



CITY OF ITHACA

108 East Green Street Ithaca, New York 14850

OFFICE OF THE MAYOR • SVANTE L. MYRICK

Telephone: 607/274-6501 Fax: 607/274-6526

August 13, 2012

Mr. Raymond Andrews, R.A
Assistant Director for Code Development
NYS Department of State
Division of Code Enforcement and Administration
One Commerce Plaza, 99 Washington Avenue, Suite 1160
Albany, New York 12231

Dear Mr. Andrews:

Enclosed please find an Authenticated Ordinance approved by the City of Ithaca Common Council on August 1, 2012 entitled "An Ordinance to Amend Chapter 348 of the City of Ithaca Municipal Code entitled "Water and Sewers" regarding Sanitary Services.

Please note that we are hereby petitioning the New York State Code Council for a determination of whether this ordinance is more stringent than the standards for construction applicable generally to such local government in the uniform code.

I have enclosed supporting materials including minutes and technical documentation that illustrates our legislative intent and purpose. Please note that additional technical support documentation will be forwarded in the near future.

Please let me know if I can be of further assistance to you. Technical and procedural questions may be forwarded to Chief Inspector of Plumbing Marc Albanese at (607) 272-1717, marca@cityofithaca.org. City Attorney Aaron Lavine also stands ready to assist with any questions at (607) 274-6504, alavine@cityofithaca.org

Sincerely,

Svante L. Myrick, Mayor
City of Ithaca, New York



AUTHENTICATION OF ORDINANCE NO. 12-06

(COPY ATTACHED)

Approved
Date: 8/14/2012

Disapproved
Date:

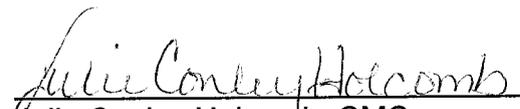


Mayor
City of Ithaca

**STATE OF NEW YORK
COUNTY OF TOMPKINS ss:
CITY OF ITHACA**

I, Julie Conley Holcomb City Clerk of the City of Ithaca, New York, do hereby certify that the foregoing is a true and exact copy of Ordinance No. 6 of the year 2012, duly adopted by the Common Council of said City of Ithaca at a Regular Meeting held on the 1st day of August, 2012.

IN WITNESS WHEREOF, I have hereunto set my hand and the Corporate Seal of the City of Ithaca, New York, this 13^h day of August, 2012.



Julie Conley Holcomb, CMC
City Clerk

PLEASE TAKE NOTICE that the Common Council of the City of Ithaca, New York, at a Regular Meeting on August 1, 2012 adopted the following ordinance:

Ordinance #2012 - 06

BE IT ORDAINED AND ENACTED by the Common Council of the City of Ithaca as follows:

Section 1. Section 348-29(E) of the City of Ithaca Municipal Code is hereby amended to read as follows:

(E) All installations of service drains or sewers between the curb and the building shall be made by a Plumbing Contractor or Water and Sewer Installer licensed by the Examining Board of Plumbers or any homeowner working on his/her own single-family residence.

Section 2: Section 348-29 of the City of Ithaca Municipal Code is hereby amended to add the following subsections:

(J) All sanitary services connected to the public mains shall have a house (building) trap installed between the property line and the building to prevent sewer gas and other potentially harmful gases generated in the public mains from entering the building. The house trap shall be installed as close to the building as possible. The trap shall be a service weight, cast iron, double hub running trap with a minimum of 4" inside diameter. A Fresh Air Inlet shall be installed on the building side riser of the trap and terminate at 12 inches above grade with an approved air inlet fitting to allow the internal vents to draft and remove accumulated gases from the plumbing system. A brass cleanout cover shall be installed at grade level on the street side of the trap for cleaning and maintenance of the trap. A wye, 45 degree fitting with riser and brass cleanout at grade level is required immediately down-stream of the trap to facilitate cleaning between the trap and the public main.

(K) Each plumbing system connected to the City of Ithaca municipal sanitary sewer system shall have an attending vent system designed to provide for the admission and emission of air within such system to protect trap seals from siphonage, backpressure and to remove the accumulation of sewer gas within the building.

(L) Main Stack required. All plumbing systems connected to the public mains shall have at least one main stack connected to the building drain and run undiminished in size and terminate to the outside. The size of the stack shall be a minimum of 3 inches in diameter or larger if total developed length exceeds 75 feet. The stack shall connect to the building drain as close as possible to the fresh air inlet of the house trap to create the necessary stacking and circulation of air for the interior venting system. Where multiple fixture groups or stacks are located throughout a building, additional main stack(s) may be required by the local authority having jurisdiction.

(M) Air Admittance Valves. Individual, branch and circuit vents shall be permitted to terminate with a connection to an air admittance valve. The air admittance valve shall only vent fixtures that are on the same floor level and connect to a horizontal branch drain. The horizontal branch drain shall conform to the following:

1) Location of branch. The horizontal branch drain shall connect to the drainage stack or building drain a maximum of four branch intervals from the top of the stack.

2) Relief vent. The horizontal branch shall be provided with a relief vent that shall connect to a vent stack, or stack vent or extend to the outdoors to the open air. The relief vent shall connect to the horizontal branch drain between the stack or building drain and the most downstream fixture drain connected to the horizontal branch drain. The relief vent shall be sized in accordance with existing Plumbing Code.

3) Stack-type air admittance valves shall be prohibited.

Section 3: Severability. If any section, subsection, sentence, clause, phrase or portion of this ordinance is held to be invalid or unconstitutional by a court of competent jurisdiction, then that decision shall not affect the validity of the remaining portions of this ordinance.

Section 4: Effective date. This ordinance shall take effect immediately and in accordance with law upon publication of notices as provided in the Ithaca City Charter.

Date: May 7, 2012

To: William Gray
Supt. of Public Works

From: Marc Albanese
Chief Inspector of Plumbing
Water and Sewer Division

Re: Changes to Water and Sewer Regulations and Local Ordinance for a More Restrictive Standard, NYS Plumbing Code.

As we discussed, I am forwarding to you recommended changes to the City of Ithaca, Water and Sewer Regulations and for a Local Ordinance for a More Restrictive Standard to the NYS Plumbing Code. Please submit the proposed code changes to the Board of Public Works as required by the **Guide for the Incorporation of More Restrictive Standards** (attached). Each of the proposed changes and additions has a brief description of the purpose and intent for their inclusion into the local code and to serve as a general reference of information.

The primary reason for the code revisions stem from changes in the 2010 NYS Plumbing Code which permitted the use of certain venting techniques and devices called stack air admittance valves in conjunction with reduced relief and stack venting requirements associated with their installation. After a year of review, it is apparent that use of these “venting” systems are having an adverse effect on the proper functioning of the house traps installed in all of our sewer services. The technical information is contained within each proposed code change section.

I am working with Michael Ocello with our GIS group to produce some graphic drawings to help illustrate these systems, how they work and are affected. “A picture is worth...”

Cc: Erik P. Whitney, Assist. Supt. of Public Works, Water and Sewer Division
David Warden, Member Examining Board of Plumbers
Kathrin Gehring, Executive Assist. Supt. Office

Legislative Intent

Purpose of Ordinance:

The Examining Board of Plumbers for the City of Ithaca is recommending changes to the City Code that is “more restrictive” than the New York State Plumbing Code. These changes are intended to require that air admittance valves (AAV) installed for fixtures have a relief vented horizontal drainage branch and to prohibit the use of stack-type AAV’s on waste and soil stacks. The State Plumbing Code made provisions in the 2010 edition for the elimination of relief vents on horizontal branch drains (four stories or less) and permitted the use of stack-type AAV’s. The technical and safety aspects of these recommended changes are detailed here.

1) Ventilation

Venting and air circulation within a plumbing system is an important public health and safety feature. Here, the term venting is a physical process that allows air to enter and leave or allow for the admission and emission of air from outside of the building structure. The primary function of venting can be best described as a two-fold process. First, venting allows the piping system to self regulate the negative and positive pressures that are created in the piping system when water, waste and solids flow through a pipe. The regulation of pressures is needed to maintain the water seals of fixture traps. The trap seal is what keeps sewer gases (see The Anatomy of Sewer Gas below) from entering the living space. The second function of the vent is to allow the sewer gases to escape through ventilation to the outside air. AAV’s are intended to accomplish the first function of trap seal protection by opening (admission only) on a negative pressure to relieve a siphon which may affect the water seal of a trap. It is the second function of the venting system, the ventilation of sewer gases, which an AAV cannot perform. Nevertheless, the State Plumbing Code permits AAV’s to be included as plumbing “vents” for fixtures and piping. The result is that potentially harmful and unwanted sewer gases remain trapped within the piping system.

2) The House Trap

In addition to the lack ventilation and the incidents of sewer gas remaining inside buildings, we have discovered another adverse effect from the installation of the AAV’s...house traps are emitting sewer gases.

All buildings in the City are required to have the installation of a house trap as part of the sewer service. This requirement dates back to the first city plumbing code published in 1929 and was a well established principal of good plumbing sanitary design. There is an estimated 5,400 house traps recorded by the City’s Utility Service Information cards and GIS maps.

Legislative Intent

An essential and required component of house trap design is the Fresh Air Inlet (FAI). The FAI allows the house trap to flow without restriction thereby limiting stoppages. However, its primary purpose is to enable outside air to draft into the building plumbing vent system. The combination of a FAI and main stack which terminates to the outdoors through the roof of the structure produces an upward air draft referred to as “stacking” or “chimney” effect. This draft is the ventilation required to dilute and remove the sewer gases and odors which form inside the building plumbing system. The inclusion of the stack-type air admittance valves (designed to open under negative pressure) cuts off the ventilation pattern designed into the plumbing system. In these situations the FAI is now a relief vent and is subjected to back-pressures caused by the lack of air circulation and air emissions upstream. The result is sewer gas and odors coming out of the FAI each time there is water flow.

3) The Anatomy of Sewer Gas

Sewer gases are, at the very least, an odor nuisance but they are also a public health concern. These gases are formed primarily as the result of human and other wastes decaying in the piping system. The wastes turn “septic”...that is they are broken down by the presence of bacterial organisms as soon as it enters the drain pipe. The by-products of this septic action are gases and bio-films that form on the interior of the pipe. Some of the substances that can be found within these bio-films and gases are: Methane (flammable), Hydrogen Sulfide (toxin), Ammonia (toxic), Biological Pathogens contained in human waste, blood and tissue (health concerns).

In a well designed plumbing piping system these substances and gases are constantly being diluted with incoming air from the FAI and removed by the “stacking effect” through the roof and to the outside.

Conclusion:

It is the determination of the Examining Board of Plumbers for the City of Ithaca that the installation of stack-type air admittance valve(s) and the additional elimination of relief venting requirements for air admittance valves contribute to several sanitary and public health issues that need to be addressed. The proposed code changes submitted remedy those concerns.

Board of Public Works
June 11, 2012

8.5A Recommendation for Changes to Water and Sewer Regulation and Local Ordinance for a More Restrictive Standard – Resolution

Resolution 1

Recommendation for changes to the Water and Sewer Regulations pertaining to the updating of plumbing licensing terms and clarifications, and the inclusion of the requirement for house (building traps) when connecting to the City sewer system.

By Commissioner Darling: Seconded by Commissioner Jenkins

WHEREAS, the Examining Board of Plumbers wants to more accurately state the terms of licensing for the installation of water or sewer services within the City, and

WHEREAS, the Examining Board of Plumbers for the City of Ithaca, under the authority of Article 4 of NYS General City Law, has created a new license category of Water and Sewer Installer to replace the outdated “sewer layer” license, and

WHEREAS, house (building) traps have been required by the City since the first Plumbing Code written in 1929, and the current version of the New York State Plumbing Code has prohibited the installation of house traps unless required by the local authority, and

WHEREAS, the Water and Sewer Division wishes to continue the use and installation of house traps on sewer services within the City by specific inclusion into the Water and Sewer Regulations, now therefore be it

RESOLVED, That the Board of Public Works recommends that Common Council amend Chapter 348-29 Sanitary Sewer Services, Section E as follows:

All installations of service drains or sewers between the curb and the building shall be made by a ~~plumber~~ Plumbing Contractor or ~~sewer layer~~ Water and Sewer Installer licensed by the Examining Board of Plumbers or any homeowner working on his/her own single-family residence.

and, be it further

RESOLVED, That the Board of Public Works recommends that Common Council amend Chapter 348-29 Sanitary Sewer Services, by the inclusion of a new Section J as follows:

All sanitary services connected to the public mains shall have a house (building) trap installed between the property line and the building to prevent sewer gas and other potentially harmful gases generated in the public mains from entering the building. The house trap shall be installed as close to the building as possible. The trap shall be a service weight, cast iron, double hub running trap with a minimum of 4" inside diameter. A Fresh Air Inlet shall be installed on the building side riser of the trap and terminate at 12 inches above grade with an approved air inlet fitting to allow the internal vents to draft and remove accumulated gases from the plumbing system. A brass cleanout cover shall be installed at grade level on the street side of the trap for cleaning and maintenance of the trap. A wye, 45degree fitting with riser and brass cleanout at grade level is required immediately down-stream of the trap to facilitate cleaning between the trap and the public main.

SBG stated that he would like, in the long run, convert a lot of the ordinances in the City Code into Rules and Regulations, which the Board would be able to make changes to without Common Council's approval.

GA requested clarification that some of the language is clear enough that anyone will understand.

A vote of the Resolution Resulted as Follows:

Carried Unanimously

Resolution 2

Local Ordinance for a More Restrictive Standard to NYS Plumbing Code pertaining to the plumbing ventilation requirements of building connected to the City sanitary collection system

By Commissioner Lecesse: Seconded by Commissioner Jenkins

WHEREAS, changes to the 2010 NYS Plumbing code allowed the use of alternate venting devices called Air Admittance Valves on plumbing stacks and the elimination of relief venting requirements for other Air Admittance Valves in buildings 4 stories or less, and

WHEREAS, the Chief Inspector of Plumbing and the Examining Board of Plumbers for the City of Ithaca has reviewed the use and installation of such devices, and

WHEREAS, the result of unventilated sewer gases in the plumbing system that occur as the result of the use of air admittance valves is a health and safety concern which the City of Ithaca wished to address and remedy, and

WHEREAS, local conditions exist that make house traps, which are required to be installed in all City building sewer services, function improperly by causing sewer gases to be forced out of the Fresh Air Inlet of the house trap when air admittance valves are used without proper air ventilation causing health and sanitary concerns, therefore be it

RESOLVED, That the Board of Public Works recommends that Common Council make a local ordinance requiring all plumbing systems connected to the public sewer system to have ventilation that can remove sewer gases from buildings and allow for the admission and emission of air throughout the piping system within buildings, and, be it further

RESOLVED, That the Board of Public Works recommends that Common Council amend the City of Ithaca Building Code, Article IV Plumbing, Section 146-22, Definitions by adding the plumbing definition of a *vent system* as follows:

Vent System. A pipe or pipes installed to provide a flow of air to and from a drainage system, in order to provide a circulation of air within such system to protect trap seals from siphonage and backpressure and to remove the accumulation of sewer gases within the building.

and, be it further

RESOLVED, That the Board of Public Works recommends that Common Council amend the Water and Sewer Regulation, Chapter 348-29 by adding three new Sections K, L, and M pertaining to the installation of vents in the plumbing systems connected to the City sewer system as follows:

K.

Each plumbing system connected to the City of Ithaca municipal sanitary sewer system shall have an attending vent system designed to provide for the admission and emission of air within such system to protect trap seals from siphonage, backpressure and to remove the accumulation of sewer gas within the building.

L.

Main Stack required. All plumbing systems connected to the public mains shall have at least one main stack connected to the building drain and run undiminished in size and terminate to the outside. The size of the stack shall be a minimum of 3 inches in diameter or larger if total developed length exceeds 75 feet. The stack shall connect to the building drain as close as possible to the fresh air inlet of the house trap to create the necessary stacking and circulation of air for the interior venting system. Where multiple fixture groups or stacks are located throughout a building, additional main stack(s) may be required by the local authority having jurisdiction.

M.

Air Admittance Valves. Individual, branch and circuit vents shall be permitted to terminate with a connection to an air admittance valve. The air admittance valve shall

only vent fixtures that are on the same floor level and connect to a horizontal branch drain. The horizontal branch drain shall conform to the following:

1) Location of branch. The horizontal branch drain shall connect to the drainage stack or building drain a maximum of four branch intervals from the top of the stack.

2) Relief vent. The horizontal branch shall be provided with a relief vent that shall connect to a vent stack, or stack vent or extend to the outdoors to the open air. The relief vent shall connect to the horizontal branch drain between the stack or building drain and the most downstream fixture drain connected to the horizontal branch drain. The relief vent shall be sized in accordance with existing Plumbing Code.

3) Stack-type air admittance valves shall be prohibited.

Carried Unanimously

GOVERNMENT PERFORMANCE AND ACCOUNTABILITY COMMITTEE:

11.1 An Ordinance to Amend Chapter 348 of the City of Ithaca Municipal Code entitled "Water and Sewers", Section 348-29 "Sanitary Services" to Amend Sub-Section 348-29(J), and add the following Sub-Sections (J), (K), (L) and (M)

By Alderperson Mohlenhoff: Seconded by Alderperson Murtagh

Ordinance #2012 - ____

BE IT ORDAINED AND ENACTED by the Common Council of the City of Ithaca as follows:

Section 1. Section 348-29(E) of the City of Ithaca Municipal Code is hereby amended to read as follows:

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1) Location of branch. The horizontal branch drain shall connect to the drainage stack or building drain a maximum of four branch intervals from the top of the stack.

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3) Stack-type air admittance valves shall be prohibited.

Section 3: Severability. If any section, subsection, sentence, clause, phrase or portion of this ordinance is held to be invalid or unconstitutional by a court of competent jurisdiction, then that decision shall not affect the validity of the remaining portions of this ordinance.

Section 4: Effective date. This ordinance shall take effect immediately and in accordance with law upon publication of notices as provided in the Ithaca City Charter.

Chief Inspector of Plumbing Marc Albanese explained the purpose of this legislation, noting that it is more restrictive than the New York State Plumbing Code. He explained that changes in the 2010 NYS Plumbing Code permits the use of certain venting techniques and devices called stack air admittance valves in conjunction with reduced relief and stack venting requirements associated with their installation. These venting systems are having an adverse effect on the proper functioning of house traps and are resulting in an unsafe accumulation of sewer gases within homes.

He stated that upon approval of this legislation, the City will petition the New York State Council of Codes to request that these new standards be approved.

A brief question and answer period followed with Council members asking clarifying questions about the legislation.

A vote on the Ordinance resulted as follows:

Carried Unanimously