

▶ LAFAYETTE COLLEGE TECHNOLOGY CLINIC

MIDTERM REPORT



RE-ENVISIONING
A FUTURE FOR THE
BUSHKILL CORRIDOR

MAY 5, 2017



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2017 CHARGE

TECHNOLOGY CLINIC CHARGE

Lafayette College Technology Clinic (TC) was charged with the task of examining the Bushkill Drive entrance to campus from North 13th Street. This task involves examining the development of Silk, the Karl Stirner Arts Trail, the Bushkill Creek, and the Bushkill Corridor (BC). The team was given direction by Lafayette College and the City of Easton, the two clients for this project. The task involves analyzing the entirety of the area in regards to its redevelopment and how it can be better incorporated to fit the needs and desires of both the College and the City. The project has been an intellectual challenge combining environmental science, social equity, engineering, economics, and art.



CLIENTS

The two clients for the project are the City of Easton and Lafayette College. Both clients have significant interest in the BC as it pertains to the redevelopment and future outlook of both parties.

CITY OF EASTON



The City of Easton has been represented by Dave Hopkins. Mr. Hopkins is the Director of Public Works and is highly involved in projects of redevelopment and planning. Dave charged the team with proposing ideas and solutions for the city about using Bushkill Drive and the surrounding area more effectively.

LAFAYETTE COLLEGE



Lafayette College has been represented by Roger Demareski. Mr. Demareski is the Vice President of Finance and Administration. He is highly involved with the college's future plans. Roger charged the team with improving the BC in an effective way that will complement the college's projected expansion.

Both clients were helpful in providing the team with expectations and focal points while giving the team leeway to tackle the charge creatively. Most importantly, the TC team was given freedom to examine and analyze any part of the area in order to effectively suggest improvements for redevelopment. The clients have made it clear that they are excited to see what types of problems are identified and what solutions are proposed by the team.

PROJECT SIGNIFICANCE

WHY THIS MATTERS

Redevelopment of the BC and its surrounding areas is significant to both the City of Easton and Lafayette College. The location of the BC presents itself as a key area because of its proximity to the college. The BC, including the Karl Stirner Arts Trail, Bushkill Creek, and Silk, are all valuable assets to both the City and the College. As both the City and the College prepare to expand and redevelop the area, it is important that the associated risks, issues, and challenges are understood. This will ensure the effective utilization of the area by both residents of Easton and Lafayette College. The TC team believes that research is an important starting point for this analysis.

The TC team has recognized the following reasons why this redevelopment project is especially important to the community:

1

Lafayette College is in the process of expanding its campus and admitting more students. In order to compensate for the increase in demand for physical space on campus, faculty members that are not in direct contact with students are being relocated to other buildings, such as the Alpha Building down the hill.

2

Silk, located at the intersection of Bushkill Drive and North 13th Street, is a redevelopment project intended to preserve the industrial history of the Simon Silk Mill and create residential and commercial spaces. **It is important to integrate the development into the larger Easton community** by improving the Bushkill Corridor, its connectivity, and coherence between 3rd and 13th Streets and the College.

3

In order to remain consistent with the surrounding areas' improvements, **measures should be taken to create an overall more aesthetically appealing space.**

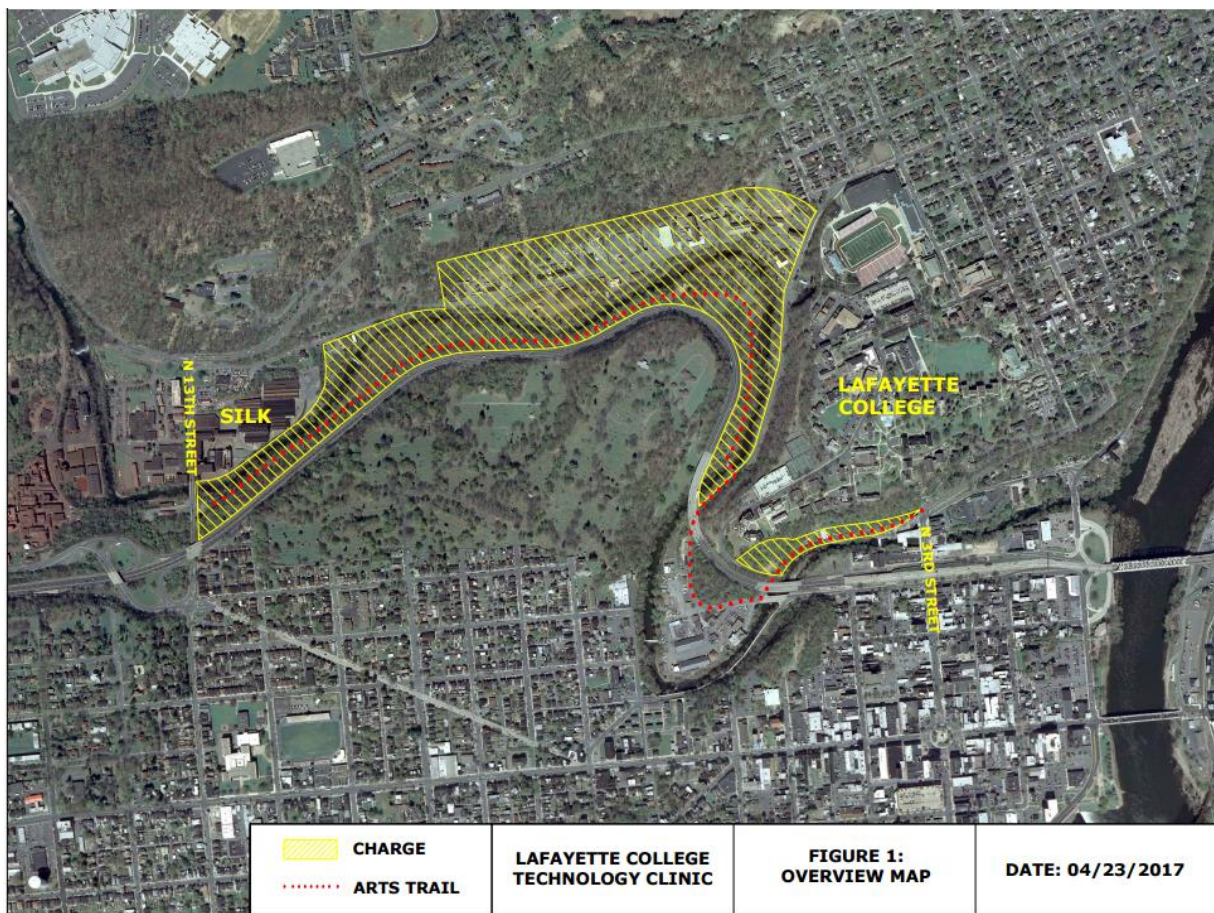
SITE DESCRIPTION

SCOPE

The scope includes the portion of Bushkill Drive that extends from North 3rd Street to North 13th Street. Though it was not directly included in the charge, TC also considered Sullivan Road in this scope because it provides direct access to Bushkill Drive from College Hill.

The TC team also recognized that it was important to consider the properties that anchor both ends of Bushkill Drive, which are Lafayette College and the Silk Project. Additionally, since the Karl Stirner Arts Trail is accessed from Bushkill Drive, the TC team considered the trail to be an important component of the project.

The overview map in Figure 1 shows the project scope.



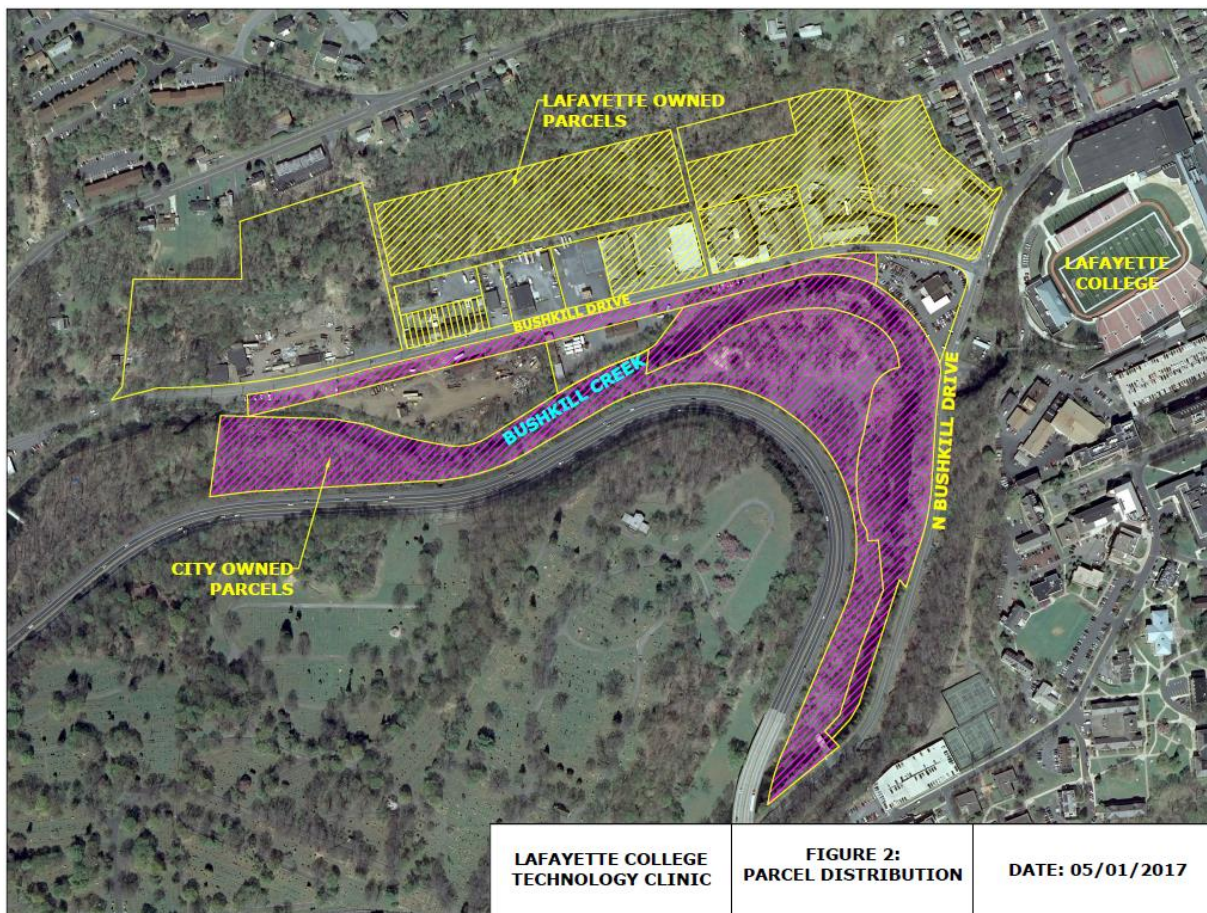
SITE DESCRIPTION

FOCUS

The segment of Bushkill Drive that leads to Silk is primarily an industrial zone. Several historic businesses reside along this corridor, including the Rinek Rope Factory and the Easton Iron & Metal Company. A car dealership, an oil company, and fourteen residential homes are also located along this road. The TC team recognized that this corridor is an integral component of the TC charge as it has significant potential for redevelopment and serves as a critical link between Lafayette College and Silk.

Lafayette College has already purchased several parcels along this corridor. The TC team felt it was important to understand which properties have been acquired by Lafayette so that the recommendations do not conflict with redevelopment plans that are already underway.

The map in Figure 2 shows which properties are owned by Lafayette and the City.



METHODOLOGY

PRELIMINARY DISCUSSION

Gained an understanding of the project scope by discussing charge with faculty advisors.

SITE WALK

Walked along Bushkill Drive from North 3rd Street to North 13th Street to gain a first-hand perspective of the area of interest.

CLIENT MEETINGS

Met with Roger Demareski to discuss the College's vision of the BC as it relates to the school's new expansion. TC also met with Dave Hopkins to discuss how the City hopes to improve the BC so that it benefits the most residents.

ADDITIONAL CORRESPONDENCE

Met with Richard McAteer to discuss how the Arts Trail is an integral component of the project. TC also met with Gretchen Rice to tour construction at Silk and discuss how improvements to the BC may benefit Silk in the future.

CREATE AND CONDUCT SURVEYS

Surveyed the Lafayette College community, Easton residents, and Arts Trail users about their experience with the BC and how they feel the area could be improved.

IDENTIFY KEY ISSUES

Analyzed the survey results to find common needs between the clients and the general community.

GENERATE PRELIMINARY SOLUTIONS

Researched sites that have successfully completed similar revitalization projects. Applied comparable ideas to this project.

SUSTAINABILITY

SUSTAINABILITY CONSIDERATIONS IN FUTURE DEVELOPMENT

It is important to ensure that the development plan is sustainable as well as attainable. Sustainability is of utter importance when thinking about future development of the BC. Sustainability is most often defined as meeting the needs of the present without compromising the ability of future generations to meet theirs. There are three main pillars: economic, environmental and social. The Silk development provides a great economically sustainable component of the corridor. The economic sustainability within the BC needs to be complemented with social and environmental pillars.



SOCIAL:

- Aligning the city development values with those of individuals in the community.
- Social equity will help residents and social agencies to raise awareness about social needs



ECONOMIC:

- Focusing on strength and opportunities for a vibrant diverse and dynamic economy
- Retaining businesses and skilled employees
- Incubating innovation
- Bringing new goods and services to market



ENVIRONMENTAL:

- Assuming responsibility for sustainable contribution to the planet
- Placing prerequisite importance on protection and restoration of the natural environment
- Focusing on preserving the Bushkill Creek's natural resources

A sustainability framework based on the three pillars will be used going forward. These pillars will be used as the backbone for assessing the TC's ideas and solutions. The LEED Neighborhood Development plan provides a great framework that can provide the basic requirements for the TC proposal. Please refer to Appendix A for more information regarding the LEED Neighborhood Development plan.

COMMUNITY OUTREACH: LAFAYETTE

LAFAYETTE COLLEGE STUDENTS, FACULTY, AND STAFF

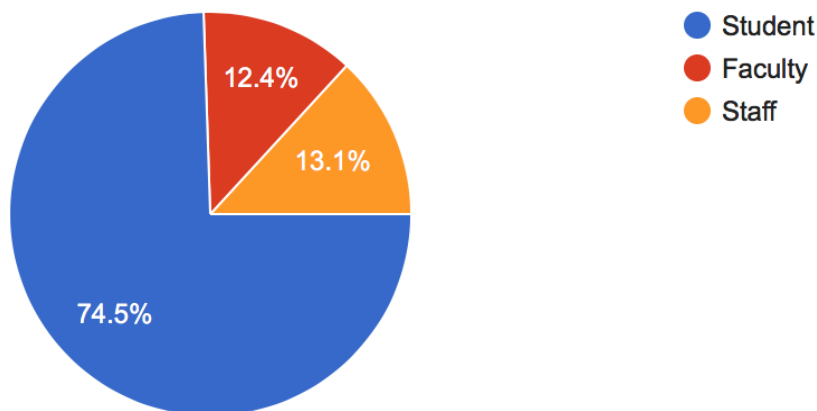
PURPOSE

The TC team surveyed Lafayette College students, faculty, and staff regarding their comments, concerns and recommendations for the Karl Stirner Arts Trail and the BC. This demographic is a critical component and contributor to the area covered by this project. Additionally, considering the College as one of the clients, it is critical to incorporate the sentiments of the College residents, staff, and faculty in the proposal.

METHODOLOGY

The methodology involved recruiting participants through social media, email blasts, extra credit incentives, and a campus-wide email sent from the Dean of Advising. The questionnaire was a Google Forms survey that included both multiple choice and open ended questions; 282 participants responded. There is recognized limitation with the survey due to its lack of anonymity as participants were asked to include their emails. The questionnaire was divided into two sections beginning with the Arts Trail (multiple-choice and two open-ended) followed by the Redevelopment of the BC (one multiple choice, seven open-ended). The multiple choice responses produced quantitative data that can be easily summarized with statistics. The open ended responses required extensive qualitative analysis. This was accomplished by compiling each question and its associated responses into an excel spreadsheet and identifying recurring responses that developed an overwhelming consensus.

PARTICIPANTS

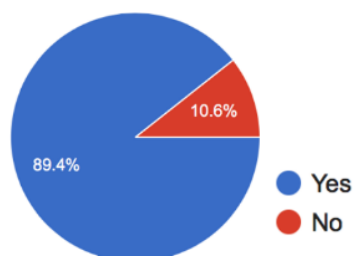


COMMUNITY OUTREACH: LAFAYETTE

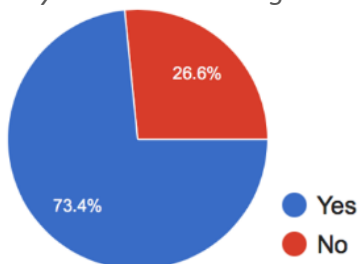
PART 1: KARL STIRNER ARTS TRAIL

MULTIPLE CHOICE QUESTION RESPONSES

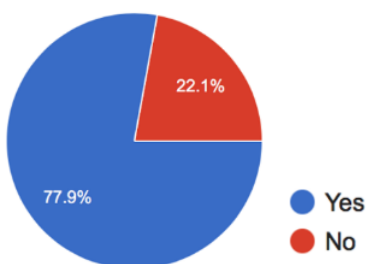
1. Do you know what the Arts Trail is?



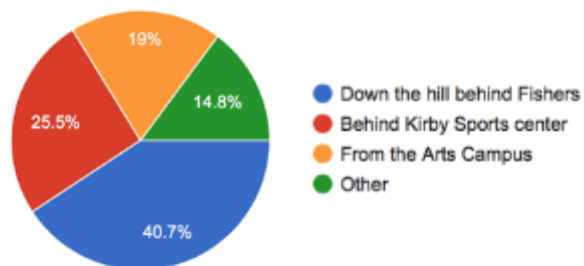
2. Do you know how to get there?



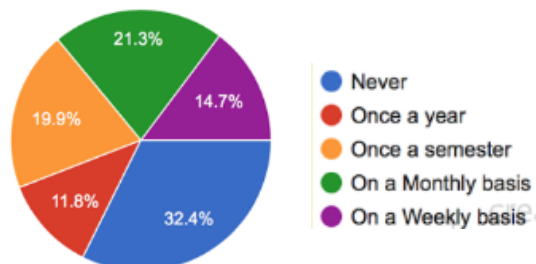
3. Do you feel safe on the Arts Trail?



4. If you use the Arts Trail, how do you access it from Lafayette?



5. How often do you use the Arts Trail?

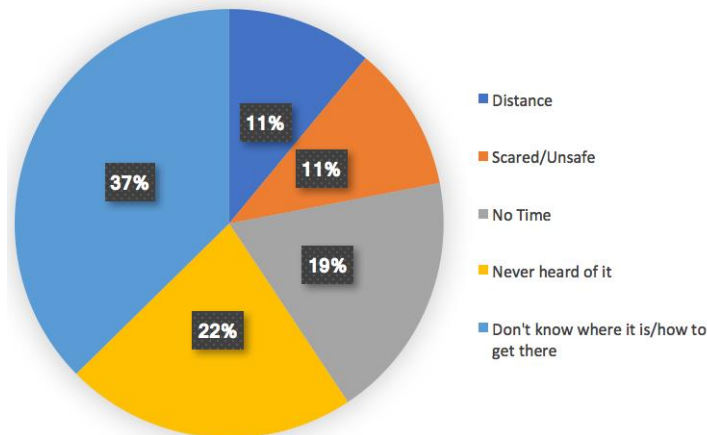


The multiple choice responses show that most Lafayette College students, faculty, and staff know of the Arts Trail, but a majority use it less than once per semester. These responses also show that more than 25% of the surveyed population does not know how to access the Trail. Those who do use the Trail choose to access it from Sullivan Road more than from any other path. Sullivan Road lacks a sidewalk and adequate vehicle sight distance, which poses safety concerns for those who access the Trail from this route.

COMMUNITY OUTREACH: LAFAYETTE

OPEN-ENDED QUESTION RESPONSES

1. *If you haven't used the Arts Trail, what deters you?*

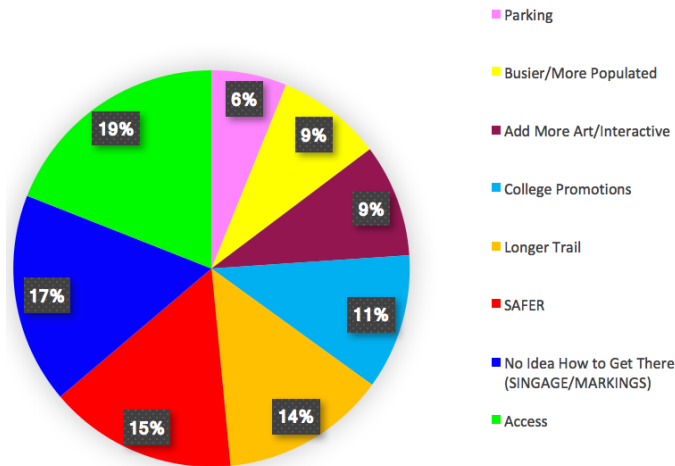


The purpose of this question was to assess why Lafayette students, faculty, and staff choose not to use the Arts Trail. The results show that the greatest percentage (37%) are deterred by how far the Arts Trail is from the College. There is not a direct path from the hill to the Trail, which shows that the Lafayette community needs improved access to the Trail and/or a stronger incentive to travel down the hill. This also shows that if people are currently unwilling to travel to the Arts Trail, they might also be unwilling to travel to the Bushkill Drive, unless there was an attraction worth the effort.

Many members of the Lafayette community (22%) have never even heard of the Arts Trail, and another 11% simply do not know how to get there. This shows a need for better signage directing people to the Trail, in addition to better promotion. The TC team believes that signage and marketing will be important for all new development in the area as well.

COMMUNITY OUTREACH: LAFAYETTE

2. What would make you want to use the Arts Trail more?



Specifically, respondents to the survey reported that **improved access** would make them want to use the Arts Trail more (31 responses). Suggestions included offering a safer route to the trail from Bushkill Drive and Lafayette College, creating additional entrance points along the trail, improving directional signage to the trail, and making transportation available. Many survey participants also responded saying that **improved safety** would boost trail usage (25 responses). Many participants recounted attacks that have taken place on the trail and said that this made them feel vulnerable or afraid to be alone. Suggestions included increasing police monitoring and adding a blue light system.

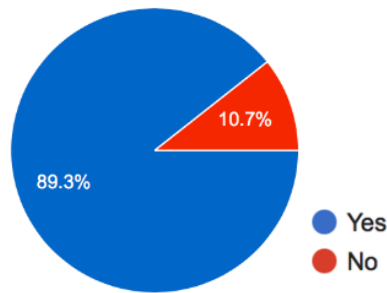
The survey results also showed that **lengthening the trail** (22 responses) or **hosting events** (18 responses) sponsored by Lafayette would attract more users. Generally, users would feel more comfortable if the trail was more populated (14 responses). The survey results also showed that the community would like to see **additional art installations** (12 responses) to make the trail more colorful and inviting. Respondents would also like to see **increased parking** (10 responses) available for trail users, and increased **connection with other trails** in the area (six responses). The survey results revealed that the trail might attract more users if it had **overhead lighting** (4 responses), offered **increased recreational space** (5 responses), was **cleaner** (3 responses), or was generally **more visually appealing** (3 responses).

COMMUNITY OUTREACH: LAFAYETTE

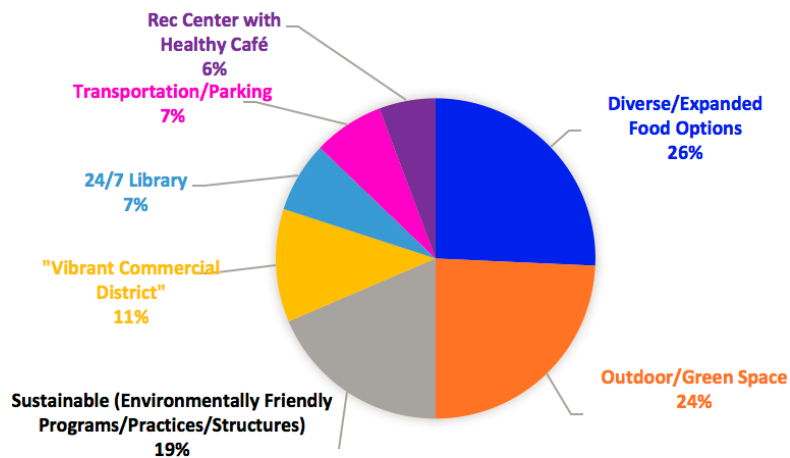
PART 2: RE-ENVISIONING A FUTURE FOR THE BUSHKILL CORRIDOR

OPEN-ENDED QUESTION RESPONSES

1. Would you attend an event down the hill on Bushkill Drive or along the Arts Trail if transportation was provided?



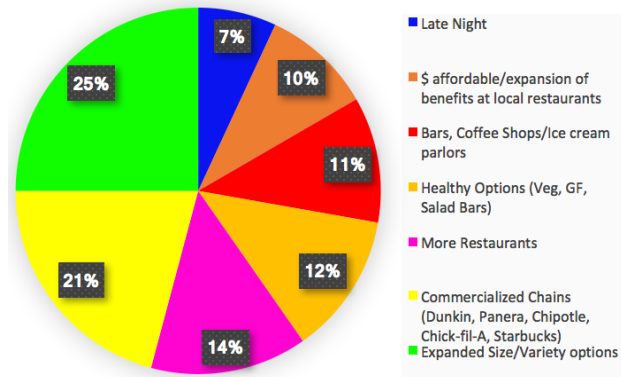
2. What have you seen at other college campuses that you wish we had at Lafayette?



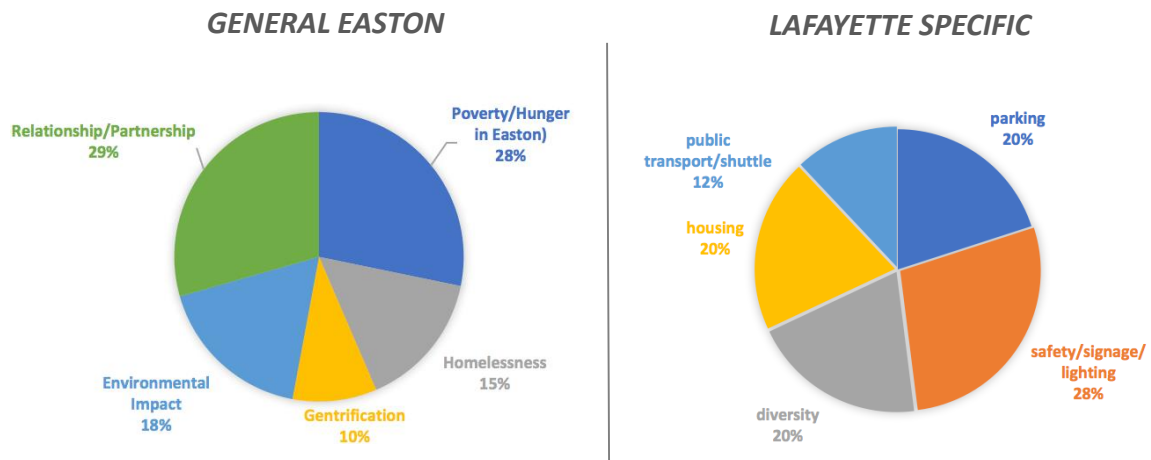
The survey results show that the Lafayette community would like to see more **green space** in the area for outdoor recreation. This may include gardens, public greenhouses, arboretums, picnic areas, outdoor seating, water fountains, running trails, or hammocks. Respondents also said they would like to see the development of a **college town** in the local area, complete with bookstores, retail, and public gathering areas. It was suggested that the college town should have a “main street” feel. The results also showed that the Lafayette community values **sustainability** and would like to see better sustainability efforts by having composting, green roofs, solar panels, multi-stream recycling, or using renewable energy to power campus.

COMMUNITY OUTREACH: LAFAYETTE

The survey results also showed that the Lafayette community would like to see **more food options** in the local area. Many responded saying they would like to see commercial chain restaurants, while others said they would like to see specialized vendors.



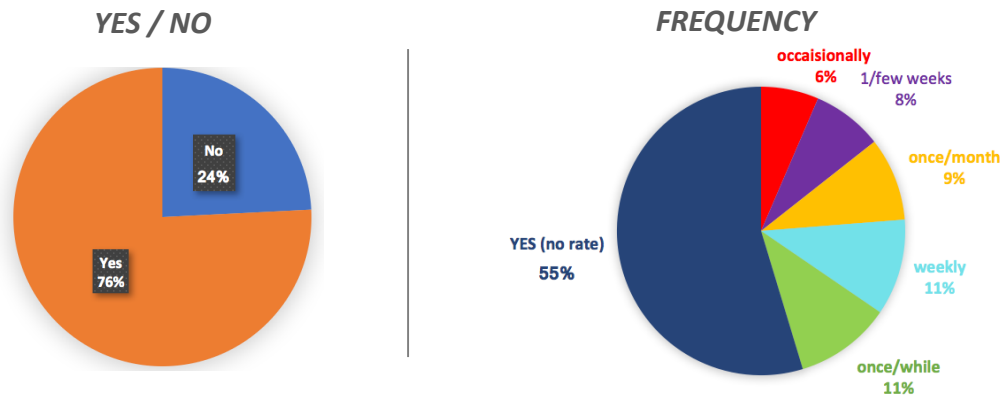
3. What local issues do you wish Lafayette addressed more closely?



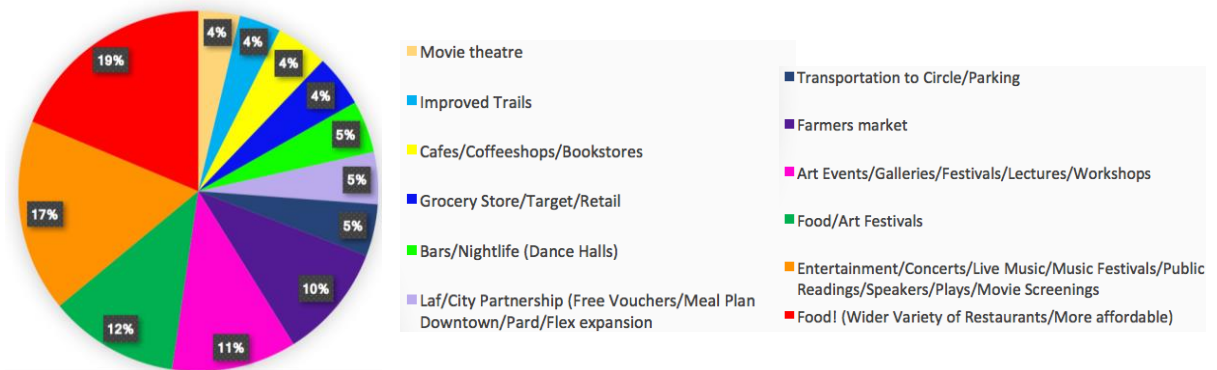
The question was intended to assess what broad issues are valued by the Lafayette community. However, survey participants interpreted this question in two different ways; some answered what issues they wished Lafayette addressed in terms of the broader Easton community while others answered within the scope of the College itself. The survey responses that addressed the intended question (refer to “General Easton” graph) revealed that the Lafayette community highly values the relationship between the College and Easton, and wishes Lafayette would promote more initiatives to address the poverty and hunger that exist in the city. The responses specific to Lafayette revealed that an overwhelming number of people perceive downtown Easton as unsafe. Many would like to see safety improvements to remedy this stigma.

COMMUNITY OUTREACH: LAFAYETTE

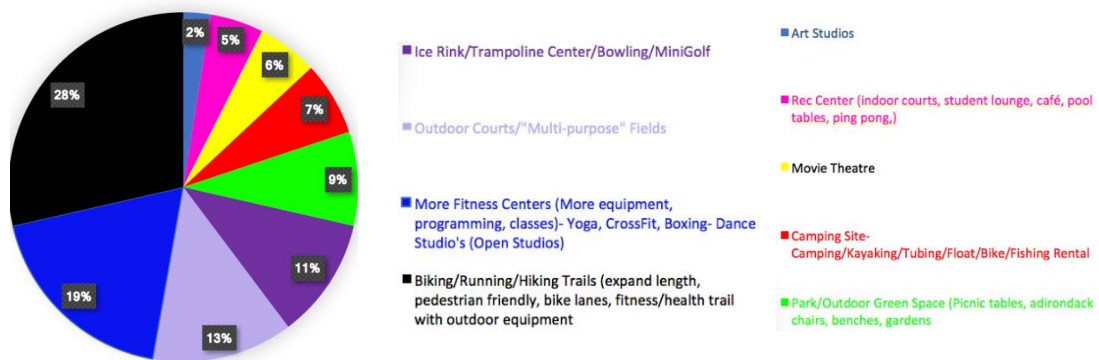
4. Have you ever, and if so how often, met other students at some off campus location?



5. What attractions would draw you down the hill?

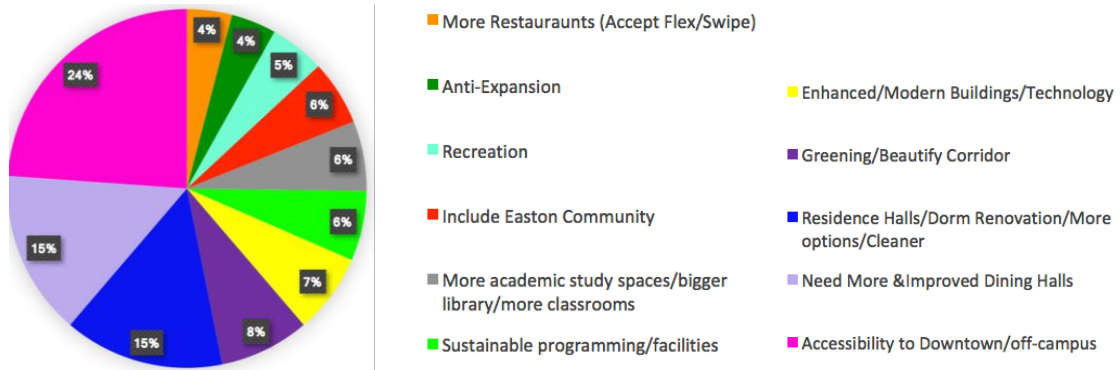


6. What recreational facilities do you envision closer to campus?

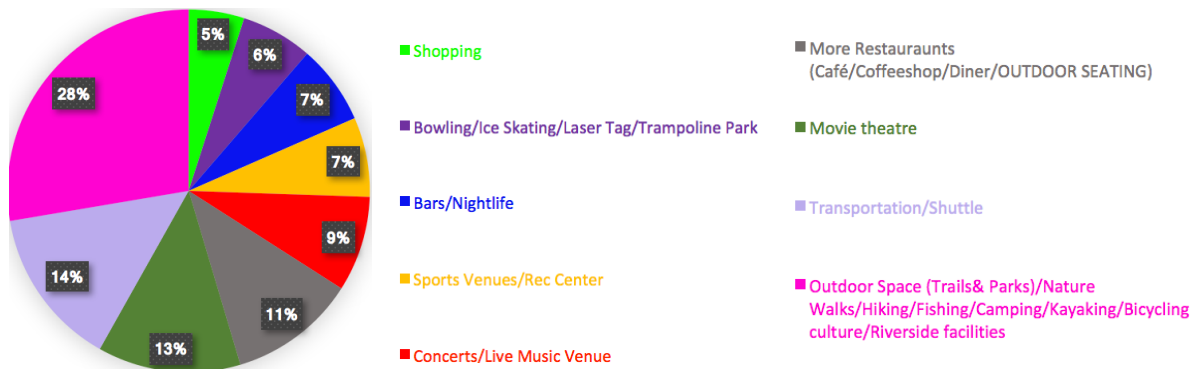


COMMUNITY OUTREACH: LAFAYETTE

7. As Lafayette plans to expand, what improvements do you hope to see?



8. What weekend activities do you wish were more accessible to our campus?



The survey results show that the Lafayette community would like to have a **movie venue** in the area where newly released movies are screened. Participants would also like more organized social activities in the local area. Regarding transportation, survey respondents would like more shuttle services from the College to local events. A shuttle service may even run to other areas of the Lehigh Valley, or nearby cities. The survey results also show that the Lafayette community would be receptive to development that incorporates the Bushkill Creek, such as having “rental watercrafts for use on rivers” or creating a “waterfront beer garden or outdoor eatery”. Please refer to Appendix B for detail responses to this survey question.

COMMUNITY OUTREACH: EASTON

LOCAL EASTON RESIDENTS

PURPOSE

The TC team also reached out to residents on College Hill and the BC to get a better understanding of their thoughts and opinions about the current state and the subsequent redevelopment of the area. The survey data focused on houses on Pardee Street and Mary Street. The homes closest to the focus area were believed to be most important in regards to gaining a better understanding of the issues involved and identifying key issues and solutions from the point of view of the homeowners and residents.

RESULTS

Many of the participants in the survey appreciated being included in this research and were helpful in providing suggestions about the project. However, several residents were confused about the construction currently underway across from the Easton Iron & Metal Company lot. In terms of the current state of the BC, many participants admitted it was in poor shape. After being asked about what could be improved, several participants expressed hopes for a more aesthetically pleasing environment. For example, some suggested a general cleanup of debris, trash, and miscellaneous items along the road. Others cited some of the locations such as the junkyard as unsatisfying to drive or walk by. In terms of solutions, a common theme of a green or recreational space was suggested. In general, residents did not necessarily want to see new buildings or commercial property but rather a greener and healthier space for the area near their homes.

Residents were also asked about their opinions regarding the development of Silk at the end of Bushkill Drive. Again many were unsure of its development plans and how it might affect the area but they were glad to see that something was being done in order to make the area more efficient and useful.

Finally, residents were surveyed on their use of the Arts Trail. Many participants complimented the Arts Trail and its beauty. A majority of residents claimed to have used the Arts Trail frequently but pointed to lack of parking and the danger of accessibility as reasons that might deter them. Some residents suggested that a speed bump be put on Detrich Road in order to prohibit cars from moving at dangerous speeds. Regardless, many residents appreciated the Arts Trail as it adds value to their residential experience.

COMMUNITY OUTREACH: TRAIL

KARL STIRNER ARTS TRAIL USERS

PURPOSE

The Karl Stirner Arts Trail is a scenic 2.5 mile path that runs along the Bushkill Creek and continues through downtown Easton. There are numerous works of art currently located along the Trail from various contributing artists. In an effort to include the voices of those who already use these resources, members of TC went to the Arts Trail and conversed with those they met on the trail.

RESULTS

1. Improved access to the Arts Trail via additional parking and bridge access:

Although there are currently two entrances to the Karl Stirner Arts Trail, many users of the trail would like to see more entries to this trail that accommodate a wider variety of people. Those living on College Hill have voiced that having to walk from the area behind the gym to the front entrance seems inefficient and time consuming. An entrance by the bottom of the Kirby gym would be of great use to many of these College Hill dwellers.



In terms of parking, those who do not have the opportunity to walk down the hill to the Arts Trail sometimes struggle to access the Trail due to parking limitations. There is currently a small parking lot near the front entrance of the trail and a larger lot near the back entrance of the trail. The space that is currently allocated for parking is not paved and does not have clear signage. Many of the Trail users said that they did not know if they were allowed to park in these lots or if they would get a ticket. This hesitancy has taken away from the value that the Arts Trail has to offer to the community by limiting its access.

Lastly, in order to expand access to the Arts Trail, many users have expressed interest in seeing the existing railroad trestle be put to use. This railroad trestle would be a great way to link adjacent areas to the trail itself. Those who live near it have said that this bridge access would increase their ability and likelihood of using this resource.

COMMUNITY OUTREACH: TRAIL

2. Preference for more green space and amenities along the Bushkill corridor:

Although the Arts Trail harnesses the nature of the outdoors and has limited manmade structures that take away from its serenity, there is little amount of green space. Besides the dog park, much of the Trail is lined with trees or pavement. This fosters a great environment to walk but is not as friendly to those who would like to bring a picnic down to the trail or relax in the sun. Similarly, much of the green space that is present along the trail is not well kept and does not provide the necessary feel that the Trail users are looking for.

Additionally, Arts Trail users have expressed interest in the inclusion of more amenities along the BC. These amenities include, but are not limited to, water fountains, benches and picnic tables, and lighting. If these features were added to the Trail, users have said that they would be much more likely to use it more frequently.

One specific amenity that was advocated for by many parents was a more robust playground for younger children to play on. This Trail has been reviewed as a great resource for many, but individuals with younger kids expressed interest in making the Trail more kid-friendly. With this addition, families hope that the Trail could provide a great space for play dates and other gatherings for their children and children's friends.

3. Interest in community events along the Bushkill Corridor:

Arts Trail users also showed interest in community events along the BC. Some of the events that users have suggested include, but are not limited to, painting classes along the Bushkill Creek, visiting musicians playing on the Trail, as well as poetry readings in different areas of the Trail. The hope is that these events will help draw more attention to the Trail, increase individual's awareness of this great resource, and change people's opinions of the level of safety the Trail has to offer.



COMMUNITY OUTREACH: CREEK

BUSHKILL CREEK USERS

PURPOSE

The Bushkill Creek is classified by the State as a High Quality Cold Water Fishery that feeds into the Delaware River in Eastern Pennsylvania. A portion of the Creek runs along Bushkill Drive, at the intersection of Sullivan Road, and continues to the Arts Trail. Many of the Arts Trail users that specifically use this area for the Bushkill Creek, enjoy fishing. Since this is their primary use of the trail, these individuals have a slightly different set of concerns that they would like the community to address.

RESULTS

1. *Improved cleanliness:*

Although the Bushkill Creek users admit that the trail is currently cleaner than it used to be, they have said that in the future they would like the Trail to be monitored more closely in an effort to keep garbage out of the Creek.

2. *Preference for dam removal along the Bushkill Creek:*

Many anglers love the idea of removing the dams along the Bushkill Creek. There are many advantages to this removal that would benefit the anglers. With the removal of the dams, more water will be able to flow through the Creek at a faster pace. This will allow the water to stay cooler and cleaner, which the fish prefer, especially trout. Since the dams are not used for any real purpose currently, if they were removed there would be a possibility for the Creek to become not only a breeding ground for trout, but also striped bass, shad, and other varieties of fish that live in bodies of cold, fresh water.

3. *Interest in planting more trees and shrubbery:*

Interest in more trees and shrubbery stems from the interest in adding coverage for the fisherman and the Creek. Increased coverage over the Creek would lower the temperature of the water and enhance fishing conditions.

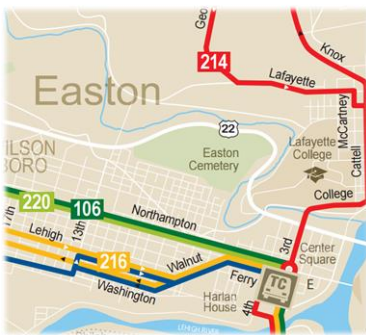


KEY ISSUES: ACCESSIBILITY & SIGNAGE

One of the main issues in the BC is accessibility to the area and connection to nearby facilities and neighborhoods. Difficult access combined with lack of effective signage creates a problem for the area and isolates it from the surroundings.

ACCESSIBILITY

1. Public Transportation:



Lehigh and Northampton Transportation Authority (LANTA) does not offer any bus or shuttle services through the area and the closest bus stops are on College Hill and Lafayette Street or in Downtown Easton. The lack of public transportation isolates the BC and provides a barrier for visitors from the larger Lehigh Valley area that have no access to personal modes of transportation.

2. Parking:

There is a general lack of parking spots in the BC This concern was echoed by the residents of the neighboring Pardee Street and the visitors to the Arts Trail. This lack of parking plays a role in deterring visitors to the arts trail and in causing illegal parking on the side of the road.



3. Walkability:



Pavements are either unavailable or in poor condition thus hindering Easton residents' ability to walk to and within the area. This also creates a safety concern for the residents.

KEY ISSUES: ACCESSIBILITY & SIGNAGE

4. *Bike Access:*

Lack of pavements is complemented by a lack of bike routes along the area. The road is very suitable for a biking route but in its current condition. Bushkill Drive is unsafe for bikers.

5. *Access to the Arts Trail:*



Arts Trail visitors and residents voiced the need for a more direct way to access the trail from Bushkill Drive. A railroad trestle currently crosses Bushkill Creek and provides a bridge connecting the Arts Trail to Bushkill Drive. However, it is not in usable conditions. In order to employ its usage, further maintenance is needed.

SIGNAGE

1. *Ineffectiveness and lack of signage:*

There is a general lack of signage in the BC. The Karl Stirner parking lot lacks a sign that specifies the availability of free parking for the trail users. This lack of signage has many complications because it reduces safety and alienates people from accessing the BC if they are unfamiliar with the area. Furthermore, some of the existing signs are confusing or inaccurate. This creates inconsistency and deters people from the area.



SUGGESTIONS: ACCESSIBILITY & SIGNAGE

INSPIRATION AND POTENTIAL SOLUTIONS

To improve this issue, discussion has focused on what solutions are possible, such as implementing a sign both at 13th Street as well as by Sullivan Road. This would create clearer and more accurate directions towards the Arts Trail. When considering sign placement, these two areas seem to be the best locations due to their distance from the Trail and the existing lack of clarity regarding access paths. Converting the old railroad trestle into a functioning pedestrian bridge is a potential solution for ameliorating accessibility.



Regarding the reconstruction of the trestle bridge, attention has been drawn to pre-existing train tracks that have successfully been converted into pedestrian bridges. For example, in Parsons, West Virginia, an old railroad bridge was converted for pedestrian use and likely provided benefits to the area and its inhabitants. The construction of additional pedestrian bridges at other locations along the trail has also been suggested.

In Iowa, a retired Union Pacific Railroad line is now both a functioning and aesthetically pleasing pedestrian bridge. While both of these bridges are larger than the trestle along the Arts Trail, they are sources of inspiration for their commonalities in usage conversions. The trestle bridge is currently unused. Taking advantage of the bridge to improve accessibility may be the best use of available resources.



Another topic of concern relates to signage. Having better accessibility to the Arts Trail would be a great addition, but could be further catalyzed by clearer signs. The existing signs to the Arts Trail give users limited direction and are not as accurate as they could be. Drawing from existing signs already on campus, vast improvements could be made and would therefore increase park usage and provide basis for better access. Lafayette's main sign to campus is inviting and clear. Applying such clarity to the Arts Trail would be a better way of publicizing it and informing potential users of its existence.

KEY ISSUES: AESTHETIC APPEAL

Users of the Arts Trail and the BC have expressed their disappointment in the lack of aesthetic appeal. Some survey responses indicate that although this area does offer resources for both the Easton and Lafayette communities, it could be made more attractive. Residents have targeted three key areas that they would like to see prioritized.

1. *Landscaping and debris offer limited visual appeal and discourage use:*

In order to further incentivize Trail usage, current maintenance and landscaping methods could be improved upon. Due to the fact that, during the winter, the Trail is largely unused, it can be expected that existing debris and litter remain on the Trail. This is most apparent the weeks immediately after winter. Due to weather limitations and a significant decrease in usage, Trail maintenance is minimal during the winter months. As the weather warms up and usage once again increases, the amount of trash and litter also increases. This perpetuates the unappealing or undesirable image of the Arts Trail. Adding trash and recycling bins more frequently along the Trail could easily remedy, or at least help solve, this problem. While there are some factors that are not within control, such as barren trees and seasonal changes, others, such as dog and geese feces, as mentioned in the survey results, can be eliminated to improve the Trail's visual appeal.

2. *No apparent maintenance plan in effect:*

Users of the trail do not see evidence of a concrete maintenance plan for upkeep of the trail. Many users feel that this Trail is a lovely addition to the area but that work still need to be done to maintain the quality of the trail and to provide future improvements so that it will continue to attract visitors for years to come.

3. *BC generally unappealing and lacks green space:*

Trail users desire more community gathering locations. While the Arts Trail provides opportunities for recreation such as walking, biking, and fishing, it lacks community space where people can sit and enjoy the area. Redesigning existing space along the BC can fill this gap. Bushkill Drive is littered with potholes and debris that discourages people from spending time in the area. Trail users voice that if greenspace was added and unappealing features were tackled, more people would visit the area.

SUGGESTIONS: AESTHETIC APPEAL

INSPIRATION AND POTENTIAL SOLUTIONS



Along the Arts Trail side of Bushkill Creek and below the paved trail, a forested area exists next to the Creek. By landscaping that area, it would be possible to **create park space** complete with amenities such as picnic benches, barbecues, and trashcans. This would attract people to the BC and provide a public space for members of Lafayette College and the various Easton communities to gather in a communal space. The picnic tables would encourage sitting and gathering while barbecues would provide the attractions necessary to encourage use.

Many students do not know where the Arts Trail is or feel unsafe on the BC. Improvements in aesthetic appeal through more **visible artwork** on currently unappealing surfaces can make the area both more visible and more attractive. There are currently many surfaces along the Arts Trail that can be converted to surfaces for artwork. These include support walls, pillars under the highway overpass, and the crosswalks that lead to the trail. Adding art to these surfaces would brighten the area, **replacing concrete surfaces with bright artwork**. Cities around the world have art that attracts people to the area. For example, the mosaics in Barcelona, Spain are an iconic feature of the city that attract many visitors.



KEY ISSUES: UNITY AND COHERENCE

The community identified the lack of unity and coherence in the BC as a key issue. Three main concerns are as follows:

1. *Discontinuity between Silk, Lafayette College, and the Karl Stirner Arts Trail:*

With the development of the Silk Mill, it is important to make sure that all the surrounding areas are progressing at the same rate. The VM Development Group has revitalized the old Simon Silk Mill in order to create high-end apartments as well as commercial space. This mixed-use complex will house a variety of retailers including breweries, an art gallery, and a fitness center. In an effort to connect this new development with the rest of the area, it is important to work with VM Development and ensure cohesion and collaboration to put forth a unified image. We have also identified the former Easton Iron & Metal property as a key location for improvement.

2. *Need for consistency in future development:*

People living in this area and users of the Arts Trail have expressed concerns about the development in this area not matching with what already exists. In order to create consistency, when new signage is added, for example to the back entrance of the College, it is important to match it to pre-existing signage, i.e. the Lafayette College sign at the front entrance of the school. This initiative will help eliminate any disjointedness that could occur with new additions and advancements pursued.

3. *Ineffective entrance to Bushkill Drive from North 3rd Street:*

Although concerns about improved access have been addressed in reference to the Arts Trail, specific attention should also be given to the North 3rd Street entrance to Bushkill Drive. This area currently serves little purpose and is a dangerous route used by cars. As reported by *The Lafayette*, Lafayette College's newspaper, a student was recently hit by a car on his way to class in this area. In an effort to make this area safer and more user-friendly, conversations about not allowing cars to drive on this road have been brought up. Many feel that this change would provide more safety to the area and potentially create a better connection from Lafayette's campus to the Arts Trail.

SUGGESTIONS: UNITY AND COHERENCE

INSPIRATION AND POTENTIAL SOLUTIONS



In order for any new projects to be successful, **people must feel safe** accessing the area. Regular patrolling of the area as well as increased lighting can be used to improve the safety of the area.

TIMED AND MOTION ACTIVATED LIGHTING: While lighting would improve the safety of the area during early morning and evening hours, it could also encourage late use of the area. Timed lighting is recommended to prevent people from lingering on the trail late into the night. Additionally, motion activated lights are recommended along the corridor as an energy saving strategy.

LIGHTED BRIDGE: In addition to providing artistic appeal, a lighted bridge can serve the dual purpose of increasing safety. A lighted bridge crossing the Bushkill Creek would be visible from Bushkill Drive as well as from Route 22, attracting more visitors to the area.

PATROLS AND MONITORING: New development along the BC is intended to increase use of the area. As more people spend time along the corridor, it will be necessary to increase monitoring of the area to promote safety. Because the Arts Trail is not accessible to cars, bike patrols are a potential solution to provide monitoring on the trail.



There is a need for **continuity and cohesion in future development**. Currently, there is a clear contrast between the developmental stages along the BC and its surrounding areas. The Silk Mill is an example of a fully developed section of the corridor. What was once a functional silk mill is now being converted into a creative residential and commercial area. This development is creating a unified and revitalized use for the Silk Mill's foundations. Silk's development has preserved the structure's historical and fundamental aesthetics and beauty while also creating a safe and updated setting for the entire area. To create continuity throughout the area, it would be beneficial to further develop the surrounding area further to ensure similar rates of progression.

FUTURE WORK



SEMESTER ONE

The Technology Clinic team has spent much of the first semester working on research and analysis of the area of interest. The TC team has placed their efforts in conducting interviews, generating surveys, and researching similar development projects to identify the key issues stated in this report.

SEMESTER TWO

Moving forward, the goal of the team is to begin **solidifying solutions** to the problems identified and how they specifically will work for the City of Easton and Lafayette College. With the information gathered during this semester, significant strides can begin to be made about proposed solutions. Please reference Appendix C for initial demographics data of the four communities that make up the city of Easton.

The team therefore looks forward to shifting from the “brainstorming stage” to putting this plan into action. This will be done with consideration of the original charge from the City and the College in addition to the other issues that the TC team has identified. The team hopes to be able to implement some of the potential suggestions in order to resolve these issues. The team will also seek out the perspectives of other key stakeholders including West Ward residents and new Silk business owners and residents. The team also plans to meet with VM Development’s CEO Mark Mulligan, the Greater Easton Development Partnership’s (GEDP) Executive Director Jared Mast, and others.

If you would like to provide your feedback/comments, please feel free to contact the TC team at bushkilltechclinic@gmail.com.

ACKNOWLEDGEMENTS

Thank You

The Technology Clinic team would like to thank those who have been involved in this project thus far. Grateful acknowledgement is made to Roger Demareski, Dave Hopkins, Richard McAteer, and Gretchen Rice for taking the time to speak with the Technology Clinic team about the revitalization project. Sincere thanks are extended to Dan Bauer and Lawrence Malinconico for their dedication to the Technology Clinic program and for their mentorship throughout the semester. Finally, the members of the Technology Clinic team would like to thank their advisors, David Brandes and Jim Toia, for their guidance. To all, your involvement in the revitalization effort is greatly valued.

Lafayette College Technology Clinic

April 30, 2017

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APPENDICES

APPENDIX A

LEED NEIGHBORHOOD DEVELOPMENT PLAN

LEED, or Leadership in Energy and Environmental Design was Developed by the U.S. Green Building Council, LEED is a framework for identifying, implementing, and measuring green building and neighborhood design, construction, operations, and maintenance. LEED for Neighborhood Development (LEED ND) was engineered to inspire and help create better, more sustainable, well-connected neighborhoods. It looks beyond the scale of buildings to consider entire communities.

LEED GOALS

The LEED rating systems aim to promote a transformation of the construction industry through strategies designed to achieve seven goals:

1. To reverse contribution to global climate change
2. To enhance individual human health and well-being
3. To protect and restore water resources
4. To protect, enhance, and restore biodiversity and ecosystem services
5. To promote sustainable and regenerative material resources cycles
6. To build a greener economy
7. To enhance social equity, environmental justice, community health, and quality of life

LEED-certified developments are designed to deliver the following benefits:

- Lower operating costs and increased asset value
- Reduced waste sent to landfills
- Energy and water conservation
- More healthful and productive environments for occupants
- Reductions in greenhouse gas emissions
- Qualification for tax rebates, zoning allowances, and other incentives in many cities

APPENDIX B

DETAIL RESPONSES: LAFAYETTE SURVEY QUESTION 8

Question: What weekend activities do you wish were more accessible to our campus?



Movie Theatre: College should screen newly released movies on campus (Buck Hall)

Bowling: An example of more organized social activities for students

Transport/Shuttle: More accessible transportation, and transportation to more destinations

- Busses to NYC/Philly/Lehigh Valley Mall (discounted/frequent)
- Better partnership with businesses in the area - have "first Saturday of the month discount"
- Transportation to the circle
- Cheaper/Discounted ways to spend time with friends in a semi-structured way
- Shuttle to the riverfront facilities and athletic events
- Busses to Banana Factory, SteelStacks, Allentown Art Museum... (Lehigh Valley venues)
- "I think having restaurants, fast food chains, movie theaters, shopping centers, or just places to pass our time would be great. Mostly everything is driving distance and you have to take an Uber which is costly, or wait for the shuttle which is time consuming."

Outdoor Facilities:

- "rental watercraft for use on rivers; waterfront beer garden or outdoor eatery"
- outdoor competitive organized activities through the college

Bars/Nightlife:

- Bar Crawls
- Dancehall, event venue, club/nightlife atmosphere

Sports Venue/Rec Center:

- More fields, open pool on weekends, water sports

APPENDIX C

DEMOGRAPHICS

The city of Easton is made up of four communities: College Hill, the Downtown Historic District, the West Ward, and South Side. In order to get a better understanding of the residents of each community, TC researched the demographics of each community as well as the demographics of Lafayette College. Significant differences in socioeconomics exist between each of the identified groups. One goal of the TC project is to create an accessible space that addresses the needs of all members of the Easton community. Knowing the demographics of the residents and students, the TC team can make better informed decision for the future of the BDC.

CENTRAL EASTON

Area: 1.014 square miles

Population: 9,717

Population Density: 9,580 people per square mile

Median Household Income in 2015: \$39,634

Median Rent in 2015: \$780

Male vs. Females:

Males: 5,038

Females: 4,678

Median Age:

Males: 34.2 years

Females: 37.5 years

Average Estimated Value of Detached Houses in 2015: \$150,511

Average Estimated Value of Townhouses or Other Attached Units in 2015: \$80,648

Average Estimated Value of Housing Units in 2-Unit Structures in 2015: \$87,641

APPENDIX C

COLLEGE HILL

Area: 2.030 square miles

Population: 10,369

Population Density: 5,108 people per square mile

Median Household Income in 2015: \$57,699

Median Rent in 2015: \$835

Male vs. Females:

Males: 5,299

Females: 5,069

Median Age:

Males: 36.5 years

Females: 35.6 years

Average Estimated Value of Detached Houses in 2015: \$274,377

Average Estimated Value of Townhouses or Other Attached Units in 2015: \$148,859

DOWNTOWN (HISTORIC DISTRICT)

Area: 0.667 square miles

Population: 4,854

Population Density: 7,276 people per square mile

Median Household Income in 2015: \$42,070

Median Rent in 2015: \$659

Median Age:

Males: 32.1 years

Females: 35.2 years

APPENDIX C

SOUTH SIDE

Area: 2.920 square miles

Population: 11,716

Population Density: 4,013 people per square mile

Median Household Income in 2015: \$47,837

Median Rent in 2015: \$736

Median Age:

Males: 35.7 years

Females: 39.1 years

WEST WARD

Area: 1.953 square miles

Population: 13,242

Population Density: 6,782 people per square mile

Median Household Income in 2015: \$43,760

Median Rent in 2015: \$791

Median Age:

Males: 36.7 years

Females: 39.8 years

APPENDIX C

LAFAYETTE COLLEGE FACULTY AND STAFF

Population of Faculty: 282 members

Full-Time: 240

Part-Time: 42

Tenured Faculty: 151

Non-Tenured Faculty, on Tenure Track: 54

Population of Staff: 618 members

Racial and Ethnic Diversity:

White: 771

Non-Resident Alien: 19

Ethnicity Unknown: 30

Hispanic/Latino: 19

Black or African American: 32

Asian: 18

Two or More Races: 11

LAFAYETTE COLLEGE STUDENTS

Population: 2,533 total undergraduate enrollment

Geographic Diversity: 46 states, 52 countries, 10% international, non-U.S. citizenship

Racial and Ethnic Diversity:

White: 1,742

Non-Resident Alien: 196

Ethnicity Unknown: 177

Hispanic/Latino: 166

Black or African American: 118

Asian: 81

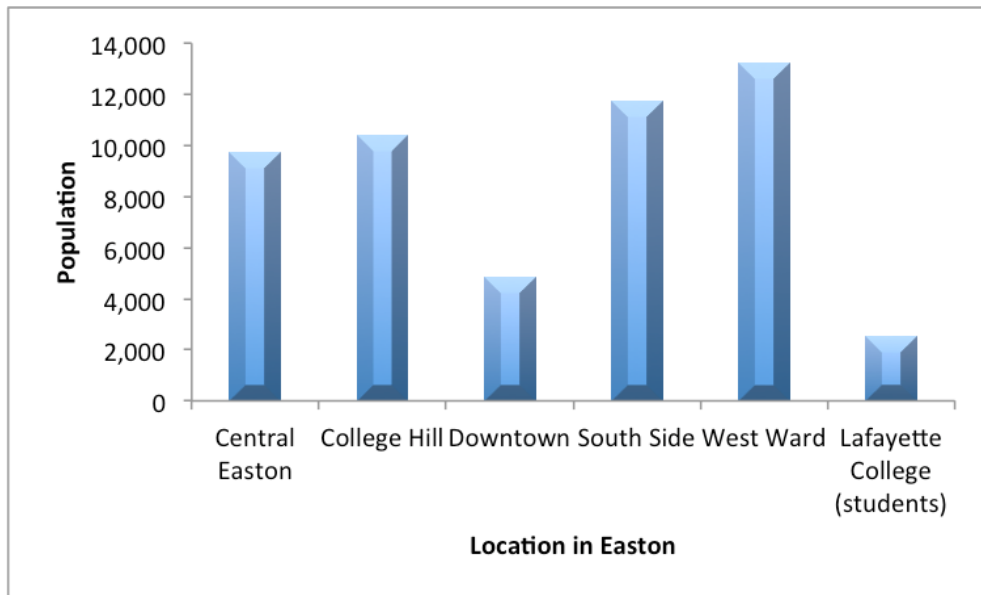
Two or More Races: 53

Socioeconomic Diversity: 47% receive College-funded grants and/or scholarships, 60% receive some type of financial aid

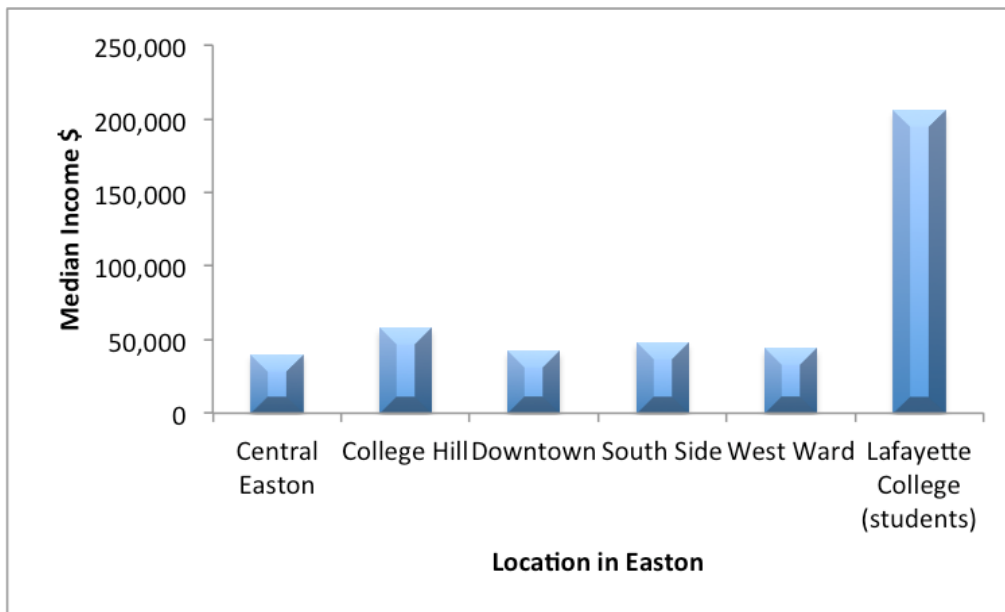
First Generation: 15%

APPENDIX C

POPULATION DATA



MEDIAN INCOME DATA



HOW LAFAYETTE COMPARES

