

**ES 001 Transportation Assessment Project –  
Group #7: Transportation Comparison**

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## **Introduction:**

When we began this transportation comparison project our goal was to assess the parking situations at a variety of different colleges and universities, compare the differences and similarities with conditions here at Lehigh, and draw valid conclusion based on the evidence that we obtained. In our selection of colleges and universities, it was important to select those that were similar to Lehigh as well as those that were different. Moravian, Bucknell, and Lafayette are all similar in many fashions, excluding the fact that Lehigh has the largest enrollment of students in all cases. The Penn State satellite school located in the Lehigh Valley was an interesting selection because the school is comprised completely by commuters.

As we learned more about each of these schools, it became apparent that Lehigh was one of the more lenient schools in terms of rules, regulations, and penalties. Perhaps this is one of the fundamental issues in Lehigh's overall parking problem. Through creating stricter rules and penalties, Lehigh might dissuade students from parking illegally. In addition, the size and difficult terrain found here at Lehigh is the source of several problems. Students residing on the hill rarely walk to class, and this creates unneeded congestion. All of the other schools we looked at had relatively flat terrain that is conducive to walking to class rather than driving.

Due to the overall magnitude of our project, we were unable to obtain all the information that we otherwise would have included in our project. Falling into this category is bus transportation, which is highly ineffective here at Lehigh, as well as the issues related to long-term planning. We know that Lehigh had devoted a large sum of money to future parking plans in the form of additional parking garages, however, we

were unable to assess the future plans of all of the other schools. This would have been interesting because future plans are directly correlated with current situations and problems. We decided to focus on parking availability, parking facilities, penalties, fines, rules, regulations, and the ability to conveniently walk to classes. We selected these areas of focus because we felt that they were the most relevant to the overall parking situation at the respective colleges and universities.

In retrospect, we all feel our project would have benefited from interviewing a few students from each of the schools in order to pinpoint some of the key parking issues that were otherwise overlooked. No one knows more about the parking situation than the students enrolled at the college or university. Additional information could be gathered about those at Lehigh that live at greater distances off-campus and are forced to commute on a daily basis. We did not feel that this was one of the primary issues in the overall parking situation here at Lehigh. It's also interesting to note that Moravian is the only other school that is divided into separate areas. We found that they provide a shuttle back and forth to their downtown historic district campus. This is not exactly the same situation we found here at Lehigh; the separate colleges here are all located in relatively close proximity with the exception of our mountaintop campus. Busses here at Lehigh are largely devoted to providing transportation back and forth from this facility. We will talk more about our suggestions for the future in our conclusion.

**Moravian:**

Moravian College was founded in 1742 and is located just across the bridge in historic Bethlehem. Currently, there are 1,392 students enrolled at the college. Lehigh has almost four times as many students enrolled in the University. Needless to say, the

large number of students here at Lehigh is a major source of current parking problems. At Moravian, 90% of the students reside on campus. They provide residence halls, town houses, and apartments. In addition, Moravian also has two fraternities as well as four sororities. Moravian definitely benefits from a relatively flat and pedestrian friendly campus. Lehigh's terrain is a major deterrent to walking to classes. Students residing on the hill are much more likely to drive to classes, especially in the winter months.

At Moravian, the campus safety office issues the parking permits. This office is also in charge of security and police. Lehigh has a parking authority that is solely devoted to parking issues. The multitasking that Moravian undertakes in regard to the parking issues detracts from the overall proficiency relating to parking matters. At Moravian, the main bulk of parking availability stems from 19 different parking lots. These lots are broken up into twelve 24-hour parking lots, four lots with no overnight parking, and three snow lots. The majority of parking at Lehigh comes from drastically different sources. Lehigh provides parking in Zoellner parking garage, the newly completed garage located across from the bookstore, as well as an abundance of metered parking located on various side streets. This parking is monitored not only by the Lehigh parking authority, but by the Bethlehem parking authority as well. Moravian's on-campus parking is controlled and monitored in totality by the college. The town regulates additional off-campus parking at Moravian. This is where one major disparity lies; there is a good portion of on-campus parking that is regulated by the Bethlehem parking authority at Lehigh.

This past year, Moravian expanded on three lots located on the north edge of campus off of Elizabeth Avenue. In addition, two smaller lots were also added. Lehigh

recently added a new parking garage located adjacent to the Fairchild Martindale library that will also house students in upcoming years. In the future, Lehigh has devoted a large sum of money to providing additional parking garages to ease the strain of the current parking situation. As far as we know, Moravian has no future plans to add additional parking. This is largely due to the fact that currently, the parking availability is rather adequate at Moravian.

In terms of rules and regulations, Moravian prohibits freshman from having cars on campus or within a half mile of campus. Penalties for violation of this rule include tickets, fines, towing, and possible suspension of car privileges. The regulations and penalties here at Lehigh are much more lenient in regard to freshman bringing cars onto campus. Freshman can park their cars off campus with little or no repercussions. This only makes matters worse, as those who are allowed to park off campus are forced to find alternative parking likely taking someone else's spot. Moravian requires students to register their cars each year for the minimal fee of thirty-five dollars. Upon registration, the student receives a brochure that clearly explains the rules and regulations pertaining to parking. In addition, they receive a sticker that must be placed on their car. This system is similar to the current system here at Lehigh.

One of the main issues at Moravian is congestion created from snow during the winter months. Congestion is often created due to plowing and students are encouraged to leave their cars at home in winter months, especially following a snowstorm. This is precisely why Moravian has three snow lots, to alleviate some of the additional strain on parking in the winter. Due to the vast array of parking options at Lehigh, winter parking is rarely a problem. The majority of problems here stem from the issue of supply and

demand; there simply are not enough spots in certain areas to make parking convenient. This problem is especially bad in the mid-campus area surrounding Packard Lab, Drown Hall, and Williams. Students are forced to park at a distance from these buildings and this creates additional congestion in other areas. In many cases, students with classes in these buildings are forced to walk to class due to the unavailability of parking.

### **Bucknell:**

When comparing Bucknell with Lehigh, many similarities and differences can be found between the two schools. Bucknell hosts 3,654 staff and students, while Lehigh hosts 6,750 faculty and students; this is almost twice that of Bucknell. This large difference in enrollment is potentially a problem for Lehigh, especially on the public transportation front. The steep and hilly terrain of Lehigh compared to the relatively flat terrain at Bucknell magnifies our transportation problem. While the overall enrollment levels are quite different, the parking systems themselves are rather similar. Bucknell's parking system is much less lenient on freshman having cars on campus in comparison to Lehigh. Parking violations at Bucknell are a lot stricter as well; expensive fines encourage students to walk to class rather than drive and risk getting a ticket. While Lehigh's future plans include investing large amounts of money on providing additional parking, Bucknell has been focusing more on improving their facilities.

If it were not for Lehigh's mountaintop campus, Bucknell's campus would be relatively the same size. The main campuses where students live and attend class are very similar at both of these schools. The sizes of the campuses may be very similar, although the means by which students travel around campus are rather different. The vastly different terrain of these two schools explains these differences in travel methods.

Lehigh is situated on the side of a mountain. A majority of the student housing, including the fraternities, sororities, and Sayre Park, are all located on the side of the mountain.

While students are located there, the buildings in which they attend class are at the bottom of the mountain. This encourages, and almost forces, students to drive to class rather than walk.

Bucknell is located in the middle of cornfields. The campus is flat; therefore walking around is much easier and more convenient than walking up and down the side of a mountain. At Bucknell, students are located relatively far away from available parking and their classrooms, similar to the situation at Lehigh; however, it is a flat and easy walk back and forth between classes at Bucknell. The larger number of students here on Lehigh's pedestrian unfriendly campus is a major contributor to the overall parking problem.

The parking systems of Lehigh and Bucknell are both very similar. Bucknell's parking system utilizes both bumper decals as well as rearview mirror tags. Passes are distributed on a first-come, first-served basis. These passes cost Bucknell students thirty dollars and the Bucknell staff fifty dollars. Each decal specifies particular lots for which the passes are valid.

Another major difference in the parking systems is the issue of freshman and the policies dealing with their right to have a car on campus. Lehigh is very lenient about freshman having cars; freshmen are rarely ticketed for having an illegal car on campus. While they are unable to acquire parking permits, freshman students usually park their cars off-campus without repercussion. Bucknell's freshman car policy is extremely strict. Under no circumstance are freshman allowed to have vehicles either on campus or in the

town of Lewisburg. Both the possession and operation of vehicles by freshman are illegal. Unlike Lehigh, this strict policy effectively eliminates freshman vehicles, further eliminating any potential parking problems.

Bucknell's parking restrictions are a lot harsher than Lehigh's. Parking fines are differentiated into two different groups. Minor infractions are twenty-five dollars each for the first four tickets, and then one hundred dollars each for the next two. Severe infractions are fifty dollars for the first and one hundred dollars for the next five. After six fines the persons parking privileges are suspended for one year. Stricter policies, dealing with fines and freshman parking, have allowed Bucknell to prevent the major parking issues from becoming a problem. Because of the lack of any real parking problems, the university has been able to upgrade and improve upon their educational facilities to a great extent, and has not be compelled to invest large sums of money in solving a parking problem such as the one here at Lehigh.

In terms of pollution, Bucknell's campus is much more environmentally friendly. Lehigh's students commute back and forth to class by car or by school bus. Bucknell's students generally walk to class because the university does not provide transportation. Lehigh's busses produce a terrible amount of pollution; the absence of these busses at Bucknell reduces smog output substantially.

**Lafayette:**

Lafayette is located twenty minutes away from Lehigh's campus in Easton, Pennsylvania. It has a student population of 2,330 and is located on a rural campus. An astounding 96% of students, who attend this nearby University, live on campus, which shows the density of people who need on-campus parking spots. As a group we focused

on parking because it was a major issue discussed in class, and we wanted to see how our school compared to other surrounding institutions in regard to their parking situations. The main differences between Lehigh and Lafayette's campus terrain is that we have a hilly campus here, while Lafayette has a more rural and flat campus. Another crucial difference between these two institutions is that Lehigh's student population is more than double that of Lafayette's, which subsequently causes more of a parking and congestion problem for us.

At Lafayette, there are a 925 student cars and 954 staff cars, which means there is a total of 1,879 cars on campus at this university. The major reason why there are so few student cars is the fact that Lafayette does not allow freshman or sophomores to have cars on campus unless they are commuters, which is a rarity. Lafayette has parking spots on campus, although only in small numbers. It has one 350 car capacity garage, which is over twenty years old; this garage is dilapidated and in need of renovation. The majority of additional parking spots that are available for use, other than the garage, are located at the fraternity parking lots and the parking lot facilities at certain academic buildings located on and around campus. Visitor parking at Lafayette is virtually nonexistent. There are only twenty-five on-campus spots and a hundred-car parking lot located at the athletic fields on-campus. Lehigh does not provide that much visitor parking either. We do, however, allow people to park in our parking garages, unlike Lafayette, whose garage is almost always full due to the limited amount of parking spots on campus.

As far as parking permits go, faculty and staff obtain them free of charge while students have to pay twenty dollars in order to receive one. If a student does not obtain a permit they will be fined fifty dollars every time they are caught without one. To

complement these passes, the school provides an equal amount of allotted parking spaces for both staff and students. When compared with Lehigh, the pass systems are similar for gaining access to drive on campus. Similar to Lehigh, there is an extensive fine for driving around without a permit. Also, at Lafayette, public safety runs the parking, law enforcement, and transportation services. At Lehigh, there is one entity devoted to parking and parking services. This is why I believe parking regulations are much stricter here than at Lafayette. Parking services here focus on parking and ticketing, while at Lafayette, public safety has to take care of much more than just minor parking issues and infractions.

As far as regulations and ticketing goes, Lafayette is more lenient than we are here in the frequency in which they ticket. The price for tickets at Lafayette varies from those at Lehigh. All general violation tickets are twenty dollars, no parking zone tickets are twenty-five dollars, parking in handicap areas results in a one hundred dollar ticket, red tow-away zone parking infractions are fifty dollars, and your car will be towed if you park there for 48 hours. Also, Lafayette institutes a reckless driving rule that the police officers generally do not enforce here; this costs the ticketed person fifty dollars.

Lafayette has a parking problem similar to ours, but it is caused by a lack of planning. As the number of students at the school increases, the school has failed to plan accordingly to accommodate the amount of students enrolled. A proposal is in the works at the school to obtain more parking spaces to solve this lingering problem. Since Lafayette already has already banned both freshmen and sophomores, it seems like this institutions major problem is its lack of size and space for parking. One solution that might be appropriate would be to increase the transportation services offered by the

school. So far, Lafayette only offers shuttle buses to their Art building in the center of Easton. If they were able to increase the amount of locations to run shuttle buses, I think they would have less on-campus parking problems to worry about. With its flat terrain, Lafayette is pedestrian friendly, which further supports the idea that it is just basically unprepared and has a minimal amount of parking spaces. Lafayette needs more parking spaces because of its increasing student population, and its lack of parking spaces that are presently available.

**Penn State (Lehigh Valley):**

Penn State's Lehigh Valley satellite has an enrollment of 700 students. It is a small school that is completely comprised of commuters; because of this they have many parking rules and regulations. There are eight different parking lots that students are allowed to park in. Any student that is registered as a full-time or part-time student can register for a parking permit. All vehicles must be registered by the first day of classes. The current cost of a parking permit is forty-five dollars. These permits can only be used to park in specified areas on campus. These designated areas are marked with yellow paint on the curb. If a parking permit is not displayed a fifteen dollar parking ticket will be issued. If a car is parked illegal in a handicap spot, a twenty-five dollar ticket is issued. Parking in areas not designated for students will result in an eight-dollar ticket. Any kind of moving violation is fifteen dollars. These tickets can be appealed within two weeks of receiving the ticket.

Those who own permits are subject to the rules and regulations that apply to having a car on campus. Parking permits must be visibly displayed on the owner's car. Students can use one permit for as many cars as they desire. The only stipulation is that

the owner must register their cars to their specific permit. If a permit is lost, a substitute permit can be requested at the discretion of the traffic office. This substitute permit needs to be displayed on the driver's side dashboard. Substitute permits cannot be used to park in any visitor parking spots.

The general provisions of Penn States satellite campuses are as follows:

- All vehicles must be registered with the office of security.
- The owner of the vehicle is parking at his or her own risk.
- Only people with vehicles can apply for a permit. The term vehicle includes, motorcycles, scooters, trucks, vans and any other vehicle that runs on a motor.
- Students are never allowed to park in visitor spots.
- All Motor Vehicle codes of Pennsylvania are observed and in-forced on the Lehigh Valley campus.

On the Lehigh Valley campus medical permits are issued when necessary. Medical permits can be received for those with appropriate medical conditions. They are issued for special area parking. On all of the medical permits, the expiration date must be visible. Medical permits are for the exclusive use of the party to whom they are issued and any violations of this rule will result in a fine.

Overall Penn State's Lehigh Valley Campus and Lehigh University have many similarities in their parking rules. They both use the parking permit system, which generates additional revenue for the campus. The only real difference is in the ticketing and fine prices. If someone parks illegally at Lehigh it results in a ten dollar fine. On the Penn State satellite campus the same offense is only an eight dollar fine. There is a substantial difference in the fine one receives for having a permit that is not registered to

their car. At Lehigh it is a one hundred dollar fine and at Penn State's satellite campus it is only a twenty-five dollar fine. Otherwise most of the rules and regulations are closely correlated to those at Lehigh.

### **Conclusion:**

After completing this project, we feel that we have gained a comprehensive understanding of the fundamental parking issues here at Lehigh and at the schools we selected for comparison. The main difference is overwhelmingly obvious; Lehigh is located on a mountain and this makes it difficult for students to easily traverse back and forth between classes. There is no clear-cut solution to this problem. We suggest that Lehigh focus more on providing additional parking garages in order to alleviate some of the parking unavailability and congestion. It is simply a problem of supply and demand; Lehigh is not meeting the demand for parking and this results in an inadequate parking system. Increased fines and penalties, while preventing students from parking illegally, would simply force more students to walk to class for fear of being ticketed.

The double-whammy effect we described was perhaps poorly articulated. We only meant to stress the idea that both the school and the town ticket Lehigh students parking on-campus. No other school has a situation in which students are ticked on-campus by the town parking authority. Moravian may have off-campus areas that are regulated by Bethlehem, however, Lehigh has areas directly on-campus that are not regulated by the school. This adds confusion due to the fact that Lehigh students cannot park in metered areas on-campus before four o'clock. There is sometimes confusion as to exactly where this invisible boundary lies. An additional suggestion we have come up with, that would temporarily solve the parking problem until additional lots are provided,

would be to only allow juniors and seniors to have cars on campus. There would certainly be some backlash from the sophomores, but not allowing them to have cars on-campus would provide a substantial amount of additional spots.

It's difficult to assess the overall environmental impact of the transportation situation on each of these campuses, although it's likely that Lehigh has one of the higher pollution rates among these five schools. This is largely due to the number of busses continually emitting smog all day across campus. Without a further analysis, we can't make a valid decision based on the information that we have gathered. However, we know that Lehigh has the largest number of faculty and students among these five schools and we all know more cars means more pollution. Once again, we stress that preventing the sophomores from having cars on campus would greatly reduce congestion as well as the overall emission of smog-related air pollution.