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Development of a User-Updatable Web Presence for the PIP Shelter

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Abstract

Homelessness and the role of homeless shelters is researched and discussed. An effective concept for a new PIP shelter website is developed with the goal of improving public relations. The new site is constructed to bring a new positive image to the PIP shelter, as well as being simple for the organization members to update by themselves.

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Table of Contents

ABSTRACT	II
ACKNOWLEDGEMENTS.....	III
1. INTRO.....	3
1.1 THE PROBLEM OF HOMELESSNESS	3
1.2 MAKING A DIFFERENCE.....	4
2. BACKGROUND CHAPTER	9
2.1 THE PROBLEM	9
2.2 THE CAUSES	12
2.3 WHAT CAN BE DONE TO HELP	18
2.4 HISTORY OF PIP	24
3. METHODOLOGY	33
3.1 OVERVIEW.....	33
3.2 ASSESSING THE PIP SHELTER'S NEEDS.....	34
3.2.1 <i>Determining Web Site Content and Functionality</i>	34
3.2.2 <i>Hosting the Website</i>	36
3.2.2 <i>Band-aiding the Current Site</i>	37
3.3 PROJECT MANAGEMENT.....	38
3.3.1 <i>Project Goals</i>	38
3.3.2 <i>Project Timeline</i>	39
3.3.3 <i>Communication and Evaluating Risks</i>	40
3.4 CREATING A WEB SOLUTION FOR THE PIP SHELTER'S NEEDS	43
3.5 DETERMINING AN APPROPRIATE WWW DEVELOPMENT TECHNOLOGY.....	54
3.6 ENSURING USABILITY	59
3.6.1 <i>Help Documentation</i>	59
3.6.2 <i>Website Usability Questionnaire</i>	59
3.7 CONCLUSION	60
4. RESULTS.....	61
4.1 OVERVIEW.....	61
4.2 FRONT END	62
4.2.1 <i>Enhancing Image</i>	62
4.2.2 <i>Applying Web Usability Research</i>	66
4.2.3 <i>The Use of Dynamic Web Pages</i>	69
4.2.4 <i>Using HTML to Format the Pages</i>	72
4.3 BACK END.....	73
4.3.1 <i>Using ASP</i>	73
4.3.2 <i>Updating the Front End's Content</i>	74
4.4 QUESTIONNAIRE.....	81
5. CONCLUSION.....	84
5.1 GOALS	84
5.2 RESEARCH.....	84
5.3 TIMELINE.....	87
5.4 RECORDS.....	87
5.5 TEAMWORK.....	88
5.6 THE WEBSITE	92
5.7 REACTION TO THE WEBPAGE.....	93
5.8 QUESTIONNAIRE CONCLUSIONS	94

5.9 FINAL WORDS	95
APPENDIX A: UPDATING THE WEBSITE – A HOW-TO GUIDE	97
APPENDIX B: FRONT END EXAMPLES.....	111
APPENDIX C: BACK END EXAMPLES.....	115
APPENDIX D: USABILITY QUESTIONNAIRE	119
REFERENCES.....	121

1. Intro

1.1 The Problem of Homelessness

At the beginning of the new century, inner city life is still an ongoing dichotomy between the progression of society and the very grim and harsh reality of lower class living that many people continue to ignore. The drugs, the violence, the poverty, the hunger are better off seen through tinted windows. As society keeps creating new technologies to broaden its horizons, it is quite clear that the lower class inner city population is being left behind. With all this education, with all this technology, our view of the ghettos only becomes more distorted. Lower class living has not seen any real improvement in living conditions for over ten years, and it doesn't appear to be getting any better. A point has been reached where there should be more progress in finding new ways of using technology to help the position of the less fortunate.

On a winter day one may drive by a lower class neighborhood. Here, the roads are icy, strong winds blow clouds of snow up from the ground whipping into the face of pedestrians along the road. While in the car, the windows are up and the heat blasts rich warmth. Continuing to drive, one can take a look outside and further value the comfortable isolation that is experienced. This isolation that is created deters one from thinking about the hardship of others and what life is like for each one of them. Homelessness conjures up negative images of our society. This is why a homeless shelter can create a negative vibe among the people living in the same neighborhood. However, places like the PIP shelter accomplish very positive tasks everyday. If this positive angle can be conveyed

to a community then public relations will improve. This is where technology can really have a positive effect. We can utilize the internet to bring people a new positive and better informed image of the shelter system by presenting them with a new professional website.

1.2 Making a Difference

With our IQP we have chosen to take the perspective of “What are some solutions?” instead of “Look at all these problems.” From a critical point of view it may seem that the homeless have reached a point of no return. It may seem that they have hit rock bottom and that’s as far as they will ever go. This is simply not true. There are solutions to this societal issue in our country and the main issue with homelessness, in this country, is that it still exists. In a nation that claims to be the richest in the world, how can you hold your head high when some live without a roof over their heads? If we really are such an advanced and well endowed country then surely we can find a way to use our resources to keep every American permanently housed.

It is therefore important to take a look at what is currently in place in our country to deal with homelessness. Various non profit organizations such as homeless shelters continue to try to help out. The deeds these shelters accomplish day to day become even more wondrous when you actually go into the shelter. Here technology simply is not on anyone’s mind. Survival and finding a place to sleep every night remains the main goal for the impoverished. Providing a bed and a warm meal is the main goal for those who assist and

volunteer at the shelters. Certainly, any tools that can assist in the daunting task the workers and volunteers face directly benefit those in need. Here technology can be used to spread positive information to those interesting in assisting the shelter or simply learning more about them.

The PIP shelter is a non profit wet shelter located in Worcester. This is where our IQP team will be focusing. PIP is a wet shelter, which means that their guests are not required to be sober to receive help. They recognize that in order to treat the problem of homelessness, each person needs treatment. Their mission¹ states that:

“The Worcester PIP Shelter helps people in peril - the homeless, the working poor, indigent alcoholics, drug addicts and the de- institutionalized mentally ill - by providing opportunities for training, rehabilitation, education, care, treatment, housing, food and shelter, regardless of gender, race, color, creed or sexual orientation with the goal of putting an end to homelessness.”

If it is their goal to help the homeless, then by assisting the shelter, it will be our goal to help them in their mission of putting an end to homelessness.

In order to help an organization it is critical to look at how it is run. If we wish to apply technology towards helping the PIP shelter, it is important to recognize that they are non profit. Communication plays a key role in the life of a non profit organization such as the PIP shelter. The primary aspects of the business of a non profit revolves around spreading word of their accomplishments, communicating their message through the public sector and

obtaining donations from various volunteers and other charitable sources.

Essentially, the public can make or break any non profit organization.

Communication is the cornerstone to funding such a shelter. Due to limited funding the fact remains that quite a few important non-profit organizations are not as technologically advanced as many corporations are. Without proper public communication tools, these non profits are falling behind, and all of their great deeds are in fact being under utilized. With proper communication, news of fund raisers can be spread to those who need to know. If an organization such as the PIP shelter fails to effectively communicate with the public in the community and instead adopts an isolationist view, then problems can arise. An uninformed public can easily make uninformed accusations about the shelters place in the community. This makes it difficult for a shelter to operate where there is animosity from the citizens, whose support is needed. An upgrade in the communication aspect of the website will improve access to funding sources and can also improve public relations.

There are obviously countless ways in which to improve the operation of a shelter, so why chose technology? The best answer to this question is that the use of new technology also presents an opportunity to advance the situation of the poor through the use of technology instead of making their plight worse through the flash flood of the information age. Even the most basic jobs now incorporate new expanding technologies. It is a simple case of keep up or be left behind. The people who are best at adapting to the changing work climate will have the edge when it comes to finding jobs. Initially, one would think that

technology serves to advance the human race by making vast amounts of information easy to share and access. Our project aims to apply technology to help a social situation. Instead of having the internet leave the impoverished outside and looking in, it can be utilized to assist them. With the internet, it becomes much easier for the PIP shelter to reach the upper class users. This way a non profit organization is able to make their presence known to those who have the means to donate money to the less fortunate. If this is the approach that we take, then technology may begin to work in favor of all classes, and the Digital Divide will be made that much smaller. Members of the PIP shelter board themselves even expressed interest in eventually expanding the site to allow clients to access resources through the new webpage.

Our IQP is going to bridge many different gaps. By bringing a web site to the People in Peril Shelter, we are expanding the way they do business and helping them to fully realize their mission and their goals. We are also bridging the technology gap that exists between the lower class and the upper/middle class. By ignoring our isolationist tendencies and extending a gracious hand out to the homeless community our project becomes a service to PIP and more importantly to the people that are in need. Through the web site the PIP shelter will be able to communicate everything that they want to communicate to the public. This website will stand out from many existing websites by being easy to modify and update. A major limiting factor with many sites on the internet today, is that the organization is restricted with what they can modify on their own site unless they have an experienced web master. The site that we envision will

require little to no programming knowledge to update and expand. This means that changing a web bulletin board will no longer require a thorough knowledge of HTML, the programming language of the internet.

By having such an easy-to-update site, People-In-Peril will be able to keep their many neighbors and stakeholders informed as to their meetings, accomplishments, changes, and even their financial situation. In addition to this, our IQP will detail the very reasons why shelters must exist to maintain a thriving urban community, and it will further explore the controversies of the wet shelter from all angles. Our IQP implements technology so as to further the societal goals of the PIP shelter and explore just what those goals are and how they affect everyone.

2. Background Chapter

2.1 *The Problem*

A critical perception about America's homeless is that they're all either mentally handicapped or recovering drug addicts, but in reality, today's homeless are simply a cross-section of the middle and lower classes. A recent study done by the McCormack Institute of Public Affairs at the University of Massachusetts Boston has tracked the users of every Massachusetts emergency shelter². The tracking includes transitional housing, supportive services, permanent-, and permanent-supportive housing in an effort to compile the first accurate portrait of the area's homeless population. The report contains many interesting statistics, all for the year 2000. The report concluded that the male/female ratio was 4-to-1; the breakdown of race was whites-60%, African Americans-25%, Latino-10%, and Asians-1%; the majority of individuals were in their 30s and 40s; and the breakdown for marital status was single/never married-60%, divorced-22%, separated-9%, married-7%, and widowed-2%. In terms of education, it is surprising that nearly 40% have a high school degree or equivalent, 20% have an associate's degree or equivalent, and 6% have bachelor's or master's degrees. Nearly a third of all the homeless people surveyed were currently or recently employed, earning an average of \$1,000 a month. 40% received some sort of public assistance, be it WIC, food stamps, worker's compensation, unemployment, veteran's disability, or rent supplements.³ The patrons of shelters clearly come from many backgrounds.

The report also shows that 25% of shelter residents came to the shelter

from a rented or owned home. Also another 21% came from a family member or friend's home. In stark contrast to the aforementioned stereotype, the percentage of homeless individuals coming from a detox/substance abuse treatment center or a mental health hospital comprised only 11% of all homeless individuals seeking shelter in 2000. When taken together, these statistics are very successful at cutting through the prevailing myths about the homeless and showing them for who they really are: people of all walks of life, levels of education, racial backgrounds, and marital status who are simply not receiving enough income to get by.²

America's shelters fight yet another never-ending battle in addition to homelessness: funding. With very few exceptions they must constantly pursue local, state, and federal grants, as well as private sector donations. As hard as this is, the process becomes even more challenging when the economy is at its worst (and homelessness, as well), since funding is most difficult to procure then.

An ongoing question in the field of homeless aid is whether the homeless might be better served by efforts to work on policies that could prevent homelessness. When service providers at various shelters across the country were asked whether they agreed with this, many of them did believe this to be true, but felt that they simply couldn't leave the front line because of the urgent survival needs of the homeless. This conundrum is most clear in the charitable domain; those who want to do something to help the homeless often give money to shelters and soup kitchens, which provides temporary relief, but in reality does absolutely nothing to abate the homeless problem. Steve Whitney-Wise, who

heads a coalition of service organizations that work with the homeless in Sacramento, California, put it well: “You see, charity is a word that makes me nervous. It’s a word that lets us all off the hook. Charity can actually be a means of perpetuating injustice, hunger, and homelessness by throwing money at the poor without changing the systems that promote poverty.”⁴ This is a very important argument that simply doesn’t get the attention it deserves. Comfortable middle- and upper-class Americans have used charity for centuries as the ultimate conscience-clearer. It allows even the amazingly wealthy citizens of this country to sleep peacefully at night by letting them believe that their million dollars really will stop hunger and change lives. However, this is simply not true. Homelessness is by-and-large a sum of the individual shortcomings of the many public, social support and government programs (like Medicaid, Home Investment Partnerships Program, and the criminal justice & child welfare systems). When these programs fail, people on the poverty/extreme poverty border can easily join the ranks of the homeless.⁵ If we are to end homelessness, these mainstream programs must prevent people from becoming homeless. In their defense, these systems are “over-subscribed and under-funded relative to their responsibilities,” according to The National Alliance to End Homelessness in their ten year plan to end homelessness. They go on to say:

“It is not surprising, therefore, that [mainstream programs] are quick to shift responsibilities and costs elsewhere, when they are able. The homeless assistance system provides one such opportunity. To the degree that homeless programs take responsibility for a whole host of very

poor people, the mainstream system does not have to. However, the homeless system is not large and well-funded. It can meet immediate needs, but it cannot prevent people becoming homeless, and it cannot address their fundamental need for housing, income and services. Only the mainstream system has the resources to do this.”⁶

In summary, money would seem to be better spent on changing the mainstream programs that currently allow people to slip into the extreme poverty level. Of course, there must still be enough funds to feed and shelter the presently homeless, and therein lies the ultimate challenge.

2.2 The Causes

The problem of homelessness is one that is still very prominent and highly debatable. It is debatable because there are no clear conclusions to what exactly causes homelessness. Prominent because it is still a problem that is to a large degree, unsolved. In order to solve the problem, science would tell us to break it down to its causes, in order to see what triggered the problem in the first place. This is where steam is lost and the problem becomes increasingly complex. Not only are there multiple causes, but each cause contains multiple causes and some even intertwine. Several generalizations exist, but in the end they only seek to cancel each other out in personal ideologues. However, there are several trends that have lead to the rise in the homeless population, and these causes

have given policy makers and researchers a general path to base their decisions upon.

One particular argument about the cause of homelessness revolves around personal blame. This is considered a more conservative approach and states that “people were homeless because something was wrong with them. They were severely mentally ill, or end-of-the-line substance abusers; people incapable of caring for themselves, unable to keep themselves housed.”⁷ Homelessness according to this perspective is the problem of each individual. Society takes little blame, labeling an individual’s unique situation as the cause of their homelessness. In this viewpoint, homelessness is essentially seen as the conscious rejection of all conventional responsibilities.

The opposing argument to the above perspective takes a more liberal stance. “Liberal advocates tended to see homeless people sympathetically: as victims of circumstances over which they had little control. Emphasis is placed on the role of failed mental health and substance abuse treatment policies.”⁵ In this viewpoint the blame is placed upon issues which public policy can control. They see the homeless as victims, not as creators of their own problems. Homelessness is the inevitable end that is out of the control of the homeless. Both arguments have their strengths and weaknesses. As studies continued to come out and evidence against both arguments started to arise, policy makers realized that when the two theories clash in the middle, they tend to cancel each other out. However, it is through the meshing of these two arguments that any causes of homelessness can truly be discovered.

The economy and other economic factors directly cause poverty. Poverty also tends to lead to homelessness. So, as poverty increases, homelessness increases. "Between 1970 and 1988, the number of poor people grew from 25.4 million to 31.9 million, an increase of almost 26 %".⁸ The baby boom generation after World War II was finally hitting the work force, and jobs were at a premium. America had to undergo deindustrialization, which simply means that the shift in industry went from a lower amount of high paying jobs to a plethora of lower paying jobs. "Wages, work opportunities, and employment levels for poorly educated women and people of minority status fell precipitously between 1979 and 1993, even during periods of economic recovery."⁹(28). Public entitlements other than social security saw a sharp decline in purchasing power. "For instance, the monthly purchasing power of a family receiving Aid to Families with Dependent Children fell by almost one third, from \$568 in 1970 to \$385 in 1984."¹⁰ Ronald Reagan was not making matters any better either. His White House policies made the rich richer and the poor poorer. He tightened the federal aid system making it tougher to receive any sort of aid. "This process left almost 500,000 previous recipients of AFDC without access to benefits in 1981 and an additional 300,000 with reduced benefits."¹¹ Reagan sought to stimulate the economy and motivate people to get jobs by doing this, and also wanted to lower rates for the middle/upper class residents.

Jobs were at a premium, and financial support of the lower class was not getting any better. Also, public drunkenness became decriminalized in many states, and some public drunkards that spent time in jails and hospitals were

looking for a place to live. “The number of skid row neighborhoods that tolerated such behavior also increasingly shrank”¹². Day labor centers, where people can get temporary day jobs while they wait for a permanent job were also on the decline. The pool of poor people continued to grow at a steady pace. Henceforth, the demand for low income housing was rising steadily. The economy for the lower class was extremely weak during this time. “Poverty was on the rise”, and this was certainly a cause for the rise of homelessness.

One of the main causes of homelessness is the lack of structural support.

“The nation’s supply of low-cost rental housing has been shrinking for over 20 years. During the 1980’s, changes in the federal tax structure, rising interest rates, and new financing practices removed incentives for private investors to produce new low-cost housing, and this occurred just as the federal government was dramatically scaling back the production and maintenance of public housing. Simultaneously, first-time buyers faced substantial difficulty in purchasing single family homes and thus remained renters.”¹³

If the demand for housing is increasing, and the supply of housing is decreasing, the basic laws of supply and demand tell us that sellers can sell these houses at higher prices. However, the government was not making the market enticing for sellers. Competition from the lower class was getting intense, and as Social Darwinism suggests, the weaker get weeded out when inter-societal competition is at its fiercest. Also, the population in general is growing almost exponentially, and there just is not enough room in the inner cities to support an exponentially

growing population. Vacancies amongst households were also declining with the “rates for rental units renting for less than \$150 in 1987 was 3.8% and market analysts estimate that 5% is the bare minimum for normal functioning of the market.”¹⁴ This situation overall does not bode well for the lower class.

Low income rental property, due to increased demand, saw a sharp increase in the rates for rent. “The number of units renting for more than \$500 per month (1987 dollars), increased by 86% between 1981 and 1987, but those renting for less than \$300 fell by more than 13%.”¹⁵ The prices were increasing, and the wages were not keeping pace. So, if one could barely afford an apartment based on previous rates, the rate hikes made any type of rent simply unaffordable. In 1985, in Los Angeles County, the number of units “renting upwards of \$750 per month rose by 320% and the number of units renting for \$300 or less fell by 42%, with vacancy rates hovering around 1%.”¹⁶ The low income housing situation in the 1980’s was a result of high rates, high demand, increasing population, low supply and even lower government aid.

Conservatives would argue that the cause of homelessness resides within each individual that is suffering. Each case of homelessness is unique, but general trends do exist. Households in the 1980’s started a trend of doubling up in apartments and cramming into tight spaces. People were “devoting higher proportions of their income to rent, dangerously stretching their ability to meet basic needs and seriously compromising their ability to cope with even minor financial crises. As their situations worsened, poor households increasingly

experienced many of the problems that leave people most vulnerable to homelessness such as substance abuse and domestic violence.”¹⁷

As financial stress increases, personal stress tends to increase along with it. Society was tightening its grip around lower income housing, and those bordering the poverty line were really feeling the squeeze coming from the top. It is like a game of musical chairs and the number of people is increasing, but, the number of chairs is also steadily decreasing. The stress is monumental, and is hard to cope with especially when two people start cramming onto a chair.

Physical and mental illness, while not the primary cause of homelessness is clearly more prevalent amongst the homeless population versus the middle/upper class population.

“Between 20 and 25% of those homeless people studied have at some time experienced severe and often extremely disabling mental illnesses such as schizophrenia and the major affective disorders (clinical depression or bipolar disorder). The prevalence of substance abuse is even higher. As many as half of the homeless people studied have had diagnosable substance abuse disorders at some point in their lives, with alcohol use disorder being more prevalent (almost half of all homeless, single adults) than drug use disorder (approximately one third).”¹⁸

These studies, conducted over a short period of time, clearly show there are common trends. Almost half frequently used alcohol or drugs, and almost a quarter have had severe illnesses at one point or another. On top of this “a quarter had spent time in a hospital, jail or prison, group care or treatment facility

in the year before they arrived at a homeless shelter.”¹⁹ Many individuals within this population have been offenders of more than one of these “symptoms” of homelessness. Some do alcohol and drugs and have spent time in a hospital.

Homelessness does not have a single cause. Rather it is a complicated network of roots that grow to an oversized, withered tree. The tree can not exist unless all its roots are contributing to its growth. The roots are intertwined, twisted, fed, and the tree continues to grow. “The political task is to recognize that homelessness is not an isolated crisis requiring an independent set of solutions, but is one of many symptoms.”²⁰ There is no simple answer to what the causes of homelessness are, but worthwhile solutions do exist.

2.3 What Can be Done to Help

If you think of our economic system as a sort of ladder, then you can imagine that there are people in our country just barely holding on to the final rung. Essentially, this is where the problem of homelessness is rooted. When you’re living on the margin and just gripping precariously to that last rung, it doesn’t take much more than one slip until you’re off completely. Once this final hold has been lost an individual is cast into the world of homelessness. Society and the community need to do all that they can to prevent this final slip. They need to look toward helping people get on their way up once more if the problem of homelessness is to be effectively addressed.

Once an individual or family has finally lost their precarious hold on their housing, there are basically three main steps that need to be present in order to

make it possible for them to return once again to a place of residence. First, anyone with no home to turn to must have a place to sleep and eat. The operation of shelters becomes the initial step. Second, a city must look towards maintaining a certain amount of lower income housing in the community. Third, a permanent solution must be found by creating new low cost housing for those who currently drift through the shelter system.

The first step is where shelters come in. Shelters serve as emergency housing and as a transitional residence for the less fortunate. They provide an immediate place for the homeless to turn to for a meal and/or a bed. Shelters are often federally and state funded, however they can be privately run. The shelter solves some of the very basic problems associated with homelessness. They provide a place where people may fulfill their basic needs in life such as shelter and food. They also serve to help the community by keeping the destitute from wandering the streets and taking shelter where they are not welcome.

The shelter plays a key role since it creates a place that is easy to access and acquire help. Shelters can also provide some minimal counseling and more importantly, referral services. From the shelter an individual can be moved on to something more permanent. In making a successful shelter there are important factors that will determine its effectiveness. The size of a shelter plays a very large role in this effectiveness. It has been found that it is best to have a shelter size below 60 occupants.²¹ In recent years there has been a movement towards smaller shelters around 30 occupants in size. Not only will the smaller size improve the ability of workers to assist individuals but it can also help to spread

out the concentration of a community's shelters. By utilizing several smaller units, shelters can be spread more evenly throughout a city, which can also make them more accessible. In the spectrum of shelters, it is important that they are able to accommodate anyone. Many homeless arrived at their current state of life due to a wide variety of issues. For this reason, a wide variety of people need to be accepted. A shelter should be open to anyone, but it is also important that some treatment is given. Rehabilitation can be pivotal in assisting someone to return to a residential life; however, it is not a solution in itself.

Even with functioning shelters in the community, the problem of homelessness will not be solved; it will only be temporarily assisted. Step 2 in helping an individual or family return once again to a place of residence is something known as a single-room occupancy or SRO. These are the places where marginal people, handicapped individuals, the elderly, and the indigent call home. This is the most inexpensive form of housing. If a community wishes to do the most to relieve homelessness, it must look towards ensuring that some low-cost housing exists. Many of these types of residences have seen the wrecking ball as they fail to be sufficiently profitable to run, or fall so far out of code that it is no longer economically feasible to maintain them. However, if properly maintained and run, the SRO serves as a good first step back to residential living from the shelters.

Without SROs in larger communities, a rung of the ladder is lost and the problem of homelessness becomes amplified. For example, the PIP shelter often sees elderly people on their doorstep that were no longer able to afford the

bills of a nursing home. Without these low economic places of residence, that many more people will drop off into homelessness. It is in the best interest of the community to preserve such places so that even those living with limited means can maintain a roof over their heads. This will lighten the load on shelters and the entire cycle of homelessness in general.

The final step in the cycle is difficult and hasn't been effectively implemented in many communities. It requires creative uses of resources and the ability to leverage capital. This step is the creation of permanent low income housing. Since a major cause of homelessness is the lack of affordable housing options, it is an effective remedy. It is here that the process of rehabilitation (drug or workforce) can really begin. This is where the cycle of homelessness finally ends for some. After spending time in the shelters, low cost housing allows individuals a chance to rejoin society and place their hands on the rung once again. At this time they will have upward momentum instead of steadily slipping towards the bottom.

With permanent housing being provided, the harder cycles of homelessness can be avoided. For example, the hospital stays of individuals were greatly decreased when they were moved into a permanent housing situation.²² More stable living allows for a much healthier lifestyle that once again returns an individual or family to society. The chaotic and uncertain life of homelessness is detrimental to say the least. If only shelters existed, people would have a place to stay and eat, but with no where to go from there. Life then becomes a cycle that prevents a person from going anywhere. One of the

problems facing the creation of low cost housing is a lack of resources. Funding must be stretched in order to provide adequate housing that meets all requirements of proper housing. Many of the month to month upkeep and utilities have to be funded from outside sources, since many residents will have little or no income to enable them to pay much rent. Once the proper steps have been taken, it is possible to return someone from utter poverty, back to a much more stable environment.

Even with shelters, maintained SROs, and available low cost housing, the root of the problem has not been addressed. These institutions only serve to remedy a problem caused by the system failing at some other point. The key to stopping homelessness altogether is preventing anyone from being cast to the streets. This means that you can divide the solution for homelessness into two main goals: immediate shelter for the homeless and prevention of homelessness for those in precarious housing arrangements. Many that hold a weak grasp on the lower rung need only a helping hand extended to prevent them from taking that final fall. This approach proves to be more practical and cost effective. The bottom line is that homelessness costs money. It is an expensive ordeal that can take large amounts of money to cure. A wiser plan involves going right to the root of the problem.

To accomplish this goal there are several approaches that can be taken:

1. Preservation of rent control. Federal policy to deny funds to localities with rent controls will increase, not prevent, homelessness.
2. A moratorium on-or, at the least, increased tenant protection in the face of-cooperative and condominium conversions.

3. Housing production programs and/ or mortgage subsidy efforts for new or rehabilitated low-and moderate-rent housing.
4. Policies that prevent landlord abandonment of buildings. Federal regulations could encourage localities to formulate such programs.
5. Preservation of SRO housing through tax incentives and direct subsidies.
6. Tax policy reversing the trend of a decreasing proportion of taxes to homeowners, and makes it difficult for low-income homeowners to maintain and stay in their homes.
7. National credit allocation policy ensuring a percentage of available credit to housing needs, at affordable interest rates.²³

Preservation of rent control prevents people with low incomes from being priced out of their own home. Federal donations could also be used to assist occupants with rent. Money to rehabilitate housing and maintain apartments in poor condition prevents low income individuals and families from being suddenly cast into a situation where they are evicted from their apartment with no where to turn. Revision of the tax system and establishment of a national credit policy are both very large steps that would take a lot of effort to employ. Money can be saved by providing just enough funding to keep the needy afloat. The system of maintaining and running shelters while developing low cost housing is more costly than assisting those on the brink of homelessness. If the problem is not attacked at its root, then the shelter system will continue to grow and become even more costly. However, this does not mean that the shelter system is an unnecessary financial burden. Such places will probably always be needed since the slip from the final rung cannot be prevented in every instance due to

the complexities of its cause. The shelters can be made much more efficient when the burden is lightened from their shoulders by slowing the flow of new homeless to their doors.

Shelters are a very visible indication of homelessness; however they are only one link in the machinery that aims to assist the homeless. It is true that some of the impoverished will not be able to live once again on their own in their own home. Some are simply too worn down by years of substance abuse or illness. This is why even with homelessness prevention there will still be a place for shelters in our society. There will always be a need for a place for those who have entirely lost their footing in today's society.

2.4 History of PIP

The PIP shelter is a wet homeless shelter located in Worcester, Massachusetts. In fact it's the only wet shelter and one of only a few shelters in the entire Central Massachusetts Area. It was started in 1974 as the Public Inebriate Program by the National Institute on Alcohol Abuse and Alcoholism. Then it was only a 25 bed emergency shelter for alcoholics. In 1979 the facility moved to its current location at 701 Main St. This move was an attempt to bring the shelter closer to the majority of its clients who are from the Main Street South area. It changed its name to People in Peril to represent its expanded rehabilitation. Since then it has been providing a starting point for people with a wide range of problems including homelessness, substance abuse and psychological problems. Its facility offers a bed, food, hot showers and clothes to

all that stop by. PIP's legal capacity is 88 but it's been known to hold twice that amount, especially in the colder months.²⁴

PIP aims to provide more than just a temporary solution. Providing shelter only helps a person through one night. To return to a normal life people need support that addresses all of their problems one-by-one. PIP understands the importance of this transition. To tackle the problem they have a network of satellite facilities and a series of programs that helps to set its clients on the road to a more fulfilling life.

PIP has an area in their main facility called stabilization which is reserved for those committed to leading a sober life. They are given a small 4x6 cubicle containing only a bed, dresser and television. The surroundings are minimalistic, but they provide a more permanent solution for those looking to make a change in their life.

The Aurora Project is a program intended to assist chronic drug users. It is located just down the street from the main facility. The converted rooms of the old hotel provide its residents a more comfortable living environment and keep them separated from the temptations of the wet shelter. Up to 28 residents can live there and follow the highly structured recovery program.²⁵

There are also several smaller, sober-houses that hold around four to six people each. They provide more personal rehabilitation support for clients that are looking to enter the workforce. One of the most interesting is called Ed's Place. It is a fully functional farm located in rural Oakham, Mass. Unlike PIP's other programs it relies solely on private contributions. Ed's Place is long time

dream of former PIP director Ed McCann which has finally been realized. It allows its patients to lead a simple, wholesome life away from the sources of their addiction. This allows for a faster, more complete recovery. The farm is fully functional and run by its patients and on-site staff. There is even enough food produced to contribute to the main facility.²⁶

PIP offers a wide range of “Compensated Work Therapy Programs” that allow clients to transition between rehabilitation and the workforce. This is an important transition along the road to full recovery. One of their more well known programs is PIP Catering. It is a catering service for the community that hires rehabilitated PIP clients from its sober programs. They work a wide range of events ranging from cookouts to galas. They are well respected by community and gather quite a bit of repeat business.

For all that PIP provides it still has its critics. Much of the concern comes from those who would like to turn Main South Area into Worcester’s art district. One such organization is Arts Worcester, a lobbying group who is strongly in support of the arts district. As of now the area doesn’t resemble an Art’s district. Its scenery consists of run-down factories, dealerships, convenience stores and apartments. However its creation is part of a gradual and ongoing effort to revitalize the downtown area. The controversial Main South area links two cultural centers: The Junction Shop Manufacturing District and the Federal Square area. The goal is to connect the two areas along Main St. and create a much larger cultural district stretching from Hammond St. to Federal St. The new district will contain four main centers: Family/Education/Culture, Downtown

Gateway, Art at Home, and Dining/Entertainment/Retail. The goals of the project are to ensure affordable housing for artists and other residents, create zoning that suits artist-related needs, put vacant properties back on the tax roll, and create a strong image for artists, businesses and nearby colleges.²⁷ In particular, the construction and maintenance of low cost housing is a must for any successful arts district. As of now “there are projects that have gone forward. Odd Fellows Hall for example was made into an apartment with 24 rooms which are advertised as lofts, but in reality they are just tall apartments that have been divided in half.”²⁸ Any progress towards the goal of the arts district is considered good, but these goals will likely be realized over the long term.

The main concern about PIP’s location is that they, along with other vacant buildings are responsible for the heavy loitering in that area. It’s believed that this loitering is a major factor in the area’s raised crime rate. Its critics complain that PIP draws in the homeless from all over creating a surplus of people that PIP just can’t handle. The PIP shelter is not in very good standing with the community. Most members of the community want them out and this even includes many board members of Arts Worcester.²⁹ They feel that this excess population is ruining the image of the downtown area. The shelter’s executive director “Buddy” Brousseau argues that the homeless population was already there and that this a major factor in choosing their current location. In an interview for a local paper he says, “The majority [of the clients] were here”. “There were studies done and you have to go where the population is that you intend to serve. They didn’t say, ‘Hey, this looks like a nice building.’ I grew up in

this city and before 1974; there was poverty, drug abuse and prostitution. There's always been this stuff here. What would it look like if we were not here? You may not like what we do, but if we weren't here, there isn't anywhere for the people to go. They'd be sleeping in their doorways, overcrowding emergency rooms and draining police resources. So, we can continue to think of ourselves as an asset rather than a liability."³⁰ He claims that the PIP shelter is "here to stay for at least another ten years."³¹

Regardless, the city is trying to change the image of that area and many feel that PIP is the eyesore preventing that change. The city has threatened to cut PIP's funding if it doesn't clean up its image. Although, in a recent survey³² given to local businesses and residents showed that they had some concerns, but were overall accepting of the service PIP provides. "It is a poor community, and most people understand the needs." Brousseau says. The main concerns that people mentioned were drug use, prostitution and loitering.³³

There has always been strong momentum from local groups to move PIP to another location. They feel that its services are valuable, but its location and size cause too many problems in the community. As far as Ann McTigue of Arts Worcester is concerned "It's not clear whether things would get better if PIP left. The current population would stay here but PIP's problems would be gone. Moving PIP would solve some problems, but it is not the real solution. Artists living in an urban environment are willing to put up with these problems."³⁴ Regardless, there still have been plenty of neighborhood members lobbying to move PIP away from the neighborhood. In fall of 2003, a community group asked

the License Commission to revoke PIP's lodging license. Their main complaint was overcrowding at the shelter. The group believes that this is the main cause of the crime in the Main South area. The lawyer representing the local group pointed out that 15% of local police calls in that area are generated by PIP alone. A more startling figure states that 324 PIP related incidents were called in from Jan 1 to August 25. He went on to say that there is often in excess of 120 people staying at the shelter when they are only licensed to hold 88.³⁵ "People say get them out of here, but where are they going to go? This is the seedy underbelly of the city. This is where people come when there's no where else to turn. There is a need for the shelter here."³⁶

PIP is doing things to improve their image in the community. They have installed cameras to monitor activity outside of the building and have even asked for a police substation at the shelter to minimize the drug trafficking and prostitution. Their request was denied on the grounds that a police force located inside the building wouldn't create enough of a visible presence to deter activities outside the shelter.³⁷

PIP also instituted a system of Background checks and created a ban-list of known drug dealers and prostitutes. This is a serious problem because dealers have been known to come to places such as this, not for shelter but to prey on the weakness of the shelter's clients.³⁸

PIP seems to be caught in a downward spiral of needing funds for improvement and being denied funds unless improvement takes place. In response to recent city budget cuts in the 2003 year, PIP had to close its doors

during the day. This forced its clients into the streets further inflaming the loitering problem. The consequences became more serious when the winter months hit. The shelter remained open and heated for its administration, but could not admit the clients waiting outside. "How could I come in with my newspaper and coffee and say, 'Sorry. You have to stay outside and freeze to death?' " asks James DiReda, associate executive director for PIP.³⁹ Luckily, they were able to get their hands on a grant sufficient to solve the problem.

While PIP may not be source of the problem it is still hard to determine whether or not it contributes to it. If the shelter were to close there is the possibility that the majority of the population would stay and the crime would remain. If the shelter was moved to a different site would the population follow? If this is the case does it accomplish anything to move the associated crime to another location? These are good questions that don't seem to have clear answers. There have been proposed locations to move the shelter and they recently merged with a larger organization, South Middlesex Opportunity Council (SMOC). Right now there are no immediate plans for PIP. Without opposition they will continue to do what they believe is right: remaining in their location to serve the homeless community.

To this day, homelessness is still a large problem in the United States. The homeless population comes from all different backgrounds; some even have bachelors and masters degrees. The causes of homelessness are numerous and they all combine to create the number of homeless people in today's society. A combination of individual problems and societal trends regarding the lower class

clearly planted the roots for homelessness. Throwing money at the problem in the name of charity might cleanse the conscious, but in reality it is not solving the problem. However, *the problem* is a non-existent term, so a multitude of solutions are necessary. Throughout its history, many shelters have sought to amend many of those problems associated with homelessness. The PIP shelter is a valuable asset in that it provides many different programs and services in combination with normal shelter procedures.

Suggestions for helping the homeless problem include increasing the amount of low income housing, and all low income housing has to be maintained as well as controlling the rent. These along with a system of shelters, will be of great help to the homeless problem. Shelters do indeed exist, and they are indeed remedying many of the individual problems the homeless have. However, these shelters require funding and the help of a great number of the community in the form of volunteer work, clothing, food, amongst other donations. The key aspect for the success of these homeless shelters is communication through the public sector. As the macro level problems of homeless continue to plague society, the micro level problems catered to each individual have ends in sight. This is exactly where the PIP shelter fits into the equation.

The PIP shelter aims towards personal recovery, seeking to benefit each individual through its many different programs and services. Shelters like the PIP shelter are doing great deeds daily. They have ambitious goals, and need a form of communication to convey these goals to the community. The Internet has become a key source of communication for everything from research, to

education, to retail, to politics. The Internet has revolutionized communications, and the PIP shelter benefits from good communication. They are in need of a web presence to effectively extend their goals to the public. In order to help out the homeless problem, shelters are needed, and shelters such as the PIP shelter need to communicate through to the public. In our project, we seek to help out the PIP shelter in their fight against homelessness by creating a web presence that will help the PIP shelter greatly and give their business a certain kind of scalability through the use of technology. This web presence will give the PIP shelter a medium of communication with a technological edge that never existed within their organization.

3. Methodology

3.1 Overview

When attempting a project as large in scale as an IQP, many decisions will have to be made by all group members. With a project that spans over a 14 week period, it is important that each of these choices be made with the same goals in mind. However, over such a long period of time a project can lose site of its goals and become bogged down if certain procedures are not agreed upon before starting. This is where a methodology becomes a key component in running a successful project. It allows a framework for the IQP to be prepared before the actual project work begins. The methodology serves to plan and organize the scheduling, communications, risks, research, and execution of a long term project. It also functions as justification for the major decisions that were made in the planning of a project. When crossroads are reached, the decision process is typically documented in the methodology.

Our particular methodology is organized in the logical order of project progression. Namely, it starts with an assessment of the PIP Shelter's needs and a focus on the project goals. This includes a schedule for deliverables that will be used to keep us on track. We next look at issues involved in following the plan we've laid out such as communication and risks. The methodology continues with an overview of our chosen approach to web site design and the process that preceded that choice. After documenting our selection of an appropriate approach to site design, it progresses on to compare and contrast the existing technologies for web site creation. Then we offer a plan to create

how-to documentation to guide the administrators in using our site. In order to evaluate the web site, our methodology concludes with a survey to test the usability of the site after it has been created, as well as a plan to create a how-to document that will guide the administrators in using our site.

3.2 Assessing the PIP Shelter's Needs

3.2.1 Determining Web Site Content and Functionality

Our goal is to build a website that fulfills all of the PIP Shelter's needs so naturally it is important to determine what those needs are. Although it would seem logical to talk to the board of directors about needs as a first step, we will examine our options before deciding.

From previous communication with our contact, Patrick, we gathered that most of the employees have little experience with web-based technologies. This means that they may not have a clear idea of what a website could do for them. It would not be a good idea to ask them what they want from a website if they don't even know what their options are. Instead of asking them to envision a website that will meet their needs we will use a more structured method so that they can see their options.

Rapid-prototyping comes to mind as a solution to this problem. It involves using very short iterations between drafts of the website. We could have a website up within the first week and then constantly make changes, presenting them twice a week or so. While this would provide the structure PIP needs, it is very time consuming to create drafts of an entire site. Seeing as how the minority of our group has web development experience and that we will only have a

seven week term to finish the project, this would be too extreme. Instead we'll use a middle of the road solution that borrows some of the benefits of rapid prototyping but works on a more manageable schedule. If we present a list of functions that we think that the website should provide they can read through them and get an idea of what a website can do for them and what they won't need. To do this we will examine the current website, noting its pros and cons.

When looking at their current site we noticed broken picture references and outdated information.⁴⁰ We realized that in an organization like PIP there is frequent turnover in job positions and no available money to hire IT personnel to manage a complex website. Their previous site was created by a local web design company. When they were finished they had a nice website but not the personnel to keep it updated. From there it slowly decayed and became out of date.

To avoid a similar outcome, we will make it a primary goal to make the website easily updatable. That way it can be updated frequently and reflect the weekly events and services that the PIP shelter sponsors.

Another thing we looked for on the old site was content. This gave us an idea of what features they currently have and will provide a basis for the features we include. It also allows us to determine the audience for the website. It is important to consider who will be coming to the website and what they will expect to find.

From here we will be able to create a list of features that we think the website should provide. These features are ideas of what certain sections of the

site should accomplish. We will show this list to the PIP shelter and get their feedback. Chances are that they will want to make quite a few changes to the current content, but our list of features will give them a basis to make those decisions on. After meeting with the PIP Shelter our next step will be to create a more specific assessment of their needs. This includes making a more specific list of features, determining the physical needs of hosting the site and addressing current problems with the site.

3.2.2 Hosting the Website

One of the primary considerations we need to evaluate before building a site is to determine where the site will be hosted. Since PIP is a not for profit organization they don't have a large budget to spend on web serving. Also, they don't have the same technical needs as other businesses. Based on the planning of site features we determined that they will need a server that is fast, reliable and has server-side scripting options. The server should be fast so that the page and images will load quickly. Server side scripting will be needed to make the site dynamic and updatable.

The cheapest option would be for PIP to host the site on their computers since they already have a permanent internet connection through DSL.net. They would be able to reduce their monthly fee by storing the website on their computers. However, a commercial web host would be able to provide more reliability than a self-served website because the servers would be maintained by IT professionals instead of the PIP staff. Maintaining a web server would only add to the responsibilities of inexperienced users. Also, by moving the site to

PIP's computers they would lose access to the server side scripting software that is loaded on the servers.

A simpler option would be to leave the site on the DSL.net servers. They would continue to pay the same price per month but would get the increased speed and support of a commercial web server. DSL.net advertises that they provide 3GB of bandwidth and 100mb disk space.⁴¹ The stats for PIP's current usage show that they only use a fraction of these resources. These ample resources would allow us to design a more graphical website and one that will load quickly should server-side scripting be used.

Based on these considerations it makes the most sense to continue hosting the site on DSL.net's server. This way we will not have to reregister their domain name (www.pipshelter.org) and all the other tedious tasks involved with changing servers. DSL.net will provide us with enough resources to develop a beautiful, technologically advanced site.

3.2.2 Band-aiding the Current Site

The term band-aiding means to temporarily remedy something so that it's usable. This is useful when you need a temporary solution and don't have the time to fix something completely. From our meeting with Patrick we determined how valuable PIP's website is to their business. They rely on it to bring in donations and get funding. Based on this we decided that we should make it a point to immediately update PIP's current website to a more usable form. We won't have the time to redo the site so that it is fully functional but we can band-aid it so that it's useable for the time being. This way PIP will still be able to utilize

the benefits of their old site while we were in the process of constructing a new one.

This process will involve logging on to their web server and evaluating what needs to be done. We will be able to fix links to missing pages and pictures so that the site doesn't look abandoned. We will also make small changes to outdated content like contact information. These changes will allow PIP to continue to use their current website as a way to broadcast their mission and attract donations.

3.3 Project Management

3.3.1 Project Goals

After we assessed the PIP Shelter's needs, the next step we decided on was to create a realistic list of goals that we have for the project. These goals will guide us as we create the website and guarantee that our finished product accomplishes everything we set out to do. We have determined these to be:

- The web site will have a user-friendly interface that is easy to modify
- we will conduct and report on in-depth research into the wet shelter controversy
- The site will aid the People In Peril shelter in reaching out and informing the community
- The site will increase shelter awareness (and possibly donations, as well)
- All PIP administrators will be able to easily manage/edit the website
- We will keep good records of meetings and work; anyone should be able to review them and know what we've done and how we've done it
- We will maintain an updated timeline, trying to stay flexible while also meeting deadlines

This timeline mentioned listed below will serve to keep the project on track and ensure that it is completed on time. It was developed by listing out each of the major components of the project that must be completed in the 14 week time-frame. These goals were then broken down and completion dates were set for each stage of the project. This will enable our project team to easily determine whether or not they are progressing fast enough to be able to finish within the set amount of time. We have developed this schedule to guide our progress:

3.3.2 Project Timeline

C Term

Week 2: Meet w/ Patrick to collect his goals & materials; talk to DSL.net about hosting options/prices; begin research

Week 3: Take revised project description to Patrick for feedback; continue research to facilitate writing of the Background section

Week 4: Continue revising Intro; begin outlining Background section; figure out which tools will be necessary for site creation.

First Draft of Intro and Background Outline Due: 2/10

Week 5: Brush up on ASP and any other site tools that will be used; continue work on Background section.

First Draft Background and Second Draft of Intro Due: 2/17

Week 6: Create site skeleton; gather all existing material to be put on the site; take necessary pictures; begin digitizing pictures; continue drafts of Intro, Background, & Methods

Second Draft of Background and First Draft of Methods Due: 2/24

Week 7: Refine skeleton into a detailed site map; sketch storyboards for site pages; finalize drafts of Intro, Background, & Methods; finish digitizing pictures; run storyboards by Professor Taylor and Patrick Smith.

Second Draft of Methods and Storyboard Due: 3/2

D Term

Week 1: Contact Patrick to let him know D term has resumed and work on the

site is in full swing; continue work on site.

Third Drafts of Intro and Background Due: 3/19

Week 2: Site construction and testing; begin writing Results section, complete interviews

Draft of Methodology, Outline of Results and Site Template Due: 3/26

Weeks 3: Site construction and testing; begin writing Conclusion section

Draft of Background, Draft of Results and Outline of Conclusion Due: 4/2

Weeks 4: Complete Results section; continue site construction and testing

Second Draft of Conclusion, Third Draft of Results and Operational Website Due: 4/9

Weeks 5: Complete Conclusion section; continue site construction and testing develop presentation. Finalize for project presentation day 4/20.

Third Draft of Conclusion and Completed Website Due: 4/16

Week 6: Show PIP administrators how to update and modify the website; work on drafts of report.

Week 7: Finalize all parts of the report -- Intro, Background, Methods, Results, and Conclusion. Give Final Presentation

Final Presentation at PIP and Final Report Due: 4/30

If the team falls behind the projected completion dates, the time line gives a list of exactly what must be done to get back on track. Scheduling is a key facet to running a long term and quick paced project.

3.3.3 Communication and Evaluating Risks

Good communication can make or break a team project. The most vital communication is between each of the group members. If there is a communication break down within the team then any progress comes to a grinding halt. To prevent such an issue each member of our team must be able

to easily reach one another. To allow this each member will be able to communicate with one another by e-mail, instant messaging client, and telephone. These means of communication will also be used to schedule face to face group meetings at least once a week during the project. Without fluid communication the project will become a patchwork of ideas that fails to flow. Four individuals will not successfully complete an IQP, so group communication is the foundation for an efficient team.

Next, communication will be ensured between the team and the advisor. For this each member is able to contact the group advisor by e-mail and telephone. Also, face to face meetings will be scheduled at the same time and place the same day, for each week of the project. Setting up a consistent week to week time ensures that there is no confusion in meeting times. It will also establish a dead line for that weeks work to be submitted for review by the project advisor. This way weekly scheduling conflicts can be avoided when the meeting time is known well in advance. Weekly advisor meetings are also critical since they allow the advisor to monitor the teams' progress and effectively advise the members.

Finally for the project to fulfill the actual requirements of the IQP, communication is needed between the team and the representatives from the sponsor. For our IQP our main contact at the PIP shelter is Patrick Smith. The team will be able to contact him through phone and e-mail. Face to face meetings will be scheduled to happen roughly every other week or as needed. Since the speed of this project is relatively quick compared to that of the work at

a homeless shelter, it becomes critical to keep on top of communications. Any lag in communication could cause the project to become bogged down. It also must be realized that there are more pressing issues at the shelter than the web page development. This makes it useful to establish the expectations for communicating and meeting with Patrick. We will establish a mutual understanding with our contact, so the flow of information stays even. The team will also have to communicate with various other stakeholders at the sponsor. This will be accomplished by setting interview times well in advance of when they are needed in order to effectively accommodate everyone's schedule.

We performed a risk analysis at the beginning of the project to determine what our project risks were. While the risk of failure was decidedly low, there were a handful of causes that could have negatively affected our outcome. We determined them to be:

1. Termination of communication
 - a. With Professor Taylor, Patrick Smith, or each other; this would have severely limited our productivity
2. Lack of cooperation on DSL.net's part
 - a. If use of ASP was not free as *they* promised, we wouldn't have been able to deliver a completely free site as we promised
3. Failure to meet deadlines on our part
 - a. The deadlines delivered us to a completed project by the last week in April with no buffer time at the end; we knew that if

we didn't stick to our deadlines, the project would not be done on time

Thankfully, each of these risks was highly unlikely – we had no reason to believe that either our advisor or our PIP liaison would abandon us, nor did we think that DSL.net was being untruthful when they said that ASP could be activated on a day's notice and for no charge. Also, considering how well we had worked together up until this point, we were all confident that we would continue to meet all of our deadlines.

3.4 Creating a Web Solution for the PIP Shelter's Needs

With the project goals and timeline clearly laid out and a good knowledge of the PIP shelter's needs, we were able to begin planning for the web site. A web site is defined as a set of interconnected webpage's, usually including a homepage, generally located on the same server, and prepared and maintained as a collection of information by a person, group, or organization. The web site is merely a way of sorting all of this information in some type of organized fashion. Without some type of organization to the information, users would be lost. It would be similar to looking for a name in the phone book, where all the data in the phone book is completely random. So what is a successful web site? A successful web site is essentially an effective roadmap that makes a bundle of information easily accessible, while simultaneously serving as an effective form of communication in line with the goals of the organization.

Before we truly sat down and designed the web site for the PIP shelter we determined what qualities we want our site to have. We then took all of these qualities and compared them to the business needs of the PIP shelter and see how we can align the two. We looked at a few other successful web sites and looked at their qualities and what they do right in order to better understand what it is we are going to do with the web site for the PIP shelter. Once we determined the qualities and features we want in the web site we then decided which methods were best to use to deliver our product.

Despite many differences in site design every successful web site share one thing in common: they are all easy to use. What exactly is an easy to use web site? Most web sites have certain design facets that they share in common, and these common traits stick in the heads of the users, making them more familiar with these assets. Familiarity is one of the key components to making a web page easy to navigate.

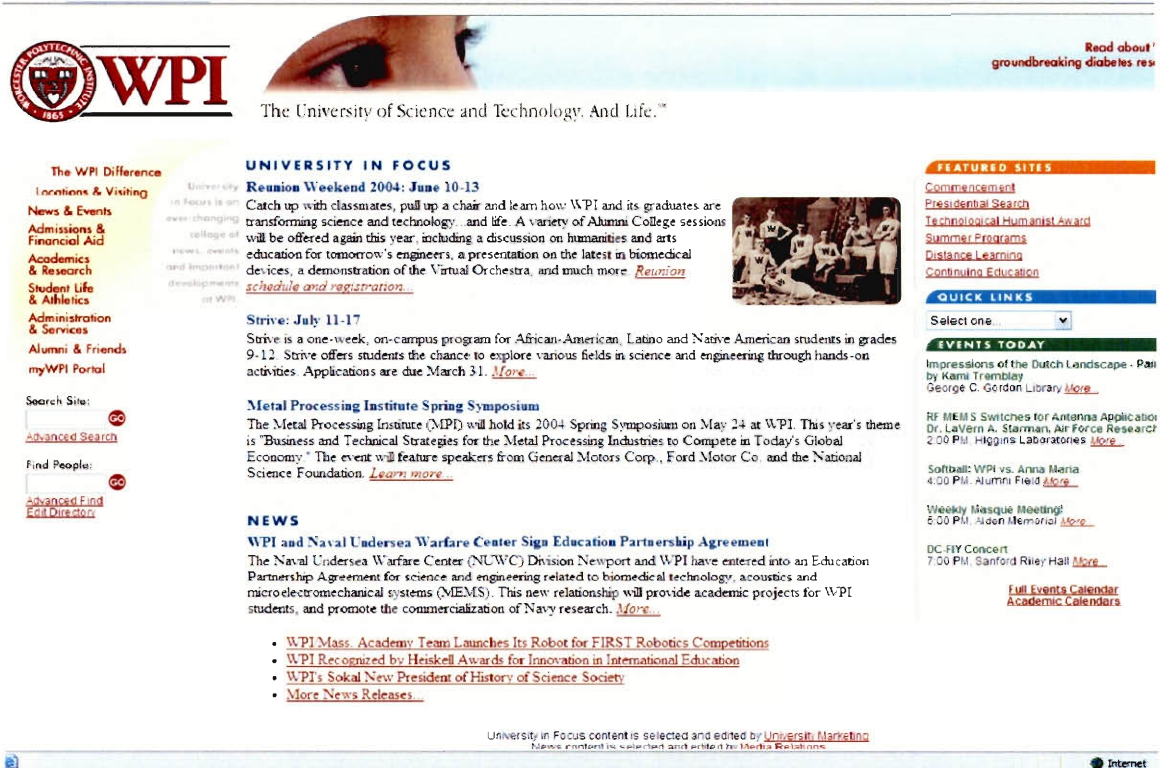


Figure 3-1 : WPI's Home Page

The WPI Main Page (pictured above), for example, utilizes many design concepts which should be familiar to most people. Underlined links and bolded headlines as in a newspaper are some examples of things that are familiar to most users. Also, main links tend to be towards the left of the page or at the top of the page and the same applies to built-in search mechanisms. When people first enter a web site they automatically look for certain trends, and a site can become frustrating if they are constantly trying to determine how the site works. If a site is easy to use, figuring out how it works should be second nature to most users, and finding the information should be the only task the user is focused on, not trying to figure out how to find the information that they seek.

In order for our web page to be considered successful we have to incorporate the above aspects, but also enhance/compliment the image of the

organization. The PIP shelter clearly wants the web page to show that they are making a difference in the community, and they are a great benefit to society. So the web page also serves as PIP's way of communicating their image through the public.

There is a multitude of ways to go about creating a web site with an "image". One way is by having the text based content of the page written in such a way that the language reflects the goals and image of the PIP shelter. However, many users are only using the web page to find specific information and will not read most of the content that is irrelevant to their search. We decided that our content will be written in such a way that it compliments the PIP image, but this clearly was not going to be enough to effectively market the PIP shelter. There are several types of multimedia which have been used in a variety of ways on other websites effectively. One example of this is having animated movies for the user to watch or even interact with. We decided not to incorporate flashy animation into the web page because it has several downsides. One being that repeat users would have to watch the videos or go through another loop in order to avoid seeing the same video. Also, most animation requires software to download, and this could potentially alienate possible clients. We decided to enhance PIP's image through other methods. The most common method of image design is through the use of graphics and colors.



Figure 3-2 : A Colorful, Graphics-intensive Web Page

The above website has a very colorful look to it, and is filled with equally colorful graphics. It serves as a perfect compliment to the image of this particular organization, which is one that promotes a very colorful and fun type of music. The design of this web page through the use of graphics compliments and enhances the image of the product which in this case is the band itself. We decided to use colors and graphics to enhance the image of the PIP shelter in the public eye.

After analyzing the needs of the PIP shelter, and after obtaining specific content that PIP wanted for the web site we were left with a slew of information. Staring at this pile of data, it becomes clear that in order for us to be successful we are going to have to take all the raw data and effectively communicate this to

the users of the web page. Simultaneously, this web page is going to enhance the image of the PIP shelter through the use of graphics.

One of the main problems with PIP's previously existing site is that its style is inconsistent. The PIP Shelter has actually had several people work on the page at various points in time, so some of the page is done with XML, some of the page is done with straight html and everything comes together in a very inconsistent fashion. Some links are broken, and one picture will have several different copies in the ftp folder with the actual coding on the page referencing several directories the pictures could possibly be located in. Some pages are still under construction, and all of the information is very out of date – most notably the board of directors.

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<lock v:skt= edit: shapetype= # />
<rectbox inset= 2.55pt,2.55pt,2.55pt,2.55pt />
<divoval-oval id= _x0000_s1030 style= position:a
top:19609106;width:220959;height:175111;visib
ms-wrap-distance-left:2.55pt;ms-wrap-distance-top
ms-wrap-distance-right:2.55pt;ms-wrap-distance-bo
stroke= # strokewidth= 0 insetpen= 1 p:z11000
<divshade color= #ccc />
<lock v:skt= edit: shapetype= # />
<rectbox inset= 2.55pt,2.55pt,2.55pt,2.55pt />
<divoval-oval id= _x0000_s1031 style= position:a
top:19609106;width:220959;height:175111;visib
ms-wrap-distance-left:2.55pt;ms-wrap-distance-top
ms-wrap-distance-right:2.55pt;ms-wrap-distance-bo
stroke= # strokewidth= 0 insetpen= 1 p:z11000
<divshade color= #ccc />
<lock v:skt= edit: shapetype= # />
<rectbox inset= 2.55pt,2.55pt,2.55pt,2.55pt />
<divoval-oval id= _x0000_s1032 style= position:a
ms-wrap-distance-left:2.55pt;ms-wrap-distance-top
ms-wrap-distance-right:2.55pt;ms-wrap-distance-bo
stroke= # strokewidth= 0 insetpen= 1 p:z11000
<divshade color= #ccc />
<lock v:skt= edit: shapetype= # />
<rectbox inset= 2.55pt,2.55pt,2.55pt,2.55pt />
<divoval-oval id= _x0000_s1033 style= rect />
<divshapetype-shape id= _x0000_s1033 type= #_x000
margin-left:76.5pt;margin-top:200.95pt;width:132.55p
visibility:visible;ms-wrap-distance-left:2.55pt;ms-wrap-distanc
ms-wrap-distance-top:2.55pt;ms-wrap-distance-right
ms-wrap-distance-bottom:2.55pt;stroke= # stroke
width:1pt;strokez= 0 />
<divshade color= #ccc />
<lock v:skt= edit: shapetype= # />
```

The Wallace House

The Wallace House is an innovative program which rebuilds the spiritual, mental and physical life of the alcoholic. All residents of the Wallace House are employed at the PIP Shelter. Currently, the Wallace House has 4 residents, which is full capacity.

The Lincoln House

Like the other supportive housing programs, the Lincoln House offers stability and support to the individual in recovery, while accepting that the road has an occasional rough patch. The program allows for residents to consider an individual's overall commitment to their recovery and continuing health. Some of the residents of the Lincoln House are employed at the PIP Shelter, while others are employed through outside resources. The Lincoln House currently houses 6 residents.

Figure 3-3 : Page 1 of 6 From the Source Code (left) for the Page Shown (right)

The above images show that some of the pages are even written in xml, a language best used to specify dynamic content, not formatting. This means it

takes six pages of code like the one on the left to render the page on the right. Because the website's code is written inconsistently, it doesn't make sense to reuse it. We will be able to make a more streamlined, easy to update website if we write it from scratch. In order to do this successfully, a design plan has to be developed from scratch before any type of implementation can occur.

Websites are built around structural themes, and consistency within the site structure is one of the most important aspects of good web site design. The structural layout defines how all of the information in the web page is going to be organized. This should be consistent because a user will see the layout of the main page and assume that the layout will remain similar throughout. A change in layout will make navigation very hard, confuse the user, and make possibly important information hard to access.⁴²

We are going to create a template that is going to be applied to each web page on the site, with the sub pages changing on another menu which will always be located in the same location in each page throughout the site. Good web site design is a careful and meticulous and always keeps the user in mind.

The most important aspects for web site usability are the following:⁴³

Ease of learning	How fast can a user who has never seen the user interface before learn it sufficiently well to accomplish basic tasks?
Efficiency of use	Once an experienced user has learned to use the system, how fast can he or she accomplish tasks?
Memorable	If a user has used the system before, can he or she remember enough to use it effectively the next time or does the user have to start over again learning everything?
Error frequency and severity	How often do users make errors while using the system, how serious

	are these errors, and how do users recover from these errors?
Subjective satisfaction	How much does the user <i>like</i> using the system?

Figure 3-4 : Usability Aspects⁴¹

We decided to create a site design that would take all of those factors into account and when we record our results, we will test these factors amongst others.

The design plan is an essential part towards achieving good results in any project of this size. A good plan is necessary before any project implementation is to take place. In order to design our web page we asked ourselves a few questions.

1. Why are we developing a web site? / What are our goals?
2. Who is going to come to our site?
3. Why are they going to come to our site?

We made sure our goals were in line with the goals of the PIP organization. We are developing the site as a communications platform from the PIP shelter to the public, and henceforth to take a large deal of their business plan and implement it over the Internet. The targeted audience of this website is very varied, and because of the variety of users, we had to make sure each user has the info he or she would want. We determined that the main core of people that would be accessing this web site would be:

- Potential Donators
- PIP Employees
- Local/State/Federal Government Employees

- Members of other non profit communities
- People seeking help
- People looking to use the PIP shelter for their patients (ex. Elderly homes will sometimes look to ship patients who have not paid their bills off to the PIP shelter)
- Active members of the non profit community
- Present and past donators
- People seeking information about programs
- Active members of the community (local neighborhood, the politically aware)
- Those seeking employment
- Those looking to volunteer their time

After determining the potential clientele of this web site, we now need to determine why each of the potential users will visit the site and what type of information they will expect to see. There are several different methods for taking this information, and laying it out in a manner that will translate well to the actual web site. A site skeleton is a list of all the links that appear on the main page, and the sub pages that are linked off them. This is an important step in the planning process of a website because it determines the content and organization of the site. These decisions are needed before other aspects of the site design are considered such as navigation and other interface issues. Below is the site skeleton that we came up with based on all the above factors.

About Us



Figure 3-5 : Proposed Site Skeleton

We designed our site skeleton with the user in mind. We wanted all the data to be categorized in links on the home page that make sense and not to bombard the user with too much information at once. The data needed to be sorted out in a logical fashion, and we designed it in such a way as to minimize site depth. Site depth is how many links the user will have to go through in order to find what information they want. All information should not be back many links, but they should be as close to the main link as possible. Site depth should be

minimized in good web site design. In the above site skeleton, the links in red are the ones that are going to be shown on the home page. The links in green are extensions of the home page links and the ones in blue are links off of those. The green links have a site depth of 2 and the blue links have a site depth of 3. The deepest any one user will have to go to get any info off the site from the main page is 3 links deep. With a site depth of three links, the user will experience minimal frustration when ever the user is trying to find any piece of information. The user should never have to search around in circles for any piece of information, and no information will be hidden in some obscure section of the website.

The wording of our links was another important factor that we came across when designing our site skeleton. Web surfers generally associate about us with either general information about the company or as a source of contact information. For us it serves as both, with a list of all the board members with direct links to their contact information and it contains the mission statement of the PIP shelter. The other thing PIP wanted in the web page is a link to an events schedule, a newsletter, and info about calendars they had made for sale. PIP does not have any products to speak of outside of the calendar and even in that case they do not have a set price on the calendar. We feel that because of this creating a separate products link would create too many links on the home page and would deter from the “warm” feeling we want users of this web page to have. The choice of facilities and services was a key choice we made in our design. We determined that the facilities took place in areas that offered longer term

solutions to problems. Services were different in that they were services that the PIP shelter provides for its clients that were not long term solutions to a problem. Facilities are programs and services are sessions. The next roadblock we came across was volunteer opportunities. We decided that volunteer work is different than employment opportunities and if someone was looking to volunteer and it was paired with employment they might not find what they are looking for and become frustrated. We decided that volunteer work was a form of giving and hence that and donations are going to fall under giving. Lastly, links and resources would include all the links that PIP feels they need to have on their web site.

With the current layout of links and while keeping the components of good web site design in mind we are going to surpass the previously existing PIP web site. With the site we want to implement we will have set the stage for accomplishment of all of our goals of this IQP and because we are meeting our goals we are subsequently meeting and extending the business goals of the PIP shelter.

3.5 Determining an Appropriate WWW Development Technology

After researching existing sites and technologies, we set out to determine an adequate technology for PIP's needs. With the myriad web authoring technologies that exist, it was a task in and of itself to simply choose which ones are best for this job. When it comes to developing a web site, there are three basic categories that the authoring technologies fall into: markup languages, script languages, and proprietary software packages. There are many pros and

cons for the technologies in each category, and they had to be considered before we could select the ones that were the best fit.

Markup languages are coding systems that are used to structure and link text files. Hypertext Markup Language (or HTML) is by far the most common, as it was this language that literally fostered the entire World Wide Web. Its strengths lie in creating static web pages that display similarly on nearly every computer that can access the web. HTML files are plain text files that require either a thorough knowledge of the language or an HTML editor (such as Microsoft FrontPage) to make any changes whatsoever. These are literally what keep webmasters in business, as they require someone with a high level of skill to make any changes to the pages. Dynamic HTML is a variation of HTML that provides an object-oriented view of a web page and its elements. In plain English, this means that every paragraph, picture, heading, list, etc. is viewed as an object with its own attributes that can be changed independently of all other objects. These attributes can be grouped into layers such that an entire page's (or even site's) attributes could be altered by switching between layers. This can be accomplished via user input or based on a timer in the code of the webpage. This markup language is very promising, but isn't really any easier to edit than regular HTML. XML (or eXtensible Markup Language) is the third markup language that is currently in use. It is known as "extensible" because each command in the language is unlimited and self-defining, unlike HTML. This allows you to sculpt the language to accomplish your vision. Unfortunately, this lack of a standard makes it the single hardest language to make edits to, making

it unviable for a long-term solution. Coincidentally, this is the language that much of the PIP Shelter's current website is written in, and part of the reason why they need a new site.⁴⁴

The other technological aspect of building a web site revolves around the use of a script language. Script languages are standards for writing sequences of instructions to be carried out by either the client or the server computer. They are essentially a middle ground between markup languages, which are generally used for formatting text and images, and programming languages, which are generally used to give a series of complex instructions to computers. A primary difference between programming and script languages is that the rules and syntax requirements for script languages are less rigid.⁴⁵ JavaScript and VBScript are the two script languages that run on the *client* computer. They're both embedded into HTML pages and are very similar to each other. However, VBScript only works in Microsoft's Internet Explorer, so we won't be considering it for this project.

Active Server Pages (or ASP) is the leading scripting language that runs on the *server* computer. An Active Server Page is an HTML page that has embedded code to run certain scripts on a Microsoft web server (such as DSL.net's). This is a very promising technology that lets you pull data from a database on the server to be displayed as content in a web page. This way, you need only change the fields in the database – a feat easily accomplished with Microsoft Access or a web form with Access-like functionality – to change the data that displays on your web page. Most people agree that this is a good deal

easier than opening up an HTML file and poking around for some time to see where the data is that needs to be changed. Active Server Pages are the first easy way for clients to affect change on a web page.

A third technology used in web page authoring is third-party, proprietary software. This includes Macromedia Flash, Macromedia Dreamweaver, and Sun Microsystems JAVA. While all three of these software packages are extremely full-featured and robust, they all require the client to download software to view them properly, which narrows the website's audience. Additionally, some of them are prohibitively expensive for this particular project, with most Macromedia packages starting at around \$300.

After reviewing all these existing web technologies, we have chosen to write all of the web pages for the site in Dynamic HTML with embedded ASP code to retrieve the content from a server-side database. This will allow for quick and easy changes to the content without complicated HTML editing. We believe this to be the perfect solution, as it will only require a basic knowledge of Microsoft Access. A primary concern that arises when choosing Dynamic HTML is that any advanced DHTML content gracefully transform to plain HTML content in the event that one's browser doesn't support the advanced features.⁴⁶ The World Wide Web Consortium (www.w3.org) has created a living document that addresses this concern, known as the Web Content Accessibility Guidelines. This contains numerous concepts for web designers to following when creating pages that are more accessible and usable, and that work across the many

existing platforms, including both new and old browsers for PCs, Macs, and mobile phones, as well as speaking browsers for the hearing-impaired.

Another primary concern of the PIP Shelter is that this website is portable to another web server, should their current conditions change. This has been taken into account when deciding on web authoring technologies; ASP needs to be supported by the web server, and it has been adopted at an extremely fast rate nationwide. We are confident that any server the PIP Shelter chooses to move to would support ASP, as DSL.net and nearly every other provider currently do. Moving the site would simply be a matter of moving the database file and the directory of HTML files from one server to another. Given the estimated size of 5MB, the entire site could easily fit on a recordable CD, USB thumbdrive, or an Iomega ZIPDisk.

The site would also be extremely easy to maintain. For example, each item on the bulletin board will be a record in a database. One would simply add, edit, or delete records in the database to update the bulletin board. The Board of Directors page will be setup similarly. Yes/No checkboxes in the database will be implemented to selectively activate links on the homepage. For example, a link to the Christmas calendar only needs to be displayed for certain weeks of the year. This link could be easily turned off once the holiday season is over, contributing to the site's fresh and current look. Additionally, paragraphs of text will be stored in a database, allowing an entire web page's text to be easily changed.

3.6 Ensuring Usability

3.6.1 Help Documentation

Once the website is complete we want the PIP administrators to be able to navigate and update it easily. They will be eager to share the latest shelter news with the public who have not received updates since the last update of the old site. They will also need to be able to update the website after we have finished the project and are no longer around.

To make this possible we will create a help document to guide them through the update process. It will contain a step-by-step tutorial of how to update all sections of the site. We will include screenshots of this update process once the backdoor has been completed. This document will be presented to them after the website is launched. It will provide a resource for newer staff members should maintenance responsibilities change hands and reinforce our goal to make the website easily updatable.

3.6.2 Website Usability Questionnaire

Every website should be designed to make navigation and locating information as easy as possible. After all, the website is there to provide content to its viewers. To ensure that our website is easy to navigate we will create a questionnaire that tests a user's ability to navigate the site.

The questionnaire will give the users two objectives that involve finding a piece of information on the site. For each of these objectives we will keep track of the number of clicks it takes them to arrive at the correct location, the amount of time it takes to find the information, the number of clicks they wasted looking for

a piece of information in the wrong location and the amount of time it takes them to become familiar with the site. These measures were chosen because they will test whether or not we accomplished the goals we established. By testing how fast a user can locate a piece of information on the site we can determine if the sub pages are laid out in a logical format and are easy to navigate. In addition we will ask questions that allow the testers to give their opinions about the site presentation. This will provide information that we can not obtain from our other results.

We will distribute the questionnaire to a variety of people including friends and family members. By using a testing base with some diversity in age and experience we hope to simulate the population of users that will be viewing the actual site. The results of this questionnaire will give us an indication of whether we succeeded in accomplishing our goals and allow us to make changes in order to reach them.

3.7 Conclusion

In conclusion, we believe this methodology to be of great benefit to us. It will guide us as we complete the project, reminding us of our goals and provide reassurance in the knowledge that we've gained by researching multiple solutions, comparing their strengths and weaknesses, and finally selecting a path to take.

4. Results

4.1 Overview

In the results section we examine the results of our completed project. To review, here is a list of the goals that we set out to accomplish through the physical implementation and design phases of our project.

- The web site will have a user friendly interface that is easy to modify.
- The site will aid the People In Peril Shelter in reaching out and informing the community.
- All PIP administrators will be able to easily manage/edit the website.

With each passing phase of this project we had to keep in mind the pertinent goals, and those were the goals as we designed and implemented our project plan.

Our methodology states that we choose several different methods in order to achieve our goals in the best way possible. Each of our methods was focused on a different aspect of the project. When all of the methods successfully merge, the project can be considered a success. The methodology sets the direction for the project. It is sort of like the script for a play, and the design and implementation is the actual acting of that play. The results section is essentially how well the actors performed in relation to the original script. Our results chapter will focus around how our project turned out in relation to our original choices we had made in the methodology chapter. As a reminder, these were the major decisions we had made in our methodology chapter:

Front End:

- The use of graphics to enhance image
- The creation of a site skeleton which was based around existing web usability research
- The front end of the web page that will pull its content out of a database
- The use of html as a front end programming module

Back End:

- A back end that makes all aspects of the front end updateable
- Use of a server side scripting language (ASP) to communicate between the back end of the page and the database

Other:

- The development and distribution of a questionnaire upon site completion that will test the success of certain aspects of the site

Our results chapter is based around those decisions that we had made in our methodology. Its sections are the results of each major decision we had made in our methodology.

4.2 Front End

4.2.1 Enhancing Image

The front end of the webpage is what the user sees every time they log onto the site. Since this will be the user's first impression of the PIP Shelter we made the site professional, easy to navigate and visually appealing. To create an enjoyable web experience we developed an interface that is graphical, and

shows the positive side of the PIP shelter. Anyone could come up with their own depiction of the horrors of homelessness, but we are showing the positive side of what the PIP shelter does. We established this through our graphical layout which shows pictures centered on such themes as recovery and hope. The images of the shelter were aligned with the PIP shelter's vision of their shelter. The positive themes should also help PIP's image within the community for any users that view their web page within the community. For example, the rotating picture on the main page gives new users a positive first impression of the shelter by showing scenes from Ed's Place. Ed's Place is a form of alternative housing provided by the PIP shelter to help recovering residents get away from the city and recover in a rural and more comfortable environment. There are 10 rotating pictures that were scanned from the PIP's Calendar. These pictures were chosen because they showcase the talent present at Ed's Place and also contain a quote relating to the issues of homelessness. These pictures were also displayed at an art exhibit put on by Ed's Place residents at CC Lowell in Worcester. Below are a few examples of pictures that rotate upon each occurring visit to the PIP shelter.



Figure 4-1 : Calendar Pictures

On the top of each page is a header image that contains the main links for site navigation. Since this is going to be seen by the user regardless of what page they were on, we viewed this as another opportunity to enhance the positive image the PIP shelter wants.



Figure 4-2 : Header Image for Entire Site

The array of colors gives the shelter's site a sense of life. The colorful design makes the site a livelier, upbeat experience whereas uses of darker colors would

have achieved the opposite. The helper that is displayed is serving food from a thanksgiving dinner with a smile, once again pushing the image. The resident displayed has a certain twinkle in his eye and a satisfied look. This heading banner is what the user sees on every web page and sets the overall tone for their web experience atop of serving as the main source of navigation for users.

Helping People in Peril Since 1979

PIP Shelter

[About Us](#) [News](#) [Facilities & Services](#) [Giving](#) [Resources](#)

PIP Shelter
 Ed's Place
 The Aurora Project
 Sober Housing
 Compensated Work Therapy
 AA Meetings
 HIV Testing

Ed's Place on the Farm

Ed's Place is an outgrowth of a dream shared by long-time PIP Shelter Executive Director Ed McCann with the staff, guests and Board of Directors of the PIP Foundation and the community. At the center of the dream is a farm offering safe, stable and supportive housing that allows and encourages chronically homeless individuals to reach their maximum potential. The philosophical basis of Ed's Place is that recovery is best accomplished in an atmosphere that is holistically supportive and healthy, removed from the habitual sources of temptation that often hamper progress. Tied in to that philosophy is the coordinate belief that a positive sense of self-worth is intrinsic to achieving and maintaining sobriety and recovery. Finally, there is the belief that every individual is capable of being a functioning and productive member of society, returning to the community in some measure the support they receive from it. Every component of Ed's Place is based on one or more of those tenets.

[Home](#) | [About Us](#) | [News](#) | [Facilities and Services](#) | [Giving](#) | [Resources](#)
 Funded cooperatively by the Department of Transitional Assistance, Department of Public Health, HUD, the United Way, the Greater Worcester Community Foundation, and private donations.

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Figure 4-3 : Ed' Place on the Farm Webpage

The graphic displayed above is one of the sample content pages we

designed. Specifically, this is the page for Ed's Place, the rural center for recovery. This is a perfect example of how graphics can truly enhance the image and the web experience of the user simultaneously. The images on the page stand out and are both visually appealing without being overwhelming. We designed this page in that fashion, and also in a manner that all the graphics seem properly in place and never feel forced onto the user.

4.2.2 Applying Web Usability Research

One issue that was a large concern after seeing the old PIP site was that the site navigation was not set up in a very organized manner. As a result, certain portions of the website were difficult to find. This made it unpleasant for a person viewing the site to access the information that they were seeking. We made it a goal to make the site navigation organized and easy to understand. We outlined how the information was going to be sorted in our methodology through the creation of a site skeleton. We then implemented that site skeleton into the design of the web site itself.

For the main page of the site we decided to group all of the sub pages into five main categories. Since the old PIP web site was such a failure in web design we wanted to essentially re-engineer their web site from the ground up. Previously, all the main page links were located further down on the left hand side of the page.



- [Board of Directors](#)
- [Programs & Services](#)
- [Giving](#)
- [Volunteer Opportunities](#)
- [In the News](#)
- [Calendar of Events](#)
- [Employment Opportunities](#)
- [Continuum of Care](#)
- [First Steps Newsletter](#)
- [Advocacy](#)
- [Links & Resources](#)

The Worcester PIP Shelter has been providing emergency shelter, food, clothing and medical care to homeless people since 1975. For many, PIP has meant the difference between life and death. For some, PIP has been the beginning of a new, sober and meaningful life.

From the
President's Desk

As the temperature outside remained below freezing, with a biting wind for much of January, a comment made to me by PIP Executive Director Buddy Brousseau struck home. "The provision of food and shelter is healthcare."

Figure 4-4 : Previously Existing Website's Homepage

In order to make things easier to access, a header bar was created that would contain the five main links at the very top of the page. Repeat users can hover over any one of those five links and the subcategories will appear underneath the main link. This gives the users a quick view of each category's content, allowing them to find the page they're searching more quickly. Our original plan was to create JavaScript popup menus in place of these category descriptions. We decided against this feature for a number of reasons. Our main concern was that the menus would detract from the user's experience. In our tests we couldn't produce a menu that was free of bugs so we decided on a simpler yet still effective solution. The five options on the title menu now exist as links to a title page for each category.

Each title page provides a summary of the category and a description of each sub-page link (see **Figure 4-5** for a look at the About Us title page).

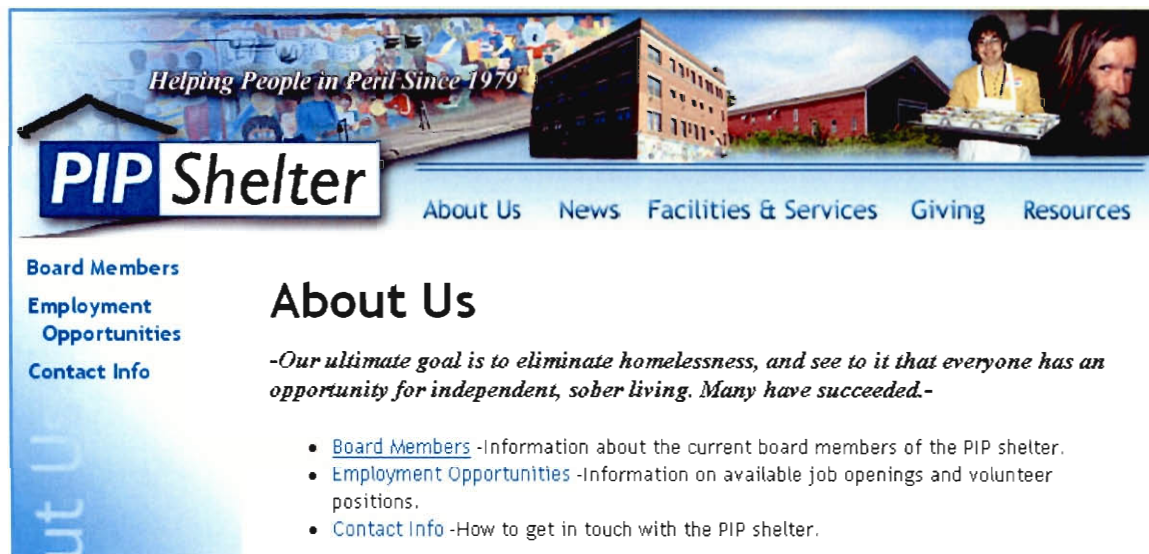


Figure 4-5 : The About Us Title Page

This way a user will know right away if they are in the correct category. The link descriptions greatly assist in the navigation of the site by giving a summary of the content that the link accesses. These links are also listed in a panel at the side of the page. This makes navigation simple for new site visitors. Every web page is set up in this fashion, so the site remains consistent in its design throughout. Users in return visits should know where to look for links.



Figure 4-6 : Side Panel Navigation for the About Us Pages

The front page of the site has a slightly different appearance. We made the page simple so that it would load quickly and not overwhelm new users. The page contains two main elements: site news and a rotating picture. Site news is a small content pane that the top five headlines from the bulletin board This allows return users to quickly see what events are coming up and gives new users an idea of what the shelter does without overwhelming them. The headlines link to their containing content page for a more detailed description.

4.2.3 The Use of Dynamic Web Pages

What stands out about the front end of our web site is that none of its

content is static in nature. The content is not stored in the html code for the webpage itself. Rather, the content is stored in a database which was developed using Microsoft Access. Each page of content was given its own unique table, with attributes corresponding to the type of content associated with each page.

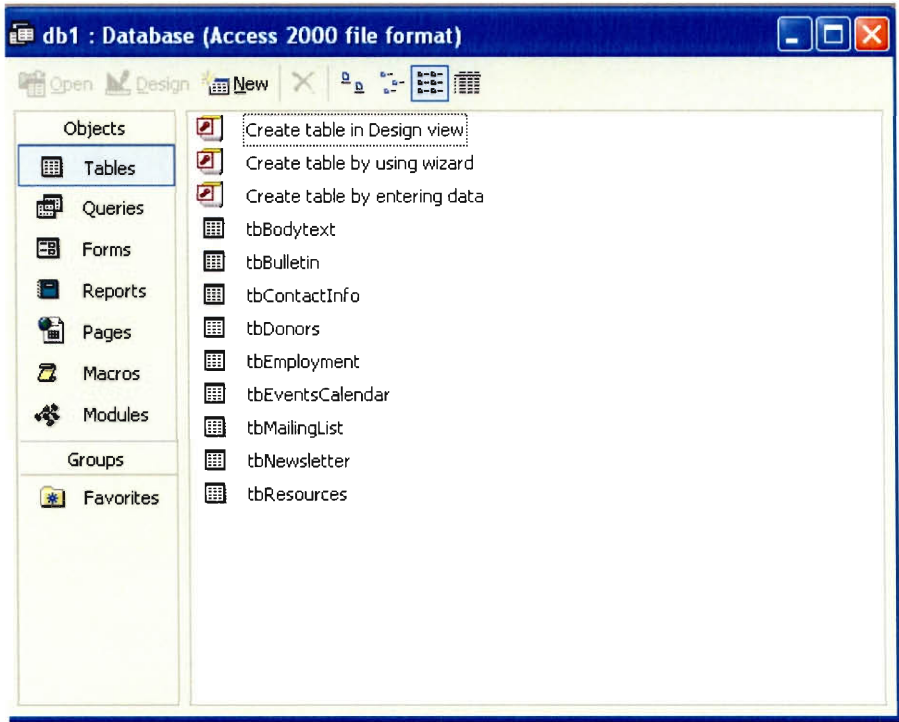


Figure 4-7 : All Tables in the Database

The front end of the web site is coded in such a way that it scans the database for its content. Each page of the web site pulls its content from a different table in the database. It scans the attributes of each part of the table; then displays and subsequently formats that data into the important content that one sees on the web page.

ID	HeadlineDate	Headline	Body	ImageURL
1	4 /21/2004	New PIP site cr	The brand new f	
(AutoNumber)				

Figure 4-8 : Sample Database Record

Above is the bulletin board table from the database. Currently there is one bulletin board entry and the website will take that entry, display the headline, the date, and the content and then it will format them properly as shown below.

4/21/2004 New PIP site created

The brand new PIP shelter site is displayed for the first time.

If the content in the database were to change, then the content on this particular page would also change. This ebb and flow is essential for the dynamic structure of the web site. The most complex example of how the front end and the database interact with each other is seen in the various main body pages. The main body pages are pages which have content which we don't foresee as needing constant change. Examples of this content are historical blurbs on the PIP Shelter and Ed's place on the farm for recovery.

PageName	Heading1	Body1	Heading2	Body2	Heading3	Body3
AAMeetings		AA (Alcoholics . Current Meeting 9:30am Monday				
AboutUs						
AuroraProject		The Aurora Proj				
BoardMembers	Board of Directc	<a href="http://v	Advisory Board	Brian M. Chand		
CompensatedWorkTherapy	Teaching Life SI	It is the goal of 1	PIP Catering: A	PIP Catering is		
Donating		We at the PIP	What Your Cont	<table class="c	Among the way	<h4>Join
EdsPlace		Ed's Place is at		The philosophic		
EmploymentOpportunities						
FacilitiesAndServices						
Giving						
HIVTesting	HIV Testing	There will be we				
News						
PIPShelter		The People In P		For those comn	In the year 200C	
SoberHousing	The Wallace Ho	The Wallace Ho	The Lincoln Ho	Like the other s		
Volunteer	Volunteer Oppo	The PIP Shelter	Contact:	Patrick Smith<t		

Figure 4-9 : Body Texts Table

Each one of these pages can be updated an unlimited number of times. This makes the site more scalable for the future and makes the whole site dynamic. The front end code refers to one of the attributes in this table then reads and formats the content of each cell within the attribute. So the page can look at a

table then point to individual attributes within the table and display the appropriate content.

This technique worked very well within the web site. The database proved to be an effective method of storage for all the sites content. It organized the content and made it much easier to read and manage then any other form of storing data. It streamlined all the content of the front end into one database file, so the data was easy to retrieve and all the coding was only referencing one database.

4.2.4 Using HTML to Format the Pages

The use of HTML made for a clean, easy to manage front end. Most of the work involved in the visual layout was done with graphics programs. HTML was mainly used for formatting purposes whether it was laying out tables to display graphics in or formatting the database content. HTML was used as a map of where to place all the various content we had on the page. In other words, we did not generate much of the actual content with HTML but rather we used HTML to reference and sort all of the content we had created from graphics to data.

The other advantage of using HTML was that it is a universal language so each one of us in the project team were able to edit and contribute different parts for the pages since HTML is a widely known language. Using notepad for the HTML instead of a program that generates HTML made it easier for us to read and manage. Contrasted to XML, HTML is a standardized markup language that has a handful of well-defined commands. This allows someone other than the

author to quickly scan through a page's code and understand what's going on.

4.3 Back End

4.3.1 Using ASP

The back end of a website is the use of a server-side scripting language (ASP, in our case) to edit the central database that the front end pulls its dynamic content from. It is essentially is a group of forms that manages all of the data within the database. Any standard language would not be able to read and write to and from a database. We chose to use active server pages (ASP) because it has the capability to interact with a database. The web forms themselves were built using a combination of HTML for formatting, and ASP for interaction with the database and the other files on the web server.

ASP proved to be an adequate choice for development of the back end. It streamlined perfectly with the database and everything works great. The language was not too complex and the results were very satisfying. It has the ability to display the content from the database, it has the ability to update a database, and it has the ability to create forms which give updating and editing commands. It also allows for pages that execute certain commands to be running invisible to any user. An example of this is the deleting a record process. When the administrator chooses to delete a record they are prompted with a confirmation box. When the administrator confirms the deletion; it is assigned a value which becomes an action that is passed to the database. The page the administrator then sees is the listing of all records in which one has been deleted.

ASP was a large part of the actual web site design. It proved to be the good choice because of its diversity and its wide breadth of features. It was these features that made our code and the backend both easy to create and easy to manage. The use of ASP worked well with what we wanted to accomplish, and it met the needs of our project plan perfectly.

4.3.2 Updating the Front End's Content

The back end of the site, although never truly visible to the user, contains a lot of features that will keep this web site an ongoing success in the near future. Any information that the PIP administration will want to modify is located in a database on the server. The front end of the website retrieves the records and uses them to create the page the user is viewing. An interface was created to make the database easy to edit by the PIP administration. The interface is a series of web pages that make changes to the records in the database. This allows the webpage to be easily updated from any computer with an internet connection.

The information on the web site can be edited all in real time through the use of this backdoor. No use of ftp knowledge or any type of web programming is necessary here. Any user could edit this site without a problem on the fly. Naturally, this is very important information, and security of this information is a top priority. We have implemented a password protection prompt. The password which will only be given to authorized users at the PIP shelter.



Figure 4-10 : Password Prompt for Backdoor

Once the administrator enters his or her password they gain entry into the web forms for database entry which is shown below.

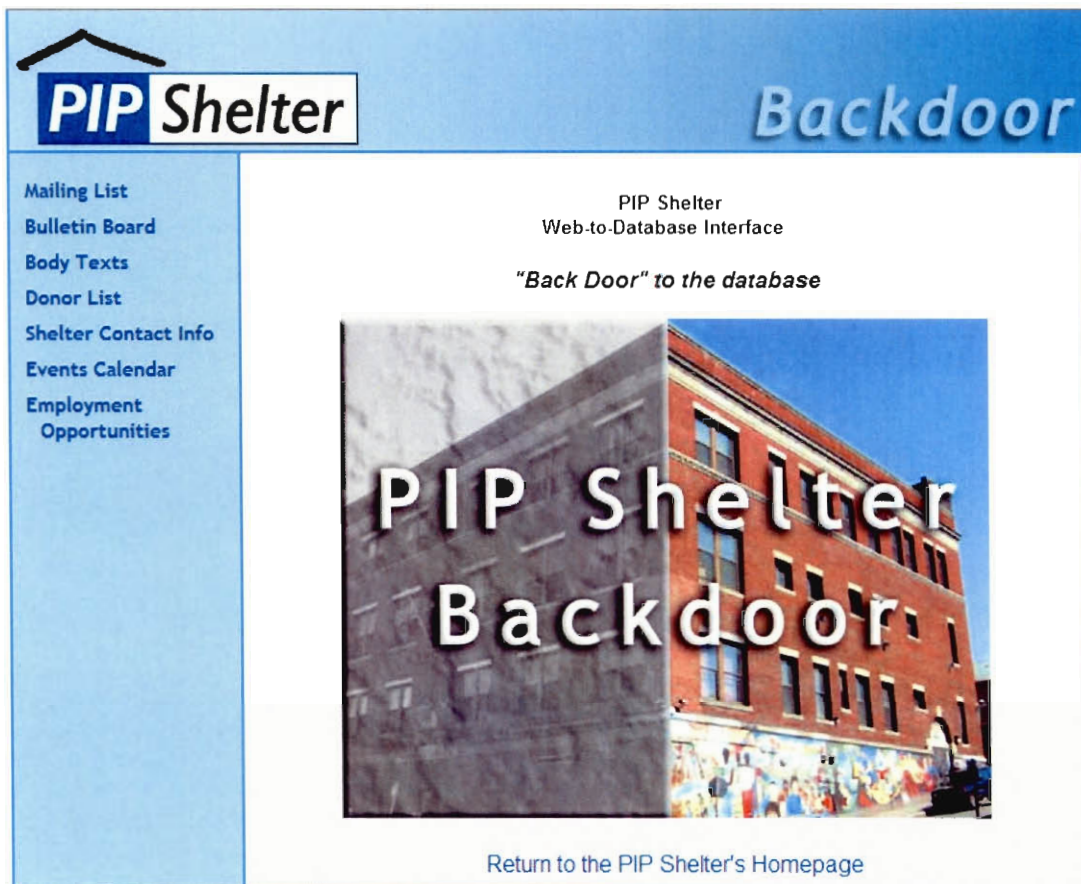


Figure 4-11 : Backdoor Homepage

From here, one can choose to view any of the tables in the website's database, such as the mailing list or the body texts of the dynamic site pages. This simple and straightforward interface was designed with the novice user in mind so that all the site's dynamic content could be edited without any knowledge of the HTML and ASP code that works in the background.

Clicking on any of the above options will bring you to a list of all the records in the corresponding table. For example, clicking on 'Bulletin Board' will bring up the following page:

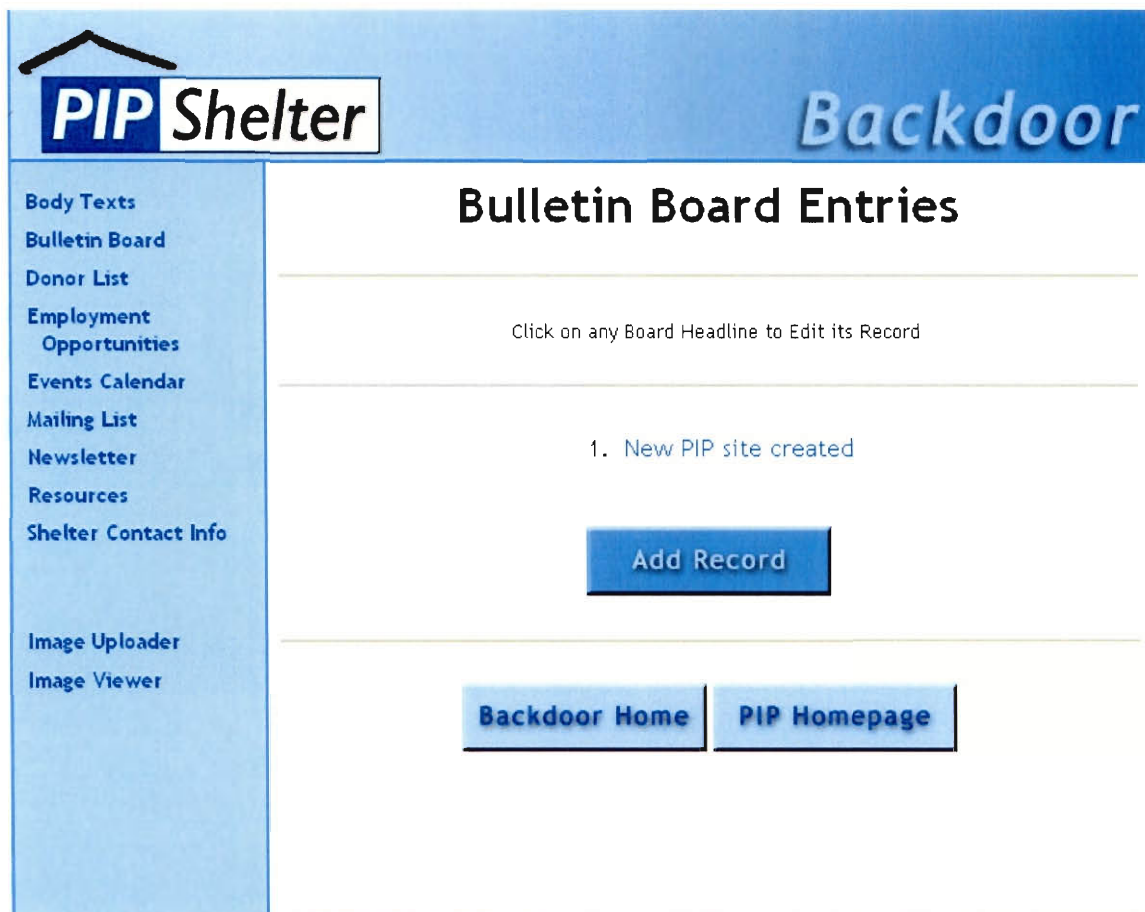


Figure 4-12 : Bulletin Board Listing on Backdoor

The bulletin board page you are seeing will actually edit the bulletin board table in the database on the server. Each one of the bulletin board records are actual

records within the database and they contain information such as headline and body paragraph in this particular case. When the administrator clicks add record, the following page is displayed.

PIP Shelter *Backdoor*

Add a Donor Entry

Body Texts
Bulletin Board
Donor List
Employment Opportunities
Events Calendar
Mailing List
Newsletter
Resources
Shelter Contact Info
Image Uploader
Image Viewer

Headline: *

Headline Date: *
(mm/dd/yy)

Headline Body: *

Image URL:

* - Required field

Figure 4-13 : Backdoor Page to Add a Donor Entry

From here the administrator can enter each one of these fields, which will update the fields in the database and add another record subsequently. The front end of the web page reads all its content from this very same database, so once the administrator adds this entry the web site is automatically updated.

All the body text within the web site can be edited as well. We pulled most of our content from existing publications within PIP but if they ever wanted to change anything from simple wording, to new features, they can now edit any

piece of body text in a similar format.

Listing of all Body Texts

Click on any page name below to edit its content

1. AAMeetings
2. AboutUs
3. AuroraProject
4. BoardMembers
5. CompensatedWorkTherapy
6. Donating
7. EdsPlace
8. EmploymentOpportunities
9. FacilitiesAndServices
10. Giving
11. HIVTesting
12. News
13. PIPShelter
14. SoberHousing
15. Volunteer

[Backdoor Home](#) [PIP Homepage](#)

Figure 4-14 : Backdoor Listing of all Body Texts

Each one of the records listed corresponds with body texts for the corresponding page on the front end of the site. Areas such as volunteer opportunities and board members are undergoing constant change, and PIP expressed interest in making these pages dynamic for the future. Administrators can click on any one of these entries and edit their content. Clicking on the 'AA Meetings' entry for example, brings up the following page:

<p>Body Texts</p> <p>Bulletin Board</p> <p>Donor List</p> <p>Employment Opportunities</p> <p>Events Calendar</p> <p>Mailing List</p> <p>Newsletter</p> <p>Resources</p> <p>Shelter Contact Info</p> <p>Image Uploader</p> <p>Image Viewer</p>	<h2>Body text for the AAMeetings page:</h2>																				
<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Heading 1:</td> <td></td> </tr> <tr> <td>Body 1:</td> <td>AA (Alcoholics Anonymous) and NA (Narcotics Anonymous) groups meet daily at the shelter. Our Justice Cafe exists as an important and welcome sober environment for re-socialization, and our sober housing units require strict sobriety as a condition of residency. Seventy percent of the residents in our sober housing programs have been able to maintain sobriety, and thus escape the cycle of poverty, homelessness and disease.</td> </tr> <tr> <td>Heading 2:</td> <td>Current Meeting Schedule</td> </tr> <tr> <td>Body 2:</td> <td>9:30am Monday - Friday 10:30am Saturday 10:00am Sunday</td> </tr> <tr> <td>Heading 3:</td> <td></td> </tr> <tr> <td>Body 3:</td> <td></td> </tr> <tr> <td>Heading 4:</td> <td></td> </tr> <tr> <td>Body 4:</td> <td></td> </tr> <tr> <td>Heading 5:</td> <td></td> </tr> <tr> <td>Body 5:</td> <td></td> </tr> </table>		Heading 1:		Body 1:	AA (Alcoholics Anonymous) and NA (Narcotics Anonymous) groups meet daily at the shelter. Our Justice Cafe exists as an important and welcome sober environment for re-socialization, and our sober housing units require strict sobriety as a condition of residency. Seventy percent of the residents in our sober housing programs have been able to maintain sobriety, and thus escape the cycle of poverty, homelessness and disease.	Heading 2:	Current Meeting Schedule	Body 2:	9:30am Monday - Friday 10:30am Saturday 10:00am Sunday	Heading 3:		Body 3:		Heading 4:		Body 4:		Heading 5:		Body 5:	
Heading 1:																					
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Heading 2:	Current Meeting Schedule																				
Body 2:	9:30am Monday - Friday 10:30am Saturday 10:00am Sunday																				
Heading 3:																					
Body 3:																					
Heading 4:																					
Body 4:																					
Heading 5:																					
Body 5:																					
<div style="background-color: #0056b3; color: white; padding: 5px 20px; display: inline-block; border: 1px solid #0056b3;">Update Record</div>																					

Figure 4-15 : Detail Listing of AAMeetings Body Text

Each heading field will be bolded and displayed as a headliner on the front end because it recognizes the particular field to be a heading. They can edit any of the content shown, or add additional content and headings which will all be displayed with proper formatting on the front end of the page all just by clicking update record.

To allow the administrators to add more than just text we implemented two useful features: the image uploader and image viewer. These features make it very easy to change the visual content on the site. The image viewer show's a

visual list of all images on the site. The relative path name of each image is displayed so that users can reference it when they would like to add images to the rest of the site's pages. Each image also has a checkbox next to it to allow the user to delete it if they he or she should choose.

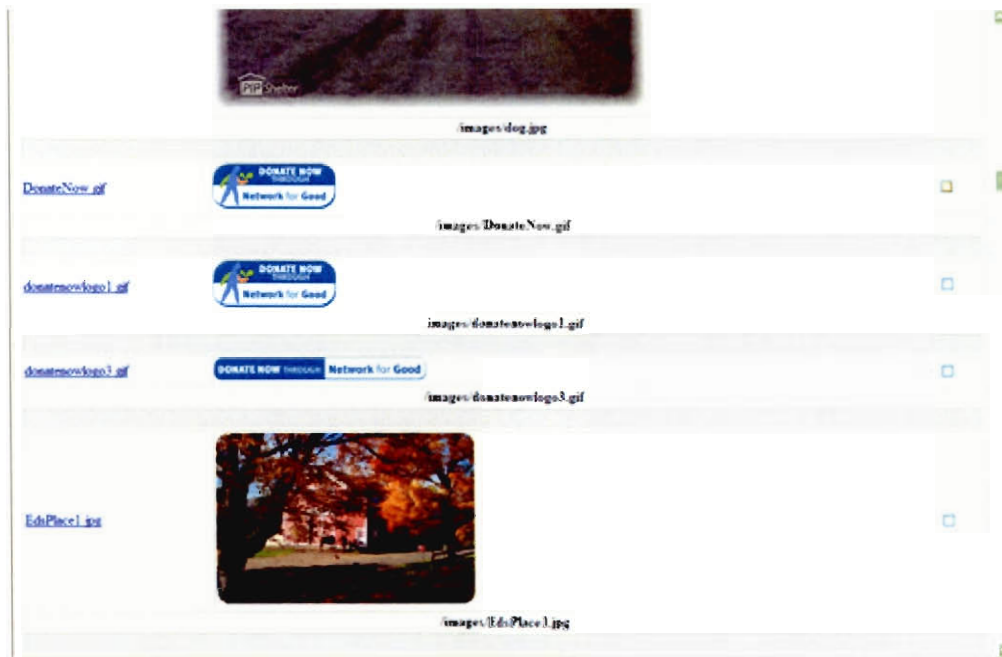


Figure 4-16 : Image Viewer

The image uploader is an interface for users to add pictures to the images directory. The page uses a windows-style dialog box to allow the user to select the files he or she would like to upload. All files are placed in the images folder which is viewed by the image viewer. This makes the process of adding images to the site a breeze.



Figure 4-17 : Uploading an Image

The administrator would essentially just browse through their local hard drive and choose an image which they would want to upload and it is automatically stored in the image viewer. If the shelter ever held an event and had pictures they can now easily become a part of the web site.

4.4 Questionnaire

In our methodology we determined that developing a questionnaire was a good method for obtaining user feedback. User feedback is important because they are the primary end users of the site, and we designed the site with the users in mind. We decided to sample eight different users of various age groups. The questionnaire that we used can be found in Appendix D.

Several trends can be derived from the questionnaire results. It seems as if the users who do not use the internet frequently had a much more careful

approach to surfing. Once they reached the main page they were very patient and read all the links and content. These users generally took longer to find the content and their familiarity times were also generally higher. Their accuracy was also higher as a result of this for these users never made more than one wrong click. They were also more aware of site content; they all said that the website provided a sense of hope. They were able to experience more of the web site because they read just about everything and were much more careful. The times would have been much higher if we had included a lot of content on the home page and the main pages. One of the users was hovering over the links and discovered the alt tag that pops up and said that was very helpful.

Frequent internet users had a different approach to navigating the site. They were much more impatient and looked immediately towards the navigation toolbar reading from left to right. Most of them did not read into all the link possibilities on the main page even though there are only five links. One user just clicked on all the five links in a row and looked to the side bar to see if the result would appear. This means that this particular user was not willing to browse the site if the link for the objective did not appear as a subcategory immediately. That is why site depth was such a crucial part of our design. Frequent users found the information much faster, but they did not take in as much about the site. They were not able to describe certain aspects of the site in as much detail. Some said it was sympathetic towards the homeless rather than give a sense of hope. The reason for this result is that the question on the questionnaire was worded poorly. When we turned around and asked those same users was it vibrant or did it

appear dismal they all said it was vibrant.

The less frequent users who took longer at first, also showed a much more significant time reduction upon their second visit to the site. The familiarity time was virtually non-existent during the repeat visit. This also held true for the frequent users. They knew exactly where to go and did not click on the wrong main link. This shows that our site caters to repeat users very well, and the site is instantly familiar to anyone upon their second visit. Also, every user after completing the entire questionnaire said that the site catered towards public communication. The only user who did not say communication misunderstood the meaning of communication and thought it meant like chatting or message boards etc.

Every user said that the information was easy to find and the experience did not frustrate any of the users. Also, all of the users found the repeat visit to the site easier. What this means is that the usability guidelines we built our site off of were successful. None of the users had significant errors or real trouble when navigating the site. They all agreed that the site was there as a source of public communication and all agreed that it was upbeat and lively. The questionnaire was designed to test the usability of our site, and the results came back and they showed us that our site was well designed.

5. Conclusion

5.1 Goals

During this project, our team had fourteen weeks to research, develop, launch, and document the creation of a very advanced website for the PIP shelter. We had four members all working around problems that arose in order to reach our main goals:

- *the web site will have a user-friendly interface that is easy to modify*
- *we will conduct and report on in-depth research into the wet shelter controversy*
- *the site will aid the People In Peril shelter in reaching out and informing the community*
- *the site will increase shelter awareness (and possibly donations, as well)*
- *all PIP administrators will be able to easily manage/edit the website*
- *we will keep good records of meetings and work; anyone should be able to review them and know what we've done and how we've done it*
- *we will maintain an updated timeline, trying to stay flexible while also meeting deadlines*

Over those fourteen weeks, we saw that all of these goals were met before the final product was presented.

5.2 Research

An important aspect to our project was the initial research into the world of homelessness and society. This is where we really learned what this new site should address in order to most effectively deal with the problem at hand. We gained insight into the entire problem and cycle of homelessness by first reading some of the existing research on the topic^{47 48 49 50 51}. Here we found that a shelter is not a solution to the problem of homelessness. It is an integral part to dealing with the issue, but it doesn't single-handedly deal with homelessness.

We also learned that even though one is homeless, it doesn't mean he or she is hopeless. The system does succeed in lifting people out of the pit of homelessness. Before we began our actual research we had a feeling that homelessness is a state you arrive at and never leave. Misconceptions such as this were quickly cleared up once our research got underway.

Before we could think about making the website we had to determine what goal the shelter was trying to accomplish with a site. Here we found that that the PIP Shelter's goal is to supply rehabilitation and temporary shelter for those without any, and to disseminate news about its positive mission throughout the surrounding communities. To further investigate the wet shelter situation, we interviewed various people with ties to the shelter to learn their views of the situation. Ann McTigue, director of the private arts agency, Arts Worcester, felt that the shelter doesn't quite fit into the scheme of an arts district that the city of Worcester is trying to create on the stretch of road where the shelter currently resides. However, PIP's own director, Buddy Brousseau, felt that the arts district will not come to fruition for at least a decade or more, so the relocation of the shelter is, for now, a moot point. He foresaw the shelter remaining at its current location for at least 10-15 years down the road, citing the only reason they would have to move would be one of their own choices. These two conflicting views highlighted the importance of a web page that addresses public concern and shows the PIP shelter in the positive light of rehabilitation. Over the course of our interviews, we noticed a general dislike of the PIP Shelter and its location; it seems as though many people blame the dismal state of PIP's neighborhood

solely on the shelter, and this is largely unjustified. This caused us to design a site with a focus on rehabilitation and hope, complete with uplifting images and an overall positive impression. The focus was shifted towards photos of people being assisted and rehabilitated since most people have negative views about homeless shelters. This is a much more fitting way to present PIP, and one that seeks to change the popular (negative) opinion of the shelter. They don't just serve as a place for a homeless person to stay for the night. They really try to rehabilitate the person and attempt to get them back to a normal life. Ed's Place on the Farm is a shining example of this philosophy. It allows them to take a person out of an unhealthy environment, and place them in an entirely new setting where they can get their minds clear and free and be surrounded by a dozen like minds. The public deserves to see the good that PIP does, and this site is one way they will.

This initial research helped to steer the initial design process for the site. We were able to determine the needs of the shelter and the general perception of wet shelters. Also, we were able to gather the specific feelings toward the PIP Shelter, central Massachusetts' only wet shelter. This allowed us to take the direction of making a site that is both easy to access by anyone and informative of the positive mission that the shelter works by. Through this new website the shelter will be able to provide the public the information it needs in order to make better-informed decisions about the establishment, and possibly obtain more of the donations that they need in order to function.

5.3 Timeline

Over the course of the project we kept a timeline of deadlines and goals that we could follow. By creating and updating this timeline we were able to keep our work on track. We took our deadlines seriously and considered the project to be behind if one deadline was not met. The timeline we made did have some flexibility to it, but only to the level of adding some goals, not pushing back dates.

The timeline proved itself to be a valuable asset since we knew what work lay ahead of us each week. Towards the final weeks of the project we found ourselves juggling many different aspects of the project all at once. We had to complete the site, organize a final presentation, and put the finishing touches to the written report itself. This is the point where the timeline really paid dividends by keeping our progress on track. We weren't in a state of constantly wondering and worrying if we could pull off all of our work in time. This allowed us all to focus on simply getting work done and checking things off of the timeline.

5.4 Records

In order to document our progress for the project we kept records of meetings and of our work. One aspect of the project we documented was each meeting with Steve Taylor, our project advisor, which occurred weekly. Minutes from these meetings were hand-recorded and then typed up. This way we were able to easily refer to any of the topics that were discussed in meetings past. The meeting minutes and timeline worked well together by showing us the direction we should go in for the upcoming week.

When interviews were conducted with various people, the interviews were

recorded to minidisc. This allowed the conversations to be easily transferred and stored since they are digital. The voice recording proved to be superior to hand written notes since any portion of the interview could be accessed. The group also kept an up to date list of sources. This allowed for easy citation in the report writing process, but more importantly it kept an easy to follow record of where we got ideas and facts from.

The methodology section of the IQP report contains the decisions we made for the project. Here we recorded the choices and steps that we followed during the fourteen weeks. This particular part of the full report serves as a key resource to documenting the work involved and the choices that were made.

5.5 Teamwork

The scope of the project was certainly very large. There was a great deal of research involved in every aspect of this project. So not only was this project heavy in website design and programming, but it was also heavy in research. There clearly needed to be a division of labor, and an overall team based approach in order to tackle a project of this size. Team members consisted of:

Michael Neirinckx- Junior, MIS

Gavin Kelley- Junior, MIS

David Krolick- Junior, CS

Chris Beaudoin- Junior, ME

Throughout the project, we identified ourselves as having the following qualities:

-A diverse set of skills

- An aligned sense of scope/vision
- A commitment to goals
- An ability to communicate effectively
- Flexibility

Michael and Gavin are both MIS majors, and as such they have a solid background in areas of business, more specifically business process and information systems contained within the business. The MIS curriculum is designed specifically to bring technological knowledge, skills, and solutions to the business world. This business knowledge was essential for this project because our website had to be aligned with the business goals of the PIP shelter. Michael and Gavin both had previous projects where they developed a technological solution to a business need. Project management is also a major part of the MIS program, and these skills were called upon in developing timelines and goals of the group, amongst other things.

David's background in computer science became an integral part to the overall success of the group. David brought a vast technological knowledge, particularly in the programming aspects of the project. His knowledge of code was the driving force behind the front end of the web page. Another forte of David's was his previous work with advanced graphic-editing software. David lent an artistic flair to the design of the web page as well as the afore-mentioned knowledge of web programming, both of which were integral to the success of this project.

Chris's meticulous approach to any workload was essential in a project of

this scope. As an ME major, he brought about an attention to detail which was much needed amongst the other group members who were more “big picture” oriented. He was also able to lend his research abilities towards initial IQP format research as well as project research. His grounded, detailed style of writing served as a perfect contrast to Michael’s more poetic approach and gave the project a firm foundation. His previous work in graphics design was also critical in the design of the front end of the website.

Diversity amongst group members is important because a multitude of different problems occur in a project of this size. A group that has similar skills might shine in one area, but other aspects of the project could fail as a result. A very narrow focus and point of view could have easily misled the project and taken it off course. Our diverse backgrounds helped steer this project in the right direction. Seeing as how a major part of the project was centered on web development it helped tremendously that every member of the group had prior experience in web page development, whether it was for businesses or just for personal use. The backgrounds and skill sets were diverse, but each member of the group had the skills needed to complete the main part of this project which was the development of a user updateable web presence for the People in Peril Shelter.

Diversity in skill sets is certainly a major characteristic of any successful team but ultimately this diverse group needs to be on the same page. A sports team, for example, may have a variety of skilled players who excel in their roles, but if they are not all playing for the championship then they will ultimately fall

apart. When we created the goals of our project, we made sure we did them together and we made sure we all agreed to the goals of the project. We then created our work plan based around those goals. A good team remains focused and goal oriented and we adapted those same traits in our team based approach to this project.

Effective communication is a must for any successful group. We were already friendly with each other before the project and we felt this allowed for a better work environment. Communication especially was always easy, since Michael and Chris are roommates as well as Gavin and David. Not only was everyone friendly but whenever one of us wanted a second opinion on any particular topic we could easily turn to our respective roommates for another opinion and phone calls between the members was never considered intrusive. All lanes of communication were always open and due to our open relationship these lanes were often used. There was a little trouble at first transporting files back and forth, but we established a file exchange on *myWPI* to take care of that minor issue.

When it came time to write the report itself, there were many lessons to be learned. We had never written a report as large in scope as the IQP. Doing this project gave everyone a better grasp on the entire process involved in writing a scientific paper. The team discovered that it must work as a team to do the writing in order to get the best flow to the information.

Good teamwork is the foundation to any successful project of this magnitude. It certainly was the critical aspect behind the success of this

particular project as well. We were a well functioning unit, and never had any issues of serious consequence throughout the development of this IQP.

5.6 The Website

The website itself is truly the core to our IQP. One of our initial goals for the site was to have it be user-updatable (with the user being a password-holding PIP administrator). Many sites that are developed leave the customer without much flexibility in terms of changing content. The employees of the shelter are not web developers, so through our research we had determined that ASP technology would be ideal. This was a new feature that none of the group members had any real previous experience with, so it proved to be one of the greater challenges in the creation of the page.

Through the process of trial and error and research, we were able to create the new very flexible PIP shelter site utilizing the ASP technology. We were able to make updating the site as easy as entering information into a database. Once we got rolling on the idea, we found that it opened up a lot of other uses of the site for the PIP employees. Meetings and quick announcements could be posted on the site just for employees to use. Not only that but we ended up with a site that could contain an up to date calendar of events. We found we could aid in organization by adding the shelters mailing list and volunteers into the sites database.

By using ASP technology on this page we gained a much better understanding of a much more complex approach to web design. The page we

left the PIP shelter is not a typical run of the mill product. With our use of technology most of the site content can be changed at the site itself. This is certainly the road less traveled in web design, and it has lent us an immense number of new technical skills, just in the amount of time we worked with it.

As the page began to take shape it also became clear that the new page was much easier to navigate. Simply looking through the site for the purpose of writing this paper is much improved. As previously discussed, the new site has a much more positive look to it. We hadn't originally planned on taking this direction with the site, but it became apparent that the shelter needed a more positive public face. The many photos from the Ed's Place on the Farm calendar are set to rotate into position on the site's front page, greeting users with a new, uplifting view each time the page is loaded. The idea grew from this point as more positive photos were added to the page. We decided to take the angle of rehabilitation and recovery as opposed to utter despair and homelessness. This approach got a good reaction from the staff when we showed them the first framework to our site. This overall treatment for the site proved to fit our theory of improving public relations through the site. Now the goals and the accomplishments for the organization are visible throughout the various pages.

5.7 Reaction to the Webpage

Perhaps the most conclusive test of our website's effectiveness is how it would be received by the PIP board. As are primary stakeholders they would be both our toughest critics and grateful recipients. We made our presentation to the

board members during their weekly meeting. The presentation included a video collage about what working for the pip shelter meant to us and an unveiling of the web site. We discussed our design choices and showed them the features of the site including the ease with which it can be updated. We concluded our presentation to full applause. All of the members were impressed with the visual scheme and updateability. However, the most rewarding part of their reaction was not their acceptance but their excitement in the possibilities the new site would offer. One of the case workers exclaimed, "Oh I could include resources in this section of the site and refer my patients to it!"

It instantly became clear that our project was a success. Within minutes of seeing their new site, PIP's stakeholders were already envisioning wonderful ways to make use of their new website. We had not only created a site that solves their existing problems, but one that also offers them new possibilities.

5.8 Questionnaire Conclusions

The questionnaire showed that our design plans were indeed a success. We planned to make the site easy to use for different types of users. We also wanted the site to become easier to navigate upon each return visit. We designed the site with the users in mind, and the questionnaire proved that the users had a positive experience with the site. They were able to take in our main message of public communication and none of them grew frustrated while trying to surf. They all found the information without missing a lot of links and the site catered towards several of the surfing styles the surveyed users had. Upon a return visit

to the site, each user had an easier time and became familiar with the site design very quickly.

The questionnaire was meant to be a measure of our design plan and our design implementation. Seeing as how the questionnaires came back and gave mostly positive results it is easier for us to sit back and say we designed a very usable site. It embedded some of our goals into it, and when the users submitted their positive feedback they were essentially giving us reassurance that we had met our goals regarding usability and site design. Our users defined the design, so we made our users define our success. The definition turned out to be a very positive one.

5.9 Final Words

Fourteen weeks of work have produced a final product that each of the group members is proud of. The challenge of using new more complex technology to create an easier to operate site was met, and the PIP shelter now has a state-of-the-art ASP website. The image that their web presence puts forth to the community is now a more positive vision of recovery and rehabilitation. Not only is it more visually appealing, but it makes content much easier to access to the first time and repeat visitor. The PIP shelter certainly has a new technological advantage that they will use to advance their organization and aid their clients. Our team: Chris Beaudoin, Gavin Kelley, David Krolick, and Michael Neirinckx have each taken away a greater understanding of the pressing issue; homelessness. No longer are we ignorant to the workings of the system of

rehabilitation that exists. Through all of our research we know how the shelter fits into the greater scheme. Most importantly, through our work, we hope that many more people will achieve a greater understanding of how the PIP shelter helps their community.



UPDATING THE WEBSITE

A How-To Guide

CREATED BY: GAVIN KELLEY
DAVID KROLICK
CHRIS BEAUDOIN
MICHAEL NEIRINCKX

APRIL 23RD, 2004

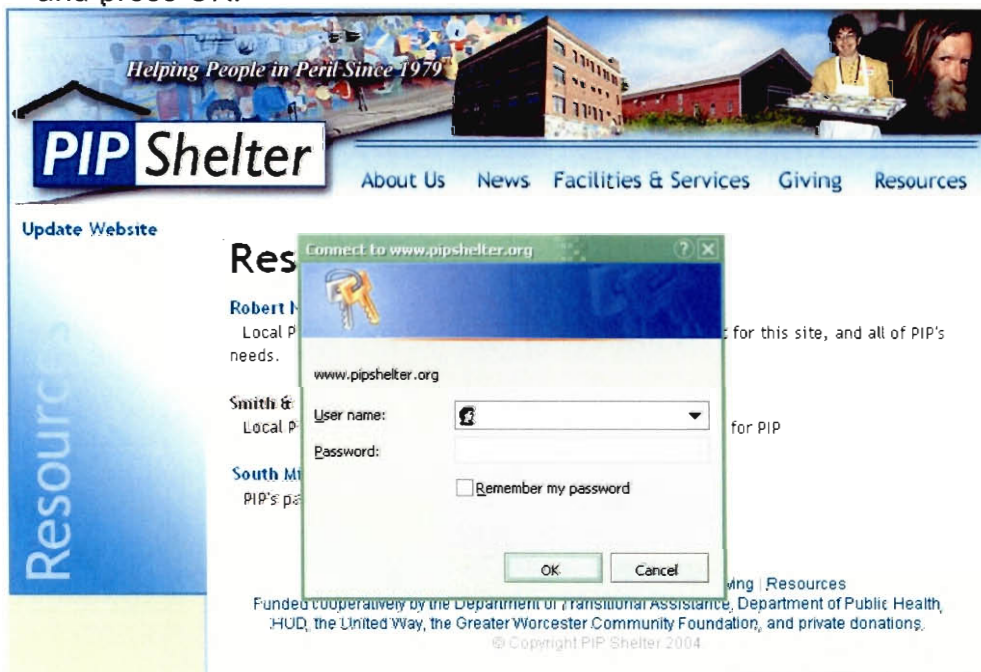
The all-new PIP Shelter website stands apart from the vast majority of the existing websites on the Internet, as it can actually be updated by an Internet novice with *no* programming knowledge whatsoever. This brief manual will guide you through the steps of the various changes to the website that can be affected via the “Backdoor Interface”. The following database tables are user-editable:

1. Main Body Text
2. Bulletin Board
3. Donor List
4. Employment Opportunities
5. Events Calendar
6. Mailing List
7. Newsletter
8. Resources
9. Shelter Contact Info

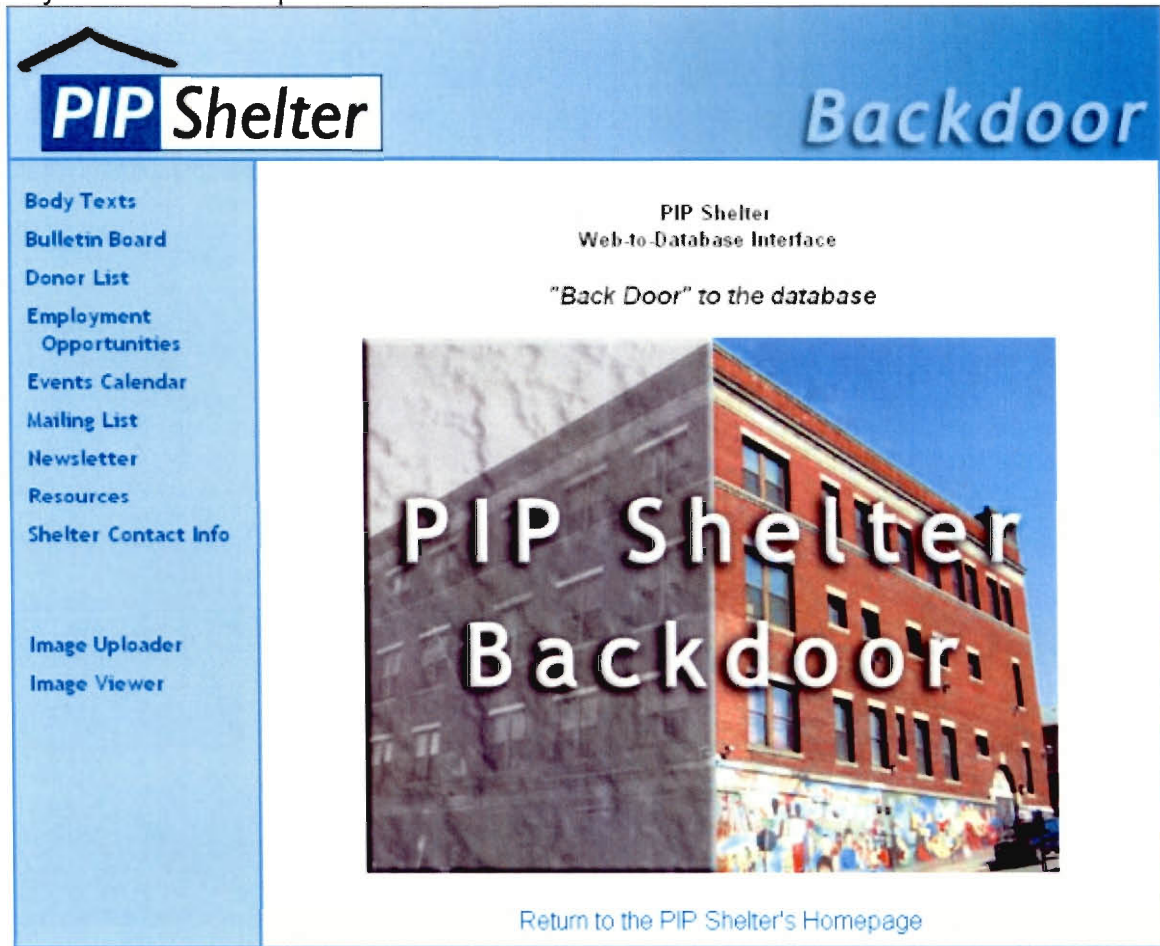
Additionally, the Backdoor has the following features:

10. Image Uploader – *to allow new images to be uploaded to the website*
11. Image Viewer – *to allow for the review/deletion of stored images*

Before any of this editing can take place, one must first log into the Backdoor with the appropriate username and password. First, click on the “Resources” link at the top of any www.pipshelter.org page. Then, click on the “Update Website” link on the left of the Resources page. This will cause a user authentication box to pop up. Enter a username of “*****” and a password of “*****” and press OK.



You will then be taken to the Backdoor. From here you can navigate to any of the eleven options in the left toolbar.



The screenshot shows a web interface for the PIP Shelter. At the top left is a logo with a house icon and the text "PIP Shelter". At the top right, the word "Backdoor" is displayed in a large, blue, stylized font. On the left side, there is a vertical toolbar with eleven blue links: "Body Texts", "Bulletin Board", "Donor List", "Employment Opportunities", "Events Calendar", "Mailing List", "Newsletter", "Resources", "Shelter Contact Info", "Image Uploader", and "Image Viewer". The main content area features the text "PIP Shelter Web-to-Database Interface" and the phrase "*Back Door*" to the database. Below this is a photograph of a brick building with a colorful mural at its base, overlaid with the text "PIP Shelter Backdoor". At the bottom of the main area is a link that says "Return to the PIP Shelter's Homepage".

1. Updating Main Body Text

1. Click on "Body Texts" on the left toolbar of the Backdoor homepage
2. Click on the name of the page you wish to view/edit
3. If you wish to edit this page, click "Update Record"
4. Make the desired changes to the headings and bodies of the page
5. Click "Update this Page's Body Text" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

2. Updating the Bulletin Board

To Add a Bulletin Board Record:

1. Click on "Bulletin Board" on the left toolbar of the Backdoor homepage
2. Click the "Add Record" button
3. Enter the desired headline, date, body, and image URL of the bulletin board record
4. Click "Add this Entry to the Bulletin Board" when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Edit an Existing Bulletin Board Record:

1. Click on "Bulletin Board" on the left toolbar of the Backdoor homepage
2. Click on the headline of the board item you wish to view/edit
3. If you wish to edit this record, click "Update Record"
4. Make the desired changes to the headline, date, body, and image URL of the bulletin board record
5. Click "Update this Bulletin Board Entry" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Delete an Existing Bulletin Board Record:

1. Click on "Bulletin Board" on the left toolbar of the Backdoor homepage
2. Click on the headline of the board item you wish to delete
3. Click "Delete Record" button
4. Click "Yes" if you're sure you want to delete, or "No" otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

3. Updating the Donor List

To Add a Donor List Record:

1. Click on "Donor List" on the left toolbar of the Backdoor homepage
2. Click the "Add Record" button
3. Enter the desired name, URL, and image URL of the donor record
4. Click "Add this Entry to Donor List" when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Edit an Existing Donor List Record:

1. Click on "Donor List" on the left toolbar of the Backdoor homepage
2. Click on the name of the donor you wish to view/edit
3. If you wish to edit this record, click "Update Record"
4. Make the desired changes to the name, URL, and image URL of the donor record
5. Click "Update this Donor Entry" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Delete an Existing Donor List Record:

1. Click on "Donor List" on the left toolbar of the Backdoor homepage
2. Click on the name of the donor you wish to delete
3. Click "Delete Record" button
4. Click "Yes" if you're sure you want to delete, or "No" otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

4. Updating the Employment Opportunities

To Add an Employment Opportunities Record:

1. Click on "Employment Opportunities" on the left toolbar of the Backdoor homepage
2. Click the "Add Record" button
3. Enter the desired title, description, and date of the employment opportunity
4. Click "Add this Entry to Employment Opportunities" when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Edit an Existing Employment Opportunities Record:

1. Click on "Employment Opportunities" on the left toolbar of the Backdoor homepage
2. Click on the name of the employment opportunity you wish to view/edit
3. If you wish to edit this record, click "Update Record"
4. Make the desired changes to the title, description, and date of the employment opportunity
5. Click "Update this Employment Opportunity" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Delete an Existing Employment Opportunities Record:

1. Click on "Employment Opportunities" on the left toolbar of the Backdoor homepage
2. Click on the name of the employment opportunity you wish to delete
3. Click "Delete Record" button
4. Click "Yes" if you're sure you want to delete, or "No" otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

5. Updating the Events Calendar

To Add an Events Calendar Record:

1. Click on “Events Calendar” on the left toolbar of the Backdoor homepage
2. Click the “Add Record” button
3. Enter the desired title, date, description, and image URLs of the events calendar record
4. Click “Add this Entry to the Events Calendar” when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing “F5”)

To Edit an Existing Events Calendar Record:

1. Click on “Events Calendar” on the left toolbar of the Backdoor homepage
2. Click on the name of the event you wish to view/edit
3. If you wish to edit this record, click “Update Record”
4. Make the desired changes to the , date, description, and image URLs of the event record
5. Click “Update this Events Calendar Entry” when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing “F5”)

To Delete an Existing Events Calendar Record:

1. Click on “Events Calendar” on the left toolbar of the Backdoor homepage
2. Click on the name of the event you wish to delete
3. Click “Delete Record” button
4. Click “Yes” if you’re sure you want to delete, or “No” otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing “F5”)

6. Updating the Mailing List

To Add a Mailing List Record:

1. Click on "Mailing List" on the left toolbar of the Backdoor homepage
2. Click the "Add Record" button
3. Enter the desired first name, last name, and e-mail address of the mailing list record
4. Click "Add this Entry to the Mailing List" when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Edit an Existing Mailing List Record:

1. Click on "Mailing List" on the left toolbar of the Backdoor homepage
2. Click on the name of the record you wish to view/edit
3. If you wish to edit this record, click "Update Record"
4. Make the desired changes to the first name, last name, and e-mail address of the mailing list record
5. Click "Update this Mailing List Entry" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Delete an Existing Mailing List Record:

1. Click on "Mailing List" on the left toolbar of the Backdoor homepage
2. Click on the name of the record you wish to delete
3. Click "Delete Record" button
4. Click "Yes" if you're sure you want to delete, or "No" otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

7. Updating the Newsletter

To Add a Newsletter Record:

1. Click on "Newsletter" on the left toolbar of the Backdoor homepage
2. Click the "Add Record" button
3. Enter the desired issue, date, headings, and bodies of the newsletter record
4. Click "Add this Newsletter to the Database" when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Edit an Existing Newsletter Record:

1. Click on "Newsletter" on the left toolbar of the Backdoor homepage
2. Click on the name of the issue you wish to view/edit
3. If you wish to edit this record, click "Update Record"
4. Make the desired changes to the name issue, date, headings, and bodies of the newsletter record
5. Click "Update this Newsletter Entry" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Delete an Existing Newsletter Record:

1. Click on "Newsletter" on the left toolbar of the Backdoor homepage
2. Click on the name of the issue you wish to delete
3. Click "Delete Record" button
4. Click "Yes" if you're sure you want to delete, or "No" otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

8. Updating the Resources

To Add a Resource Record:

1. Click on "Resources" on the left toolbar of the Backdoor homepage
2. Click the "Add Record" button
3. Enter the desired name, URL, and description of the resource record
4. Click "Add this Entry to the Resource List" when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Edit an Existing Resource Record:

1. Click on "Resources" on the left toolbar of the Backdoor homepage
2. Click on the name of the resource you wish to view/edit
3. If you wish to edit this record, click "Update Record"
4. Make the desired changes to the name, URL, and description of the resource record
5. Click "Update this Resource Entry" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Delete an Existing Resource Record:

1. Click on "Resources" on the left toolbar of the Backdoor homepage
2. Click on the name of the resource you wish to delete
3. Click "Delete Record" button
4. Click "Yes" if you're sure you want to delete, or "No" otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

9. Updating the Shelter Contact Info

To Add a Shelter Contact Record:

1. Click on "Shelter Contact Info" on the left toolbar of the Backdoor homepage
2. Click the "Add Record" button
3. Enter the desired name, address, phone, fax, and/or e-mail of the contact record
4. Click "Add this Entry to the Contact Listings" when finished (or on the PIP logo to cancel changes)
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Edit an Existing Shelter Contact Record:

1. Click on "Shelter Contact Info" on the left toolbar of the Backdoor homepage
2. Click on the name of the contact you wish to view/edit
3. If you wish to edit this record, click "Update Record"
4. Make the desired changes to the name, address, phone, fax, and/or e-mail of the contact record
5. Click "Update this Contact Listing" when finished (or on the PIP logo to cancel changes)
6. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

To Delete an Existing Shelter Contact Record:

1. Click on "Shelter Contact Info" on the left toolbar of the Backdoor homepage
2. Click on the name of the contact you wish to delete
3. Click "Delete Record" button
4. Click "Yes" if you're sure you want to delete, or "No" otherwise
5. The changes are now live and should be visible on the main site (after refreshing the page in the browser, i.e. pressing "F5")

10. Uploading Images

To Upload an Image to the Site:

1. Click on "Image Uploader" on the left toolbar of the Backdoor homepage
2. Click the "Browse" button
3. Locate the desired image on your local computer and click "Open"
4. Click "Click to Upload" when finished (or on the X in the upper right-hand corner to cancel the upload)
5. The image will then be transmitted to the PIP Shelter's site server
6. Once the page refreshes and the "Select File to Upload:" text box has cleared, the image has successfully been uploaded
7. Repeat with other images, if necessary
8. Close the window by clicking the X in the upper right-hand corner

11. Viewing Images

To View All Images on the Site:

1. Click on "Image Viewer" on the left toolbar of the Backdoor homepage
2. Scroll down through the alphabetically-listed images until you find the one you want
3. Highlight the image's address (something like **"/images/AboutUs.jpg"**)
4. Copy the highlighted text to the clipboard (**Edit/Copy** or **Ctrl+C**)
5. Paste the image's address into any ImageURL box, for example, the one on the Bulletin Board entry:

Update the Bulletin Board Entry for New PIP site created

Headline:	<input type="text" value="New PIP site created"/>
Headline Date:	<input type="text" value="4/21/2004"/>
Headline Body:	<input type="text" value="The brand new PIP shelter site is displayed for the first time."/>
Image URL:	<input type="text"/>

APPENDIX B: Front End Examples

Code for BulletinBoard.asp

```
<%
'-----
'View Data Code
set dbconn = server.createobject("ADODB.Connection")
dbconn.open "Driver=Microsoft Access Driver (*.mdb);DBQ=" &
Server.MapPath("/db/db1.mdb")
SQL = "Select * FROM tbBulletin Order BY HeadlineDate"
set rs = dbconn.execute(SQL)
'-----
%>
<HTML>
<HEAD>
<title>PIP Shelter</title>
<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=iso-8859-
1">
<link rel="stylesheet" href="pipstyle.css" type="text/css" /><!-- loads
stylesheet for formatting -->

<script language="javascript">
<!--
function preload() {
    if (!document.images) return;
    var ar = new Array();
    var arguments = preload.arguments;
    for (var i = 0; i < arguments.length; i++) {
        ar = new Image();
        ar.src = arguments;
    }
}
-->
</script>

</HEAD>

<BODY onLoad="preload('images/New-Titlebar-mouseover_05.jpg',
'images/New-Titlebar-mouseover_06.jpg', 'images/New-Titlebar-
mouseover_07.jpg', 'images/New-Titlebar-mouseover_08.jpg', 'images/New-
Titlebar-mouseover_09.jpg')">
<center>
<div id="Container"><!-- holds the whole site -->

<!-- START TITLEBAR -->
<div id="New-Titlebar-sliced-01">
    
</div>
<div id="New-Titlebar-sliced-02">
```

```

        
</div>
<div id="New-Titlebar-sliced-03">
    <a href="index.asp"></a>
</div>
<div id="New-Titlebar-sliced-04">
    
</div>
<div id="New-Titlebar-sliced-05">
    <a href="AboutUs.asp"></a>
</div>
<div id="New-Titlebar-sliced-06">
    <a href="News.asp"></a>
</div>
<div id="New-Titlebar-sliced-07">
    <a href="FacilitiesAndServices.asp"></a>
</div>
<div id="New-Titlebar-sliced-08">
    <a href="Giving.asp"></a>
</div>
<div id="New-Titlebar-sliced-09">
    <a href="Resources.asp"></a>
</div>
<div id="New-Titlebar-sliced-10">
    
</div>
<!-- END TITLEBAR -->
<div id="ContentPanel"><!-- holds page contents -->

<h1>Bulletin Board</h1>

<% do while not rs.eof %>

```

```

<table class="contenttable">
<tr>
<td><h4><%=rs("HeadlineDate")%></h4></td>
<td><h3><%=rs("Headline")%></h3></td>
</tr>
</table>
<% if rs("ImageURL") <> "" then %>

" class="floatleft" />
<% end if %>

<p><%=rs("Body")%></p>

<%
rs.Movenext
loop
%>
<!-- end page contents -->

<div id="Footer"><!-- text at bottom of every page -->
    <a href="index.asp">Home</a> | <a href="AboutUs.asp">About Us</a>
    | <a href="News.asp">News</a> | <a
href="FacilitiesAndServices.asp">Facilities and Services</a> | <a
href="Giving.asp">Giving</a> | <a href="Resources.asp">Resources</a><br
/>
    <a href="LinksToDonors.asp">Funded cooperatively by the
Department of Transitional Assistance, Department of Public Health,
HUD, the United Way, the Greater Worcester Community Foundation, and
private donations.</a><br />
    &copy; Copyright PIP Shelter 2004.
</div>
</div>

<div id="SidePanel" class="News"><!-- left navigation panel -->
    <p><a href="BulletinBoard.asp">Bulletin Board</a></p>
    <p><a href="Newsletter.asp">Newsletter</a></p>
    <p><a href="Eventscalendar.asp">Events Calendar</a></p>
</div>
</div><!-- close container -->
</center>

</BODY>
</HTML>

```

Rendered Page: BullentinBoard.asp

PIP Shelter - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.pipshelter.org/BulletinBoard.asp>

Helping People in Peril Since 1979

PIP Shelter

[About Us](#) [News](#) [Facilities & Services](#) [Giving](#) [Resources](#)

[Bulletin Board](#)
[Newsletter](#)
[Events Calendar](#)

Bulletin Board

4/21/2004 New PIP site created

The brand new PIP shelter site is displayed for the first time.

[Home](#) | [About Us](#) | [News](#) | [Facilities and Services](#) | [Giving](#) | [Resources](#)
Funded cooperatively by the Department of Transitional Assistance, Department of Public Health, HUD, the United Way, the Greater Worcester Community Foundation, and private donations.
© Copyright PIP Shelter 2004

News

Internet

APPENDIX C: Back End Examples

Code for bulletinupdate.asp

```
<%
'-----
'View Data Code
set dbconn = server.createobject("ADODB.Connection")
dbconn.open "Driver=Microsoft Access Driver (*.mdb);DBQ=" &
Server.MapPath("/db/db1.mdb")
SQL = "Select * FROM tbBulletin WHERE ID=" & request("ID")
set RS = dbconn.execute(SQL)
if rs.eof then response.redirect "adderror.asp"
'-----
%>

<html>
<head>
<link rel="stylesheet" href="/members/backstyle.css" type="text/css"
/><!-- loads stylesheet for formatting -->

<SCRIPT LANGUAGE="JavaScript">
<!-- Begin
image1 = new Image();
image1.src = "/images/backdoordown.jpg";

image2 = new Image();
image2.src = "/images/homedown.jpg";

// End -->
</script>

<title>Update Bulletin Board Entry for <% =rs("Headline")%></title>
</head>
<body background="/images/watermark.jpg">

<center>
<div>
<table width=750 cellpadding="0" cellspacing="0">
<tr height=100 border="0" cellpadding="0">
    <td id=Header width=750 colspan=2 style="cursor:hand;"
onclick="window.location.href='/members/index.html'">
        &nbsp;
    </td>
</tr>
<tr height=500>
    <td id=SidePanel width=150 valign=top>
        <p>
        <a href="/members/bodytext/bodytext.asp">Body Texts</a>
        </p>
        <p>
        <a href="/members/bulletin/bulletin.asp">Bulletin Board</a>
        </p>
        <p>
        <a href="/members/donor/donor.asp">Donor List</a>
```

```

        </p>
        <p>
        <a href="/members/employment/employment.asp">Employment
Opportunities</a>
        </p>
        <p>
        <a href="/members/event/event.asp">Events Calendar</a>
        </p>
        <p>
        <a href="/members/mail/maillinglist.asp">Mailing List</a>
        </p>
        <p>
        <a href="/members/newsletter/newsletter.asp">Newsletter</a>
        </p>
        <p>
        <a href="/members/resource/resource.asp">Resources</a>
        </p>
        <p>
        <a href="/members/contact/contact.asp">Shelter Contact
Info</a>
        </p>
        <br />
        <br />
        <br />
        <p>
        <a href="/members/Upload.asp" target="_blank">Image
Uploader</a>
        </p>
        <p>
        <a href="/members/imgview.asp?ShowImages=True"
target="_blank">Image Viewer</a>
        </p>
    </td>
    <td bgcolor=white width=600 align=center valign=top
id=ContentPanel>
        <center><h1>Update the Bulletin Board Entry for <%
=rs("Headline")%></h1></center>
        <p>
        <hr>
        <CENTER>
        <form ACTION="updatebulletinsubmit.asp" METHOD="POST">
        <input type="hidden" value="<% =rs("ID")%>" name="ID">
        <table border="1">
            <tr>
                <td valign="top"><strong>Headline:</strong></td>
                <td valign="top"><textarea rows="1" name="Headline"
cols="50" WRAP><% =rs("Headline")%></textarea></td>
            </tr>
            <tr>
                <td valign="top"><strong>Headline Date:</strong></td>
                <td valign="top"><textarea rows="1" name="HeadlineDate"
cols="11" WRAP><% =rs("HeadlineDate")%></textarea></td>
            </tr>
            <tr>
                <td valign="top"><strong>Headline Body:</strong></td>
                <td valign="top"><textarea rows="8" name="Body"
cols="50" WRAP><% =rs("Body")%></textarea></td>

```

```

        </tr>
        <tr>
            <td valign="top"><strong>Image URL:</strong></td>
            <td valign="top"><textarea rows="2" name="ImageURL"
cols="50" WRAP><% =rs("ImageURL")%></textarea></td>
        </tr>
    </table>
    <P>
    <CENTER>
    <input TYPE="Submit" Value="Update This Bulletin Board
Entry">
    </form>
    </CENTER>
    <P>
    <HR>
    <P>
    <CENTER>
    <a href="/members/index.html"
onmouseover="image1.src='/images/backdoordown.jpg';"onmouseout="image1.
src='/images/backdoorup.jpg';">
</a>
    <a href="/index.html"
onmouseover="image2.src='/images/homedown.jpg';"onmouseout="image2.src=
'/images/homeup.jpg';">
</a>
    </CENTER>
    <P>

    </td>
</tr>
</table>
</div>
</center>
<br>
</body>
</html>

```


Update Bulletin Board Entry for New PIP site created - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.pipshelter.org/members/bulletin/bulletinupdate.asp?ID=1>

PIP Shelter *Backdoor*

Body Texts
Bulletin Board
Donor List
Employment Opportunities
Events Calendar
Mailing List
Newsletter
Resources
Shelter Contact Info

Image Uploader
Image Viewer

Update the Bulletin Board Entry for New PIP site created

Headline: New PIP site created

Headline Date: 4/21/2004

Headline Body: The brand new PIP shelter site is displayed for the first time.

Image URL:

Update This Bulletin Board Entry

[Backdoor Home](#) [PIP Homepage](#)

Done Internet

APPENDIX D: Usability Questionnaire

Name:

Age:

Internet Connection Type:

Usage of Internet Per Week (Circle One): 1 Day | 2 Days | 3 Days | 4 Days | 5 Days | 6 Days
| 7 Days

Usages (Please Circle All That Apply): Work Related | Academic | Recreational |
Commercial

Objective: Find out what times AA meetings are.

(For Observers Use Only)

1. Site Depth- Number of clicks to get info:
2. Time- Amount of time to get info:
3. Missed Clicks- Name of wrong link clicked on:
4. Familiarity Time- Amount of time it took to get used to the layout:

(Questions for End User)

1. Does the PIP Shelter provide hope for the homeless or does it appear sympathetic?
2. Where you able to find the information easily?
3. Name 3 things you associate with the PIP shelter just from your first visit.
-
-
-
4. Did the experience frustrate you at all? If so, please explain.
5. Where you satisfied with your overall experience?
6. What times are AA meetings scheduled?

Objective #2: Name 2 different types of alternate housing available for occupants.

(For Observers Use Only)

5. Site Depth- Number of clicks to get info:
6. Time- Amount of time to get info:
7. Missed Clicks- Name of wrong link clicked on:
8. Familiarity Time- Amount of time it took to get used to the layout:

(For End Users)

1. Name 2 different types of alternate housing available for occupants.
-
-
2. Did you find the web site easier to navigate upon your second visit? Please explain.

3. Would you say the web site is a source of public communication, a source of research, or a source of commercialism? Why?

4. Was this info harder to obtain than objective 1? If so, what made it harder to retrieve?

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