

Buildings & Environments

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Things You Need to Know About Kitchen Waste Piping and Garbage Disposals in Chicago Condos & Apartments

Kitchen Waste Piping and Garbage Disposals:

In recent years during plumbing pipe replacement projects, a topic of discussion has been the effect of food waste disposers (garbage disposals) on kitchen waste piping. For large multi-family buildings with cast iron piping in the City of Chicago, the potential for costly projects to replace or repair kitchen waste piping should be considered when discussing the installation and use of garbage disposals. Two approaches for the assessment of garbage disposals should be considered: Building Code impacts and practical experience.

Building Code Impacts:

Prior to 2023, the City of Chicago Building Code provided clear direction regarding garbage disposals in large multi-family buildings. Multiple City of Chicago Building Code sections required the installation of a grease interceptor at the discharge of the kitchen waste piping prior to connection to the City of Chicago sewage system for multi-family buildings with over six dwelling units. The following code section prevents the installation of garbage disposals where grease interceptors are installed.

18-29-1003.3.2

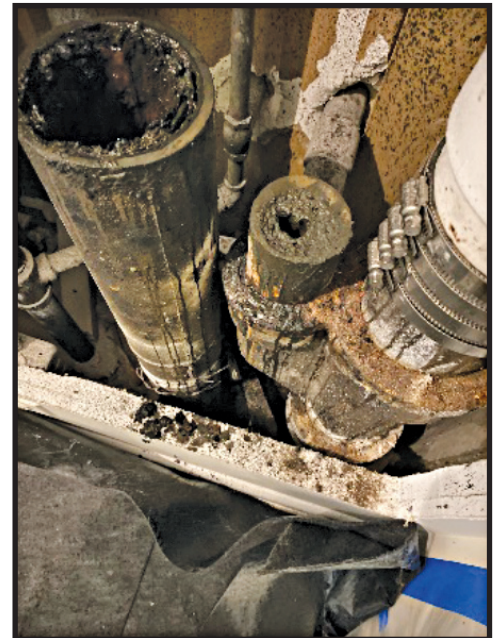
Food waste disposers restriction.

No grease interceptor or separator shall receive the discharge from a food waste disposer.

Although the City of Chicago updated the plumbing section of its Building Code for 2023, the above code section remained. The City of Chicago Building Code removed requirements for grease interceptors in new multi-family buildings with more than six dwelling units. Additionally, when code interpretations were requested regarding existing large multi-family buildings, code officials stated grease interceptors can be removed or bypassed based on the updated plumbing code. If grease interceptors are removed or bypassed, garbage disposals can remain in multi-family buildings.

Although the above information is valid, other code sections should be noted and taken into consideration. For example, multiple code sections provide overall limits to the quantity of fats, oil, and grease (FOG) that can be discharged to the City of Chicago. Additional code sections allow City officials to measure or visually review the effluent leaving any building's waste system and require the installation of a grease interceptor due to excessive FOG discharge. Other sections provide new guidance to the construction and sizing of required grease interceptors that may differ from previous code requirements.

In summary, while the Building Code allows for the removal or bypass of grease interceptors, City Officials can enforce the installation of new grease interceptors. New grease interceptors may be required to meet current code requirements possibly resulting in new construction, new sizing and new location. Building owners should be aware of these potential additional costs that could arise from making efforts to maintain garbage disposals.



Shown here is an image of grease buildup in kitchen waste piping that undergoes regular maintenance.

Practical Experience:

The nature of typical kitchen sink usage results in a buildup of grease in kitchen waste piping. Garbage disposals encourage unit occupants to discharge food waste to the kitchen waste piping instead of garbage.

As food waste enters the kitchen waste piping it is unable to move downstream due to the buildup of



Shown here are examples of cast iron kitchen waste piping that demonstrate failures resulting in the process described in this article.

grease. Improper pitch and/or lack of regular thorough maintenance will further contribute to additional grease and food waste deposits in the piping. Additionally, food deposits decompose over time resulting in acidic off-gassing which condenses into a liquid, coating the interior of the pipe in a corrosive liquid. Over time, the liquid corrodes the cast iron kitchen waste piping from the inside out, shortening the lifespan of the piping. The pictures on this page are examples of cast iron kitchen waste piping that demonstrate failures resulting in the process described above.

Pipe Maintenance is Important

The interior condition of kitchen waste piping is difficult to determine as during video scoping grease covers the camera upon insertion into the pipe. Kitchen waste piping maintenance typically requires more frequent and potentially more aggressive methods to remove the ongoing buildup of grease throughout the entire piping system. Maintaining piping with active corrosion can increase the risk of potential pipe failures during maintenance efforts. The maintenance efforts needed to thoroughly remove grease from the entire kitchen waste piping can be invasive as the vertical piping is typically located within the foot print of dwelling units. Grease interceptors require cleaning with a frequency matching the building up of grease. Note, with a change in building staff or maintenance contractors, a loss of knowledge may occur resulting in reduced maintenance efforts which will likely accelerate pipe deterioration.

As maintenance staff has reported to Elara representatives, on average, large multi-family buildings without garbage disposals perform kitchen waste piping maintenance 1-2 times a year to maintain functionality. Also reported to Elara, large multi-family buildings with garbage disposals typically perform maintenance 3-4 times a year to main-

tain minimal functionality while continuing to experience clogs. Several buildings with garbage disposals reportedly perform kitchen waste piping maintenance more frequently with the most frequent maintenance efforts being 12 times a year. See the image on the prior page of grease buildup in kitchen waste piping in a large multi-family building that undergoes regular maintenance.

Typical rodding may keep a small passage open in the short term however, the piping will continue to be prone to clogs and other functional issues until more invasive methods are utilized.

Enzymes and Other Products Unproven

Throughout the years, several enzymes and other products have been marketed to remove grease from kitchen waste piping. As maintenance staff has reported to Elara, thus far, the effectiveness of these products has not been proven to make a discernable difference to the presence of grease within the piping or reduce the amount of required maintenance.

Pipe Replacement or Lining in Place are Options

If adequate maintenance is not performed in combination with the use of garbage disposals, repair or replacement of the kitchen waste piping may be necessary. Two common methods for addressing corroded piping include replacement or lining in place. Structurally compromised piping will no



longer be a candidate for lining in place and will likely require replacement. Newly installed piping can be provided with additional protection from corrosion utilizing commercially available products.

Engineering Recommendations: Removal of Garbage Disposals in Condo Units

Despite changes to the plumbing code, Elara continues to recommend removal of garbage disposals in existing large multi-family buildings. Elara's recommendation is based on our practical knowledge and the resulting capital expenditures our clients are funding. Removal of garbage disposals contributes to less maintenance, reduced functional issues, and slower pipe deterioration. This topic should be discussed further with your preferred Plumbing Engineer, Plumbing Maintenance Contractor, and Attorney based on the specific conditions of your building. 🍃