Memorandum

Human Resources Division

TO: Todd Rent, Chief Examiner
Civil Service Commission

FROM: Human Resources Staff

RE: Establish a Passing Score for Housing Inspector

DATE: Sept. 28, 2016

A. Summary

City of Urbana Human Resources staff recommends establishing a passing score for Housing Inspector based on the minimum qualification of two years in building construction or related experience. At this proposed passing point, 32 candidates would be eligible for consideration.

B. Background

The position opened for applications on August 9, 2016 and closed on September 19, 2016. During the open application period, 52 applications were completed. A demographic analysis of the applicants is as shown:

	#	%
Male	45	87%
Female	7	13%

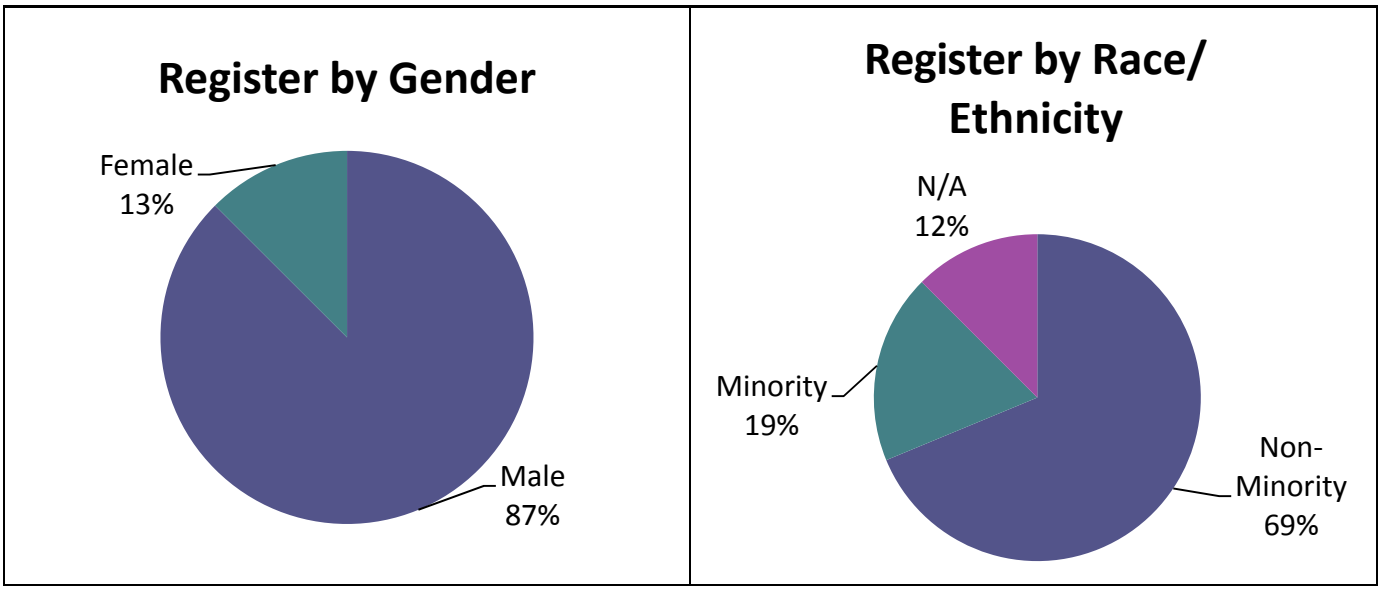
	#	%
Non-Minority	33	63%
Minority	13	25%
N/A	6	12%

C. Passing Score

At the recommended passing score, adverse and/or disparate impact is not supported by the data (additional statistics are attached).

Proposed Pass Rate				
	#	**% of Total Applicants**	**% of Like Group**	**% of Register**
Male	**28**	54% (28/52)	62% (28/45)	87% (28/32)
Female	**4**	8% (4/52)	57% (4/7)	13% (4/32)
	#	**% of Total Applicants**	**% of Like Group**	**% of Register**
Non-Minority	**22**	42% (22/52)	67% (22/33)	69% (22/32)
Minority	**6**	12% (6/52)	46% (6/13)	19% (6/32)

	#	% of Total Applicants	% of Like Group	% of Register
No Answer	**4**	8% (4/52)	67% (4/6)	13% (4/32)



E. Attachments

- Disparate Impact Report
- Housing Inspector Job Description

Disparate Impact Analysis

(an On-Line Internet based application)

Instructions: Please fill out the information into the form below. Once you have entered your data below, you may select the types of analysis to be conducted by checking the appropriate boxes. Then press the compute button at the bottom of the form to view the results.

Select the type of employment decision: Selection

Enter a title for your report:

Housing Inspector 2016

Sex		Race		Age		Disability	
Number of Male		Number of Non-Minority		Number of Younger		Number of Non-Disabled	
45	Applicants	33	Applicants		Applicants		Applicants
28	Selected	22	Selected		Selected		Selected
Number of Female		Number of Minority		Number of Older		Number of Disabled	
7	Applicants	13	Applicants		Applicants		Applicants
4	Selected	6	Selected		Selected		Selected

☑ -Adverse Impact ☑ -Chi-Square ☑ -Standard Deviation ☑ -Confidence Intervals ☑ Probability Distribution	Select the Statistical Tests you wish to execute by checking or unchecking the boxes on the left. Then press the 'Compute' button below. **Compute**
Display: ☑ Description of Statistic ☑ Interpretation of Results	

Housing Inspector 2016

Adverse-Impact Report

Adverse Impact and the "four-fifths rule." - A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5ths) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact. *Uniform Guidelines on Employee Selection Procedures*

Rate of Female Applicants Selected	Rate of Male Applicants Selected	Adverse Impact Ratio for Female	Adverse Impact Ratio for Male
(4/7) = 0.5714	(28/45) = 0.6222	(0.5714/0.6222)=0.92	(0.6222/0.5714)=1.09
Adverse impact as defined by the 4/5ths rule was not found in the above data.			

Rate of Minority Applicants Selected	Rate of NonMinority Applicants Selected	Adverse Impact Ratio for Minority	Adverse Impact Ratio for NonMinority
(6/13) = 0.4615	(22/33) = 0.6667	(0.4615/0.6667)=0.69	(0.6667/0.4615)=1.44
The Adverse Impact Ratio for Minority is less than 0.80. Minority Applicants are Selected at a rate less than 80% (4/5ths) of the rate that NonMinority Applicants are Selected.			

Chi-Square Report

Observed Expected	Selected	Not Selected	Row Totals
Male	28 27.6923	17 17.3077	45
Female	4 4.3077	3 2.6923	7
Column Total	32	20	52
Chi-Square = 0.066 **The value of the statistic is less than 3.841. This indicates that there is a 95 percent chance that these results have been obtained absent any form of bias. Therefore, you may conclude that these results fall within normal random variations and are not the result of bias.**			

Observed Expected	Selected	Not Selected	Row Totals
NonMinority	22 20.087	11 12.913	33
Minority	6 7.913	7 5.087	13
Column Total	28	18	46
Chi-Square = 1.6475 **The value of the statistic is less than 3.841. This indicates that there is a 95 percent chance that these results have been obtained absent any form of bias. Therefore, you may conclude that these results fall within normal random variations and are not the result of bias.**			

Standard-Deviation Report

The difference between the proportion of the protected class Selected and the proportion of all Applicants Selected has a normal distribution with a mean and standard deviation. The statistic is shown below:

$$\frac{(r / n) - p}{\sqrt{p * (1-p) / n} * \sqrt{1-q}}$$

***Analysis of proportion of Female Selected*where:**

- **r = number of Female Selected.**
- **n = number of Selected (Female and Male).**
- **p = proportion of Applicants that are Female.**
- **q = proportion of Applicants Selected.**

	Selected	Not Selected	Row Totals
Male	28	17	45
Female	4	3	7
Column Total	32	20	52

r = 4
n = 32
p = 7 / 52 = 0.135
q = (4 + 28) / (7 + 45) = 0.615

Standard Deviation Statistic = -0.257

These results show that the proportion of Female Selected is -0.257 standard deviations below the proportion of Applicants Selected.A result of less than 2 standard deviations is generally considered non-significant.

***Analysis of proportion of Minority Selected*where:**

- **r = number of Minority Selected.**
- **n = number of Selected (Minority and NonMinority).**
- **p = proportion of Applicants that are Minority.**
- **q = proportion of Applicants Selected.**

	Selected	Not Selected	Row Totals
NonMinority	22	11	33
Minority	6	7	13
Column Total	28	18	46

r = 6
n = 28
p = 13 / 46 = 0.283
q = (6 + 22) / (13 + 33) = 0.609

Standard Deviation Statistic = -1.284

These results show that the proportion of Minority Selected is -1.284 standard deviations below the proportion of Applicants Selected.A result of less than 2 standard deviations is generally considered non-significant.

Confidence Interval Report

The proportion of the protected class Selected has an expected value that would fall within a specified confidence interval.
The statistic is shown below:
Observed value = (r / n)
Expected value = p

Standard Deviation = sqrt(p * (1-p) / n) * sqrt(1-q)

Confidence Interval:
Lower Bound = p - 1.96 * Std Dev
Upper Bound = p + 1.96 * Std Dev

***Analysis of proportion of Female Applicants Selected*where:**

- **r = number of Female Selected.**
- **n = number of Applicants Selected.**
- **p = proportion of Female among those Selected.**
- **q = proportion of Applicants Selected.**

r = 4
n = 32
p = (7/(7+45))=0.135
q = ((4 + 28)/(7 + 45))=0.615
(r/n)=4/32=0.125

The lower bound of the confidence interval is: 0.135-(1.96*0.037)=0.0613
The upper bound of the confidence interval is: 0.135+(1.96*0.037)=0.208

Confidence Interval = 0.0613 to 0.208

These results show that the proportion of Female Female (r/n=0.125) is contained in the confidence interval.
Therefore a finding of disparate impact is not supported by this data.

***Analysis of proportion of Minority Applicants Selected*where:**

- **r = number of Minority Selected.**
- **n = number of Applicants Selected.**
- **p = proportion of Minority among those Selected.**
- **q = proportion of Applicants Selected.**

r = 6
n = 28
p = (13/(13+33))=0.283
q = ((6 + 22)/(13 + 33))=0.609
(r/n)=6/28=0.2143

The lower bound of the confidence interval is: 0.283-(1.96*0.053)=0.1783
The upper bound of the confidence interval is: 0.283+(1.96*0.053)=0.3869

Confidence Interval = 0.1783 to 0.3869

These results show that the proportion of Minority Minority (r/n=0.2143) is contained in the confidence interval.
Therefore a finding of disparate impact is not supported by this data.

Probability Distribution Report

Number Female Selected	Number Male Selected	Rate of Female Applicants Selected	Rate of Male Applicants Selected	Adverse Impact Ratio of Female	Adverse Impact against Female ?	Probability	Cumulative Probability
0	32	(0/7)	(32/45)	0	YES	0.000579	0.000579
1	31	(1/7)	(31/45)	0.2074	YES	0.009271	0.00985
2	30	(2/7)	(30/45)	0.4286	YES	0.05748	0.067331
3	29	(3/7)	(29/45)	0.665	YES	0.179626	0.246957
Selected->4	28	(4/7)	(28/45)	0.9184	NO	0.306421	0.553378
5	27	(5/7)	(27/45)	1.1905	NO	0.285993	0.839371
6	26	(6/7)	(26/45)	1.4835	NO	0.13547	0.974841
7	25	(7/7)	(25/45)	1.8	NO	0.025159	1

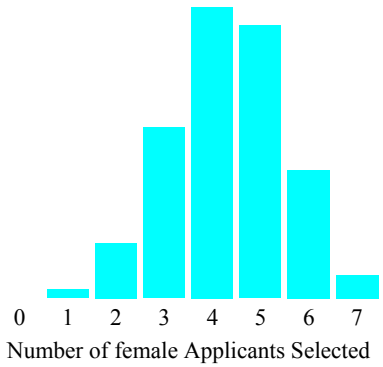
Given that 32 were Selected from a pool of 45 Male and 7 Female it was possible to have Selected from 0 to 7 females.

Adverse Impact would be found if you Selected 3 or fewer Female.

The probability of Adverse Impact occurring even if the employment decisions were random (i.e. unbiased) is 0.247 (the sum of the probabilities of having Selected 3 or fewer Female).

Since the probability of Adverse Impact occurring even if the employment decisions were random (i.e. unbiased) is greater than 10%, an observed Adverse Impact may be not significant since the probability is greater than 1 in 10 that Adverse Impact would have occurred due to chance.

Probability Distribution of the variable: Number of Female Selected.

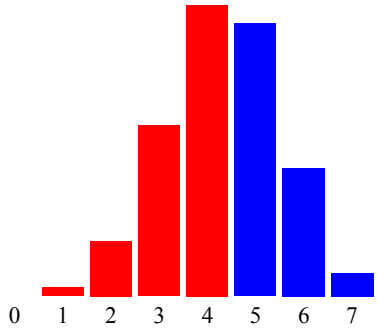


The probability distribution of having Selected from 0 to 7 females is displayed above. As can be seen, the most likely event (highest probability) to have occurred by chance (or decisions not affected by any form of bias) is to have Selected 4 female Applicants. This represents the mean of the probability distribution. Approximately half of the probability distribution is above this point and approximately half is below this point. The total area contained in the probability distribution is equal to 1. Thus, probabilities for each number of female Applicants Selected are a fraction of the total probability distribution. The larger areas of the distribution represent higher probabilities of occurance. Adding the individual probabilities up to a certain point enable you to compute the probability of having Selected that many or fewer females Applicants. Adding the individual probabilities from a certain point and higher enable you to compute the probability of having Selected that many or more females Applicants.

The characteristics of the probability distribution--its mean and standard deviation--are a function of the number of female and male Applicants and the number of Applicants to be Selected. Though it is possible to have Selected from 0 to 7 female Applicants, the individual probabilities of having Selected each number of female Applicants can be computed and accumulated. As noted before, these individual probabilities are a function of the number of female and male Applicants and the number of Applicants to be Selected.

Using the distribution above, a 90 percent confidence interval on the variable 'Number of Female Selected' would have a lower bound of 2 and an upper bound of 6.

The significance of having Selected 4 or fewer Female is graphically displayed below.



As noted earlier, Adverse Impact, according to the 4/5ths rule, would be found if you Selected 3 *or fewer* female Applicants.

You have Selected 4 female Applicants. The probability of having Selected 4 *or fewer* Female is equal to the cumulative probability for having Selected 4 Female Applicants. The cumulative probability of having Selected 4 female Applicants is 0.5534 and is graphically displayed, in red, above.

Since the probability is greater than 10%, we are unable to reject the hypothesis that the decisions occurred due to chance. Therefore, we must conclude that it is entirely possible that having Selected 4 or fewer female Applicants is an event that occurred due to chance and not from discriminatory actions by the employer.

Probability Distribution Report

Number Minority Selected	Number NonMinority Selected	Rate of Minority Applicants Selected	Rate of NonMinority Applicants Selected	Adverse Impact Ratio of Minority	Adverse Impact against Minority ?	Probability	Cumulative Probability
0	28	(0/13)	(28/33)	0	YES	0	0
1	27	(1/13)	(27/33)	0.094	YES	0.000005	0.000005
2	26	(2/13)	(26/33)	0.1953	YES	0.000118	0.000123
3	25	(3/13)	(25/33)	0.3046	YES	0.001409	0.001532
4	24	(4/13)	(24/33)	0.4231	YES	0.009782	0.011314
5	23	(5/13)	(23/33)	0.5518	YES	0.042259	0.053573
Selected->6	22	(6/13)	(22/33)	0.6923	YES	0.117813	0.171386
7	21	(7/13)	(21/33)	0.8462	NO	0.21599	0.387376
8	20	(8/13)	(20/33)	1.0154	NO	0.261681	0.649057
9	19	(9/13)	(19/33)	1.2024	NO	0.207683	0.85674
10	18	(10/13)	(18/33)	1.4103	NO	0.105226	0.961966
11	17	(11/13)	(17/33)	1.6425	NO	0.032285	0.994251
12	16	(12/13)	(16/33)	1.9038	NO	0.005381	0.999632
13	15	(13/13)	(15/33)	2.2	NO	0.000368	1

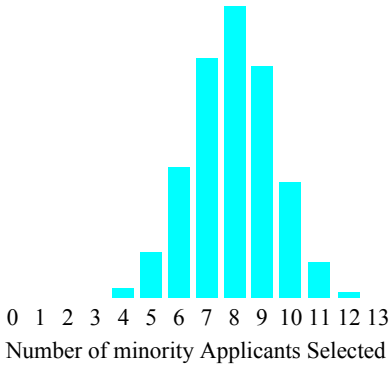
Given that 28 were Selected from a pool of 33 NonMinority and 13 Minority it was possible to have Selected from 0 to 13 minorities.

Adverse Impact would be found if you Selected 6 or fewer Minority.

The probability of Adverse Impact occurring even if the employment decisions were random (i.e. unbiased) is 0.1714 (the sum of the probabilities of having Selected 6 or fewer Minority).

Since the probability of Adverse Impact occurring even if the employment decisions were random (i.e. unbiased) is greater than 10%, an observed Adverse Impact may be not significant since the probability is greater than 1 in 10 that Adverse Impact would have occurred due to chance.

Probability Distribution of the variable: Number of Minority Selected.

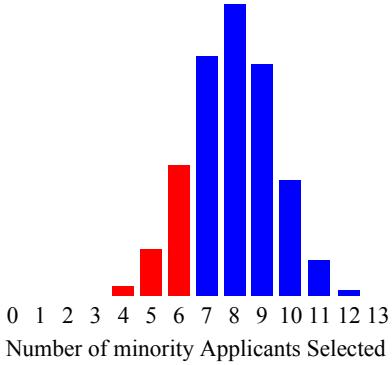


The probability distribution of having Selected from 0 to 13 minorities is displayed above. As can be seen, the most likely event (highest probability) to have occurred by chance (or decisions not affected by any form of bias) is to have Selected 8 minority Applicants. This represents the mean of the probability distribution. Approximately half of the probability distribution is above this point and approximately half is below this point. The total area contained in the probability distribution is equal to 1. Thus, probabilities for each number of minority Applicants Selected are a fraction of the total probability distribution. The larger areas of the distribution represent higher probabilities of occurance. Adding the individual probabilities up to a certain point enable you to compute the probability of having Selected that many or fewer minorities Applicants. Adding the individual probabilities from a certain point and higher enable you to compute the probability of having Selected that many or more minorities Applicants.

The characteristics of the probability distribution--its mean and standard deviation--are a function of the number of minority and non-minority Applicants and the number of Applicants to be Selected. Though it is possible to have Selected from 0 to 13 minority Applicants, the individual probabilities of having Selected each number of minority Applicants can be computed and accumulated. As noted before, these individual probabilities are a function of the number of minority and non-minority Applicants and the number of Applicants to be Selected.

Using the distribution above, a 90 percent confidence interval on the variable 'Number of Minority Selected' would have a lower bound of 5 and an upper bound of 10.

The significance of having Selected 6 or fewer Minority is graphically displayed below.



As noted earlier, Adverse Impact, according to the 4/5ths rule, would be found if you Selected 6 *or fewer* minority Applicants.

You have Selected 6 minority Applicants. The probability of having Selected 6 *or fewer* Minority is equal to the cumulative probability for having Selected 6 Minority Applicants. The cumulative probability of having Selected 6 minority Applicants is 0.1714 and is graphically displayed, in red, above.

Since the probability is greater than 10%, we are unable to reject the hypothesis that the decisions occurred due to chance. Therefore, we must conclude that it is entirely possible that having Selected 6 or fewer minority Applicants is an event that occurred due to chance and not from discriminatory actions by the employer.

Send questions or comments to webmaster@hr-guide.com. Thank you.

CITY OF URBANA
Human Resources Division

HOUSING INSPECTOR

JOB DESCRIPTION

Division:	Building Safety	FLSA Status:	Non-Exempt
Department:	Community Development Services	Job Type:	Civil Service, Non-Union
		EEO Category:	1
Reports To:	Building Safety Division Manager	Pay Grade:	38

JOB SUMMARY

Inspects existing occupied and vacant structures, including single-family, multi-family, hotels/motels, and mobile homes and enforces compliance with existing structure code, building codes, and property maintenance code; enforces zoning and other codes and ordinances; enforces departmental procedures pertaining to dangerous buildings; assists in administration of the City's rental registration program.

Performs a variety of routine to complex duties related to the City's code enforcement and building inspection program, including: the identification, investigation and correction of violations of the City's building, property maintenance, occupancy, and housing codes and City and State building and safety codes and ordinances; completes complex inspections of residential, commercial and industrial building sites to enforce building, plumbing, mechanical, electrical codes and safety regulations; investigates citizen complaints of public nuisances and quality of life issues; and seeks voluntary compliance or issues citations and initiates abatement procedures; and performs related work as required.

Distinguishing Characteristics of this Class: This is the journey level class. A position in this class typically requires prior building inspection work experience or substantially similar work in another field. Supervision received is general in nature from the Building Safety Division Manager.

ESSENTIAL FUNCTIONS

- Inspects existing residential structures and other buildings for conformance with existing structure codes; orders corrective action and inspects for compliance.
- Conducts Community Development grant/loan code compliance inspections, homeowner's courtesy inspections, and installation inspections.
- Conducts systematic inspections of rental housing properties in Urbana

- Conducts University of Illinois certified housing inspections and other special inspection programs, such as the Carle Hospital rental housing inspection program.
- Conducts bi-annual hotel/motel inspections in coordination with Urbana Fire Rescue Services.
- Assists owners to prepare appeal/variance application; prepares and presents city's cases for Property Maintenance Board of Appeals; appears in court if court ordered compliance and fines are necessary.
- Coordinates with other inspectors from Community Development Services Department, Public Works Department, Champaign County Housing Authority, Fire Department, Legal Division, and Police Department, University of Illinois, and community groups as required.
- Receives complaints from tenants and citizens; investigates and resolves complaints according to standard complaint procedures.
- Coordinates with housing-related interest groups, including various neighborhood groups, tenant groups, and the apartment association, and sits on relevant boards and commissions, as appropriate.
- Maintains vacant properties register and reports on status of cases.
- Monitors security of vacant properties.
- Investigates ownership of properties through contracting title searches and speaking with neighbors and tenants.
- Answers inquiries from the general public on zoning, property maintenance code regulations, and fire safety.
- Enforces zoning ordinance provisions as they pertain to rental property and housing maintenance, including occupancy and use restrictions.
- Coordinates with Planning Division (Zoning), Environmental Compliance Officer (Public Works), Legal Division, Animal Control, Police, and Fire, as appropriate, to address specific building safety, property maintenance and zoning violation issues.
- Enforces departmental procedures pertaining to dangerous buildings.
- Performs structural assessments of fire-damaged properties with assistance from other Building Safety Division and Fire Department personnel as needed.
- Inspects lot dimensions and utility connections for placement of mobile homes for conformance with existing municipal ordinance; orders corrective action and inspects for compliance; issues Certificate of Occupancy.
- Inspects mobile home parks for conformance with the municipal ordinance including an annual systematic inspection of all parks.
- Monitors daily activities and trains interns for project work as assigned.
- Performs other related duties as assigned.
- Enters and tracks inspection and correction data in automated and spreadsheet programs.

JOB REQUIREMENTS

KNOWLEDGE & EXPERIENCE

- Knowledge and skills typically acquired through graduation from high school and two (2) years' work experience in building construction and/or relevant code enforcement. Experience as a journey level plumber, electrician, carpenter or related craftsperson in the building construction field is highly desirable.
- Attainment of a college degree at the associate's level is desirable.
- Knowledge of methods and practices involved in building construction.
- Basic knowledge of national, state, and municipal existing construction codes and zoning principles.
- Basic knowledge of systems and principles for plumbing, mechanical, electrical, and building construction in existing buildings.
- Basic knowledge of computer systems for an office setting, including ability to utilize permit and enforcement software programs and spreadsheets.

ABILITY TO

- Organize and prioritize workload.
- Communicate clearly and precisely both in writing and orally, including presenting cases.
- Detect violations and assess extent of violations.
- Analyze means of compliance presented by relevant parties.
- Deal effectively with the general public, contractors, tenants, fire inspectors, attorneys, police, and owners regarding enforcement of zoning and existing construction codes and ordinances.
- Enforce necessary regulations with firmness, diplomacy and tact.
- Establish and maintain cooperative working relationship with those contacted in the course of work.
- Work independently without immediate supervision.
- Prepare professional letters, reports, and documentation pertaining to inspection and enforcement findings.
- Work with confidential information.

LICENSES, CERTIFICATIONS AND MEMBERSHIPS REQUIRED

- Must possess or obtain within fifteen (15) days of employment a valid State of Illinois Class D driver's license.
- Must obtain I.C.C. Code certification as Residential Building Inspector within reasonable period of time after employment. Must maintain certification as required by Building Officials Code Administrators International (B.O.C.A.).

EXPECTATIONS

The City of Urbana is committed to excellence for and expects the employees to model the following values:

- **Respect** - We champion diversity and welcome individual perspectives, backgrounds and opinions. All individuals are to be treated with respect and dignity.
- **Integrity** - We are stewards of the public's trust and are committed to service that is transparent and consistent with City regulations and policies. We are honorable, follow through on our commitments, and value open communication. We are accountable to ourselves, to the City and to the public.
- **Customer Service** - We are dedicated to exceeding the expectations of our community and our peers by demonstrating professional service with a solution-oriented approach.
- **Collaboration** - We are committed to organizational success and celebrate our shared dedication to public service. We believe in the power of collaboration and the sum of our individual contributions leads to results greater than what we could have accomplished alone.

RESPONSIBLE FOR:

- Executing duties in a timely manner in accordance with departmental policy.
- Inspecting existing structures, mobile home lots and mobile home parks, for conformance with municipal codes and ordinances; responsible for ordering corrective action and inspecting for compliance.
- Enforcing pertinent zoning ordinance provisions.
- Assist in administration of the city’s rental registration program.
- Conducting hotel/motel inspections on a bi-annual basis.
- Maintaining vacant structures register.
- Gathering information regarding ownership of properties and contracting title searches when necessary.
- Enforcing departmental procedures pertaining to dangerous buildings.
- Preparing and presenting city's case for Property Maintenance Board of Appeals and appearing in court when court ordered fines and compliance are necessary.
- Safe operation of City vehicles and equipment.

CONTACTS: INTERNAL/EXTERNAL

- Daily contact with other city inspectors and office personnel.
- Daily contact with other departments.
- Daily contact with owners, tenants, contractors, attorneys, and general public.

- Periodic contact with other governmental agencies and community groups.

WORK ENVIRONMENT

- Standard office setting and daily visits to dwellings sites.
- Frequent work within occupied rental units.
- Occasional work within building with unsound structural systems including work in fire damaged buildings.
- Moderate work during inclement weather and weather conditions (snow, ice, rain, heat and humidity).
- Moderate work on ladders to inspect roofs.
- Occasional work in cramped spaces such as crawlspaces, basements, and attics.
- Occasional weekend and evening work depending on schedule of clients and city council meetings.

SPECIAL CONDITIONS

- Security Sensitivity Level 3: Requires successful completion of a Criminal History Check and Motor Vehicle Check prior to employment.

The work environment characteristics described herein are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.

Prepared By: John Schneider, Building Safety Manager 5/20/2014
Signature *Date*

Class Specification History:
General revision: Jan. 2003
Revision: Approved by the Civil Service Commission on 5/30/2014