The Risks of Construction Work without a Permit

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Executive Analysis of Community Risk Reduction – R274

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Certification Statement

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Abstract

Springfield fires were examined for the prior 20 years – focusing on fire causes, costs, rate of rise, geographical location, morbidity, and populations effected. Brush fires, vehicle fires, and cooking fires were the leading local fire problems. The morbidity, geographical locations and populations effected by fire did not pattern or trend specifically within the local fire problem. An examination of a $2.1 million fire loss revealed community vulnerability, not from fire specifically, but from its cause -- a registered home improvement contractor performing plumbing work without a plumbing license and without a permit. The problem is the Springfield Fire Department has not conducted an analysis of the building department's violation database to identify the type and frequency of failure to obtain permit notices. The purpose of this study is to identify the types and frequency of failure to obtain permit in the building department's database. What is the scope of construction work without permits in Springfield? What methods are currently being employed in Springfield to detect construction work without permits? What methods are being employed by other jurisdictions to gain permit compliance? What future actions are required to reduce community risk from construction work without a permit in Springfield? The most permit violations were heating/cooling systems which were the type of work most likely to be completed professionally, not by the homeowners themselves. Given the current economic circumstances, it can be expected that people will fail to get permits in order to save money. Inevitably this is going to lead to some tragic consequences unless unaddressed community risks are mitigated through collaborative organizational and community support.

Keywords: Risk, Permits, Inspections, Vulnerability, Community

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Introduction

The National Fire Academy Executive Fire Officer Program enhances the participant's professional development through a unique series of four graduate and upper-division-baccalaureate equivalent courses. *Executive Analysis of Community Risk Reduction* (EACRR) is the second course in the program. The course is a mixture of philosophy -- the value of the community risk reduction, and application -- the process of applying risk reduction in the community. It involves developing partnerships with community members to implement programs, initiatives, and services that prevent and/or mitigate the risk of human-caused and natural disasters.

There is an extensive pre-course assignment where students are required to research the history of fire prevention and how it has evolved into community risk reduction. Students build a demographic and risk profile of their home communities. They examine social, cultural, economic, and environmental trends that impact community risk. The course examines the Executive Fire Officer as a community risk-reduction leader, assesses community risk, develops a draft plan for local risk-reduction initiatives, and addresses organizational and community politics. The ultimate goal of the course is to develop fire service leaders who are committed to comprehensive, multi-hazard community risk reduction.

"There are only four things that an evaluation can reveal: good things you already know about, good things you don't know about, bad things you already know about, and bad things you don't know about." (National Fire Academy, 2011, p. SM 3.19) A community change narrative for the past 20 years and the next 10 years was prepared showing the past, present, and future development in Springfield. The local fire problem examined fire causes and their costs for the past 20 years – focusing on the rate of rise, geographical location, morbidity, and

populations effected. The results showed that brush fires, vehicle fires, and cooking fires were the leading local fire problems. The morbidity as the result of fire was primarily related to a few motor vehicle crashes with subsequent fires and a single casualty as the result of a cooking fire. The geographical locations and populations effected did not pattern or trend specifically within the local fire problem.

An examination of fire-loss costs did reveal a vulnerability to Springfield, not from fire specifically, but from the cause of the fire which can create risk in many areas of the community. On September 3, 2010, the Springfield Fire Department responded to a four alarm apartment fire that resulted in a $2.1 million fire loss, displaced 10 families and injured four firefighters. The cause of the fire was determined to be a registered home improvement contractor performing plumbing work without a plumbing license and without a plumbing permit.

In the EACRR course, students studied a fire with multiple firefighter line-of-duty deaths (LODD). The Charleston Post Incident Assessment and Review Team (2009) reported:

> On June 18, 2007, units from the Charleston Fire Department responded to a fire at a large retail furniture outlet. In less than 40 minutes, the fire claimed the lives of nine firefighters. The fire risk factors associated with the Sofa Super Store exceeded the limits prescribed by the applicable building and fire codes. (pp. 21-22) If building permits had been obtained for the construction of the loading dock and the workshops, the previous classification of the property as four separate buildings would have been invalidated. All of the property encompassing the original structure, the west showroom addition, the warehouse, the connecting corridor, the loading dock and the workshops would have been reclassified as a single structure, because

> the fire-resistive separations and open spaces had been compromised. The building code would have required the installation of an automatic sprinkler system to protect this entire area. (p. 34)

"In New Jersey, and under the Uniform Construction Code Act (NJSA 52:27D-119 et seq), a building or structure may not be "constructed, extended, repaired, removed, renovated, altered or reconstructed" without first obtaining a Construction Permit (N.J.A.C. 5:23-2)." (NJ Department of Community Affairs | Construction Activity Reporting and Permits NJ, 2011)

> Many homeowners, however, don't want to bring in building inspectors because they fear that their property assessment and taxes will go up when the town's property files are updated to reflect the improvements. Many contractors don't like to bring in the inspectors because it slows down the job and they have to charge more plus add the cost of permits to the job. In the end, pulling a permit holds the contractor accountable to someone that knows more about the building code than the homeowner and often the contractors. (Schneiderman, 2009)

The problem is the Springfield Fire Department has not conducted an analysis of the building department's violation database to identify the type and frequency of failure to obtain permit notices. The purpose of this study is to identify the types and frequency of failure to obtain a permit in the building department's database. Research methods and approaches were used to answer the following questions: What is the scope of construction work without permits in Springfield? Descriptive research will determine the present extent of failure to obtain construction permits in Springfield. What methods are currently being employed in Springfield to detect construction work without permits? Descriptive research will involve a detailed

examination of how construction work without a permit is currently being detected in Springfield. What methods are being employed by other jurisdictions to gain permit compliance? Descriptive research will identify strategies and methods that other jurisdictions have used to gain permit compliance. What future actions are required to reduce community risk from construction work without a permit in Springfield? Evaluative research will identify if there are needed improvements to Springfield's construction permit process.

Background and Significance

Springfield is a township located at the northern edge of Union County, New Jersey. It has an area of 5.1 square miles. In June 1780, the Battle of Springfield, one of the last major battles of the American Revolutionary War, kept the British from advancing to George Washington's Headquarters in Morristown. In modern times, Springfield is better known as the home of Baltusrol Golf Club, which has hosted numerous major golf championships including the 2005 PGA Championship and several U.S. Opens. In 2010, the median home sales price was $380,000, a drop of 10.6% since 2007. The median property taxes in 2010 were $8,651.00 -- rising by 11.1% over the previous three years. In compiling *New Jersey Monthly* magazine's 2011 Top Towns list, researchers at Leflein Associates, an independent research firm from Ringwood, NJ, considered five categories to represent the quality of life in New Jersey's 566 municipalities: home values, property taxes, crime rate, school performance and lifestyle. (New Jersey Top Towns 2011, 2011) In its 2011 rankings, *New Jersey Monthly* magazine ranked Springfield as the 168th best place to live in New Jersey – down from 85th in 2010. It is uncertain if *New Jersey Monthly's* revised 2011 methodology to more accurately rank the top towns in the Garden State attributed to Springfield's dramatic decline, but it is a notable to mention the decrease in its ranking.

According to the U.S. Census Bureau, the current population is estimated at 15,817 which is an increase of 2.8% since 2000. There are 6,204 housing units at an average density of 8,161.5 people per square mile in residential areas. The racial makeup of the township is 89.72% White, 3.72% African American, 0.02% Native American, 4.69% Asian, 0.96% from other races, and 0.89% from two or more races. Hispanic or Latino of any race is 4.14% of the population.

There are 6,001 households out of which 27.0% have children under the age of 18 living with them, 56.9% are married couples living together, 7.3% have a female householder with no husband present, and 33.1% are non-families. Individuals make up 28.7% of all households and 14.7% have someone living alone who is 65 years of age or older. The average household size is 2.40 and the average family size is 2.98.

In the Township the age of the population is spread out with 20.6% under the age of eighteen, 4.7% from eighteen to twenty four, 29.4% from twenty five to forty four, 24.7% from forty five to sixty four, and 20.6% who were sixty five years of age or older. The median age was 42 years. For every 100 females there are 89.3 males. For every 100 females age 18 and over, there are 86.0 males.

The median income for a household in the Township is $73,790, and the median income for a family is $85,725. Males have a median income of $55,907 versus $39,542 for females. The per capita income for the Township is $36,754. About 1.8% of families and 3.1% of the population are below the poverty line, including 1.0% of those under age 18 and 5.8% of those ages 65 or over.

In the 1960s, there were major housing developments in the former farm lands located within the 376.02 census tract. This development boom, which can be seen in the historical population chart, doubled the town's population. These lands were developed primarily as single family detached homes. The land developers marketed these developments to New York City outer borough residents seeking a suburban community within a reasonable commute to Manhattan. Springfield is crossed by Interstate Route 78, US Route 22 and NJ State Route 24 which also makes commuting to other parts of New Jersey very convenient.

By the 1990s, single family detached home developments had filled most of the remaining open space. At the turn of the century, the new construction trend shifted to multiple family housing units, primarily rental apartments. Former commercial sites began to be re-developed into these high density housing developments.

Springfield is moving towards tax base stagnation due to a lack of available land for future development. Political pressure from the public has the governing body cautious about any new spending without tax base growth. "Like other older suburbs, it will be difficult to compete with newer suburbs for businesses and middle-class residents." (Katz, 1998) Any future construction will be through re-development of commercial districts into other use groups, rehabilitation, or knock-down rebuilding of single family dwellings. To this degree, the Springfield Tax Assessor foresees that his position will be converted to a part-time position or shared with another community. In 2009, the Building Department needed funding from the municipal budget when the number of inspection hours needed to complete the remaining 2008 permit inspections exceeded the income generated by new housing construction permit applications and failed to generate enough fees to cover personnel costs.

In April 2011, the NJ Department of Community Affairs (DCA) conducted a staffing report for Uniform Construction Code (UCC) Enforcement in Springfield (Appendix A). The staffing needs were based upon construction permit activity & inspections reported from January 1, 2010 through December 31, 2010. Construction permit activity for the past 12 months was: 328 new construction permits/new dwelling units, 101 permits for additions & major alterations, 829 permits for minor alteration projects, and 22 demolition permits. Significant on-going projects include: 238 residential units at Springfield Gardens (Apartment Complex) and 90 residential units at Springfield Residential Communities (Apartment Complex). Anticipated inspection

activity for the next 12 months is as follows: 2,637 building inspections, 1,055 electrical inspections, 527 fire protection inspections and 1,055 plumbing inspections. The actual hours authorized for the Springfield Building Department were considerably less than the report indicated. Nonetheless, the full-time Construction Official/Zoning Official was replaced with a shared Construction Official using an inter-local agreement with a neighboring community in July 2011 and the Zoning Official position was filled with a part-time employee.

The residential rental market in Springfield has continued to flourish to the present day. In the 2010 *New Jersey Monthly* magazine's Top High Schools, Springfield's Jonathan Dayton High School ranked 32nd, but more importantly it ranked 1st in its socioeconomic group. (New Jersey Top High Schools 2010, 2010) After this school ranking was published, the rental offices in Springfield experienced a near 100 percent occupancy rate. This market strength has driven property managers to build additional units into existing complex spaces.

If the Springfield School District continues to perform highly in its socioeconomic group, many inner city families will continue to migrate to Springfield's rental properties. The schools' population demographics will continue to increase in the lower income groups. The challenge will become that tax revenues generated from rental properties, which are typically less than single family detached homes, will be outpaced by the services provided by the municipality.

This applied research project (ARP) will demonstrate the role of the executive fire officer in community risk reduction. It will analyze the potential impact of unaddressed community risks and identify potential challenges to reducing community risk. The executive fire officer will be better able to lead the Springfield Fire Department in working with other Township agencies and "the community because challenges to reducing risk are best addressed through collaborative

efforts and community support." (National Fire Academy, 2011, p. SM 1.1) The databases from the Fire Department, Fire Prevention Bureau and Building Department will be used to research the types and frequency of people failing to obtain a construction permit in Springfield, New Jersey. Determining what methods are being employed by other jurisdictions to gain permit compliance will impact what future actions are required to reduce community risk from construction work without a permit in Springfield.

One of the United States Fire Administration operational objectives is to reduce risk at the local level through prevention and mitigation.

> When a deficiency in a life safety building item, such as fire resistant construction, is brought to the attention of the Construction Official, it is his responsibility to take the appropriate action to restore the protection that the building was originally designed to have. (Estepp, 1998)

Literature Review

A comprehensive literature review of the subject material was accomplished through multiple sources including laws, standards, text, periodicals, websites and reports. The findings of others were reviewed and a summary of those findings will be presented. The merging of these sources provided the necessary basis for the four research questions contained in this applied research project (ARP).

The vulnerability to both the Springfield Fire Department and the community from the unknown scope of construction work without permits was found through literature review. The Occupational Safety and Health Administration published a manual to assist with building design to increase the safety of building occupants and emergency responders by streamlining fire service interaction with building features and fire protection systems. The information provides a better understanding to the needs of the fire service when it is called upon to operate in or near the built environment. “To put this another way, architects and engineers create workplaces for firefighters. Designs can be tailored to better meet operational needs, thereby reducing the time it takes to mitigate an incident.” (Occupational Safety and Health Administration, 2006)

The Charleston Post Incident Assessment and Review Team (2009) concluded:

> The Sofa Super Store was a large property that incorporated a very significant potential for a major fire to occur. The fire risk factors associated with the Sofa Super Store exceeded the limits prescribed by the applicable building and fire codes. An automatic sprinkler system should have been installed to reduce the level of fire risk or the buildings should have been divided into manageable fire compartments by a system of fire walls. If a sprinkler system had been installed, the fire probably

> would have been controlled within the loading dock area. If effective fire walls had been provided, the fire probably would not have spread beyond the loading dock. The loading dock had been enclosed by a structure that did not meet building code requirements. The loading dock enclosure failed to stop the exterior fire from spreading to the interior and subsequently contributed to the spread of the fire into the adjoining areas. The size and layout of the building, inadequate exits, and the highly flammable nature of the contents likely contributed to the inability of the lost firefighters to escape from the building. (pp. 21-22) The Sofa Super Store was a high risk occupancy that presented several specific risks to the health and safety of firefighters. The fire risk factors that were found in this occupancy also presented risks to the employees, customers, neighbors, and the surrounding community. The level of fire risk exceeded the limits prescribed by established regulations and would have – or should have – been mitigated if the applicable codes and standards had been followed, applied, and enforced. (p. 133)

The detection of construction work without permits can reveal unsafe conditions that place the building owner at risk.

> As a code official, you discover an addition is being constructed on a single family dwelling without a permit. The project is at the framing stage. There is a clearly visible violation of any span table and additionally there are two large windows framed out without headers. A Notice of Violation and Order to Terminate carries a weekly penalty which effectively gives the violator one week to continue working. Therefore, it is important to stop this job as quickly as possible. It will correct a possibly unsafe condition and will limit the potential liability of the homeowner. The

> most logical recourse is to issue a Stop Construction Notice, since the first responsibility is to get the job stopped. (Mraw, 1996, p. 6)

> Building officials are constantly trying to get people to get permits for structures… The goal is to make sure the structures are safe and code compliant. But, when there is widespread enforcement action, local officials should expect forceful opposition from the homeowners. When encountering a problem like this, an education campaign is done first. (Pieczynski, 2011)

An example of public awareness is to educate homeowners that minor work is restricted to one and two family dwellings or separate single family dwellings. These projects can be processed with Minor Work permits under N.J.A.C. 5:23-2.17A.

> Construction or total replacement of any porch or stoop, as long as it does not function as the support of any roof or other building portion. Replacing any existing plumbing piping with new and approved materials of the same capacity, installing drinking fountains and condensate drains, and replacing existing low pressure hot water heaters with new ones of like capacity. Installing a maximum of five 110 volt or 220 volt receptacles or fixtures as long as the existing circuits and/or available circuits and service are adequate to support the load. Also, you may replace existing wiring with new if you provide the same capacity and it is approved for use by the code. Installation of a burglar alarm or security system. (Roth, 1995, p. 6)

The Charleston Post Incident Assessment and Review Team (2009) recommended to the City of Charleston and the Charleston Fire Department:

> It is a governmental responsibility to ensure that adopted fire and safety codes are adequately enforced through systematic inspections. The City of Charleston has committed additional resources to code enforcement in the wake of the Sofa Super Store incident. The City should continue to provide sufficient resources to identify and cause correction of hazardous situations. Mitigation programs to reduce or eliminate excessive risk levels should be encouraged and supported. Measures that mandate or provide incentives to encourage the installation of automatic sprinklers or support alternative fire protection measures should be adopted as public policy. The City of Charleston should continue to encourage actions at the state level that will support these efforts. All Charleston firefighters should be trained and should have a specific responsibility to recognize fire hazards and code violations and to initiate appropriate corrective actions. (p. 143)

In order to reduce community risk from construction work without a permit, some building departments have considered alternative methods for code compliance.

> Some construction officials, in an effort to be helpful to homeowners applying for building permits, have developed their own guidelines for permit applications. These guidelines are often checklists of various requirements. The development of such guidelines is good public relations; however, caution should be exercised when developing and distributing them. Code officials are neither responsible for, nor qualified to practice, building design. If you properly identify the scope of your checklist, avoid the use of drawings and sketches, and base your checklist on general rather than specific requirements, I'm sure that you will end up with a checklist that

> will provide good public relations and will not cause any conflicts with regulations. (Baier, 1992, p. 4)

The Springfield Building Department provides a pamphlet for construction permits. A construction permit represents legal permission to begin a constructions project. The issuance of a permit indicates that plans for a project have been approved and have complied with the Uniform Construction Code and Township Zoning Ordinance. The pamphlet indicates when a permit is required, the permit application process, and the permit approval process -- which includes the prior approvals from the Zoning Official and Township Engineer. The required inspection sequence and the applicant's obligations during construction are explained. Springfield also provides a 12 page handout of N.J.A.C. 5:23-2.7 ordinary maintenance and minor work regulation.

Some towns have begun offering an amnesty program to help ensure that they can check previously completed work that was done without a permit. The Village of Rye Brook Amnesty Program waves the Administrative Fine for work completed without the proper permits, and in most cases also waives the need to go to the Board of Architectural Review. The Administrative Fine that is being waived is 12% of the current day construction costs with a minimum fee of $500 and a maximum fee of $3,500. The Village of Rye Brook's Building Permit Amnesty Program Local Law can be found in (Appendix B). This amnesty program can be seen as addressing vulnerabilities to their citizens through inspections, "…while permitting homeowners to receive all proper permits. This is especially important when a resident needs to sell or refinance their home and finds there is an open building permit or no certificate of occupancy on their home." (Village of Rye Brook, New York, 2011)

Procedures

The procedures used for this applied research project were based on descriptive methods to determine current conditions and identify opinions and attitudes regarding construction work without permits. This method used data base analysis, direct observations by subject matter experts, and survey results. The purpose was to fully understand the problem in order to facilitate decision making and do evaluative research to improve the existing programs. The Springfield Construction Official is the qualified person appointed by the municipal appointing authority to enforce and administer the Uniform Construction Code (UCC) regulations as per N.J.A.C.: 5:23-4.5 Municipal Enforcing Agencies – Administration and Enforcement. The Construction Official, by virtue of this position, is the lead subject matter expert for this ARP. Both the Construction Official and his Technical Assistant (Appendix C) were given this APR's problem statement, purpose statement and research questions and their feedback assisted with creating the following procedures.

Springfield's UCC database was searched for five types of violation notices: 1) Failure to comply with a lawful order that will endanger the life or safety of any person; 2) Failure to obtain a required permit or occupying without a Certificate of Occupancy; 3) Failure to comply with a Stop Work Order; 4) Making a false or misleading statement; 5) Going beyond the approved scope of work. A list of violations was created for the time period 2005 through 2010 and broken down by geographical location (census tracts), by construction trade and categorized for the scope of construction work without permits.

Determining how construction work without permits is being detected became the next step in the descriptive research method. The Springfield Fire Department Uniform Fire Code (UFC)

database was searched for Notice of Violation/Order to Correct for citations of failure to obtain proper permits. The list of these UFC violations was cross-referenced to the UCC violations to determine if the SFD fire prevention inspections initially detected the construction work without permits and to verify that the Construction Official had properly cited the violation through the UCC. A combined list of violations was created as a basis for further analysis.

Just as the UFC inspectors make referrals to the Construction Official, firefighters also make referrals to UFC inspectors when they discover potential code violations -- typically when firefighters respond on emergency incidents. The SFD's National Fire Incident Reporting System (NFIRS) database was query searched using the addresses from the combined UCC and UFC violation list. A corresponding SFD incidents list was established. Using the violation dates, the corresponding NFIRS narratives were examined to determine if a fire department emergency response detected the construction work without permits.

To conclude the examination of how construction work without a permit is detected, the UCC database was query searched using the addresses from the combined violation list looking for construction permit histories. The dates of permit inspections were then examined to determine if UCC inspectors detected additional construction work without permits or work going beyond the approved permit. During the database examination period – 2005 to 2010, there were UCC and UFC staffing changes implemented; therefore, a correlation between staffing and work without permit detection was explored.

The literature review of laws, standards, text, periodicals, websites and related studies allowed for the development of a Construction Permit Survey for Building Departments (Appendix D) and a Construction Permit Survey for Fire Departments (Appendix E). The

surveys were focused on methods employed by their jurisdictions to gain permit compliance. Using an online survey instrument, an anonymous survey was provided to the 87 active members and 42 retired members of the New Jersey Career Fire Chiefs' Association, 21 active members of the Union County Fire Chief's Association, 72 active members of the Municipal Construction Officials Association of New Jersey and 40 National Fire Academy Executive Fire Officer Program participants. Thirty five respondents completed the survey. The survey questions revealed several things: inspector staffing, inspection records management, construction without a permit -- detection, frequency, interventions for compliance -- and opinions regarding community vulnerabilities and firefighter risk.

The literature review of laws, standards, text, periodicals, websites and related studies allowed for the development of a Construction Permit Public Opinion Survey (Appendix F). The objective is to determine public opinion regarding quality of life, likelihood to obtain permits, value of permits, type of work performed by building owners versus hiring a contractor, and to test general knowledge for ordinary repair work or minor work needing a permit. It also measured customer satisfaction with the Springfield Building Department. The goal of the survey is to determine what future actions are required to reduce community risk from construction work without a permit in Springfield. The survey was released to the public in a *Springfield Patriot Times* newspaper article, the Springfield Patch online news webpage, and the Township Website. Thirty four respondents completed the survey. To identify the correct answers for ordinary repair and minor work permit requirements for the Building Permit Public Opinion question, subject matter experts were chosen from the fire prevention code field and the construction code field. The purpose of using subject matter experts was to identify any

misconceptions held by the public regarding the construction permit requirements. A curriculum vita of each subject matter expert (Appendix A) is provided to establish their qualifications.

Limitations and Assumptions

The Springfield databases for Uniform Construction Code, Uniform Fire Code and National Fire Incident Reporting System are all separate records management systems. When analyzing the databases, the information was manually compiled and organized in spreadsheets. Some of the data entry fields were not always complete. When notice of violations for failure to obtain permits did not indicate the nature of the work performed, assumptions were made for the nature of work detected using patterns and trends from the three databases. Overall, the data collection was difficult and time consuming, but it does represent a valid method for determining the descriptive research to identify the problem of construction work without a permit.

New Jersey has adopted the technical codes and standards from the International Code Council, National Fire Protection Association, and National Association of Plumbing-Heating-Cooling Contractors which are shared throughout the United States. Administratively, State of New Jersey regulations implement the statutes that are the legal basis for operating State programs and services. The New Jersey Administrative Code (N.J.A.C.) compiles all effective rules adopted by State agencies and their sub-divisions. Nationally, while common technical codes exist, administrative regulations variables exist and some programs and initiatives discovered through research from other states may not be permitted by N.J.A.C. or may need specific approval from the NJ Department of Community Affairs (DCA), Division of Codes and Standards, Office of Regulatory Affairs.

Results

Research Question #1

What is the scope of construction work without permits in Springfield? Using the notice of violation data from Springfield's Uniform Construction Code (UCC) records from 2005 to 2010, an overview of construction work without permits was established (Table 1) by identifying the number of violations by year, the number of violation by property type, the number of violations by location (census tract) and the number of violations by construction trade.

Table 1 – Construction Work without Permit Overview

Totals 2005 to 2010	2005	2006	2007	2008	2009	2010
Number of Permits (5,978)	974	1,052	1,028	**1,057**	905	965
Number of Properties Violated (183)	23	26	25	**62**	22	25
Commercial Properties (67)	**12**	9	11	19	7	9
Residential Properties (**116**)	11	**17**	**14**	**43**	**15**	**16**
Census Tract 375.00 (**80**)	**15**	10	**14**	21	**11**	9
Census Tract 376.01 (36)	3	5	3	16	4	5
Census Tract 376.02 (67)	5	**11**	8	**25**	7	**11**
Building Violations (**96**)	**14**	**17**	8	**34**	8	**14**
Electrical Violations (90)	12	8	13	33	12	12
Plumbing Violations (91)	8	5	**14**	26	**16**	12
Fire Violations (53)	6	4	9	17	9	8
Elevator Violations (1)	0	0	0	0	0	1

The highest number of construction permits processed was 1,057 in 2008, which corresponds with the highest number of construction work without permits violations. The highest number of violation by property type overall was residential. The highest number of violations by geographical location alternated in each of the study years between census tracts 375.00 and 376.02. The total violations for the three census tracts equaled the total violations cited because the property could only be geographically located once. The number of violations by construction trade totaled higher than the total number of violations because some construction work involved more than one construction trade. The highest number of violations by construction trade was building.

Using the violation list from construction work without a permit, the type of construction work performed was categorized into generalized categories (Table 2) from 2005 to 2010. The total number of work type corresponds to the number of properties violated with the exception that some work types performed were not identifiable, as some inspection data fields were not completed (see Assumptions and Limitations).

Table 2 – Type of Work Performed without a Permit

Totals 2005 to 2010	2005	2006	2007	2008	2009	2010
Heating System (17)	2	1	2	4	**6**	2
Hot Water Heater (15)	1	1	4	3	4	2
Interior Alterations (15)	2	3	2	5	3	0
Alarm Systems (13)	3	2	2	5	0	0
Roofing (11)	1	5	1	3	1	0
Air Conditioning (10)	0	2	5	2	0	1
Bathroom (10)	2	1	2	4	1	0
Kitchen (9)	0	0	1	7	0	1
Certificate of Occupancy (7)	0	3	1	0	2	1
Electrical Devices (7)	0	0	1	5	0	1
Doors/Windows (6)	3	0	1	1	0	1
Basement (5)	1	0	0	3	0	1
Siding (5)	2	1	1	0	0	1
Chimney (4)	0	0	0	0	1	3
Deck (4)	0	1	0	2	0	1
Demolition (4)	0	2	0	1	0	1
Fire Sprinkler (4)	0	2	0	2	0	0
Fuel Tank (3)	1	1	0	1	0	0
Plumbing Fixtures (3)	0	0	0	0	0	3
Pool (3)	0	0	0	1	1	1
Drain Line (2)	0	0	0	1	0	1
Sign (2)	0	0	1	1	0	0
Porch (1)	0	0	1	0	0	0
Gas Piping (1)	0	0	0	1	0	0
Water Service (1)	0	0	0	0	1	0
Undetermined (21)	5	0	0	10	2	4

The greatest number of work performed without a permit was heating systems with the peak number being detected in 2009. The trades for heating systems are electric, plumbing and fire. While this type of work could be classified as mechanical, this enforcement responsibility in New Jersey typically falls primarily to the Plumbing Sub-Code Official. It may, secondarily, fall to the Fire Sub-Code Official if he/she holds a mechanical inspectors license for one and two-family residences. Hot water heaters tied with interior alterations were the second largest type of work performed without a permit. Depending of the type of heating source, the trades for a hot water heater are definitely plumbing and sometimes electrical for wiring, and fire for flue gas venting. Interior alterations can be described as tenant fit-outs, renovations and alterations in which construction trades primarily involve building, but can include electrical for wiring, plumbing for piping and fire for fire rating and fire protection.

Research Question #2

What methods are currently being employed in Springfield to detect construction work without permits? An interview of the Springfield Construction Official and his Technical Assistant revealed similar results as Table 2 the type of construction work without a permit. In Springfield, as in many other towns, the Construction Official reported mostly hot water heaters, furnaces and boilers which are quick, one-day projects, making them more difficult to detect. Bathrooms, kitchens, finished basements and attics are popular renovations; however, they are more involved projects, so the chance of being detected is greater.

In Springfield, the most common way to detect construction work without a permit is calls from the neighbor or the contractor who did not get the job. The Springfield Technical Assistant regularly experiences a higher complaint call volume during the time of the year when the new tax bills are mailed to the residents. She attributed the increase in complaints to the residents

whose tax assessments increased due to approved home improvements. These homeowners report their neighbors who worked without permits. Next, inspectors mainly detect unapproved work while conducting other field inspections, such as the Municipal Certificate of Occupancy for new businesses. The inspector is sent to inspect work with a permit, but finds work that went beyond the approved scope of the job or learns that the owner/contractor made a false or misleading statement on the permit application. Occasionally, dust from demolition or construction activates a smoke alarm and the Fire Department will find work being done without a permit and report it. Finally, the presence of construction debris at the curb can indicate unapproved construction work if the permit placard is not visible from the street.

Using the spreadsheet created from the UCC, UFC, and NFIRS databases from 2005 to 2010, the Township's internal detection methods (Table 3) can be classified into three categories: UCC inspectors conducting prior permit inspections, UFC inspectors conducting fire prevention enforcement inspections and the fire department incident response referrals.

Table 3 – Springfield Internal Detection Methods

Totals 2005 to 2010	2005	2006	2007	2008	2009	2010
Number of Violations	23	26	25	**62**	22	25
Total Internally Detected Violations	8	5	8	**17**	3	8
UCC Inspectors (14)	4	1	2	**6**	1	0
UFC Inspectors (24)	4	4	4	**7**	1	5
Fire Department Referrals (10)	0	0	2	**4**	1	3

The highest method of internal detection for construction work without permits was the UFC Inspections. During the study period, the Springfield Fire Prevention Bureau Inspectors conducted 5,784 UFC inspections (Appendix G). The UFC inspections include Life Hazard Uses, Non-Life Hazard Uses, Permits, Complaints, and Smoke Detector, Carbon Monoxide Dectector, and Fire Extinguisher Compliance Inspections in one and two-family residences. Prior

to 2009, the Springfield Fire Prevention Bureau was staffed by a Firefighter/Fire Official and a Firefighter/Fire Inspector who also performed UCC Fire Sub-Code duties in the building department. In 2009 and 2010, the two Firefighters were re-assigned as line firefighters to manage vacancies caused by budget-based attrition. A part-time Fire Sub-Code Official was then hired.

There were three notable internally detected violations that can illustrate the range of construction work without a permit in Springfield: the installation of a heating, ventilation and air conditioning (HVAC) unit in a single family residence, a second floor addition to a single family residence, and a registered home improvement contractor performing plumbing work without a plumbing license in an apartment building. 1) The unapproved HVAC installation was discovered by the Fire Department when responding on several carbon monoxide alarm activations to this particular residence. The Fire Prevention Bureau discovered that a HVAC unit was installed in a second floor enclosure with no consideration given for clearance or the required make-up air for combustion. There were approved permits for interior alterations, but the additional heating unit went beyond the approved scope of work. 2) The unapproved second floor addition was detected by the Construction Official after the framing, sheathing and roofing had already been completed. The homeowner was doing the work himself and continued to build even after being issued a failure to obtain permit violation. An unsafe structure placard was then issued and the utilities were ordered disconnected. The building needed temporary shoring while the first floor walls were reinforced to support the additional un-designed dead load. 3) The Fire Department responded to a four alarm apartment fire that resulted in a $2.1 million fire loss, which displaced 10 families and injured four firefighters. The cause of the fire was determined to be a registered home improvement contractor performing plumbing work without a plumbing

license and without a plumbing permit. The property management routinely used this contractor for work of a minor nature and for ordinary repairs. A copy of the contractor's registration was maintained in their files; however it indicated that he was not approved for electrical or plumbing work.

Research Question #3

What methods are being employed by other jurisdictions to gain permit compliance?

Using the results of the Construction Permit Survey for Building Departments (Appendix B) and Construction Permit Survey for Fire Departments (Appendix C), the top three methods they had in common to detect construction work without a permit were complaints from the public, fire prevention code inspections and emergency incident responses. The remaining detections were a combination of events that happened when UCC inspectors were performing their various duties. The frequency of detecting unapproved construction work was primarily reported as monthly. There were several remarks recorded in the comments section for methods to detect construction work without a permit. "Staffing reductions have reduced … inspections which would regularly discover work performed without a permit". "Access to the construction permit databases did assist with referrals to the building inspector." "The best method of detection is the inspector's eyes, however most part time inspectors who work in multiple jurisdictions rarely report work without permits." "It was unclear if they are overworked or were just in a hurry to get to another town." (Anonymous, 2011)

The top three intervention methods being employed to gain permit compliance are fines, inter-agency cooperation and public education awareness. Amnesty programs and reduced fees were the lowest intervention methods offered. The vast majority of building departments do provide a checklist for homeowners of the various permit requirements. There were several

remarks recorded in the comments section related to fines. Some construction departments felt that fines should be the last resort and that the best solution was to work with homeowners and local contractors to educate them about the reasons for permits and the protection permits provide. NJ regulations mandate a notice of violation and an order to pay penalty. The maximum penalty is $2,000.00 per discipline which can be challenged at a construction board of appeals hearing. The fines can go to both the homeowner and the contractor. The fine can be reduced based on the nature of the work and if the contractor or homeowner responds in a reasonable amount of time.

Springfield can be compared with other jurisdictions for its Local Enforcing Agency (LEA) organization and inspection records management systems. The majority of LEAs staffed their fire prevention offices with full-time uniformed fire personnel. Some LEAs used a combination of full-time and part-time inspectors, and only a few LEAs maintained a solely civilian staff. A slight majority of building departments had a full-time staff, however, the combination of full-time and part-time inspectors was higher than was found in the fire prevention results. Very few LEAs used third-party agencies.

Respondents from other jurisdictions were asked to describe their record management software to determine if database information sharing could assist with detecting construction work without a permit. The majority of UFC agencies currently use Emergency Software Products, followed by Firehouse Software. The majority of UCC agencies use Roadrunner Software. Information sharing inter-departmentally was reported to be limited. Those sharing information restricted their database access to specific personnel. Other access was limited to the "read only" feature. The majority of municipalities maintained separate UCC, UFC and NFIRS

software systems. The shared databases existed primarily between the UFC and NFIRS systems, although there was a system that shared UCC and UFC information.

Research Question #4

What future actions are required to reduce community risk from construction work without a permit in Springfield? Using the survey results from the Construction Permit Public Opinion Survey (Appendix D), an assessment of the community's opinions and attitudes regarding construction permits could influence possible risk reduction strategies through education, engineering, enforcement, economic incentives, and emergency response. Response to the survey was anonymous to ensure an honest personal view without the fear of code enforcement penalties upon the respondent.

Several questions were asked specifically to determine the perceived importance of construction permits to the public. The questions flowed from general to more specific, from the least sensitive to the most sensitive and from attitudinal to opinion. When asked if they would obtain a permit for their next job, the results were: Absolutely (29%), Very Likely (29%), Somewhat Likely (23%), Unlikely (5%) and Very Unlikely (14%). When asked if construction permits are not needed because "It's my house" and any deficiencies won't affect anyone else, the results were: Agree (3%), Disagree (92%), Unsure (5%). When asked if they would purchase a home knowing alterations were performed without permits, the results were: Yes (12%), No (54%), Unsure (34%). When ask to complete the sentence "Construction permits can be viewed as….", the top five results were: assurance that plans are reviewed for requirements, protecting zoning conformity in the neighborhood, fee generator to the municipality, health and safety for Firefighters, and making selling a home easier.

There were several remarks recorded in the comments section of the public importance of construction permits. In reference to the likelihood of obtaining a permit, it was expressed that permits should not have to be obtained for everything, unless it is a safety issue. In reference to the "It's my house" concept, although results were favorable, there was an attitude that home repairs and updates should not have government involvement. While there were some people who would purchase a home knowing alterations were performed without permits, the comments indicated that they would rely on real estate disclosure forms, pre-closing home inspections and a trust that licensed contractors performed the work to the proper building standards even without getting a permit.

Several questions were asked specifically to determine the type of construction work people would perform themselves versus hiring a licensed/registered contractor. The survey also tested for understanding which specific jobs required a permit. The type of work most likely performed by homeowners was Painting/Wall Papering (79%), Landscaping/Irrigation (55%), and Flooring (52%). The type of work most likely to be done professionally was Heating/Cooling (94%), Masonry (85%), and Plumbing (82%).

Based on N.J.A.C. 5:23-2.7 ordinary maintenance and minor work, the survey asked for which ordinary repair or minor work would you seek a permit? Only sixty nine percent of the responses were answered correctly: Vinyl wall covering (ordinary repair no permit required), replacement of a smoke detector with a like device (ordinary repair no permit required), replacement of a faucet (ordinary repair no permit required), repairs to a doorbell (ordinary repair no permit required). Thirty one percent of responses were answered incorrectly: Installation of paneling (permit required), installation of less than 5 electrical outlets (permit

required), replacement of a clothes dryer with a dryer having a different fuel type (permit required).

Many responses to the Building Department customer satisfaction survey questions were unable to be rated because many of the respondents never had dealt with the department. The others that were able to answer returned ratings evenly distributed between satisfied and dissatisfied. There were several criticisms recorded in the comments section which can be summarized. There appeared to be a frustration that each town employee had a different answer; codes seemed to change without notice; inspectors sometimes seemed to make up their own laws and always seemed overworked and stressed. One respondent specifically wrote,

> Homeowners need positive and proactive support, rather than just policing and fining. The public needs to be taught that the engineering and building departments are there to protect them and the community. Offering construction guidelines with explanations of risks and safety issues involved before a project begins would help us do a job correctly and also help us hire the best contractors. Poorer people do not have the luxury of hiring the highly-skilled, top-rate companies that obviously know how to do things the right way.

Discussion

In January 2011, the new Springfield Mayor questioned his department heads and senior staff: Is Springfield thriving or merely surviving? His concern that the Township of Springfield would have a sustained vitality appears to be founded as is evidenced by Springfield's drop in ranking in the *New Jersey Monthly* magazine's "2011 Best Places to Live". The surveyed residents feel "Quality of Life" means community safety, a clean environment, and quality housing. The residents were less interested in community participation (spirit), community affordability, and community social infrastructure (culture, recreation, sports). Whatever "Quality of Life" means to the Springfield citizens, does Springfield have enough of "it" to attract new citizens with varying interests, retain its existing citizens and inspire them all to improve the community? One risk to Springfield's vitality may lie in improperly modified buildings. Other jurisdictions surveyed indentified tax revenue loss, personal injury/fatality and property loss as their primary vulnerabilities to construction without a permit.

The Fire Chief's mission is to ensure the safety of firefighters, protect the lives of the public and preserve property. Using his role as the Fire Inspector, the Fire Chief is able to reduce risk to his organization and to the community.

> It is easy to determine that a building severely damaged by fire is unsafe, but what about a building having a required exit door blocked by boxes? Would the situation require the same action as if, say, the exit door had been removed? Clearly, a required exit door that has been removed is a danger to human life and public welfare. (Grayce, 1990, p. 4)

A blocked door is easily recognizable as a hazard and is more of a housekeeping issue that is easily corrected. Detecting a removed door, explaining why it is necessary, and getting the building owner to replace it, is more challenging.

The Construction Permit Public Opinion Survey revealed positive attitudes that construction permits ensure code and zoning requirements are met. Some misconceptions existed that construction permits merely collect fees, increase taxes, create a paperwork bureaucracy and are inconvenient. The *"It's my house"* attitude and opinion of government intrusion did appear to be a barrier for obtaining a building permit. The construction code does give the homeowners the latitude to perform construction work themselves, but that does not eliminate the construction permit requirements. The average person will only live in a house for approximately ten years. A homeowner may decide to perform some minor electrical work and believe the work has been completed correctly, however, an improper electrical grounding could be life-threatening. Future homeowners must be protected as well as the current homeowners, therefore permits are required.

In analyzing Table 2 - Type of Work to be Performed without a Permit, the top violations were heating/cooling systems and hot water heaters. Interestingly, the Construction Permit Public Opinion Survey revealed that this type of work was the most likely to be completed professionally, not by the homeowners themselves. The Springfield Construction Official had reported that installation of most hot water heaters, furnaces and boilers were quick, one-day projects. The UCC regulations do allow emergency repairs to commence with notification to the building department during business hours and then the building owner must submit a permit application within 48 hours. Given that licensed contractors would tend to be hired to perform heating/cooling and hot water heater work and emergency repair permit notification would not

delay replacing this equipment, there appears to be an inconsistency. Why are heating/cooling and hot water heater permit not being taken out?

While detecting construction work without permits primarily was the result of public complaints, the public must not be relied upon as a detection method. Using their training and experience, inspectors should be the best method for detecting unapproved work. One of the observations made from the Building Department customer satisfaction survey was the inspectors seemed overworked and stressed which relates to an answer from the Construction Permit Survey for Building Departments regarding part-time inspectors. One code official reported that inspectors working in multiple jurisdictions rarely report work without permits for the possible reason that they are overworked or were in a hurry to get to another town.

> To address this situation, the NJ DCA Office of Regulatory Affairs has been asking each municipality for rosters that include the actual hours worked by each employee of the local building department. The purpose of accumulating this information is to track officials who are working in multiple towns, because a large portion of complaints received are generated from towns where the part-time officials have limited hours. If it is determined by review of the permit activity that there appears to be a significant amount of work in one or more municipalities in which the official is working, a staffing analysis is performed. The main reason for monitoring officials in multiple towns is to ensure that each individual is capable of adequately enforcing the adopted Uniform Construction Code rules and regulations. Hurried or incomplete inspections can compromise the safety if the intended occupants. This is what we are ultimately trying to ensure will not happen. (Mraw L. , 2004, pp. 10-11)

The comment section quote from the Building Customer Satisfaction response captures what is needed for community risk reduction through collaborative organizational and community support.

> ***Homeowners need positive and proactive support, rather than just policing and fining. The public needs to be taught that the engineering and building departments are there to protect them and the community. Offering construction guidelines with explanations of risks and safety issues involved before a project begins would help us do a job correctly and also help us hire the best contractors. Poorer people do not have the luxury of hiring the highly-skilled, top-rate companies that obviously know how to do things the right way.*** (Anonymous, 2011)

Recommendations

"The economic reality is that most communities are either unable or unwilling to bear the cost of providing enough resources to fund every possible scenario. To do so would mean schools, libraries, police, and other essential services would not be adequately funded. Funding is both an economic and political decision." (National Fire Academy, 2011, p. SM 2.9) The current hiring trend is to replace full-time positions with part-time or inter-locally shared employees who do not require pension contributions or health benefits. The construction inspector staffing issues can be referenced to the DCA Staffing Report for Springfield UCC Enforcement (Appendix A) where the actual authorized weekly hours are half of the recommended time needed. According to a five year comparison presented to the Springfield Public Safety Committee (Appendix G), the effects of the UFC staffing elimination show decreased inspections in 2009 and 2010. Given the task to meet these challenges, the principles in the EACRR course can be implemented to build organizational and community cooperation through risk reduction strategies. The information gained from the data analysis and survey feedback can used to design a strategy for Springfield. The following recommendations will be based on the EACRR course interventions: education, engineering, enforcement, economic incentives and emergency response.

Education: With help from the Building and Engineering Departments, the Springfield Fire Department will create a construction permit awareness education program for the public. The program will be designed to explain the history of construction codes, giving examples of the significant events that influenced the building codes. These explanations will show that construction guidelines are there to protect public safety and reduce community risk. The concept of permits being a value-added service should be integrated into the program to show that construction permits prevent costly mistakes before construction starts and provide some

measure of consumer protection. The Public Information Officer will launch a media campaign for the construction permit awareness program using: the *Springfield Patriot Times* Newspaper, the Springfield Patch news Website, the Township Website and Township Signboards. The Fire Prevention Educator will then present the construction permit awareness program to various business, trade, social, and community groups.

Engineering: The construction permit violation analysis revealed the need for an improved records management system in the UCC, UFC and NFIRS databases. As a result of the database analysis for this ARP, the Fire Department and Construction Department have begun researching a new a software solution that would be integrated into the normal everyday processes of each department. Advances in technology could allow for combined databases in all Township departments with mobile applications offered in the field. The software should improve the level of service and responsiveness delivered to the community. The Township has recently upgraded its website and its new platform should be utilized to better connect with the community. The public will be able to look up information, download forms, submit applications, check appointments, and report complaints.

Enforcement: Construction work without a permit is an organizational and community risk. The inspector staffing may not increase in the foreseeable future, therefore, other Township departments are needed to assist with unapproved construction detection. There are many Township workers who regularly enter buildings or drive the streets within Springfield. Firefighters, Police Officers, Emergency Medical Technicians, Emergency Management Responders and Public Works Crews can be trained to detect the signs of illegal construction. With the help of the Construction Official and Fire Official, the Springfield Fire Department Training Officer will develop construction detection awareness training for all Township

employees. These efforts can be combined with the improved integrated software and a web-based central complaint system to improve code enforcement.

Economic Incentives: Pursuant to N.J.A.C. 5:23-4.19, the New Jersey Department of Community Affairs allows for a waiver of construction permit fees for various reasons. However, there is no current provision for a permit amnesty program in the Regulations. The Township could create an ordinance based on the sample building permit amnesty program (Appendix B) and submit a request to the DCA Office of Regulatory Affairs for a special waiver of municipal fees and for the State permit surcharge. If the DCA rejects this proposal, there is another option available through the existing Regulations. N.J.A.C. 5.23-2.23(e) provides that upon the request by the owner of an existing building, a general inspection of the visible parts of the building be done to determine if construction without a permit was performed or unsafe conditions exist. According to DCA Bulletin No. 06-1 (Appendix H), work performed without a permit by a previous owner can be reasonably inspected ensuring that the construction work is properly documented. If it is discovered that the current owner performed the work without a permit, the Construction Official may use his discretion to implement enforcement actions. The building owner would be required to obtain a permit for any corrective work that would normally require a permit.

Emergency Response: Through the new shared records management database, emergency responders will be more effective using the building intelligence gained through code enforcement, incident reports, pre-fire planning surveys and other municipal records. Each department can reference the property's records for information such as: ownership, construction type, zoning, open permits, open violations, engineering, public utilities, incident history, on-site hazards, and pet licensing.

Given the current economic circumstances, it can be expected that more and more people will fail to get permits in order to save money. When construction permits are not obtained, it decreases the safety of building occupants and emergency responders because building features and fire protection systems may not have not been properly designed or approved. The construction code takes into account the needs of the fire service when called upon to operate in or near the structure. Inevitably, failure to get a permit is going to lead to some tragic consequences unless the challenges of unaddressed community risks are mitigated through collaborative organizational and community support.

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Appendices

Appendix A – DCA Staffing Report for Springfield UCC Enforcement

STAFFING REPORT
SPRINGFIELD TOWNSHIP (UNION)

The following are the minimal staffing needs (per week) for Springfield Township's Uniform Construction Code (UCC) enforcement agency — **Construction Code work only.**

POSITION (S)	NEEDED HOURS UCC Only
Construction-Official	25
Building Sub Code &Inspections	63
Electrical Sub Code & Inspections	23
Fire Protection Sub Code & Inspections	15
Plumbing Sub Code & Inspections	23
UCC Office Control Staff	74

COMMENTS

The staffing needs are based upon construction permit activity & inspections reported from January 1, 2010 through December 31, 2010.

Construction permit activity for the last 12 months was: 328 new construction permits/new dwelling units, 101 permits for additions & major alterations, 829 permits for minor alteration projects, and 22 demolition permits.

Significant on-going projects include: 238 residential units at Springfield Gardens (Apartment Complex) and 90 residential units at Victory Road Project, Springfield Residential Communities.

Anticipated inspection activity for the next 12 months is as follows: 2637 building inspections, 1055 electrical inspections, 527 fire protection inspections and 1055 plumbing inspections.

Any questions or comments concerning this report, call Chris Ferrara at 609-984 -7768.

CF: 4/5/11

Appendix B – Sample Building Permit Amnesty Program

LOCAL LAW CREATING A BUILDING PERMIT AMNESTY PROGRAM FOR OWNERS OF ONE AND TWO FAMILY HOMES AND COMMON PROPERTIES IN A CONDOMINIUM PLANNED UNIT DEVELOPMENT, HOMEOWNER'S ASSOCIATION OR CONSERVATION SUBDIVISION

A LOCAL LAW to create a Building Permit Amnesty Program for owners of one and two family homes and common properties in a Planned Unit Development or Conservation Subdivision.

BE IT ENACTED by the Board of Trustees of the Village of Rye Brook as follows:

Section 1: Findings of Fact. The Village of Rye Brook finds that:

A) A building permit and other permits are required in order to erect, enlarge or structurally alter any building or other structure in the Village of Rye Brook. A certificate of occupancy is required once all work allowed by the building permit and other permits is completed.

B) There currently is an administrative fee assessed against persons engaged in or caused to be engaged in erecting, enlarging or structurally altering any building or other structure in the Village of Rye Brook without a building permit and other permits.

C) The Board of Trustees has knowledge that property owners of one and two family homes and common properties in a Condominium, Planned Unit Development (PUD), Homeowner's Association and Conservation Subdivision have failed to secure the required permit(s) for such activities and wishes to encourage compliance with the permit requirements in the interests of safety.

Section 2: One and Two Family Homes and Common Properties in a Condominium, Planned Unit Development, Homeowner's Association or Conservation Subdivision. The Permit Amnesty Program shall only apply to owners of one and two family residential properties and common properties in Condominiums, PUDs, Homeowner's Associations or Conservation Subdivisions situated in the Village of Rye Brook.

Section 3: Amnesty Period. The Permit Amnesty Program began on November 15, 2009 and will be extended to May 31, 2012. This shall be known as the Amnesty Period.

A) The Village of Rye Brook Building Department will began taking building and other permit applications under this Amnesty Program on November 15, 2009 for all past work and work in progress at the time of the enactment of this local law and will stop accepting permit applications under this Local Law on May 31, 2012.

B) All applicants will have until May 31, 2013 to obtain a Certificate of Occupancy from the Village of Rye Brook Building Department for all building and other permits issued during this Amnesty Period.

C) During the Amnesty Period, the Village of Rye Brook will waive all administrative fees for construction activities without a building or other permits that are currently required (e.g., electrical and plumbing) and/or not obtaining a certificate of occupancy upon completion of the construction activities. All other fees and costs associated with the issuance of a building or other permits shall remain in effect during the Amnesty Period.

Section 4: Notification and Exclusion of Small Projects: An applicant for a building permit or other permit needing Architectural Review Board approval shall, upon its filing and at least ten (10) days before the issuance of any permit, notify immediate neighbors, as defined below, of that application. Such notice shall be given either personally or by first class mail. If no objection from the immediate neighbors is received in writing by the Village within ten (10) days of the notice given by the applicant, then no Architectural Review Board Approval is required. In addition, no Architectural Review Board approval shall be required for Small Projects as defined in subsection (2) below, and for that reason, this Notice provision is not applicable to said Projects.

1) For owners of one and two family homes, immediate neighbors shall include all neighbors within a notification area that shall be defined as a radius line measured fifty (50) feet from the residential applicant's property line and, if the applicant is a Condominium, PUD, Homeowner's Association or Conservation Subdivision, the radius line shall be measured one hundred (100) feet from the project location. An affidavit attesting to proper notice must be submitted to the Building Department.

2) Small Projects shall be defined as any addition to or alteration or modification of an existing single or two family residence or Condominium or PUD or Conservation Subdivision structure that:
    i. Does not create a second story if none previously existed on the structure; or
    ii. Is less than 15% of the existing gross floor area of the structure as measured prior to the addition or alteration; or
    iii. Relates solely to the installation of windows and/or sliding glass doors, the installation or replacement of a fence; or
    iv. the installation or replacement of a deck, patio or retaining wall; or
    v. was completed on or prior to November 1, 2007.
    vi. With respect to item (v) above, the applicant shall submit an affidavit that the work was completed on or prior to November 1, 2007.

Section 5: Board Approvals: Except as specified by this law, approval by the Village Board, Planning Board, Zoning Board of Appeals or any other Board still is required. All supporting documentation and fees associated with the application to the Village Board, Planning Board, Zoning Board of Appeals or any other Board must be submitted with the application and must meet all current zoning and other Codes.

Section 6: Effective Date. This Local Law shall take effect immediately upon filing with the Office of the Secretary of State.

Appendix C - Subject Matter Experts: Curriculum Vita

Jerry Eger – Construction Official/Building Sub-Code Official
Licensed by the New Jersey Department of Community Affairs as Construction Official, Building Sub-Code Official RCS, ICS, HHS, Hotel & Multiple Dwelling, Mr. Eger has 7 years of code enforcement experience. Mr. Eger has over 30 years of experience as a construction contractor. Mr. Eger is International Code Council Certified as a Residential Green Building Examiner. Mr. Eger's professional affiliations are International Code Council Member, Building Officials Association of NJ Executive Board Member, Essex County Code Enforcement Officials Association of NJ President, Municipal Construction Code Official of NJ Member and Eastern States Building Officials Federation Members. Mr. Eger currently is the Building Sub-Code Official for Millburn Township and Construction Official/Building Sub-Code Official for the Borough of Kenilworth, Borough of Mountainside and Township of Springfield. Mr. Eger is also an adjunct professor at Essex County College in the NJ Contractors EPA/HUD Renovator Training Program.

Township of Springfield
100 Mountain Avenue
Springfield, NJ 07081
973-912-2218
jerry.eger@springfield-nj.us

Denyce Yannazzone – Technical Assistant
Studied at Rutgers University in liberal arts and licensed by the New Jersey Department of Community Affairs (DCA) as a Technical Assistant, Ms. Yannazzone has four years experience in Uniform Construction Code (UCC) administration. Prior to her current role, Ms. Yannazzone worked in the Township of Springfield Tax Assessor's Office for three years and worked in Township of Irvington Clerk's Office for eight years prior to that.
Ms. Yannazzone maintains her UCC license through DCA and Rutgers University continuing education seminars.

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Appendix D - Construction Permit Survey for Building Departments

Dear Sir/Madam,

I am completing my second year of studies in the National Fire Academy's Executive Fire Officer Program (EFOP). Executive Analysis of Community Risk Reduction is the second course in the program. The course is a mixture of philosophy (the value of the community risk reduction) and application (the process of applying risk reduction in the community). It involves developing partnerships with the community members to implement programs, initiatives, and services that prevent and/or mitigate the risk of human-caused and natural disasters.

EFOP participants must complete an Applied Research Project (ARP) that relates to their organizations and their communities. I am using the databases from the fire department, fire prevention bureau and construction department to research the types and frequency of people failing to obtain a construction permit in Springfield, NJ.

This survey will help me determine what methods are being employed by other jurisdictions to gain permit compliance and what future actions are required to reduce community risk from construction work without a permit in Springfield.

Please take a few minutes to complete this survey. Try to answer as many questions as you can, skipping the questions that don't apply to your department. I have included an optional comment box for most questions in case you wish to add any additional information or feedback. Feel free to forward this survey to anyone you feel could help with these questions.

Sincerely,

Fire Chief James G. Sanford
Township of Springfield
Fire Department
200 Mountain Avenue
Springfield, NJ 07081

james.sanford@springfield-nj.us
973-912-2266
973-912-2270 fax

1. **How is your Building Department staffed?**
- o Full-time
- o Part-time
- o Inter-local agreement
- o Regional
- o 3rd Party
- o OTHER

_____
(Please specify)

2. **How is your local Fire Prevention agency staffed?**
- o Uniformed Fire Personnel
- o Civilian
- o Inter-local agreement
- o Regional
- o 3rd Party
- o OTHER

_____
(Please specify)

3. **What computerized records management software does your department use?**

_____
(Please specify)

4. **Is your construction permit database information shared inter-departmentally?**
- o Yes
- o No

5. What methods are utilized to detect construction work without a permit?

- o Aerial images/GIS
- o Certification of Occupancy Inspections
- o Construction inspections for other work
- o Complaints from contractors
- o Complaints from public
- o Construction debris
- o Delivery of building supplies
- o Fire prevention code inspections
- o Health code inspections
- o Presence of contractor vehicles
- o Public safety incident responses
- o Referrals from other agencies
- o Tax record
- o NO SPECIFIC METHODS

6. How often is construction without a permit detected?

- o Daily
- o Weekly
- o Monthly
- o Annually
- o Less than once a year
- o UNKNOWN

7. What intervention methods are being employed to gain permit compliance?

- o Amnesty programs
- o Education awareness
- o Fines
- o Increased field inspections
- o Information technology
- o Inter-agency cooperation
- o Reduced fees
- o Streamlining permit application process
- o OTHER

_____

(Please specify)

8. In an effort to be helpful to homeowners applying for building permits, does your building department provide a checklist of the various requirements?

- o Yes
- o No

9. **How do you assess your community's vulnerability to construction without a permit?**

- o Personal injury/Fatalities
- o Property loss
- o Tax revenue lost
- o Wages lost
- o Business interruption
- o Community feeling unsafe
- o Disruptions in daily life
- o Changes to building codes and ordinances
- o Environmental damage
- o OTHER

_____

(Please specify)

10. **Opinion question:**

When construction permits are not obtained, it decreases the safety of building occupants and emergency responders because building features and fire protection systems may not have not been properly designed or approved. The construction code takes into account the needs of the fire service when called upon to operate in or near the structure.

- o Agree
- o Disagree

Appendix E - Construction Permit Survey for Fire Departments

Dear Chief,

I am completing my second year of studies in the National Fire Academy's Executive Fire Officer Program (EFOP). Executive Analysis of Community Risk Reduction is the second course in the program. The course is a mixture of philosophy (the value of the community risk reduction) and application (the process of applying risk reduction in the community). It involves developing partnerships with the community members to implement programs, initiatives, and services that prevent and/or mitigate the risk of human-caused and natural disasters.

EFOP participants must complete an Applied Research Project (ARP) that relates to their organizations and their communities. I am using the databases from the fire department, fire prevention bureau and construction department to research the types and frequency of people failing to obtain a construction permit in Springfield, NJ.

This survey will help me determine what methods are being employed by other jurisdictions to gain permit compliance and what future actions are required to reduce community risk from construction work without a permit in Springfield.

Please take a few minutes to complete this survey. Try to answer as many questions as you can, skipping the questions that don't apply to your department. I have included an optional comment box for most questions in case you wish to add any additional information or feedback. Feel free to forward this survey to anyone you feel could help with these questions.

Sincerely,

Fire Chief James G. Sanford
Township of Springfield
Fire Department
200 Mountain Avenue
Springfield, NJ 07081

james.sanford@springfield-nj.us
973-912-2266
973-912-2270 fax

1. **How is your Fire Prevention agency staffed?**
- o Uniformed Fire Personnel
- o Civilian
- o Inter-local agreement
- o Regional
- o 3rd Party
- o OTHER

_____
(Please specify)

2. **How is your local enforcement agency for Construction staffed?**
- o Full-time
- o Part-time
- o Inter-local agreement
- o Regional
- o 3rd Party
- o OTHER

_____
(Please specify)

3. **What computerized records management software does your department use?**

_____
(Please specify)

4. **Is construction permit database information shared inter-departmentally?**
- o Yes
- o No

5. What methods are utilized to detect construction work without a permit?

- o Aerial images/GIS
- o Certification of Occupancy Inspections
- o Construction inspections for other work
- o Complaints from contractors
- o Complaints from public
- o Construction debris
- o Delivery of building supplies
- o Fire prevention code inspections
- o Health code inspections
- o Presence of contractor vehicles
- o Public safety incident responses
- o Referrals from other agencies
- o Tax record
- o NO SPECIFIC METHODS

6. How often is construction without a permit detected?

- o Daily
- o Weekly
- o Monthly
- o Annually
- o Less than once a year
- o UNKNOWN

7. What intervention methods are being employed to gain permit compliance?

- o Amnesty programs
- o Education awareness
- o Fines
- o Increased field inspections
- o Information technology
- o Inter-agency cooperation
- o Reduced fees
- o Streamlining permit application process
- o OTHER

_____

(Please specify)

8. In an effort to be helpful to homeowners applying for building permits, does your building department provide a checklist of the various requirements?

- o Yes
- o No

9. **How do you assess your community's vulnerability to construction without a permit?**

- o Personal injury/Fatalities
- o Property loss
- o Tax revenue lost
- o Wages lost
- o Business interruption
- o Community feeling unsafe
- o Disruptions in daily life
- o Changes to building codes and ordinances
- o Environmental damage
- o OTHER

_____

(Please specify)

10. **Opinion question:**

When construction permits are not obtained, it decreases the safety of building occupants and emergency responders because building features and fire protection systems may not have not been properly designed or approved. The construction code takes into account the needs of the fire service when called upon to operate in or near the structure.

- o Agree
- o Disagree

Appendix F - Construction Permit Public Opinion Survey

This survey is created by and reflects the personal work of James Sanford for his participation in the National Fire Academy's Executive Fire Officer Program. It does not necessarily represent a Township of Springfield program or initiative. The results of the survey are for academic research purposes only and are not intended for construction code enforcement. A goal of this applied research is to assess community risk and recommend possible risk reduction strategies through public education. Response to this survey is anonymous to ensure an honest personal view without the fear of code enforcement penalties upon the respondent. Thank you for your participation in this survey.

***1. Please rate these "Quality of Life" concepts in your life.**

	Very Important	Important	Neutral	Not Important	Unable to Rate
Clean Environment	O	O	O	O	O
Community Affordability	O	O	O	O	O
Community Participation (Spirit)	O	O	O	O	O
Community Safety	O	O	O	O	O
Healthcare Access	O	O	O	O	O
Quality of Employment	O	O	O	O	O
Quality of Housing	O	O	O	O	O
Social Infrastructure (Culture, Recreation, Sport)	O	O	O	O	O

***2. When performing construction, alterations or repairs, how likely would it be that you would obtain construction permits for your next job?**

- o Very Unlikely
- o Unlikely
- o Somewhat Likely
- o Very Likely
- o Absolutely

***3. Construction permits are not needed because "it's my house" and any deficiencies won't affect anyone else.**

- Agree
- Disagree

Other (please specify)

***4. Would you purchase your next home knowing that alterations were performed without a construction permit?**

- Yes
- No
- Unsure

Other (please specify)

5. What type of work would you perform yourself?

- Burglar/Fire Alarm
- Cabinetry
- Carpentry
- Chimney
- Demolition
- Electrical
- Fencing
- Flooring
- Heating/Cooling
- Landscaping/Irrigation
- Masonry
- Painting/Wall Papering
- Plumbing
- Roofing/Siding
- Sheet Rocking
- Tilling/Glazing
- Windows/Doors
- NONE

6. For what type of work would you hire a licensed/registered contractor?

- Burglar/Fire Alarm
- Cabinetry
- Carpentry
- Chimney
- Demolition
- Electrical
- Fencing
- Flooring
- Heating/Cooling
- Landscaping/Irrigation
- Masonry
- Painting/Wall Papering
- Plumbing
- Roofing/Siding
- Sheet Rocking
- Tilling/Glazing
- Windows/Doors
- NONE

7. For which ordinary repairs or minor work would you seek a permit application?

- o Change affecting an exit way
- o Cutting away of any wall
- o Installation of a carbon monoxide detector
- o Installation of a new shower
- o Installation of communication wire through a fire-rated assembly
- o Installation of five or less electrical receptacles where existing circuits are adequate
- o Installation of kitchen cabinets
- o Installation of paneling
- o Installation of rolled insulation when installed to an interior finish
- o Installation of vinyl wall coverings
- o Interior or exterior paint not involving lead abatement
- o Lead abatement
- o Relocation of piping
- o Removing a structural beam
- o Repairs to doorbells
- o Replacement of a clothes dryer with a different fuel type
- o Replacement of a fan motor of the same capacity
- o Replacement of a faucet
- o Replacement of a porch or stoop which does not support a roof
- o Replacement of smoke detector with a like device
- o Replacement of a toilet
- o Replacement of a water heater
- o Replacement of any interior finishes not exceeding 25% of the wall area in a given room
- o Replacement of glass
- o Replacement of siding of more than 25% of the exterior wall area
- o Replacement of window or door without altering the original opening
- o Work affecting fire safety

8. Construction permits can be viewed as…

- o Assurance that plans are reviewed for code requirements
- o Assurance that work is performed to the approved plan
- o Providing consumer protection
- o Fee generator to municipality
- o Health and safety for Firefighters
- o Increased property assessment
- o Limiting potential liability to owner
- o Maintaining property values in the neighborhood
- o Making selling a home easier
- o Paperwork bureaucracy
- o Personal health and safety
- o Protect future homeowners just as much as they protect the current homeowner
- o Public health and safety
- o Quality of workmanship
- o Preventing costly mistakes before construction starts
- o Time inconvenience meeting inspectors
- o Protecting zoning conformity in the neighborhood

Other (please specify)

9. Building Department Customer Satisfaction:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Unable to Rate
Overall quality of telephone Communication	O	O	O	O	O	O
Overall quality of walk-up counter support	O	O	O	O	O	O
Knowledge and professionalism of walk-up counter staff	O	O	O	O	O	O
Knowledge and professionalism of inspectors	O	O	O	O	O	O
Communication and follow-up on problem resolution	O	O	O	O	O	O
Ability to solve problems	O	O	O	O	O	O
Time required to solve problems	O	O	O	O	O	O

Please tell us how we could improve the quality of service.

Appendix G – Fire Prevention Inspections – Five Year Comparison

TOWNSHIP OF SPRINGFIELD
DEPARTMENT OF PUBLIC SAFETY
FIRE DIVISION
200 MOUNTAIN AVENUE, SPRINGFIELD, NJ 07081
(973) 912-2265 - FAX: (973) 912-2270

To: Public Safety Committee
From: James Sanford, Fire Chief/Fire Official
Reason: 2010 Annual Report to NJDFS
Date: January 27, 2011

Fire Prevention Inspections - Five Year Comparison

	2006	**2007**	**2008**	**2009**	**2010**
Life Hazard Uses:	141	137	137	152	153
Periodic Inspections	147	145	146	84	95
Re-Inspections	410	383	270	179	149
Complaints	161	59	42	40	28
Certificates Issued:	103	93	98	64	51
Non-Life Hazard Uses:	1125	1124	1124	1100	1175
Periodic Inspections	73	56	125	30	16
Re-Inspections	150	127	227	54	41
Complaints	----	----	48	25	----
Certificates Issued:	48	29	91	20	7
Permits:	45	49	23	49	38
Smoke Detector Compliance:					
Field Inspections	372*	330*	256*	77**	124
Affidavit in Lieu of	N/A	N/A	N/A	32**	87
Penalties Issued:	52	96	64	23	67
Revenues:					
LHU State Rebate	$29,471	$25,711	$35,243	$34,838	$38,754
Non-Life Hazard Fees				$ 125	$ 75
Permit Fees	$ 2,002	$ 2,044	$ 1,750	$ 2,674	$ 2,296
Smoke Detector Fees	N/A*	N/A*	N/A*	$ 6,700	$15,800
Penalties Collected	$13,025	$16,525	$14,394	$ 3,100	$ 2,750

* Inspections conducted through Building Department using Fire Division personnel
**Part year totals, 6 months under Fire Division and 6 months under Building Department

Appendix H – NJ DCA Bulletin No. 06-1

State of New Jersey
Department of Community Affairs
Division of Codes and Standards
PO Box 802
Trenton, New Jersey 08625-0802

Date: February 2006 **Subject:** Work Performed Without Permits

Reference: N.J.A.C. 5:23-2.23(e)

The Department of Community Affairs has become aware of construction officials' concerns about how to proceed when it is discovered that homeowners have performed construction work without obtaining the appropriate Uniform Construction Code (UCC) permits. In some cases, this comes to light only when the home is subjected to a resale inspection or a reevaluation inspection. As a result, construction officials are faced with deciding how to handle the work done without a permit with the new homeowners. This bulletin is intended to provide guidance on how to enforce the provisions of the UCC in an equitable manner when it is discovered that a previous homeowner or the current seller has performed construction work without the required permits after the work has been completed.

If it is discovered that work was performed without a permit by a previous homeowner, construction officials should perform a Certificate of Continued Occupancy (CCO) inspection for the new homeowner. A CCO inspection is a reasonable solution for ensuring that construction work is properly documented and that future owners are not held responsible for violations resulting from work performed without permits. The documentation for a CCO inspection should include a report describing the work that was completed without a permit. Construction officials should be aware that CCO inspections are limited to those portions of the home that are visible. For items that are not visible, there must be probable cause to warrant uncovering the work to allow for inspections. The code official is not compelled to perform a destructive inspection unless there is reason to believe that a life-safety violation exists.

If it is discovered that work was performed without a permit by the current homeowner, the construction official may offer the homeowner a CCO inspection at his or her discretion, unless there is probable cause to warrant uncovering the work. If a contractor was involved and is known, the construction official should issue notices, require that a permit be obtained, and implement the enforcement actions prescribed by the UCC. In addition, construction officials should require homeowners to obtain a permit for any corrective work that would require a permit under normal circumstances, in accordance with the UCC.

If there are questions regarding enforcement, contact the Office of Regulatory Affairs at (609) 984-7672.