the stadium style seating of the Forum prohibits proper leg space. This is an issue for taller students who need more room. A student expressed his concerns in regards to the limited space as,

“The chairs are uncomfortable, the desks are too small, and there is not enough room between rows for long legs so tall people have to sit in the front and their neck hurts because the screen is so high.”

This complication can be fixed with the renovation of the Forum building similar to the layout of 100 Thomas. 100 Thomas has proper spacing between seats, accommodating to students of different heights.

In the next section we discuss our strategies to replicate 100 Thomas, and why it would benefit the insufficient learning environment the Forum contains.

Comfort
The majority of the feedback we received regarding Forum was directed towards the comfort level inside the lecture halls. These classrooms are uncomfortable and it affects students’ learning. Students agree that too many people are packed into the classrooms, consequently leading to desks being too close together, making it difficult to get in and out of seats.
The Solution

Replicate Lecture Hall 100 Thomas

Demolishing the Forum Building and reconstructing it similar to 100 Thomas will produce a more functional structure and enhanced learning environment for the students and faculty. 69% of the students we surveyed believe that the Forum Building is in need of renovation.

“69% of the students we surveyed believe that the Forum building is in need of renovation.”

These pictures clearly display the differences between what a modern class entails versus an outdated lecture hall. As you can see, 100 Thomas provides adequate spacing between sections, enabling students to move in and out of rows. Unlike Forum’s small and insufficient screen, 100 Thomas is compromised of a large screen with updated technology.
Newer and more accommodating buildings already exist on Penn State’s campus, so we already know what strategies need implicated to ensure success. For this reason, we believe that the Forum Building should be rebuilt to replicate lecture halls similar to 100 Thomas. The new classrooms inside the new Forum Building will encompass the positive elements the modern class buildings currently possess. 100 Thomas is a great example of a practical lecture hall; it has the capability of holding 735 students and still provides a pleasant learning environment. One student that took our survey stated, “Forum would be better if it looked similar to Thomas.” There are several factors Forum lacks that Thomas contains:

- Outlets at every seat for laptops
- Stronger WiFi connection enabling better presentations from professors
- Adequate spacing between sections and rows
- Comfortable seating
- Stable desks

With these improved features, the benefits students and professors will receive are safer, less distracting, and more comfortable classrooms.

**Logistics Timeline**

We had the opportunity to speak with Dan Bechtel, the Assistant Director of the Design and Construction at the Penn State Office of Physical Plant. He gave us insight on the logistics of a project of this caliber. He informed us that the best time to start a construction project is during the spring season. That way, a majority of the project can be completed before the following winter. It is best to begin a construction project in the spring, because most of the labor will be completed during the summer, avoiding Penn State’s high student population. The timing is crucial to this project due to the Forum being on a popular road.

The typical phase of a project like this would be about 2.5 years, with one year devoted to design and another 18 months allocated to construction. Dan Bechtel estimated that the cost associated with renovating the Forum would fall around $50 million.

**Accommodations**

Dan informed us of several accommodations we would have to make for this project. As you may recall, a “swing space” was created for the Penn State Bookstore during the renovation of the Hub-Robeson Center. The temporary bookstore was inside a trailer located on the Hub Lawn. Trailers like this would be installed during the renovation of The Forum Building in order to accommodate for the temporary loss of classrooms. These trailers would be on campus for the duration of the construction period, until the new building is completed. We can ensure this strategy will work because of its success with the HUB-Robeson Center Bookstore.

“From a construction perspective, it is best to start in early spring so you are able to get it under roof prior to the start of the next winter season.”

**Benefits**

Overall, this will be a lengthy process. However, the results will be worth the time dedicated to the renovation of the Forum. The improved lecture halls will have a positive lasting impact on Penn State’s campus for years to come. This building will enhance the lives of students and improve their academic performance. We are confident academic performance will increase with enhanced technology, and comfort. Faculty will benefit from productive and eager students, as well as be equipped with more efficient technology. Additionally, renovation will limit safety hazards and accommodate the high volume of students that attend class in the Forum. The reconstruction of Forum will bring nothing but positive contributions to Penn State’s campus.
The Facts

We received significant research that qualified us to provide these plans and recommendations for the Board of Trustees. Our core research included reaching out to the student population to gain their insight on the Forum Building. We wanted to see if other students saw this building as a necessary building to renovate. One student stated, “The seats are small and the stadium style seating makes you feel like you’re at a movie. It’s designed to cram in as many students as possible with no regard for a proper learning environment.”

We also spoke with the John Bechtel, the Assistant Director of the Design and Construction Division at the Penn State Office of Physical Plant. He provided us with technical insight regarding projects at Penn State. Obtaining this research enabled us to formulate a plan of action to tackle this process efficiently. We produced an itemized cost estimate table to illustrate where the donated funds will be allocated, which is shown on page 9.

Survey

We conducted a student survey to find that many students shared our belief that the Forum Building is inadequate and lacking in basic areas. We asked 100 students to rate their experience with Forum shown on table 1, on a scale from 1 to 5 (1 being poor and 5 being amazing.) We found that 59% of them rated their experience in the Forum Building either a 1 or a 2. This reinforced our belief that the Forum lacks a sufficient learning environment and is affecting students’ performance.

“The seats are small and the stadium style seating makes you feel like you’re at a movie. It’s designed to cram in as many students as possible with no regard for a proper learning environment.”

Table 1 displays the majority of students’ unpleasant experience in the Forum Building.
Office of Physical Plant

John Bechtel was a great resource to us throughout the duration of our project. He answered all of our logistical questions such as how long this project would take, what time of year renovation should be completed, and necessary accommodations. He provided us information on estimated costs, tentative timelines, construction accommodations, and insider information. We asked if the idea of the reconstruction of Forum has ever been brought up, and he stated, “I do believe it has been discussed but it is not on the current capital plan.” Mr. Bechtel further explained to us that specific accommodations would need to be implemented such as temporary trailers serving as classrooms. The Forum building sees up to 1,200 students per class period, making this an important aspect to focus on. A project of this caliber would require extensive time and planning. John informed us, “A construction at this scale would demand one year of design phase with 18 months construction, thus approximately 2.5 years from start of design to finished product.”

If OPP is considering this project, it proves that the Forum Building is a relevant issue. Current students view Forum as an issue as portrayed in Table 2. Out of a survey of over 100 students 70% agreed that Forum

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Summary of OPP

The Office of Physical Plant is a support business that exists to enable Penn State University to accomplish its mission of teaching, research and service. OPP has a strong commitment to customer service and efficient operations. OPP is what keeps Penn State up to its impressive standards. Every OPP employee is professional, hard working, and dedicated to improving Penn State University’s campus every day.

“I do believe it has been discussed but it is not on the current Capital Plan.”

Table 2 displays students in favor of renovating the Forum Building
# The Cost Estimates

## Cost Estimate: Renovation

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<th>Building (Total)</th>
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<td>Labor</td>
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<td>Equipment</td>
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## Cost Estimate: Accommodations

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<td>Classroom equipment</td>
<td>5 million</td>
</tr>
<tr>
<td>Handicap access</td>
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<tr>
<td>Set-up/tear down</td>
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## Cost Estimate: Utilities

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<td>Heating/air conditioning</td>
<td>6 million</td>
</tr>
<tr>
<td>Electric</td>
<td>2 million</td>
</tr>
<tr>
<td>Internet</td>
<td>2 million</td>
</tr>
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</table>

## TOTAL PROJECT COSTS

| 50 million |

This table focuses on certain construction factors we felt needed to be highlighted in order to allocate costs accurately. John Bechtel projected the renovation of the Forum would fall around 30 million dollars. However, in our situation with Forum providing a variety of classes for over 1,200 students an hour, we are aware that additional accommodations need to be implemented. For these adjustments, we allocated an additional 20 million dollars for temporary classrooms. These short-term changes will require extra cost to provide equipment and manage utilities associated with these modifications.
Authorization

The Forum Building lacks the basic necessities a properly functioning class building possesses. It cannot properly accommodate the high volume of students that attend classes each day. Its insufficient technology and design creates a poor learning environment for both students and faculty. Penn State takes pride in superior academic performance, and we should do everything in our power to take the necessary steps to achieve these standards.

By completing this project, future generations at Penn State will greatly benefit. Through extensive research, we have found that out of a poll of over 100 students, 70% agreed that Forum is an issue that needs to be addressed. The negative comments we have received from students and their experience in Forum proves that the building is in dire need of renovation.

Forum does not compare to some of the other class buildings on campus. Therefore, it must be demolished and rebuilt to resemble model classrooms like the lecture hall 100 Thomas.

In addition to the surveys we conducted for students, we obtained opinions from Penn State’s Office of Physical Plant’s Assistant Director of Design and Construction, John Bechtel. He stated that the renovation of the Forum has been recognized as an issue on campus, but has not fit the budget yet. The $70 million dollar donation would best serve Penn State if allocated towards a project that benefitted education.

We ask that you grant us this opportunity, which will allow us to make a difference in the academic experience of Penn State students and professors. The renovation of the Forum is a significant issue that needs to be addressed immediately and requires our assistance. By granting us permission to proceed with this project, we are confident the current and future Pennsylvania State University students and faculty will acquire a learning environment that ensures success.
Works Cited


Guernsey, Casey. "John R. Bechtel Forum Renovation Questions." E-mail interview. 4 Nov. 2015.


Appendix

English 202D- The Forum Building Reconstruction

* 1. Do you currently or have you in the past attended class in the Forum Building?
   - yes
   - no

* 2. Please rank your comfort experience attending class in Forum from 1-5 (1 being unpleasant and 5 being outstanding)
   - 1
   - 2
   - 3
   - 4
   - 5

* 3. Do you think the Forum Building provides an insufficient learning environment? (ex. it is uncomfortable and hard to pay attention in the classrooms)
   - yes
   - no
   - not sure

* 4. Do you think the Forum Building needs to be remodeled?
   - yes
   - no
   - not sure

5. If yes, briefly explain why.
Hi John,

Thank you so much for taking time out of your schedule to help my partner and I with our project.

I just have a couple of questions regarding the logistics of a possible renovation of the Forum Building to construct a building containing lecture halls similar to 100 Thomas:

1.) Approximately how much would it cost to demolish Forum and reconstruct a building containing lecture halls similar to 100 Thomas? Very difficult question to answer but I will give you a rough order of magnitude, let’s just say a range of $30 to $50 Million. With the lack of program definition it is impossible to put a number on it but I would expect a building to be in the range mentioned ($100,000 grf). I am also assuming the new building would provide more classroom space than the current Forum Building.

2.) Approximately how long would a project like this take? Typically a 1 year design phase with 18 months construction, so approximately 2.5 years from start of design to finished product.

3.) When would be the best time of year for this project to take place? From a construction perspective, best to start in early Spring so you are able to get it under roof prior to the start of the next Winter season.

4.) I realize many classes take place in Forum everyday. Where would these classes move to during the reconstruction of this building? We would attempt to find existing classrooms on campus or we may have to build a ‘swing space’ (temporary classrooms). Just like we did for the HUB Bookstore, modular trailers were constructed as a temporary space.

5.) In your opinion, does this seem like a feasible and necessary project? In my opinion, the Forum is functional. I enjoyed attending classes in this building (long ago). However, if the required maintenance is costly and if the building is not performing from an energy perspective, it may make sense to renovate or build a new building. More analysis is certainly required. Also, if the classrooms are unable to meet the needs of the faculty and students, this is the big driver for a future project.