Introduction

The goal of this project has been to investigate the role of cars on the Williams College campus (See Appendix A). More specifically, our focus has been on issues of parking options and availability for people directly associated with the college: students, faculty and staff. Williams College is nestled in a valley formed by the Taconic and Greylock mountain ranges. Given its location, the college is rural in nature and isolated from large cities in the surrounding area. As a result, transportation is a concern for residents and workers of the college who rely in large part on their own personal vehicles for mobility. With increasing availability of cars and numbers of students who wish to bring cars to campus, parking demands have become more pressing in the past few years. With this in mind, we have evaluated multiple options for change, which could help the college remedy the problem. Our approach has been under the assumption that the college wants to solve this problem and that this necessitates a change in the current situation.

In order to gauge demand for change, we conducted surveys of all students, faculty and staff. Upon assessing the survey results and determining that there is a perceived parking problem, we took a few steps back from the situation at hand – parking – to see how it fits into the context of the college system. We came up with two different approaches that the college could take in working to remedy car issues. Option 1 is to meet the demand, to accommodate the growing number of cars coming to campus each year. Option 2 is to take an environmental approach; to discourage car use and work for a greener, more unified campus. The two options are represent two entirely different schools of thought, and the college as an institution needs to make the decision as to what they would like to represent and to work for.

Site Description

Williams College is situated in the northwest corner of Massachusetts in the rural setting of Williamstown (See Figure 1). The elevation of Williamstown is on average 740 feet above sea level, and the town covers an area of 46.86 square miles. The existing geological structures are indicative of a glacial geological formation, and Williamstown is located in what was Glacial Lake Bascom. The ridges surrounding Williamstown are primarily phyllite and the valleys are predominantly marble. The college is part of the Hoosic watershed, and there are four main water bodies that run through or boarder the campus: the Hoosic River, the Green River, Christmas Brook, and Hemlock Brook As a result of these rivers, there are a few wetland areas existing on campus (See Appendix B). On the north end of campus by Cole Field, there is a large wetland and floodplain and wetland area. Additionally, along the Green River and by Weston there are designated wetland areas.

Another important aspect of Williamstown is its historical character. Williamstown has a strong colonial influence and agricultural history. The residential town is surrounded by agricultural fields as well as hardwood forests on the upper hills. Many of the buildings on campus are constructed out of brick, giving the college a warm feel, and many surrounding local residences are colonial style houses. The college is woven into the town, owning multiple residences on the streets around the periphery of campus

As for the zoning, the college is located in General Residence 1 and General Residence 2 districts (See Appendix C). Part of the property that the college owns downtown on Spring Street is located in the Planned Business district. There is a constant intermingling of both college and town properties. The proximity of college property to town property results in movement patterns on campus that interact with and influence town patterns. The central thoroughfare in Williamstown is Route 2, which bisects the Williams College campus. Many of the main roads that boarder and are used by the campus are town roads; these include Route 2, Route 7, Spring Street, Latham Street, Southworth Street, Hoxsey Street, Park Street, Walden Street, Whitman Street, and Water Street. These roads, connected with the principle college roads, provide a network for vehicular circulation through campus (See Figure 2).

History of Cars on Campus

TIMELINE OF TRANSPORTATION IN WILLIAMSTOWN

- 1859 – First Railroad opens
- 1895 – Electric Streetcar begins functioning (Williams students main form of transportation)
- 1900 – First automobile enters Williamstown (greeted with suspicion by town residents)
- 1908 – Model T invented; assembly lines increase access to cars
- 1910s -- Automobile use increases in the town
- 1910 – Speed limit set at 5 mph
- 1920s – Only juniors and seniors allowed to bring cars to campus
- 1949 – Parking stickers introduced (cost $15 for a year of parking privileges)
- 1960s – Students only allowed cars for getting to and from campus (put in dead storage)
- 1966 – College claims it "will not turn anymore of this campus into blacktop"
- 1970 – First women students admitted (no longer a need to travel on the weekends)
- 1999 – Over 600 student and 750 faculty cars on campus

Historical Importance of Cars

The presence of cars in the United States has increased significantly over the course of the 20th century. This trend has been mirrored in Williamstown, despite the rural and remote nature of this area. Cars have given people a greater flexibility and freedom of movement, but have also significantly impacted this landscape. Roads and paved surfaces comprise a substantial part of this environment and dictate much of the movement within this town. The issue of cars has been linked to the creation of roads throughout the history of Williamstown; the amount of paved surface and money spent on road maintenance has increased along with car use.

College Attitude on Cars

The attitude of the college has fluctuated over the years, in regards to the number of cars in this area. Initially, automobiles were regarded with suspicion by the college and feared to change the historic, rustic beauty of the town. Increasing feelings of isolation by the student body forced the college to accept student cars on campus, although with limited use restrictions. Over subsequent years, the college has worked to meet increasing demands by both students and faculty for more convenient parking on campus.

Currently however, demand is increasing at a faster rate than the college can supply. In the past few years, four new parking lots have been constructed, and there is still perceived to be a higher demand for more parking. After the construction of these lots, the college has unofficially sworn not "to pave another inch of this campus" (Michael Card, personal communication).

Current State of Cars on Campus

Parking Situation

Williams College currently owns and maintains 47 parking lots on its property, ranging in size from large lots such as the Greylock lot which has 179 spaces to small lots such as the West College lot which has spaces for 6 cars. In total, there are 1772 parking spaces monitored by the college which are divided into 769 faculty/staff spaces, 725 students spaces, visitor, handicap and public/tenant lot spaces (See Appendix D). The college has plans to build a new parking lot or garage in conjunction with the proposed Performing Arts Center (PAC). The current plan, which would place the PAC on the south end of Spring Street, includes addition of 125 parking spaces. However, this construction site would incorporate a current town lot into the new structure. Therefore, 95 spaces in the new lot would go to replacing the old spaces, while the rest would provide parking for theater performances. No current plans exist to expand or build new parking lots for students or faculty.

Parking Allocation

Parking is allocated differently for students and workers of the college. All college students except for first years (See Appendix E) are allowed to bring cars to campus. Parking is granted on a first-come, first-serve basis through an on-line registration system. Students are only allowed to park in the parking lot to which they are assigned, although parking in faculty spaces is permitted between 6pm and 2am on weekdays and 1pm and 2am on weekends. The cost of a parking sticker for the year is $60. The distribution of students bringing cars to campus is almost equally balanced between students from the Northeast and those from outside the Northeast. (See Figure 3) Through the system, students are assigned to the parking lot closest to their dorm. (See Figure 4) Every effort is made to ensure the current system is as fair and equitable as possible.

The system of faculty/staff parking is slightly different than the student system. All workers for the college are given as many parking stickers as they would like and are allowed to park in any faculty/staff parking spaces on campus. This universal decal system does not cost the staff or faculty anything. As a result, **82%** of faculty and staff drive to get to work each day. (See Figure 5) Once on campus however, **86%** of workers walk to get where they need to go. (See Figure 6)

Parking Surveillance

In order to monitor the large number of cars on campus, Williams College security patrols all campus parking lots for about sixteen hours a day, ticketing for both moving and parking violations. Over the course of the 1998-99 school year, 6360 student parking tickets were given out amounting to a sum of approximately $114,000. Additionally, about 2000 faculty tickets are written every year adding up to about $10-20,000. Payment of student parking tickets is enforced, while payment of faculty tickets is not. Security also has more extreme measures to deal with parking including selective towing of non-college registered vehicles and applying a car "boot" to vehicles illegally parked.

Alternative Options to Driving

Students without cars or those who choose not to use their cars are not limited to staying strictly on campus. There are alternative modes of transportation on and around campus. The College Council runs a shuttle multiple times throughout the weekend to local consumer destinations such as Stop and Shop, Wal-Mart and the Berkshire Mall. Additionally, buses are chartered through the college to Boston, New York and the Albany airport over extended college breaks. In terms of outside sources of transportation, the Berkshire Regional Planning Authority sends local buses down Route 2 to a variety of destinations, and there are buses to Boston and New York that leave from the Williams Inn once or twice a day. **37%** of students have bicycles on campus and there are bike racks outside of most dorms and frequently visited college buildings. Foot power provides a major mode of transportation for most students on the central areas of campus as well.

Parking Demand

Surveys were conducted in order to assess the important parking related issues concerning students, faculty and staff. An all-campus email was sent out to the entire student body from which there were 520 responses. Faculty and staff were given paper copies of a survey, to which 275 people responded. From these results, the major conclusion that can be drawn is that students, faculty and staff feel there is a parking shortage on campus (See Figure 7). **67%** of students expressed concerns with both the number of parking spaces available to students and the convenience of that parking. Similarly, **63%** of the faculty also felt that parking is inadequate. Although these responses only represent approximately a quarter of each population sampled, they nonetheless point quite clearly to a perceived parking problem on campus. Therefore, while we cannot draw conclusions about sentiments from the entire campus, we feel these results to be a fair representation of overall opinion.

Given the expressed demand for more parking, the next question comes of how to deal with the situation. With regards to this problem, we have evaluated options within a spectrum of possibilities ranging from accommodating parking demand to placing a higher priority on green space and intentionally not meeting demand.

Option 1: Meeting the Demand

Meeting the demand is an effective strategy because it gives people what they want – in this case, more parking. It goes along with the trend of an increase in the number of cars coming to the campus and an increase in the number of cars in this country in general. This year, all of the student spaces filled before the online car registration period had even ended – security had to turn people away who wanted to bring cars. B&L Gulf at the end of Spring Street, which offers off-campus parking to students who did not get a spot on campus, is full as well. If the demand for more parking is met, everyone who wants to bring a car to campus has equal right to a parking space and no system of prioritizing would be necessary.

Accommodating the demand would, in short, require new spaces; new spaces means construction that would not only take away open or green space, which could have both aesthetic and environmental impacts, but would be an expense to the college. What is more, it is only a band-aid solution; it addresses the situation now, but may not be sufficient if the number of cars continue to increase. After all, in the past five years four new lots were built that are now all filled to capacity.

As mentioned above, whether to meet the demand or not is part of a bigger decision that the college has to make.

What makes the concept of meeting demand tangible at the planning level are the physical results a decision to meet the demand would have on the campus. The most obvious way to accommodate more cars would be to increase the number of spaces by adding parking lots or garages.

I. Parking Lot Option

Williams College currently has far fewer spaces for our population size and building areas than the Williamstown Zoning by-laws require (See Appendix F). This difference is mostly due to a diversity factor that the college uses in negotiating construction with the town. The diversity factor allows the college to construct buildings without meeting the parking requirements based on the idea that most of the people using the new facility will be members of the college community who walk or bike as main forms of transportation. Thus, the standard parking lot requirements would not apply.

To create more spaces, the college could either build new lots or expand existing lots. As an educational institution the college is often granted variances on dimensional requirements under the Campbell determination, which states that, if buildings are "to be used for an educational purpose, they [are] 'excluded from local control' under G.L.C. 404 3, second pen." (Campbell vs. City Council of Lynn) Despite this exemption, there are still a number of things to consider on any site.

Construction of one parking spot costs about $4,200 (Vince Guntlow, personal communication). While the specific costs of construction vary depending on the nature of each site, there are certain factors that need to be taken into consideration regardless of location. The amount of surface runoff cannot be increased for any given area. Thus, paving over an area that used to be grass usually requires an underground holding tank that collects the runoff via drains, then slowly releases the water back into the system at a controlled rate. Other aspects of lot construction are the pavement and curbing required, as well as the lighting and electrical needs of the lot. This may require that utility structures, such as a generator, be installed on the site. Finally, the landscaping requirements as dictated by the bylaws must be attended to (See Appendix F).

A. Building a New Lot

Building a new lot seems to be the simplest answer as it would meet the demand and could be done in a fairly inconspicuous manner. However, not only would it involve demolition of green space and construction costs for the college, but it would also require a substantial spatial investment as well. At this point, the only area that has enough space to accommodate a new lot would be towards the south end of campus near Susie Hopkins and Doughty, off of the end of Spring Street. As mentioned earlier, current

plans have the Performing Arts Center sited there. Any parking areas built in that area would be in conjunction with the PAC and would not help relieve the perceived parking shortage that we are trying to remedy.

B. Expanding Current Lots

A more feasible option for the college would be expanding existing lots. This would still help to meet the demand, could be done in a visually unobtrusive way, but most importantly it works with existing structures. Expanding an existing lot would allow the college to work with the existing lighting, electrical and utility structures already on site, and possibly even the water holding tank. It would, however, still involve a loss of green space and costs of construction.

Based on recommendations from various college personnel, we evaluated 6 lots on campus that could potentially be expanded:

The Thompson lot, behind Thompson Chapel and Griffin Hall, could be expanded east down through the wooded area and the dirt lot of the Village Coiff's to Southworth Street (See Figures 8 and 9). Now that the grandstand beyond the Weston lot by the football field and track on the southern end of campus has been moved, there is space to expand to the south towards the baseball diamond (See Figures 10 and 11). Another lot that could be expanded is the lot that starts behind Spencer House and stretches out away from Brooks House. Recently expanded, it could be pulled all the way through a group of trees on the south side to connect with the Health Center lot (See Figures 12 and 13). The small lot between Goodrich and Sewall houses could potentially be expanded to the west, across what is now the lawn of Goodrich, to connect with Sawyer Library Drive (See Figures 14 and 15). A little further out in that same area is the small lot behind Dodd House. Currently bordered by lawn on the north and east sides, it could be pulled in both these directions to allow space for more cars (See Figures 16 and 17). Further north is the Poker Flats lot, which could be expanded to the south towards Mission Park. There is also a small area across Stetson Hall Drive to the east, below the tennis courts, that could support further expansion in this area, as could the open space just north of the upper Mission Park lot, behind Thompson Hall, south of the Cole Field House (See Figures 18 and 19). The dirt Mission lot beyond the tennis courts (See Figure 20) has been mentioned to us by different people as a place that we should look at because of the large number of cars it holds. The main problem with this lot is that it is dirt and was built before the bylaws required

paving. Any change would most likely mean that the college would also have to pave and improve the lot. In addition, it is located in a wetland, which means it falls under regulation of the Wetlands Protection Act.

To determine which of these sites listed would be the most feasible, we looked at five important, more site-specific factors of planning and construction in relation to each of the six lots (See Figure 21). The geology of each site is important in determining how each lot will be installed. In the case of the Thompson lot, bedrock is very close to the surface and would require a ledge cut for any sort of grade change. Blasting ledge costs about $80 per cubic yard. Where the bedrock is deeper down and clay lies in the areas of potential lot construction, as in all of the other sites, it would likely be necessary to remove the clay and fill the entire area with gravel for a more solid base. This only costs about $4 or $5 per cubic yard. Another factor to consider is whether the sites are in Conservation Areas and thus fall subject to the regulations of the Wetlands and Rivers Protection Acts. The only area this applies to is the Weston lot, which lies quite near Christmas Brook. Thus, certain places on the site lie within the 100-foot riparian zone of the Rivers Protection Act. On the aesthetic side, we looked at the visual impact each lot could have on the surrounding area and the campus overall. Opening the area behind Thompson Chapel all the way through to Southworth Street would present the residents with a very altered, open view of cars and pavement. Connecting the Goodrich/Sewall lot to Sawyer Library Drive would change a pleasant lawn into an obtrusive, paved space. As the other four lots are located more on the periphery of campus, changes would affect the area directly surrounding the lots, but would have a smaller effect on the campus overall. Creating new spaces for cars could also potentially alter the traffic flow of an area. While increasing spots anywhere will lead to more cars driving around the area, expanding lots in certain areas would create paths of circulation where none currently exist. The Thompson expansion would cut a lane through to Southworth Street where there is not one now. Expanding the Brooks lot to meet the Health Center would create another connection between Hoxsey Street and Route 2. Extending the Goodrich/Sewall lot would place Goodrich House on an island surrounded by pavement. The other three would merely increase circulation around the existing lot. Finally, we looked at the convenience of each lot, or each site's location in respect to heavily used buildings and areas of campus. The Thompson, Brooks and Goodrich/Sewall lots are all centrally located areas that are accessed by a large number and variety of people throughout the day. The Weston, Dodd and Poker Flats lots are on the outskirts, more associated with specific groups of people from specific areas of campus.

To determine the best lots to expand, we analyzed the positives and negatives for each option. Dodd and Poker Flats weigh positively in all areas except convenience, and are thus what we considered the more favorable options. The disadvantages weigh out the advantages in both the Goodrich/Sewall lot and the Thompson lot. The Weston lot also has more negatives than positives, but one of these disadvantages is convenience, the other conservation. While it would pose a problem, the existing lot is proof that this problem can be worked out. The Brooks lot only has one disadvantage as well, but it is in regards to traffic circulation, which could have quite an impact on the residential "backyard" nature of that area. Thus, we would recommend the Poker Flats, Dodd and Weston lots as the areas most appropriate for expansion.

II. Parking Garage Option

An alternative to the options of expanding or building new lots is the construction of a parking garage on campus. A parking garage in this area would have to fit in with a rural, small-town, college campus; it would probably be along the lines of a two-story, aesthetically well designed garage. As of now, Williamstown has never seen a parking garage, and thus has no zoning by-laws governing the construction or design of such a structure. If, however, Williamstown residents were to develop zoning by-laws for a garage, it would most likely be regulated to ensure that it was relatively small, hidden, had good access, and was planned to fit well into its surrounding buildings and environment.

As is the case in building parking lots, the construction of a parking garage requires an investigation of the site in terms of the composition and placement of underground materials. These findings then determine the suitability of a site for a garage, and consequently, the expense of building on a particular site. In general, parking garages are constructed with shallow footings made of pre-cast concrete that extend below the frost line, which is about 4 feet below ground level. A base layer is built upon these footings, and an elevated deck is then built above this. The cheapest and easiest type of garage to build is one that has a base level at the grade of the ground surface – parking lots become more expensive if they are underground, or if the grade of the ground surface has to be altered. In terms of underground materials, the best situation is one in which the bedrock is sufficiently below the surface to allow the footings to rest upon this. If the bedrock is too far below the surface, a suitable surface for the footings to rest upon must be found; in this case, excavation down to strong soil may be necessary. Finally, if the bedrock is right underneath the surface of the ground, ledge will have to be blasted in order to place the footings below the frost line – this is the most expensive option.

The parking garage options in order from least expensive to most expensive are:

- Site with bedrock adequately below the ground to provide a suitable base for footings
- Site with bedrock farther underground, yet with strong soil capable of supporting footings
- Site with bedrock farther underground, yet with layers of poor soil above this – excavation necessary
- Site with bedrock right at the surface, requiring blasting

(Eric Beattie, personal communication)

A parking garage on the Williams campus would serve to meet demand while at the same time concentrating cars in one area and avoiding the increase of paved surfaces on campus. However, this is an

aesthetically questionable option, for it is suggesting the use of an urban construct in a rural area, and is large and obtrusive in general. The cost of building a parking garage is also extremely high, at about $15,000 per space, and maintenance including repaving, repainting, and lighting concerns, as well as surveillance for safety concerns would further add to the expense.

Based upon sites that were recommended to us and those that meet the criteria of large, pre-existing parking lots sites capable of supporting a parking garage, we chose to investigate the Greylock parking lot (See Figures 22 and 23) and the Thompson Memorial Chapel lot (See Figures 24 and 25) as possible sites.

In evaluating parking lots, we looked at four factors that are significant in determining the utility and impact of a parking garage (See Figure 26):

- The composition of the ground surface in terms of bedrock or clay, indicating the relative expense level of a particular site.
- The level of visual impact upon surrounding areas
- The impact upon traffic flow
- The locational convenience of a parking garage in terms of its accessibility to central areas of campus.

The Greylock lot has clay underneath its surface; this clay however, may or may not be capable of supporting footings. Thus, although clay is approximately 15 times cheaper than bedrock to excavate (Chris Williams, personal communication), excavating down to stronger soil would still substantiate a significant cost. The Thompson Chapel lot, however, would be an even higher cost because bedrock is located directly underneath the ground surface, and would definitely have to be excavated. The Greylock lot would have a high visual impact due to its location in a central area of campus and the lack of screening in this area, its proximity to admissions, and the fact that it would be seen from Rt. 7. The Thompson Chapel lot is less obtrusive visually, because the slope behind Griffin Hall could be utilized to tuck the upper deck of the parking garage into the hillside. The view of the parking garage would be buffered by a line of trees towards Southworth Street, and by Thompson Chapel, Griffin and Hopkins Hall towards Route 2. In both areas, traffic flow would not be greatly effected by a parking garage because there are one way streets leading into and out of the current lots that would greatly facilitate flow into and out of a garage. In addition, both lots are located in a centrally convenient place for both faculty and students, although the Greylock lots is more convenient for students, and the Thompson Chapel lot is more so for faculty.

In order to determine the best possible site for a parking garage, a value judgement was made concerning the utility and impact of both sites. Both lots become equivalent in terms of the four factors when the positive and negative features are weighed out, and therefore we chose to look at aesthetic impact as the deciding factor. If the college were to build a parking garage, we would recommend its placement at the Thompson Chapel lot site, because of its low visual impact. If the college is planning to forgo the money and the effort to build a lot, it should be well suited to the college and town environment. Although the Thompson Chapel lot requires a greater cost, the aesthetic benefit is worth the expense. Additionally, this lot would serve faculty needs well, since **61%** of faculty indicated on surveys that a parking garage

would be a beneficial for them. On the other hand, **60%** of students felt that it would not be beneficial, mainly due to aesthetic and convenience reasons (See Figure 26).

III. Alternative Policies

If Williams College were decides not to build, there are a number of options and alternatives to increasing parking spaces that could be implemented by the college. By addressing alternative options that deal with policy and minor physical changes rather than increasing the infrastructure on campus, the present level of green space is maintained and the high monetary cost is avoided. In addition, the college would not be encouraging the increase of cars on campus. Yet if the college were to maintain the current system, implementing smaller scale alternatives rather than creating more spaces for the increasing number of cars brought to campus, the college would not be meeting a demand that **67%** of students and **63%** of the faculty/staff felt should be addressed. Interestingly enough, students and faculty/staff also expressed that they felt there to be a lack of convenient parking: maintaining the current system would not be addressing this issue.

The alternatives can be broken down into three categories based on the issues that they address. The first set of alternatives deals with parking policy, the second set deals with traffic policy, and the final set addresses transportation concerns.

A. Parking Policy Alternatives

Students and faculty/staff alike feel that there are numerous problems with the management and allocation of the parking on campus. The following alternatives are options that we looked at to address the issues surrounding parking for cars on campus.

- A first option that could be easily implemented would be to have a mandatory information session for students when they register their cars. As it currently stands, upon picking up their decal, students are provided with handouts about parking policy to be read at their discretion. The information session could address the issues of parking and speeding. In conjunction with the information session, a written agreement, similar to the college honor code statement, could be put into effect where students would agree to abide by the parking and driving policies. The college explicitly states that having a car on campus is seen as a privilege rather than as a right, and thus, the written agreement could further emphasize this privilege and the responsibilities that having a car on campus entails. Because there is a small percentage of students who do drive short distances on the residential campus and bordering

town roads, the written statement could also incorporate a statement where students would agree not to use their cars unless the use was need based.

- Another alternative addresses the implementation of a parking fund. Under the existing structure, revenue that is brought in from the parking tickets (last year the amount being $114,000) that security issues to students is placed in a central fund that security does not oversee. A special fund that the parking committee and security would manage could be created. These funds would include revenue from parking tickets, decals and other parking and car policy related issues. These funds in turn could be used to implement some of the alternatives that require funds.
- A third alternative is to increase the price for student parking decals. Students expressed a willingness to pay more than the current $60 per year parking fee. If students were to pay $60 per semester, the allocation of spots could be done on a semester rather than a yearly basis. This would allow security to keep better records of the amount of student cars on campus since some students may be away or do not have cars on campus for part of the year. Another option dealing with parking decals would be to charge faculty/staff for a parking space, but whereas students expressed a willingness to pay more, faculty/staff were not amenable to the idea. They felt that the college should continue to subsidize their parking since the college employs them. Unlike students who live on or near campus, many faculty and staff travel several miles to work. However, charging for decals could encourage faculty/staff within walking and biking distance to walk and bike, and possibly encourage carpooling among faculty/staff commuting from farther distances. An important issue that should be recognized is that many faculty are paid more than staff One way to address this concern would be to charge staff less than faculty. Dartmouth College for example charges staff employees $60 per year while charging faculty members $120 per year.
- To further address parking concerns of students and faculty/staff, the restrictions on student parking in faculty lots could be re-evaluated. Presently, students are allowed to park in faculty/staff spaces from 6pm to 2am weekdays and 1pm to 2am on weekends. To avoid faculty/staff shortage, students could be restricted to park in their assigned lots at all times. This would further encourage students to walk around campus.

- Two other policy options addressing abuse of faculty/staff parking would be to enforce faculty parking tickets and to issue one parking decal per faculty. The former option would change the policy from a voluntary payment system to subject faculty/staff to the same standards as students. The second option would limit the number of decals only to the faculty/staff who park on campus, and not their family members. To address the faculty/staff concern of driving other vehicles to campus, the decals issued could be a removable plastic decal that could be attached to the window or rearview mirror.
- Another alternative aimed at decreasing the abuse of parking privileges would be to increase surveillance of lots and parking. Currently, six security officers combined patrol the lots for a total of sixteen hours a day barring other more important duties, parking lot surveillance being one of the lowest priority items on the list of duties. With the creation of a parking fund, another security officer could be funded to address parking abuse.
- Finally, the system of allocation could be reformulated to distribute parking spaces on a seniority basis for students. With the lack of adequate parking spaces, seniors would be given the highest priority and sophomores would be given the lowest priority. Thus, by the time students became seniors, they would be assured a parking spot.

B. Traffic Policy Alternatives

On the surveys that we conducted, students and faculty/staff commented on speeding cars and car and pedestrian conflicts. The following alternatives are options that we looked at to address traffic concerns on campus.

- One option that the college has implemented on certain roads and could continue to look into for other various roads is to designate roads as one way streets. For example, Chapin Hall Drive, Adams Memorial Theater Drive leading into Greylock lot, and the road between Thompson Memorial Chapel and Hopkins Hall are designated one way. Another possibility for a one way road would be Mission Park drive in the Dodd area. However, there are numerous considerations that need to be taken into account for a road to be turned into a one way access area. Emergency vehicle access must not be prohibited in any way, and traffic patterns should not affect residential neighborhoods adversely. For

these reasons, the decision to create one way roads on campus is made in conjunction with local authorities.

- Another alternative to decreasing traffic flow in certain areas of campus would be to close prohibit access to various roads. Middlebury College, for example, chains off roads running through the center of campus, yet still allows vehicular access for emergencies and special events. While Chapin Hall Drive is perhaps an obvious option for a central location that should be made more pedestrian friendly, the Congregational Church parking lot complicates closing off Chapin Hall Drive. One area that has the potential to be closed off and does not prevent access to buildings would be at the north end of Chapin Hall Drive (along the lawn behind Lehman hall) down towards the triangular green space that forks towards Mission dorm and Dodd.
- The final two alternatives addressing traffic issues deal specifically with speeding. According to Massachusetts General Law, the speed limit in school zones is 20 mph. One option would be to place speed bumps in areas that are prone to speeding. A second option would be to put up speed limit signs since there are no signs indicating the speed limit on campus. While it is costly to make signs, ranging between $100 and $300 per sign, and Williams College wants to limit signage for aesthetic reasons, putting up signage is a minor physical change.

C. Transportation Alternatives

To decrease the need for cars on campus, the college also needs to address the issue of transportation. Because of the rural location of the college and a sporadic public transportation system, students and faculty/staff feel there is a need to drive to get off campus and to work. The following options address the need for alternative transportation.

- A community bikes program is currently being worked on by the Druids, the environmental group on campus. A community bikes program would provide a number of bikes around the college campus which students could use to get around the campus. This encourages students who live on the periphery of campus to bike rather than drive.

- The College Council does currently provide a shuttle service to the Berkshire mall, Stop and Shop, and Wal-Mart on Fridays, Saturdays, and Sundays. It is used extensively by students and there is a high demand for the shuttle service. The college could increase service to include weekday shuttles and frequency. The shuttle is funded partially by the College Council and is also rented out to other college departments during the week to help offset costs. Were the shuttle frequency to be increased, the cost could also be subsidized with funds from the parking fund.
- Another alternative that could be provided by the college for faculty/staff could be a shuttle service from various locations such as Bennington and North Adams. This would decrease the need for parking and potentially decrease the needs for cars.
- Public transportation provides another alternative to car use on and around campus. With a bus stop located at the intersection of Route 2 and Spring Street, several buses a day pass through town. The college could advertise local transportation, making schedules readily available to students through dorm bulletin boards and e-mail. The college has also approached the local bus transportation authority, the Berkshire Regional Transit Authority, suggesting a reduced rate for students. However, this effort was not successful. One possibility the college could look into would be to subsidize a student rate on local public transportation, offsetting the cost to students at no additional cost to the local transportation authority.
- Finally, the existing ride board system for students could be improved. There is currently a ride board posted on Williams Student Online (WSO) as well as a ride board at the entrance of Baxter Hall. With a better ride board system, students could offer and find rides to given places. The WSO ride board could be better advertised through the DA, all campus e-mails, and signs posted in dorms explaining the ride board system.

Option 2: The Environmental Approach

An option at the other end of the spectrum from meeting and accommodating the demand for cars on campus is one that focuses upon environmental concerns and attempts to foster an environmental ethic and sense of responsibility on campus. This option stresses the importance of decreasing dependence upon car use in a rural, residential campus environment. Car use is an area that is of increasing environmental concern, as dependence upon cars rises in today's society and subsequently, the amount of pollutants emitted and energy consumed rises. It is important to address these issues on the level of the Williams College campus.

Williams College is a part of a rural, scenic area that does not align with an abundance of cars and their associated consequences, such as increased pavement, traffic issues, and environmental impacts. In particular, the residential feel of the campus and its orientation towards the outdoors would be significantly hindered by increases of cars on campus. One of the major issues is not transportation by vehicle to and from campus, but unnecessary driving around campus. There is no need for students who live on campus to utilize cars to move around campus – this increases traffic and decreases the amount of pedestrian circulation. In addition, the environmental impact of the college would be augmented by increased car dependence and accommodation, in the form of increased pavement and pollution.

In implementing an environmental option, we have chosen to focus upon the concept of increasing green space and pedestrian circulation in the central areas of campus. This would enhance the aesthetic, rural qualities of the college and increase the amount of people interacting within and using these areas without conflicts with traffic. One method of reaching such a goal is through depaving certain areas of campus. Depaving would serve to increase green space, pedestrian use, enhance the rural feel of the area, and would decrease dependence upon cars. At the same time, depaving does not accommodate demand, increases inconvenience, and there is a financial cost involved. Demolishing a parking spot, however, costs about $300 a space, which is significantly less than the cost of constructing a parking spot ($4200 a space).

The Depaving Option

Our depaving option specifically focuses upon depaving small lots rather than large, multi-use lots. This is mainly due to the fact that faculty and staff have commuting needs, while students on a residential campus don't; the loss of a large, multi-use lot would directly effect those that need to park on campus. For example, if we propose to depave a lot such as the one behind Thompson Chapel, a number of people who have a need to drive would be inconvenienced. The goal of this option is to deliberately inconvenience students, in order to prevent the unnecessary use of cars, increase green space, and increase pedestrian use.

This option can be approached in two ways. The first involves depaving small, central lots in order to increase green space and pedestrian use in the center of campus. Although some of these lots include faculty spaces, they do not accommodate many parking spots and the space is not efficiently used. In most cases, large lots are also located nearby, and therefore the lost spots could easily be moved to only a slightly less inconvenient location. The central lots that are potential sites for depaving are the Sewall/Goodrich lot, the Lehman lot, the Perry house lot, the CES faculty lot, and the Clark/Geo lot. These lots, besides being located in central areas of campus, are lots with relatively few numbers of spots or are student lots; thus, they are prime candidates for depaving.

Another way to go about this option is to depave periphery lots, in particular, small lots near student houses. These lots are also not necessarily space efficient, and support student dependence upon their cars. If these lots were depaved and the spots relocated to larger parking lots, students would be more likely to walk to and around campus, rather than opting to take advantage of the convenience factor and utilize their cars to reach central areas of campus. This option would also serve to decrease traffic and increase pedestrian use of the center of campus. The periphery lots that are potential sites for depaving are the area in front of Dodd between Parsons House and Hubbell House, the Agard lot, the Garfield Lot, the Wood lot, and the Tyler Annex lot. These lots are all small student lots next to houses that are on the edges of campus; depaving in these areas would directly target unnecessary student driving around campus.

Final Recommendation

Implementation of any individual option we have proposed would involve drastic changes in the college's outlook and behavior. Thus, our final recommendation to the college includes a combination of options in an attempt to implement an environmental option as well as alleviate some of the concerns surrounding parking at Williams College. We propose to depave certain small, central lots while expanding larger periphery lots. Although there would still be a net loss in the number of spaces on campus, this option would allow for an increase in green space, pedestrian use, and easier traffic circulation in the center of campus. Adding spots by expanding periphery lots would offset this balance to a certain degree; the implementation of our baseline recommendations is the next step in trying to balance the loss of the spots with policy changes that are easily implemented.

The central lots that could be depaved are Lehman, Perry, Center for Environmental Studies, West, Wood, Garfield, Agard, Tyler, Bascom, and Sewall, with a total loss of approximately 150 spots. The periphery lots to be simultaneously expanded are Weston, Poker Flats, and Dodd, for an addition of approximately 79 spots, and a net loss of approximately 70 spots.

In addition to this larger recommendation, there are certain baseline recommendations that would serve to more efficiently control the parking situation and the dependence on cars including:

- a seniority based allocation system -- this would allow those upperclassmen whose cars were displaced by depaving to have top priority in spots on campus, and would curb car use by underclassmen
- the issuing of one decal to each faculty member -- the number of potential cars on campus is cut down, and the decal could be removable to allow multiple family member to use it
- increasing the student fee for parking to $60/semester -- students indicated a willingness-to-pay greater amounts, and security would be more aware of the actual number of cars on campus each semester, a need-based system would be implemented for those unable to meet the cost
- enforce faculty parking tickets -- make faculty more responsible for where they are parking and more aware of the parking situation in general
- increase shuttle and other alternatives -- create more opportunities for people to leave campus without relying upon student cars
- improve the rideboard system -- encourage car-pooling, decrease the number of cars brought to campus for commuting purposes
- student car information registration sessions -- supplement security handouts with information sessions so students can better understand the responsibilities and regulations surrounding car use on the Williams campus

- use the money generated by parking tickets to create a parking fund that would help implement these suggestions

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