



**THE CITY COUNCIL OF WATERLOO, IOWA
WORK SESSION TO BE HELD AT
Harold E. Getty Council Chambers
Monday, January 5, 2026
4:00 PM**

RULES FOR WORK SESSION PUBLIC COMMENT

Iowa Code Chapter 21 gives the public the right to attend council meetings, but it does not require cities to allow public participation except during public hearings. The city council shall not receive any public comment during a work session.

Roll Call.

Agenda, as proposed or amended.

Approval of Minutes of the December 15, 2025 Council Work Session, as proposed or amended.

4:00 p.m. Discussion of filling the Ward 2 City Council vacancy.

Submitted by: Kelley Felchle, City Clerk

**Approx. 4:10 Update from Central Garage, Waste Management, and Safety Departments.
p.m.**

Submitted by: Randy Bennett, Public Works Division Manager

**Approx. 5:00 Discussion of ordinances amending the Plumbing, Electrical, and HVAC
p.m. codes.**

Submitted by: Greg Ahlhelm, Building Official

ADJOURNMENT

Kelley Felchle
City Clerk

December 15, 2025

COUNCIL WORK SESSION

Harold E. Getty Council Chambers

Roll Call.

Members Present: Mr. Boesen, Mr. Nichols, Ms. Creighton-Smith, Mr. Simon, Ms. Wilder and Mr. Feuss. Mr. Chiles was absent.

Agenda, as proposed or amended.

Nichols/Simon

that the agenda as proposed, be approved. Voice vote-Ayes: Six. Motion carried.

Approval of Minutes of the December 1, 2025 Work Session, as proposed or amended.

Nichols/Simon

that the minutes of December 1, 2025, Work Session as proposed, be approved. Voice vote-Ayes: Six. Motion carried.

Discussion of the FY2025 Audit.

Bridgett Wood, Finance Director, shared that Bergen KDV is here to present an overview of the FY2025 financial audit.

Dustin Opatz, BergenKDV, presented the preliminary results of the FY2025 financial audit.

Mr. Boesen questioned when he expected the Waterloo Fiber audit to be completed.

Dustin Opatz commented that, optimistically, in the next couple of months, but because they are a new entity, it could take longer.

Mr. Boesen questioned if it would be possible to get Waterloo Fiber more in line with the Water Works, as they turned theirs in just a couple of weeks ago.

Dustin Opatz explained that it is their goal to get it done much more timely.

Update from Grow Cedar Valley.

Katy Susong, Grow Cedar Valley President/CEO, Grow Cedar Valley, provided a brief overview of their accomplishments over the past six months.

Lisa Skubal, Vice President of Economic Development, provided a high-level update on some of the projects they have been working on since their last report. They have engaged nineteen new prospects for Waterloo representing \$947,000,000 in new capital investments.

Adrienne Miller, Director of Business Services and Advocacy, works with existing businesses in the Cedar Valley to ensure they have the resources they need to succeed. Data received from these businesses is sent to the state Economic Development Office to collect and contribute to statewide reporting as strategic reporting on their end and to identify trends. There have been fifteen business visits to date, representing over three thousand and three of those businesses indicate that they want to expand. Workforce and employment growth are steady in the area.

They have a government affairs committee and each year they set legislative priorities, which include economic development, workforce and education and community development.

Stephanie Detweiler, Director of Talent and Workforce, provided a high-level update on efforts over the past six months with consultants out of Austin, Texas. They held twelve roundtables with twelve different topics, one on one conversations with twenty community leaders and two community ideas workshops. These interactions resulted in eight areas to focus on to push our community forward with our population.

Kelsie Kunkle, Workforce Development Manager, shared one of the most recent initiatives is the integration of the Cedar Valley Manufacturers Association underneath the Grow Cedar Valley umbrella. This allows them to create a stronger, more coordinated approach to supporting our largest workforce, our manufacturers.

Katy Susong commented that they have a lot of good initiatives underway and the population study will provide an overarching plan for our community. They are excited about getting this underway, and it will enhance the work that they are already doing.

Mr. Nichols questioned what businesses were part of the Career Crawl and how the businesses were chosen.

Kelsie Kunkle provided the names of those businesses and where they placed their focus. Grow Cedar Valley led a breakout session with thirty UNI students where they addressed a specific case study where they could collect feedback and allow participants to see what Grow Cedar Valley does.

Mr. Nichols questioned and Katy Susong explained how events can be added to the Live the Valley website event calendar.

Mr. Simon questions if there are smaller businesses on their advisory committee.

Katy Susong explained that there is a mix of manufacturer sizes, and noted that this organization was already underway. Grow Cedar Valley saw an opportunity in meeting with existing leadership to identify things they can do to strengthen the program. She shared that the intent of Cedar Valley Manufacturers Association is to represent manufacturers of all sizes.

ADJOURNMENT

Nichols/Simon
that the council adjourn at 4:57 p.m. Voice vote-Ayes: Six. Motion carried.

Kelley Felchle
City Clerk



MEMO

To: Council Members and Mayor Boesen
From: Kelley Felchle
cc:
Date: December 30, 2025
Re: Council Vacancy

On January 2, 2026, the Ward 2 council seat officially becomes vacant as Mr. Boesen takes his seat as Mayor of the City of Waterloo. When a vacancy occurs, council must take steps to fill the position either by appointment or special election. Time constraints, cost, and process are important to consider with either option. Below is an explanation of both methods for filling the vacancy.

Appointment

To fill the vacancy by appointment, council must begin the process by publishing notice of filling the vacancy in this manner. Notice must be published in the paper not less than four and not more than twenty days prior to the date council considers the appointment. The publication must also notify city residents of the right to request a special election by filing a petition.

Council can determine its own process for identifying potential candidates but must make an appointment within 60 days of the date the vacancy occurs. If council fails to appoint a replacement within 60 days, the city clerk must give notice of the vacancy to the county auditor. The county auditor must then call for a special election at the earliest practicable date but no sooner than 32 days after the notice from the city clerk was received.

Residents of Ward 2 can petition to fill the vacancy by special election rather than by appointment. The petition must be filed with the city clerk within 14 days after publication of notice of intent to appoint or within 14 days after the appointment is made, whichever is later. The petition must contain a sufficient number of signatures of eligible electors of the ward. In this case, a minimum of 127 signatures (10 percent of the votes for Ward 2 councilmember in the previous city election).

Special Election

If council chooses to call a special election the city clerk must give written notice to the county auditor. The county auditor must call for a special election at the earliest practicable date but no sooner than 32 days from the date the notice was received by the county auditor. The earliest practicable date a special election could occur is February 24, 2026. However, to potentially save on cost, we may consider holding the election on Tuesday, March 4, since that is already a scheduled special election date. If a runoff were necessary, it would occur on a Tuesday, four weeks after the election.

Costs

The county auditor will charge a fee for holding the special election and a runoff election for filling the Ward 2 vacancy. The election budget is \$65,000. The cost for the November 4, 2025, election was \$32,500 and the runoff election cost was \$26,177.46. The estimated cost of a special election would be \$5,000-\$6,000. Including the estimate for a Ward 2 special election, we would have just enough budget available to cover the cost of the election. In the event the special election went to a runoff, we would go over budget.

Next Steps

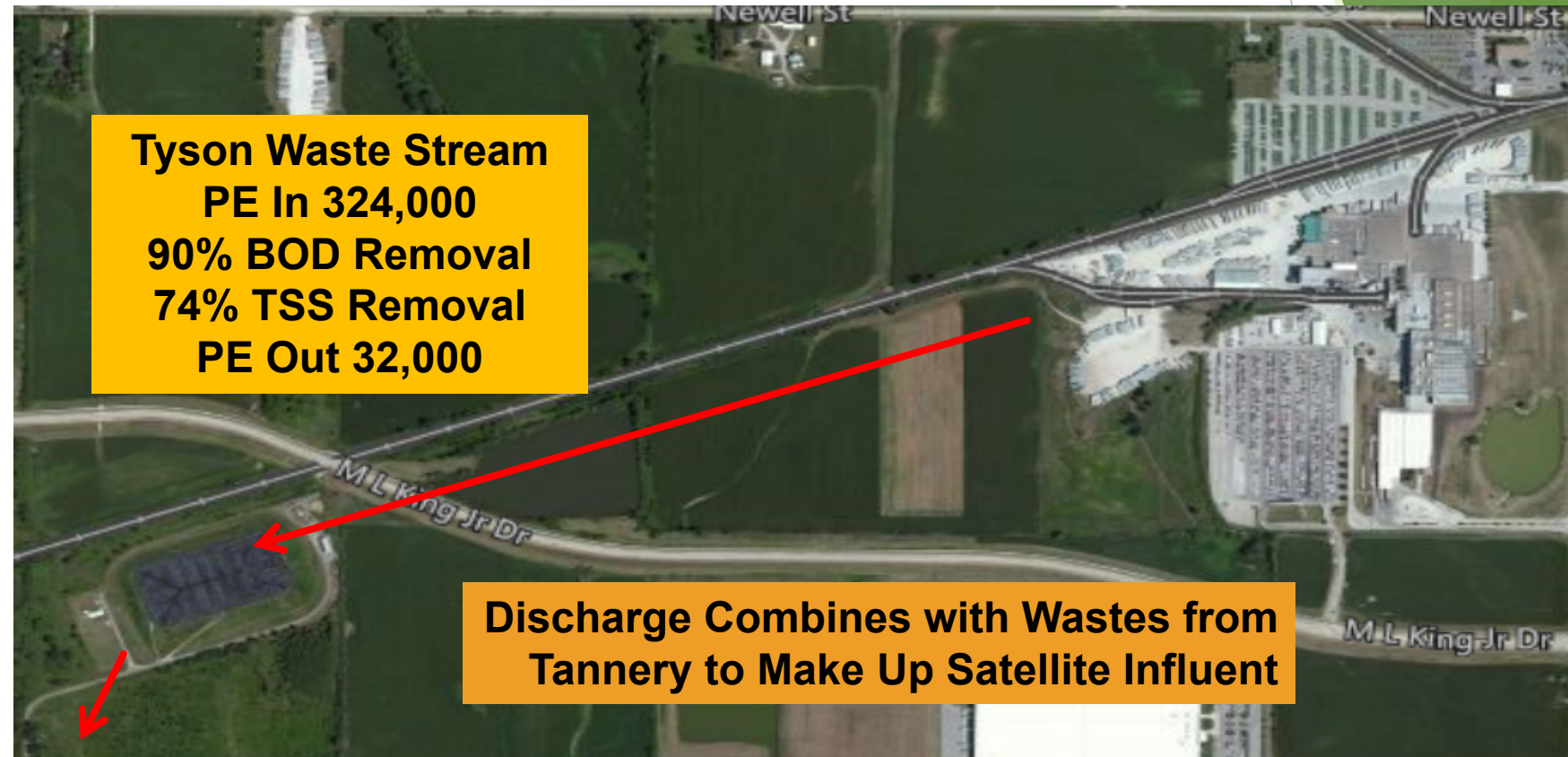
Council will vote on filling the vacancy at the January 20, 2026 council meeting. The action will be presented on the agenda based on council feedback from the January 5, 2026, work session.

Waste Management Services Project updates



Project #1 the Anaerobic Lagoon

The Anaerobic Lagoon is a critical Asset to WMS treatment capabilities. It treats a Population Equivalent of 324,00 People. The Anaerobic Lagoon takes effluent waste from Tyson Fresh Foods. Without a properly functioning Anaerobic Lagoon Downstream Wastewater Treatment would be overwhelmed with pollutants.



Project #1 Capital Improvement Needs at Anaerobic Lagoon

Waterloo, Iowa
 Anaerobic Lagoon Upgrades

5/13/2024

Funded by State
 Revolving Fund (SRF)

	<u>Budget</u>
Lagoon Cover Removal	\$ 300,000
Lagoon Cover	\$ 1,500,000
Lagoon Cleaning	\$ 1,000,000
Piping and Supports	\$ 800,000
Flare/Gas Safety Equipment	\$ 400,000
Bldg/Blower Upgrades	\$ 200,000
Electrical Upgrades	\$ 100,000
Site Work	\$ 50,000
subtotal	\$ 4,350,000
Contingencies @ 30%	\$ 1,305,000
subtotal	\$ 5,655,000
Planning, Design, Bidding, Construction Engr	\$ 1,131,000
Total	\$ 6,786,000

Project #2 Cattle Congress Lift Station/Force Main

The Cattle Congress Lift Station is a wet pit plus dry pit type wastewater pumping station originally constructed in 1961. This lift station is a major conveyor in the City of Waterloo collection system and is in dire need of replacement



Project #2 Cattle Congress Lift Station/Force Main

Take-Home Points:

- **Design Agreement in place with AECOM at cost of \$250,000**
- **Construction Cost expected to be \$3.2 Million**
- **Construction Related Services Expected to be \$250,000**
- **Issues expected with Sovern Lands and Land Clearance**
- **Funded by State Revolving Fund (SRF)**

Project #3 Airline Highway Lift Station and Collection Systems Improvements to No Name Creek;

With the recent economic developments on Leverage Road, (Northwest Industrial Park), downstream Lift Station Improvements are necessary at Airline Highway Lift Station and Collection System to No Name Creek



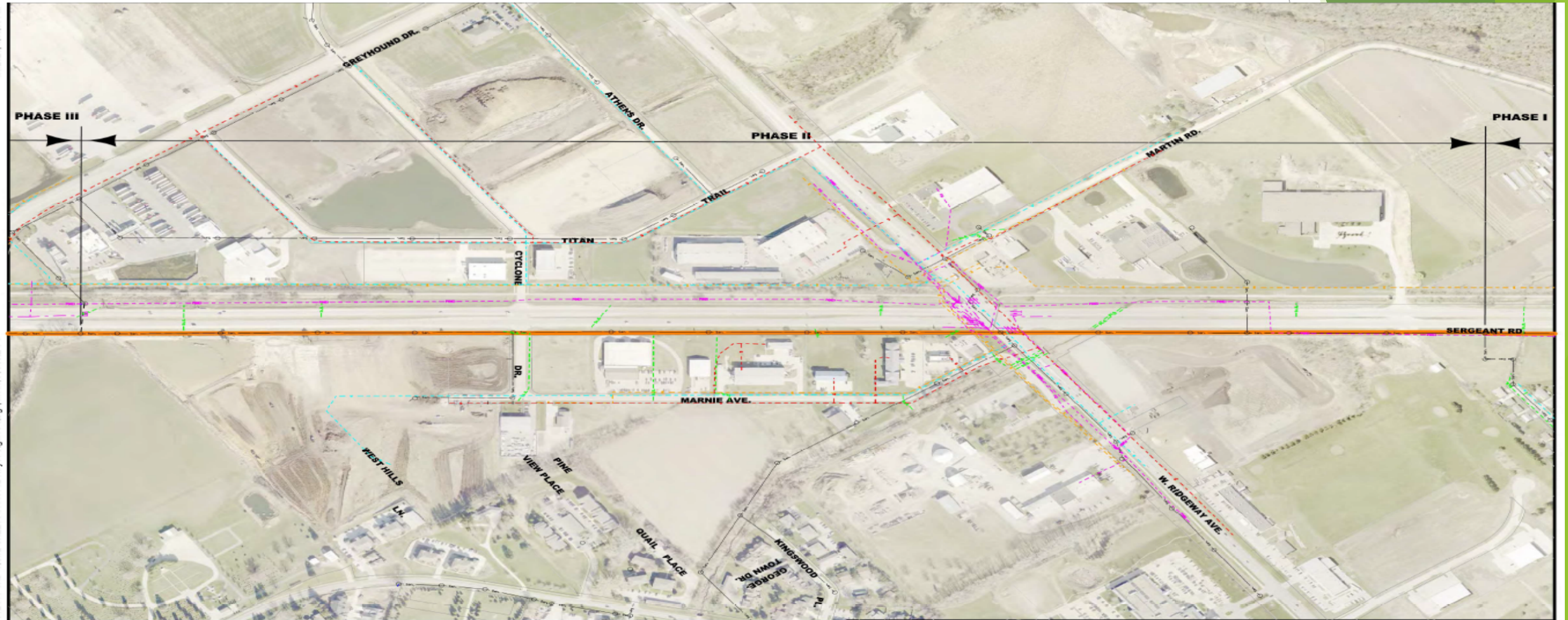
Project #3 Airline Highway Lift Station and Collection Systems Improvements to No Name Creek

Take-Home Points:

- **Need to enter into Engineering Design Agreement for lift station only with a cost of \$300,000**
- **Construction Related Services Cost for lift station only expected to be \$300,000**
- **Construction for lift station only estimated at \$3.0 Million**
- **Total Construction Cost for Lift Station expected \$3.6 Million**
- **Cost for Collection system improvements downstream still being vetted by consulting engineer**
- **Funded by TIF Funds**

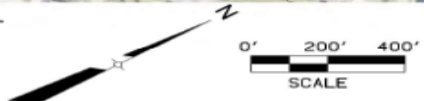
Project #4 Phase 2 Highway 63 Lift Station and Collection System Improvements

Phase 2 Highway 63 Sanitary Sewer Improvements improves Highway 63 Sanitary Sewer Collections from Jane Street to the Highway 20 Intersection. Phase 2 is critical to economic growth to this area in Greyhound Park and residential sewer conveyance to the East of Ridgeway Ave



EXISTING UTILITIES

- AUREON - FIBER OPTIC
- UNITE PRIVATE NETWORK - FIBER OPTIC
- MIDAM - FIBER OPTIC
- WINDSTREAM - FIBER OPTIC
- MIDAMERICAN - ELECTRIC
- MIDAMERICAN - GAS
- CENTURYLINK - TELEPHONE
- CITY OF WATERLOO - SANITARY SEWER
- CITY OF WATERLOO - STORM SEWER
- CITY OF WATERLOO - TRAFFIC CONTROL
- CITY OF WATERLOO - WATER WORKS



PREPARED BY:

AECOM

501 BYCAMORE STREET SUITE 222 WATERLOO, IA. 50703-4644 1-319-232-6531

FIGURE 6-3
PHASE II
JANE STREET TO HIGHWAY 20
 PRELIMINARY ENGINEERING REPORT
 US HIGHWAY 63 SOUTH INTERCEPTOR SEWER UPGRADE
 CITY OF WATERLOO, IOWA

Page 13 of 76

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Project #4 Phase 2 Highway 63 Lift Station and Collection System Improvements

Take-Home Points:

- **Need to enter into Engineering Design Agreement with at cost of \$600,000**
- **Construction Related Services Cost expected to be \$600,000**
- **Construction estimated at \$6.0 Million**
- **Total Construction Cost expected \$7.2 Million**
- **Funded by State Revolving Fund (SRF)**

Project #5 Ongoing Cure in Place Pipe.

This is the annual targeted area to perform CIPP on existing infrastructure.

- Annual CIPP Budget Currently @ \$1,000,000 a year
- Assists in reducing infiltration and inflow (I & I)
- Reduces wastewater needing treatment at plant
- Reduces potential for basement back-ups

Project #6 Liquid Improvements/Nutrient Reduction Engineering Design Phase 2

WWTP History

- 1990s: Most of the facilities were constructed
 - Two plants were constructed side-by-side
 - ~20 year life (+/-)
- 2012: One plant was “mothballed” because the capacity wasn’t needed and it was costly to operate.
- 2024 Plans in place to re-activate “mothballed” Satellite plant to meet DNR Requirements
- 2017/18: Major planning effort in conjunction with DNR required nutrient removal study
 - Phased WWTP upgrades recommended
 - Ultimately combine the two plants to provide capacity while meeting DNR requirements for Nutrient Reduction
 - \$101 million in three phases. Phase 1 Biosolids Improvements Completed at cost of \$18 Million
 - Phase 2 Cost in 2024 Dollars at \$51 million



Project #6 Liquid Improvements/Nutrient Reduction Engineering Design

Take-Home Points:

- WWTP capacity needs to be expanded or Economic growth/industry/jobs will be impacted
- Lowest cost plan is still to combine the plants while achieving nutrient reductions per DNR requirements
- ~\$94 million total cost (2023 dollars)
- **Next phase is to increase capacity while removing nutrients ~ \$51 million (2024 dollars)**
- Timing is becoming critical as the next phase will take 5 years to provide the needed capacity
- **COST TO BEGIN DESIGN \$ 3,060,000 2024 Dollars**
- **Easton Plant Built -1998**
- **Satellite Plant Built - 1996**

In House rehabilitation of Lift Stations / Plant Equipment

- Updating electrical controls, alarm systems and Programmable Logic Controllers (PLC)
- PLC will integrate with Fiber Backbone to allow stations to be visible via city's current Supervisory Control and Data Acquisition (SCADA) system
- Replacement of outdate mechanical systems (pumps, valves, piping)
- Bringing equipment up to present day standards

In House Rehabilitations

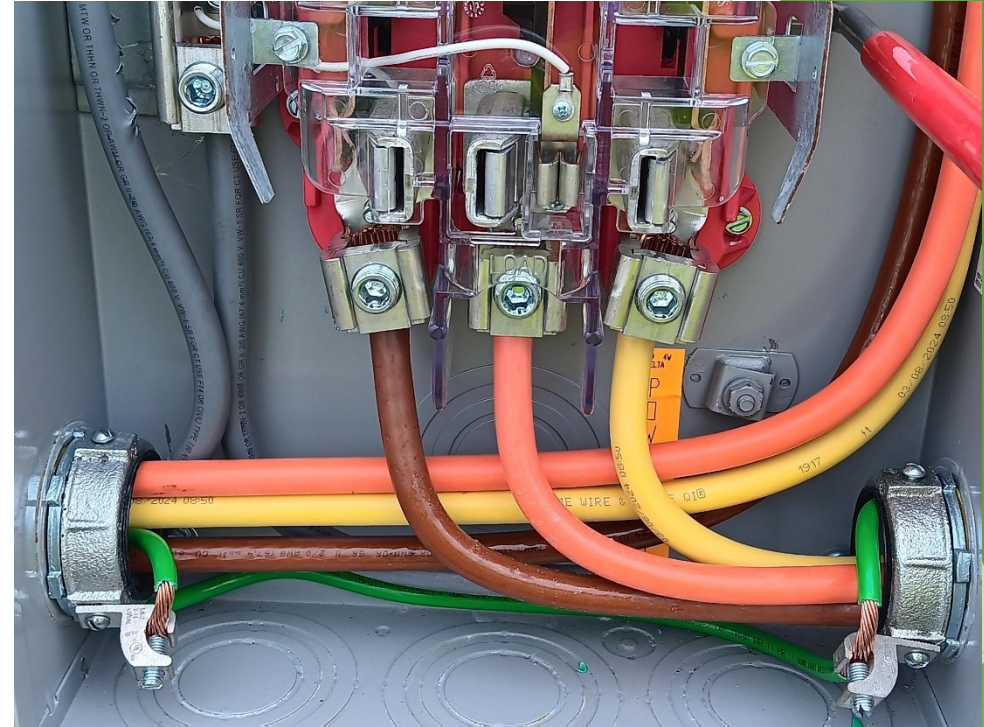


Progressive Cavity Pump



Raw Wastewater 30" flow meter replacement

Park Road Lift Station



New electrical service with manual transfer switch to hookup portable generator

Garden Lift Station



New hookup for portable generator and a manual transfer switch

Updated Electrical and control panels with new Variable Frequency Drives



Garden Lift Station

New Dry Pit Submersible Pump and Valves



Midway Lift Station

New Dry Pit Submersible Pump and Valves



**Avg. age of
Lift Stations
and Plant
Infrastructure
48 years old**

Midland/Titus Lift Station (2024)
NEW Cattle Congress Lift Station and Force Main (1961)
Lift Station - Airline (1968) (1) (CAN)
Lift Station - 63 South (1975) (2) (CAN)
Lift Station - Triangle (1977) (3) (CAN)
Lift Station - Cedar Terrace (1974) (4) (CAN)
Douglas Lift Station (1942) Rehab
Lift Station Rehab - Hawkeye (1971) (5)
Lift Station Rehab- David (1981) (6)
Lift Station Rehab - Park Road (1967) (7)
Hackett Lift Station and Force Main Remodel (1960)
Lift Station Rehab - Webster (1971) (8)
Lift Station Rehab - Virginia (1954) (9)
Lift Station Rehab - Garden Avenue (1960) (10)
Lift Station Rehab - Greenbrier (1962) (11)
Lift Station Rehab - Midway (1960) (12)
Lift Station Rehab - Byrnbrae (1947) (13)
Gates Golf Course Lift Station (1956)
Country View (Currently Managing) (1988)
City Hall Lift Station (1991)
LaPorte Road (South View) Lift Station (2013)
Public Works Lift Station (2011)
Tower Park / Dry Run Creek (2021)

Equipment and Vehicle Replacement Program

- Sewer Cleaning equipment aging
- Replace equipment before maintenance cost increase and there is still value left in equipment
- Keep equipment up to present day standards

Questions ?

**CHAPTER 4
PLUMBING REGULATIONS**

SECTION:

9-4-1: Title

9-4-2: Application And Scope

9-4-3: Plumbing Inspector

9-4-4: Defective Work; Unsanitary Conditions

9-4-5: Maintenance And Repairs Of Double Or Multiple House Sewer Connections

9-4-6: Work Requiring Permit Or Approval

9-4-7: Installation By Owner

9-4-8: Notification For Inspection

9-4-9: Applicability To Existing Buildings

9-4-1: TITLE:

This chapter shall be known as the *WATERLOO PLUMBING CODE* and may be so cited and may be referred to hereinafter as "the code" or "this code". (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4-2: APPLICATION AND SCOPE:

The provisions of this chapter shall include and apply to all plumbing work, plumbing installations and plumbing equipment hereinafter installed, constructed, altered, serviced or repaired in, for or about any new, remodeled or relocated building or structure in the city. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4-3: PLUMBING INSPECTOR:

A. Appointment: The plumbing inspector shall be appointed by the mayor and city council after being tested by the civil service commission and upon recommendation by the building official, and shall work under the direction of the building official.

B. Qualifications:

1. The appointee shall be a licensed practical journeyman or master plumber with not less than ten (10) years' experience; shall possess a certificate of competency issued by the city or must submit to an examination of competency administered by the city board of

plumbing examiners; shall possess a valid driver's license; shall possess such executive ability and requisite for the performance of required duties; shall have thorough knowledge of the standard materials and methods used in the installation and maintenance of plumbing equipment; shall be well versed in improved methods of construction for safety to persons and property, the statutes of the state relating to sanitation and plumbing and any orders, rules and regulations issued by authority thereof and in the Uniform Plumbing Code.

2. The plumbing inspector shall hold a current journeyman plumber's license with the Iowa Department of Public Health division for licensing in the State of Iowa.

C. Powers And Duties:

1. The plumbing inspector is empowered to inspect any and all buildings or structures, public or private, and to, as herein provided, condemn, and order removed or remodeled and put into proper and safe condition all plumbing and plumbing related items for the protection of the public health, safety and welfare.

2. The plumbing inspector shall have power under the direction of the building official to exercise judgment in a reasonable and proper manner and rule accordingly on all special cases in regard to matters in this chapter or not specifically covered thereby.

3. The plumbing inspector shall keep records of sewer connections from city main(s) to the property line and from the property line to each building connected to city services.

4. The plumbing inspector shall be the code and administrative authority for the administration of the plumbing code of the city.

D. Right Of Entry: Whenever necessary to make an inspection to enforce any of the provisions of this plumbing code, or whenever the plumbing inspector or authorized representative has reasonable cause to believe that there exists in any building or upon any premises, any condition which makes such building or premises unsafe, the plumbing inspector or authorized representative may enter such building or premises at all reasonable times to inspect the same or to perform any duty imposed upon by this chapter, provided that if such building or premises be occupied, they shall first present proper credentials and demand entry; and if such building or premises be unoccupied, they shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry. If such entry is refused, the plumbing inspector or their authorized representative shall have recourse to every remedy by law to secure entry.

E. Unlawful Activities: It shall be unlawful for the plumbing inspector to engage in the business of the sales, installation or maintenance of plumbing equipment, either directly or indirectly, and the inspector shall have no financial interest in any concern engaged in such business in the city, at any time while holding office as herein provided for. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4-4: DEFECTIVE WORK; UNSANITARY CONDITIONS:

Whenever it shall come to the knowledge of the plumbing inspector that the plumbing in a building causes a nuisance or may cause disease, sickness, or otherwise becomes a hazard to health, it shall be the duty of said inspector to make an inspection of such plumbing and render a report to the proper party, setting forth the necessary repairs or alterations required to make such plumbing conform to this chapter. The inspector shall set a limit of time in which such repairs or alterations are to be made, and upon the refusal or neglect of the owner, agent, lessee or tenant to comply with said notice within the time stated, the plumbing inspector shall cause such repairs or alterations to be made and such nuisance abated and the expense of such work shall be taxed against such property and become a prior lien thereon; or the inspector may order the premises vacated and closed to further occupancy until such time as the required repairs or alterations have been made. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4-5: MAINTENANCE AND REPAIRS OF DOUBLE OR MULTIPLE HOUSE SEWER CONNECTIONS:

A. When it shall become necessary to make any repairs or to make any replacements or in the event of any cost of maintenance of a double or multiple house sewer between the main sewer and the lot line from which such multiple connections are extended, the owner of each structure, residence or building served by such double or multiple house sewer shall pay their proportionate share of the expenses of such repair, replacement or maintenance cost. Such double or multiple sewer shall be construed to mean from the branch opening where the individual sewers enter the double or multiple house sewer to the point of connection at the city sewer.

B. In the event the owner of each structure, residence or building served by such double or multiple house sewer shall fail to maintain or repair the same or to make any replacements in the same and to pay their proportionate share of expense incident thereto, the city shall have the power to order said replacements, repairs or maintenance, as the case may be, and the actual cost thereof shall be assessed against such property by certifying to the county auditor for collection as other special taxes. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4-6: WORK REQUIRING PERMIT OR APPROVAL:

No building or premises shall tap any water or sewer main or have installed any private building sewer, water service, private sewage disposal plant or private water system or have connections, extensions, replacements, removals or additions of any nature to the sanitary plumbing or water supply system or disconnection of any fixture or change in the plumbing system before notifying the plumbing inspector or his assistant and securing a permit or authority to proceed with the work. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4-7: INSTALLATION BY OWNER:

In cases where the owner/occupant desires to do plumbing work in the owner occupied residence, said owner shall make payment of required fees and a plumbing permit shall be issued. Said permit authorizes the owner only to do plumbing work in the dwelling or unit owned and occupied by said owner without licensing, certificate of insurance or help from other than family members. Said person performs all labor in connection therewith, has the necessary inspections made and complies with chapter requirements. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

If at any time during the permit or inspection process, the chief plumbing inspector determines the homeowner is unqualified to perform the plumbing work, the homeowner will be required to hire a licensed plumbing contractor to perform the plumbing work.

9-4-8: NOTIFICATION FOR INSPECTION:

A. It shall be the duty of the permit holder to notify the inspector that his work is ready for inspection or test. All inspections require twenty four (24) hours' notice.

B. It shall be the duty of the permit holder to make sure the work will stand the test prescribed before giving notification.

C. If the inspector finds that the work will not stand a required test, or corrections are required, the plumber shall be required to notify the inspector when the necessary corrections are complete for re-inspection. If corrections are still required, the plumber shall make corrections, notify the inspector for re-inspection and pay a re-inspection fee.

D. If the inspector fails to appear within twenty four (24) hours, during normal working hours, of the time set for each inspection or test, the inspection or test shall be deemed to have been made; but the plumber doing the work shall be required to file an affidavit with the plumbing inspector that the work was installed in accordance with the ordinance and permit, and that it was free from defects and that the required test had been made and the system was found free from leaks. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4-9: APPLICABILITY TO EXISTING BUILDINGS:

If an existing building is damaged by fire or otherwise or altered in a manner to require the replacement of fifty percent (50%) or more of the structure as determined by the authority having jurisdiction, the entire building shall conform to this chapter's requirements for new buildings. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

ARTICLE A. PLUMBING CODE

SECTION:

9-4A-1: Uniform Plumbing Code Adopted

9-4A-2: Amendments

9-4A-3: Exhibits

9-4A-1: UNIFORM PLUMBING CODE ADOPTED:

Except as hereinafter added to, deleted, modified or amended, there is hereby adopted as the plumbing code of the city, that certain plumbing code known as the Uniform Plumbing Code, ~~2021~~ 2024 edition, and any further regulations or requirements of the State Plumbing Code, and the provisions of said plumbing code shall be controlling in the construction and maintenance of plumbing and in all other matters covered by said plumbing code within the city. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4A-2: AMENDMENTS:

Section 106 is amended by adding sections as follows:

106.1.1 Municipal Infraction.

106.1.2 Any person, firm, or corporation failing to comply with or violating any of the terms or provisions of this ordinance shall be deemed guilty of a municipal infraction and upon conviction thereof, be punished accordingly.

106.1.3 If any plumbing work, including construction or repair, is performed within the city contrary to the provisions of this ordinance, it shall be deemed a municipal infraction and in addition to penalties described, shall be corrected in accordance with this ordinance.

106.1.4 The omission or failure to perform any act or duty required by this ordinance or the performing of any act which is prohibited or declared to be unlawful by this ordinance, an offense or a municipal infraction pursuant to this ordinance or the uniform plumbing

code, is punishable by a fine of up to two hundred dollars (\$200.00), for the first offense and up to four hundred dollars (\$400.00) for each subsequent offense.

106.1.5 Fees, is hereby repealed in its entirety; a new section 106.1.6 Fees, is hereby enacted in lieu thereof as follows:

106.1.6 Fees. All plumbing permit and inspection fees shall be established by resolution of the city council and paid prior to issuance of a permit or re-inspection.

Section 602 is amended by adding the following subsection:

602.4.1 Yard hydrants to furnish water for human consumption are prohibited, unless it is an approved fixture.

Section 603, Specific Requirements for cross connection control is amended by adding the following subsections:

603.1.2 Cross Connection Control-Containment Provisions. The purpose is to safeguard potable water supplies by preventing backflow into public water systems.

603.1.3 Definitions. The following definitions shall apply to section 603.13 of the Waterloo Plumbing Code. For the purpose of this section, these definitions supersede definitions given elsewhere in this code.

1. **Administrative Authority.** For the purpose of this section, the administrative authority shall be the Waterloo Water Works and plumbing division of the City of Waterloo Building Inspection Department.

2. **Approved Backflow Prevention Assembly For Containment.** A backflow prevention assembly which is listed by the University Of Southern California- Foundation For Cross Connection Control And Hydraulic Research as having met the requirements of ANSI-AWWA standard C510-89, "Double Check Valve Backflow-Prevention Assemblies", or ANSI-AWWA standard C511-89, "Reduced-Pressure Principle Backflow-Prevention Assemblies" for containment. The listing shall include the limitations of use based on the degree of hazard. The backflow prevention assembly must also be listed by the International Association of Plumbing and Mechanical Officials.

3. **Approved Backflow Prevention Assembly For Containment In A Fire Protection System.** A backflow prevention assembly to be used in a fire protection system which meets the requirements of Factory Mutual Research Corporation (FM) and Underwriters Laboratory (UL), and the requirement of the fire code and the building code of the city, in addition to the requirements of paragraph a(3). Devices sized smaller than 2 1/2" which have not been listed by Underwriters Laboratory (UL) and tested by Factory Mutual

Research Corporation (FM) may be allowed if they meet the requirements of the fire code and the building code of the city.

4. Auxiliary Water Supply. Any water supply on or available to the premises other than the water purveyor's approved public water supply such as, but not limited to, a private well, pond or river.

5. Containment. A method of backflow prevention which requires the installation of a backflow prevention assembly at the water service entrance.

6. Cross Connection. Any actual or potential connection or arrangement, physical or otherwise, between a potable water supply system and any plumbing fixture or tank, receptacle, equipment or device, through which it may be possible for non-potable, used, unclean, polluted and contaminated water, or other substance, to enter into any part of such potable water system under any condition.

7. Customer. The owner, operator, or occupant of a building or property which has a water service from a public water system, or the owner or operator of a private water system which has a water service from a public water system.

8. Degree of Hazard. The rating of a cross connection or water service which indicates if it has the potential to cause contamination or pollution.

9. Double Check Valve Backflow Prevention Assembly. A backflow prevention device consisting of two independently acting internally loaded check valves, four properly located test cocks, and two isolation valves.

10. High Hazard Cross Connection. A high hazard cross connection is a cross connection which may cause an impairment of the quality of the potable water by creating an actual hazard to the public health, through poisoning or through the spread of disease by sewage, industrial fluids or waste.

11. Isolation. A method of backflow prevention in which a backflow prevention assembly is located at the cross connection rather than at the water service entrance.

12. Low Hazard Cross Connection. A low hazard cross connection is a cross connection which may cause an impairment of the quality of potable water to a degree which does adversely and unreasonably affect the aesthetic qualities of such potable waters for domestic use.

13. Multiple-Family Residential Units. A multiple family residential unit shall mean a building designed to be used as residential occupancy for multiple-family units, each having separate plumbing facilities and not more than two levels of occupancy.

14. Private Owned Customer Water System Piping. Water service line pipes and plumbing fixtures connected to the public water system of the city of Waterloo which are extended to the customer's property and into the customer's building for service to the customer, regulatory control of which is defined in the city plumbing code and Waterloo water works regulations.

15. Reduced Pressure Principle Backflow Prevention Assembly. A backflow prevention device consisting of two independently acting internally loaded check valves, a different pressure relief valve, four properly located test cocks and two isolation valves.

16. Registered Backflow Prevention Assembly Tester. A person who is registered by law to test or repair backflow prevention assemblies and report on the condition of those assemblies.

17. Thermal Expansion. Volumetric increase of water due to heating resulting in increased pressure in a closed system.

18. Water Service. Depending on the context, water service is the physical connection between a public water system and a customer's building, property or private water system, or the act of providing potable water to a customer.

603.1.4 Administrative Authority.

1. For the purpose of section 603.5.21.2 of the Waterloo Plumbing Code only, the administrative authority shall be the Waterloo Water Works and plumbing division of the City of Waterloo Building Inspection Department.

2. The administrative authority shall have the right to enter, with the consent of the customer, or upon the basis of an administrative warrant issued by a court of appropriate jurisdiction, any property to inspect for possible cross connections.

3. The administrative authority may approve training programs for backflow prevention assembly testers and register backflow prevention assembly testers who successfully complete an approved training program.

4. The administrative authority may collect fees for the administration of this program. Fees shall be established by resolution of the Waterloo City Council.

603.1.5 New Water Service.

1. Plans shall be submitted to the administrative authority to review on all new water services to determine size and degree of hazard.

2. The administrative authority shall determine if any type of backflow prevention assembly is required for containment based on the degree of hazard.

3. The administrative authority shall require, where necessary, the installation of the appropriate backflow prevention assembly for containment before the initiation of water service.

603.1.6 Existing Water Services.

1. Upgrades of existing water services shall be treated as new water services for the purpose of this section.

2. The administrative authority shall publish and make available to each customer a copy of the standards used to determine the degree of hazard.

3. After publication of the standards, the administrative authority shall notify customers whose premises are classified as single family residential or multiple family residential, having five units or less and not more than two levels of occupancy, of the provisions of this ordinance and compliance therewith.

4. Within six (6) months after publication of the standards, customers whose premises are not classified as single family residential shall complete and return to the administrative authority a cross connection hazard survey to be used to determine the type of containment device.

5. The administrative authority shall, on the basis of information received from customers or gathered through on-premises investigations or surveys, notify the customer that a method of backflow prevention is required. The customer shall prepare a written plan for review and approval by the administrative authority to install a device or devices for containment and/or isolation based on the degree of hazard.

6. Within the time frame specified in writing by the administrative authority, the customer shall install a backflow prevention assembly as approved by the administrative authority.

7. For existing water services, the administrative authority may inspect the premises to determine the degree of hazard. When the high hazard cross connections are found, the administrative authority shall, at its sole discretion:

7.1 Develop a schedule of compliance which the customer shall follow.

7.2 Terminate the water service until a backflow prevention assembly for containment required by the administrative authority has been installed.

8. Failure of the administrative authority to notify a customer that they are believed to have a high hazard cross connection and that they shall install backflow prevention assemblies for containment in no way relieves a customer of the responsibility to comply with all requirements of this section.

603.1.7 Customer.

1. The customer shall be responsible for ensuring that no cross connections exist without approved backflow protection within his or her premises starting at the point of service from the public potable water system.

2. The customer shall, at his or her own expense, cause installation, operation, testing and maintenance of the backflow prevention assemblies required by the administrative authority.

3. The customer shall ensure the administrative authority is provided with copies of records of the installation and of all tests and repairs made to the backflow prevention assembly on the approved form within fifteen (15) days after testing and/or repairs are completed.

4. In the event of a backflow incident, the customer shall immediately notify the local water supplier, the Waterloo Water Works.

603.1.8 Required Backflow Prevention Assemblies For Containment - Water Services.

1. An air gap or an approved reduced pressure principle backflow prevention assembly is required for water services having one or more cross connections which the administrative authority classifies as high hazard.

2. An approved double check valve assembly is required for water services having no high hazard cross connections but having one or more cross connections which the administrative authority has classified as low hazard.

3. Every water service which is required to install a backflow prevention assembly at point of entry will be required to follow section 603.4 of the uniform plumbing code at time of installation.

4. Exception. Residential - single family dwelling to be done by isolation unless specified by administrative authority.

603.1.9 Required Backflow Prevention Assemblies For Containment - Fire Protection Systems.

1. A reduced pressure principle backflow prevention assembly shall be installed on all new and existing fire protection systems which the administrative authority determines to have any of the following.

1.1 Direct connections from public water mains with an auxiliary water supply on or available to the premises for pumper connection.

1.2 Interconnections with auxiliary supplies such as reservoirs, rivers, ponds, wells, mills or other industrial water systems.

1.3 Use of antifreezes or other additives in the fire protection system.

1.4 Combined industrial or domestic with high hazard and fire protection systems supplied from the public water mains only, with or without gravity storage or pump suction tanks.

1.5 Any other facility, connection, or condition which may cause contamination.

2. A double check valve assembly shall be required for all other fire protection systems. The double check valve shall be required on all new systems at the time of installation and on existing systems at the time that they are upgraded.

3. Submittal of proposed backflow prevention devices to the administrative authority does not relieve the designer or sprinkler contractor of the responsibility of submitting plans, including backflow prevention devices, to the fire marshal for approval.

603.2 Registration of Backflow Prevention Assembly Tester. A backflow prevention assembly tester registered by the state of Iowa shall include his or her registration number on all correspondence and forms required by or associated with this ordinance.

603.2.1 Registered Backflow Prevention Assembly Tester Noncompliance.

1. The registration of a tester may be revoked or suspended, for a period of up to two years, for noncompliance with this ordinance.

2. Any of the following conditions constitute noncompliance:

2.1 Improper testing or repair of backflow prevention assemblies.

2.2 Improper reporting of the results of testing or of repairs made to backflow prevention assemblies.

2.3 Failure to meet registration requirements.

2.4 Related unethical practices.

603.2.2 Installation of Backflow Prevention Assemblies.

1. Installation of backflow prevention assemblies shall be made by a licensed and bonded plumbing contractor of the city of Waterloo with proper permits.
2. The required backflow prevention assemblies for containment shall be installed in horizontal plumbing immediately following the meter or as close to that location as deemed practical by the administrative authority. In any case, it shall be located upstream from any branch piping. Installation at this point does not eliminate the responsibilities of the customer to protect the water supply system from containment or pollution between the backflow prevention assembly and the water main.
3. Reduced pressure principle backflow prevention assemblies shall be installed so as to be protected from flooding.
4. Reduced pressure principle backflow prevention assemblies shall not be installed in underground vaults or pits.
5. All backflow prevention assemblies shall be protected from freezing. Those devices used for seasonal services may be removed in lieu of being protected from freezing; however, the devices must be reinstalled and tested by a registered backflow prevention assembly tester prior to service being reactivated.
6. If hot water is used within the water system, thermal expansion shall be provided for when installing a backflow prevention assembly for containment.
7. Provisions shall be made to convey the discharge of water from reduced, pressure principle backflow prevention assemblies, to a suitable drain.
8. No backflow prevention assemblies shall be installed in a place where it would create a safety hazard, such as but not limited to over an electrical panel or above ceiling level.
9. If interruption of water service during testing and repair of backflow prevention assemblies for containment is unacceptable to the customer, another backflow prevention assembly, sized to handle the temporary water flow need during the time of test or repair, should be installed in parallel piping.
10. All backflow prevention assemblies shall be installed so that they are accessible for testing as stated in section 603.17 of the uniform plumbing code.
11. All shut-off valves conform with the current edition of the Manual Of Cross Connection Control (University Of Southern California) requirements for either ball or resilient seat gate valves at the time of installation. Ball valves shall be used on assemblies

installed in piping two inches and smaller and resilient seat gate valves on assemblies installed in piping larger than two inches.

603.2.3 Testing Of Backflow Prevention Assemblies.

1. Testing of backflow prevention assemblies shall be performed by a registered backflow prevention assembly tester. The costs of tests required in the following paragraphs 2 through 5 shall be borne by the customer.

2. Backflow prevention assemblies shall be tested upon installation, and tested and inspected at least annually.

3. Backflow prevention assemblies which are in place, but have been out of operation for more than three months, shall be tested before being put back into operation. Backflow prevention assemblies used in seasonal applications shall be tested before being put into operation each season.

4. Any backflow prevention assembly which fails a periodic test shall be repaired or replaced. When water service has been terminated for noncompliance, the backflow prevention assembly shall be repaired or replaced prior to the resumption of water service. Backflow prevention assemblies shall be retested by a registered backflow prevention assembly tester immediately after repair or replacement.

5. The administrative authority may require backflow prevention assemblies to be tested at any time in addition to the annual testing requirement.

6. The registered backflow prevention assembly tester shall report the successful test of a backflow prevention assembly to the customer and to the administrative authority on the form provided by the administrative authority within fifteen (15) days of the test.

7. The administrative authority may require, at its own cost, additional tests of individual backflow prevention assemblies as it shall deem necessary to verify test procedures and results.

603.2.4 Repair of Backflow Prevention Assemblies.

1. All repairs to backflow prevention assemblies shall be performed by registered backflow prevention assembly testers.

2. The registered backflow prevention assembly tester shall not change the design, material, or operational characteristics of a backflow prevention assembly during repair or maintenance and shall use only original manufacturer replacements parts.

3. The registered backflow prevention assembly tester shall report the repair of a backflow prevention assembly to the customer and to the administrative authority on the form provided by the administrative authority within fifteen (15) days of the repair. The report shall include the list of materials or replacement parts used.

4. Any time fire services are discontinued for a period of time longer than necessary to test the device the tester is required to notify the fire marshal's office that the fire services are shut off for repairs.

603.2.5 Customer Noncompliance. The water service may be discontinued in the case of noncompliance with the Waterloo Plumbing Code. Noncompliance includes but is not limited to the following:

1. Refusal to allow the administrative authority access to the property to inspect for cross connections.

2. Removal of a backflow prevention assembly which has been required by the administrative authority.

3. Bypassing of a backflow prevention assembly which has been required by the administrative authority.

4. Providing inadequate backflow prevention when cross connections exist.

5. Failure to install a backflow assembly which has been required by the administrative authority.

6. Failure to test and/or properly repair a backflow prevention assembly as required by the administrative authority.

Table 604.1 is hereby repealed in its entirety and replaced with the following:

604.1.2 Materials for water service piping shall be of lead-free brass, copper, ductile iron, or other materials approved by the administrative authority. All materials used in water supply systems except valves and similar devices shall be of like material, except when otherwise approved by administrative authority. Copper tube, when used underground, shall have a weight of not less than copper water tube type K.

INSTALLATION STANDARD FOR NON-METALLIC PLASTIC WATER SERVICE PIPE - PE & PEX

I All water service pipes through 2" shall be type K copper, red brass, PE or PEX pipe.

II PE or PEX SDR 9 200 PSI can be used for ¾" - 2" water service installations as follows:

- If PE or PEX pipe is used, it shall be installed all the way from the stop box to meter.

- PE or PEX pipe shall not be used for repairs or partial replacements. Intermixing of materials shall not be allowed.

Type K copper is required from the tap to the stop box for all new water services in new developments and all other instances where water service is stubbed to the stop box. Copper can also be used from the stop box to the meters inside the premise on any service line through 2".

III PE or PEX pipe shall be installed in casing or bedded with approved backfill material. The minimum requirements for casing shall be SCH-40 or SDR-23.5 sized to accommodate the service line and tracer wire. Backfill shall be manufactured sand, river sand, or 1/2" pea gravel placed a minimum of 3" below and 4" above the pipe unless approved by administrative authority.

IV Splicing of PE or PEX pipe between stop box and meter inside the building is **discouraged and will only be approved under special circumstances.**

V PE or PEX pipe may not be used within 500' of a Leaking Underground Storage Tank or in other areas where the soil may be contaminated. You can access IDNR records.

VI Tracer wire shall be required when PE or PEX pipe is used. Tracer wire shall be #12 solid single strand copper wire with 45 mil linear low-density polyethylene insulation suitable for direct bury. Insulation shall be blue in color. When conduit is used the tracer wire shall be placed inside the conduit. When conduit is not used tracer wire shall be installed alongside the pipe and shall be fastened to pipe with zip ties, a minimum of every 5 feet. Tracer wire shall terminate above-ground and be accessible.

VII Joint methods for attaching PEX pipe to fittings shall meet AWWA C 904 Standards and ASTM F1960, F2080, or F1807 Specifications. Fittings shall be installed in accordance with PE or PEX Pipe Manufactures Installation Guidelines and related plumbing codes.

VIII Intermixing of approved material shall not be allowed.

604.1.3 Joints and fittings for underground water service piping must be lead-free compression or threaded brass. Fittings must meet A.W.W.A. (American Water Works Association) and Waterloo Water Works standards. All fittings shall maintain an effective grounding path from the meter to the main. Rubber compression fittings will not be allowed.

604.1.4 Materials for water distribution, pipes, and tubing shall be of lead-free brass, copper, ductile iron, stainless steel, or PEX water pipe. PEX water pipe, tubing, and fittings, manufactured to recognized standards may be used for hot and cold water distribution systems within a building. All materials used in the water supply system, except valves and

similar devices shall be of a like material, except where otherwise approved by the administrative authority. Copper tube used underground shall have a weight of not less than copper water tube type K and aboveground shall be a weight of not less than copper water tube type L.

604.1.5 Approved PEX water pipe may be used in water distribution piping except where existing metallic water distribution piping is used for electrical grounding purposes, replacement piping therefore shall be of metallic and PEX will not be allowed.

Exception: Where a grounding system, acceptable to the administrative authority is installed, inspected and approved, metallic pipe may be replaced with approved PEX pipe.

604.1.6 PEX. Cross-linked polyethylene (PEX) tubing shall be marked with the appropriate standard designation(s) listed in table 14-1 for which the tubing has been listed or approved. PEX tubing shall be installed in compliance with the provisions of this section.

604.1.7 Licensed installers, employed by licensed plumbing contractors, shall be appropriately certified by the manufacturer or other approved training agency prior to commencing any PEX tubing installation.

713.4 is amended by adding the following subsection:

713.4.1 Public Systems Available. A public water supply system and/or public sewer system shall be deemed available to premises if such premises are within two hundred (200) feet, measured along a street, alley, or easement, of the public water supply or sewer system and a connection conforming to the standards set forth in this code shall be made thereto.

Section 715 is amended by adding the following subsection:

715.1 .1 The building sewer, beginning two (2) feet from any building or structure, shall be schedule 40 PVC, PVC SDR 23.5, cast iron soil pipe, vitrified clay tile, truss pipe or concrete pipe.

715.1 .2 For a new building or structure, the building sewer, beginning two (2) feet from ~~any building or structure~~ the structure, shall be SCH 40 PVC, PVC SDR 23.5 or cast iron soil pipe ~~vitrified clay tile, truss pipe or concrete pipe~~ to the sewer main.

Section 717 is hereby amended by adding the following subsection:

Section 717 is hereby amended by adding the following subsection:

717.1.1 Size Of Building Sewers. The minimum size of any building sewer shall be determined on the basis of the total number of fixture units drained by such sewer, in

accordance with table 7-8. No building sewer shall be smaller than the building drain. Minimum size of a building sewer is four (4) inches.

Section 906 is amended by repealing subsection 906.7 in its entirety; and by enacting in lieu thereof a new subsection 906.7 as follows:

906.7 Frost or Snow Closure. Where frost or snow closure is likely to occur, vent terminals shall be minimum three inches (3") in diameter but in no case smaller than the required pipe. The change in diameter shall be made inside the building at least one (1) foot below the roof and terminate not less than 12 inches above roof.

Section 1007, is amended by repealing subsection 1007.1 and enacting a new subsection 1007.1 to read as follows:

1007.1 Trap Seal Protection. All automatic floor drain primers or trap seal valves are prohibited.

Section 1009, is hereby repealed in its entirety and a new section 1009 is hereby enacted in lieu thereof as follows:

1009 Industrial Interceptors (Clarifiers) and Separators.

1009.1 Drainage from commercial garages, gasoline filling stations, dry cleaning establishments, oil extraction plants, and other industries where oils or solvents are used, is likely to contain inflammable compound, which shall therefore be intercepted before discharging into the city sewer. The interceptor shall have a capacity sufficient to separate the oil, grease, or other inflammable compound and shall be so located and constructed to prevent fire or explosion. Drainage from commercial garages and oil stations where automobile wash racks are installed is also likely to contain mud and sand, which shall be separated from the wastes before discharging into the city sanitary sewer. Hence, the interceptor for these wastes shall afford sufficient capacity for both separating the oils and grease by flotation and the sand and mud by settling.

1009.2 For drainage from commercial garages or other places where wastes are likely to contain sand, mud, or other solid material in addition to oil, grease, or other inflammable compounds, a minimum capacity of 50 cubic feet, with a minimum effective depth of 3 feet, shall be provided and a vent and manhole with tightly fitting cover shall be installed.

1009.3 All interceptors shall be cleaned periodically.

1009.4 Subsections 1009.1 through 1009.5 of this section shall apply except for manufactured or prefabricated concrete interceptors that comply with approved applicable standards. See "Exhibit A. Commercial Mud Trap" 39.

1009.5 For details, see diagram marked "Exhibit B. Mud Trap Or Inflammable Waste Interceptors" 1.

Subsection 1017.3 is hereby repealed in its entirety and a new subsection 1017.3 is hereby enacted as follows:

1017.3 Residential Garage Interceptor. If a drain is installed in a residential garage, an interceptor shall be required. See "Exhibit D. Residential Garage Interceptor".

(Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022; Ord. 5748, 2-5-2024)

1017.4 Fuel Gas Piping. A fullway valve controlling outlets shall be installed on the discharge side of each gas meter and each unmetered gas supply. Gas piping supplying more than one building on one premise shall be equipped with a separate fullway valve to each building, so arranged that the gas supply can be turned on or off to an individual or separate building. Such shutoff valves shall be accessible and on the exterior of the structure. This shall apply to all new construction, re-pipe and gas shut off releases.

9-4A-3: EXHIBITS:

Exhibit "A"

The following drawing is an approved type of manufactured or prefabricated concrete interceptor.

Mud trap sidewalls and floor are reinforced with #3 rebar; sidewalls and the compartment divider are 2 1/2" thick; the floor of the mud trap is 3".

The lid is reinforced with over 20' of #4 rebar, and is 5" thick.

Capacity of the mud trap is a nominal 625 gallons; if capacity is calculated at a conservative 500 gallons, the volume of the inlet compartment is still .9 cubic yards, and the outflow compartment has a volume of 1.8 cubic yards.

MUD TRAP OR INFLAMMABLE WASTE INTERCEPTOR

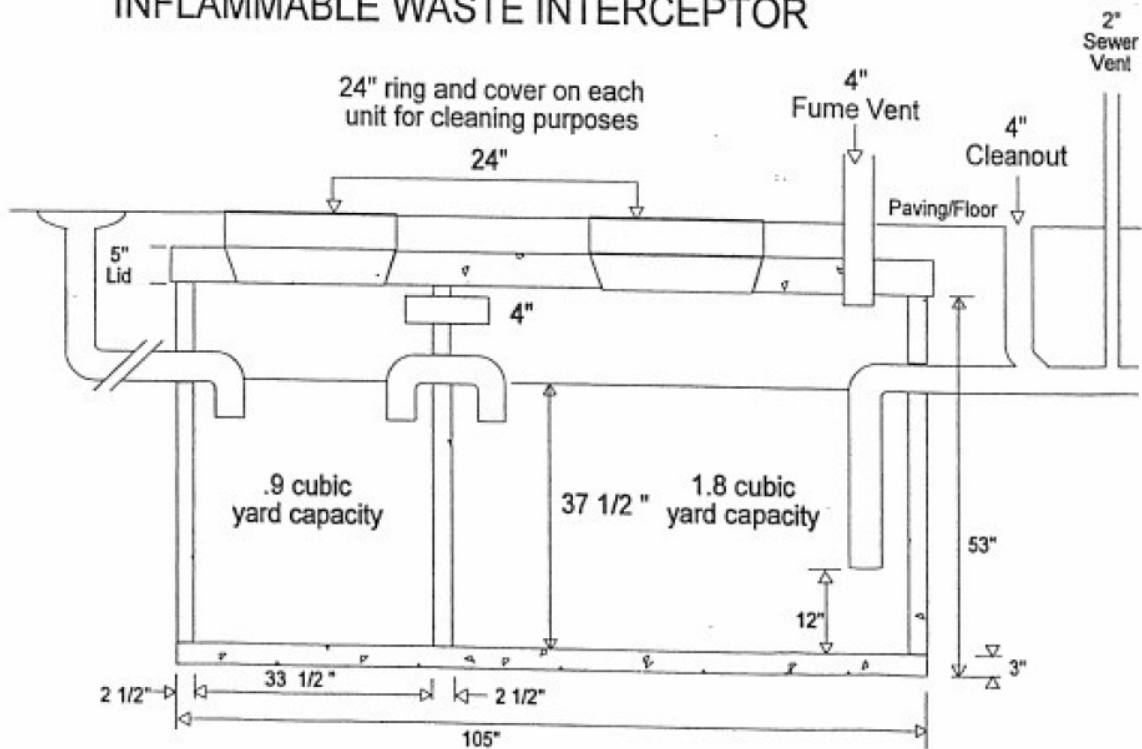
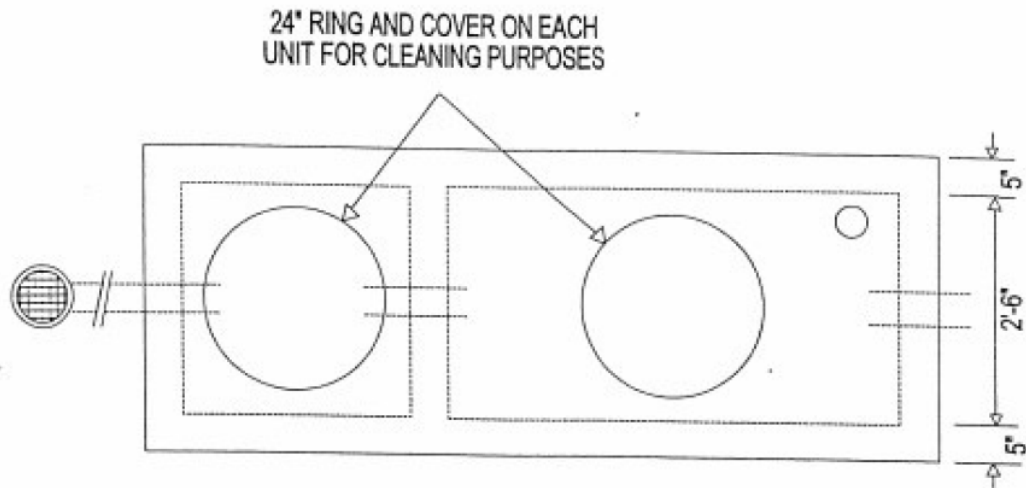
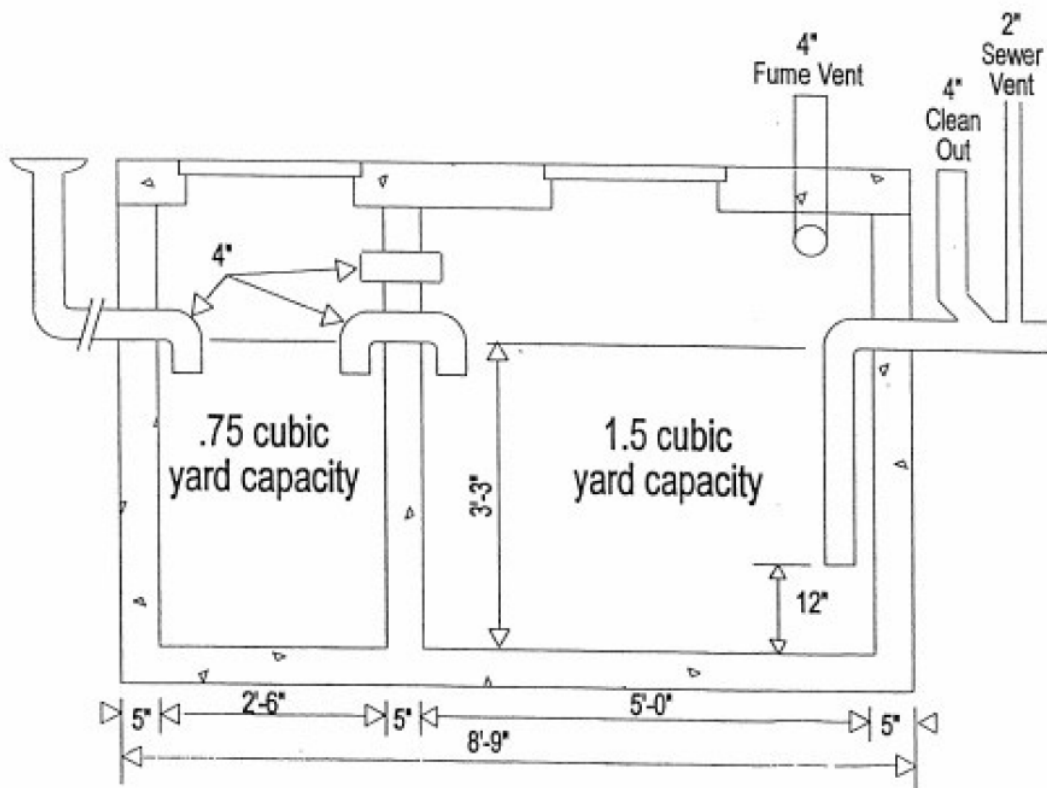


Exhibit 'B'



MUD TRAP OR INFLAMMABLE WASTE INTERCEPTOR



Note: Dimensions shown are suggested only. Alternate dimensions for compartments may be used to maintain the same proportion.

Exhibit "C"

RECOMMENDED COMMERCIAL KITCHEN GREASE INTERCEPTOR

The Waterloo Plumbing Code requires that these interceptors be not less than two compartments with fittings designed for grease retention. The inlet, outlet, and compartment fitting should be of the elbow type design with the vertical leg extending to within 12 inches of the interceptor floor. The fittings shall not be less than 4 inches or the size of the building sewer, whichever is greater. A clean out is required on the outlet line, outside the tank.

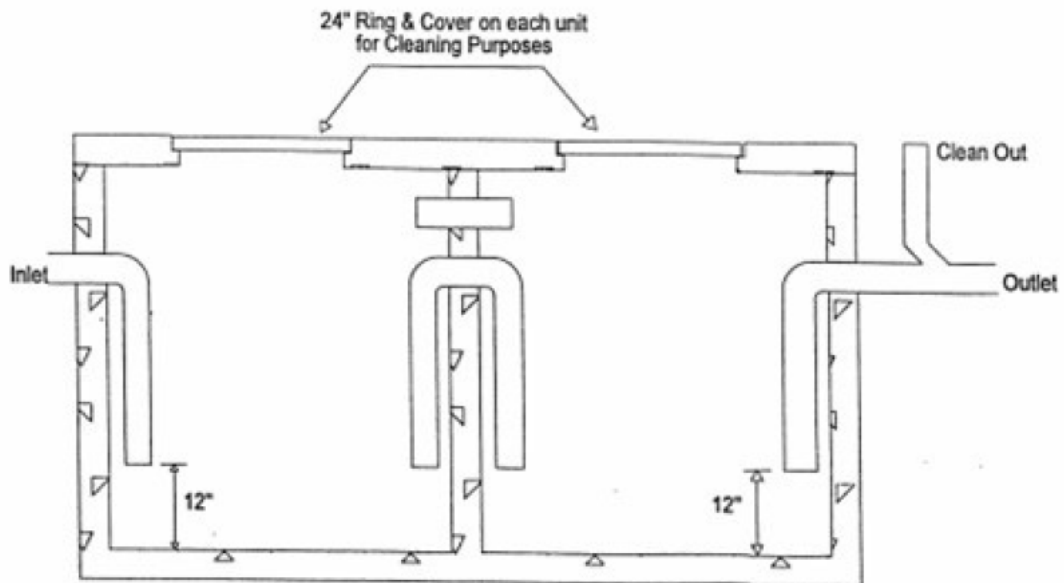
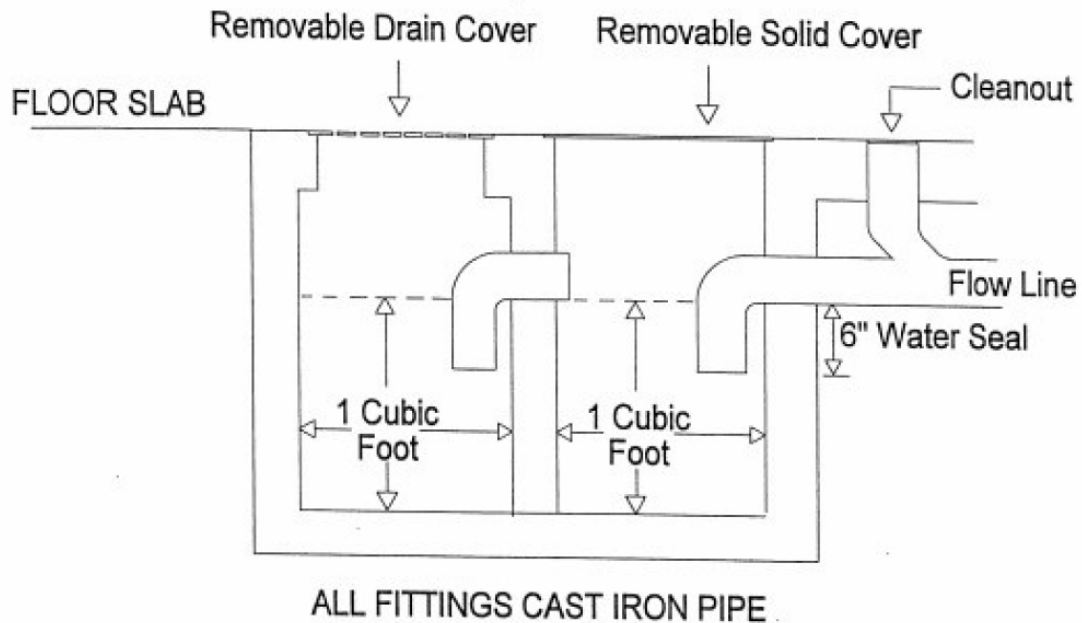


EXHIBIT "D"

The drawing below is the recommended method of installing a drain in a residential garage. No dimensions are shown, just the required 1 cubic foot per each compartment. Also the outlet of such a drain must be vented.



(Ord. 5673, 11-21-2022)

ARTICLE B. PLUMBING BOARD FOR LICENSING AND APPEALS

SECTION:

9-4B-1: Board Established; Composition

9-4B-2: Appointment; Terms

9-4B-3: Quorum

9-4B-4: Duties

9-4B-1: BOARD ESTABLISHED; COMPOSITION:

A. Establishment Of Board: There is hereby established a plumbing board for appeals hereinafter referred to as the board, with authority and responsibility as follows:

1. To act as a board of appeals as provided in the Waterloo plumbing code.
2. To periodically review the provisions of the Waterloo plumbing code and make recommendations to the city council for improving and updating said document.

B. Composition Of Board: The board shall consist of five (5) members, all of whose place of business, residence, or work is located in the city. All members shall be qualified by experience and training to pass judgment upon matters pertaining to the installation of plumbing. The membership shall be as follows: two (2) licensed master plumbers, one licensed journeyman plumber, one registered professional mechanical engineer, and one member at large, with no one company or interest being represented by more than one member of the board. The city plumbing inspector or their designee shall act as secretary to the board. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4B-2: APPOINTMENT; TERMS:

A. Appointment: The mayor with the approval of the city council shall appoint the members of the plumbing board for licensing and appeals.

B. Terms: After the initial appointment of the board, the terms of the members shall be for three (3) years except that the initial terms shall be so arranged and staggered that the terms of no more than two (2) members shall expire on December 31 of any one year. A vacancy within any term shall be filled by appointment of the mayor with the approval of the city council for the unexpired portion of that term only. Each member can serve a total of two (2) three (3) year terms.

C. Compensation: The members of the board shall serve without compensation.

D. Organization: The board shall designate a member as chair and shall adopt reasonable rules for conducting its investigations and proceedings, and shall render all decisions and findings in writing to the building official with a duplicate copy to the appellant and may recommend to the city council new legislation as is consistent therewith. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4B-3: QUORUM:

Three (3) members of the board shall constitute a quorum for the transaction of business, provided that a decision on a matter relating to a specific license shall not be valid unless decided in the presence of a board member who holds a similar valid license. Any vote

taken for the purpose of suspending or revoking a contractor's license shall require a majority vote of all members of the board. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4B-4: DUTIES:

The plumbing board for appeals shall receive applications for appeals based on a claim that the true intent of this code has been incorrectly interpreted, the provisions of the code do not fully apply, or an equally good or better form of compliance with the code is proposed. The board shall have no authority to waive requirements of this code. The plumbing board for licensing and appeals shall also act as the Black Hawk County Plumbing Board for appeals, as permitted by Black Hawk County Ordinance 46, the Black Hawk County Plumbing Code. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

ARTICLE C. PLUMBING CONTRACTORS

SECTION:

9-4C-1: Classification Of Plumbers

9-4C-2: Pipe Layer Business (Contractor's) License

9-4C-3: Pipe Layer's Certificate Of Insurance

9-4C-4: Conditions Of License

9-4C-5: Persons Authorized And Reporting

9-4C-6: Revocation Of Licenses

9-4C-1: CLASSIFICATION OF PLUMBERS:

A. Pipe Layer:

1. Definition: "Pipe layer" shall mean a person who installs, lays, repairs, removes or caps off sanitary sewer pipe between the public sanitary sewer main in the street or easement and a point two feet (2') outside the foundation wall of a building or structure.

2. Qualifications: A pipe layer shall be qualified in the principles of the hydraulics of liquids in sewer pipes and related matters and shall be familiar with the pertinent provisions of the Waterloo plumbing code and the rules and regulations of the local and state boards of health as such provisions, rules and regulations pertain to sewers and sewer service pipes.

3. Licensing: Any person desiring to be licensed as a pipe layer shall make application to the building department on forms furnished by said department accompanied by a fee.

Upon receipt of the application and fee, the building department shall schedule the administration of a test prescribed by the plumbing board. If the applicant obtains a passing score he shall be issued a pipe layer's license upon the payment of an additional fee of fifty dollars (\$50.00) the first year. The renewal fee will be twenty five dollars (\$25.00) per year.

4. Authorized Work: A pipe layer's license shall not be construed as license or permit to do plumbing work as a state licensed plumber in the city as defined in this chapter. Except for the installation, laying, removing, repairing or capping off of sewer between public main and a point two feet (2') outside building, every pipe layer shall be hereby prohibited from doing any plumbing work within the city unless he is licensed as a plumber by the state in conformance with the provisions of the Waterloo plumbing code, as amended.

5. Pipe Laying: No person shall engage in the construction, reconstruction, laying, alteration, repair, removal or capping off of a sanitary sewer between public main and a point two feet (2') outside building in the city without first having obtained a state plumber's license or a Waterloo pipe layer's license, along with an approved certificate of insurance on file with the city and having obtained a plumbing permit for sewer installation from the building department as required by this chapter. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4C-2: PIPE LAYER BUSINESS (CONTRACTOR'S) LICENSE:

Applicants who have met the requirements of the board and upon payment of a fee of two hundred dollars (\$200.00) for the first year and having in place a certificate of insurance as herein provided for, issue to such applicant a pipe layer business (contractor's) license in the name of the city of Waterloo, by the plumbing inspector. Renewal license fee will be one hundred dollars (\$100.00) per year.

It shall be unlawful for any person to install, erect, alter, repair, service, reset, replace thereto, as defined in the plumbing code, unless said person or some member of such firm or corporation shall first have obtained a state plumbing contractor license or pipe layer business (contractor's) license or unless such person, firm or corporation has regularly and steadily in his employ a holder of such a license, who shall be the authorized representative of the person, firm or corporation in all matters pertaining to this chapter. The authorized representative who is the holder of a state plumbing contractor license or pipe layer business (contractor's) license may not apply for permits for more than one person, firm, or corporation and the permit shall apply only to the type of work pertaining to the specific license possessed by the license holder. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4C-3: PIPE LAYER'S CERTIFICATE OF INSURANCE:

A pipe layer's application shall be filed with the building official (or a specified intergovernmental agency if so designated by the building official) accompanied by a certificate of insurance written by a company authorized to transact business in the state, in limits of not less than three hundred thousand dollars (\$300,000.00) combined single limit to any person and one hundred thousand dollars (\$100,000.00) property damage; said certificate to be written on a standard form and carrying an endorsement naming the city and its employees (or the intergovernmental agency designated by the building official) as additional insureds as its interest may appear and conditioned upon the faithful performance of all duties required of such contractor by any ordinances, rules and regulations of the city. It shall be a further condition of said certificate of insurance that the obligator will hold the city (through the specified intergovernmental agency if so designated) harmless from any and all damages sustained by reason of neglect or incompetency on the part of such contractor, his agents or employees in the performance of the work done under a license or permit issued upon the filing of said certificate.

Said certificate of insurance shall be issued by December 31 of each year, and shall be filed on or before said date for each subsequent year and shall be in continuous full force and effect. That it is the intent and purpose of said certificate of insurance to also bind the individual, company, firm, association or partnership, whether it be a trade name, corporation, or other business association or arrangement with which the principal is associated.

Homeowners working on their principal residence shall be exempt from filing said certificate. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4C-4: CONDITIONS OF LICENSE:

Any license not renewed prior to December 31 shall expire thirty (30) calendar days thereafter, and shall be renewed upon payment of a double fee. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4C-5: PERSONS AUTHORIZED AND REPORTING:

A. Must Be Licensed: No person other than those holding a state plumbing contractor license or pipe layer's license issued by the city of Waterloo, shall not tap any water or sewer mains, nor install any private building sewer, water service, private sewage disposal plant or private water system; nor shall they make any connections, extension, replacement, removals or additions of any nature to the sanitary plumbing or water supply system or disconnect any fixture or change the sanitary or water pipe arrangement.

B. Exceptions: Those persons who perform the function of water softener installers only, and who do not perform any other plumbing work, may install water softeners only; provided, that said person obtains the proper permits, prior to any work performed, has in place insurance as by this chapter provided, requests and has inspected by the plumbing inspector any installations, and pays any and all inspection fees. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

9-4C-6: REVOCATION OF LICENSES:

A pipe layer's license or a state plumbing contractor license may be revoked for cause by the board, after a hearing by said board, upon a written notice served upon the person in whose name said license is issued, not less than ten (10) days prior to the date of hearing, stating the time and place thereof and the grounds for such hearing. (Ord. 5392, 3-20-2017; amd. Ord. 5673, 11-21-2022)

CHAPTER 3 ELECTRICAL REGULATIONS

SECTION:

9-3-1: Title

9-3-2: Purpose And Scope

9-3-3: Definitions

9-3-4: Rules Of Construction

9-3-5: National Electrical Code Adoption

9-3-6: National Electrical Code Amendments

9-3-7: 2017 NEC Annex H Amendments

9-3-8: Penalty; Abatement Of Violations

9-3-9: Applicability Of Chapter To Existing Buildings

9-3-10: Moved Buildings

9-3-11: Disclaimer

9-3-12: Liability Of Electrical Inspector

9-3-13: Reserved

9-3-14: Unlawful Connections

9-3-15: Inspection Of Wiring Required Prior To Installation Of Meter

9-3-16: Alteration Of Identification Or Rating Markings

9-3-17: Conflict Of Interest

9-3-1: TITLE:

This chapter shall be known as the *WATERLOO ELECTRICAL CODE*, may be so cited and may be referred to hereinafter as the "code". (Ord. 5392, 3-20-2017)

9-3-2: PURPOSE AND SCOPE:

It is the purpose of this chapter to adopt an Electrical Code by reference, including provisions for the inspection and regulation of electrical installation, issuance of permits,

the collection of fees, and to provide penalties for violations of this chapter in order to protect the public health, safety, and welfare.

The provisions of this chapter shall apply to and govern all uses, installations, alterations, repairs, removals, renewals, replacements, connections, disconnections, and maintenance of all electrical equipment within the City of Waterloo, Iowa. (Ord. 5392, 3-20-2017)

9-3-3: DEFINITIONS:

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

APPEAL BOARD: The Board created in section [9-3-7](#) of this chapter.

APPROVED BY THE ELECTRICAL INSPECTOR: Found by the inspector to comply with the requirements of this chapter and, in the absence of such requirements, found by the inspector to be safe in respect to life and property as measured by the standards established in this chapter and the National Electrical Code and National Fire Protection Association standards.

ELECTRICAL CONTRACTING: Undertaking, or offering to undertake, the planning and installation of electrical systems and equipment and the employment, management, supervision and control of electricians and apprentice electricians doing electrical work.

ELECTRICAL CONTRACTOR: Any person responsible for the activity of planning, or supervising electricians and apprentices doing electrical wiring, work, or equipment installations and connections to apparatus, which is or will be connected to an electric light and power source.

ELECTRICAL EQUIPMENT: All electrical materials, wiring, conductors, fittings, conduits, devices, appliances, fixtures, signs and apparatus or parts thereof comprising an electrical system or control of such system.

ELECTRICAL MAINTENANCE WORK: The repair of the existing electrical equipment, or limited replacement and extensions of branch circuits as determined by the chief electrical inspector.

ELECTRICAL WORK: All installations, alterations, repairs, removals, replacements, disturbances, connections, disconnections and maintenance of wiring and electrical equipment, or control of any of the above, over twenty five (25) volts, and wiring systems through, or by which is conveyed, or intended to be conveyed, electrical current in, above,

or under any building, structure, tent, or premises, public, or privately owned, in the City of Waterloo, Iowa.

ELECTRICIAN: Any person doing electrical work for an electrical contractor.

EXAMINING BOARD: The board created in section [9-3-7](#) of this chapter.

LICENSED OR QUALIFIED PERSON: Any person who has been examined and licensed by the Examining Board and has its approval to install, remove, alter or make additions to any electrical work in the City.

SHALL: That the act to be performed is mandatory. (Ord. 5392, 3-20-2017)

9-3-4: RULES OF CONSTRUCTION:

In this chapter certain terms shall be construed as follows:

A. Electrical terms are definitions relating to electrical equipment, wiring methods and special wiring locations and conditions shall be those accepted by the trade and listed in the National Electrical Code or other recognized safe wiring manuals or tests.

B. Building classification and occupancy shall be determined from the City Building Code and the City zoning ordinance. (Ord. 5392, 3-20-2017)

9-3-5: NATIONAL ELECTRICAL CODE ADOPTION:

A. The ~~2020~~ **2023** edition of the National Electrical Code, including article 90, chapters 1 through 9, and annex A, B, C, D and H, inclusive, as published by the National Electrical Code Committee, and adopted by the National Fire Protection Association, is hereby adopted by reference and is effective as if fully set forth in this article. Where, in any specific case, different sections of this article specify different materials, methods of construction or requirements, the most restrictive shall govern. (Ord. 5428, 12-11-2017; amd. Ord. 5596, 4-19-2021, eff. ~~4-1-2021~~ **7-1-2025**)

9-3-6: NATIONAL ELECTRICAL CODE AMENDMENTS:

A. Amendments To ~~2020~~ **2023** NEC Chapter 2 Amendments:

~~550.3(1)~~ Delete ~~section~~ article 210.8(A), “**Dwelling Units**”, and insert in lieu thereof the following new section:

210.8(A) Dwelling Units.

All 125-volt, ~~15- and 20-ampere~~ receptacles installed in ~~the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground~~ shall have ground-fault circuit-interrupter protection for personnel:

(1) Bathrooms

(2) Garages and also accessory buildings that have a floor located at or below grade level not intended ~~to be as~~ habitable rooms and limited to storage areas, work areas ~~or similar use and areas of similar use~~

(3) Outdoors

~~Exception to (3): Receptacles that are not readily accessible and are supplied branch-circuit dedicated to electrical snow-melting, de-icing or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.~~

(4) Crawl spaces - at or below grade level

(5) Basements

~~Exception to (5): A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have ground-fault-circuit-interrupter protection.~~

~~Informational Note: See 760.41B and 760.121(B) for power supply requirements for fire alarm systems.~~

~~Receptacles installed under the exception to 201.8 (A)(5) shall not be considered as meeting the requirements of 210.52(G).~~

(6) Kitchens ~~—where the receptacles are installed to serve the countertop surfaces.~~

(7) Areas with sinks and permanent provisions for food preparation, beverage preparation or cooking

(8) Sinks - where receptacles are installed ~~to serve the countertop surfaces.~~ within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

(9) Boathouses

(10) Bathtubs or shower stalls - where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

(11) Laundry areas

~~Exception to (1) through (3), (5) through (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be~~

~~ground-fault circuit interrupter protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.~~

(12) Indoor damp and wet locations

Delete ~~section 210.8(F)~~, article 210.8(D), "Specific Appliances", and insert in lieu thereof the following new section:

210.8(D) Specific Appliances.

GFCI protection shall be provided for the branch circuit or outlet supplying the following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase:

- (1) Automotive vacuum machines
- (2) Drinking water coolers and bottle fill stations
- (3) High-pressure spray washing machines
- (4) Tire inflation machines
- (5) Vending machines
- (6) Sump pumps
- (7) Dishwashers
- (8) Microwave ovens

Delete article 210.8(F), "Outdoor Outlets"

(Ord. 5428, 12-11-2017; amd. Ord. 5596, 4-19-2021, eff. ~~4-1-2021~~ 7-1-2025)

9-3-7: 2017 NEC ANNEX H AMENDMENTS:

80.9(C) Additions, Alterations, Or Repairs, is amended by adding the following:

It is prohibited by this ordinance to perform any repair, add to, or revamp any residential service less than 60 ampere electrical service.

80.13 Authority, subparagraph (13), is amended by inserting a period after the words "ready for inspection", and deleting the words, "and shall conduct the inspection within ___ days."

80.15 Electrical Board, is deleted in its entirety and the following is substituted therefor:

ARTICLE 2. BOARD OF ELECTRICAL EXAMINERS AND APPEALS

Membership; Appointment Of Members; Term Of Office

(a) Establishment Of The Board. There is hereby established a board of electrical examiners and appeals, hereinafter referred to as the "board," with authority and responsibility as follows:

(1) To act as a board of appeals as provided in the Waterloo electrical code.

(2) To periodically review the provisions of the Waterloo electrical code and make recommendations to the building official for improving and updating said documents.

(b) **Composition Of The Board.** The board shall consist of five (5) members, all of whose place of business, residence, or work is located in the city of Waterloo. All members shall be qualified by experience and training to pass judgement upon matters pertaining to electrical construction. The membership shall be as follows: Two licensed electrical contractors, one licensed, working electrician, a representative from a public utility company furnishing electrical power to the city, one electrical engineer capable of designing systems governed by this code. The electrical inspector shall serve as secretary to the board. Said board shall serve without compensation.

(c) **Appointment Of Members And Terms Of Office.** The members of the board of electrical examiners and appeals shall be appointed by the mayor with the approval of the city council. After initial appointment of the board the terms of the members shall be for three years except that the initial terms shall be so arranged and staggered so that the terms of no more than two members shall expire any one year. A vacancy within any term shall be filled by appointment of the mayor with the approval of the city council for the unexpired portion of that term only.

Powers And Duties Of The Board

The board of electrical examiners and appeals shall have the following powers and duties:

(a) To act upon reports of violations by licensed master electricians and journeyman electricians as filed by the electrical inspector with the board.

(b) To keep a complete record of the official proceedings of the board; to preserve all documents, books and papers relating to appeals and hearing of complaints and charges for at least three years.

(c) To hear appeals from the decision of the electrical inspector and to rule on interpretations of the provisions of the Waterloo electrical code, and to determine the suitability of alternate materials and methods of construction consistent with the provisions of the Waterloo electrical code.

Meetings; Records

(a) All meetings of the board of electrical examiners and appeals shall be held in the council chambers, or other location indicated in a public notice posted 24 hours prior to any meeting.

(b) Three members of the board shall constitute a quorum for the transacting of all business, but any action taken by the board shall require a majority vote of all members of the board.

(c) The board shall annually elect one of its members as chairperson of the board.

(d) The secretary of the board shall keep a record of the board meetings and register the names and residences of all persons examined by the board and the kind of electrical license issued to each, if any.

Right Of Appeals

Any person shall have the right to appeal any decision of the electrical inspector to the electrical board of examiners and appeals by filing a written notice of such appeal with the electrical inspector within ten (10) days from the date of the inspector's decision. The board shall forthwith fix a time and place of hearing such appeal which shall not be less than five (5) days nor more than fifteen (15) days after the date of filing of the notice of such appeal, and the electrical inspector shall notify the appellant in writing by registered mail of the time and place of such hearing. After the hearing of said appeal, the board may sustain or overrule the decision of the electrical inspector. Decision of the board shall be final unless appealed to the courts as by law provides.

80.19(a) is amended by adding the following line item #3:

Permit For Installation By Homeowner

3. A permit application may be submitted by the homeowner and, upon approval and payment of required fees, an electrical permit shall be issued. Such permit authorizes the **owner only** to install electrical equipment in the dwelling owned and occupied by the owner, without license or certificate of insurance, and without help from persons other than family members.

If at any time during the permit or inspection process, the chief electrical inspector determines the homeowner is unqualified to perform the electrical work, the homeowner will be required to hire a licensed electrical contractor to perform the electrical work.

80.19(c1) is amended by adding the following sentence at the end of the section:

A permit is not required for these repairs if the cost of the repairs does not exceed \$300.00.

80.19(e) is amended by adding the following:

Fees

(a) Payment of fees for electrical permits shall be made on or before the tenth day of the month following the date of application for the permit or the date of the statement from the electrical inspector. All fees shall be payable to the city of Waterloo. All accounts over 60 days due will be put on a "hold" status until brought current.

(b) Inspection fees shall be paid in such amounts as established by resolution by the city council.

Inspections

80.19(f) Inspections And Approvals, subparagraph (3), is amended by deleting the words "or until ___ days have elapsed from the time of such notification".

80.23(b) Penalties, subparagraph (3), is deleted in its entirety.

80.25(c) Notification is deleted in its entirety.

80.27 Inspector's Qualifications is amended by deleting said section in its entirety and substituting the following therefor:

80.27 Inspector's Qualifications.

ARTICLE 3. ELECTRICAL INSPECTOR

Appointment; Qualifications

(a) The electrical inspector is hereby authorized, directed and empowered to inspect any and all buildings, structures, tents and premises, public and private, and, as provided in this ordinance, to condemn and order removed or remodeled and put into proper and safe condition for the prevention of fire and for safety to life and property, all electrical equipment installations and connections of electrical current for light, heat and power purposes, and to control the disposition and arrangement of such equipment so that persons and property shall not be in danger therefrom.

(b) The electrical inspector shall have successfully passed any and all examinations administered by the civil service commission, have been recommended to said position by the building official, appointed by the mayor, and confirmed by the majority of all members of the city council.

(c) The appointee shall:

(1) Be a qualified electrician and shall have at least five years of practical experience in the electrical trade or five years of experience as an electrical inspector, or, in lieu of such experience, shall be a graduate in electrical or mechanical engineering of a college or

university considered by the personnel director as having suitable requirements for graduation, and shall have had two years of practical electrical experience; and

(2) Be possessed of such executive ability as requisite for the performance of required duties and have thorough knowledge of the standard material and methods used in the installation of electrical equipment; and

(3) Be well versed in improved methods of construction for safety to persons and property, the statutes of the state relating to electrical work and any orders, rules and regulations issued by authority thereof, and in the national electrical code.

(d) The electrical inspector shall hold a current master or journeyman electrical license with the state of Iowa or shall be required to pass an examination prior to his/her appointment.

(e) He/she shall hold membership in the International Association Of Electrical Inspectors.

80.28 Licensing, is added as follows:

(a) License Required

1. Electrical licenses shall be governed by Iowa Code chapter 103, Electricians And Electrical Contractors (2008).

(b) State Of Iowa Class B License. All state of Iowa class B journeyman's license will be accepted by the city of Waterloo. A state of Iowa class B master electrician's license will be accepted if the electrician has held a Waterloo license after January 1, 1990.

(c) If you have a state of Iowa electrical contractor's license and wish to pull a permit in the city of Waterloo, a one-time registration fee of \$150.00 will be charged if you have never held a city of Waterloo license.

(d) Licenses are not transferable, nor shall they be loaned or rented.

(Ord. 5392, 3-20-2017)

9-3-8: PENALTY; ABATEMENT OF VIOLATIONS:

A. Any person violating any provision of this chapter shall be deemed guilty of a municipal infraction and, upon conviction thereof, shall be punished accordingly.

B. If any electrical work, including construction or repair, is performed within the city contrary to the provisions of this chapter, it shall be deemed a municipal infraction and, in addition to penalties described, shall be abated in accordance with this chapter.

C. The doing of any act prohibited or declared to be unlawful, an offense or a municipal infraction by this chapter or the national electrical code, or the omission or failure to perform any act or duty required by this chapter or the national electrical code, is, unless another penalty is specified, punishable as provided in section [1-3-2](#) of this code. (Ord. 5392, 3-20-2017)

9-3-9: APPLICABILITY OF CHAPTER TO EXISTING BUILDINGS:

A. If any existing building is damaged due to fire, natural disaster or otherwise, the areas that are damaged shall be brought up to current city and national codes. If other areas of the building are altered or repaired due to damages that occurred, these areas must also be brought up to the current codes.

B. If the type of occupancy of an existing building is partially or entirely changed, the electrical wiring shall be made to conform to the requirements of the current city and national codes for the new type of occupancy. (Ord. 5392, 3-20-2017)

9-3-10: MOVED BUILDINGS:

A. Residential moved buildings shall be brought into compliance with the electrical requirements of new residential type buildings.

Exception: Parts of an electrical system which were not damaged and had been installed in compliance with the electrical code which was in effect at the time of installation may be retained in said electrical systems.

B. Electrical systems in any other moved buildings shall be brought into compliance with the provisions of this code the same as for new construction.

C. The permanent service connection shall not be made by the power company until the electrical system is completely installed, and is approved by the inspector.

D. The existing service on the moved building shall not be connected to the electrical power source unless specifically approved by an inspector. (Ord. 5392, 3-20-2017)

9-3-11: DISCLAIMER:

This chapter shall not be construed to affect the responsibility or liability of any party owning, operating, controlling or installing any electrical equipment for damages to persons or property caused by any defect therein, nor shall the city be held as assuming such liability by reason of the inspection or reinspection authorized in this chapter or the certificates of approval issued as provided in this chapter, or by reason of the approval or disapproval of any equipment authorized in this chapter. (Ord. 5392, 3-20-2017)

9-3-12: LIABILITY OF ELECTRICAL INSPECTOR:

The electrical inspector, acting in good faith and without malice in the discharge of his/her duties, shall not thereby render himself/herself liable personally and he/she hereby is relieved from all personal liability for any damage that may accrue to person or property as a result of any act required or by reason of any act of omission in the discharge of his/her duties. Any suit brought against the city because of such act or omission performed by him/her in the enforcement of any provisions of this chapter shall be defended by the city. (Ord. 5392, 3-20-2017)

9-3-13: RESERVED:

(Ord. 5392, 3-20-2017)

9-3-14: UNLAWFUL CONNECTIONS:

It shall be unlawful for any person to make connection from a supply of electricity to any electric equipment that has been installed or which has been disconnected or ordered to be disconnected by the electrical inspector, until inspected and approved by the electrical inspector. (Ord. 5392, 3-20-2017)

9-3-15: INSPECTION OF WIRING REQUIRED PRIOR TO INSTALLATION OF METER:

It shall be unlawful for any person to set a meter for electric purposes to any building or premises, wiring of which has not been inspected and approved by the electrical inspector. A violation of this section will cause the electrical inspector to give written notice and immediately cause the removal of such conditions and the discontinuance of such current. (Ord. 5392, 3-20-2017)

9-3-16: ALTERATION OF IDENTIFICATION OR RATING MARKINGS:

It shall be unlawful to cover, remove, alter, change, or deface the maker's name or identification mark or any of the rating markings on electrical equipment. (Ord. 5392, 3-20-2017)

9-3-17: CONFLICT OF INTEREST:

It shall be unlawful for the electrical inspector or assistant electrical inspectors to engage in the business of the sales, installation or maintenance of electrical equipment either directly or indirectly, and they shall have no financial interest in any concern engaged in such business in the city of Waterloo, at any time, while holding said offices. (Ord. 5392, 3-20-2017)

CHAPTER 5 MECHANICAL SYSTEMS

SECTION:

9-5-1: Title

9-5-2: Application And Scope

9-5-3: Mechanical Inspector

9-5-4: Defective Work; Unsanitary Conditions

9-5-5: Maintenance; Change Of Occupancy

9-5-6: Application For Permit

9-5-7: Installation By Owner

9-5-8: Notification For Inspection

9-5-9: Applicability

9-5-1: TITLE:

This chapter shall be known as the *WATERLOO MECHANICAL CODE* and may be so cited and may be referred to hereinafter as "the code" or "this code". (Ord. 5664, 9-19-2022)

9-5-2: APPLICATION AND SCOPE:

The provisions of this chapter shall include and apply to all mechanical and fuel gas systems, appliances and equipment regulated by the adopted mechanical and fuel gas codes hereinafter installed, constructed, altered, serviced or repaired in, for, or about any new, remodeled or relocated building or structure in the city. (Ord. 5664, 9-19-2022)

9-5-3: MECHANICAL INSPECTOR:

A. Appointment: The applicant for mechanical inspector shall fulfill all applicable civil service requirements for the position of mechanical inspector. The building official will appoint the new mechanical inspector. The appointment shall go to the mayor and city council for approval. The mechanical inspector shall work under the direction of the building official.

B. Qualifications: The appointee shall have had at least four (4) years of practical experience in the design, planning, supervision and contracting for installation of heating, air conditioning and ventilation systems. Two (2) years of experience may be substituted for four (4) years of schooling if the study is in engineering or a related field. Schooling shall

be from a recognized school of continuing education; possession of a valid driver's license; shall possess the ability and aptitude for the performance of required duties and shall have thorough knowledge of the standard materials and methods used in the installation and maintenance of heating, air conditioning and ventilation equipment; shall be versed in methods of construction for safety to persons and property, the statutes of the state relating to air quality and air pollution control and any orders, rules and regulations issued by authority thereof, and in the uniform mechanical code.

C. Restrictions: It shall be unlawful for the mechanical inspector to engage in the business of the sales, installation, or maintenance of heating, air conditioning and ventilation equipment, either directly or indirectly, and the inspector shall have no financial interest in any concern engaged in such business in the city at any time while holding the position as mechanical inspector for the city.

D. Powers And Duties:

1. The mechanical inspector is empowered to inspect any and all buildings or structures, public or private, and to, as herein provided, order removed or remodeled and put into proper and safe condition all heating, air conditioning, and ventilation equipment and related systems for the protection of the public health, safety and welfare.

2. The mechanical inspector shall have authority to enforce this chapter and may bring before the mechanical board proposals for modifications or alternate materials, methods, and equipment to determine compliance with the intent of this chapter; provided, that the individual or entity affected provides satisfactory documentation to the board.

3. The building official shall be the executive official and administrative authority for the administration of the mechanical code of the city.

E. Right Of Entry: Whenever necessary to make an inspection to enforce any of the provisions of this chapter, or whenever the mechanical inspector has reasonable cause to believe that there exists, in any building or upon any premises, any HVAC condition which makes such building or premises unsafe, the mechanical inspector may enter such building or premises at all reasonable times to inspect the same or to perform any duty imposed upon by this chapter; provided, that if such building or premises be occupied, they shall first present proper credentials and request entry; and if such building or premises is unoccupied, they shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry. If such entry is refused, the mechanical inspector or authorized representative shall have recourse to every remedy by law to secure entry. (Ord. 5664, 9-19-2022)

9-5-4: DEFECTIVE WORK; UNSANITARY CONDITIONS:

Whenever it shall come to the knowledge of the mechanical inspector that the mechanical or fuel gas system, appliance or equipment governed by this code in a building or structure is defective or otherwise becomes a hazard to health or life, it shall be the duty of said inspector to make an inspection of such system, appliance or equipment and render a report to the proper party, setting forth the necessary repairs or alterations required to make such heating, air conditioning or ventilation system conform to this chapter. The inspector shall set a limit of time within which such repairs or alterations are to be made, and upon the refusal or neglect of the owner, agent, lessee, or tenant to comply with said notice within the time stated, the mechanical inspector shall cause such repairs or alterations to be made or such nuisance abated and the expense of such work shall be taxed against such property and become a prior lien thereon and as a personal judgment against the property owner; or the inspector may order the premises vacated and closed to further occupancy until such time as the required repairs or alterations have been made, all at the mechanical inspector's sole discretion based upon health or life safety concerns. (Ord. 5664, 9-19-2022)

9-5-5: MAINTENANCE; CHANGE OF OCCUPANCY:

When a single-family structure is changed to multi-family occupancy, the following shall specifically apply in addition to any requirements identified in the mechanical code:

- A. Each unit shall be provided a heating unit that will maintain room temperature in accordance with the housing code of the city.
- B. Transfer of conditioned air between units is prohibited. (Ord. 5664, 9-19-2022)

9-5-6: APPLICATION FOR PERMIT:

A. Permit To Do Work Required: It shall be unlawful for any person to construct or install any fuel burning, space heating, air conditioning or incinerator equipment or appurtenances subject to and covered by the provisions of this chapter in or for any building or to alter, repair or convert any such existing fuel burning, space heating, air conditioning or incinerator equipment or appurtenances as are subject to the provisions of this chapter without first making written application for a permit therefor setting forth the nature and extent of the work to be performed. (Ord. 5664, 9-19-2022)

9-5-7: INSTALLATION BY OWNER:

In cases where the owner/occupant desires to do heating, air conditioning and ventilation work in the owner's own residence, the owner shall appear before the mechanical inspector and show competency in the installations of heating, air conditioning and ventilation systems. Upon such showing of competency and approval and payment of

required fees, a mechanical permit shall be issued. Said permit authorizes owner to do heating, air conditioning and ventilation work only in the dwelling owned and occupied by said owner without licensing, certificate of insurance or help from other than family members. Said person performs all labor in connection therewith, has the necessary inspections made and complies with code requirements. (Ord. 5664, 9-19-2022)

9-5-8: NOTIFICATION FOR INSPECTION:

A. It shall be the duty of the permit holder to notify the inspector that the work is ready for inspection or test. All inspections require twenty four (24) hours' notice.

B. It shall be the duty of the permit holder to make sure the work will stand the test prescribed before giving notification.

C. If the inspector finds that the work will not stand a required test, or corrections are required, the journeyman HVAC shall be required to notify the inspector when the necessary corrections are complete for re-inspection. If the journeyman HVAC calls for a re-inspection where corrections were required and the corrections were not made, a re-inspection fee will be assessed to the contractor. The re-inspection fee shall be paid before additional inspections are made.

D. If the inspector fails to appear within twenty four (24) hours, during normal working hours, of the time set for each inspection or test, the inspection or test shall be deemed to have been made, but the journeyman HVAC doing the work shall be required to file an affidavit with the mechanical inspector that the work was installed with the ordinance and permit, and that it was free from defects and that the required test had been made and the system was found free from leaks. (Ord. 5664, 9-19-2022)

9-5-9: APPLICABILITY:

If an existing building is damaged by fire or otherwise or altered in a manner to require the replacement of fifty percent (50%) or more of the structure as determined by the authority having jurisdiction, the entire building shall conform to this chapter's requirements for new buildings. (Ord. 5664, 9-19-2022)

ARTICLE A. MECHANICAL CODE

SECTION:

9-5A-1: Mechanical Code Adopted

9-5A-2: Amendments

9-5A-1: MECHANICAL CODE ADOPTED

The International Mechanical Code and ~~International Fuel Gas Code N.F.P.A. 54 fuel gas code~~ are adopted by this reference except as added to, deleted, modified or amended otherwise herein, and there is adopted as the mechanical code of the city, that certain mechanical code known as the International Mechanical Code, ~~2021~~ 2024 edition, ~~International Fuel Gas Code N.F.P.A. 54~~, 2024 edition, as prepared by the International Code Council (ICC). (Ord. 5664, ~~9-19-2022~~)

9-5A-2: AMENDMENTS:

Where this chapter uses the phrase heating, air conditioning, and ventilation; fuel gas and mechanical systems appliances, and equipment shall be understood to be included.

The following sections of the ~~2021~~ 2024 International Mechanical Code (ICC) and ~~2021 2024 International Fuel Gas Code N.F.P.A. 54 fuel gas code~~ are amended as follows:

Section 101.1 Insert: city of Waterloo.

Section 101.2 Delete: Exception.

~~Sections 103.1, 103.2 and 103.3 Delete in their entirety.~~

Section ~~106.2~~ 105.2 of the ~~2021~~ 2024 International mechanical code Add: item #9, electric baseboard heating system.

Section ~~106.5.2~~ 108.2 of the ~~2021~~ 2024 international mechanical code ~~and section 106.6.2 of the 2021 international fuel gas code~~ are hereby amended to read:

Permit fees. All mechanical permits fees shall be established by resolution of the city council and paid prior to issuance of a permit or re-inspection.

Section ~~106.5.3~~ 108.6 of the ~~2015~~ 2024 international mechanical code ~~and section 106.6.3 of the 2021 international fuel gas code~~ are hereby amended as follows:

Fee Refunds: ~~#2~~. Not more than 80 percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.

~~#3 Deleted.~~ Section 113.1 Article B. Mechanical Board for Licensing and Appeals.

Section ~~108.4~~ 114.4 of the ~~2021~~ 2024 international mechanical code are hereby amended as follows: ~~and 2021 international fuel gas code are deleted and replaced with the following:~~

~~108.4 Municipal Infraction.~~

~~108.4.1~~ 114.4.1 Any person, firm or corporation failing to comply with or violating any of the terms or provisions of this ordinance shall be deemed guilty of a municipal infraction and upon conviction thereof, be punished accordingly.

~~108.4.2~~ 114.4.2 If any mechanical work, including construction or repair, is performed within the city contrary to the provisions of this ordinance, it shall be deemed a municipal infraction and in addition to penalties described, shall be corrected in accordance with this ordinance.

~~108.4.3~~ 114.4.3 The omission or failure to perform any act or duty required by this ordinance or the performing of any act which is prohibited or declared to be unlawful by this ordinance, an offense or a municipal infraction pursuant to this ordinance or the international mechanical code and/or ~~international N.F.P.A. 54~~ fuel gas code is punishable by a fine of up to ~~two five~~ hundred dollars (\$~~200~~ 500.00) for the first offense and up to ~~four seven~~ hundred ~~fifty~~ dollars (\$~~400~~ 750.00) for each subsequent offense.

Delete section 108.4 of the 2021 international mechanical code and 2021 international fuel gas code.

~~Delete sections 109.2, 109.3, 109.4, 109.5, 109.6 and 109.7 of the 2021 2024 international mechanical code and 2021 international fuel gas code.~~

Amend section 507.2.~~2~~ of the ~~2021 2024~~ international mechanical code ~~by deleting the following wording "into the HVAC system design or".~~

Add sections 507.2.~~3.1.9~~ and ~~507.2.3.2~~ to the ~~2021 2024~~ international mechanical code.

Section 507.2.~~3.1.9~~ Cooking appliances used in commercial-type occupancies such as places of worship, fellowship halls, lodge halls, employee kitchens, and classrooms may need to be provided with a hood based on the type of appliances and processes in accordance with sections 507.2, and 507.2.1. Light-duty appliances that produce heat or moisture and do not produce grease or smoke may need to be provided with a hood in accordance with sections 505.1, 501.1 exception 1, and 505.2. At the discretion of the building official or designee, in all applications, portable fire extinguishing equipment shall be provided as directed by the fire marshal.

Exception: If a type 1 hood with fire suppression system is not needed or installed, a permanent etched sign with background contrasting letters at least 2 inches in height shall be installed in plain sight on or near the hood stating "NO FRYING, GRILLING, SAUTEING OR GREASE ALLOWED".

1. Complete and submit a use agreement form available at the building department.
2. The equipment is limited to a maximum of two domestic light-duty appliances in any one location.
3. Complete hood coverage of the cook area is provided and hood is ducted in compliance with the mechanical code requirements for type II hoods.
4. Cooking practices are limited to tenants of the building.
5. Frying, sauteing, grilling or other grease producing activities that produces more than minimal amounts of grease or grease vapor are prohibited.
6. Portable fire extinguishing equipment shall be provided as directed by the city.
7. A permanent etched sign shall be installed in plain sight on the hood stating "ONLY MINIMAL FRYING, GRILLING, OR SAUTEING ALLOWED".
8. Where the cooking equipment is to be used as training equipment, it shall not be used by students without direct supervision of an instructor.
9. The approved use is tenant based. If the tenant changes, the occupancy changes, or the type of cooking changes, approval of the alternative hood is voided.
10. City inspectors shall have the authority to immediately void the approval if any of the above conditions are found to be in violation.

(Amend chapter 6 of the international mechanical code, 601.5.

Exception #5 will not apply to existing unaltered structures. All new single family or existing single family converted to multi-family living will not be exempt.)

The following is added to ~~section 402.6 the 2024 N.F.P.A. 54 of the 2015 international national~~ fuel gas code:

1. ~~#7~~ Maximum gas delivery pressure into a dwelling shall not exceed 14" water column ("w.c.").
~~Sections 403.4.3, 403.4.4, 403.5, 403.5.2, 403.5.3 of the 2015 international fuel gas code are hereby deleted and replaced with the following:~~
2. ~~403.4.3~~ Pipe used for the installation, extension, alteration or repair of gas piping shall be standard weight wrought iron or steel (galvanized or black). Corrugated stainless steel tubing (C.S.S.T.) may be permitted for residential use only.

~~The following section is added to the 2021 international fuel gas code:~~

~~2A. 403.5.5~~ Inspection Procedure For C.S.S.T.

- (a) An air pressure test of a minimum ten (10) pounds for a minimum of fifteen (15) minutes must be performed after the piping is installed in rough construction. (Before cover of interior walls and ceiling are finished.)
- (b) Another air test of the same requirement must also be performed after the cover of walls and ceiling are complete. Both of which tests must be witnessed by the mechanical inspector. At no time before this, will gas service be released to the building.
- (c) After final pressure test, piping can be connected to the gas service, a gas shut off will be required before each connection is made into existing pipe, and C.S.S.T. must terminate at ceiling or floor joist and hard piped with a shut off to each appliance.

Section 403.10.4 of the 2021 international fuel gas code is hereby deleted and replaced with the following:

- 3. Gas piping larger than 2" (50.8 mm) in size regardless of gas pressure and any size gas pipe carrying 1 pound p.s.i. or more gas pressure shall be welded black pipe with welding performed by a certified welder and pressure tested to a minimum 50 pounds p.s.i. for no less than one (1) hour.
- 4. In lieu of the NEC, HVAC air handling equipment with a blower motor or electric elements in a duct needs to be provided with disconnect means within reach of the unit.
- 5. Fullway Valve/ Gas Valve. A fullway valve or gas valve controlling outlets shall be installed on the discharge side of each gas meter and each unmetered gas supply. Gas piping supplying more than one building on one premise shall be equipped with a separate fullway valve to each building, so arranged that the gas supply can be turned on or off to an individual or separate building provided. Such shutoff valves shall be accessible, and on the exterior of the structure. This shall be in all new construction, re-pipe, and gas shut off releases.

(Ord. 5664, ~~9-19-2022~~)

ARTICLE B. MECHANICAL BOARD FOR LICENSING AND APPEALS

SECTION:

9-5B-1: Board Established; Composition

9-5B-2: Appointment, Terms

9-5B-3: Quorum

9-5B-4: Powers And Duties

9-5B-1: BOARD ESTABLISHED; COMPOSITION:

A. Board Established: There is hereby established a mechanical board for licensing and appeals, hereinafter referred to as the board, with authority and responsibility as follows:

1. To act as a board of appeals as provided in the heating, air conditioning and ventilation code.

2. To periodically review the provisions of the heating, air conditioning and ventilation code and recommend to the building official for improving and updating said ordinance.

B. Composition Of Board: The board shall consist of five (5) members, all of whose place of business or residence is located in the city. All members shall be qualified by experience and training to pass judgment upon matters pertaining to the installation of heating, air conditioning, and ventilation systems. The membership shall be as follows: three (3) certificate of competency holders, and two (2) members at large, with no one company or interest being represented by more than one member of the board. The city mechanical inspector or building official's designee shall act as secretary to the board. (Ord. 5664, 9-19-2022)

9-5B-2: APPOINTMENT, TERMS:

A. Appointment Of Members: The members of the mechanical board for licensing and appeals shall be appointed by the mayor with the approval of the city council.

B. Terms: After the initial appointment of the board, the terms of the members shall be for three (3) years except that the initial terms shall be so arranged and staggered that the terms of no more than two (2) members shall expire on December 31 of any one year. A vacancy within any term shall be filled by appointment of the mayor with the approval of the city council for the unexpired portion of that term only.

C. Compensation: The members of the board shall serve without compensation.

D. Organization: The board shall designate a member as chair and vice chair and shall adopt reasonable rules for conducting its investigations and proceedings, and shall render all decisions and findings in writing to the building official with a duplicate copy to the appellant and may recommend to the city council new legislation as is consistent therewith. (Ord. 5664, 9-19-2022)

9-5B-3: QUORUM:

Three (3) members of the board shall constitute a quorum for the transaction of business, provided that a decision on a matter relating to a specific license shall not be valid unless decided in the presence of a board member who holds a similar valid license. Any vote taken for the purpose of suspending or revoking a contractor's license shall require a majority vote of all members of the board. (Ord. 5664, 9-19-2022)

9-5B-4: POWERS AND DUTIES:

The mechanical board for licensing and appeals shall have the following powers and duties:

A. To hold regular meetings when determined necessary for the purpose of conducting examinations of applicants for mechanical certificates of competency or heating, air conditioning and ventilation appeals.

B. To act upon reports of violations by licensed contractors as filed by the mechanical inspector with the board.

C. To prescribe rules consistent with the provisions of this chapter for hearings before the board to suspend, revoke, or reinstate licenses.

D. To keep a complete record of the official proceedings of the board; to preserve all documents, books, and papers relating to appeals, examinations for licenses, and hearings of complaints and charges for at least three (3) years.

E. To hear appeals from the decision of the mechanical inspector and to rule on interpretations of the provisions of the heating, air conditioning and ventilation code. (Ord. 5664, 9-19-2022)

ARTICLE C. MECHANICAL CONTRACTORS

SECTION:

9-5C-1: License Required

9-5C-2: Conditions Of License

9-5C-3: Revocation Of License

9-5C-1: LICENSE REQUIRED:

A. License: No person other than those holding a current state mechanical contractor license, in addition to their state master HVAC license shall be allowed to work at the trade of heating, air conditioning, and ventilation in the city of Waterloo.

B. Unlawful To Lend License: It shall be unlawful for any person to lend that person's license, or to borrow the license of another person, nor shall any person offer to assume the responsibility of another person's work, when such person's work would require that person to be licensed under the provisions of this chapter.

C. Exemption: Homeowners working on their principal residence shall be exempt from state licensing. (Ord. 5664, 9-19-2022)

9-5C-2: CONDITIONS OF LICENSE:

A. Advertising Without License: No person shall advertise in any way that they possess the qualifications to engage in or carry on the heating, air conditioning and ventilation trade or business in the city unless they are a bona fide holder of a valid contractor's license as provided in section [9-5C-1](#) of this article.

9-5C-3: REVOCATION OF LICENSE:

A. Appointment Of Members: The members of the mechanical board for licensing and appeals shall be appointed by the mayor with the approval of the city council.

B. Terms: After the initial appointment of the board, the terms of the members shall be for three (3) years except that the initial terms shall be so arranged and staggered that the terms of no more than two (2) members shall expire on December 31 of any one year. A vacancy within any term shall be filled by appointment of the mayor with the approval of the city council for the unexpired portion of that term only.

C. Compensation: The members of the board shall serve without compensation.

D. Organization: The board shall designate a member as chair and vice chair and shall adopt reasonable rules for conducting its investigations and proceedings, and shall render all decisions and findings in writing to the building official with a duplicate copy to the appellant and may recommend to the city council new legislation as is consistent therewith. (Ord. 5664, 9-19-2022)

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