

REINVENTING THE
SOUTH ALLEN STREET
Promenade



A proposal prepared for

HONOR 301: The Role of Knowledge in Society
Presidential Leadership Academy
The Pennsylvania State University

Ezra Gershanok
Zachary McKay
Michael Miller
Charles Ryan
Cory Steinle
William “Billy” Young

Under the supervision of
Peggy Johnson
Melissa Doberstein

TABLE OF CONTENTS

ACKNOWLEDGMENTS	4
EXECUTIVE SUMMARY	5
INTRODUCTION	8
Engaging	8
Safe	9
Inviting and Rich in Detail	10
Designed for “Lingering”	11
Interactive and Social	13
Unique	14
Accessible	16
Flexible	17
HISTORICAL LANDSCAPE	18
History of the Proposal	18
History of Pedestrian Malls	29
CASE STUDY: PEARL STREET	31
PROJECT CONSIDERATIONS	34
Relevant Stakeholders	34
Current Business Owners and Merchants	34
State College Community Members and Taxpayers	35
State College Borough Council	36
State College Community Organizers	36
Penn State University	37
Pennsylvania Department of Transportation	37
Private Foundations and Donors	38
Parking Analysis	38
Parking Concerns	39
Acknowledgment of Parking Trends	40
Case Studies	40
Legal and Zoning Issues	42
“Town and Gown” Analysis	46
BENCHMARKING	49
Logistics	51

Measuring Success	54
POLITICAL IMPLICATIONS	56
Electoral Considerations	56
Current Composition of the Borough Council	56
Direct Impact of and Problems With the 2019 State College Primary Election	57
Solutions to the Primary Problem	59
FINANCIAL ANALYSIS AND METHODOLOGY	62
Considerations	62
Budgetary and Fiscal Requirements	63
Materials, Labor, and Service Costs	63
Project Funding	67
Methodology for the Incurrence of Municipal Debt	70
Methodology for Recurring Income Through a Managed Fund	72
Corporate Valuation	74
Scenario Breakdown and Sensitivity Analysis	76
CONCLUSION	77
REFERENCES	80
APPENDIX	86

ACKNOWLEDGMENTS

Foremost, the proposal team would like to thank the wonderful University faculty members, University staff, and community advocates who have aided in the completion of the proposal.

Special thanks to Councilman Dan Murphy, for providing the team with the local framework to begin the project as well as for providing suggestions in regard to the communication of community officials and changemakers.

Special thanks to Brad Groznik for “pitching” his plan to close South Allen Street. The team looks forward to the culmination of his efforts and will advocate on his behalf.

Finally, the team would like to thank the Presidential Leadership Academy for affording its members the opportunity to develop a substantive policy with long-term implications for the local community. The team fervently believes in the impact of integrating ideas, people, and places and is convicted that the following proposal embodies that exact spirit.

*“If you plan cities for cars and traffic, you get cars and traffic.
If you plan for people and places, you get people and places.”*

– Fred Kent, Project for Public Spaces

EXECUTIVE SUMMARY

The proposal, derived largely from the “South Allen Street Promenade” design concept featured in the 2013 State College Downtown Master Plan, provides the social, ecological, and financial framework for renovating the bustling asphalt street into a vibrant pedestrian site and advancing support for the idea in local legislatures. To become a reality, the proposal team has carefully examined comparable projects as a vehicle of encouraging the State College Borough Council to approve the promenade for statutory funding in the Capital Improvement Plan. In order to achieve such, the policy revolves around the notion of social and community sustainability, in which the success of the transformation is dependent on the street’s ability to create memorable travel experiences for current and future generations alike.

Throughout the proposal, there exists a theme of bolstering social sustainability by transforming public space. The UN Sustainable Development Goals, colloquially referred to as “SDGs,” served as a framework from which the policy was constructed. The implementation of the project would most directly impact sustainability by contributing towards Goal 11: Sustainable Cities and Communities, Goal 8: Decent Work and Economic Growth, and Goal 3: Good Health and Well-Being, given that it involves the transformation of space into a usable community resource, the enhancement of economic engagement with local businesses, and the promotion of physical interaction in an outdoor space. Indirectly, the policy allows for a communal learning space for students of various ages and works toward developing community-centered, convivial infrastructure, which collaterally impacts Goal 4: Quality Education and Goal 9: Industry, Innovation, and Infrastructure.

The pedestrian mall prides itself on sleek and adaptable infrastructure. The street, therefore, may be flexibly opened or closed. While several parking spots will be eliminated, widening the sidewalks on either side of South Allen enables residents and visitors to congregate and permit street vendors to contribute to local commerce and the general State College economy. The Borough, nonetheless, has a social responsibility to ensure the safety and family-friendliness of the promenade ecosystem and is thus encouraged to license property from the street to local businesses in addition to enforcing liquor license extensions. The legality of the proposal, subsequently, has been assessed to ensure that the plan complies with local zoning regulations. Indeed, the project involves the collaboration by a number of University and residential stakeholders in adherence to UN Sustainable Development Goal 17.

The overall approval process for the project, as with most Borough projects of this size and nature, falls under the purview of the State College Borough Council. Thus, this report includes important considerations of the political implications which factor into the current composition of the Council, the future outlook the Council may have on the project following the 2019 Primary Election, and the ways which advocates for our proposal can ensure the Council's timely consideration and implementation of our proposed transformation.

Lastly, the project's success relies on its financial longevity. Given that the promenade is not a temporary feature, the project's projected future cash flows include one-time material expenses in addition to recurring labor and service costs and importantly reflect University-related, federal, and state revenue streams. The profitability of the project can immensely be improved by issuing municipal debt and managing an internal foundation fund. Using a weighted three-scenario analysis, the pedestrian plaza will require a \$10.21 million

initial capital investment. The proposal team, in short, hopes that future local decision makers will consider and consequently utilize the following well-researched environmental, political, logistical, and budgetary suggestions when determining the eligibility and priority of the project.

INTRODUCTION

Streets are paramount to the structure of modern society, but are too often viewed in purely transactional terms. Residents can forget the capacity they hold to form connections between people and establish a sense of community. The Project for Public Spaces, a nonprofit organization geared towards “helping people create and sustain public spaces that build stronger communities,” developed eight guiding principles for developing streets as places (About n.d). These principles, while broad in scope, hold significant value in that they contextualize how public spaces can fit within a community’s economic and social development goals.

Engaging

At a most basic level, popular community spaces provide people with reasons to spend time within them. Whether through culinary, retail experiences, or family experiences, the most successful places succeed in providing a holistic experience that taps into the interpersonal, historical, and architectural characteristics of the surrounding environment. The Project for Public Spaces has developed the “Power of 10,” which states that a place thrives when people have at least ten reasons to be there, ranging from “a place to sit, playgrounds to enjoy, art to touch, music to hear, food to eat, [and] history to experiences and people to meet” (Power of 10+ PBS). These experiences should be curated by and for the community so that stakeholders are invested in the continued development of the space. Although there are several open spaces in Downtown State College—Sidney Friedman Park, Bill Welch Memorial Plaza, and MLK, Jr. Plaza, to name a few—there is no true “town square.” A pedestrian plaza could serve this purpose by providing a space for businesses, local authorities, the university, and citizens to organize community building activities.



Figure 1. Historic 25th Street – Ogden, Utah

Photo courtesy of *Historic 25th Street Association*.

Safe

According to the Project for Public Spaces, “vehicular speed is the number one factor contributing to the higher likelihood of deaths and serious injuries in car crashes” (A Street You Go To).

One way to avoid hazard is to design streets with the intention of slowing the average speed of vehicles, which will make streets more appealing to pedestrians. These changes will also have a beneficial impact on pedestrians’ experiences with the street: if cars move slower and pedestrians are consequently more comfortable, there will be more “eyes on the street,” which will improve the safety of the space. As Jane Jacobs, an early champion of urban planning wrote, “the safety of a street works best [...] most casually, and with least frequent hostility [...]

precisely when people are using and most enjoying the streets voluntarily” (A Street You Go To). With the constant flow of students throughout the week and the mass influx of visitors on weekends, there is significant need to make Downtown State College safer and more inclusive for all forms of transportation.



Figure 2. Avenue 16 de Septiembre – Mexico City, Mexico

Photo courtesy of *Institute for Transportation and Development Policy*.

Inviting and Rich in Detail

Victor Dover, the founding principal of Dover, Kohl & Partners, has emphasized that “great streets feel like a public, outdoor room” (A Street You Go To).

While “buildings help shape the edges of a streets room,” it is the “architectural details, art, landscaping, signage, and [...] people” that “make a street feel interesting and captivate the eye” (A Street You Go To). In retrofitting streets as public spaces, communities should make use

of art, architecture, and landscaping in order to enhance the experience of those who walk through it. There are many resources within the State College for developing interesting designs and programs for Downtown State College such as local musical artists and community members, the Palmer Museum of Art, Penn State students, and the Centre County Festival of the Arts. All of these resources should be included in the development of new community spaces.



Figure 3. Larimer Square - Denver, Colorado

Photo courtesy of Geoff Livingston on *Flickr*.

Designed for “Lingering”

“The desire to go ‘through’ a place must be balanced with the desire to go ‘to’ a place”
(Lynne.Karago).

A street’s functionality as a public space hinges on its capacity to maintain the presence of the public within it. It is difficult to classify the success of a space in increasing pedestrians linger-time, but it has been accomplished in the past. In a 2004 report, the City of Melbourne, Australia found that “after a decade of focusing on creating more public spaces and streets ‘with

staying options' in the city center, there was a 98% increase in pedestrian traffic and the number of people lingering in the area tripled" (A Street You Go To). A space's ability to foster a consistent presence of pedestrians is vital to its success as both a central town hub and an ambassador for local businesses surrounding it. If more people linger within the space, more people will be drawn to it, which will increase their exposure to the shops and restaurants within the area. Increasing the downtown "linger time" of students, local community members, and visitors would be vital to the longevity and vibrancy of the promenade. Because many stakeholders in the community, from students and young professionals to families and retirees, have different interests in Downtown State College, a "public square" should serve as a place of unification and community engagement for all individuals involved.



Figure 4. Española Way - Miami, Florida

Photo courtesy of *Freepik*.

Interactive and Social

The main goal of transforming streets into public spaces is to facilitate interactions between people and the environments around them. William Whyte, a preeminent American urbanist, coined the term “triangulation” to describe how the physical characteristics of spaces and the activities within them can “create linkages between people in a public square” (*A Street You Go To*). Successful public spaces enhance human experience by engaging the senses and reminding residents to take note of and appreciate their surroundings.



Figure 5. 30th Street Station - The Porch - Philadelphia, Pennsylvania

Photo courtesy of *University City District*.



Figure 6. Promenade des Artistes - 21 Balançoires - Montréal, Canada

Photo courtesy of 21 *Balançoires* and Olivier Blouin.

Unique

As Mark Francis writes in Public Streets for Public Use, “a democratic street is one that reflects the history as well as the social and economic diversity of the larger neighborhood and city” (A Street You Go To).

The most successful town squares are vastly different from one another. Even though they may foster the same objectives of social interaction and community engagement, the strategies for achieving them vary greatly. The Borough should identify the stories, designs, and landmarks that make it unique and then incorporate them within the public space. Too often, cities fail to use their potential, and in lieu of “performing like a well-coordinated orchestra,” pedestrian malls are “often the result of property owners ‘playing their own instrument,’ out of sync and out of time, [and] making no concerted effort to harmonize with each other” (A Street

You Go To). The development of South Allen as a public square is inspiring because it serves as a breeding ground for citizen, government, and business cooperation towards a common goal of community engagement. Each stakeholder has a different relationship to the space and a different vision for what it should be, and although this confluence of agendas may become a barrier, it also serves as an opportunity to develop a space that is representative of the vast set of stories that have contributed to the birth and preservation of the place. The diversity of people in the State College Community—students, young professionals, retirees, families, high school students, University administrators, Penn State faculty, and visitors—reinforces the need for the collective development of a downtown “town square.” Each set of interests should be represented in the design and planning process and allowed the authority to make use of the space for the purpose of promoting meaningful interactions between community members.



Figure 7. South 9th Street - Philadelphia, Pennsylvania

Photo courtesy of Virginie Nadimi.

Accessible

Another function of a “public square” is to facilitate interactions between community members and serve as a “true meeting grounds of local society” (A Street You Go To).

For this goal to be realized, there again must be a diverse set of activities that is representative of the differing needs and constraints on people within the community. Part of this has to do with preserving or developing infrastructure so that the public square is made easily accessible by foot, bike, and transit. It also requires that the space is accessible and navigable to those with special needs, because “[when] a street is designed to be amenable to everyone” and includes “wheelchair or stroller accessibility,” it becomes “a place that welcomes and priorities vulnerable populations of our communities” (A Street You Go To).



Figure 7. 16th Street Mall - Denver, Colorado

Photo courtesy of Laura Gilmore on *Flickr*.

Flexible

South Allen should not be static in its functionality. The State College community's needs and priorities vary across time; therefore, it is important that the promenade stores the capacity to adapt to evolving residential and local government goals. This can be achieved by committing to create "a flexible [portion of the] street that can more easily be used for markets, shows, play streets, and local celebrations," all of which may be coupled with additional artistic and design projects (A Street You Go To). The public square should exist to serve the public and be structured both in terms of its physical capacity and the political forces surrounding it in a manner that invites, rather than discourages, the public to take advantage of its resources. While the mall must be open to traffic in the mornings in order to accommodate local business delivery, it also should be adaptable for community events such as concerts, weeknight bocce ball, and even poetry readings.

HISTORICAL LANDSCAPE

History of the Proposal

The basis for our proposal to transform the 100 block of Allen Street into a versatile pedestrian plaza with accommodations for both cars and pedestrians is the 2013 Downtown Master Plan. Although the debate over this issue goes back decades, the 2013 plan was the first, and to this day the most thorough, communication of how the Allen Street Plaza fits into State College's broader economic development goals.

In 2013, the State College Borough Council, in coordination with Pennsylvania State University and the Downtown Improvement District, developed the Downtown Master Plan. The plan, which builds off of the goals set in the Downtown Vision and Strategic Plan for State College adopted in 2002, "outlines five themes for improving Downtown State College: Marketing the District, Connecting the District, Navigating the District, living in the District, and Managing the District" (State College Downtown). The master plan "provides a framework to guide growth and change for a community," offering recommendations for attracting private investment, developing partnerships with private businesses, and renovating key areas of downtown State College, most notably, transforming the 100 block of Allen Street into a pedestrian plaza (State College Downtown). The master plan has three goals:

1. "Realize and market the downtown's unique identify and distinct role within the larger community, its development potential for a sustainable future and specific implementation strategies that will achieve this vision" (p. 10).
2. "Establish the framework to create a most memorable attractive and comfortable downtown core that aesthetically united the College Avenue Corridor" (p. 10).

3. “Consider public and private sector improvements that can attract a diverse range of users in order to expand the businesses and services that can be supported in downtown.” (p. 10)

The master plan is divided into six sections, each of which represents alternative—although not mutually exclusive—strategies for achieving the goals laid out above:

1. “Design and Placemaking Strategies: Includes placemaking and streetscape improvements, public spaces, public art and downtown branding strategies” (p. 8).
2. “Utilities: Includes existing infrastructure and opportunities for updated and green infrastructure in conjunction with other strategies” (p. 8)
3. “Multi-modal Transportation and Circulation: Includes vehicular issues and parking, walkability, alternative transportation and signage” (p. 8)
4. “Town-Gown Interface: Includes physical and functional relationships between downtown and the campus, uniform design standards for both sides of College Avenue and redevelopment opportunities” (p. 8)
5. “Downtown Uses and Development Opportunities: Includes development/redevelopment potential, land use and seasonal tourism/event uses” (p. 8)
6. “Community sustainability issues including diversity of housing stock, inclusionary housing, financial impact of students and special events and environmental solutions.” (p. 8)

In 2012, the planning and design team for the Downtown Master Plan engaged stakeholders across the State College community to evaluate the state of the Borough. The summary of stakeholder feedback within the master plan points to the tough economic decisions

State College will have to make regarding the direction of the town's development. The team found that "Overall impressions of downtown are generally positive; however, stakeholders have indicated many opportunities for improvements are critical if there is a desire for downtown to appeal to more than simply the student population" (State College Downtown, p. 14). Although State College as is will continue to appeal to alumni and visitors, the feedback in the master plan demonstrates that "there is a strong desire to balance downtown with a variety of housing and businesses that would attract young professionals, seniors, and visitors" in the long term (State College Downtown, p. 14). The other two main concerns raised relate to mobility and branding. In terms of mobility, "Downtown State College continues to emerge as a multimodal community where transportation needs are by way of car, bus, bicycle, and pedestrian modes of travel," placing pressure on the borough to develop new infrastructure to safely facilitate the use of different modes of transportation in the downtown (State College Downtown, p. 15). These concerns have led to new conversations about designating Calder Way and/or Allen Street as pedestrian only zones. In addition to concerns about mobility, "many stakeholders have identified that there is a need for a strong downtown brand; one that celebrates the quintessential 'town-gown' environment as well as downtown's connection to the surrounding natural amenities" (State College Downtown, p. 15). The purpose of developing a downtown brand laid out in the master plan are two-fold: First, "The downtown brand needs to be something that Penn State can use to help 'sell' downtown to prospective students and one that responds to the Penn State alumni who are the largest base of tourism" (State College Downtown, p. 15). And second, the downtown brand should serve to re-engage the local community with the downtown and "help address unfavorable stereotypes" (State College Downtown, p. 15). While these

stereotypes are not elaborated on, there is significant frustration with student-domination of downtown that should be addressed.

Section 3 of the master plan, *The Vision: Looking Forward*, outlines the best practices from great places, the sustainability goals associated with the master plan, and explores in more detail the strategies for cultivating the State College brand and making the downtown more pedestrian friendly. The vision statement is as follows:

Downtown State College will continue to evolve into a world-class college town district that reflects the dynamic town-gown relationship between a major university and a vibrant commercial district. Downtown will be a place where local citizens, regional residents, national and international visitors, faculty, staff and students will find appealing, exciting and diverse offerings. Downtown State College will also emerge as a district that embraces sustainability and offers shopping, dining, entertainment, culture, the arts amidst a variety of living options and places to work. (State College Downtown, p. 63)

The policy strategies for realizing this vision are structured based on the five themes of the master plan: Marketing the District, Connecting the District, Navigating the District, Living in the District, and Managing the District. This paper, which concerns the development of the Allen Street Promenade, is most concerned with Theme 3, which seeks to create a “comfortable, cohesive, and attractive downtown” (State College Downtown, p. 95). It is our belief that the establishment of a public realm is a vital first step to the development of the other goals of the

master plan and that before State College moves forward with other developments, it should thoroughly explore the Allen Street Promenade as a future “public square.” Developing this project, and exploring its social and economic impacts, would serve as an important first step in developing a more concrete vision of how State College can strike a proper balance between cars and pedestrians, students and the local community, and Penn State and its own identity. In the next section, we will run through the Borough’s existing plans for the Promenade and then we will propose our proposal and financial evaluation.

The Allen Street Promenade, listed as Focus Project 1 in the downtown master plan, would require the reinforcement of the “100 block of Allen Street, including the intersection with College Avenue, as the center of downtown and establish it as downtown’s ‘town square’” (Downtown Master Plan, p. 103). The project would be implemented as part of the master plan’s Catalyst project through cooperation with the Borough of State College, Downtown Improvement District, Downtown Businesses, and Property Owners. The concept for the plan is outlined as such:

The overall concept for the Allen Street Promenade supports recommendations from previous master planning efforts to treat this block of Allen Street as a ‘great place’—one that clearly portrays itself as being the ‘town square’ for State College. It is important to note that the proposal is not to designate this block of Allen Street as a ‘pedestrian mall’—a space that is permanently closed to automobiles. Rather, the design for this block of Allen Street allows great flexibility in how the block functions. Most of the time, the block will function as

it currently does with two-way traffic and on-street parking. Other times, it could be closed to accommodate events or increased volumes of pedestrian traffic. It could be closed entirely (College Avenue to Beaver Avenue) or in segments (College Avenue to Calder Way or Calder Way to Beaver Avenue). (Downtown Master Plan, p. 103)

At first, the block would remain as it is, with closures occurring a few times over year. Slowly, over time, the Borough and Downtown Business Improvement District would experiment with more permanent closures with specific programming.



The space could be used for community events that have proved successful in the past. Examples include: “Lunch ‘n’ Learn” and “Lunch Break.”

Photo courtesy of *State College Downtown Master Plan*

Throughout this process, the Borough would add design enhancements to the block. These would include leveling the curb to create a “flush paved surface of predominantly brick,” designating different parking and pedestrian-throughway zones defined by “bollards, planters,

street trees, ornamental lighting and pavement markings” (Downtown Master Plan, p. 103). In addition, “Electrical service and water hook-ups will also be provided to accommodate performance venues” (Downtown Master Plan, p. 104). Although plans call for the street to remain open to traffic most of the time, the design enhancements and programming are intended to make it “feel like a space where pedestrians are the primary user and vehicles are secondary users” (Downtown Master Plan, p. 104).

The master plan calls for the construction of “kiosks, signage, and banners to reinforce the downtown community brand, bicycle accommodations and public art” which falls in line with Themes one, two, and three of the master plans (Downtown Master Plan, p. 104). An important consideration addressed in the master plan is ensuring that the visibility of the Allen Street Gate and Pattee Mall are not disturbed: “Earlier master plans suggested overhead ‘string lights’ as a way to further enliven the street. While this would certainly enhance the atmosphere of the street, it is important to maintain the view to the Allen Street gates and Pattee Mall and avoid overhead elements that would detract from this view” (Downtown Master Plan, p. 104). Concerns such as these demonstrate the importance of acting with caution in the construction of this project and its vast potential to establish a cohesive vision of downtown State College. Allen Street is the principle “source of orientation” for visitors and locals of the State College community, and this project should enhance its ‘placemaking’ power (Downtown Master Plan, p. 57).

The master plan also outlines potential uses for the space: “An additional early opportunity for this block is to experiment with ‘pop-up cafes’ or ‘parklets’ in place of some of the parking spaces. These would allow the expansion of the pedestrian zone in some areas

without having to close the street to vehicles and parking” (Downtown Master Plan, p. 104).

Parklets have a lot of potential in the transformation of Allen Street. They can serve to maximize the pedestrian experience within the plaza by providing spaces to eat and relax, but they also serve as a potential space for cooperation between the Borough and businesses. The success of the pedestrian plaza hinges on cooperation between local authorities, businesses, and community members to develop and manage the space. Parklets have the potential to connect all three stakeholders. For example, “In New York city, [parklets] are open to anyone and shared among businesses since they are located within the public right-of-way” (Downtown Master Plan, p. 104). In Frederick, Maryland, “individual businesses can obtain a permit to use the space for their businesses and patrons...provided there is unobstructed pedestrian access along the sidewalk” (Downtown Master Plan, p. 104).

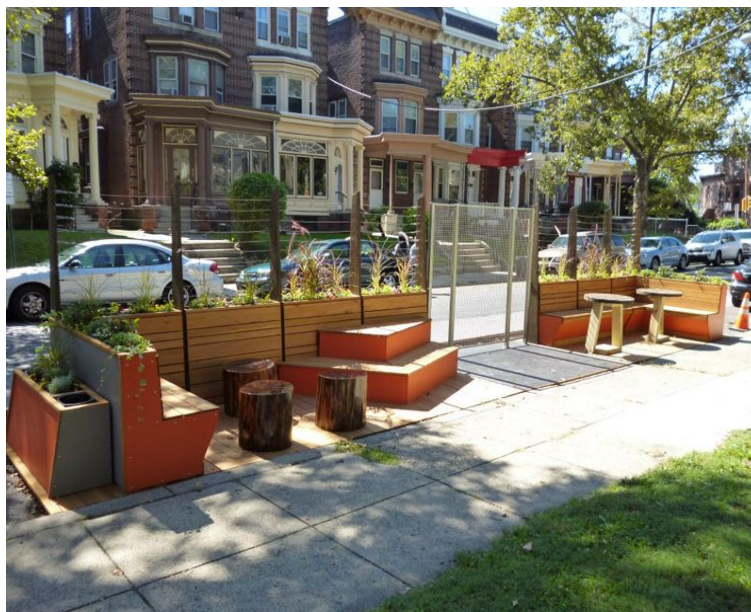


Figure 8. Philadelphia, Pennsylvania

Photo courtesy of *Contemporist.com*.



Figure 9. San Francisco, California

Courtesy of *Contemporist.com*.

The master plan also includes plans for using the reconstruction of Allen Street as an opportunity to develop more sustainable and innovative “stormwater management practices into the streetscape design” (Downtown Master Plan, p. 104). Specifically, “water from building downspouts might be directed to new interconnected tree planting pits or collected for irrigation of planter pots” (Downtown Master Plan, p. 104). The complete set of designs proposed in the master plan are included below:.

- A. Enlarged Bulb-Out and Bicycle Storage
- B. Brick Sidewalks; Bollards Between Sidewalks and Street
- C. Brick Paving in Street; Flush with Sidewalk Grade
- D. Brick Crosswalks at Calder Way
- E. Relocated or New Street Tree, Typ.
- F. Brick Paving Along Beaver Avenue to Match Existing Borough Standard Adjacent to Schlow Library
- G. Stamped Concrete Crosswalks to Match Treatment Along College Avenue; Center of Intersection Remains Asphalt
- H. Outdoor Seating/ Merchandise Display Opportunities
- I. "Pop-Up Cafes" or "Parklets" in Parallel Parking Zone; May Be Temporary or Permanent and May Rotate Locations

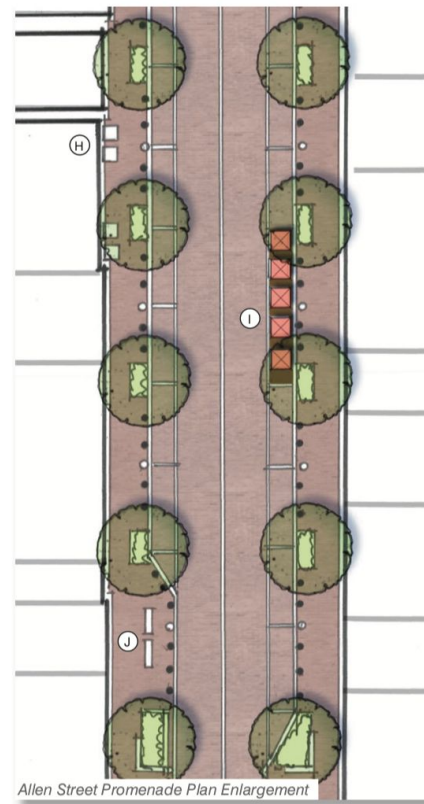
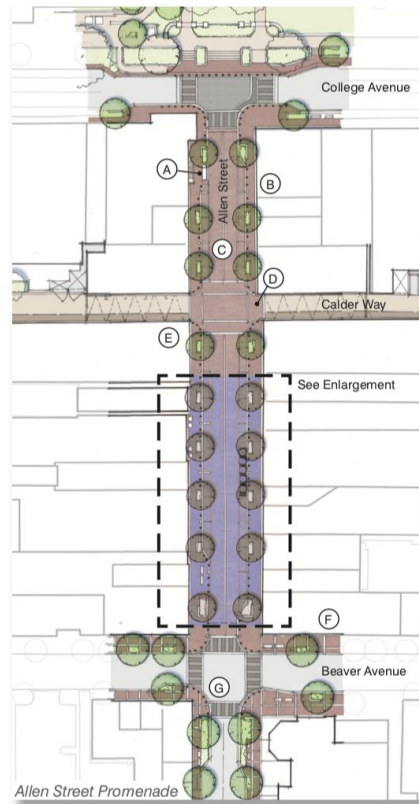
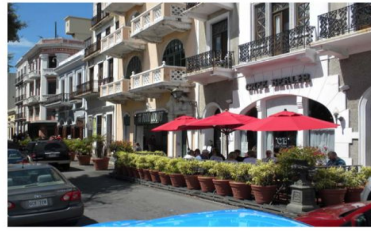


Figure 10. Courtesy of *State College Downtown Master Plan*.



"Pop-up cafes" or "parklets" utilize space typically devoted to parallel parking to expand the pedestrian environment of the street. These spaces can be temporary or permanent and have the flexibility to rotate locations so that businesses can share in the opportunity to service more clients. This strategy could be implemented on Allen Street to add activity and color to the street as well as offering outdoor gathering and/or dining spaces that do not currently exist downtown.

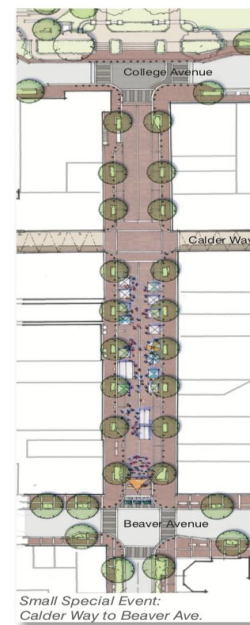
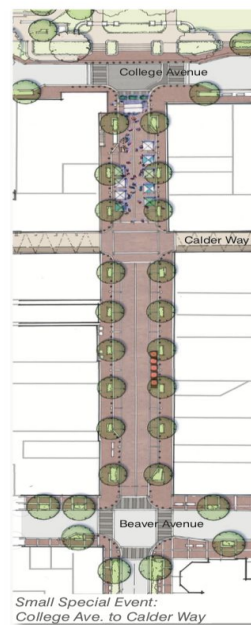
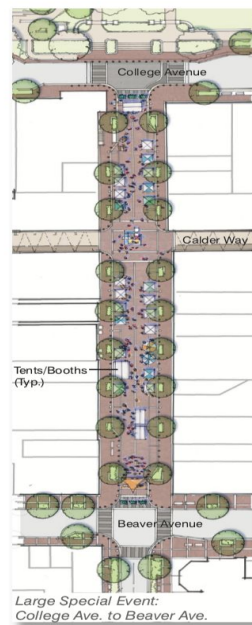
(Top left: Old San Juan, Puerto Rico; Bottom left: Baltimore, MD)

Large Special Event

- Performance Space at College Avenue and Beaver Avenue
- Activity Node at Calder Way
- Vendor Spaces and Outdoor Dining Located in Parallel Parking Zone

Small Special Event Options

- Performance Space at College Avenue or Beaver Avenue
- Vendor Spaces and Outdoor Dining Located in Parallel Parking Zone
- Intersection with Calder Way Remains Open to Allow for Vehicular Circulation



Figures 11 and 12. Courtesy of *State College Downtown Master Plan*.

History of Pedestrian Malls

Pedestrian malls have a troubled history in the United States. By looking at the rates of failure and the number of malls that have been reopened to traffic, it may seem as though developing Allen Street into a pedestrian promenade is one of worst projects the Borough could undertake. Indeed, 89% of pedestrian malls in the United States have failed, while only 11% have proved successful (Judge, C.E, p. 1). While these figures are bleak, there are two important factors to take into account. First, neither the Boroughs nor our proposal is for the permanent closure of the 100 block of Allen Street to vehicular traffic. And second, there are several characteristics that all successful pedestrian malls share, all of which are found in the State College community.

The contemporary understanding of the pedestrian mall was developed in the 1960s and 1970s as a “urban renewal” strategy to reignite economic development in cities’ urban core in response to the flight to the suburbs (Judge, C.E, p. 2). To fight against the rising popularity of the suburban mall, many cities sought to reestablish their urban cores as retail destinations. According to a report by Cole E. Judge, formerly of the Strong Cities, Strong Communities Downtown Fresno Partnership, “Approximately 200 pedestrian malls were installed during this time period” (Judge, C.E, p. 2). By 2008, according to the Downtown Memphis Commission, 85% of these malls had been reopened to vehicular traffic (Judge, C.E, p. 3). A lot of the reason these malls failed stems from the fact that there was not an existing tourist or retail base to sustain pedestrian traffic and enliven the spaces. They established retail destinations that were less convenient than their suburban counterparts and many of them failed as a result. As Tod Newcombe wrote in *Governing*, “many of the pedestrian malls were ill-planned and had little

purpose. Because so few people lived downtown, the malls became lifeless after work, attracting crime and loiterers, rather than large crowds” (Judge, C.E, p. 5). But, as noted above, the successful malls share a thread of common themes that when thought about in the context of State College, makes the proposal less daunting: “located near or attached to a hub such as a university, situated in close proximity to a beach, designed to be a short length in terms of blocks, in a town/city with a population under 100,000, and/or located in a major tourist location such as Las Vegas or New Orleans” (Judge, C.E, p. 1). Aside from close proximity to a beach, State College has all of these: State College is attached to a world-class public research institution, Penn State University, the permanent population, 42,430, is under the threshold of 100,000, and it is a tourist attraction for thousands of Penn State fans and alumni each year (Mayor’s Welcome). Another report conducted by the Community Land Use and Economics Group, LLC (CLUE) found that “in almost all instances, these successful malls are in downtowns housing or abutting universities, hospitals, or other large institutional users...whose students, employees, and visitors provide a significant concentration of daily customers for these districts’ businesses” (Judge, C.E, p. 3). There are several excellent models of successful pedestrian malls, which can serve as frameworks for guiding the project on Allen Street. Examples include: Pearl Street in Aspen, Colorado, the Downtown Mall in Charlottesville, Virginia, Seaport Village in San Diego, California, and Church Street Marketplace in Burlington, Vermont.

CASE STUDY: PEARL STREET



Figures 13, 14, and 15. Courtesy of *reStreets*.

Pearl Street has been central to Boulder’s economy and culture for more than 100 years. In the 1960s, Boulder experienced unprecedented population growth, and as crime rates grew and development surged on the city’s edges, a group of public officials, property owners, citizens, and business owners formed the Boulder Committee for the Exploration of Core Area Potential (CECAP) to develop strategies for reviving the urban core and preserving its historical integrity (*reStreets*). In 1967, the group, whose name changed to “Boulder Tomorrow,” began a downtown improvement plan with two phases, the first of which “sought support both in planning and fund-raising.” Phase One then “facilitated the move to Phase Two, a plan and proposal for Downtown development,” but the two plans were “eventually rejected due to cost” (*reStreets*). The second, however, was developed by the Boulder architectural firm Carl Worthington Partnership and “proposed a four-block pedestrian mall on Pearl Street” (*reStreets*).

With the support of Governor John Love and the passage of the Public Mall Act, which formally permitted cities to build pedestrian malls, in addition to a \$650,000 grant from the 1974 Community Housing and Development Act and \$1.2 million in revenue from property taxes, the Pearl Street Mall was finally built (*reStreets*). Ever since, the mall has remained as an important

tourist attraction and public space for the Boulder community. In addition to the mall's prime location adjacent to the University of Colorado, Boulder, its success has been characterized by cooperation between the City of Boulder, the Downtown Boulder Improvement District, and the public in crafting detailed architectural and design standards. One of the most important aspects of the mall as a community space is its dedication to the experience of children. Each of the mall's four blocks includes a "child-oriented amenity" (reStreets). As Richard Foy described the intention behind these little additions, "[the team] wanted to create a space that signaled to kids that it was a place to play and be animated" (reStreets). The "Boulders" provide an interesting, safe space for children to relax and play, which allows parents to feel more comfortable interacting with their surroundings. There are also four "whimsical statues of a snail, frog, rabbit, and beaver," all of which can be found in Boulder's surrounding environment. These statues, which are large enough to catch pedestrian attention but not too much so to be dangerous for children, rest upon a bed of gravel while a "pop-jet fountain" enable kids of all ages to come relax in the hot sun (reStreets). Originally, the mall had a large grassy area, but it was later removed because it "attracted college students who would lounge with 'shirts off' and play frisbee" and unfortunately "were deemed not good for business" (reStreets). The success of the Pearl Street Mall serves as a reference point for understanding how a collective vision of the public, local businesses, and local authorities can be used to effectively navigate the intricacies of developing and maintaining a pedestrian space. The unique design of Pearl Street, when considering its attention to high-quality family-friendly experiences in conjunction with challenges related to balancing business interests and its proximity to a large university, provides

a useful framework for understanding how to develop and adhere to a cohesive mission of what intrinsic value public spaces should serve.

PROJECT CONSIDERATIONS

Relevant Stakeholders

Current Business Owners and Merchants

According to 2012 U.S. Census Bureau data, State College is home to approximately 1,942 businesses and merchants throughout the town. A majority of these businesses are located in the downtown area with popular shops and restaurants concentrated along West College Avenue, East Beaver Avenue, South Allen Street, and East Calder Way. Currently, South Allen Street houses 21 occupied businesses with two vacancies, each located at the north and south corners of the east side of the street (Google, n.d.). These merchants are comprised of a combination of restaurants, bars, banks, and retail shops.

Because businesses are the primary occupants of real estate along both sides of South Allen Street, they are one of the most important stakeholders in the development of a semi-permanent promenade. The relevant interests of businesses along South Allen Street include the effect of closing the street to vehicular traffic on customer traffic and behavior, customer street parking, employee and owner street parking, delivery of goods, and the overall impact of rerouting traffic to adjacent streets. According to local community organizer Mr. Brad Groznik and Downtown State College Improvement District Executive Director Mr. Rob Schmidt, most business owners on South Allen are in favor of such a project and see the potential benefits of increased pedestrian traffic and the cultivation a convivial atmosphere surrounding their store. However, two businesses have expressed opposition to closing the street, including Rapid Transit Sports—a locally-owned sporting goods retailer whose owner has

historically been staunchly opposed to any such project, citing a disruption in customer access (Schmidt). For more details on the perspectives of affected businesses regarding the promenade proposal, see *Benchmarking*.

South Allen Street is a public street that is owned, maintained, and controlled by the Borough of State College. Because of this, the alteration of such a public roadway does not legally require the explicit consent of merchants and property owners who occupy space lining the street (Groznik). However, community organizers like Mr. Groznik have expressed that in planning community events that temporarily close all or a portion of South Allen Street, the Borough Council has requested he notify business owners of the planned street closure. The implementation of a flexible, semi-permanent promenade as proposed within this policy would necessitate a similar approval process (D. Murphy, personal interview, March 28, 2019).

State College Community Members and Taxpayers

United States Census Bureau data estimates the Borough of State College population at about 42,224 people. A college town by both origin and name, approximately 60% of State College residents are between the ages of 15 and 24 years old (U.S. Census Bureau). Due to State College's overwhelming student population, a majority of its residents only live within the Borough for eight months out of the year. For permanent residents, State College was ranked in 2018 as one of the top places to raise a family (Livability) and was called "one of the fastest growing, most educated, and safest college towns in America" (Klurman).

From every conversation with community members and organizers, there is a desire to design more permanent, community-oriented spaces within State College. The relevant interests of Borough community members and taxpayers include value added by a community-centered

pedestrian mall, the effect of developing a promenade on taxes levied, the effect of road closures on access to the downtown area, changes to parking access along South Allen Street, and the implications of the development of community projects like the South Allen Street Promenade on future proposals.

State College Borough Council

Because South Allen Street is a public thoroughway owned and operated by the Borough, the responsibility of logistically planning and funding the promenade falls upon the local government of State College. Although not as thorough and far-reaching as our proposal, the State College Downtown Master Plan does include a plan for a promenade along South Allen Street. The relevant interests of the Borough Council integrate a wide variety of other stakeholders, acting as the point of approval and oversight for any such project.

To set the plan in motion and allocate funding towards the South Allen Street Promenade, there would need to be a majority vote in favor of doing so by the Borough Council, first initiated by adding the item onto the Council agenda. For more information on the full approval process and other details relating to the Borough Council's role in implementing the promenade, see *Political Implications*.

State College Community Organizers

Within State College, there are several community members who are passionate about incorporating more shared, innovative spaces into the makeup of downtown and the surrounding area. Community organizers such as Brad Groznik, owner of a local public relations firm, have led the charge in formally proposing a move towards temporarily closing down South Allen

Street as a trial run to transform the space into more of a shared and convivial area. For more details on Brad's project, see *Benchmarking*.

Penn State University

Officially, Penn State University does not own any of the property, land, or roadway included in the implementation of a promenade on South Allen Street. However, the University still plays an influential role in helping this project become a reality. From ideating the vision to providing funding support, the University has a lot of latitude, and therefore power, in various aspects of the project.

After sitting down with Dr. Eric Barron, current President of Penn State, we learned that the University is interested in helping advocate for the project, and President Barron believes that this could be an opportunity for the University and the Borough to work together on improving an important aspect of community life (E. Barron, personal interview, April 9, 2019).

As perhaps the population that utilizes South Allen Street most, Penn State students are also stakeholders in this process. With the street being closed to vehicular traffic, students would have numerous opportunities to engage with one another and enjoy a shared community space with permanent residents and businesses lining the street.

Pennsylvania Department of Transportation

The Pennsylvania Department of Transportation, known as PennDOT, currently owns the rights to West College Avenue and East Beaver Avenue—the two streets that run perpendicular to South Allen Street. Because our proposal of a pedestrian mall would preclude vehicular traffic entering from or exiting to either of these public roadways, the State government would have to be consulted. For more information on this process, see *Legal and Zoning Issues*.

Private Foundations and Donors

Private entities are also interested in contributing to a project that could help revitalize and transform downtown State College. The John S. and James L. Knight Foundation, an American non-profit foundation dedicated to fostering "informed and engaged communities," has agreed to help fund Brad Groznik's plan for temporarily closing South Allen Street. The Centre Foundation is also involved in helping facilitating this project. For more information on the involvement of these private foundations, see *Benchmarking*.

Parking Analysis

Losing the 19 parking spots on South Allen Street would mean that the Borough would lose \$40,299 in revenue per year. This figure is substantial but it represents only 5.2 percent of total meter revenue.

Parking Spots Downtown	364
Revenue of parking per day	\$7
Meter days (excluding Sundays and Holidays)	303
Total revenue	\$772,044

Lost Allen Street Parking Spots	19
Revenue of parking per day	\$7
Meter days (exclude Sundays and Holidays)	303
Total lost revenue	\$40,299
Percentage of total revenue lost	5.2%

Potential ways to compensate for this loss in parking revenue include:

- 1) Levy taxes on the business on South Allen, like Champs, who can acquire outdoor seating on the sidewalk and closed off street.
- 2) Charge food trucks a fee to operate on the closed off street.
- 3) Increased tax revenue from added customers to local shops.

Parking Concerns

Through an interview with Rick Ward, Director of Parking in State College, the team discovered that parking would likely shift to side streets that do not see full parking capacity during all hours of the day. According to Ward: “If Allen Street becomes a pedestrian mall, I expect the parkers displaced to find parking in Borough garages or alternative on street spaces. Please keep in mind that businesses that operate on Allen Street rely on parking being available for their customers. Reducing the supply of parking will result in increase demand in an already crowded area of Downtown.”

However, there are plans to increase the parking capacity of downtown State College. State College Borough Councilman Dan Murphy shared with the team a plan to create a 500-800 space parking lot at the Days Inn, only 0.2 miles from South Atherton. The Days Inn parking facility will be a public private partnership adding parking to the downtown area that will generate revenue for both Days Inn and the Borough. This addition would more than absorb the lost parking from South Allen street.

Acknowledgment of Parking Trends

With the existence of businesses like Uber and Lyft, parking will continue to become less essential as more and more customers opt to be dropped off. Self-driving cars, which are expected to impact each and every American community within 10 years, will continue to expedite the reduced need for parking. Pedestrian malls will create more of a destination in our downtown area as people are already choosing to be dropped off rather than find a parking spot. Don Elliott, a leading expert on parking trends and the director of Clarion Associates in Denver, predicts that pedestrian spaces will be designed to maximize walking and shopping space. Drop off and pick up areas will mark the point where cars stop and walking begins. These self-driving cars will then park in garages further away or below ground which have less valuable real estate.

Case Studies

Some cities are already planning for this change. Mega-developer, Avalon Bay, in Los Angeles has begun work on an apartment development in the city's arts district with parking garages designed so that they can be converted into community space once parking demand diminishes. In Nashville Tennessee, the development company Brentwood has decided to build a smaller parking development because of the current decrease in demand from Uber and Lyft and the predictions on decreased future demand from self-driving cars. Lastly, Somerville Massachusetts collaborated with Audi's Urban Future initiative to design a parking garage that will cut needed parking space by 62 percent. Audi estimates the design will save \$100 million once it's finished. According to Don Elliot, "developers will start using the promise of AV and

driverless cars to realize net savings. It's not necessarily cheaper, but more space can be used for commercial or residential purposes.”¹

¹ Driverless Cars. *Curbed.com*. Retrieved from <https://www.curbed.com/2017/5/16/15644358/parking-real-estate-driverless-cars-urban-planning-development>.

Legal and Zoning Issues

To evaluate the legal considerations of such a project, we consulted multiple stakeholders including: Anne Messner, Senior Planner in the Borough of State College; Dan Murphy, Borough Councilperson; and Rob Schmidt, Executive Director of the State College Downtown Improvement District. Through these individuals, we obtained answers to questions including:

- Can bars include outdoor seating areas and serve liquor in the downtown promenade;
- Who exactly owns South Allen Street;
- Which laws and statutes govern the construction of a downtown promenade; and
- Who can bid on servicing such a project, and do they need to meet certain requirements as a public contractor?

Anne Messner provided several legal answers to these questions, while Dan Murphy and Rob Schmidt helped us understand exactly how we can leverage these resources and ideas to incentivize the construction of a downtown promenade.

The State of Pennsylvania considers most if not all of the sidewalks and streets in State College “public right of way” (A. Messner, personal communication, April 1, 2019). This means the Borough reserves the right to regulate the entirety of South Allen Street - minus its intersection with College Ave, regulated by PennDOT and considered a state highway - to its desire. In practice, this means the Borough need not obtain permission from any outside body or governmental institution to commence construction in a “public right of way” area. The Borough regulates virtually every street or alley between College and Beaver Avenue. The differences between “public right of way” areas and PennDOT regulated areas can be located in the map below.

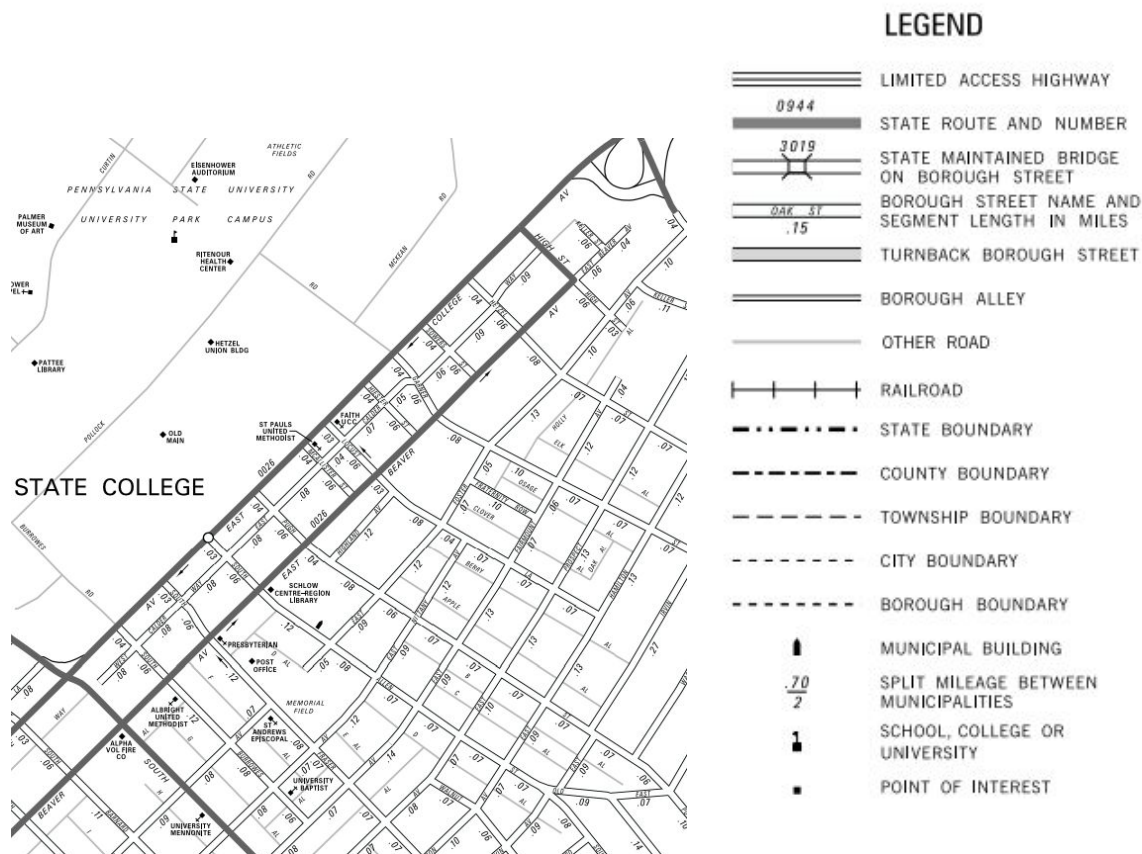


Figure 16.

It is important to distinguish that zoning laws only regulate the construction of projects in non-public right of way areas. Public right of way areas are not subject to zoning laws - only to local codes and regulations. However, a proposed change to the direction of the road - or of the closure of a road - would require a traffic impact study using accepted engineering practices reviewed and approved by the Borough and PennDOT (A. Messner, personal communication, April 1, 2019). Messner explained, “It is likely mitigation would have to be a part of the change in road network, and engineering/construction would be required to provide relief to convert Allen Street to a one-way street. This would include new signage, changing signal timing, and other things yet to be determined.” As it presently stands, no budget has been allocated to the

Planning and Zoning Divisions of the Borough of State College to investigate these required changes and their approximate cost to the project.

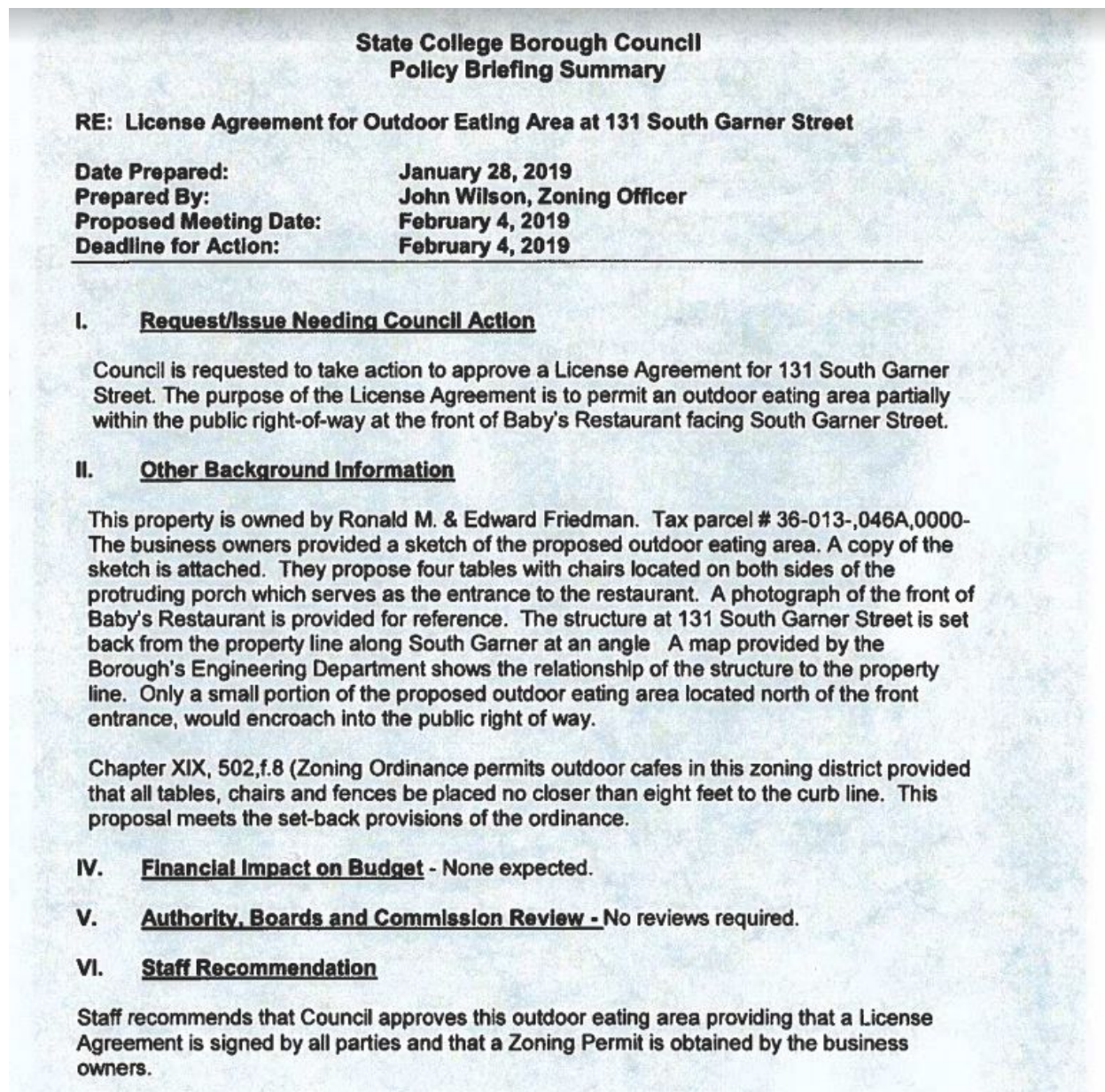


Figure 17.

Restaurants and bars can apply for public seating areas in a proposed South Allen Street Promenade. For example, Anne Messner provided an example of the request by Baby's Diner to

include an outdoor eating area in front of their restaurant. Because the eating area would include parts of the sidewalk and alleyways owned by the State College Borough, the Borough Council needs to approve such usage during one of their weekly meetings. Once a proposal is approved, the Borough would draft a licensing agreement to permit the business to use the area for the purposes outlined in that licensing agreement. Such agreements can be extended for as long or as little as the Borough would like to grant the business the space - thus, the Borough can use these licensing agreements to incentivize businesses to support the plan, and can loan out public seating areas to the firms to quell their concerns about through traffic and their business's profits (D. Murphy, personal interview, March 28, 2019). Additionally, bars with existing liquor sale permits can apply for extension licenses through the PA State Liquor Control Board (40 Pa. Code § 3.13) under § 7.21.B.1-2 for a small \$202 fee.

State College Borough owns all of South Allen Street and its sidewalks except for the intersection between South Allen Street and College Avenue. PennDOT regulates this intersection, so any provisions specific to this intersection would need approval through PennDOT. For example - if the Borough wished to close one lane of the intersection for deliveries in the morning, PennDOT would need to approve those closures (A. Messner, personal communication, April 1, 2019). Specifically, PennDOT considers College Avenue a state route, and is thus bound to Chapter 459 of the Pennsylvania Code: Occupancy of Highways by Utilities (Pa. Code 459.3). PennDOT does not require permit applications for modifying parts of existing facilities, but does require applications for any work that will significantly affect the highway. Presumably, the construction of a promenade on South Allen Street may disrupt the highway's

traffic. Once the Borough selects a contractor to construct the promenade, this contractor should submit the application pursuant to the relevant code.

The Borough would need to put the project, once approved and funded in the Capital Improvement Plan, out to bid for potential contractors (A. Messner, personal communication, April 1, 2019). The bidders must meet the requirements of the proposal to be considered. However, if federal funds helped to fund the project, Davis Bacon rules will apply for wage rates, as well as any or all engineering provisions required by the federal government through the National Traffic and Motor Vehicle Safety Act, among other statutes (Statutory Authorities, 2019). The Davis Bacon rules require contractors being compensated with federal funding received standardized wage rates (or higher) on an hourly basis.

“Town and Gown” Analysis

When considering the relevant stakeholders in the proposed transformation, it’s equally important to consider the relationship which exists between them—namely, the connection between the University and the Borough of State College itself. This bond, known universally as the “town and gown” relationship is formally defined by Cambridge Dictionary as “the university and the local people of a city, considered together.” Between Penn State and State College, this relationship has been inherently prominent since the founding of Farmer’s High School in 1855 (2019). In an effort to enhance greater unification between academic and municipal leaders, the nonprofit organization International Town and Gown Association (ITGA) was established in 2006 (IGTA History, 2019). Each year, a different university and its surrounding town or city is chosen to host an annual conference with the aim of “strengthening town/gown partnerships by providing a network of professionals and resources, identifying and

sharing promising practices, innovative solutions and professional development opportunities for municipal and university communities,” as stated in the IGTA’s mission statement (ITGA Mission and Vision, 2019). Seeing as this project relies heavily on the idea of a shared community-space for students and community members alike, the IGTA’s decision to host their 2019 ITGA conference at Penn State University and the Borough of State College serves as a clear indication that such collaboration is not only available, but the time to begin further enhancing the town and gown relationship is now. “The 2019 conference will give local government, municipal and higher education professionals the opportunity to learn about how the University and Borough collaborate to boost community engagement and safety, create a diverse and welcoming community, address key challenges, and expand local entrepreneurial efforts and other economic and job creation initiatives” (Penn State News, 2019). With positive words coming from Tom Fountaine—State College Borough manager—such as, “...State College is excited to co-host this annual national gathering of community and university leaders with our friends at Penn State...”, and from Eric Barron, President of Penn State University, such as “...we look forward to sharing promising town-gown practices, as well as learning from our peers about successes and solutions to the universal challenges we face in our efforts to grow thriving communities...”, a project which combines and utilizes to their full potential the interests of academic and Borough leaders alike would be a key centerpiece for presentation of collaboration to other town and gown relationships nationwide (Penn State News, 2019).

Furthermore, the students of Penn State are vocally invested in the continued development of the town and gown relationship between the university and the State College Borough, providing a sounding confirmation of other critical stakeholders’ approval to projects

and developments such as a joint operation to build a pedestrian walkway on South Allen Street. On March 20th, 2019, the University Park Undergraduate Association (UPUA), which serves as the student government for the undergraduate student body at Penn State's University Park Campus, passed Bill #16-13, entitled "Funding for Sponsorship for the 2019 International Town and Gown Association Conference", and in doing so represented the approximately 46,000 students in purchasing a \$2000 donor sponsorship with the intention of promoting the mission and vision of the ITGA (Hill, 2019). Sophomore Tom Dougherty III, who has previously served as the Borough Liaison on the UPUA's Committee on Governmental Affairs, served as the primary author of this legislation, and advocated for its passage on the grounds that doing so would be a sign of good faith toward strengthening the town and gown relationship (UPUA Documents, 2019). This student support is not only valuable to the town and gown relationship, but is critical to ensuring that all aforementioned stakeholders are both engaged in projects which require collaboration and are actively included in conversations about the planning of future developments.

BENCHMARKING

Several past efforts attempted to close South Allen Street for an extended period during the summer months. Central Pennsylvania Festival of the Arts (“Arts Fest”) already closes the street for several days during their annual festival (“2019 Sidewalk Sale and Festival Hours”). The event also closes to street traffic during Centre Gives, the International Town & Gown Conference in early May and at least four to five other events throughout the year (B. Groznik, personal communication, April 2, 2019).

Brad Groznik of *Groznik PR* recently secured funds to submit a proposal to the State College Borough Council to close Allen Street to vehicular traffic from May 6th to July 6th, a few days before the annual Central Pennsylvania Festival of the Arts (B. Groznik, personal interview, April 2, 2019). Brad originally intended the plan to the Borough Council during their meeting on April 15, 2019, but the proposal will be postponed until Fall 2019 because of concerns about water-pipeline projects that must be finished over the summer (R. Schmidt, personal interview, April 11, 2019). The funds come from a combination of the Knight Foundation and Centre Foundation, who provided a \$100,000 grant to close South Allen Street during the summer. Additionally, the State College Downtown Improvement District offered a financial partnership through providing their existing resources to Brad’s team.

If his proposal is accepted in the fall, his team will plan several prominent community-building events including food-truck fundraisers, Pop-Up Avenues, and several concerts. To promote these events, his team created a website - SummersOnAllen.com - and several social media accounts to document their programming. Additionally, the team plans to execute a comprehensive marketing strategy including: posterage, marketing, word-of-mouth,

and community promotion. The State College Downtown Improvement District (“DID”) agreed to keep the space clean throughout the course of the project (B. Groznik, personal interview, April 2, 2019).

On Tuesday, April 2nd three members of our team met with Brad to discuss the specifics of this project. At that time, Brad had not yet proposed the plan to the Borough Council - because the project is now on hold until the fall, we are unsure exactly when the Borough will formally hear and approve the closure of South Allen Street. For approval, Borough Council asked Brad to contact all of the business owners on South Allen Street.



Figure 18. Affected businesses include Allen Street Grill, Amazon Prime Store, The Animal Kingdom, Bill Pickle’s Tap Room, China Dragon, The Corner Room, Freeze Thaw Cycle, Jersey Mike’s Subs, Kondu, McLanahan's Downtown Market, Rapid Transit Sports, Panera Bread, Say Sushi, Saully Boys, Woodring’s Floral Gardens, and Zeno’s Pub.

Of all of these businesses, two expressed formidable opposition - Rapid Transit Sports and Woodring's Floral Gardens. Woodring's expressed specific opposition to the date of the closure to include Mother's Day, one of the most profitable days for their business (B. Groznik, personal interview, April 2, 2019). Many community stakeholders held a similar sentiment that Rapid Transit Sports has always opposed the closure—whether permanent or semi-permanent—of South Allen Street to pedestrian traffic because said closure would: prevent their owner from parking in front of their store;² prevent their older customer base from parking directly in front of their store; decrease sales generally (B. Groznik, personal interview, April 2, 2019; D. Murphy, personal interview, March 28, 2019). Most other businesses amicably expressed other concerns—particularly around delivery and logistics—but were open to closing the street for a two month trial period and benchmarking the success of a closure (B. Groznik, personal interview, April 2, 2019). According to Brad Groznik, the Borough only requires that most businesses approve of a proposal, and since most businesses did approve of Brad's plan, it appears a trial closure period of South Allen Street should occur in the next six months.

Logistics

The logistics of the closure prove most difficult in gaining rapport from local businesses. For example, Rapid Transit Sports' most often cites the lack of parking in front of their store as a major issue for their firm. Other retailers like McInahan's Downtown Market express concerns about their suppliers will be able to deliver the goods they purchase. Stores current unload deliveries right in front of their store - the delivery trucks are granted permission to park on South Allen Street during unloading.

² A quick and simple fix to this issue: provide said business owner with a designated parking spot on E Calder Way, right next to their store.

given delivery. We interviewed one such employee - he said unloading typically takes forty-five minutes to an hour, maximum (Chad, personal interview, April 8, 2019). When asked how much longer unloading would take if the delivery truck parked in one of the new designated loading zones, the employee estimated it would double the time. Assuming a \$10/hour wage for McInanahan's movers, this would only cost an additional \$30-\$40 per day.

Additionally, smaller deliveries could park on E Calder Way if Allen Street is not completely bricked and permits through traffic. These trucks for stores like The Animal Kingdom and Kondu would be parked for unloading in a similar spot than they already are. It seems most of the owners of these businesses understand this, and are willing to assume the slight labor cost increase from deliveries in exchange for increased foot traffic (B. Groznik, personal interview, April 2, 2019). Brad engages the major revenue businesses such as McInanahan's, the Corner Room, and Panera bread on delivery schedules that do not impede traffic in the area.

The plan addresses several other logistical concerns involving safety and parking. At each end of the street, large water drums (similar to those used during highway construction) will be placed at each end of the street (B. Groznik, personal interview, April 2, 2019). These jugs function to prevent vehicles from entering the promenade area, and are also used during Arts Fest. As for parking, Brad is confident that community members can easily access the promenade and its events. The trial period, originally in the summer months, easily addressed this problem because students had left State College and more street parking on College and Beaver Avenues will be readily available. However, if the project's trial period would move to the fall as now expected (R. Schmidt, personal interview, April 11, 2019), parking is readily

available in both the Pugh Street and Fraser Street parking garages. Located only 200 meters in either direction from South Allen Street, these garages provide realistic parking options for those seeking to enjoy the community events, concerts, and vendors on South Allen Street throughout the trial.

Measuring Success

Measuring the success of this project is extremely difficult without full and honest cooperation from the business owners. Organizations in the community have previously secured financial records from these businesses to better understand their operating model and profit-potential, but we've been warned that our own efforts to obtain these records will be futile and met with hostility (R. Schmidt, personal interview, April 11, 2019). Accordingly, Brad plans to survey the business owners after the project asking questions including: did you make more profits this summer or last summer? What were your total revenues this summer? What were your total costs? Did you think our project helped or hurt your business? Why? (B. Groznik, personal interview, April 2, 2019). Additionally, Brad's team will record attendance at each of their community events, and issue several public climate surveys through their website and through other promotional means to better understand public opinion and consensus on the closure of South Allen Street (B. Groznik, personal interview, April 2, 2019).

Our team recommends additional, tangible metrics that should be calculated and recorded throughout the trial period. First, if there is any way to measure the frequency of parking in the street parking spots on College and Beaver Avenues immediately adjacent to South Allen Street, as well as comparing the frequency of parking at the Pugh and Fraser Parking Garages, this may provide insights quelling the parking concerns raised by opponents of the project. Second, if cost

and revenues records could be obtained from the trial period and the same months in the year prior, that would be valuable - such data allows proponents of the promenade to draw direct causal inferences between the closure of the street and a business's financial well-being. This data should be aggregated and visualized to better understand the quantitative impacts of such a proposal - doing so will allow concerns about the economic and community impacts of the promenade to be addressed.

POLITICAL IMPLICATIONS

Electoral Considerations

As this plan currently exists in the State College Borough Master Plan, and would culminate in a construction project within the heart of its constituency in downtown State College, the final decision to fund the promenade in the Capital Improvement Project falls to the State College Borough Council. It is here that the project will either see its approval or its end. Therefore, it is logical and ultimately necessary to consider the political avenues by which the project will see its successful creation, as well as the barriers to its implementation which can be addressed at the present time, all with regard to the agenda of the State College Borough Council.

Current Composition of the Borough Council

A collection of seven voting members, along with the Mayor of State College, make up the general composition of the Borough Council. Together, these seven elected officials set the course for all of State College by voting on construction projects, policy changes, and zoning decisions. These elected officials include Jesse Barlow, David Brown, Janet Engeman, Catherine Dauler, Theresa Lafer, Dan Murphy, and Evan Myers, in addition to Don Hahn, who serves as the Borough's mayor.

These officers serve terms of four years, with local elections taking place every year in-between presidential and midterm election years, also known as off-years. As the Council is not evenly split, the municipal elections rotate the number of seats opening up for election every two years. For example, one off-year would see the vacancy of four seats, while the next

municipal election two years later would see the vacancy of three in addition to the mayoral race. As the 2017 Municipal Elections served as the latter example, in which Mayor Don Hahn was elected in addition to three Borough Council members, the 2019 General Election will see the election of four posts. Lastly, it is important to recognize that Council members have a term limit of three terms in office.

Direct Impact of and Problems With the 2019 State College Primary Election

Three current Council members—Jesse Barlow, David Brown, and Janet Engeman—will seek re-election to their seats; Catherine Dauler will not due to her terms of service now reaching the aforementioned term limit. Other candidates running include Peter Marshall, who previously served as the former Borough manager; Deanna Behring, who serves as Assistant Dean and Director of International Programs at Penn State’s College of Agricultural Sciences; Lynn Herman, who previously served as a Pennsylvania State Representative; and current Penn State University students Jackson Fitzgerald (senior) and Tom Dougherty III (sophomore). Of these candidates, Lynn Herman is running as the sole Republican in a field of Democratic Borough Council candidates.

Conversations with current Council member Dan Murphy have led our team to believe that this proposed promenade, as it currently stands in the Master Plan, would be voted down with a vote of 4-3 (D. Murphy, personal interview, March 28, 2019). These votes, we were told, are considered hypothetically “hardlined”, meaning there would be no budging of any thought on the subject one way or another in the minds of any Council member. Fortunately however, conversations with candidates running to fill the four opening Council seats yielded very promising results with regard to their stance on the proposal should they find themselves elected

to the Council. In fact, every candidate our team has spoken with has given positive feedback and shown excitement in passing the project; candidates our team spoke with on this project include Deanna Behring, Tom Dougherty III, and Jackson Fitzgerald.

Furthermore, the municipal elections historically seen in the State College Borough are not competitive races between Democratic and Republican candidates, as the majority of all State College voting precincts are registered with the Democratic Party—the largest of these majorities totaling 76% registered Democratic voters in the SC North precinct during the 2017 Municipal Primary Election (Election Results, 2017). Accounting for this, Republican candidates have historically registered on both the Democratic and Republican ballot (also known as cross-filing) during the primary election in an effort to achieve the amount of votes needed to win the May Municipal Election and to be included as one of four names on the ballot in the November General Election. In fact, the last year a Republican candidate who did not cross-file on both party's ticket won a seat on the Borough Council was 2009, in which Charles Gable (R) trailed behind three Democratic front-runners by a gap of 877 votes. One could hypothesize that this feat was made possible because there were only three Democratic candidates running for seats during that election year.

Instead, candidates often try to differentiate themselves from other candidates on a scale of student-friendliness, which is generally weighted heavily by the Penn State student body. In the past, this scale has determined by student advocacy groups and student-led political action committees such as BugPAC, which helped Council Members Dan Murphy (D) and Evan Myers (D) with their “Get Out the Vote” (GOTV) efforts to secure their seats in the 2017 Primary and General Elections. Student-friendly candidates—or, pro-student advocates, as written on the

BugPAC website—are candidates who “respect and value all residents, students, young professionals, and long-term residents alike”, and who would generally be more receptive to the ideas and concerns of Penn State students, including this very proposal (BugPAC, 2019).

The issue with this system, however, lies with the fact that the majority of the largest voting base for student-friendly candidates—students—leave for the summer weeks before the May Primary Elections are held, thus essentially leaving the decision of who appears on the November ballot up to full-time residents who do not necessarily have as large an interest in the student-friendliness of Borough Council candidates as students do. For example, this year’s Primary Election, which consists of the Municipal Election as well as the Special Election to fill the vacancy left by Rep. Tom Marino (R) in Pennsylvania’s 12th district, takes place on May 21st, 2019, while finals week ends (and the majority of students subsequently leave) on May 3rd, 2019. For this reason, many students fail to turn out and vote during the primaries, often resulting in plummeting percentages of overall voter turnout, as evidenced by the 22% voter turnout in the 2017 Municipal Primary Election (Election Results, 2017).

Solutions to the Primary Problem

In an effort to fix this systematic problem, an advocacy campaign to the Centre County Board of Elections was created with the goal of establishing an early voting station—the first in Pennsylvania’s history—to operate in the HUB-Robeson Center before students leave for the summer. This request was denied by the Board (Paez, 2019). Other attempts to solve this issue include those made by the University Park Undergraduate Association (UPUA)—Penn State’s undergraduate student government—in their overwhelming passage and support of Resolution #02-14, “Establishment of PSU Votes Local 2019” (UPUA Resolution #02-14, Appendix). This

legislation created a three-day advocacy campaign which encouraged students to apply for an absentee ballot if they were registered in State College but would not be in town to physically vote on May 21st. Furthermore, the legislation created and the UPUA hosted a Borough Council candidate “town hall debate” on Penn State’s campus with the aim of increasing students’ engagement and interest in the Primary Municipal Election. All candidates were invited to the debate, and all but Janet Engeman and Lynn Herman were in attendance. Ms. Engleman could not attend due to a prior commitment, and Mr. Herman did not respond to his email invitation.

Yet, even if efforts to increase student voter turnout in the Primary Election prove successful and so-called student-friendly candidates are elected to the Borough Council, there is no way to guarantee that this proposal makes its way to the Agenda of a Borough Council meeting on their own good will. In the event of this situation, in which the integrity of the student-friendliness scale has proven tipped, and our new Council members refuse to meet and discuss the proposed promenade, a clause in Article V, Section 502 of the State College Home Rule Charter states that when a petition containing at least 2% of the electors voting in the “most recent municipal election”, and which requests “that Council consider and take action on the subject matter of the petition”, is presented to the Council, it becomes the duty of the Council to “place the subject matter thereof on its agenda for a regular or special meeting taking place within two months after receipt of the petition” (State College Home Rule Charter, 1973). This meeting would then, in accordance with this rule, be the required date the Council consider and take action on the subject matter petitioned for.

In the event of apparent inaction by the Council to move forward with their consideration of this proposal on their own accord, our team will create an advocacy campaign, or will utilize

the resources of an existing advocacy group, to garner the signatures necessary for a petition in support of adding this policy proposal to the Borough Council's agenda. Using statistics from the 2017 Municipal Election (the most recent Municipal Election to date), the advocacy campaign will need to gather approximately 80 signatures of students and residents who voted in the 2017 election to reach the required 2% of approximately 4,000 voters in that election, and to ensure that the Borough Council may consider the proposal as early as possible (Election Results, 2017). With the support of student-friendly Borough Council members, and the attention and consideration mandated of the Council by petitioning for an addition to their meeting agenda, our team is prepared to meet each and every political step in implementing this proposal while ensuring successful collaboration and positive communication with the State College Borough Council throughout the process.

FINANCIAL ANALYSIS AND METHODOLOGY

Considerations

Forecasting and managing the project's financial implications are imperative to its initial implementation and eventual viability as a permanent community feature. A budgetary analysis of the promenade must adhere to Sustainable Development Goals 9 and 11, which concern infrastructure and sustainable communities respectively, in order to fully capture both the short- and long-term economic impacts of downtown construction and development. In this regard, the project's valuation methodology incorporates up-front costs and philanthropic efforts as well as recurring expenses and income streams. The accuracy of a financial model, however, is prone to unexpected adjustments, logistical delays, and temperamental external factors such as inclement weather and global macroeconomic conditions. To mitigate variability, projections for line items have been calculated conservatively and with concern for potential areas of conflict, including:

- Local business noncompliance, in the event that the foreseen economic impact of paving the street and altering the flow of traffic leads to agency issues;
- One-time costs for expected special events, such as security; and
- Changing financial market outlooks, given recent “gradualist” rhetoric by the Chairman of the Federal Reserve and generally low interest rates.

Best financial practices for ensuring the successful implementation of the project consist of cooperating with local credit unions, brokers, and financial advisors and communicating frequently with Borough and University officials. The following cost and revenue appraisals have been made using publicly available information. Additional financial statement explanations are available upon request to the project proposal team.

Budgetary and Fiscal Requirements

Materials, Labor, and Service Costs



The dimensions of the promenade are crucial to determining the needed number and size of materials and services.³

Solid bricks, on average, cost \$6-10.50 per sq. ft.⁴ Given that the width of the park, drive 1, drive 2, and park/café lanes are 8', 11', 11' and 8' respectively, and the length of the plaza is approximately 175 ft, nearly 6,650 sq. ft of bricks will be needed. A conservative forecast for the number of bricks needed is 8,000 given the operational likelihood of replacing cemented bricks, removing defects, and placing additional bricks in areas adjacent to the mall, should the decision be made to brick the intersections neighboring the plaza. Assuming a mid-range price of \$8.25, \$66,000 worth of bricks will need to be installed. Looking toward city hall and away from Old Main, the width of the left sidewalk is 10' while the width of the right sidewalk is 12.5'. Being that the length of the plaza is approximately 175', an expected 3,937.5 sq. ft. of concrete will be

³ Recommendation 3E. *Downtown State College Master Plan*. Retrieved from <https://www.statecollegepa.us/DocumentCenter/View/8212/Recommendation-3E?bidId=>.

⁴ Brick prices. *Remodeling Calculator*. Retrieved from <https://www.remodelingcalculator.org/brick-prices/>.

needed to repave the current sidewalks along the selected portion of South Allen St. Assuming a price of \$8 per sq. ft. for "basic" concrete, which ranges from \$6-10 per sq. ft., the total cost of concrete will be approximately \$31,500.⁵ Next, a 6' recycled plastic bench costs approximately \$648.85.⁶ If 18 benches are purchased, then \$11,679.30 will be needed. In accordance with Sustainable Development Goal 11, which concerns the cleanliness of city air, the use of bicycles as opposed to gas-guzzling automobiles will be encouraged as a more environmentally-friendly mode of plaza transportation. If 8 bike racks are requested and a 5-loop rack (with the capacity for 7 bikes) costs approximately \$450, then \$3,600 will be needed.⁷ However, the purchase of 9 racks will reduce the per-unit cost to \$430; thus, a more sustainable cost of \$3,870 is preferable. Large, 14-20' trees are expected to cost approximately \$2,423 each, with \$38 assigned to labor.⁸ Assuming that 18 large trees will be planted, \$42,930 will be needed. 20 lampposts, whose ability to display signs may bring awareness to local fundraising and cultural events, will cost approximately \$2,200 each.⁹ The intersection of the plaza and Calder Way may feature a large fountain and a "green area" surrounding it as a means of reiterating the Borough's commitment to preserving biodiversity on land and water, an objective consistent with Sustainable Development Goals 14 and 15. The fountain, of course, will require a water source and piping-related costs

⁵ Cost of Concrete. *Concrete Network*. Retrieved from <https://www.concretenetwork.com/concrete/walkways/cost.html>.

⁶ Classic Park Benches. *The Bench Factory*. Retrieved from http://www.thebenchfactory.com/classic-park-benches?st-t=tbfgoogshop&gclid=CjwKCAjwkcbIBRB_EiwAFmfyyxGT653WtvdDbYhCoH11eunLRltG0UsIfepVHSiX4XNVOsZ_70-DhoC9K4QAvD_BwE.

⁷ 5-Loop Wave Style Bike Rack. *Uline*. Retrieved from https://www.uline.com/Product/Detail/H-2544BL/Outdoor-Furniture-and-Equipment/5-Loop-Wave-Style-Bike-Rack-7-Bike-Capacity-Black?pricode=WA9417&gadtype=pla&id=H-2544BL&gclid=CjwKCAjwkcbIBRB_EiwAFmfyy2vM8kt8okBNCbcLQGLSKTTXaVdjJJrONF4IRZ694S1WaI8x3sL0NRoCufwQAvD_BwE&glsr=aw.ds.

⁸ Tree Install Costs. *How Much*. Retrieved from <https://howmuch.net/costs/tree-install>.

⁹ You break it, you buy it:Knocking down a light pole will cost you. (2010). *The Chronicle*. Retrieved from <http://www.chroniclet.com/news/2010/01/26/You-break-it-you-buy-it-Knocking-down-a-light-pole-will-cost-you.html>.

have therefore been accounted for in the operating model. Estimates for the fountain, green space, and flowers will likely be inaccurate given the variability of future project design and landscape modeling considerations. The plaza will incentivize the recycling of compostable trays, plastic, and paper by placing 20 polytec recycling bins adjacent to its 20 polytec trash containers. A set of one polytec recycling bin and one polytec garbage can is approximately \$500.¹⁰ Approximately 20 traffic barriers will also be needed to close off the selected portion of South Allen during pedestrian plaza usage and protect members of the community from nearby traffic. Concrete traffic barriers cost roughly \$289 each.¹¹

The pedestrian plaza is expected to increase visibility for businesses, and in turn, spur demand for outdoor eating areas particularly during the spring and summer seasons. The total cost of local business expansion is largely undeterminable until negotiations are made with the owners themselves; as such, “ballpark” estimates for each eatery's additional furniture have been included. It is important to note that the Borough may have to incur these expenses in order to sustainably incentivize local businesses to comply with plaza implementation procedures. The downhill slope behavior of the selected portion of South Allen enables the formation of a small performance venue, with a stage neighboring the College Ave intersection, for musical ensembles and public ceremonies.¹² The space may also provide means for University-invited speakers, the presence of which may provide minority voices an opportunity to vocalize their messages to the Borough community and initiate all-encompassing change discussed in the

¹⁰ Polytec and Stonetec Recycling and Waste Containers. *Recycle Away*. Retrieved from https://www.recycleaway.com/Polytec-and-Stonetec-Recycling-and-Waste-Containers_c_594.html.

¹¹ Concrete Barriers. *Traffic Safety Warehouse*. Retrieved from <https://www.trafficsafetywarehouse.com/Concrete-Barriers/products/85/>.

¹² Carpeted Economy Executive Stage Kits. *The Stage Depot*. Retrieved from https://www.thestagedepot.com/category_s/384.html.

Presidential Leadership Academy’s Fall 2018 course. The cost of a transportable stage (average economy executive kit) does not include truss and roof extensions. The presence of event security, however, will be demanded as to prevent uproar and unruly behavior in the event that a controversial speaker is permitted to voice his or her perhaps polarizing perspective on social, political, and economic issues facing the contemporary world. The cost of law enforcement, therefore, has been accounted for on a recurring basis and assumes that a squad of three regularly patrolling officers at \$149,364 per individual (which includes the mandated supervision by sergeants and lieutenants) will be needed.¹³ Of each salary amount, approximately \$55,070 will be allocated to annual benefits, which may be written off if the officers' healthcare, compensation insurance, retirement plan (which is not limited to annuities, benefit funds, and pensions), overtime, and Medicare benefits are covered by the State College Police Department. The highly variable cost of one-time event security has been included as a ballpark adjustment.

Material costs	Year 1
Bricks	\$66,000.00
Cement	\$31,500.00
Benches	\$11,679.30
Bike racks	\$3,870.00
Trees	\$42,930.00
Lampposts with banners	\$44,000.00
Center fountain	\$50,000.00
Green space adjacent to fountain	\$30,000.00
Flowers	\$10,000.00
Restaurant expansion	\$60,000.00
Additional seating	\$10,000.00
Tables	\$30,000.00
Umbrellas	\$10,000.00
Gates and barriers	\$10,000.00
Trash cans and recycling bins	\$10,000.00
Temporary items	\$5,000.00
Transportable stage	\$5,000.00
Traffic barriers	\$5,780.00
Total material costs	\$370,759.30

¹³ Full Cost of a Police Officer. *Alderman Michele Smith*. Retrieved from https://ward43.org/wp-content/uploads/2015/09/Cost-per-Police-Officer_vF.pdf.

Initial materials for construction and program implementation.¹⁴

Labor and service costs	Year 1	Year 2	Year 3	Year 4	Year 5
Construction and related services	\$550,684.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00
Bricking	\$250,000.00	-	-	-	-
Sidewalk removal and replacement	\$250,000.00	-	-	-	-
Installation costs associated with trees	\$684.00	-	-	-	-
Installation and maintenance of fountain	\$50,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00
Landscape architecture and project management	\$350,000.00	-	-	-	-
Design, modeling, and planning	\$250,000.00	-	-	-	-
Accounting and finance	\$50,000.00	-	-	-	-
Consulting/other	\$50,000.00	-	-	-	-
Civil engineering	\$350,000.00	\$120,000.00	\$120,000.00	\$120,000.00	\$120,000.00
Septic system, electrical, and plumbing	\$300,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00
Installation/maintenance of green space	\$50,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00
Marketing	\$50,000.00	-	-	-	-
Custodial	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00
Law enforcement	\$448,086.00	\$448,086.00	\$448,086.00	\$448,086.00	\$448,086.00
Total labor and service costs	\$1,848,770.00	\$828,086.00	\$828,086.00	\$828,086.00	\$828,086.00
One-time event security	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00
PENNDOT fees	\$100,000.00	-	-	-	-
Total material, labor and service costs	\$2,719,529.30	\$1,228,086.00	\$1,228,086.00	\$1,228,086.00	\$1,228,086.00
Total costs, bull scenario	\$2,583,552.84	\$1,166,681.70	\$1,166,681.70	\$1,166,681.70	\$1,166,681.70
Expected bulk cost savings as a percentage of costs	5.00%	-	-	-	-
Total costs, bear scenario	\$2,991,482.23	\$1,350,894.60	\$1,350,894.60	\$1,350,894.60	\$1,350,894.60
Perceived cost premiums and misappraisals	10.00%	-	-	-	-

Appraisal estimates for service-related costs with scenario adjustments.

Project Funding

A joint effort by the Borough and University to obtain the financial means necessary for implementation and maintenance will be crucial to offsetting initial and recurring expenses. The following sources of funds will be consulted.

University-related funding. The financing decisions of the Borough may not be fully autonomous in the event that University alumni become engaged in the project. Philanthropic proceeds from large donors may amount to a considerable portion of project funds. A “buy a brick” donation campaign, where community residents, students, parents, and alumni may engrave a personalized message on one or more street bricks or tiles in exchange for a one-time

¹⁴ Line items in blue denote manual model inputs.

fee, may be an additional source of philanthropic funds. Selected bricks, as those in the Nittany Valley Heritage Walk, will require maintenance.

State- and federal-related funding. The immense size of the University Park student body has lowered the average State College household income to a level that makes the Borough eligible for federal grant funding via the Community Development Block Grant. Since the program is primarily intended for low-income communities, an ethical dilemma naturally presents itself. The Borough's allocation of a portion of annual CDBG funds to a project meant to promote sustainability and well-being certainly may be in the moral agenda of Council members. Fiscal or tax-related methods may similarly be employed as a way to improve the property value of South Allen real estate (tax incremental funding) and charge Borough businesses for carbon and alcohol usage ("socially responsible" financing).

Municipal bonds. The Borough additionally has the option of issuing tax-exempt debt instruments to residents by way of local brokers and financial intermediaries. Bond mathematics and logistics have been outlined in detail in a following section.

Proceeds from loans, revenue bonds, COP, and Grant Anticipation Revenue Vehicle (GARVEE) funds were not estimated in the financial model given the unpredictability of their issuance dates and amounts. The latter, however, is a potentially viable feature to a plaza municipal bond. In essence, GARVEE is a debt instrument that "pledges" future U.S. Code Title 23 federal aid funding to municipalities, including the retirement of principal outstanding, semiannual interest payments, and other debt-related costs.¹⁵ The promenade interestingly may be classified as a "project," and therefore be eligible for a GARVEE, through:

¹⁵ Grant Anticipation Revenue Vehicles (GARVEEs). *Federal Highway Administration*. Retrieved from https://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/garvees/.

- Section (12)(D)(ii), if creating it involves the combination of both private and public sector funds (which includes the investment of public funds in private sector facility improvements); or
- Section (12)(E), if creating it improves or constructs public infrastructure that is located within walking distance of and is accessible to an intercity bus station or public utility/capital project described in Section 5302(3)(G)(v) of Title 49, which may include “a capital project for, and improving, equipment or a facility for an intermodal transfer facility or transportation mall.”¹⁶

As such, federal aid guidelines may change the way the Borough chooses to frame or present the project’s benefits to Title 23 officials.

Street vendors, such as food trucks and kiosks, will contribute to the family-friendly, colorful environment of the mall while appealing to the senses of plaza-goers. Vendors, of course, will be charged a fee for usage of the plaza space. Street musicians, similarly, have the ability to make the space more vibrant, and by requiring performers to purchase a \$200 license with no renewal, the Borough will jointly benefit from a modest source of income to be used for miscellaneous expenses and a captivating, culturally respectful plaza ambience.

Managed fund. A multi-purpose, excess stream of income may be derived from a small investment fund managed by financial professionals and perhaps Smeal College of Business students, assuming Borough approval. Alternatively, the fund can take the organizational form of a foundation. A suggested portfolio strategy has been explained in detail in a following section.

¹⁶ 23 U.S. Code § 601. Generally applicable provisions. *Legal Information Institute*. Retrieved from <https://www.law.cornell.edu/uscode/text/23/601>.

Income and investment-related expenses	Year 1	Year 2	Year 3	Year 4	Year 5
University-related funding	\$1,500,000.00	\$1,075,000.00	\$1,060,000.00	\$1,045,000.00	\$1,030,000.00
Philanthropic proceeds	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00
"Buy a brick" campaign	\$500,000.00	\$75,000.00	\$60,000.00	\$45,000.00	\$30,000.00
State and federal-related funding	\$150,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00
Federal funding through CDBG	\$100,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00
Taxes	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00
Tax incremental funding	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00
"Socially responsible" financing	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00
Municipal bonds	\$5,645,000.00	(\$242,358.29)	(\$242,358.29)	(\$242,358.29)	(\$242,358.29)
General Obligation bond due in 11 years	\$1,800,000.00				
Interest expense on GO bond "A"		(\$69,860.11)	(\$69,860.11)	(\$69,860.11)	(\$69,860.11)
General Obligation bond due in 12 years	\$1,890,000.00				
Interest expense on GO bond "B"		(\$80,688.42)	(\$80,688.42)	(\$80,688.42)	(\$80,688.42)
General Obligation bond due in 13 years	\$1,955,000.00				
Interest expense on GO bond "C"		(\$91,809.76)	(\$91,809.76)	(\$91,809.76)	(\$91,809.76)
Revenue bonds	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GARVEE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tax-exempt bonds	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tax credit bonds	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Loans	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Concessional ("soft") loans	\$0.00				
Interest expense on concessional loans		\$0.00	\$0.00	\$0.00	\$0.00
Bank loans (short/long-term revolver)	\$0.00				
Interest expense on bank loans		\$0.00	\$0.00	\$0.00	\$0.00
Funds from infrastructure banks	\$0.00				
Interest expense on infrastructure bank loans		\$0.00	\$0.00	\$0.00	\$0.00
Street vendor fees	\$100,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00
Street musician licenses	\$5,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00
Managed fund income for community purposes	\$39,140.00	\$39,140.00	\$39,140.00	\$39,140.00	\$39,140.00
Returns less capital gains tax	\$244,625.00	\$244,625.00	\$244,625.00	\$244,625.00	\$244,625.00
Proceeds to investors	(\$171,237.50)	(\$171,237.50)	(\$171,237.50)	(\$171,237.50)	(\$171,237.50)
Management fees	(\$34,247.50)	(\$34,247.50)	(\$34,247.50)	(\$34,247.50)	(\$34,247.50)
Total income/expenses attributable to investment income	\$7,439,140.00	\$1,023,781.71	\$1,008,781.71	\$993,781.71	\$978,781.71
Economic slowdown deflator	(\$100,000.00)	(\$150,000.00)	(\$200,000.00)	(\$175,000.00)	(\$150,000.00)
Local business noncompliance loss	(\$200,000.00)	(\$50,000.00)			
Total income	\$7,139,140.00	\$823,781.71	\$808,781.71	\$818,781.71	\$828,781.71
Total income, bull scenario	\$7,281,922.80	\$840,257.34	\$824,957.34	\$835,157.34	\$845,357.34
Expected additional capital gains as a percentage of income	2.00%				
Total income, bear scenario	\$6,425,226.00	\$741,403.54	\$727,903.54	\$736,903.54	\$745,903.54
Expected premiums, additional broker fees, and issuance costs	10.00%				

The project's revenue build.

Methodology for the Incurrence of Municipal Debt

The issuance and arranging process of municipal securities are a financial application of Sustainable Development Goal 17, which calls for the proactive partnership of stakeholders to achieve sustainability. In lieu of specifying a maturity date due to uncertainty surrounding the eventual start of the project, the time to maturity of hypothetical General Obligation "GO" bonds

issued by the Borough is based on the average years to maturity of State College Area School District's current outstanding debt, rounded to the nearest whole year to simulate real issuance. Similarly, coupon rates assume the absence of callable and call/sink features and are based on the average semiannual coupon of the SCASD GO series, conservatively rounded down to the nearest 25-bps spread to reflect realistic rate arranging and market flex activity. The tranche size of each instrument in the hypothetical three-bond series has been determined by three outstanding obligations in the SCASD set with the most similar time to maturity, assuming a current date of May 15, 2019 (with greater coupons assigned, as a premium of sorts, to longer-dated securities). In short, these three instruments give investors of varying risk tolerances the ability to contribute to the project by way of a local broker, who are incentivized by semiannual interest payments and may write off purchases from federal and state income taxes. The tax-deductible nature of interest payments has not been considered and the municipal debt schedule assumes that no call feature is exercised and semiannual interest payments occur until maturity.

Debt Schedule		
General Obligation "GO" Securities		Adjusted
Principal on GO bond "A" due in 11.03 (~11) years	\$1,800,000.00	
Coupon	3.88%	3.75%
Years to maturity	11.03	11
Annual interest expense	\$69,860.11	
Accrued interest at maturity using adj. maturity and coupon	\$742,500.00	
Principal on GO bond "B" due in 11.03*1.10 (~12) years	\$1,890,000.00	
Coupon	4.27%	4.25%
Years to maturity	12.13	12
Annual interest expense	\$80,688.42	
Accrued interest at maturity using adj. maturity and coupon	\$963,900.00	
Principal on GO bond "C" due in 11.03*1.10^2 (~13) years	\$1,955,000.00	
Coupon	4.70%	4.50%
Years to maturity	13.35	13
Annual interest expense	\$91,809.76	
Accrued interest at maturity using adj. maturity and coupon	\$1,143,675.00	
Total debt	\$8,495,075.00	
Required rate of return	9.80%	
Growth rate	2.50%	
Terminal value with principal outstanding paid at maturity	(\$13,222,496.82)	
Terminal value with principal paid, bull scenario	(\$11,813,683.32)	
Terminal value with principal paid, bear scenario	(\$16,040,123.82)	

Capital raised through the issuance of local government debt.

Methodology for Recurring Income Through a Managed Fund

Due to the recurring nature of a variety of service costs, it would be in the best interest of the Borough to pursue a separately managed internal index fund that uniquely provides a continuous stream of excess returns to outweigh ongoing project expenses, as well as to perhaps afford additional programs for students and plaza contributors such as scholarships, special celebrations, guest speakers, and events that necessitate local catering. Doing such requires that the Borough hedge downside risk and market volatility exposure in order to protect investor capital and preserve stakeholder morale. It is indeed possible to "track" the S&P 500 (debatably the most followed market index) with the possibility of achieving alpha, or excess gains in

respect to the movement of market indexes, by employing a quasi-"StocksPLUS" portable alpha strategy popularized by PIMCO chief Bill Gross.¹⁷ While agency, investor-related, and regulatory hurdles may prevent an identical strategy to Gross', which historically outperformed the S&P 500 by an impressive 0.50% in spite of a remarkable 99.9% correlation with and 0.05 difference in volatility than the closely monitored index, the principles of collateralizing U.S. Treasury futures with investment grade (IG) credit may still be employed. In this way, "bonus return" alpha from an actively managed corporate bond portfolio—which, in order to engage local students, may be co-managed by individuals within the Smeal College of Business—can pay off the required 95% financing rate of Treasury futures while safely rewarding plaza investors with additional "risk-free" returns. In theory, clients earn the "risk-free" return on the S&P 500 proxy (by way of Treasury futures, a derivative instrument of standard U.S. Treasury 10-year notes) in addition to extra return on the collateral, given that futures contracts need only be financed 5% with cash and 95% through some other asset class or sub-portfolio (an openly interpreted "financing cost"). At most 95% of the collateral, therefore, can be invested in "risk-free," low default-risk instruments that still have the potential to achieve excess returns by a variety of separately managed portfolio allocation strategies; this is referred to as "beta" by Marvin Damsma, a prominent pension controller in New York City.

The incentives for the Borough or the organization with the responsibility of financing the project is a portion of "risk-free" alpha from the investment grade bond fund of funds ("FoF"). As an important note, the managed plaza fund build assumes no additional investment or reinvestment past its origination. In adherence to Sustainable Development Goal 16, the

¹⁷ StocksPLUS Strategy. *PIMCO*. Retrieved from <https://www.pimco.com/en-us/investments/strategies/stocksplus-strategy/>.

Borough and its constituents must hold fund managers accountable to the Volcker Rule, which ensures that commission-based portfolio management and brokerage services are not mistreating perhaps financially illiterate clients by excessively executing trades. Figures in the managed fund scenario exclude capital gains-related tax provisions.

Managed Fund: Portable Alpha Case Study	
Expected initial investment	\$2,500,000.00
Cash hold requirement, <i>minimum of 5%</i>	5.00%
Capital available to invest ("financing rate" or collateral)	95.00%
Expected historical annual return on S&P 500	9.80%
Expected percentage deviation from S&P 500 (IG alpha)	0.50%
Annual return of portfolio	\$244,625.00
Proceeds to investors as a percentage of returns, per annum	70.00%
"Risk-free" proceeds to investors, per annum	\$171,237.50
Management fees as a percentage of returns, per annum	20.00%
Management fees, per annum	\$34,247.50
Residual community income as a percentage of returns, per annum	10.00%
Residual community income, per annum	\$24,462.50

Forecasting the returns of a so-called plaza fund is contingent on several assumptions, including the percentage of proceeds returned to investors and third-party fund managers.

Corporate Valuation

Ultimately, the project's valuation and resulting feasibility can be determined by its expected future cash flows, the majority of which will be negative as the promenade is not intended to be profitable. The discount rate, or the opportunity cost of "missed" investment, is the "risk-free" yield on the 10-year U.S. Treasury note as of April 13, 2019. Net present value is interpreted as the total cash flow over the life of the plaza. The project must generate a discounted internal rate of return of 28.24% for its net present value to be zero, an unrealistic pace at which the plaza becomes profitable in the long term using a discounted cash flow model. It is important to note that the internal rate of return (IRR) measure does not include the effects of inflation, the cost of capital of the project (which excludes shareholders' equity), or the

risk-free rate of return, represented by the current yield on the 10-year U.S. Treasury. Do to these risks and the understanding that the project, like the construction of University buildings discussed by Penn State Executive Vice President for Finance & Business David Gray, is not intended to reward the community monetary but rather through the enhanced well-being of its constituents. The required rate of return on the plaza, for project finance metric computing purposes only, is the historical return of the S&P 500. Assume that expenses will grow at a rate of 2.50%, which is purposefully above the expected y/y core Consumer Price Index inflation forecast and below the forecasted annual growth rate for gross domestic project.

Discounted Cash Flow Valuation, <i>not included in final valuation</i>	
Discount rate	2.56%
NPV with interest expense incurred but principal unpaid	(\$1,885,765.03)
NPV with expected principal outstanding paid	(\$8,547,355.08)
NPV with principal outstanding paid, bull scenario	(\$6,780,019.99)
NPV with principal outstanding paid, bear scenario	(\$12,679,880.30)
IRR with principal outstanding paid	28.24%

Net Present Value, a useful metric in determining the value of a project over the course of its life, is the summation of the present value of the project's expected future cash flows.

Cash Flow Figures					
Total CF	\$4,419,610.70	(\$404,304.29)	(\$419,304.29)	(\$409,304.29)	(\$399,304.29)
Total CF less interest expense	\$4,419,610.70	(\$161,946.00)	(\$176,946.00)	(\$166,946.00)	(\$156,946.00)
Total CF, bull scenario	\$4,698,369.97	(\$326,424.36)	(\$341,724.36)	(\$331,524.36)	(\$321,324.36)
Total CF less interest expense, bull scenario	\$4,698,369.97	(\$84,066.07)	(\$99,366.07)	(\$89,166.07)	(\$78,966.07)
Total CF, bear scenario	\$3,433,743.77	(\$609,491.06)	(\$622,991.06)	(\$613,991.06)	(\$604,991.06)
Total CF less interest expense, bear scenario	\$3,433,743.77	(\$367,132.77)	(\$380,632.77)	(\$371,632.77)	(\$362,632.77)

Cash flow, starting with Year 1 (left) and ending with Year 5 (right), is total income less total material, labor, and service expenses.

Terminal Value Build, <i>not included in final valuation</i>	
Required rate of return	9.80%
Growth rate	2.50%
Terminal value less debt obligations	(\$5,469,921.82)
Terminal value less debt obligations, bull scenario	(\$4,401,703.55)
Terminal value less debt obligations, bear scenario	(\$8,287,548.82)

While projections for only Years 1-5 have been included, it is possible to roughly determine the perpetual cash flow of the project using the Gordon Growth Model terminal value calculation.

Scenario Breakdown and Sensitivity Analysis

In order to account for cost variability due to seasonality, supply and demand (market) risks, and commodity pricing risks, three valuation cases were developed. The first, a “base” or neutral case, assumes that cost appraisals are fair and excludes considerable premiums or discounts. The base scenario is likely unreasonable given its strict dependency on model inputs. The second case, “bull,” is an even more optimistic situation. In this scenario, global market conditions (particularly in the U.S. investment grade and municipal debt space) are overwhelmingly opportunistic, while buying in bulk alleviates the impact of one-time material costs. The most conservative estimate, the feared “bear” scenario, is possibly the most accurate forecast of the project’s net present value and required initial investment. This case assumes that the global macroeconomic outlook is too uncertain to adequately predict and incorporates procurement delays, adverse weather, and cost premiums in its final calculation. If project managers are able to obtain the capital necessary for operating under the bear scenario, it is probable that the promenade will be financially sustainable. All in all, the project is valued at *\$10.210 million* assuming that it operates to perpetuity and does not incur depreciation expense. The bear case, whose figures are more preferred, produces a fairer *\$12.026 million* valuation.

CONCLUSION

The transformation of the 100 Block of South Allen Street into a permanent pedestrian plaza will bring together local business owners, residents, and the Penn State community at large in the advancement of a common goal: the development of a family-friendly collaborative space that may be ecologically and monetarily preserved for generations to come. In conjunction with the tangible outcomes of this project, which consist of economic prosperity for local businesses and the revitalization of downtown commerce, the proposed South Allen Street plaza encourages stakeholders to evaluate what exactly they desire from a community hub, and more importantly, which aspects of the State College ecosystem they hope to see make substantial progress in the medium term. There still are myriad barriers to implementing the project, yet the team believes strongly in its capacity to unite community members in determining the future of the “State College experience.”

In particular, revising the current parking situation remains a concern to a handful business owners in South Allen. This issue may be mitigated by recouping lost meter revenue for the Borough through fiscal measures and positioning State College for foreseeable trends in parking. As such, the team believes that the tradeoff of paving over 19 parking spaces is opportunistic.

An in-depth assessment of the political factors that will play into the implementation of this project highlight the unique opportunity to increase student engagement with Borough officials through the May 2019 Primary Election, as well as the criticality for a far more student-friendly Borough Council. Further, this study has pinpointed steps which this project will

take toward enhancing Town and Gown relations between Penn State University and State College.

A financial analysis of the project reveals that the promenade will be unprofitable; however, its intrinsic value lies in its ability to generate “intangible” or social profit in lieu of traditional cash flow. Financial projections have been sorted into three economic scenarios of increasing costs, with the latter two cases assigned the most weight in valuation calculations. The project’s estimated lifespan value of \$10.210 million is reasonable given that the figure includes the recurring nature of a variety of labor-related costs.

The team hopes that the environmental, political, and financial implications outlined in the proposal serve a functional purpose to local lawmakers and residents. The included suggestions acknowledge risks that may thwart the progress and eventual status of the project, while delineating steps to mitigate said factors. All in all, the written considerations contribute insight into the exigence of sustainability when devising the promenade, and consequently, present a compelling argument for why the project requires a collective effort by builders, planners, officials, and townspeople alike in order to ensure its longevity.

Further explanation and inquiries may be directed to the proposal team.



The South Allen Street intersection: *before*.

Courtesy of *Penn State WEPO*.

REFERENCES

- 11 Parklets You Wish Your City Had. (2016, February 28). *Contemporist*. Retrieved from <http://www.contemporist.com/11-parklets-you-wish-your-city-had/>.
- A Street You Go To, Not Just Through: Principles for Fostering Streets as Places. (n.d.). Retrieved from <https://www.pps.org/article/8-principles-streets-as-places>
- About. (n.d.). Retrieved from <https://www.pps.org/about>
- Allen Street Grill. (2019). *Spat's at the Grill*. Retrieved from <https://www.allenstreetgrill.com/>.
- Amazon State College. (2019). *Amazon*. Retrieved from <https://www.amazon.com/ulp?zipcode=16801>.
- Antosz, A. (2019, April 16). UPUA to vote on funding coffee for finals week. *The Underground*. Retrieved from <https://www.psuunderground.com/2019/04/16/upua-to-vote-on-funding-coffee-for-finals-week/>
- The Animal Kingdom. (2019). Retrieved from <https://www.theanimalkingdom.com>.
- B. Groznik, personal interview, April 2, 2019.
- Bill Pickle's Tap Room. (2019). Retrieved from <http://www.billpicklestaproom.com/>.
- BugPAC. (2019). *BugPAC*. Retrieved from bugpac.org/#about.
- Case Studies: Pearl Street Pedestrian Mall. (2019). *Re:Streets*. Retrieved from <https://www.restreets.org/case-studies/pearl-street-pedestrian-mall>.
- Chad, personal interview, April 8, 2019.
- China Dragon. (2019). *StateCollege.com*. Retrieved from <http://www.statecollege.com/business/detail/china-dragon,8175/>.

D. Murphy, personal interview, March 28, 2019.

E. Barron, personal interview, April 9, 2019.

Election Results: 2017 Municipal Primary Election (2017, May 17). *Centre County*

Pennsylvania. Retrieved from

http://www.co.centre.pa.us/centreco/elections/results/results_iframe.asp?FolderName=2017__municipal_primary_election&FileName=2017_municipal_primary_precinct_results#top

Freeze Thaw Cycle. (2018). Retrieved from <http://www.freezethaw.com/about>.

Frequently Asked Questions (2019). *Pennsylvania Liquor Control Board*. Retrieved from

<https://www.lcb.pa.gov/Legal/Pages/FAQs.aspx>.

Hill, E. (2019, March 21). 'Ceasin' with Heaton': UPUA's 13th Assembly Comes To A Close.

Onward State. Retrieved from

<https://onwardstate.com/2019/03/21/ceasin-with-heaton-upuas-13th-assembly-comes-to-a-close/>

IGTA History. (2019). *International Town and Gown Association*. Retrieved from

<https://www.itga.org/about/history>.

IGTA Mission And Vision. (2019). *International Town and Gown Association*. Retrieved from

www.itga.org/about/mission.

Jersey Mike's Subs in State College, PA. (2019). Retrieved from

<https://www.jerseymikes.com/8007/state-college-pa>.

Judge, C. E. (2013, October 11). The Experiment of American Pedestrian Malls: Trends

Analysis, Necessary Indicators for Success and Recommendations for Fresno's Fulton

Mall. *Strong Cities, Strong Communities, Downtown Fresno Partnership*. Retrieved from

<http://downtowndevelopment.com/pdf/americanpedmallexperiment.pdf>.

Kondu. (2019). Retrieved from <http://www.kondustatecollege.com/>.

Klurman, M. (n.d.). These Are the 15 Best Places to Move to in the U.S. (Before They Get Too Crowded). Retrieved from https://www.rd.com/advice/travel/best-places-to-move-to-before-too-crowded/?fbclid=IwAR2IAqr-ZWOJBFT95i_2t6TeRBXeoVPGmUiALHoWLvUVSZepkrlamx8lwPU

Laws Administered by NHTSA. (2019). *United States Department of Transportation*. Retrieved from <https://www.nhtsa.gov/laws-regulations/statutory-authorities>.

Lynne Karago. (2016, January 20). Streets as Public Spaces and Drivers of Urban Prosperity. Retrieved from <https://unhabitat.org/books/streets-as-public-spaces-and-drivers-of-urban-prosperity/>

Mayor's Welcome. (n.d.). Retrieved from <http://www.statecollegepa.us/1158/Mayors-Welcome>

Mclanahan's Downtown Market. (2019). *Mclanahan's*. Retrieved from <http://mclanahansmarket.com/>.

Meet Me at the Corner! (2019). *The Corner Room*. Retrieved from <https://www.cornerroom.com/>.

Paez, S. (2019, April 16). A satellite voting office at Penn State is not likely. Will students still vote absentee? *Centre Daily Times*. Retrieved from <https://www.centredaily.com/news/local/article229031734.html>

Panera Bread State College - S Allen St. (2019). *Panera Bread*. Retrieved from <https://locations.panerabread.com/pa/state-college/148-s-allen-st.html>.

Pearl Street Mall: Boulder, Colorado. (2019). *Planning.com*. Retrieved from

<https://www.planning.org/greatplaces/spaces/2015/pearlstreetmall.htm>.

Pearl Street Pedestrian Mall. (2019). *Learning Landscapes*. Retrieved from <http://www.learninglandscapesdesign.com/pearl-street-pedestrian-mall/>.

Penn State and State College chosen to host international town-gown conference. (2018, June 18). *Penn State News*. Retrieved from <https://news.psu.edu/story/525702/2018/06/18/impact/penn-state-and-state-college-chosen-host-international-town-gown>

Pennsylvania State Code, 40 Pa. Code § 3.13 7.21-25. <https://www.pacode.com/secure/data/040/chapter7/subchapbtoc.html>

The Power of 10+. (2018). *Project for Public Spaces*. Retrieved from <https://www.pps.org/article/the-power-of-10>.

Rapid Transit Sports (2019). *StateCollege.com*. Retrieved from <https://www.statecollege.com/shop/rapid-transit-sports/>.

ReStreets. (n.d.). Retrieved from <https://www.restreets.org/case-studies/pearl-street-pedestrian-mall>

R. Schmidt, personal interview, April 11, 2019.

Saully Boys. (2019). Retrieved from <http://www.saullyboys.com/>.

Say Sushi. (2019). *StateCollege.com*. Retrieved from http://www.statecollege.com/business/detail/say-sushi,3211/?utm_source=statecollegecom&utm_medium=referral&utm_campaign=businessdirectory.

State College Borough Map. (2010, November 18). *Pennsylvania Department of Transportation - Bureau of Planning and Research - Geographic Information Division*. Retrieved from http://www.dot7.state.pa.us/BPR_pdf_files/Maps/Type5/14410.pdf.

State College Downtown Master Plan. (2013, August 19). *Mahan Rykiel Associates Inc.*
Retrieved from
<https://statecollegepa.us/DocumentCenter/View/8202/Final-Downtown-State-College-Master-Plan?bidId=>

State College Home Rule Charter. (1973). Retrieved from
<https://www.statecollegepa.us/DocumentCenter/View/3118/Home-Rule-Charter?bidId=>

Statutory Authorities. (2019, February 06). *National Highway Traffic Safety Administration*.
Retrieved from <https://www.nhtsa.gov/laws-regulations/statutory-authorities>

A Street You Go To, Not Just Through: Principles for Fostering Streets as Places. (2015, October 18). *Project for Public Spaces*. Retrieved from
<https://www.pps.org/article/8-principles-streets-as-places>.

Sidewalk Sale and Exhibition. (2019). *Central Pennsylvania Festival of the Arts*. Retrieved from
<https://arts-festival.com/sidewalk-sale>.

TOWN AND GOWN | Definition in the Cambridge English Dictionary. (2019). *Cambridge English Dictionary*. Retrieved from
<https://www.dictionary.cambridge.org/us/dictionary/english/town-and-gown>.

UPUA Documents. (2019, March 20). *University Park Undergraduate Association*. Retrieved from <http://upua.org/docs/>

Woodring's Floral Gardens. (2019). Retrieved from

https://www.woodringsfloral.com/Default.asp?utm_source=statecollegecom&utm_medium=referral&utm_campaign=businessdirectory.

Zeno's Pub. (2019). *Hotel State College & Company*. Retrieved from

<http://www.zenospub.com/>.

Google. (n.d.). *South Allen Street*. Retrieved from

<https://www.google.com/maps/place/S+Allen+St,+State+College,+PA+16801/@40.7873959,-77.8528327,622m/data=!3m2!1e3!4b1!4m5!3m4!1s0x89cea8bb0c4fa3a3:0xde7ac6370247ac84!8m2!3d40.7873919!4d-77.850644>

APPENDIX

Resolution # 02-14

The University Park Undergraduate Association (UPUA) The Pennsylvania State University

of the 2019 – 2020 Session

April 17th, 2019

*Be it decided by the Assembly, having been brought to the floor
by a two-thirds (2/3rd) vote, a*

Resolution

Establishment of PSU Votes Local 2019

(Decided: [Y / N / A])

Nature of the Situation:

Statistically, college students have one of the lowest voter turnouts of any group in the United States, especially in primary elections. In the Borough of State College, there are nineteen (19) voting precincts—four (4) of which are located in the HUB-Robeson Center. Those four precincts have the highest student populations and yet approximately less than one percent of registered voters turned out to vote in May primary elections in years since 2012, not including the 2012 or 2016 Presidential elections¹. Two of the four precincts had zero voters in the 2013 and 2015 primaries. A direct cause of such low voter turnout could be that historically, students do not have the opportunity to physically vote in the primaries since classes usually end weeks before the primary occurs².

In an effort to encourage both student voter registration and voter turnout in general elections, the University Park Undergraduate Association (UPUA) has historically partnered with student organizations across campus to host PSU Votes Week. As noted in Resolution #06-13, this annual effort seeks to make students aware of their civic duties as citizens while stressing the general importance of civic engagement.

Recommended Course of Action:

The UPUA, on behalf of the University Park undergraduate student body, shall host a programming event entitled “PSU Votes Local 2019”. The programming event will occur from April 23 to April 25, 2019 and will entail tabling events in the HUB-Robeson Center to provide absentee ballot request forms to students.

¹ <https://www.centredaily.com/news/local/education/penn-state/article174276361.html>

² <https://www.centredaily.com/news/local/article229031734.html?>

23 Additionally, the UPUA will host a debate between the State College Borough Council candidates on
24 Wednesday, April 24th, 2019 from 6:00 PM - 7:30 PM, in an effort to increase political engagement and
25 interest in the local primary election.

26 The Department of Communications is hereby tasked with promoting PSU Votes Local 2019 and its
27 programs through all relevant media outlets.

Respectfully submitted,

Zachary McKay
At-Large Representative
Chair of Governmental Affairs

Tom Sarabok
Smeal College of Business
Speaker of the Assembly

Tyler Ladzinski
At-Large Representative

Speaker _____ Committee Vote: [0/0/0]

President _____ Affirm Veto

The University Park Undergraduate Association

UPUA Resolution 02-14: "Establishment of PSU Votes Local 2019"

State College Area School District Municipal Bond Issuance (1 of 2)

Issuer Name	State	Coupon	Maturity	CUSIP	Maturity Type	Tax Status	Ticker
State College Area SD	PA	2.00%	11/15/2019	856706TZ9	At Maturity	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	2.13%	11/15/2020	856706UA2	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	2.45%	11/15/2021	856706UB0	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	2.75%	11/15/2022	856706UC8	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	3.00%	11/15/2023	856706UD6	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	3.00%	11/15/2024	856706UE4	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	3.13%	11/15/2025	856706UF1	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	3.25%	11/15/2026	856706UG9	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	3.38%	11/15/2027	856706UH7	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	3.50%	11/15/2028	856706UJ3	Callable	Fed & St Tax-Exempt	STASCD
State College Area SD	PA	3.50%	11/15/2029	856706UK0	Callable	Fed & St Tax-Exempt	STASCD
State College SD-A	PA	4.00%	3/1/2020	856706VQ6	At Maturity	Fed BQ/St Tax-Exempt	STASCD
State College SD-A	PA	2.00%	3/1/2021	856706VR4	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.00%	3/1/2021	856706VT0	Callable	Fed BQ/St Tax-Exempt	STASCD
State College SD-A	PA	2.00%	3/1/2022	856706VS2	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.00%	3/1/2022	856706VU7	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.00%	3/1/2023	856706VV5	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.13%	3/1/2024	856706VW3	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.25%	3/1/2025	856706VX1	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.50%	3/1/2026	856706VY9	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.50%	3/1/2027	856706VZ6	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA Area	PA	2.50%	3/1/2028	856706WA0	Callable	Fed BQ/St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2020	856706WE2	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2021	856706WF9	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2022	856706WG7	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2023	856706WH5	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2024	856706WJ1	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2025	856706WK8	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2026	856706WL6	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2027	856706WM4	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2028	856706WN2	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	3.00%	3/15/2029	856706WP7	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2030	856706WQ5	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2031	856706WR3	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	3.25%	3/15/2032	856706WS1	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	4.00%	3/15/2033	856706WT9	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2034	856706WU6	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	3.25%	3/15/2035	856706WV4	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD	PA	5.00%	3/15/2040	856706WW2	Call/Sink	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2019	856706XM3	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD-B	PA	5.00%	5/15/2019	856706XA9	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	2.00%	5/15/2019	856706UR5	Callable	Fed BQ/St Tax-Exempt	STASCD
State College PA ASD	PA	3.00%	5/15/2019	856706YH3	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	2.10%	5/15/2020	856706US3	Callable	Fed BQ/St Tax-Exempt	STASCD
State Clg Area SD-B	PA	5.00%	5/15/2020	856706XB7	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	4.00%	5/15/2020	856706XN1	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2020	856706YJ9	At Maturity	Fed & St Tax-Exempt	STASCD

Issuer Name	State	Coupon	Maturity	CUSIP	Maturity Type	Tax Status	Ticker
State College ASD	PA	2.40%	5/15/2021	856706UT1	Callable	Fed BQ/St Tax-Exempt	STASCD
State Clg Area SD-B	PA	5.00%	5/15/2021	856706XC5	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2021	856706XP6	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2021	856706YK6	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	2.75%	5/15/2022	856706UU8	Callable	Fed BQ/St Tax-Exempt	STASCD
State Clg Area SD-B	PA	5.00%	5/15/2022	856706XD3	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.00%	5/15/2022	856706XQ4	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	2.00%	5/15/2022	856706YL4	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2023	856706XR2	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD-B	PA	5.00%	5/15/2023	856706XE1	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2023	856706YM2	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD-B	PA	5.00%	5/15/2024	856706XF8	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2024	856706XS0	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2024	856706YN0	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD-B	PA	5.00%	5/15/2025	856706XG6	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2025	856706XT8	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2025	856706YP5	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD-B	PA	3.00%	5/15/2026	856706XH4	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2026	856706XU5	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2026	856706YQ3	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2027	856706YR1	At Maturity	Fed & St Tax-Exempt	STASCD
State Clg Area SD-B	PA	3.00%	5/15/2027	856706XJ0	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2027	856706XV3	At Maturity	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2028	856706XW1	Callable	Fed & St Tax-Exempt	STASCD
State Clg Area SD-B	PA	3.00%	5/15/2028	856706XK7	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2028	856706YS9	At Maturity	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2029	856706YT7	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2029	856706XX9	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2030	856706XY7	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2030	856706YU4	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	5.00%	5/15/2031	856706XZ4	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	3.13%	5/15/2031	856706YV2	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.00%	5/15/2032	856706YA8	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	3.25%	5/15/2032	856706YW0	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.00%	5/15/2033	856706YB6	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	3.25%	5/15/2033	856706YX8	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.00%	5/15/2034	856706YC4	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	3.38%	5/15/2034	856706YY6	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	3.38%	5/15/2035	856706YZ3	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.13%	5/15/2035	856706YD2	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.13%	5/15/2036	856706YE0	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2036	856706ZA7	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.25%	5/15/2037	856706YF7	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2037	856706ZB5	Callable	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2038	856706ZC3	Callable	Fed & St Tax-Exempt	STASCD
State College ASD	PA	3.25%	5/15/2043	856706YG5	Call/Sink	Fed & St Tax-Exempt	STASCD
State College PA ASD	PA	5.00%	5/15/2044	856706ZD1	Call/Sink	Fed & St Tax-Exempt	STASCD
Average		3.88%					

Source: Bloomberg Data

Average time to maturity, in years, was determined by converting into years the difference between maturity and issue date codes.

State College Area School District's debt profile, of which estimates for the maturities, coupons, and features of suggested plaza debt instruments were based.

SCASD Municipal Bond Series

Maturity Date	Out. (\$k)	Issue Price
5/15/2019	\$935	101.52
5/15/2020	\$1,135	106.76
5/15/2021	\$1,195	109.40
5/15/2022	\$1,255	99.88
5/15/2023	\$1,280	113.37
5/15/2024	\$1,345	115.04
5/15/2025	\$1,410	116.47
5/15/2026	\$1,480	177.46
5/15/2027	\$1,555	118.31
5/15/2028	\$1,630	119.29
5/15/2029	\$1,710	118.71
5/15/2030	\$1,800	118.14
5/15/2031	\$1,890	98.05
5/15/2032	\$1,955	98.55
5/15/2033	\$2,015	97.66
5/15/2034	\$2,080	98.47
5/15/2035	\$2,150	97.90
5/15/2036	\$2,220	115.49
5/15/2037	\$2,330	115.21
5/15/2038	\$2,450	115.02
5/15/2044	\$17,465	114.19
Average	\$2,442	112.61

Source: Bloomberg Data

A simplified breakdown of SCASD's outstanding debt.

Sensitivity Analysis

Material, labor, and service costs

Year 1		Expected bulk cost savings as a percentage of costs				
		0.00%	2.50%	5.00%	7.50%	10.00%
Perceived cost premiums and misappraisals	0.00%	\$2,719,529.30	\$2,651,541.07	\$2,583,552.84	\$2,515,564.60	\$2,447,576.37
	5.00%	\$2,855,505.77	\$2,784,118.12	\$2,712,730.48	\$2,641,342.83	\$2,569,955.19
	10.00%	\$2,991,482.23	\$2,916,695.17	\$2,841,908.12	\$2,767,121.06	\$2,692,334.01
	15.00%	\$3,127,458.70	\$3,049,272.23	\$2,971,085.76	\$2,892,899.29	\$2,814,712.83
	20.00%	\$3,263,435.16	\$3,181,849.28	\$3,100,263.40	\$3,018,677.52	\$2,937,091.64
Year 2		Expected bulk cost savings as a percentage of costs				
		0.00%	2.50%	5.00%	7.50%	10.00%
Perceived cost premiums and misappraisals	0.00%	\$1,228,086.00	\$1,197,383.85	\$1,166,681.70	\$1,135,979.55	\$1,105,277.40
	5.00%	\$1,289,490.30	\$1,257,253.04	\$1,225,015.79	\$1,192,778.53	\$1,160,541.27
	10.00%	\$1,350,894.60	\$1,317,122.24	\$1,283,349.87	\$1,249,577.51	\$1,215,805.14
	15.00%	\$1,412,298.90	\$1,376,991.43	\$1,341,683.96	\$1,306,376.48	\$1,271,069.01
	20.00%	\$1,473,703.20	\$1,436,860.62	\$1,400,018.04	\$1,363,175.46	\$1,326,332.88
Year 3		Expected bulk cost savings as a percentage of costs				
		0.00%	2.50%	5.00%	7.50%	10.00%
Perceived cost premiums and misappraisals	0.00%	\$1,228,086.00	\$1,197,383.85	\$1,166,681.70	\$1,135,979.55	\$1,105,277.40
	5.00%	\$1,289,490.30	\$1,257,253.04	\$1,225,015.79	\$1,192,778.53	\$1,160,541.27
	10.00%	\$1,350,894.60	\$1,317,122.24	\$1,283,349.87	\$1,249,577.51	\$1,215,805.14
	15.00%	\$1,412,298.90	\$1,376,991.43	\$1,341,683.96	\$1,306,376.48	\$1,271,069.01
	20.00%	\$1,473,703.20	\$1,436,860.62	\$1,400,018.04	\$1,363,175.46	\$1,326,332.88
Year 4		Expected bulk cost savings as a percentage of costs				
		0.00%	2.50%	5.00%	7.50%	10.00%
Perceived cost premiums and misappraisals	0.00%	\$1,228,086.00	\$1,197,383.85	\$1,166,681.70	\$1,135,979.55	\$1,105,277.40
	5.00%	\$1,289,490.30	\$1,257,253.04	\$1,225,015.79	\$1,192,778.53	\$1,160,541.27
	10.00%	\$1,350,894.60	\$1,317,122.24	\$1,283,349.87	\$1,249,577.51	\$1,215,805.14
	15.00%	\$1,412,298.90	\$1,376,991.43	\$1,341,683.96	\$1,306,376.48	\$1,271,069.01
	20.00%	\$1,473,703.20	\$1,436,860.62	\$1,400,018.04	\$1,363,175.46	\$1,326,332.88
Year 5		Expected bulk cost savings as a percentage of costs				
		0.00%	2.50%	5.00%	7.50%	10.00%
Perceived cost premiums and misappraisals	0.00%	\$1,228,086.00	\$1,197,383.85	\$1,166,681.70	\$1,135,979.55	\$1,105,277.40
	5.00%	\$1,289,490.30	\$1,257,253.04	\$1,225,015.79	\$1,192,778.53	\$1,160,541.27
	10.00%	\$1,350,894.60	\$1,317,122.24	\$1,283,349.87	\$1,249,577.51	\$1,215,805.14
	15.00%	\$1,412,298.90	\$1,376,991.43	\$1,341,683.96	\$1,306,376.48	\$1,271,069.01
	20.00%	\$1,473,703.20	\$1,436,860.62	\$1,400,018.04	\$1,363,175.46	\$1,326,332.88

Cash flow projections may materially differ when considering discrepancies in pricing and procurement. The above scenario breakdown table, with green shading representing ideal circumstances and red denoting the opposite, illustrates potential variability in cost appraisals. In each subtable, the boxed figure in the top-left corner indicates the “base” case, whereas the projection two cells to the right is the “bull” scenario and the number two cells below is the “bear” situation. A similar methodology applies for all following sensitivity charts.

Income and investment-related expenses						
Year 1						
Expected premiums, additional broker fees, and issuance costs	Expected additional capital gains as a percentage of income					
	0.00%	1.00%	2.00%	3.00%	4.00%	
	0.00%	\$7,139,140.00	\$7,210,531.40	\$7,281,922.80	\$7,353,314.20	\$7,424,705.60
	5.00%	\$6,782,183.00	\$6,850,004.83	\$6,917,826.66	\$6,985,648.49	\$7,053,470.32
	10.00%	\$6,425,226.00	\$6,489,478.26	\$6,553,730.52	\$6,617,982.78	\$6,682,235.04
	15.00%	\$6,068,269.00	\$6,128,951.69	\$6,189,634.38	\$6,250,317.07	\$6,310,999.76
	20.00%	\$5,711,312.00	\$5,768,425.12	\$5,825,538.24	\$5,882,651.36	\$5,939,764.48
Year 2						
Expected premiums, additional broker fees, and issuance costs	Expected additional capital gains as a percentage of income					
	0.00%	2.50%	5.00%	7.50%	10.00%	
	0.00%	\$823,781.71	\$844,376.25	\$864,970.79	\$885,565.34	\$906,159.88
	5.00%	\$782,592.62	\$802,157.44	\$821,722.25	\$841,287.07	\$860,851.88
	10.00%	\$741,403.54	\$759,938.62	\$778,473.71	\$797,008.80	\$815,543.89
	15.00%	\$700,214.45	\$717,719.81	\$735,225.17	\$752,730.53	\$770,235.90
	20.00%	\$659,025.37	\$675,501.00	\$691,976.63	\$708,452.27	\$724,927.90
Year 3						
Expected premiums, additional broker fees, and issuance costs	Expected additional capital gains as a percentage of income					
	0.00%	2.50%	5.00%	7.50%	10.00%	
	0.00%	\$808,781.71	\$829,001.25	\$849,220.79	\$869,440.34	\$889,659.88
	5.00%	\$768,342.62	\$787,551.19	\$806,759.75	\$825,968.32	\$845,176.88
	10.00%	\$727,903.54	\$746,101.12	\$764,298.71	\$782,496.30	\$800,693.89
	15.00%	\$687,464.45	\$704,651.06	\$721,837.67	\$739,024.28	\$756,210.90
	20.00%	\$647,025.37	\$663,201.00	\$679,376.63	\$695,552.27	\$711,727.90
Year 4						
Expected premiums, additional broker fees, and issuance costs	Expected additional capital gains as a percentage of income					
	0.00%	2.50%	5.00%	7.50%	10.00%	
	0.00%	\$818,781.71	\$839,251.25	\$859,720.79	\$880,190.34	\$900,659.88
	5.00%	\$777,842.62	\$797,288.69	\$816,734.75	\$836,180.82	\$855,626.88
	10.00%	\$736,903.54	\$755,326.12	\$773,748.71	\$792,171.30	\$810,593.89
	15.00%	\$695,964.45	\$713,363.56	\$730,762.67	\$748,161.78	\$765,560.90
	20.00%	\$655,025.37	\$671,401.00	\$687,776.63	\$704,152.27	\$720,527.90
Year 5						
Expected premiums, additional broker fees, and issuance costs	Expected additional capital gains as a percentage of income					
	0.00%	2.50%	5.00%	7.50%	10.00%	
	0.00%	\$828,781.71	\$849,501.25	\$870,220.79	\$890,940.34	\$911,659.88
	5.00%	\$787,342.62	\$807,026.19	\$826,709.75	\$846,393.32	\$866,076.88
	10.00%	\$745,903.54	\$764,551.12	\$783,198.71	\$801,846.30	\$820,493.89
	15.00%	\$704,464.45	\$722,076.06	\$739,687.67	\$757,299.28	\$774,910.90
	20.00%	\$663,025.37	\$679,601.00	\$696,176.63	\$712,752.27	\$729,327.90

Fluctuations in revenue flow assuming changes in additional capital gains and financing fees.

Adjusted Terminal Value with Principal Paid						
Base Scenario						
Growth rate	Required rate of return					
	8.20%	9.00%	9.80%	10.60%	11.40%	
	2.00%	(\$14,995,466.82)	(\$13,456,922.04)	(\$12,871,860.81)	(\$12,395,648.17)	(\$12,000,498.01)
	2.25%	(\$15,206,071.52)	(\$13,668,194.15)	(\$13,041,373.58)	(\$12,534,662.34)	(\$12,116,556.34)
	2.50%	(\$15,500,413.47)	(\$13,895,717.97)	(\$13,272,496.87)	(\$12,682,257.63)	(\$12,239,140.09)
	2.75%	(\$15,821,759.27)	(\$14,141,443.69)	(\$13,416,465.68)	(\$12,839,253.89)	(\$12,368,809.60)
	3.00%	(\$16,174,008.71)	(\$14,407,646.55)	(\$13,624,696.96)	(\$13,006,578.85)	(\$12,506,197.54)
Bull Scenario						
Growth rate	Required rate of return					
	8.20%	9.00%	9.80%	10.60%	11.40%	
	2.00%	(\$13,276,702.54)	(\$11,987,730.82)	(\$11,553,355.87)	(\$11,199,794.86)	(\$10,906,414.44)
	2.25%	(\$13,477,611.26)	(\$12,144,588.45)	(\$11,679,209.54)	(\$11,303,005.03)	(\$10,992,584.92)
	2.50%	(\$13,696,143.55)	(\$12,313,512.04)	(\$11,813,683.32)	(\$11,412,586.20)	(\$11,083,596.43)
	2.75%	(\$13,934,724.68)	(\$12,495,949.52)	(\$11,957,694.26)	(\$11,529,147.07)	(\$11,179,868.73)
	3.00%	(\$14,196,246.30)	(\$12,693,590.13)	(\$12,112,294.23)	(\$11,653,376.42)	(\$11,281,871.52)
Bear Scenario						
Growth rate	Required rate of return					
	8.20%	9.00%	9.80%	10.60%	11.40%	
	2.00%	(\$18,252,995.38)	(\$16,395,304.48)	(\$15,508,870.69)	(\$14,787,354.81)	(\$14,188,650.15)
	2.25%	(\$18,662,992.04)	(\$16,715,405.57)	(\$15,765,701.67)	(\$14,997,976.96)	(\$14,364,499.19)
	2.50%	(\$19,108,953.31)	(\$17,060,129.83)	(\$16,040,123.82)	(\$15,221,600.48)	(\$14,550,227.40)
	2.75%	(\$19,595,828.46)	(\$17,432,432.02)	(\$16,334,008.53)	(\$15,459,467.53)	(\$14,746,691.34)
	3.00%	(\$20,129,518.53)	(\$17,835,759.39)	(\$16,649,502.41)	(\$15,712,983.73)	(\$14,954,849.57)

The discounted cash flow model terminal value, which simply is a summation of expected future cash flows from Year 6 to perpetuity, is built on assumptions for the required rate of return of the project and the growth rate of cash flows. The Gordon Growth Model formula for the terminal value is the cash flow in Year 5 divided by the difference of the required annual rate of return of the project and the growth rate of cash flows to perpetuity. Note that cash flow in Year 5 is negative, meaning that the terminal value will also be in the red.

Adjusted NPV						
Base Final CF Scenario						
		Discount rate				
		2.36%	2.46%	2.56%	2.66%	2.76%
Terminal Value Scenario (Growth rate, Required rate of return)	0.02, 0.082	(\$1,172,174.16)	(\$8,493,313.39)	(\$7,599,185.61)	(\$6,805,910.19)	(\$6,088,186.49)
	0.0225, 0.09	(\$1,266,631.31)	(\$9,531,657.10)	(\$8,597,143.29)	(\$7,773,546.27)	(\$7,092,239.49)
	0.025, 0.098	(\$1,381,725.56)	(\$10,584,047.46)	(\$9,605,077.54)	(\$8,748,512.90)	(\$7,981,830.20)
	0.0275, 0.106	(\$13,520,296.90)	(\$11,652,170.06)	(\$10,624,049.71)	(\$9,731,510.45)	(\$8,937,438.78)
	0.03, 0.114	(\$14,685,731.42)	(\$12,737,991.44)	(\$11,655,277.21)	(\$10,723,331.44)	(\$9,899,602.52)
Bull Final CF Scenario						
		Discount rate				
		2.36%	2.46%	2.56%	2.66%	2.76%
Terminal Value Scenario (Growth rate, Required rate of return)	0.02, 0.082	(\$8,730,048.81)	(\$7,223,464.00)	(\$6,466,227.93)	(\$5,784,334.96)	(\$5,158,997.75)
	0.0225, 0.09	(\$9,763,912.45)	(\$8,214,776.25)	(\$7,426,670.45)	(\$6,721,384.96)	(\$6,077,663.08)
	0.025, 0.098	(\$10,813,097.99)	(\$9,216,517.34)	(\$8,394,520.02)	(\$7,663,877.47)	(\$7,000,439.85)
	0.0275, 0.106	(\$11,879,713.93)	(\$10,229,938.74)	(\$9,370,564.62)	(\$8,612,332.49)	(\$7,927,684.54)
	0.03, 0.114	(\$12,966,274.27)	(\$11,256,500.48)	(\$10,355,708.10)	(\$9,567,338.42)	(\$8,859,796.08)
Bear Final CF Scenario						
		Discount rate				
		2.36%	2.46%	2.56%	2.66%	2.76%
Terminal Value Scenario (Growth rate, Required rate of return)	0.02, 0.082	(\$13,056,424.86)	(\$11,093,012.18)	(\$9,865,100.97)	(\$8,849,060.65)	(\$7,946,563.97)
	0.0225, 0.09	(\$14,272,069.01)	(\$12,165,418.80)	(\$10,938,088.96)	(\$9,877,868.90)	(\$8,941,392.31)
	0.025, 0.098	(\$15,518,980.71)	(\$13,319,107.68)	(\$12,026,192.59)	(\$10,917,783.75)	(\$9,944,610.91)
	0.0275, 0.106	(\$16,801,462.83)	(\$14,496,632.69)	(\$13,131,019.90)	(\$11,969,866.36)	(\$10,956,947.25)
	0.03, 0.114	(\$18,124,645.72)	(\$15,700,973.35)	(\$14,254,415.47)	(\$13,085,317.48)	(\$11,979,215.41)

Net present value calculations for each case, which will help determine the final valuation.

Forecasted Project Value to Perpetuity		
	Single Estimate	Weight
Base scenario	(\$9,605,077.54)	60.00%
Bull scenario	(\$8,394,520.02)	10.00%
Bear scenario	(\$12,026,192.59)	30.00%
Weighted average	(\$10,210,356.30)	

Using a weighted average of the three scenarios, the project is valued at approximately \$10.21 million. This figure, of course, is contingent on the project incurring expenses perpetually.