IAAI/USFA
Abandoned Building Project

Managing Vacant and Abandoned Properties in Your Community

2006 Revision

Foreword

Shortly after the tragic fire in Worcester, Massachusetts that took the lives of six firefighters in an vacant building, the leadership of the International Association of Arson Investigators, Inc. began planning a program that would increase awareness of the hazards that vacant and abandoned buildings pose within communities. In October of 2000, the United States Fire Administration awarded a grant to assist the IAAI in this effort.

The objective of the project was, the development of materials to assist public officials in dealing with vacant or abandoned buildings within their jurisdictions. Materials developed as part of the project were targeted toward the safety of fire suppression forces involved in fighting fires in vacant or abandoned buildings and the reduction of incendiary fires involving these properties. Materials developed as part of the project were to become a "Tool Box" that community leaders could select from to address vacant and abandoned buildings and the hazards they represent.

To accomplish the objectives of the project a Technical Advisory Committee was established, and two demonstration communities, Worcester, Massachusetts and Lewiston, Maine were selected.

The Technical Advisory Committee provided project staff with input regarding the vacant/abandoned building problem. The committee helped to focus the objectives of the project and assisted in the development and review of the materials developed for the "Tool Box".

A significant component of the project was to provide support to the demonstration communities and to take the lessons learned from this effort and develop the "Tool Box" materials. The assistance was provided by the Project Manager and two fire protection students serving as Technical Assistants to the project. Support provided the communities included the development of an evaluation form to assist in evaluation vacant and abandoned buildings in the communities; assistance in identifying vacant and abandoned properties and locating owners; training fire department personnel to perform building evaluations and develop pre-plan documents based on the evaluation; and supporting public awareness efforts in both communities.

The information contained in this background paper and the project support materials found on Tool Box CD, make up the Abandoned Building Tool Box that the project set out to develop. These materials have been reviewed by the Technical Advisory Committee and field tested in the demonstration communities. Users are free to use those components of the "Tool Box" that are appropriate to their communities.

Project staff would like to thank the Technical Advisory Committee for their hard work and thoughtful guidance through out the project. Additional thanks go out to Fire Marshal Stephen Coan and the staff of the Massachusetts Department of Fire Services for the assistance they provided through out the project.

PHASE II

Phase II of this project involved working with two additional demonstration communities. Wilson, North Carolina and Champaign, Illinois. The city of Wilson provided insights into the use of GIS in the management of vacant and abandoned properties . In addition, the Wilson Fire Department provided the IAAI with the opportunity to field test the first edition of the Tool Box materials. This effort led to many of the revisions and additions found in the current version.

Champaign, IL provided the project staff with the opportunity to look at a growing Midwestern community. With an active Neighborhood Services Department actively enforcing property management codes, Champaign is a community that takes a proactive approach to property management. The ability to review the Tool Box materials with representatives of Neighborhood Services, the Police and Fire Departments and Code enforcement provided a different prospective on the management of vacant and abandoned properties. The development of the Building Evaluation Field manual was a direct result of the site visit in Champaign.

Another initiative during Phase II of the project was a summit meeting with representatives of volunteer fire departments from several mid-Atlantic states held in Newark, Delaware. IAAI Past President Gerald Naylis presided over this session. The input from this segment of the fire service was incorporated into the Phase II revisions. The insights of the attendees provides a new perspective on the issue of vacant and abandoned properties from public safety professionals in our smaller communities.

The project staff would like to thank IAAI president Kirk Hankins, Past President Naylis, Wilson Fire Chief Donald Oliver and Property Maintenance Supervisor, Susan Salzman in Champaign for their assistance in this project.

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Introduction

Vacant and abandoned structures are unsightly, attract criminal activity, and are a threat to public safety wherever they exist. The National Fire Protection Association (NFPA) estimates that more than twenty civilians die and 6000 firefighters are injured while fighting fires in these properties every year. Recent NFPA statistics estimate that there are more than 11,000 fires in vacant or idle properties annually. These fires result in hundreds of millions of dollars in direct property loss and a significant expense for suppression and mitigation after the fire. NFPA statistics also show that more firefighters are injured while operating at fires involving vacant or abandoned properties than in any other property classification. The loss of six firefighters operating in a vacant property in Worcester, Massachusetts, in December of 1999 was a tragic example of the hazards these buildings pose to communities.

While no census data is available on vacant or abandoned buildings, researchers at Ohio's Miami University and the University of South Carolina conducted a survey of 100 cities and estimate that more than 18 percent of urban structures are unused. This estimate equates to thousands of building nationwide in communities both large and small. Another source, the Insurance Services Office, estimates there are 21,000 idle properties of 15,000 square feet or more in the United States.[1] After the Worcester fire, many communities began exploring just how many buildings were vacant in their jurisdiction. The results are startling: Philadelphia reported more than 27,000 at-risk structures; in Worcester over 250 vacant structures were identified; smaller cities like Lewiston, Maine, identified nearly 60 vacant structures.

The terms "vacant" and "abandoned" are often used interchangeably when talking about these buildings. There is, however, a subtle difference in the terms. Black's Law Dictionary defines **vacant** as "empty; unoccupied". The word **abandon** is defined as "to desert, surrender, forsake or cede. To relinquish or give up with intent of never again resuming one's right or interest." For buildings, the difference between vacant and abandoned is primarily related to the availability of an owner. Unoccupied buildings where there is a viable owner, i.e. one that is interested in the property and easily contacted, are considered vacant. Where there is no viable owner or an absentee landlord, the property is generally considered abandoned.

Unoccupied properties that are secure and well maintained do not pose the threat to public safety that properties that are unoccupied and open to unauthorized access do. Where there is no viable owner, the property is considered abandoned. In research done on urban residential fires, Charles Jennings describes the issue in residential neighborhoods as follows:

> Abandonment of property is the most striking indication of neighborhood decline. Large-scale abandonment threatens the stability of neighborhoods and undermines the value of investments made by other property owners. The literature indicates that abandonment and decline of property can be considered as a contagious phenomenon. Fire is intertwined with abandonment as both a cause and an undesired side effect.

> Abandonment usually signals the end of a building's productive life. Real estate market conditions, difficulty in obtaining financing for renovation or repair, withdrawal of fire insurance, and declining economic fortunes of tenants all contribute to abandonment. In declining areas, the use value of a building will frequently exceed its market value. Any damage to the building sufficient to vacate it can lead to abandonment by the owner.[2]

The issues that Jennings describes are those that resulted in significant fire problems in cities such as Detroit; Houston; New Haven, Connecticut; Utica, New York; and Lawrence, Massachusetts. (See Appendix D for case studies of communities that have successfully addressed the issue.) For commercial or industrial properties the issue may be that the building has reached the end of its useful lifecycle and that it would cost more than the building is worth to improve it for continued use. Many industrial buildings in the Northeast fit this category. Environmental pollution and the high cost of mitigation are also factors in the abandonment of commercial properties. Whatever the cause, these rapidly deteriorating buildings in communities become havens for the homeless and vandals, as well as magnets for criminal activity.

The relationship between abandonment and crime can be described as the "Broken Windows theory of social disorder". This relationship is discussed by James Wilson in the Forward to *Fixing Broken Windows: Restoring Order and Reducing Crime in Our Communities*[3]:

> If a factory or office window is broken, passersby observing it will conclude that no one cares or no one is in charge. In time, a few will begin throwing rocks to break more windows. Soon all the windows will be broken, and now passersby will think that, not only is no one in charge of the building, no one is in charge of the street on which it faces.
>
> Only the young, the criminal, or the foolhardy have any business on an unprotected avenue, and so more and more citizens will abandon the street to those they assume prowl it. Small disorders lead to larger and larger ones, and perhaps even to crime.

Uninhabited buildings that are not secure - open to unauthorized entry - have a very high probability of intentionally set fires. When fires occur in these buildings, they present a host of unusual problems to firefighters. Since the buildings are uninhabited, fires may develop for significant periods of time before they are detected and reported. The buildings may contain unprotected hazardous materials and fuel packages that would not be found in occupied buildings. The removal of equipment or structural components and deterioration due to age or weather can weaken the structure causing rapid failure early in a fire. Firefighters may encounter open shafts, stairways, pits or holes in floors that would not be found in occupied structures. All of these factors contribute to the danger these structures pose to firefighters operating in vacant or abandoned structures.

An emerging issue in communities large and small across the nation is the number of vacant or under performing commercial properties or *greyfields*[4]. These properties, typically with a large floor area are left vacant and unwanted when the tenant store moves to a larger more modern property. This issue was observed in the demonstrations cities visited during the second phase of the project and was identified as an issue in the discussion held with volunteer firefighters (appendix E). Many of these large underutilized structures are provided with modern fire protection systems including sprinklers.

The burden on the community is to monitor the properties to ensure that the systems remain serviceable and that any new occupants do not attempt to store materials or perform tasks that would be beyond the capacity of the installed protection. Large parking areas and receiving docks are also easy targets for disposal of unwanted vehicles and waste that may add to the deterioration of the property and the potential for intentional fires.

At first glance, the prevention of fires in vacant or abandoned properties appears to be relatively simple. Prevent unauthorized access in the short term, and then rehabilitate or demolish the structure in the long term. In practice, however, it is much more complex. One of the major obstacles to preventing fires and other crime in these buildings is the cost of security and demolition of abandoned structures. The major building and fire codes used in the United States provide the jurisdiction with the authority to order these actions for buildings that are hazards to public safety. Where there is a viable owner, this action may be successful. However, where the building is abandoned and no viable owner is available, the responsibility reverts to the community.

Codes and Ordinances

For any program aimed at reducing fires in vacant/abandoned properties to be successful, the community must have the power to act when vacant or abandoned properties are determined to pose a public safety risk. This power comes from the codes and ordinances that are adopted by the jurisdiction, either at the community or state level. In most cases the primary authority comes from the building and fire codes that are in force in the community. There may also be anti-blight ordnances that are adopted at the community level.

The key elements of an effective ordinance aimed at addressing vacant/abandoned buildings include

- Criteria defining proper security
- Requirements for the removal of combustible contents and hazardous waste
- Establishing an inspection/evaluation process
- Requirements for posting of no trespassing signs
- Establishing a marking system to alert emergency responders that a property is hazardous
- Requirements for the maintenance of existing fire suppression and protection systems
- Defining the responsibilities of the property owner
- Establishing an enforcement process
- Defining penalties and fines for noncompliance
- Establishing requirements for the posting of a performance bond by the owner

A guide for communities developing vacant and abandoned property ordinances is as Appendix H of this document. The guide, *Developing Vacant Property Ordinances*, includes sample anti-blight ordinances in the reference section.

Interdepartmental Cooperation

With the power to act in place, the next step is cooperation between the various departments within the community. The fire department responds to the fires when they occur but may not have the authority to intervene prior to that response. The building and health code officials are usually the primary code enforcement authorities. Surveillance of at-risk properties is usually a function of the police department. Funding for security measures and the demolition or rehabilitation of abandoned properties will normally be a function of the community development official or department. If these individual departments in the community are not working together to deal with the issues presented by vacant and abandoned properties, it is unlikely that the community will be successful in dealing with the problem. Departments or offices normally included are

- Mayor or City Manager
- Assessor
- Tax Collector
- Treasurer
- Development Director
- City Attorney (Solicitor)
- Police Department
- Fire Department
- Public Works
- Building Inspector
- Health Inspector

Interdepartmental cooperation is also critical in the development and dissemination of data regarding vacant and abandoned buildings. Cooperation between departments and access to available data will assist in the handling of individual properties as well as dealing with community planning and overall mitigation. One very useful tool in the collection and analysis of a wide variety of data are geographic information systems (GIS). As many communities or jurisdictions begin to establish these powerful systems thought should be given to their use in the management of vacant and abandoned properties. Appendix I of this document discusses this important tool and looks at how several communities, including Wilson, NC are using GIS to great advantage.

Identification

When many properties are involved, the cost of dealing with the problem can be beyond the capability of most communities. Thus, one of the key components of programs aimed at preventing fires in uninhabited properties is the identification of an owner or responsible party early in the vacancy cycle. While it is apparent that a community has to know the magnitude of the problem before it can effectively deal with it, the research from Miami University and the University of South Carolina cited above indicates about one-third of the cities responding to the survey were unable to provide estimates of the number of vacant or abandoned properties. In many communities the problem is just not addressed.

Communities must know which buildings in their jurisdiction are vacant or abandoned to take action. A more proactive approach is to begin to track properties that are at-risk of becoming vacant while a viable owner is still known. One such program was initiated in the early 1980's by the city of New Haven, Connecticut. Using funds from public and private grants, the Arson Warning and Prevention Strategy (AWAPS) was developed. This program allowed the community to identify properties that were at risk of becoming vacant and intervene before abandonment.[5]

The risk factors that triggered action in New Haven were

- A history of back taxes
- Previous structural fires
- Unabated housing code violations
- Unreleased liens and attachments

At-risk properties were then targeted for action while the owner was still available and the property occupied. This type of action reduces the cost to the community and places the responsibility for rehabilitation of the property or proper security on the owner early in the cycle of deterioration. Additional indicators identified during this project include:

- Building owners with a history of abandoning property
- Decreasing utility usage
- Increasing vacancy in multi-tenant properties

The first step in dealing with vacant and abandoned buildings in a community is the development of a comprehensive list of properties that fit the criteria discussed above for vacant and abandoned. Buildings that are at-risk of becoming vacant should also be added to this list. Data for compiling the list may be available from the Assessors Office, the Tax Collector, Fire Prevention and the Building Official. Once the list is compiled the information should be verified by sending inspectors or fire department companies to the addresses to conduct a visual inspection from the exterior of the building. This initial inspection should provide verification that the building is on the property and that it appears to be vacant. Additional information regarding the condition of the building and if it is secure or not should also be gathered.

When the list is compiled, an attempt should be made to identify the current owner of the property. This information may be available from the Tax Collector or Assessor. If a viable owner is not readily found, an attempt at determining the last owner should be made at the Registrar of Deeds serving the jurisdiction. This effort may be relatively easy if the information is computerized. If the search requires using paper files, it becomes more time consuming. A flow chart developed for the "paper chase" in Worcester is provided in Appendix E as an example of the process. It is important that an owner be located so that the community can attempt to pass on the cost of mitigation or recover expenses.

Building Evaluation

Once at-risk buildings are identified and the community has adopted codes and ordinances to regulate them, what can the community do to stop the fires? An effective program includes provisions for the inspection and evaluation of the property early in the vacancy cycle; properly securing the building; and determining a long term strategy for mitigation. The courses of action available for long-term mitigation are re-use or demolition. An evaluation can assist officials in making a determination about the proper

handling of the property. An evaluation instrument that was developed as part of this project is provided as Appendix A. The evaluation form is intended to assist communities in the inspection and evaluation of vacant and abandoned properties. The form was developed to guide the evaluator through the potential hazards commonly found in vacant and abandoned properties. A Field Manual that guides inspectors through the evaluation process is also available as part of the Tool Box materials developed for this program. The Field Manual is intended for training of inspectors and as a guide in the field as the evaluation is being conducted. The IAAI/USFA Abandoned Building Project has also developed an on-line training program to assist in training firefighters and other personnel in building evaluation. This program is available on the Public Safety Education Network.

The data developed during the evaluation can easily be incorporated into pre-plans for the buildings as well as a tool for prioritizing properties in need of immediate action when funding is limited.

Communities may choose to use this form or develop one of their own that addresses the specific needs of the jurisdiction. The objective, however, should be to gather sufficient information on known vacant and abandoned properties so that informed decisions can be made regarding the properties under both emergency and non-emergency circumstances. Consideration should be given to including the requirement for evaluation into the local jurisdictions ordinances or regulations regarding vacant and abandoned properties. For instance, the provisions of 527 CMR, the Massachusetts Comprehensive Fire Safety Code include a provision for inspecting buildings deemed to be unsafe prior to being placarded:

10.13(7)(f) Prior to receiving a mark, all buildings shall be inspected thoroughly by the head of the fire department.

Building Security

While a vacant property is waiting for demolition or re-use, it must be properly secured to prevent unauthorized entry. The importance of proper security is demonstrated by National Fire Protection Association's estimates that more than 72 percent of fires reported in vacant or abandoned structures are of incendiary or suspicious origin. An additional 5 percent of the fires result from children playing with matches.[6]

Security measures for properties that are intact and able to be locked may be as simple as regular surveillance by police and the owner. Where properties are open to unauthorized entry, they must be secured. The most common method of securing vacant and abandoned buildings is boarding them up. While many methods and materials are used, one of the most effective and secure methods is detailed in the United States Fire Administration's National Arson Prevention Initiative Board Up Procedures[7]. Specifications and installation details are provided as Appendix C of this document.

The intent of boarding up a property is the prevention of unauthorized entry. Thus, to be effective all openings in a building must be secured. That includes doors, windows and openings in walls that could be used to gain access. Materials used must be strong enough to prevent access and must be weather resistant. A surveillance program should also be coupled with the board up process to monitor building security. Regular visual inspections of boarded up properties by police, fire department, or neighborhood watch

groups will determine if security measures have been damaged and need repair. To assist in enforcement, all secured properties should be posted with NO TRESPASSING signs.

Security and surveillance measures become key elements in providing for firefighter safety in the event of a fire in the structure as they reduce the possibility of the building being occupied. As discussed in the firefighting operations section below, where there is no known life safety hazard, firefighters should not generally enter known vacant and abandoned structures to attack fires.

In some communities, regular high visibility surveillance is used as the short term method of fire and crime prevention rather than boarding up the properties. While these measures do not require the labor intensive and costly board up process, they do require a significant commitment on the part of the police and community groups involved in the patrol and surveillance activities.

Marking Vacant and Abandoned Buildings

Two of the thirteen recommendations of the NIOSH report on the 1999 cold storage building fire in Worcester, Massachusetts[8], related to the evaluation and marking of vacant and abandoned buildings.

> Recommendation #1:
>
> > Fire departments should ensure that inspections of vacant buildings and pre-fire planning are conducted which cover all potential hazards, structural building materials (type and age), and renovations that may be encountered during a fire, so that the Incident Commander will have the necessary structural information to make informed decisions and implement an appropriate plan of attack.
>
> Recommendation #10 :
>
> > Fire departments should identify dangerous vacant buildings by affixing warning placards to entrance doorways or other openings where firefighters may enter.

Many communities also use a marking system for vacant properties that are considered to be a risk to firefighters under fire conditions. Marking of vacant and abandoned buildings is used to alert fire suppression personnel to the potential hazards the buildings pose should a fire occur. The evaluation of the building is an opportunity to rate the potential hazards and determine if the building should be marked. For buildings that pose significant hazards such as holes in floors, deteriorating structural members and combustible interior finish, firefighters may be directed to operate from the outside in a defensive mode in all cases except were there is known life hazard.

The system adopted in Worcester and the Commonwealth of Massachusetts after the Worcester Cold Storage Fire was one adapted from the City of New York. In this system a sign with a white **X** on a red background is used to indicate that the placarded structure is extremely hazardous and interior firefighting operations should be conducted only when there is a known life hazard and with specific consent of the incident commander and extreme caution. A white **** on a red background is used to indicate that interior operations can be conducted with extreme caution. Additional information regarding the system can be found in Appendix F and in the Reference List in Appendix H.

Long Term Solutions

Once a building is secured and marked, the process of seeking a long-term solution must begin. As discussed above there are generally two routes that can be taken. The first is re-use. If the structure is viable, it may be a candidate for rehabilitation and sale. Another considerations for rehabilitation might be the historical significance of the structure. To facilitate this process, some communities publish lists of vacant properties that are available for reuse or rehabilitation[9]. Organizations such as Habitat for Humanities, church or civic groups, or private developers have stepped forward in communities to rehabilitate residential properties. In Lewiston, Maine, the community used a combination of federal, local and private funds to rehabilitate a portion of a vacant shoe mill in the center of the community. This property now has a variety of tenants and is a productive, viable property in a prime location within the community. The reuse of old factories for residential, commercial, or manufacturing occupancies is a popular trend in many old industrial communities. In most cases these efforts are the result of a public/private partnership.

Dealing with vacant and abandoned biddings in communities is a time-consuming and costly undertaking. To be effective a community must address the issue from several perspectives so that they are identified, evaluated, secured, and finally demolished or rehabilitated. To accomplish this, requires cooperation between governmental departments, the public and, in many cases, private developers. Where a cooperative effort is not the case, the problem of vacant and abandoned buildings cannot be adequately addressed, and the community will be faced with the significant hazards that these properties pose to the safety of the public and firefighters.

At the national level organizations such as Smart Growth America provide forums for both the public an private sectors regarding land use and reclamation of vacant and abandoned properties. Smart Growth America is a coalition of national, state and local organizations working to improve the ways that towns, cities and metro areas are planed and built. The coalition includes many of the best-known national organizations advocating on behalf of historic preservation, the environment, farmland and open space preservation, neighborhood revitalization and more. State- and regional-level members include community-based organizations working to save treasured landscapes while making towns and cities ever more livable and lovable.

The National Vacant Property Campaign is a project of Smart Growth America (SGA), Local Initiatives Support Corporation (LISC), and the Metropolitan Institute at Virginia Tech. The campaign is supported by grants from the Fannie Mae Foundation; the U.S. EPA, the Ford Foundation, the C.S. Mott Foundation, the Surdna Foundation, and the National Endowment for the Arts. Effective vacant property reclamation efforts involving environmental advocates who see property reclamation as a way to offset urban sprawl, to housing groups seeing to create affordable homes, to those interested in preserving a community's history are supported by the campaign.

Firefighting Operations

The most important concept that firefighters must understand when responding to fires involving vacant and abandoned buildings is that the building themselves are inherently dangerous. Hazards commonly found in these buildings include

- Open shafts
- Pits and holes due to removal of equipment
- Structural degradation due to weather and vandalism
- Exposed structural members
- Penetrations in barriers such as walls, floors and ceilings that allow abnormal fire travel
- Combustible contents
- Maze-like configuration
- Blocked or damaged stairs
- Potential for delay in discovery of a fire
- Potential for multi-room fire on arrival
- Potential for extension to near-by structures

These potential hazards are some of the reasons that the rate of firefighter injuries in these properties is significantly higher than for any other property use[10]. Firefighting operations in buildings that are known to be vacant should be conducted with extreme caution. Interior firefighting operations should be attempted only after a size-up has determined that these operations can be conducted safely. Where there are indications of structural deterioration or other hazards listed above and no known life hazard, the incident commander should consider defensive operations. Hazard floor plans developed using information from an inspection of the building can assist the incident commander in the decision making process on the fire scene (See Appendix B for additional information and an example of the plans developed for Worcester Fire Department.). As Dugan states in his article on operations in sealed buildings:

> "Most vacant buildings usually have a low potential for civilian victims and a high injury risk to firefighters. Therefore, commanding officers must take into account the safety of all personnel at the fire scene. Interior operations are not mandated at vacant buildings. Entry into a vacant building is an option, not an obligation."[11]

Buildings that are properly secured should have a very low potential of life hazard. This should impact the decision as to ordering an aggressive interior attack or a more cautious defensive operation.

Where communities adopt a hazardous building marking system as discussed above, firefighters have an additional safety mechanism in place. The marking system provides an easily recognized indication of the potential hazard the building poses to suppression operations. Data regarding the hazards in known vacant/abandoned buildings should also be made available to responding units via radio or computer.

Fire suppression personnel should receive training regarding the hazards that these buildings pose and standard operations for the jurisdiction. Companies should be provided with data regarding vacant/abandoned buildings in their response district and the results of the evaluations completed on these properties.

The decision to commit interior firefighting personnel should be made on a case by case basis with proper risk benefit decisions being made by the incident commander. The commitment of firefighters' lives for saving of property and an unknown or marginal risk of civilian life must be balanced appropriately.

Where communities require securing structures using the HUD board-up procedures outlined in this paper and in the Tool Box materials, the fire department should provide specific training for personnel. Operations involving secured structures will have different priorities and require training in the safe removal of board-up components for exterior firefighting operations.[12]

Fire departments should also consider establishing procedures that detail the use of alternative methods for searching hazardous structures. One suggested practice is the use of thermal imaging devices from the outside. Where there is a known life hazard, special precautions should taken during interior operations. Precautions will be specific to the incident and building but might include

- Limiting the time that crews operate in the structure
- Providing very specific tasks and objectives to interior crews
- Providing each crew with a safety line or operating hose line
- The use of thermal imagers to guide interior crews
- Monitoring of interior crew progress by incident commander

Where defensive operations are considered, provisions should be made to protect personnel and apparatus from structural collapse. An adequate water supply should also be provided to protect exposed structures.

As part of the most recent grant initiative, the IAAI conducted a review of the impact that vacant and abandoned properties have on communities protected by volunteer or paid-on call fire departments. It is interesting to note that many volunteer departments do not view vacant or abandoned properties as a significant hazard. This may be due to the type of community the departments protect, or that fire prevention is not a typical function assigned to these departments. It is important to raise the awareness of the hazards present by these buildings to this sector of the fire service.

Funding

Dealing with vacant and abandoned building in a community is a costly endeavor. If a viable owner is available he should be held accountable for the expenses. Where there is no viable owner the expense becomes the responsibility of the taxpayer. In most of the successful models reviewed as part of this project, public/private partnerships were used to reduce blight and enhance development.

Vacant and abandoned buildings in a community are the result of social and economic issues. These issues manifest themselves as fire and crime problems as neighborhoods decline and businesses move on. The resulting blight and related issues must be dealt with if the community is to recover. Because abandonment is an issue related to the development and prosperity of a community, there are a number of federal programs that can be tapped by communities.

The first program that should be looked at is the Community Development Block Grant (CDBG) program administered by the U.S. Department of Housing and Urban Development (HUD). These funds are provided directly to entitlement communities and through state grants to others. The primary objective of these funds is to benefit low and

moderate income persons, prevent or eliminate slums or blight, and address community development needs where there is an immediate threat to the health and welfare of the community.

Communities such as Lewiston, Maine, have been very successful in obtaining funding for the mitigation of vacant and abandoned buildings in the downtown area using these funds coupled with tax dollars and private development funds.

Small to very large communities with low to moderate income populations should review how the CDBG dollars are being allocated and contemplate the use of a portion of the available funds for mitigation of vacant and abandoned buildings.

Another source of federal funds that could be directly allocated to the mitigation of vacant and abandoned buildings is the Brownfield funds available from the Environmental Protection Agency (EPA) and HUD. These funds are directed toward the cleanup of contaminated sites within a community. Many communities have used the Brownfield funds to assist in the mitigation and development of large factories that have been vacated and in many cases abandoned due to hazardous waste contamination. These structures tend to be very large industrial complexes that, when vacated, create significant problems for the community. Because the buildings and the ground they sit on are contaminate they can not be developed. In many cases the company that owned the facilities have gone out of business and the buildings are the responsibility of the community. By entering into partnerships with potential developers, Brownfield funds can assist in removing the hazardous materials that are obstacles to new development and in the process mitigate the vacant building problem.

The Livable Communities initiative administered by the EPA is another federal program that may be of assistance in mitigation of vacant an abandoned buildings. These funds are aimed at fostering economic growth while not contributing to urban sprawl.

Finally, if vacant and abandoned buildings are truly the incubators of disorder and crime as several of the authors' quotes in this document might suggest, communities should look to the anti-crime funds administered by the U.S. Department of Justice. The correlation between disorder, crime and abandoned buildings has been well documented. Mitigation of these crime breeders should be in the best interest of those involved in community policing and the prevention of crime.

The tax dollars available in the community must also be looked at when addressing funding for the mitigation of vacant and abandoned buildings. These buildings are part of the community and it must take some responsibility for the final solution.

As the case studies included in this document show, communities must also think "outside the box" when attempting to solve their problem. The use of the National Guard in Utica, New York, and the establishment of a multi-agency task force in Lawrence, Massachusetts, are just a few examples of solving the problem through alternative methods.

A commitment to addressing the problems and hazards presented to communities by vacant and abandoned structures must be coupled with interdepartmental cooperation and the identification of potential sources of funds, both public and private, to support the effort. The Community Development Director and the executive leadership of the community will be the individuals with the best handle on potential funding sources.

Appendix F provides additional information on CDBG and Brownfield funding.

Strategies for Handling Vacant and Abandoned Buildings

- Develop mechanisms that enhance inter-agency communication and cooperation regarding the identification and handling of vacant and abandoned properties in the community.
- Determine the legal authority provided by building and fire codes and ordinances adopted by the community.
- When necessary, develop and adopt a local ordinance that empowers the community to take proper action to secure and mitigate vacant and abandoned properties.
- Develop a system to identify at-risk properties and track those that are vacant or abandoned.
- Evaluate vacant and abandoned properties.
- Institute a system that communicates potential hazards found in vacant and abandoned buildings to responding firefighters.
- Develop a marking system that alerts firefighters to potential hazards in vacant and abandoned buildings.
- Initiate programs for local government to mandate proper security for vacant and abandoned properties.
- Enforce requirements for the securing of vacant and properties by owners.
- Monitor the integrity of security provided for vacant and abandoned properties and provide a system to initiate repairs when required.
- Identify potential public and private funding sources that are available for securing, rehabilitating or demolishing vacant or abandoned buildings.
- Develop programs to identify those properties that require demolition.
- Develop programs that assist in the rehabilitation of viable properties.

Appendix A – Building Evaluation Form

Date: / /

Building Marking

Vacant/Abandoned Building Evaluation Form

Address: _____

Property Name: _____

Owner Name: _____ Telephone: _____

Owner Address: _____

Answer each of the following questions about the building. Select multiple options, if necessary; explain response.
Draw a simple sketch of the location and explain your observations in a brief narrative.

Building Security

☐ Secure ☐ Open/unsecured ☐ Signs of recent entry

Utilities (Note Entry Points for each active utility on sketch)

Active Utilities ☐ No ☐ Yes **If Yes:** ☐ Gas ☐ Electricity ☐ Oil ☐ Water

Building Use (The original use of the building and how it was last used)

Building Construction

Number of Floors _____ **Basement:** ☐ Yes ☐ Sub-Basement ☐ Multi Sub-Levels

Exterior Walls ☐ Block/Brick ☐ Curtain Wall ☐ Wood ☐ Metal Tie Rods (stars)

Openings in Exterior Walls (Windows, Doors, etc.) ☐ Many ☐ Few ☐ Windowless

Structural Members (Beams, Girders, Columns) ☐ Steel ☐ Concrete ☐ Wood ☐ Mixed (*Describe*)

Truss Construction ☐ Roof ☐ Floors

Exposed Structural Members (Beams, Girders, Columns & Trusses) ☐ Yes ☐ No

Ceiling Type ☐ None ☐ Suspended ☐ Metal ☐ Sheetrock/Plaster ☐ Wood

Condition of Interior Walls and Floors (Integrity of compartmentation)

☐ Good ☐ Deteriorating ☐ Multiple penetrations that would allow fire spread ☐ Walls ☐ Floors

Condition of Roof

☐ Good ☐ Some instability/deterioration ☐ Major deterioration

General Condition of Structure

☐ Good ☐ Minor structural instability ☐ Major deterioration of structural elements

Fire Protection Systems

Operational Fire Alarm System ☐ Yes ☐ No

Operational Sprinkler System (Valves open, pressure showing on gauges) ☐ Yes ☐ No ☐ System off, but usable if supplied through FD connection

Operational Standpipe System ☐ Yes ☐ No

Fire Department Connection (If Yes, note location on sketch) ☐ Yes ☐ No

Fire Potential

Fuel Packages (Fuel Load)

Quantity	☐ Numerous	☐ Moderate	☐ Limited		
Distribution	☐ Concentrated	☐ Spread out			
Housekeeping	☐ Good	☐ Poor			
Interior Finish	☐ Combustible	☐ Non-combustible	☐ Mixed (Describe)		
Room Size	☐ Large	☐ Moderate	☐ Small		
Potential for a delay in FD notification	☐ High	☐ Medium	☐ Low		

Exposures (Note locations on sketch)

Location	☐ **A side**	☐ **B side**	☐ **C side**	☐ **D side**
Separation (ft)	___	___	___	___
Occupied (Y/N)	___	___	___	___

Suppression Operations

Hazards In Building	☐ Holes in Floors	☐ Missing Stairs	☐ Open Shafts/pits	
Building Access:	☐ 4 sides	☐ 3 sides	☐ 2 Sides	☐ Limited
Interior Layout	☐ Complicated	☐ Normal - Walls/Partitions	☐ Open	
Water Supply:	☐ Adequate	☐ Inadequate	(Note Locations on Sketch)	

Hazardous materials located on the site ☐ Yes ☐ None Observed
(If Yes, describe in detail)

Conditions that require immediate correction ☐ Yes ☐ No
(If Yes, describe in detail)

Analysis of the building (provide ***your*** analysis of the building)	High	Moderate	Low
Potential for an exposure fire (extension to another building)	☐	☐	☐
Potential for a Multi-Room fire on arrival of first due company	☐	☐	☐
Potential for structural collapse early in the fire development	☐	☐	☐
Potential for fire fighters to become lost or trapped during operations	☐	☐	☐

Narrative:

Inspected by: Posting Authorized by: Data Entered by:

Appendix B - Developing Floor Plans

Developing Hazard Floor Plans of Vacant/Abandoned Buildings

Floor plans of vacant/abandoned buildings are an extremely useful tool on the fire ground. They give critical information about the building and show hazardous areas in the buildings that otherwise might not be known. Completing a hazard floor plan is not that difficult; it requires few tools and some computer experience.

Once a building has been chosen, the structure needs to be surveyed. First, check and see if any current floor plans are available. If not, the building will have to be measured by hand. Two people should always survey the building for safety. Begin by measuring the footprint of the building with a tape wheel and sketch it on a pad of paper. Then move inside and complete the interior floor plan. Numbers need not be exact and can be rough dimensions. While one person is measuring, the other is taking pictures, ideally with a digital camera. Pictures should be taken of holes, weakened floors, exposed structural members, trusses, or any other information that might be important. Also, hazards can be noted on the sketch of the building. Other information to note may include sprinkler systems, active utilities, location of utilities, or hazardous materials on site. Typically, a building can be surveyed in less than two hours.

After the building information has been collected, the floor plan can be completed in a computer. Any drawing program can be used to develop the footprints. The program selected for this project was Microsoft Visio. Visio was selected since it is very easy to learn and compatible with other Microsoft products such as Word and PowerPoint. Visio uses “drag and drop” utilities; for example, one would just drag a wall or door from a toolbar and drop it on the drawing. Photographs are also very easily imported into the drawing.

The Worcester Fire Department is using hazard floor plans. One of the goals of the final drawing was to include all pictures and information on a single sheet of paper. This gives the incident commander a tactical worksheet to use on an incident with the most important information about the building. If multi-story buildings are drawn and different floors have the same layout, only one needs to be drawn on the floor plan; noting that another floor has the same layout. An example of a hazard floor plan is shown below. Additional examples of the floor plans developed in Worcester are provides as part of the Tool Box.

Hazard and preplanning information can also be provided electronically to responding firefighters. The system used in Wilson, NC is an excellent example of this type of application. In order to provide this level of data, however, the basic data must still be developed an input into a format that is usable by the computer system being used in the community.

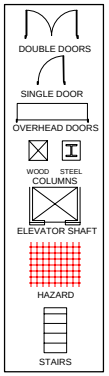
48 MASON ST.

INSTITUTIONAL LINENS INC

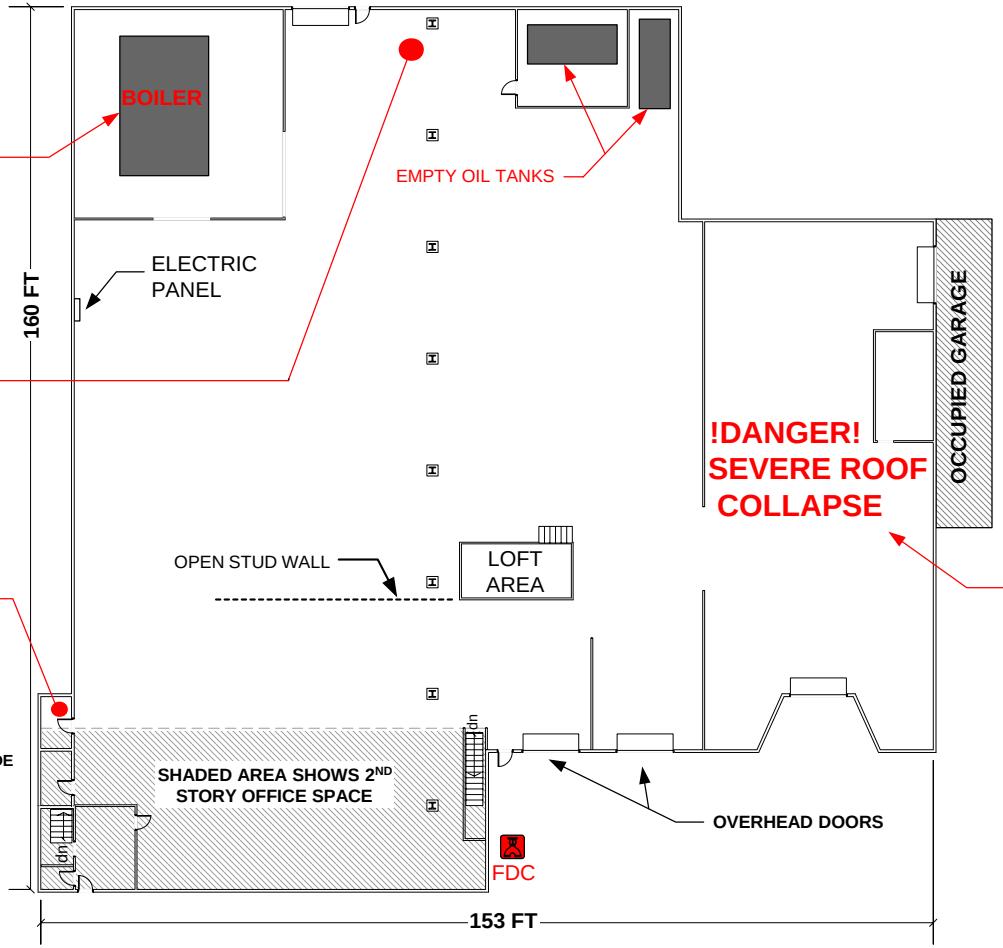
WOODEN TRUSS ROOF
THIS ROOM ONLY!

CEILING COLLAPSE

CEILING MISSING



LEGEND



ALL WINDOWS HAVE
STEEL FRAME

!DANGER!
SEVERE ROOF
COLLAPSE

NOTES:
- **BUILDING HAS SECOND FLOOR, ON MASON STREET SIDE**
- **LIGHT WEIGHT STEEL TRUSS ROOF**
- **BOILER ROOM ONLY HAS WOOD TRUSS**
- **SPRINKLER SYSTEM IS INOPERATIVE, DOES HAVE FDC**
- **OCCUPIED GARAGE ATTACHED TO BUILDING**
- **BUILDING HAS NO OPERATIONAL UTILITIES**
- **NO BASEMENT**

IAAI/USFA Abandoned
Building Project

B.L. 02/01

Appendix C - Building Security Specifications and Details

USFA National Arson Prevention Initiative
Board Up Procedures

Materials List and Specifications

Security Measures

1. All openings in the basement, first floor doors and windows, and any point of entry accessible from a porch, fire escape or other potential climbing point shall be barricaded with plywood, 2x4 braces, carriage bolt sets, and nails. Particle board, wafer board, Masonite, or other similar material shall not be used for purposes of boarding-up a building.
2. Openings that are at least 10' from ground level which are not accessible from a porch, fire escape, roof, or other climbing point can be secured with nails in each brace, and every 12" around the perimeter. For all openings, the plywood should be fitted so that it rests snugly against the exterior frame, butting up to the siding on wood frame buildings and up to the brick molding edge on brick buildings. It may be necessary to remove the staff bead so this fit can be flush and tight.
3. The structure shall be posted with a NO TRESPASSING sign at the completion of the board-up.

Materials

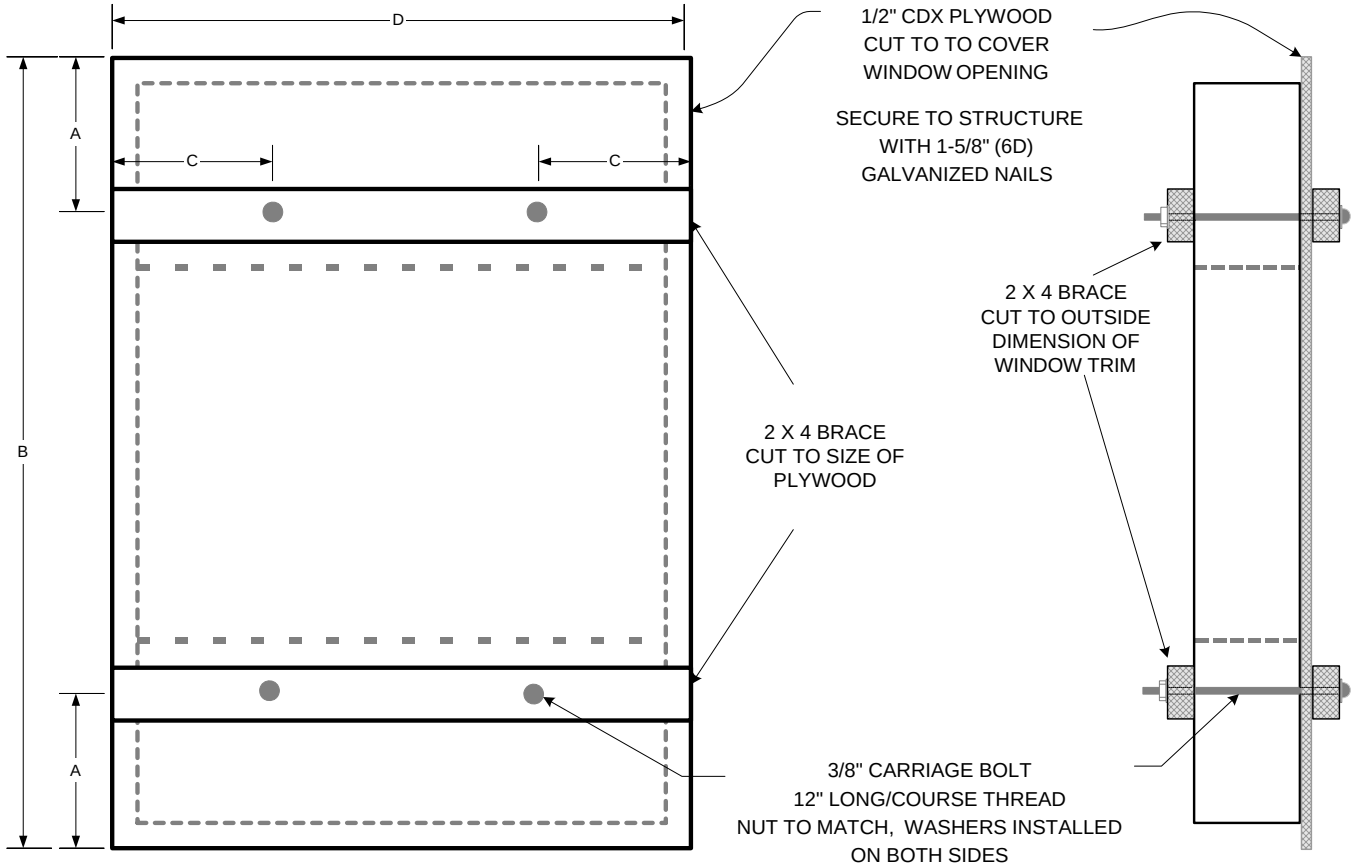
1. Plywood, 1/2" (4 ply) exterior grade CDX
2. Braces - 2" by 4" by 8' construction grade lumber
3. 3/8" (coarse thread) by 12" carriage bolts (rounded head on weather side)
4. 3/8" (coarse thread) construction grade nuts
5. 1/2" (USS Standard) Flat washers with an inside diameter large enough to bypass the wrench neck inside the carriage bolt head so no lift edge is available beneath an installed carriage bolt head.
6. 3/8" (USS Standard) diameter flat washers for installation beneath the nut inside the building
7. 1-5/8" (6d) galvanized or stainless steel ring-shank nails or comparable deck nails.

Barrier Assembly

1. Applying barriers is accomplished with a inside and outside carpenter with appropriate tools and supplies. The inside carpenter will need a light. Exit is made over a ladder when the last window is boarded.
2. Plywood shall be cut to fit over the window and door openings, flush with outside of the molding/trimmer stud. Application of barriers shall be completed so that all lift or pry points are avoided.
3. The 2x4 braces shall be cut to fit the horizontal dimension of the plywood. Two exterior and two interior 2x4 braces shall be provided for each window and three sets for each door.
4. Window Assembly – Braces are located horizontally approximately 1/3 of the distance from the top and the bottom of the window. Bolt holes are located 1/3 of the length of the brace from the outside edge of the window jams. Prior to installation, the assembly should be pre-assembled and 3/8” holes drilled through all of the components.
5. Door Assembly – Door braces will be placed horizontally; one in the center of the doorway and one 1/2 the distance from the center to the top and one 1/2 distance from the center to the bottom of the doorway. Bolt holes are located 1/3 of the length of the brace from the outside edge of the door frame. Prior to installation, the assembly should be pre-assembled and 3/8” holes drilled through all of the components.
6. Plywood used to cover exterior openings shall be nailed every 12" along the perimeter to the window or door frame.
7. The 2x4 braces on the interior and exterior of the assemblies shall be secured using 3/8” by 12” carriage bolt assemblies. Bolts shall be inserted through the pre-drilled holes from the exterior with a 1/2” washer place against the exterior brace, a 3/8” washer is placed against the interior brace. The bolt is tightened from the inside so that it slightly compresses the interior brace.
8. The exterior surfaces of barriers shall be painted or stained the same color as the structure to minimize the appearance.

Should the through-bolt compression method be impossible due to the size or condition of the opening, the opening shall be covered with plywood and secured with a minimum of 3-inch-long deck or wood screws installed on 4-inch centers around the circumference of the opening.

For buildings that require access by authorized personnel, a single door that is visible from the street may be secured using a solid core wood or steel door. There shall be no windows or other openings in this door. The door shall be securely locked using a padlock and hasp assembly that is bolted through the door. The lock loop portion of the hasp is attached to the door frame using a minimum of 3-inch-long wood screws.



WINDOW - OUTSIDE VIEW

NOTES:

1. FOR DOUBLE HUNG WINDOWS, SLIDE SASH TO CENTER OF UNIT AND PASS BOLTS THROUGH OPENINGS AT TOP AND BOTTOM.
2. STORM WINDOWS SHOULD BE REMOVED AND STORED INSIDE STRUCTURE.
3. OUTSIDE TRIM MAY HAVE TO BE REMOVED TO ACCOMMODATE A FLUSH AND TIGHT FIT.
4. TIGHTEN NUTS FROM INSIDE ENOUGH TO SLIGHTLY COMPRESS 2X4 BRACE.
5. BRACE LOCATIONS: A = 1/3 B (SEE DIMENSION LOCATIONS ON DRAWING)
6. LOCATION OF BOLT HOLES: C = 1/3D (SEE DIMENSION LOCATIONS ON DRAWING)

USFA National Arson Prevention Initiative
Board Up Procedures

Window Detail

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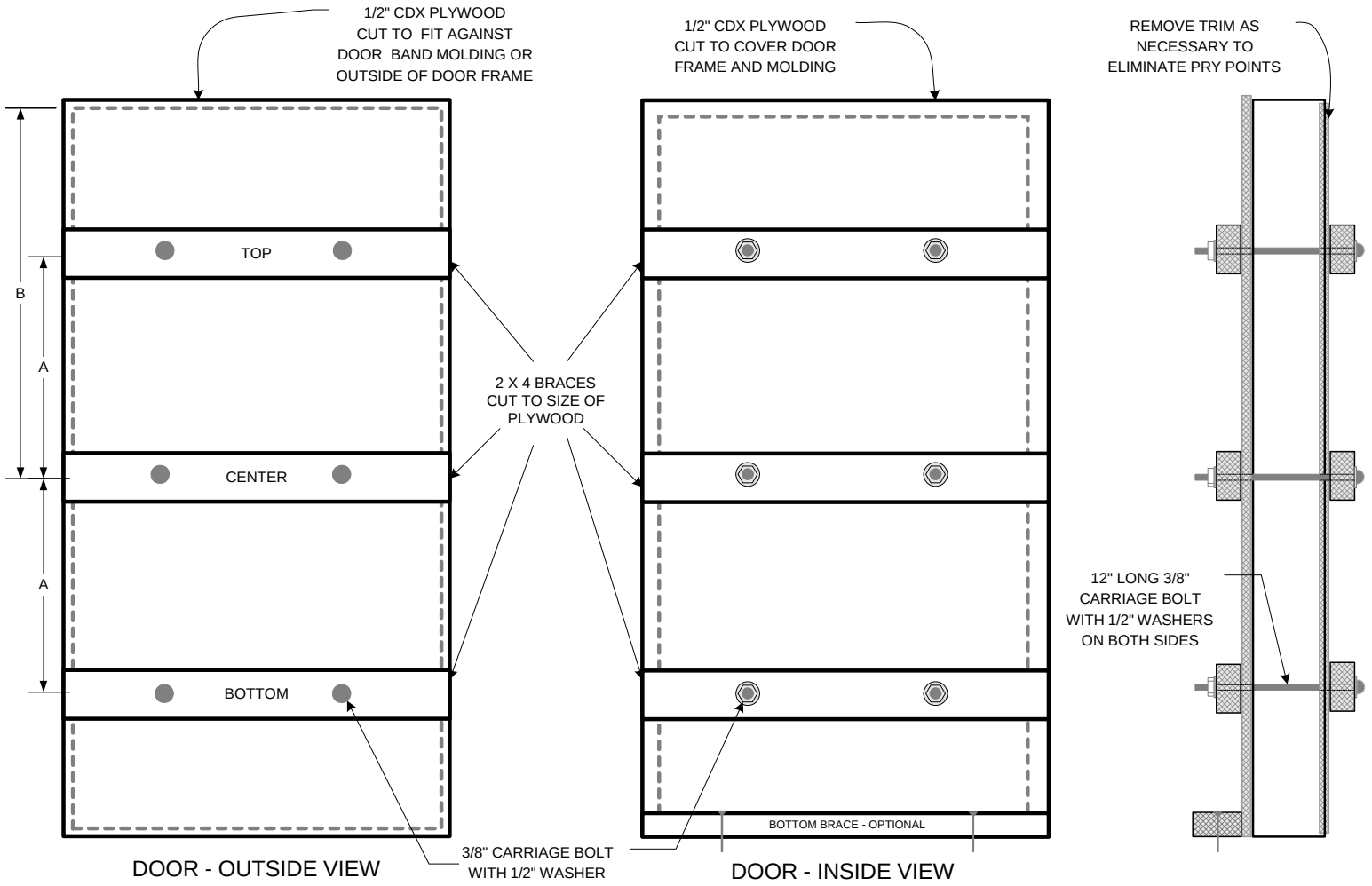
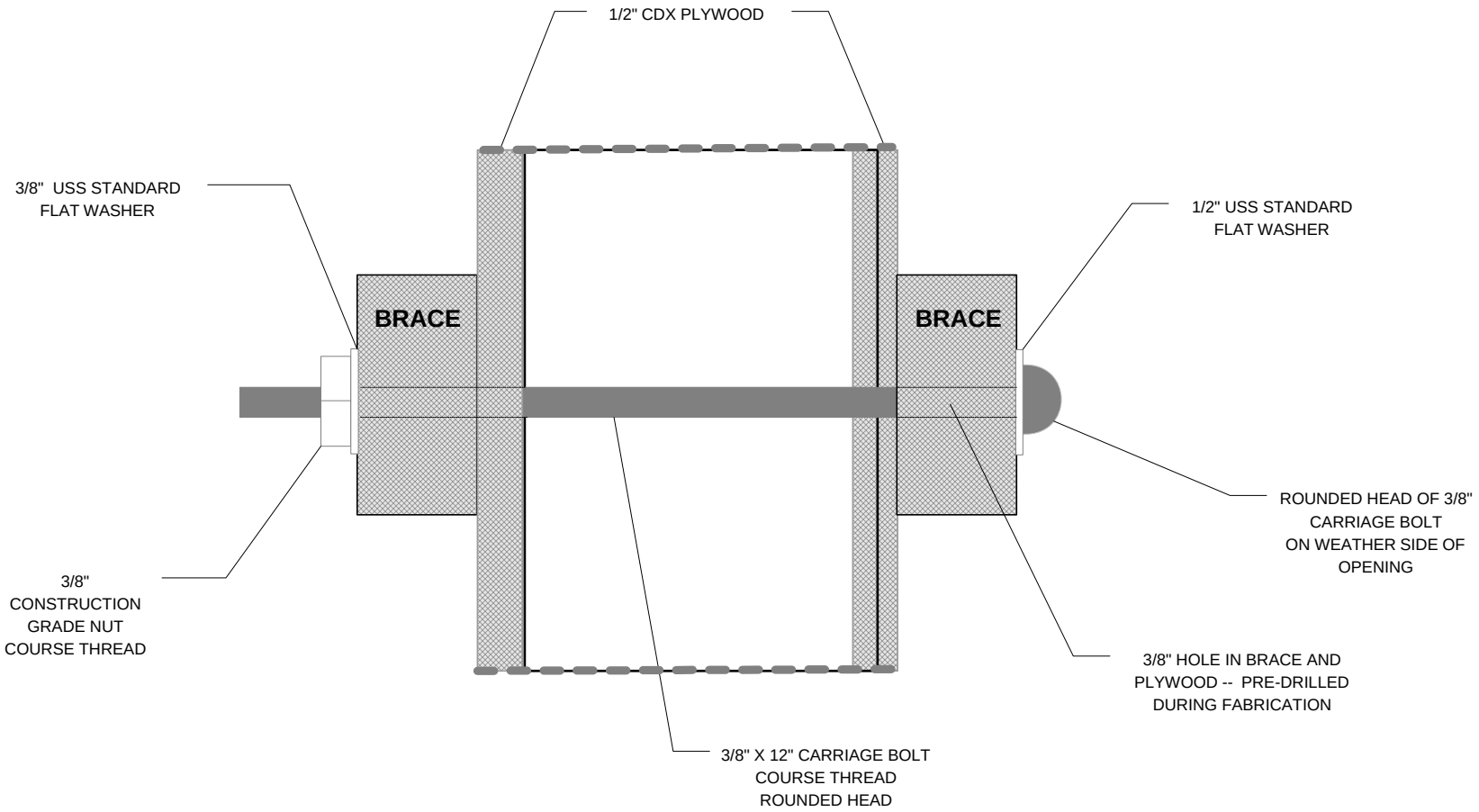


NOTES:

1. DOOR IS REMOVED AND STORED INSIDE BUILDING.
2. USE 3/8" X 12" CARRIAGE BOLTS - ROUNDED HEAD ON OUTSIDE OF BUILDING
3. TIGHTEN NUTS FROM INSIDE ENOUGH TO SLIGHTLY COMPRESS 2X4 BRACE.
4. IF PLYWOOD CAN NOT BE BUTTED AGAINST BAND MOLDING, CUT TO COVER OUTSIDE EDGE OF DOOR FRAME.
5. BOLT HOLES ARE LOCATED AS THEY ARE FOR WINDOWS (SEE WINDOW DETAIL)
6. CENTER BRACE LOCATED IN CENTER OF DOORWAY OPENING. TOP AND BOTTOM BRACES ARE POSITIONED WHERE A = 1/2B (SEE DIMENSION LOCATIONS ON DRAWING)

USFA National Arson Prevention Initiative
Board Up Procedures

Door Detail
IAAI/USFA Abandoned Building Project



NOTES:

1. USE 3/8" X 12" CARRIAGE BOLTS - ROUNDED HEAD ON OUTSIDE OF BUILDING
2. TIGHTEN NUTS FROM INSIDE ENOUGH TO SLIGHTLY COMPRESS WASHER INTO 2X4 BRACE.
3. USE 1/2" WASHER ON WEATHER SIDE TO ACCOMMODATE THE THE WRENCH NECK OF BOLT AND ELIMINATE PRY POINTS.

USFA National Arson Prevention Initiative

Board Up Procedures

Bolt Assembly Detail

IAAI/USFA Abandoned Building Project

WINDOW ASSEMBLY

MATERIALS REQUIRED PER WINDOW

1 1/2" CDX PLYWOOD SHEET - CUT TO DIMENSIONS OF WINDOW FRAME (WEATHER SIDE

4 2X4 BRACES - CUT TO WIDTH OF PLYWOOD

4 CARRIAGE BOLT ASSEMBLIES

NUMBER OF WINDOWS TO BE SECURED (N_w): _____

NUMBER OF WINDOWS BRACES REQUIRED: (N_w X 4) _____

CARRIGE BOLT ASSEMBLIES REQUIRED (B_W): (N_w X 4) _____

DOOR ASSEMBLIES

MATERIALS REQUIRED PER DOOR

1 1/2" CDX PLYWOOD SHEET - CUT TO DIMENSIONS OF DOOR FRAME (WEATHER SIDE)

1 1/2" CDX PLYWOOD SHEET - CUT TO OUTSIDE DIMENSIONS OF DOOR FRAME TRIM (INSIDE)

6 2X4 BRACES - 3 CUT TO WIDTH OF OUTSIDE PLYWOOD, 3 CUT TO WIDTH OF INSIDE PLYWOOD

1 2X4 BOTTOM BRACE - CUT TO WIDTH OF DOOR TRIM (OPTIONAL)

6 CARRIAGE BOLT ASSEMBLIES

NUMBER OF DOORS TO BE SECURED (N_D): _____

NUMBER OF DOOR BRACES REQUIRED: (N_D X 6) _____

NUMBER OF BOTTOM BRACES REQUIRED: (N_D) _____

CARRIGE BOLT ASSEMBLIES REQUIRED(B_D): (N_D X 6) _____

CARRIAGE BOLT ASSEMBLY

1 12' X 3/8" CARRIAGE BOLT - COURSE THREAD

1 1/2" USS STANDARD FLAT WASHER (WEATHER SIDE)

1 3/8" USS STANDARD FLAT WASHER (INSIDE)

1 3/8" CONSTRUCTION GRADE NUT - COURSE THREAD

TOTAL CARRIGE BOLT ASSEMBLIES REQUIRED:(B_W + B_D) _____

USFA National Arson Prevention Initiative
Board Up Procedures

MATERIALS LIST

IAAI/USFA Abandoned Building Project

Appendix D - Case Studies

IAAI Abandoned Building Project: Case Studies of Arson Response

Introduction

In an effort to create a tool kit for the prevention of fires in abandoned buildings several communities' response to the abandoned building and arson problem was reviewed. The problems found in each community, as well as the response to those problems, are included in this report. Similarities and differences can be found from community to community; however, the end result is virtually always positive if the community has a true desire to solve the problem.

New Haven, Connecticut

In the middle of the 1970's, New Haven, Connecticut experienced a drastic rise in fires occurring in the city. Even more alarming was a 400% increase in the number of arson fires many occurring in vacant /abandoned buildings from 1973 to 1976.

A Grand Jury probe and subsequent report led to sweeping changes in the way fires were investigated. The Grand Juries efforts led to the arrest of fourteen defendants on a total of ninety five felony offenses however it was the Grand Jurors report on the deficient way arson was investigated that triggered a unique response by the city.

The initial action was to develop an Arson Task Force comprised of members of the Mayor's Office, the State's Attorney's Office , and the city's police and fire chiefs. The Task Force proposed three initial recommendations.

First, establish a dedicated Fire Investigation Unit comprise of selected members of both the police and fire departments under the command of a fire captain. Members of the joint unit would immediately respond and thoroughly investigate the origin, cause and responsibility of all fires occurring in the city.

Second, increase arson awareness among the ranks of the police and fire departments. The task force recognized the critical role of the first responders and their ability to recognize and alert Fire Investigation Unit members of critical information on the fire ground. To achieve this an in-service training program was developed and delivered to every active member of the fire and police departments. This program utilized a cooperative effort between the city, the South Central Criminal Justice Advisory Board, and John Jay College of Criminal Justice.

Third, was to create a computerized arson early warning information system. This proactive component of the overall plan became an integral part of the city's arson prevention effort. The Arson Warning and Prevention Strategy (AWPS) provided key pre-fire information which, when combined with the investigative expertise of the joint Fire Investigation Unit and aggressive prosecution policy of the State's Attorneys Office , resulted in a marked decline in arson fires in New Haven.

The AWPS system had two elements the first was a computer data collection and maintenance system that supplied computer based information from the Tax Office, Housing Code Violations, Assessor's Office, Liens and Fire Department. The second component of the program was to utilize this information to predict arson prone properties that existed in the city based on common indicators present in buildings that already had an arson fire. The system identified four factors that were present in significantly higher numbers in the buildings which had arson fires.

- History of back taxes
- Previous structural fires
- Unabated housing code violations
- Unreleased liens and attachments

The AWPS program proactively deterred arson fires using the prediction model. Once a building was identified as an at risk structure based on the common denominator factors the owners of the buildings would be notified. The building would be place on a deterrent patrol list which required the police department to systematically monitor the activities at the buildings and the fire department would increase inspections of the structures as well.

The strategy also included the development of close working relationships with the residents who lived near or in at-risk buildings. "Block Watch" and other neighborhood groups were encouraged to participate in New Havens multi –faceted anti arson effort.

Public awareness was identified to be very important in the reduction of arson fires in the city. Several actions were taken to accomplish the task of increasing public awareness. Written materials like brochures and newsletters were distributed throughout the city. A Fire/Arson Public Information System Advisory Board was created to involve the community in the campaign. Also, target groups were identified for education programs about fire and arson.

Educational programs were developed for youth in school, community based youth organizations, for the elderly, for business people, and for homeowners and tenant groups. These programs were provided by a multi-agency approach from the city.

Utica, New York

After several large manufacturing plants closed along with a large military base in the early 1990's, economic and social erosion threatened this beautiful city once known as one of the ten safest communities in the United States.

By 1997 Utica had lost more than 12% of its skilled worker population and began suffering an explosive growth in crime and arson rates. The arson rate eventually reached three times the national average. Although the fires were occurring throughout the city the incidence was highest in central Utica in a neighborhood known locally as "Cornhill". This area was characterized by dozens of vacant and abandoned buildings mixed into rundown streets with blighted, non-owner occupied rental properties and vacant lots often filled with abandoned cars, trash and discarded appliances.

Utica was chosen along with Charlotte, NC, Macomb, GA, and Nashville, TN as a pilot community for a FEMA program called the National Arson Prevention Initiative. This program was designed to use community-based resources to reduce the incidence of arson by coordinating prevention and control activities.

Beginning in May 1997 during Arson Awareness Week the city, Oneida County, the State of New York and the NAPI Program launched a coordinated program to attack both the arsonist and the problem buildings that were the major arson targets.

An interagency Arson Strike Force to address fire/arson investigation was formed under a formal Memorandum of Understanding consisting of Utica Fire and Police Departments, the Oneida County Sheriffs Department & Prosecutor's Office, the New York State Police and State Fire Marshal, the ATF and U.S. Attorney Control and the Insurance Crime Prevention Institute. A separate, but equally well organized, Arson Prevention Task Force was started to address *arson prevention* measures. Led by Oneida County's Chief Administrator this task force included representatives from his staff, the Utica Mayor's Office, the city's engineer, Department of Public Works (DPW) Chief and Code Enforcement Divisions as well as the county and state DPW, and the New York State National Guard.

The objective of the Arson Prevention Task Force was to "harden the target" by either accelerating demolition or boarding up of the most fire prone structures in the city's Corn Hill neighborhood. Additional activities of this program included increasing public awareness of problems and solutions, coordinating the activities of neighborhood watch groups and stepped up code enforcement.

Community support and inter-agency cooperation were critical to the completion of the project. Due to a tenuous city budget program coordinators proved very resourceful at locating, and taking full advantage of, both public and private section sources of funding the various initiatives. Direct monetary support as well as in-kind contributions was found to obtain everything from office equipment for the Strike Force to materials for board ups. The development of a local resource list was used in this effort.

The Strike Force was in need of a headquarters and many things were needed to establish this facility. Oneida County provided supplies for remodeling to establish offices for the

Strike Force. Local industry donated desks, office equipment, and computers for the headquarters.

Demolition efforts were supported by the New York State Army National Guard, County and City DPW crews and equipment, and private sector contractors who donated their time and equipment. This effort lead to the complete demolition of nearly 100 abandoned buildings. This number represented more building demolitions in three weeks than had been possible in the entire previous year by city crews.

Community awareness and involvement was sought through media relations. A cooperative effort was made and a private advertising firm donated media and public relations at no cost. The primary goal of the public awareness campaign was to avoid negative connotations of the arson problem that might inflame the problem or leave the community with a permanent black eye. The campaign stressed that though there was a problem, there was something being done to solve that problem.

Through the board ups, demolition, arson strike force action, and public awareness and involvement Utica was able to control the problem. They achieved a two-thirds reduction in arson in just three months.

Lawrence, Massachusetts

Lawrence is located about twenty-five miles north of Boston and for many years housed a large number of textile mills and the unskilled labor population to support those mills. A long term gradual loss of jobs and industry lead to a change in the make-up of the community. Traditional working class people left the city and were replaced by a population supported mainly by public assistance.

Drastic reductions in the tax base led to a 50% manpower reduction in the fire department and many other essential city services in only ten years. Lawrence lost half its fire department as arson fires radically increased until the U.S. Fire Administration stated the community had the highest arson incidence rate of any community in the country.

In the early 1990's Lawrence saw a dramatic increase in large, multiple alarm fires. A high increase in abandonment of blighted and unsecured buildings also provided drug dealers, vandals, mentally disturbed persons, the homeless and a large unsupervised population of juveniles a place to hang out, hideout or commit crimes

Multiple alarm fires often occurred simultaneously in different parts of the city. In this situation the local public safety departments were quickly overwhelmed and exhausted. To combat the disastrous trend, a new type of arson task force was set up to combat this problem namely an "Arson Prevention and Control Task Force".

The mission of this unit was to both lock up arsonists and also to spearhead efforts to identify and fireproof vulnerable buildings. Municipal fire and police, State Fire Marshal investigators, state police detectives and Special Agents of the ATF worked round the clock for months intensively investigating each case. The solution rate of cases investigated by this unit would eventually approach 7 in 10 arson fires resulting in an arrest.

Traditionally a Task force will develop strategies and implement programs using available local resources. Lawrence was a special case due to the problems of extremely limited resources, lack of leadership, and the rapidly escalating fire problem.

Five lessons were attributed to the success of the Lawrence Arson Task Force. Lesson one was organization of the task force. The task force must achieve an identity as a recognizable entity. This means finding a location to headquarter the task force. Lawrence used the basement of the central fire station which required extensive modification. To equip the task force donations were sought from local, state and federal government agencies, private businesses and service organizations such as the Chamber of Commerce. To staff the task force BATF, Fire Department, Lawrence Police Department, Massachusetts State Police troopers under the State Fire Marshall's Office and student interns were utilized.

The second lesson was visibility. A community-policing concept was applied to the problem with high police presence in the high-risk arson areas during night time hours. This helped to establish relationships with the members of the communities especially residents who might not traditionally support law enforcement activities such as prostitutes.

A third lesson learned was that every fire must be investigated and each investigation must be done in a constant fashion. To accomplish this a protocol was developed utilizing intensive witness interviewing and standardized investigation methods.

Public awareness and involvement were the basis of the fourth lesson. Using the media to convey information to the public by giving information and statements on fires that they media would normally cover. Involving the media and giving prepared statements can improve the quality and accuracy of information given to the public. Community involvement also contributes to the effectiveness of the program by donations of money and materials. Lawrence received a used van for the arson task force from a local car dealer and the vehicle was completely outfitted by donated materials and manpower.

Lesson five stresses involving others in the process. Each group involved in the task force and the project has talents and benefits that it can bring to the table. For example in Lawrence to secure buildings classified as a high hazard by boarding up openings many agencies were involved.

The local Sheriffs Department was used to provide workers with prisoners. The Massachusetts Army National Guard provided supervisors and equipment. Supplies and lumber were sought from the Lumberman's Association and local lumberyards. From this the fifty highest hazard buildings were secured. Without the cooperation of many agencies and organizations this would not have been possible.

Lawrence was able to significantly reduce the amount of arson cases in their community through the task force. This was attributed to four key factors. These are as follows:

- Identify specific arson problems
- Cooperation with other agencies and the community
- Combined use of personalities and strengths to achieve the goal
- A commitment to solving the problem

Worcester, Massachusetts

A city of approximately 180,000 population located in central Massachusetts Worcester is the second largest city in the Commonwealth. In December of 1999 the city received national attention for its abandoned buildings when six firefighters lost their lives battling a fire in one of the city's 200 abandoned structures. Like Lawrence, the decline of the mill industry led to changes in the makeup of the community. In Worcester a combination of industrial and residential buildings became vacant or abandoned, and vandals, criminals, and vagrants were drawn to the structures.

Following the firefighter fatalities the issue was highly publicized on a national level and the City of Worcester has begun projects to eliminate the problem. One issue with the abandoned buildings is that they must either be reused or demolished to become safe once more. Unfortunately, in Worcester many of the buildings cannot be economically renovated or demolished. With property values low, the cost of demolition due to hazardous materials and environmental concerns might be significantly higher than the value of the land. The same costs from hazardous materials removal, in addition to the cost of renovation and the low property value for renting and leasing space, also make renovations uneconomical.

The city has begun to take action in several ways. Firefighter safety has been stressed with the fire department beginning evaluations of vacant and abandoned structures to determine the hazards located within. These buildings are then rated and placarded to indicate the level of additional hazard that the building contains above and beyond that of a normal building.

A pre-incident plan is then created for the building. Using computer aided drawing and digital photography, the building is drawn and the specific hazards are shown graphically. This creates a very simple and easy to read plan that can be effectively used on the fire ground. The plans are formatted to be carried either in hard copy form or in a computer.

Lewiston, Maine

Lewiston, Maine, is in many ways similar to several of the communities listed above. The city was once largely occupied by mills, and the problems of the decline of that industry have affected this community as well. The city has a population of approximately 40,000 and is located along the Androscoggin River in inland Maine.

The mill companies brought many workers to the city from Canada and hastily built housing for them along the river near the mills. These residential structures are three and four story wood frame tenements. The construction was often balloon frame. In many areas these structures are as little as ten inches from one another, creating a huge fire exposure problem.

A decline in population led to a growing number of these tenements becoming vacant and abandoned. This caused problems with vagrancy and crime which have been established to lead to arson fires. The construction of the buildings, added to the close proximity, creates a very hazardous fire condition for neighboring residents and the firefighters who respond to the call.

The mill buildings themselves have become vacant and abandoned in many cases. These vast structures are very difficult to secure and maintain in such a state.

The city has taken many actions to battle the abandoned building problem. Demolition is very common in the area; the fire department's fire inspection bureau has for quite some time targeted buildings for demolition in a very strategic manner. If the funding cannot be found to demolish all the vacant buildings in an area, then every other building is torn down or problematic buildings are demolished to eliminate exposure problems.

Public and private partnerships have also been utilized to reuse structures. The greatest success in this area is the Bates Mill Complex. The complex is over a mile long and was at one time almost completely vacant. Using Community Development Block Grants and public private partnerships, the complex has been renovated and is being occupied by industry once more.

Currently, the fire department is assessing the city to identify as many of the vacant and abandoned buildings in the city as possible. At which point these buildings will be evaluated and ranked in order of hazard. This enables the greatest risk to the public and the firefighters to be eliminated first.

Cooperation between the city departments is being established and utilized for this task. This city has recently begun to use GIS in the public works department and this mapping will be used to aid the fire department in locating the abandoned structures. In return the fire department's survey of the city will be utilized to update the databases for the GIS department.

Wilson, North Carolina

Located in North Eastern North Carolina, Wilson was once the largest exporter of tobacco in the world. The city maintains a population of approximately 50,000 and contains a uneven dispersion of wealth.

The decline of the tobacco industry in recent years has led to many tobacco storage warehouses becoming vacant. These structures are most often large and constructed with wood. In an abandoned condition they would deteriorate very quickly.

In the past five years the city has been struck by three Presidential Disasters and several other disasters. These include three hurricanes, a flood described to be at 500 year levels, and a tornado. Of these disasters the flood has created a large abandoned building problem. While many of the structures have been demolished, a great number still stand. Crime and vagrancy have become an issue in many areas. Urban mining of valuable components of the homes is also common even in areas of low crime.

Many areas of the city are also suffering from abandonment and blight for other reasons. The high crime and low property values have led to large numbers of homes becoming vacant. Drug crime has become especially common in these areas.

The city has taken numerous steps to address the issue of abandoned buildings. Code enforcement officials in Wilson identified vacant or abandoned commercial buildings in the city and actively evaluate the structures. In the initial effort, one hundred and eighteen vacant commercial structures were identified and 32 of those were determined to be hazardous.

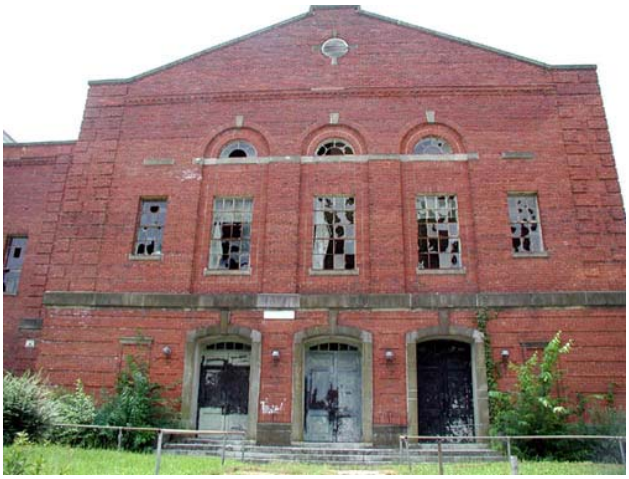
To manage the information, the city has an established and well funded GIS system which has been utilized in the process quite effectively. Using data from the fire, police and other city departments trends and target areas for proactive code enforcement and police patrol can be identified. Information on potentially hazardous structures is also provided to firefighters via computers in the responding apparatus.

The Fire Department has actively trained personnel in the various aspects of managing vacant and abandoned buildings. Fire officers were trained in the evaluation of the structures using the IAAI/USFA model outlined in this Tool Box. As part of the training, a vacant property was secured and firefighters trained on operations at these structures, including gaining access to secured buildings.[13]

One of the most striking examples of the mitigation of vacant and deteriorating properties was the rehabilitation of the cities former high school. Left vacant and unsecured for more than a decade, the property was unsightly and very dangerous with collapsed floors and ceilings, evidence of unauthorized access and accumulated combustible waste.

The property was acquired by a private entity and with the assistance of the community obtained funding to convert the building into moderate income housing for adults. The property was completely renovated, while preserving the architectural elements of the former school. The property is now a well kept, sprinkler protected source of needed housing for dozens of Wilson residents. The following photos depict the building before and after the renovation.

Former Wilson High School Building - 2001



Wilson High School Building After Renovation - 2004

Champaign, Illinois

Located in central Illinois, the city of Champaign has a population of approximately 72,000 and is the home to a large portion of the University of Illinois campus. Champaign is a growing community with significant development in annexed areas on the edges of the city.

The 2000 U.S. Census estimated that the community had 28,605 housing units. Nearly half of these units are single family homes. Another 30 percent of the units are in properties with 10 or more units.

Champaign is a well maintained community with a mix of business, industry and commercial property in addition to the University campus. The city has strong property maintenance codes that are actively enforced by a effective Neighborhood Services Department in conjunction with inspectors from the Fire Department and Building officials. The city Police Department also works closely with Neighborhood Services in the identification of problem properties.

The city utilizes integrated software to track properties, code violations and complaints. The system allows inspectors to attach photos of the property to the file as well as detailed information developed during inspections and the investigation of complaints. A key component of the system is the ability of other code enforcement and planning departments to access the data and to link pertinent information to the property file. While no specific data was maintained on vacant and abandoned properties, properties that generated complaints were tracked. The proprietary CodeTrack software is provided by CRW Associates.

The importance of developing and maintaining a database of vacant and abandoned properties in a community was observed during the site visit to Champaign. While the community is in general very well maintained, several properties were observed to be vacant and unsecured with significant evidence of unauthorized entry, accumulations of combustible materials and building deterioration. While the city can require that properties be secured, there are no specific guidelines for the type and quality of security measures such as the HUD Board-up method detailed by the IAAI/USFA Abandoned Building Project.

The rapid development in the community has also resulted in the emergence of a number of *greyfield* properties. These buildings formally housed large discount retailers and home building products stores. When the tenant required additional floor space the property was vacated and the retailer moved to a new facility leaving the large vacated properties empty or under utilized. This trend put a burden on city inspectors to verify that the facilities are properly secured and that installed fire protection systems are properly maintained.

The City of Champaign is currently reviewing the development of a specific vacant and abandoned building ordinance as advocated by the IAAI/USFA Abandoned Building Project. In addition, the city is in the process of implementing the use of GIS to expand the capabilities of the CodeTrack system already in use.

Appendix E – The Impact of Vacant and Abandoned Properties on Volunteer Fire Departments

The Impact of Vacant and Abandoned Properties on Volunteer Fire Departments

On May 15, 2004 a focus group representing volunteer fire departments from four Mid-Atlantic States (Delaware, Maryland, New Jersey and Pennsylvania) met in Delaware to discuss the impact of abandoned and under utilized buildings on the delivery of fire services. Specific issues that guided those discussions included:

1. What impact do vacant and abandoned buildings have on the volunteer fire service?
2. Are volunteer fire departments aware of the assessment and evaluation tools currently available to help them and are those tools being used? If not, what obstacles exist that prevent the use of these tools?
3. What tools need to be made available to volunteer fire departments to better deal with vacant and abandoned buildings?
4. What strategies could be suggested to assist volunteer fire departments in dealing with vacant and abandoned buildings?
5. What is the extent of the vacant and abandoned building situation in political jurisdictions serviced by volunteer fire departments?
6. What type(s) of community support would assist in dealing with the vacant and abandoned building issue?

Impact

Every participant acknowledged that vacant and abandoned buildings represent greater hazards to firefighters than those buildings that are normally occupied. Buildings that are left open were identified as easier targets for vandalism, damage by natural elements, occupancy by homeless people (trespass) and illegal activity that could lead to fire calls.

Vacant buildings are generally not thought of as a problem for the fire service. Abandoned buildings are more viewed as community or societal issues than an issue for the fire service to deal with. The full impact of this issue is not felt until the tax base is significant eroded or there is a fire call that results in a significant (lost time) injury or fatality.

Assessment and Evaluation Tools

Because a larger number of volunteer fire departments have not recognized the potential vacant and abandoned building issue within their respective jurisdictions, little or no effort was expended to identify assessment and evaluation tools that could be used to address and act on the issue. A small percentage commented that they had obtained and used the USFA/IAAI CD-ROM as a tool to get buildings boarded up. When shown the evaluation form, there was agreement that this form provided useful information that could aid firefighters.

New Tools Needed

Participants identified two specific tools that they believed would be of benefit and value to volunteer fire departments in particular. The first was to develop and produce a brief (15 minutes or less in total length) video to use in educating firefighters in the dangers of vacant and abandoned buildings. Second, create lesson plans that could be used by company level officers in delivering classes to members of their fire companies on the topic of vacant and abandoned buildings. There was general agreement that company officers were more likely to use a tool that was created for them rather than one they had to create themselves.

Strategies

Encourage fire departments to add the use of Thermal Imaging Cameras to fire department operations. These can also be used in preplanning to find people illegally occupying a vacant or abandoned building during a building assessment.

Consider the use of video tape when conducting tours and assessments to be shared with firefighters.

Use special operations teams to conduct building assessments and evaluations of vacant and abandoned buildings along with code enforcement.

Create levels of training on vacant and/or abandoned buildings for the fire service personnel commensurate with their responsibilities.

1. Awareness - all in the fire service need to be aware of certain dangers inherent in these buildings.
2. Operations - company officers need to be able to employ specific strategies and tactics designed especially for vacant and abandoned buildings.
3. Technician - Chief Officers and special operations team members that need to be ready for anything.

Firefighters need to recognize that building constructed in the last 20 years are likely to be must lighter in weight and pose a greater collapse potential than older buildings that were constructed with more substantial materials and fire resistance.

Firefighters need to recognize that certain building elements may have reached the end of their reliable useful life.

Special operations teams may have tools and equipment that makes them better suited to respond to fires and operations in vacant and abandoned buildings. Consideration should be given by incident commanders to mobilize special operations type teams to confirmed fires in vacant and/or abandoned buildings.

Consider requiring a permit before a building is allowed to remain vacant past a certain period of time. This would assure that code compliance issues were identified and addressed rather than overlooked by owners and other responsible parties.

Extent of Issue

Several participants acknowledged that they had not given the issue of vacant or abandoned buildings "much thought", but upon further reflection remarked that there were a number of such buildings within their respective jurisdictions. They also commented that they had not taken any special precautions regarding these buildings. As such, there were no building identification programs in place nor were there any drills or training done to target vacant and/or abandoned buildings.

Some firefighters identified "spec" buildings that received tax abatement for being built as adding to the vacancy problem. The issue is that when the tax abatement expires and/or the business grows beyond the capability of the building, the business moves to a new location or a new, larger building is erected with yet another new tax abatement issued to stimulate growth. This new type of vacant building is identified as an "under utilized" building. Changes in the consumer marketplace as well as commercial economic forces all contribute to this phenomenon.

Communities that have identifiable homelessness and/or an above average level of juvenile delinquency noted anecdotally that fire department responses seemed to be more frequent to vacant and abandoned buildings for actual fire calls than occupied buildings.

Community Support

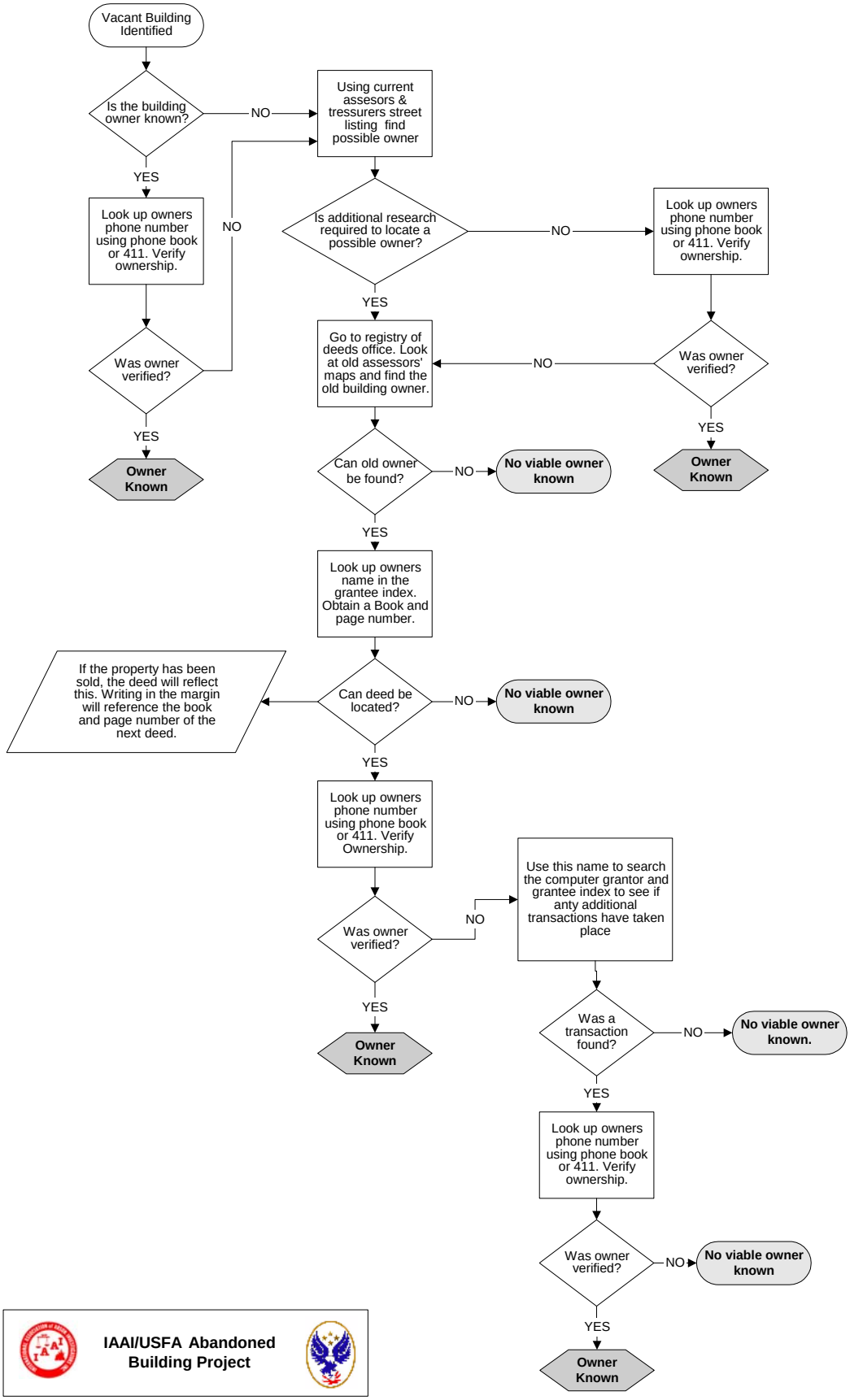
More frequent and more formal mechanisms of communication between the fire department and other local agencies was viewed as better enabling the fire service to deal with vacant and/or abandoned buildings. Specifically, building departments, code enforcement offices, and the police department were seen as agencies that offered the greatest potential of sharing information dealing with vacant and/or abandoned buildings.

There was a recognition that rehabilitating existing housing stock would return vacant and abandoned buildings to a useful purpose. Additionally, if these rehabilitated housing units were used to provide housing for those that are currently homeless, a pressing societal problem could also be addressed. However, this was viewed as a item that required overall community support and not something that the fire service alone could implement.

Prepared by Gerald Naylis
Past President, IAAI

Appendix F - Finding The Owner Flow Chart

Locating Vacant and Abandoned Building Owners



Appendix G – Building Marking

Placards or marks on vacant and abandoned properties provide a visual indication of the potential hazard the structure poses to emergency responders. The markings system shown here is based on the system used by FDNY in New York City. Other jurisdictions may utilize different systems but the objective should be to warn firefighters and other emergency responders that the building poses hazards that are significantly greater than buildings that are maintained and in good repair. Building may be marked using signs or the marks may be painted on to outside walls of the building. Markings should be readily visible from normal access points of the building.

The sign depicted here is 2 ft x 2 ft and is printed on corrugated plastic sign stock.

Exterior operations only – Enter only for known life hazard

Interior operations permitted – Enter building with extreme caution

Appendix H – Funding Sources

Community Development Block Grant (CDBG) Programs

Community Development activities include many different programs that provide assistance to a wide variety of grantees. Begun in 1974, the Community Development Block Grant (CDBG) is one of the oldest programs in HUD. The CDBG program provides annual grants on a formula basis to many different types of grantees through several programs like:

- Entitlement Communities
  The program provides annual grants on a formula basis to entitled cities and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons.
- State Administered CDBG
  States participating in the CDBG Program award grants only to units of general local government that carry out development activities. Annually each State develops funding priorities and criteria for selecting projects.
- Section 108 Loan Guarantee Program (Section 108 Program)
  Community Development Block Grant (CDBG) entitlement communities are eligible to apply for a guarantee from the Section 108 Loan Guarantee program. CDBG non-entitlement communities may also apply, provided that their State agrees to pledge the CDBG funds necessary to secure the loan. Non-entitlement applicants may receive their loan guarantee directly or designate another eligible public entity such as an industrial development authority, to receive it and carry out the Section 108 assisted project.
- Disaster Recovery Assistance
  HUD provides flexible grants to help cities, counties, and States recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations.
- Colonias
  Texas, Arizona, California and New Mexico set aside up to 10 percent of their State CDBG funds for use in colonias.

Another program, Renewal Communities/ Empowerment Zones/ Enterprise Communities (RC/EZ/EC) is an innovative approach to revitalization, bringing communities together through public and private partnerships to attract the investment necessary for sustainable economic and community development.

The Community Development Block Grant (CDBG) program works largely without fanfare or recognition to ensure decent affordable housing for all, and to provide services to the most vulnerable in our communities, to create jobs and expand business opportunities. CDBG is an important tool in helping local governments tackle the most serious challenges facing their communities. The CDBG program has made a difference in the lives of millions of people living in communities all across this Nation.

The annual appropriation for CDBG is split between states and local jurisdictions called "entitlement communities". Entitlement communities are central cities of Metropolitan Statistical Areas (MSAs); other metropolitan cities with populations of at least 50,000; and qualified urban counties with populations of at least 200,000 (excluding the population of entitled cities). States distribute the funds to localities who do not qualify as entitlement communities.

HUD determines the amount of each grant by a formula which uses several objective measures of community needs, including the extent of poverty, population, housing overcrowding, age of housing and population growth lag in relationship to other metropolitan areas.

Citizen Participation

A grantee must develop and follow a detailed plan which provides for, and encourages, citizen participation and which emphasizes participation by persons of low- or moderate-income, particularly residents of predominantly low- and moderate-income neighborhoods, slum or blighted areas, and areas in which the grantee proposes to use CDBG funds. The plan must provide citizens with reasonable and timely access to local meetings, an opportunity to review proposed activities and to review program performance; provide for timely written answers to written complaints and grievances; and identify how the needs of non-English speaking residents will be met in the case of public hearings where a significant number of non-English speaking residents can be reasonably expected to participate.

Eligible Activities

Over a 1, 2, or 3 year period selected by the grantee not less than 70% of the CDBG funds must be used for activities that benefit low- and moderate-income persons. All activities must meet one of the following national objectives for the program: benefit low- and moderate-income persons, prevention or elimination of slums or blight, community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community.

Content updated February 2, 2005

U.S. Department of Housing and Urban Development
451 7th Street S.W., Washington, DC 20410
Telephone: (202) 708-1112 TTY: (202) 708-1455

Historic Preservation

Congress made the Federal Government a full partner in historic preservation with passage of the National Historic Preservation Act in 1966. As amended in 1992, Section 110 of the Act calls for, among other things, Federal agencies **to establish preservation programs, commensurate with their mission and the effects of their activities on historic properties, that provide broadly for careful consideration of historic properties**.

HUD and governments which assume responsibility for administering environmental HUD environmental laws must comply with historic preservation review requirements found in Section 106 of the National Historic Preservation Review Act

The Advisory Council on Historic Preservation issues regulations implement The Historic Preservation Act. HUD assistance must comply with the ACHP Regulations.

Historical Preservation Review Resources

The National Register Collection
These files hold information on nearly one million individual resources-historic buildings, sites, districts, structures, and objects. The documentation on each property consists of photographs, maps, and a National Register registration form, which provides a physical description of the place, information about its history and significance, and a bibliography.

- Look Up Historic Places by State and County
- Other Resource Links

U.S. Department of Housing and Urban Development
451 7th Street S.W., Washington, DC 20410
Telephone: (202) 708-1112 TTY: (202) 708-1455

Content updated December 17, 2004

Historic Preservation Documents

- **Preserving America**
  
  Historic Preservation and Heritage Tourism in Housing and Community Development: A Guide to Using Community Development Block Grant Funds for Historic Preservation and Heritage Tourism in Your Communities
  Press Release | CDBG Website
  - PDF High Resolution (10.2 MB)
  - PDF Low Resolution (0.4 MB)
  - WORD (0.3 MB)

- **Linking Historic Preservation to CDBG Objectives**
  Published in 1991, this Guide illustrates the various methods by which historic preservation can be linked to other eligible activity under the CDBG Program.

  more...

EPA Brownfields Program

About Brownfields

Brownfields Mission

Brownfields Brochure
EPA 560-F-04-258
[PDF (564K) 2 Pages]
September 2004

Brownfields Law
EPA 500-F-02-134
[PDF (141K) 2 Pages]
October 2002

Since its inception in 1995, EPA's Brownfields Program has grown into a proven, results-oriented program that has changed the way contaminated property is perceived, addressed, and managed. EPA's Brownfields Program is designed to empower states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. It is estimated that there are more than 450,000 brownfields in the U.S. Cleaning up and reinvesting in these properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development pressures off of undeveloped, open land, and both improves and protects the environment. Initially, EPA provided small amounts of seed money to local governments that launched hundreds of two-year brownfield "pilot" projects. Through passage of the Small Business Liability Relief and Brownfields Revitalization Act, effective polices that EPA had developed over the years were passed into law. The Brownfields Law expanded EPA's assistance by providing new tools for the public and private sectors to promote sustainable brownfields cleanup and reuse.

Brownfields grants continue to serve as the foundation of EPA's Brownfields Program. These grants support revitalization efforts by funding environmental assessment, cleanup, and job training activities. Brownfields Assessment Grants provide funding for brownfield inventories, planning, environmental assessments, and community outreach. Brownfields Revolving Loan Fund Grants provide funding to capitalize loans that are used to clean up brownfields. Brownfields Job Training Grants provide environmental training for residents of brownfields communities. Brownfields Cleanup Grants provide direct funding for cleanup activities at certain properties with planned greenspace, recreational, or other nonprofit uses.

EPA's investment in the Brownfields Program has resulted in many accomplishments, including leveraging more than $6.5 billion in brownfields cleanup and redevelopment funding from the private and public sectors and creating approximately 25,000 new jobs. The momentum generated by the Program is leaving an enduring legacy. The Brownfields Program and its partners have provided guidance and incentives to support economic revitalization, and empowered communities to address the brownfields in their midst. EPA's Brownfield Program continues to look to the future by expanding the types of properties it addresses, forming new partnerships, and undertaking new initiatives to help revitalize communities across the nation.

Brownfields Contact Information

US EPA
Office of Brownfields Cleanup and Redevelopment
Mail Code 5105 T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Office of Brownfields Cleanup and Redevelopment:
(202) 566-2777
Fax: 202-566-2757

Brownfields Mission

EPA's Brownfields Program is designed to empower states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. EPA's Brownfields Program provides financial and technical assistance for brownfields activities through an approach based on four main goals:

- **Protecting the Environment**
  Addressing brownfields to ensure the health and well-being of America's people and environment.
- **Promoting Partnerships**
  Enhancing collaboration and communication essential to facilitate brownfields cleanup and reuse.
- **Strengthening the Marketplace**
  Providing financial and technical assistance to bolster the private market.
- **Sustaining Reuse**
  Redeveloping brownfields to enhance a community's long-term quality of life.

`

Brownfields Success Story

Old Town's New Look: Along the Waterfront, an Abandoned Manufacturing Site Joins Two City Parks

On the banks of the Penobscot River in Old Town, Maine, three acres of contaminated property once home to a paper plate and cup manufacturer will soon be a recreational area with a playground, a bandstand, paths for running and biking, and a winter skating rink. The former Lily-Tulip Company site had been abandoned for seventeen years, until the City arranged to purchase the property in a settlement with the previous owner for unpaid taxes. The City found transformers on the site containing Polychlorinated Biphenyls (PCBs). "We weren't sure what kind of liability we were looking at," explains Charles Heinonen, City Engineer. "If even one of the transformers had leaked PCB-contaminated oil, the City might have been faced with a very expensive cleanup project." EPA determined the true extent of contamination in late 1996, as part of the Agency's Targeted Brownfields Assessment (TBA) program. At a cost of approximately $20,000, EPA's assessment of the former Lily-Tulip property revealed much lower levels of PCB contamination than originally feared. With EPA's assistance, the City reached an agreement with two prior owners of the property to defray a significant portion of cleanup costs. Cleanup is now complete. In January 1998, the City held a public hearing at which a detailed plan to transform the site into a large, open recreational area was unveiled. In addition to a new bandstand and running and biking paths, the site's "Central Lawn" will be flooded every winter to create a skating pond. At subsequent public meetings, suggestions from local residents contributed to what would become the master plan for Old Town's new recreational and commercial area. A redevelopment fund containing over $100,000 has already been established. The success of the former Lily-Tulip site has already inspired redevelopment in other areas of the City, according to Heinonen. And as assessments proceed on additional sites selected by EPA Region 1 for TBA funding, other communities across New England may enjoy the same level of success as Old Town. For more information on EPA Region 1's Targeted Brownfields Assessment program, contact Lynne Jennings of EPA Region 1 at (617) 573-9634.

Transformers are removed from the Lily-Tulip site

Underground storage tank removal

Appendix I – Developing a Vacant Property Ordinance

IAAI/USFA
Abandoned Building Project

Developing Vacant Property Ordinances

2006 Revision

Developing Vacant Property Ordinances

Table of Contents

Developing Vacant Property Ordinances

Objective

The objective of local ordinances is to provide a jurisdiction with the legal framework necessary to regulate zoning, building, safety and other maters in the municipality. In the case of vacant and abandoned properties, most of the model building codes used by states and other jurisdictions provide general language regarding the application of the code to unsafe or hazardous structures. A vacant property ordinance goes beyond these general provisions and defines the process the jurisdiction will use to implement and enforce these provisions at the local level.

Model Building and Fire Codes

Model building codes use in the United States generally define unsafe structures and provide requirements for the property to be made safe by repair or demolition. The following provisions are examples of these requirements from building codes developed by the International Code Council, Inc. (ICC) and the National Fire Protection Association (NFPA):

> ***International Building Code*, 2000 Edition**
>
> Section 115 Unsafe Structures and Equipment. Structures or existing equipment that are or hereafter become unsafe, unsanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or which involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.
>
> **NFPA 5000, *Building Construction and Safety Code*, 2003 Edition**
>
> 1.7.5.3.1.1 Description of Unsafe Building. All buildings that are, or that hereafter become, as follows shall be considered unsafe buildings:
>
> (1) Unsanitary
> (2) Deficient in means of egress
> (3) A hazard from fire or natural or man-made threats
> (4) Dangerous to human life or public welfare by reason of illegal or improper use, occupancy, or maintenance
> (5) Noncompliant with the provisions of applicable codes
> (6) Significantly damaged by fire or explosion or other natural or man-made cause
> (7) Incomplete buildings for which building permits have expired
> (8) The falling away, hanging loose, or loosening of any siding, block, or other building material, structural member, appurtenance, or part thereof of a building; or the deterioration of the structure or structural parts of a building, a partially destroyed building, or any part of a building when caused by deterioration or overstressing
> (9) The existence of unsanitary conditions by reason of inadequate or malfunctioning sanitary facilities or waste disposal systems

1.7.5.3.1.2 Description of Building as a Fire Hazard. A building shall be deemed to be a fire hazard and unsafe under the following conditions:

(1) When vacant and unguarded and open to unauthorized entry at door or window

(2) When there is an accumulation of combustible dust, debris, or materials therein deemed to be a hazard by the authority having jurisdiction

(3) When the building does not provide the exits or fire protection required herein for the most recent occupancy

(4) When electrical or mechanical installations or systems create a hazardous condition

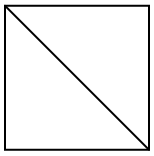
1.7.5.3.2 Authority of the Authority Having Jurisdiction Regarding Unsafe Buildings or Buildings that Are a Fire Hazard. All buildings deemed to be unsafe or to be a fire hazard by the authority having jurisdiction, based on 1.7.5.3.1, are hereby declared to be public nuisances and shall be demolished and removed from the premises concerned or shall be made safe and sanitary in a manner acceptable to the authority having jurisdiction and as provided in Section 1.7 and by other applicable laws, rules, and regulations of the jurisdiction.

Fire codes adopted by jurisdictions generally provide requirements for the control of hazards within a vacant/abandoned property, building security and the maintenance of fire protection systems. Fire codes may also provide for marking systems to alert emergency responders to potential hazards in vacant/abandoned properties. The following is an example of the language included in the Massachusetts Fire Code CMR 527 after the Worcester Cold Storage Fire in 1999:

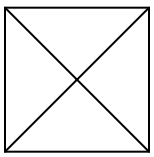
10.13(7) Marking or identifying certain buildings that are especially unsafe in the case of fire.

(a) Any building determined to be especially unsafe in case of fire, under the provisions of 780 CMR 121.2 shall be identified and marked by the building official, with the cooperation of the head of the fire department, to indicate the degree of hazard.

(b) In marking such buildings, the following symbols shall be used:



This symbol shall mean that interior hazard exists to such a degree that interior operations shall be conducted with extreme caution. This symbol shall not in any way limit the discretion of the on scene Incident Commander in directing operations that the Incident Commander deems necessary.



This symbol shall mean that exterior or interior hazards exists to such a degree that consideration should be given to conduct operations from the

exterior only. This symbol shall not in any way limit the discretion of the on scene Incident Commander in directing operations that the Incident Commander deems necessary.

(c) Markings shall be applied on the front of the building at or above the second floor level, where practical, between openings such that they are visible from the street. Markings may be applied to the sides or the rear of a building if the head of the fire department deems such placement necessary. Markings shall also be applied in a conspicuous place near every entrance and on penthouses. Markings shall not be applied over doors, windows, or other openings where they may be obscured by smoke or fire.

(d) Markings shall be a minimum of 24 inches by 24 inches. Markings shall either be on a placard with a reflective background or painted with a reflective paint of contrasting color directly on the surface of the building. Stripes and borders outside of the marking shall be a minimum of 2 inches wide.

(e) All markings shall bear a date as to when applied or the date of the most recent inspection.

(f) Prior to receiving a mark, all buildings shall be inspected thoroughly by the head of the fire department.

(Commonwealth of Massachusetts, 527 CMR Fire Code)

While these provisions provide the authority for a jurisdiction to act, they are not specific as to the process used to identify the properties and the actions the jurisdiction will take. Where allowed by law, the local ordinance allows the jurisdiction establish specific requirements regarding the identification of unsafe properties, requirements for inspecting these properties, the levels of security required by the jurisdiction, and the justification for demolition should that action be deemed necessary. The ordinance should also define how the actions of the jurisdiction will be paid for where there is no viable owner for the property.

Developing a Vacant/Abandoned Building Ordinance

The development process for a vacant/abandoned building ordinance should be one that is open to input from the community, as well as departments and agencies that have responsibility within the community. Involving the stakeholders throughout the development process will assure that the ordinance includes provisions that represent the issues in the community and assists in building support when it is presented for adoption. Stakeholders in the development process may include:

- Mayor or City Manager
- Assessor
- Tax Collector
- Treasurer
- Development Director
- City Attorney (Solicitor)
- Police Department
- Fire Department
- Public Works Department
- Building Official
- Health Department
- Neighborhood groups
- Property owners associations
- Real Estate Associations
- Social Service Organizations

The process used to develop the ordinance should follow the requirements of the jurisdiction. The resulting document should also be in the proper format for the ordinance to be adopted. A sample format and examples of requirements from several ordinances are provided in the Components of a Vacant Property Ordinance section.

Ordinance Development Process

The process outlined in this section is provided as an example for use in planning the process that will be used to develop a vacant property ordinance for a community. As discussed above, the process used should follow the requirements of the jurisdiction. The process elements included here are offered as suggestions to assist in the development of a usable document. The actual writing of the ordinance will more that likely be assigned to an individual or department with the community. However, input from stakeholders should be obtained throughout the development process. The stakeholders can also provide input to the questions posed in this section. Finally, the pitfalls discussion is intended to give the development team ideas of where issue, problems and opposition may develop as the ordinance is developed and finally submitted for adoption.

A. Public input – Community involvement

Input from the community and departments or agencies that are stakeholders in the mitigation of vacant and abandoned properties in the community should be obtained throughout the development process. Stakeholder involvement will increase the effectiveness of the document and should provide support base once the completed ordinance is submitted for the adoption.

B. Identify the need – What is the problem?

To begin the process, an assessment of the problems posed by vacant and abandoned properties in the jurisdiction should be undertaken. Many communities do not have an accurate picture of the issues that these properties pose. This data will provide a direction for the development of an ordinance that meets the needs of the jurisdiction. The needs assessment phase should also explore what is currently being done in the community and how these properties are tracked by the various departments and agencies with jurisdiction. Once the magnitude of the problem is determined, the objectives of a vacant/abandoned building ordinance should be established. These objectives should define the components and requirements of the proposed ordinance.

C. Anti-blight v. Vacant Property Ordinances

Many communities include requirements applicable to vacant or abandoned properties in "anti-blight" ordinances. In the context of these requirements blight is defined as a "deteriorated condition". Thus anti-blight ordinances typically include provisions related to weed control, the accumulation of unregistered motor vehicles, the accumulation of trash and vacant or abandoned properties. An example of an anti-blight ordinance is found on the interFire web site http://www.interfire.com/res_file/ord.asp. Examples from this example are used in the Components section below.

Other communities have addressed vacant and abandoned properties in ordinances that are specific to the issue or in building regulations. The decision as to how requirements for vacant/abandoned properties will be included in a jurisdiction's codes and ordinances should be made early in the development process. As discussed in the section on pitfalls to the development process below, the decision to use an anti-blight model may not be acceptable to many of the stakeholders and could impede the adoption of the ordinance.

D. Performance v. Prescriptive requirements

When developing requirements for the management of vacant or abandoned properties in a community the development team should determine the format for the requirements. Typically, codes and ordinances are written with prescriptive requirements. Prescriptive ordinances describe the issue and define in some detail the actions that are acceptable. As an example, the anti-blight ordinance referenced earlier in this section provides prescriptive requirements for securing a vacant or abandoned property. The document states:

> This Ordinance shall describe the only acceptable manner in which vacant buildings officially classified by said Anti-Blight Committee as blighted or which fall within the provisions of this Ordinance; Section 2 Definitions, sub-section A. Blighted Premises, shall be heretofore secured within the City. Securing buildings in any other less effective fashion shall constitute an unacceptable violation of this Ordinance
>
> *(Suggested Draft Anti-Blight Ordinance, InterFIRE.com)*

The ordinance goes on to fully describe the process that will be used to secure a structure.

A new trend in the development of codes and standards involves the use of performance based requirements. Performance based requirements are based on specific performance objectives rather than generic requirements. The developer of the performance based ordinance would develop a specific set of objectives the jurisdiction desired to achieve in the mitigation of vacant and abandoned properties. Using the example of building security from above, the objective might be – *The building shall be secured to prevent any unauthorized entry into the structure through doors, windows or other openings to the outside.* This objective based requirement would allow the responsible party for the building to use a number of methods to secure a property as long as the objective of preventing unauthorized entry was met. These methods could include fencing the perimeter of the property, using security guards, installation of intrusion detection systems or the board up process identified in the prescriptive requirements above. This objective would also allow the responsible party to simply close and lock windows and doors in structures where they are intact and there is a low potential for trespass. Well defined performance objectives in ordinances allow jurisdictions to set criteria for vacant and abandoned property without including excessive technical detail.

To be effective, ordinances developed with prescriptive or performance requirements should include a method that can be used by the jurisdiction to measure performance or adherence to the requirements or objectives included in the document.

E. Pitfalls in the development process

The development of any regulation by a jurisdiction has the potential for opposition by one or more of the stakeholders in the community. Any vacant or abandoned building ordinance should be developed so that the values and priorities of the community are reflected in the requirements. As discussed above, there may be communities where adoption of a strong anti-blight ordinance that included requirements for vacant and abandoned buildings would not be acceptable to the citizens or their elected officials. In other cases the establishment of fees and required bonds for vacant properties may generate opposition from property owners.

When developing a vacant/abandoned building ordinance issues related to the enforcement of the requirements should be addressed. If one of the departments, agencies or officials assigned responsibility by the ordinance is not willing or capable of performing the assigned duties opposition to adoption can be expected. In communities where tax dollars are limited and vacant properties are increasing methods of properly funding the implementation of an ordinance should also be addressed in the planning and development process. It will do no good to adopt requirements that can not or will not be enforced.

Establishing good communications with all of the stakeholders, soliciting broad community input in the early stages of the development process and developing clear objectives that are relevant to the community are key strategies that should be employed to develop an ordinance that will be effective in the mitigation of these unsightly and dangerous properties.

Basic Components of an Ordinance

Ordinances developed by local jurisdictions , regardless of purpose, will generally include the following basic provisions or structural elements:

1. Title
2. Findings
3. Purpose and Intent
4. Definitions
5. Determination of deficiencies
6. Jurisdiction – Duties/Responsibilities/Powers
7. Requirements/Standards
8. Enforcement/penalties/Due Process or Appeals
9. Severability

The development of any ordinance should be based on the specific requirements and needs of the jurisdiction. The city or municipal attorney for the jurisdiction should be consulted regarding the specific format and legal ramifications prior to drafting the proposed document. As with any regulation, the needs of the community and the desired outcomes of the process should be identified and addressed in the development process.

Components of a Vacant Property Ordinance

Each of the basic provisions of a vacant/abandoned property ordinance are discussed in this Section. Examples of the provisions from ordinances that have been adopted by various jurisdictions are provided to illustrate the options that are available and how specific issues and needs are addressed.

1. Title

The ordinance should have a brief descriptive title that includes the Chapter and section of the local ordinances that it represents. The title section may also include adoption information and references to other codes and standards and sections of the local ordinances.

Unsafe Building Ordinance

AN ORDINANCE OF THE (CITY/VILLAGE) OF _____, MISSOURI, REGARDING DANGEROUS BUILDINGS AS NUISANCES AND THEIR REMOVAL OR RECONDITIONING, PROVIDING FOR THEIR DEMOLITION OR REPAIR BY THE (CITY/VILLAGE) AND PERTAINING TO INSURANCE PROCEEDS FROM DAMAGE OR LOSS TO BUILDINGS OR STRUCTURES.

BE IT ENACTED BY THE COUNCIL OF THE (CITY/VILLAGE) OF _____, MISSOURI, AS FOLLOWS:

(Missouri Municipal League, Sample/Model Ordinances)

Chapter 39 ABANDONED STRUCTURES*

***Cross references:** Health and sanitation, Ch. 17; buildings and structures generally, Ch. 40.
State law references: Dangerous buildings, G.S. 160A-425 et seq.

(Municipal Code of the City of Wilson, NC)

2. Findings

The *Findings* sections establishes the reasons the that jurisdiction find it necessary to adopt the ordinance. The section can also be used to provide the reader with the intent and benefits of the requirements.

Sec. 39-2. Finding; intent.

It is hereby found that there exist within the city abandoned structures which the city council finds to be hazardous to the health, safety and welfare of the residents of the city due to:

(1) The attraction of insects or rodents.
(2) Conditions creating a fire hazard.
(3) Dangerous conditions constituting a threat to children.
(4) Frequent use by vagrants as living quarters in the absence of sanitary facilities.

Therefore, pursuant to the authority granted by G.S. 160A-441 et seq., it is the intent of this chapter to provide for the repair, closing or demolition of any such abandoned structures in accordance with the same provisions and procedures as are set forth in sections 43-15 through 43-21 for the repair, closing or demolition of dwellings unfit for human habitation.

(Municipal Code of the City of Wilson, NC)

Section 1 - Declaration of Policy

It is hereby found and declared that there exist within the City of ---------- a large number of real properties which contain vacant, abandoned or blighted buildings and the existence of said vacant and blighted properties contributes to the decline of our neighborhoods. It is further found that the existence of vacant and blighted buildings affects the economic well being of this city and is inimical to the health, safety and welfare of the residents of said neighborhoods. It is further found that many of the vacant and blighted buildings can be rehabilitated and reconstructed so as to provide decent, safe and sanitary housing and ancillary commercial facilities, and that such rehabilitation, reconstruction and reuse would eliminated, remedy and prevent the adverse conditions described above.

(Suggested Draft Anti-Blight Ordinance, InterFIRE.com)

3. Purpose

The *Purpose* section identifies the goals to be achieved by the ordinance.

Section 1. Purpose and scope.
It is the purpose of this ordinance to provide a just, equitable and practicable method for the repairing, vacation or demolition of buildings or structures that may endanger the life, limb, health, property, safety or welfare of the occupants of such buildings or the general public, and this ordinance shall

apply to all dangerous buildings, as herein defined, that now are in existence or that may hereafter exist in the (city/village) of _____, Missouri.

(Missouri Municipal League, Sample/Model Ordinances)

4. Definitions

The *Definitions* section of the ordinance provided definitions of key terms used in the ordinance.

Section 2. Dangerous buildings defined.
All buildings that are detrimental to the health, safety or welfare of the residents of the (city/village) and that have any or all of the following defects shall be deemed "dangerous buildings":

1) Those with interior walls or other vertical structural members that list, lean or buckle to such an extent that a plumb line passing through the center of gravity falls outside the middle third of its base.
2) Those that, exclusive of the foundation, show thirty-three (33) percent or more damage or deterioration of the supporting member or members, or fifty (50) percent damage or deterioration of the nonsupporting enclosing or outside walls or covering.
3) Those that have improperly distributed loads upon the floors or roofs, or in which the same are overloaded or that have insufficient strength to be reasonably safe for the purpose used.
4) Those that have been damaged by fire, wind or other causes so as to become dangerous to life, safety or the general health and welfare of the occupants or the people of the city.
5) Those that are so dilapidated, decayed, unsafe, unsanitary or that so utterly fail to provide the amenities essential to decent living that they are unfit for human habitation, or are likely to cause sickness or disease, so as to work injury to the health, safety or welfare of those occupying such building.
6) Those having light, air and sanitation facilities that are inadequate to protect the health, safety or general welfare of human beings who live or may live therein.
7) Those having inadequate facilities for egress in case of fire or panic or those having insufficient stairways, elevators, fire escapes or other adequate means of evacuation.
8) Those that have parts thereof that are so attached that they may fall and injure members of the public or property.
9) Those that because of their condition are unsafe, unsanitary or dangerous to the health, safety or general welfare of the people of this city.

(Missouri Municipal League, Sample/Model Ordinances)

Listing 11.11.040 Boarded-Up Building Defined.
A "boarded-up building" is a building any exterior opening of which is closed by any extrinsic device or in any manner designed or calculated to be permanent and which gives to the building the appearance of nonoccupancy or nonuse for an indefinite period of time. After two years a boarded-up building becomes an unfit building as provided in Section 11.11.420.

(Spokane Municipal Code, Spokane, WA)

Section 2 - Definitions
For the purpose of this ordinance, the following words and terms shall have the meanings respectively ascribed as follows:

A. “Blighted Premises” - shall mean any vacant building or structure or any portion of said property that is defined by one or more of the following definitions:

(1) It is determined by the City that existing conditions pose a serious or immediate danger to the community; i.e. a life threatening condition or a condition which puts at risk the health or safety of citizens of the City.

(2) It is not being maintained; the following factors may be considered in determining whether a structure or building is not being maintained; missing or boarded windows or doors; a collapsing or missing wall, sagging or collapsed roof or floor; siding that is seriously damaged or missing; fire damaged; a foundation that is seriously damaged or missing; a foundation that is structurally faulty; or garbage, trash or abandoned cars situated on the premises (unless the premises is a legal junk yard.)

(3) It is becoming dilapidated;

(4) It has attracted illegal activity;

(5) It is a fire hazard;

(6) It is a factor in materially depreciating property values in the immediate neighborhood because of its poorly maintained condition;

(7) It is a factor creating a substantial and unreasonable interference with the reasonable and lawful use and enjoyment of other space within the building or of other premises within the neighborhood;

(8) It constitutes a health or sanitary problem.

B. "Blighted" - shall mean deteriorated, in a state of ill repair, filthy, decaying.

C. "Administrator"- shall mean the Commissioner of Codes of the City.

D. "Dilapidated"- shall mean a state of decay or partial ruin.

E. "Vacant" - shall mean a building or structure which has been unoccupied for a period of sixty (60) days or longer during which the building or a portion thereof is not legally occupied. Under the provision of this ordinance enforcement action may proceed without regard to a period of vacancy whenever any unoccupied building attracts criminal activity, is a health risk because of trash disposal or other condition, is blighted, or otherwise falls under the condition generally described in Section 1, Declaration of Policy.

F. "Legal Occupancy" - shall mean occupancy that is legal by virtue of compliance with State Building codes, State Fire Safety codes, local zoning codes, housing codes, and all other pertinent codes, which must be substantiated by a ownership, a mortgage, a lease agreement, or a rent statement.

G. "Neighborhood"- shall mean an area of the City comprised of all premises or parcels of land any part of which is within a radius of 600 feet of any part of another parcel or lot within the City limits.

H. "Unit" - shall mean any space within a building that is or can be rented by or to a single person or entity for his or its sole use, and is intended to be a single and distinct space.

I. "Vacant Parcel" - shall mean a parcel of land with no structures thereon.

(Suggested Draft Anti-Blight Ordinance, InterFIRE.com)

5. Determination of Deficiencies

This section should define the process of identifying properties that the ordinance applies to and the inspection process that the jurisdiction will initiate.

Sec. 18-190, Inspections.

(a) *Generally*. The city building department with the assistance of the city fire department and/or Fire Marshall shall forthwith undertake systematic inspection of all vacant buildings in the City of Ypsilanti. Vacant buildings shall be re-inspected periodically monthly.

(b) *Scope of inspection*. The inspection shall include review of building security including the means used to prevent unauthorized access, and all fire risks and potential hazards, including but not limited to, structural building materials (type and age), renovations that may be encountered during a fire, unprotected hazardous materials and fuel packages, open shafts, pits and holes due to removal of equipment, structural degradation due to weather and vandalism, exposed structural members, penetrations in barriers such as walls, floors, and ceilings that allow abnormal fire travel, combustible contents, maze-like configurations, blocked or damaged stairs, and whether fire alarm and suppression systems are present and working.

(Ypsilanti City Code, Ypsilanti, MI)

Sec. 39-6. Procedure for enforcement.

Whenever a petition is filed with the housing inspector by a public authority or by at least five (5) residents of the city charging that any abandoned structure is in violation of this chapter, or whenever the housing inspector determines, upon inspection, that any abandoned structure is in violation of this chapter, he shall, by service of a complaint and notice of hearing, initiate the same procedure for enforcement as is contained in section 43-15. In all relevant respects, the procedure for enforcement of this chapter shall be identical to that contained in sections 43-15 through 43-21.
(Code 1969, § 36 1/2-6)

(Municipal Code of the City of Wilson, NC)

Jurisdictions should consider requiring the inspection of buildings that are vacant or deteriorating. The inspection process provides information regarding the property and the responsible parties. The data developed during the inspection should then be made available to the applicable departments or agencies in the jurisdiction for use in planning and mitigating any hazards identified during the inspection. The inspection process can also be linked to the security requirements identified in the Requirements/Standards section of the ordinance. Properties that show signs of unauthorized access or criminal activity may require a higher level of security that those in areas where vandalism and criminal activity is not prevalent.

6. Duties/Responsibilities/Powers

This section assigns the responsibility for implementation and enforcement of the ordinance and identifies the powers delegated to the various agencies within the jurisdiction.

Section 5. Building inspector.

All city police officers and all other (city/village) employees so designated by the (mayor, city manager/administrator) shall be building inspectors within the meaning of this ordinance.

Section 6. Duties of building inspector; procedure and notice.

The building inspector shall have the duty under this ordinance to:

1) Inspect, or cause to be inspected, as often as may be necessary, all residential, institutional, assembly, commercial, industrial, garage, special or miscellaneous occupancy buildings for the purpose of determining whether any conditions exist that render such places a dangerous building when he has reasonable grounds to believe that any such building is dangerous.

2) Inspect any building, wall or structure about which complaints are filed by any person to the effect that a building, wall or structure is or may be existing in violation of this ordinance, and the building inspector determines that there are reasonable grounds to believe that such building is dangerous.

3) Inspect any building, wall or structure reported by the fire or police departments of this (city/village) as probably existing in violation of this ordinance.

4) Notify in writing, either by personal service or by certified mail, return receipt requested, or if service cannot be had by either of these modes of service, then service may be had by publication in a newspaper qualified to publish legal notices for two (2) successive weeks, the owner, occupant, lessee, mortgagee, agent and all other persons having an interest in said building as shown by the land records of the Recorder of Deeds of _____ County, of any building found by him to be a dangerous building within the standards set forth in Section 2.

(Missouri Municipal League, Sample/Model Ordinances)

Sec. 39-3. Duties of the housing inspector, others.

(a) The housing inspector is hereby designated as the city officer to enforce the provisions of this chapter. It shall be the duty of the housing inspector:

(1) To locate abandoned structures within the city and determine which structures are in violation of this chapter.

(2) To take such action pursuant to this chapter as may be necessary to provide for the repair, closing or demolition of such structures.

(3) To keep an accurate record of all enforcement proceedings begun pursuant to the provisions of this chapter.

(4) To perform such other duties as may be prescribed herein or assigned to him by the city council.

(b) The employees of the fire department and police department of the city shall make a report in writing to the housing inspector of each building or structure which they know or suspect may be in violation of this chapter. Any such report shall be delivered to the housing inspector within forty-eight (48) hours of the discovery of such building or structure by such employee of the fire and police departments of the city.

Sec. 39-4. Powers of the housing inspector.

The housing inspector is authorized to exercise such powers as may be necessary to carry out the intent and the provisions of this chapter, including the following powers in addition to others herein granted:

(1) To investigate the condition of buildings within the city in order to determine which structures are abandoned and in violation of this chapter.

(2) To enter upon premises for the purpose of making inspections.

(3) To administer oaths and affirmations, examine witnesses and receive evidence.

(4) To designate such other officers, agents and employees of the city as he deems necessary to carry out the provisions of this chapter.

(Municipal Code of the City of Wilson, NC)

7. Requirements/standards

This section should define the requirements that the jurisdiction whishes to establish for vacant and abandoned properties. These requirements may be for posting of the property, providing security and registration of the property. The jurisdiction may also require that the owner post a bond to cover costs of mitigation by the jurisdiction should that become necessary.

8. Enforcement/Penalties/Due Process

These sections of the ordinance define the responsibility for enforcement of the ordinance, the penalties that can be imposed for non-compliance and the appeals process for a property owner who is cited for a violation.

Section 4. Enforcement.

(1) The Commissioner of Codes shall cause regular inspections to be made of certain of the blighted premises for the purpose of documenting continuous blight and additionally, may cause to be imposed a penalty of not more than $99.00 for each day that building or structure or unit or part thereof, is in violation of this ordinance.

(2) Each day that a building or structure or unit or part thereof, is in violation of this ordinance shall constitute a separate offense. The Administrator shall cause the imposition of said penalty by notifying the owner by certified mail at the start of the period in which fines are levied. All fines imposed for violations of this section shall be paid to a fund maintained by the City.

(3) If at a later date a State General Statute is amended or passed permitting the City to place a lien as a security for the penalty then the Commissioner of Codes may waive and release said penalties and liens in the event the City acquires the property or at the time of the sale of the blighted premises if, in his/her opinion, it is determined that the buyer has the financial ability, and the intention to immediately rehabilitate said blighted premises; and/or

(4) Violators of this ordinance shall have the right to appeal within fifteen days from the date of the imposition of the fines. Payment of fines shall be stayed until the appeal has been heard and ruled on by the hearing officer. If dissatisfied with the findings, the violator may appeal to the Superior Court.

(5) The Mayor shall appoint, with the approval of the Common Council, one (1) or more Hearing Officer(s) (the "Officer").

(6) Any department that comprises the Blighted Building Committee shall not employ the Hearing Officer(s). Officer(s) shall serve for a term of two (2)

years or part thereof, which term shall commence from date of approval by the Common Council and shall end on December 31 of every even year. Officer(s) may be compensated by the city with the funds appropriated for this purpose as recommended by the Mayor and approved by the Common Council.

(7) Hearing Procedure.

(i) In scheduling formal appeal hearings, the violator shall be notified by mail of the place and time of the hearing. Such notice shall be provided at least fifteen (15) days but not more than thirty (30) days prior to the scheduled hearing date.

(ii) The procedure for the hearing shall be informal as to the rules of evidence, but testimony shall be taken under oath or affirmation.

(iii) In considering an appeal, the Hearing Officer may consider all relevant facts and circumstances and may require personal appearance of the violator and the Administrator or his/her designee.

(8) Take the necessary steps to acquire the blighted premises pursuant to the Urban Homesteading Act, State General Statute Sections _____ et. Seq. As it may be amended from time to time.

(9) Take necessary steps to pursue tax foreclosure on those properties owing back taxes to the City.

(Suggested Draft Anti-Blight Ordinance, InterFIRE.com)

Sec. 39-5. Standards for enforcement.

(a) Every abandoned structure within the city shall be deemed in violation of this chapter whenever such structure constitutes a hazard to the health, safety or welfare of the city citizens as a result of:

(1) The attraction of insects or rodents.

(2) Conditions creating a fire hazard.

(3) Dangerous conditions constituting a threat to children.

(4) Frequent use by vagrants as living quarters in the absence of sanitary facilities.

(b) In making the preliminary determination of whether or not an abandoned structure is in violation of this chapter, the housing inspector may, by way of illustration and not limitation, consider the presence or absence of the following conditions:

(1) Holes or cracks in the structure's floors, walls, ceilings or roof which might attract or admit rodents and insects, or become breeding places for rodents and insects.

(2) The collection of garbage or rubbish in or near the structure which might attract rodents and insects, or become breeding places for rodents and insects.

(3) Violations of the state building code, the state electrical code, the fire prevention code (as adopted by the city in sections 40-5, 41-3 and 14-36, respectively of the city Code) or sections 43-4 through 43-9 which constitute a fire hazard in such structure.

(4) The collection of garbage, rubbish or combustible material which constitutes a fire hazard in such structure.

(5) The use of such structure or nearby grounds or facilities by children as a play area.

(6) Violations of the state building code, or sections 43-4 through 43-9 which might result in danger to children using the structure or nearby grounds or facilities as a play area.

(7) Repeated use of such structure by transients and vagrants, in the absence of sanitary facilities, for living, sleeping, cooking or eating.

Sec. 39-6. Procedure for enforcement.

Whenever a petition is filed with the housing inspector by a public authority or by at least five (5) residents of the city charging that any abandoned structure is in violation of this chapter, or whenever the housing inspector determines, upon inspection, that any abandoned structure is in violation of this chapter, he shall, by service of a complaint and notice of hearing, initiate the same procedure for enforcement as is contained in section 43-15. In all relevant respects, the procedure for enforcement of this chapter shall be identical to that contained in sections 43-15 through 43-21.

Sec. 39-7. Violation; penalty.

(a) It shall be unlawful for the owner of any abandoned structure to fail, neglect or refuse to repair, alter or improve the same, or to vacate, close and remove or demolish the same, upon order of the housing inspector duly made and served, within the time specified in such order. Each day that any such failure, neglect or refusal to comply with such order continues shall constitute a separate and distinct offense.

(b) The violation of any provision of this chapter shall constitute a misdemeanor, as provided by section 1-11(a).

(Municipal Code of the City of Wilson, NC)

Section 9. Appeal.

Any owner, occupant, lessee, mortgagee, agent or any other person(s) having an interest in a dangerous building as shown by the land records of the recorder of deeds of the county wherein the land is located, may, within thirty (30) days from the receipt of the order of the building commissioner, appeal such decision to the circuit court of the county wherein the land is located, pursuant to the procedure established in Chapter 536 of the Revised Statutes of Missouri.

(Missouri Municipal League, Sample/Model Ordinances)

9. Severability

Webster's 10th Edition defines severability as; "Capability of being divided into legally independent rights or obligations"

The purpose of severability text is to prevent the whole ordinance from becoming invalid if any part of it is declared invalid by the courts. In many jurisdictions these provisions are included in ordinances as a matter of course.

Section 2. Severability. If any provision of this ordinance is held invalid, such provision shall be deemed excised from this ordinance and the invalidity thereof shall not affect any of the other provisions of this ordinance. If the application of any provision of this ordinance to any person or circumstance is held invalid, it shall not affect the application of such provision to other persons or circumstances.

(Chicago, IL Vacant Building Ordinance)

SECTION 3.0 SEVERABILITY CLAUSE

That if any provision of this ordinance or its application to any person or circumstances is held invalid for any reason, the invalidity does not affect any other provisions or applications of this ordinance which can be given effect

without the invalid provision or application, and to this extent the provisions of this ordinance are declared to be severable.

(Tyler, TX Ordinance No. 2001-9)

Section 9 - Severability
If any provision of this ordinance or the application thereof shall be held invalid or unenforceable. The reminder of this ordinance, or the application of such terms or provisions to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each remaining term and provision thereof shall be deemed valid and be enforceable to the fullest extent permitted by law.

(Suggested Draft Anti-Blight Ordinance, InterFIRE.com)

References

InterFIRE Online

Draft anti-blight ordinance

The City of Chicago, IL

Vacant Building Ordinance

Martin County, FL

Unsafe Vacant Buildings

Commonwealth of Massachusetts

Massachusetts Fire Prevention Code

Missouri Municipal League

Model Unsafe Building Ordinance

Model Vacant Residential Structure Registration Fee Ordinance

The City of Seattle, WA

City Regulations for maintaining vacant buildings

The City of Spokane, WA

Boarded-Up Building Defined

Abandoned Defined

Unfit Buildings

The City of Wilson, NC

Municipal Code: Abandoned Structures

The City of Ypsilanti, MI

Inspection of Vacant Buildings

Appendix J – Using GIS to Manage Vacant and Abandoned Properties

IAAI/USFA
Abandoned Building Project

Using GIS to Manage Vacant and Abandoned Properties

2006 Revision

The Role of GIS in the Management of Abandoned Buildings

GIS can be a very valuable tool in managing abandoned buildings in a community. GIS or Geographic Information Systems uses computer databases to link information like address, parcel, owner, and occupancy status together. This allows for timely management of information through several capabilities. These capabilities and their use in the management and mitigation of abandoned buildings will be discussed in the following paragraphs.

One benefit of GIS is the usefulness of the tool to government agencies for decision making. Many cities have, or are developing, GIS departments to manage these programs. GIS has use in urban planning and development, public works, education, law enforcement, and the fire service. Virtually every facet of government can use GIS to manage and analyze information. Multiagency usage allows the sharing of cost between all departments rather than burdening only one budget, making the tool that much more attainable.

GIS can be used to create maps overlaying multiple layers of information. These maps provide visual reference that includes considerable information in an easily understood format. The ability to overlay layers of different information such as address, parcel, owner information, and occupancy status and to add or remove layers to create a map to show specific information is very valuable. In addition to the layers listed above aerial photographs may be incorporated for additional information and insight. Maps also provide the ability to see target areas and trends in abandoned buildings and fires and incidents involving such buildings. An example of layers used in a typical GIS analysis of vacant and abandoned properties is shown in Figure 1.

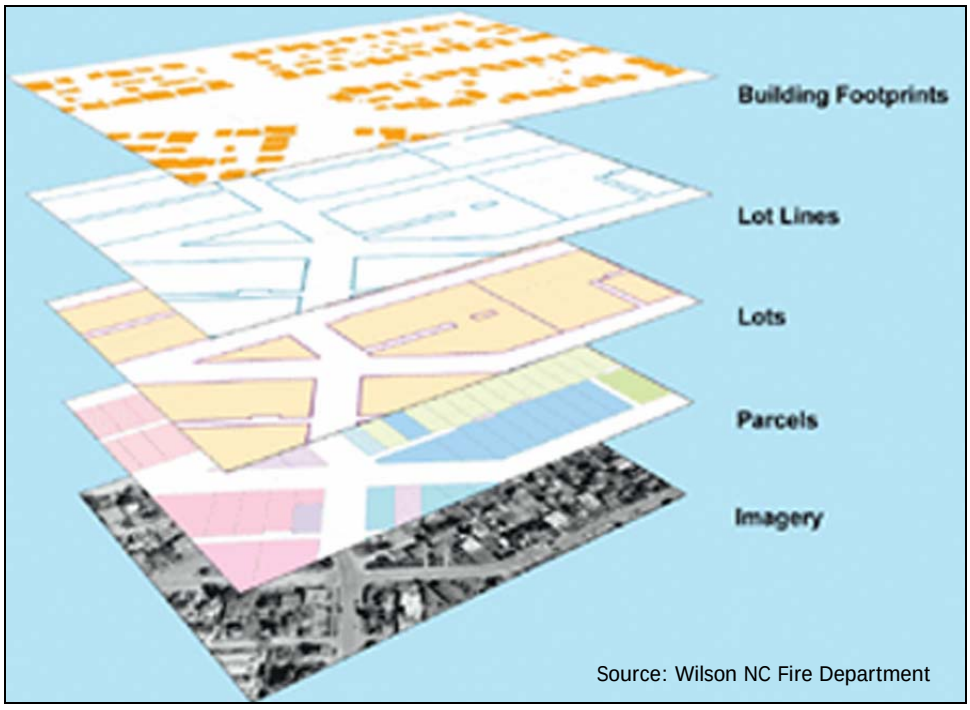


Figure 1 - GIS Layers

The fields of a GIS database are limitless, therefore the amount of information that can be analyzed is also limitless. In the case of Wilson, NC, the city had the capability to analyze more than 100 separate layers of information. GIS can be used through each step of the mitigation of abandoned buildings. The initial step in mitigation is the identification of vacant/abandoned buildings. With the database listed above, the addition of one or more readily available fields of information can show areas of potential vacancy/abandonment. Delinquent property tax is a recognized indicator of vacancy or abandonment. By simple entering the addresses or parcel numbers of those properties that are delinquent we can determine a list of potential vacant or abandoned properties. The same could be done with power company records or any other service that is associated with occupancy.

By making each piece of information or field of the database a layer of the drawing the information can be manipulated to show trends in specific areas. The method used to analyze data can yield different results. An example of this is the difference between sorting information by city block versus by parcel. The value of this is shown in a study by Christine Coletta of Brown University titled Picturing Renewal: Using GIS to Evaluate Effectiveness of Housing Renovation. The study shows much more specific trending of crime by parcel than could be accomplished using a broader spectrum of a city block. The study shows that crime when compared by city blocks, showed similar results for each block. However, when analyzed by parcel, dense areas of crime within a city block can be seen. Parcel information was used as opposed to street address because the parcel database was more complete than the address database. This example shows the need to determine the most effective data set for the analysis being conducted to yield the most accurate results.

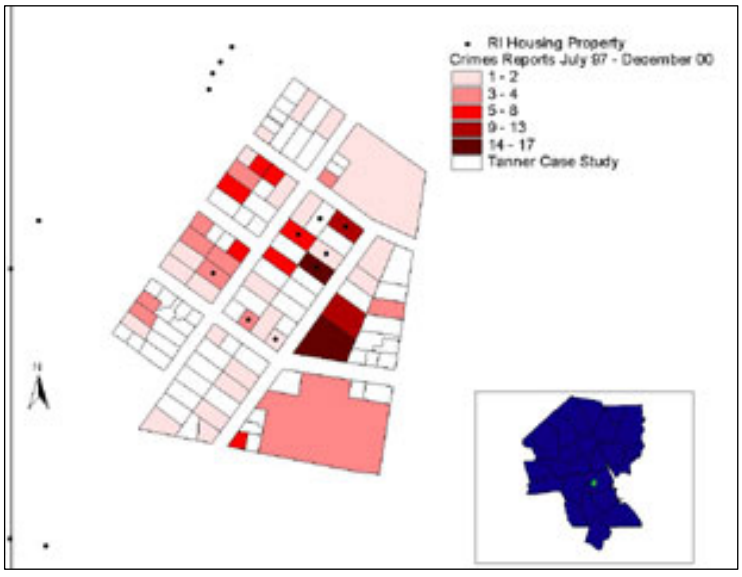


Figure 2 - Sample Parcel Map

GIS is a powerful tool that allows for manipulation of data analysis from multiple fields of data and overlaying this data to recognize trends. By overlaying the data in Figure 2 with the vacant buildings in the area a direct correlation between vacancy/abandonment and crime could be made.

Once vacant and abandoned buildings are identified they can be prioritized for demolition or ranked according to hazard with GIS. By entering data on fires and crime by address or parcel trends can be identified by location. In addition, information from building inspection and evaluation could be ranked and compared to develop a hazard classification for each property.

The cities of St Louis and East St Louis, MO have an easily navigated format of GIS available online that shows abandoned properties. This is a valuable tool for public education and information. Without public awareness of the issue, mitigation can be very difficult.

Another view of the information is the database. The ability to see the raw information in database form allows the ability to query the information and arrange said information into usable forms. Again this view can be used to organize the information to recognize trends and problem areas. This tool could also be used to categorize and prioritize the abandoned structures for mitigation efforts.

Another very valuable tool that can be used is Pictometry using orthogonal aerial photography. These are photographs taken from oblique angles from multiple directions. This is a great tool because it allows the user to easily identify structures and even perform preliminary evaluations prior to going into the field. The photos are linked to geographic information using GIS and provide another valuable tool. Especially in fire service use. These photos can be used to measure the height of a building or distances to fire hydrants or exposures.

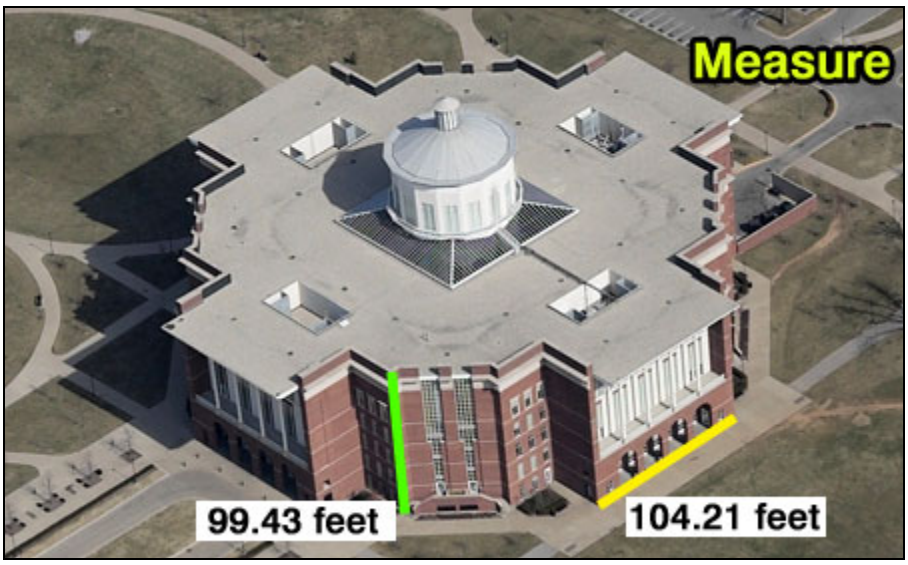


Figure 3 - Sample Orthogonal Aerial Photograph

Pictometry is versatile and easily enough navigated to be used in emergency response as well. Current cell phone technology allows users to call 911 and have GPS coordinates transmitted to the 911 operator. With pictometry these coordinates could be entered into a computer and the dispatcher is able to visualize the area and use the computer database to find the nearest address.

GIS is being used with great success to assist with the abandoned building problem in many cities. St Louis and East St Louis, shown above have used GIS in their vacant building mitigation. Other cities that have used GIS effectively are San Diego, CA, Spokane, WA, Philadelphia, PA and Baltimore, MD. Links to these programs are included in the reference section of this paper. The City of Wilson, NC is utilizing GIS extensively for the evaluation and mitigation of abandoned buildings in their community.

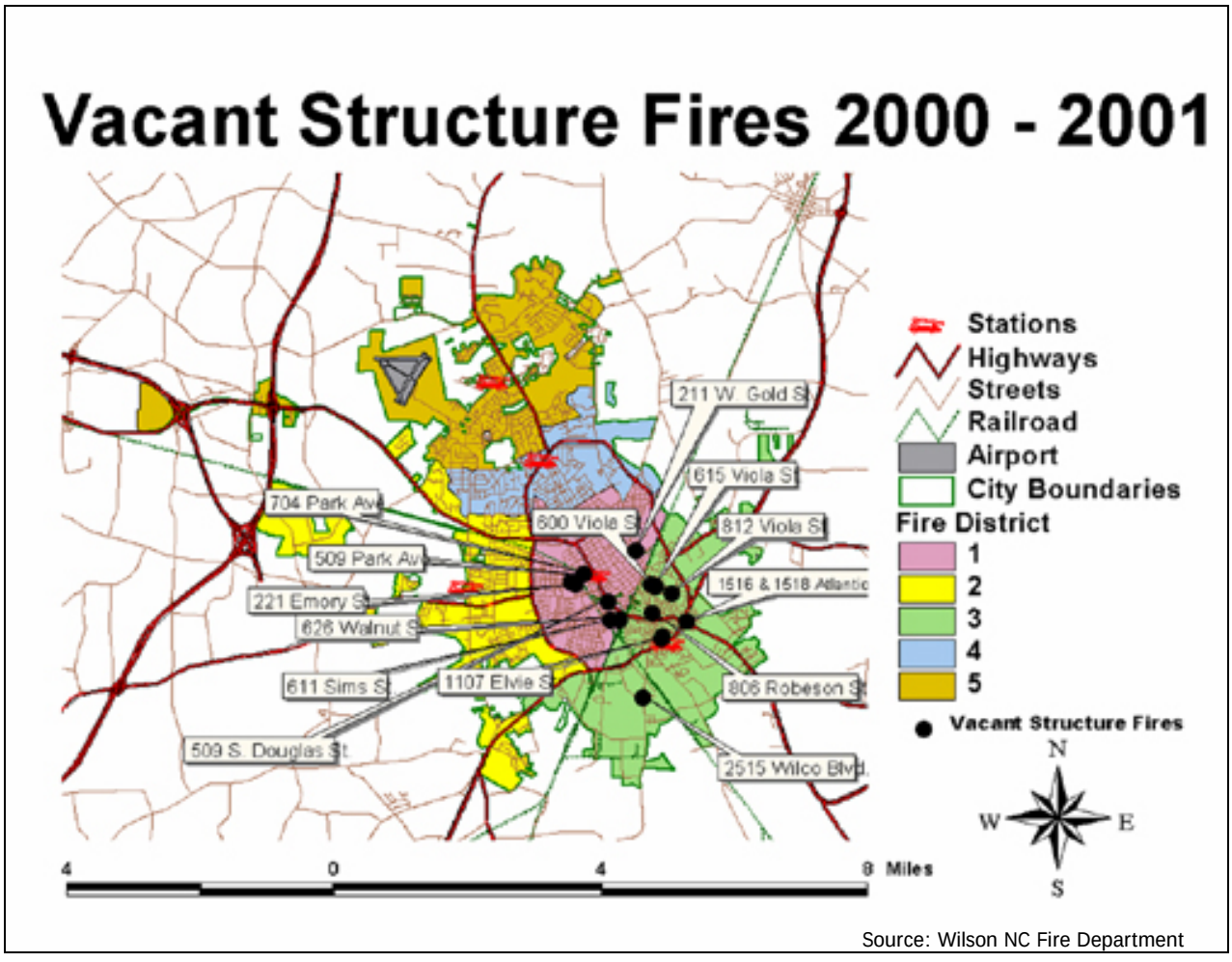
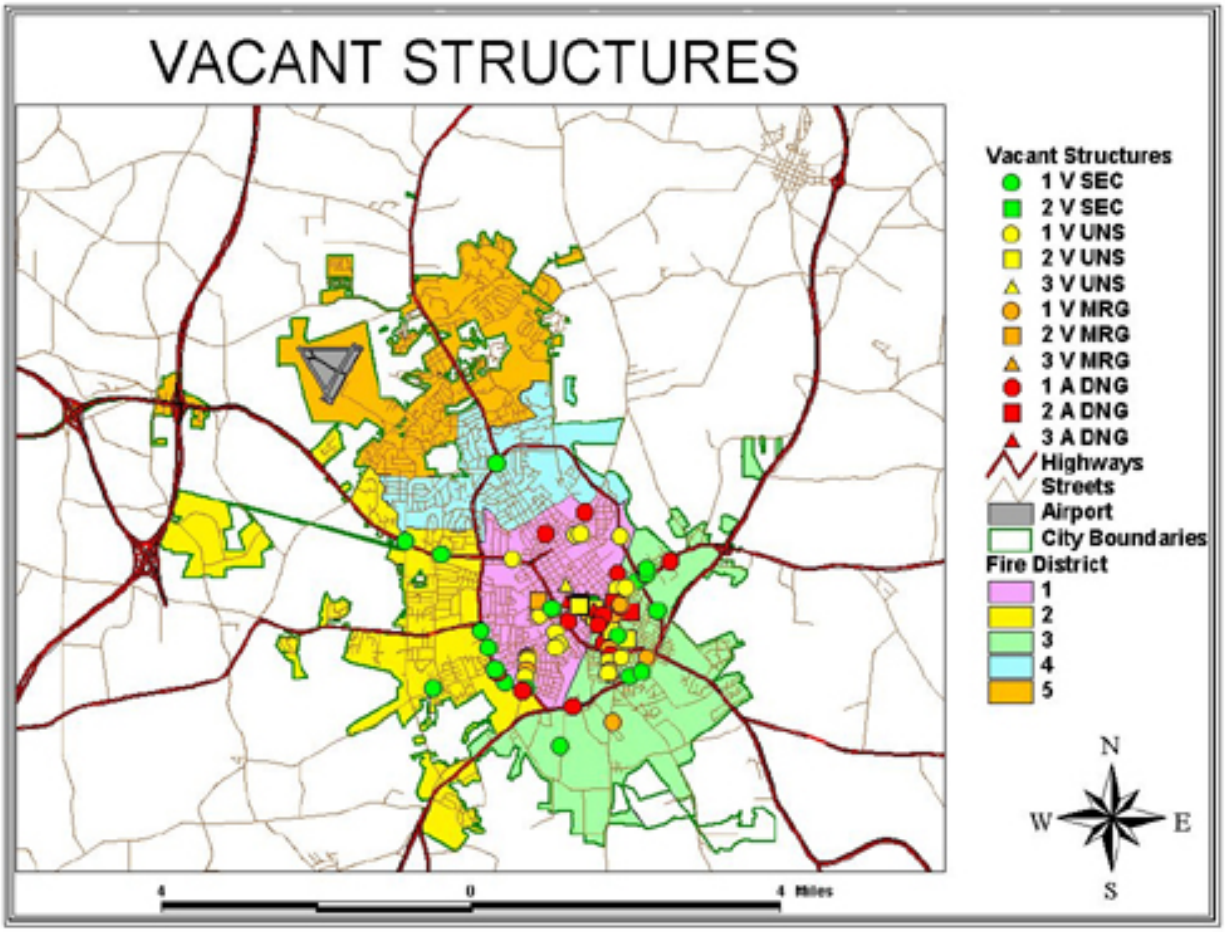


Figure 4 - Wilson Vacant Structure Fires

Figure 4 illustrates the value of GIS by showing a vast amount of information in a small and easily understood graphic. Geographically the city boundaries and fire district boundaries are shown. In addition the location of each fire station within its district can easily be seen. For trending purposes of fires we see that all fourteen fires occurred in two fire districts. Of the fourteen fires three clusters of three fires each in very close proximity occurred. From this data we see a broad area of concern in Fire Districts One and Three. In addition the tighter neighborhood or block surrounding the three fire clusters is a priority.

To manage existing buildings Wilson used GIS and inspection to determine the location and hazard of commercial structures that were vacant or had been abandoned and prioritized these structures by hazard. The following figure shows the results of this evaluation. Structures noted in green are secured vacant buildings in relatively good structural condition, those noted in yellow are unsecured vacant buildings in relatively good structural condition, those noted in orange are unsecured vacant buildings in distressed structural condition, those noted in red are unsecured abandoned buildings in and unsafe structural condition, severe hazard.



Source: Wilson NC Fire Department

Figure 5 - Wilson Vacant/Abandoned Structures

When reviewing the data for mitigation efforts we can compare figures 4 and 5 to see an alarming trend of high densities of vacant and abandoned buildings of varying hazard class within the areas of the three fire clusters noted in figure 4.

As mentioned above the correlation between fires and other crime in areas can also indicate priorities for mitigation efforts. Wilson has used GIS in all aspects of government, to include Law Enforcement, very successfully. The following figure shows a correlation between fires and crime in a varied format. The three dimensional image shows fires as topography or high spots with areas of crime depicted in color. The map shows three distinct areas of concern where we see significant crime and the occurrence of fires. This map shows how the incorporation of two departments existing databases overlayed onto a map of the city can in minutes show us trends that would take a significant amount of time to analyze through other means.

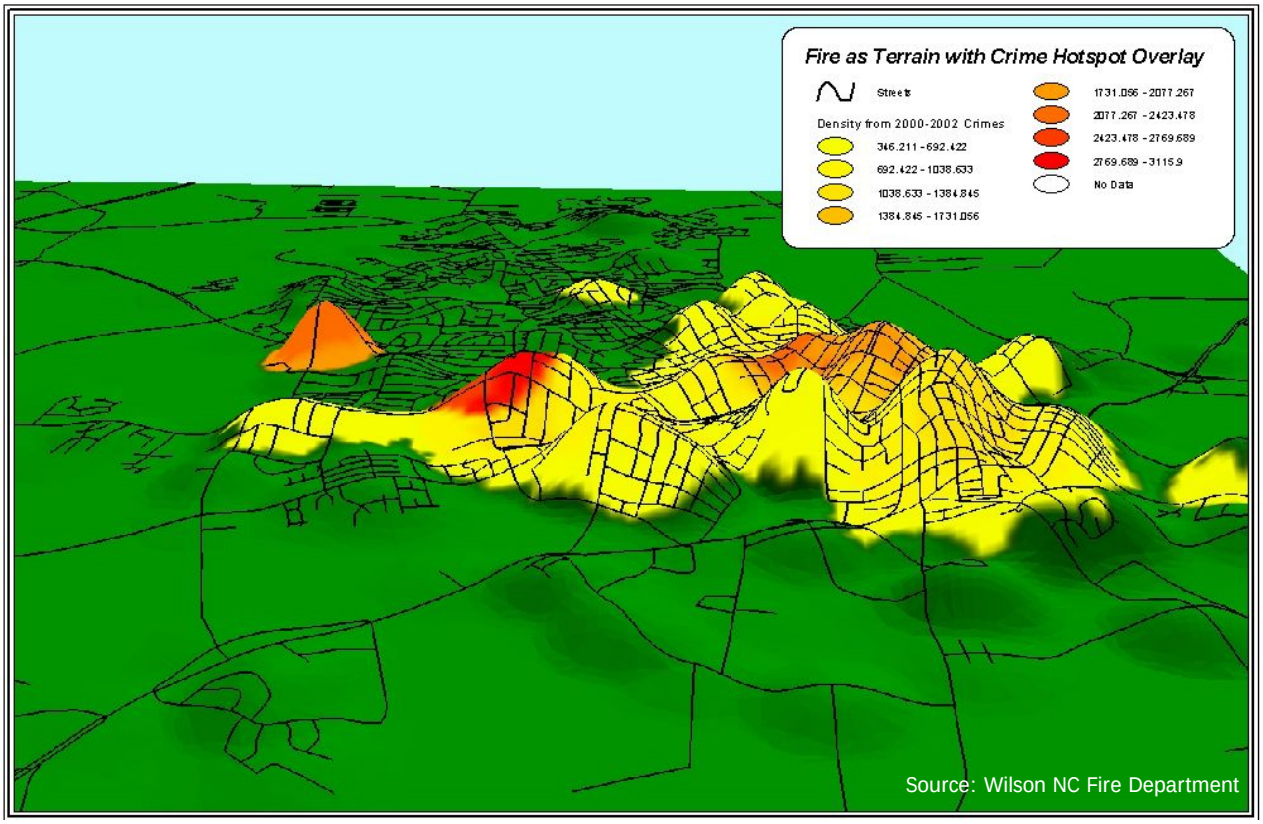


Figure 6 - Wilson Crimes vs. Fires

The City of Wilson, NC shows the value of GIS in public safety operations and planning. The same data used in the maps above to deal with the very specific problem of vacant buildings has also been used to perform a vast number of other programs. Fire and police station location studies have been completed using fire and crime statistics as well as response times to remap fire and police districts. An automobile accident prevention program has been initiated using crash statistics to locate problem intersections and upgrade the traffic control systems. Crime prevention programs using GIS with crime statistics to show hot spots and trends are being used. Hazardous materials permits are

viewable in the system to locate addresses with hazards and identify the type of material used. GIS is being used for disaster preparedness both natural and terrorist related. By mapping potential targets and evaluating those areas the city can prepare for the threat.

Wilson fire and police vehicles are equipped with mobile computers that allow responders to access, view, and use GIS information to assist in emergency response. For example, a fire officer responding to an incident can enter the address and determine if hazardous materials are stored at that location and what materials are stored. The officer can then determine and enter the necessary evacuation radius for that hazardous material into the mobile computer. GIS then can tell the officer exactly which addresses need to be evacuated for that distance. This process could take a significant amount of time manually, the GIS system can accomplish the task in seconds.

GIS is gaining prevalence in many communities nationwide. If a program is already implemented or being implemented, joining the program would simply require communication with the department currently establishing the system. In addition these systems are hardware and software intensive. Aging computers may not be powerful enough to run the system. The software systems are not inexpensive, however multiple agencies could utilize the system within one community for decreased cost.

An agency must have computer literate users to ensure the system is used to its fullest potential. Training is available on many levels and much of the software is user friendly with some experience. In many communities a department is formed solely for GIS, typically to coordinate the use of GIS among the various departments. A GIS department would also establish the databases necessary for use, train in the use of GIS, and maintain the system.

Data collection and entry can be time consuming if they are done manually. However much of the data required to make the system useful may already be in a database. If your department uses a computer based system to track calls, this information already exists in database form and can be converted to use with GIS.

The role of GIS in public safety can be viewed as one of a “force multiplier,” a term used by the military that refers to technology that makes a smaller force more effective by giving it an unfair advantage over the enemy. With current budgetary constraints, public safety departments need as many force multipliers as possible. Though GIS is not inexpensive, the overall use and savings in manpower make it a valuable tool. Many of the tasks that can be completed with GIS were once thought to be niceties, though not necessities. This thinking created public safety departments that were and are purely reactive to hazards. With systems like GIS and the proper mindset communities can become proactive and prevent unnecessary loss of life and property.

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