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## Technical Bulletins: Grease Traps

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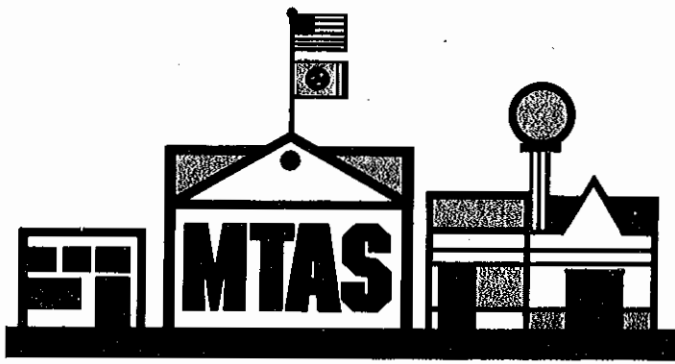
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# TECHNICAL BULLETIN

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MUNICIPAL TECHNICAL ADVISORY SERVICE  
THE UNIVERSITY OF TENNESSEE  
IN COOPERATION WITH THE TENNESSEE MUNICIPAL LEAGUE

July 10, 1986

## GREASE TRAPS

by

Sharon Rollins, Utility Management Consultant

### Why Are They Needed?

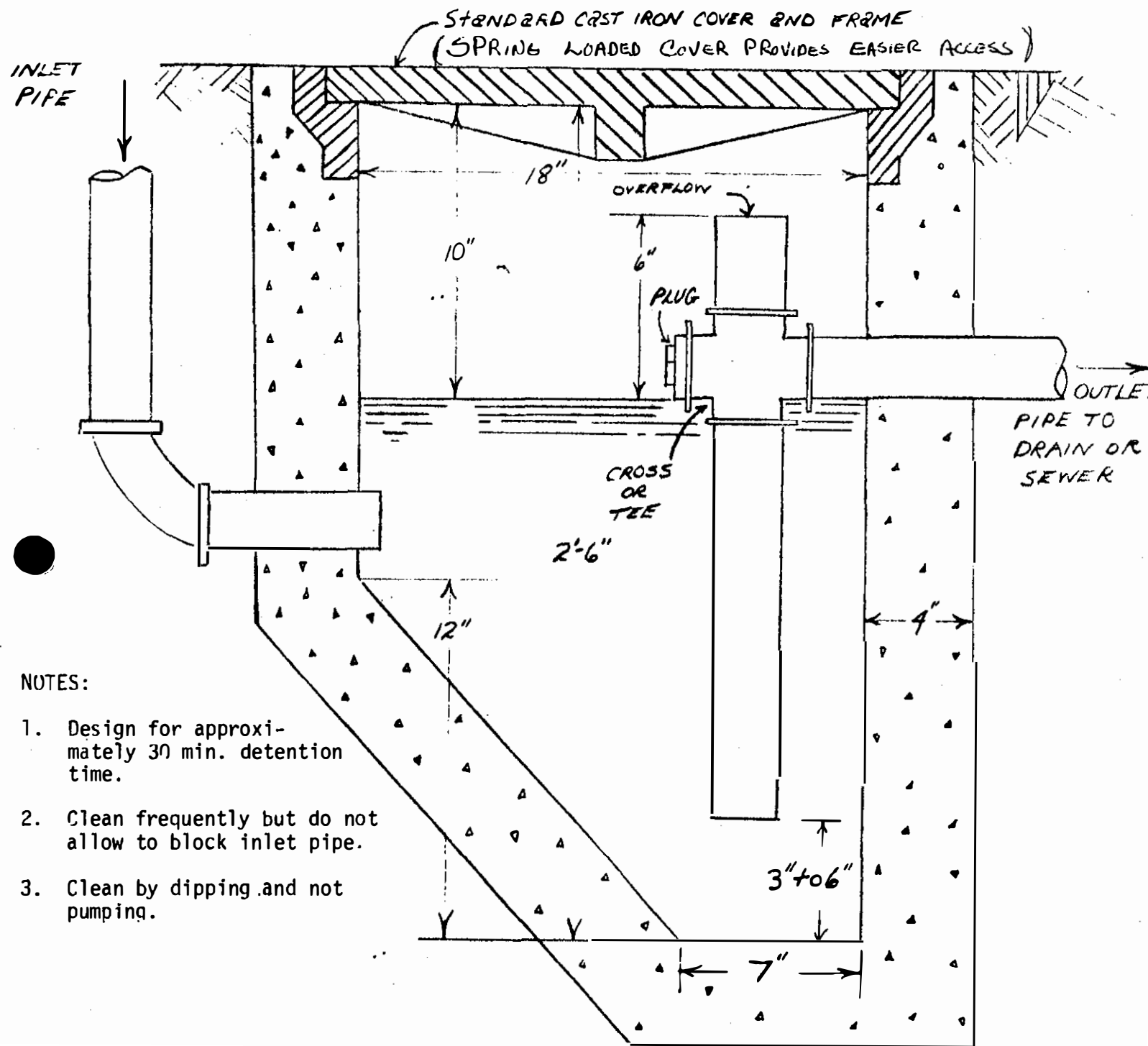
The wastewater from high oil and grease (O&G) users such as restaurants, cafeterias, and some industries tends to accumulate on sewer walls causing clogging and significantly reducing the capacity of the sewer. The presence of oil and gasoline has caused violent explosions in sewers. Once a grease incrustation has formed on the inside of sewer lines, it is very difficult to remove.

Grease that is carried on to the sewage treatment plant, either in solution or suspension in normal flow or that which is occasionally stripped from sewers by high wastewater flows, can cause operational problems at the plant.

### What Are The Design Criteria?

1. Design for 15-30 minutes detention to allow time for the wastewater to cool and the grease and oil to separate and rise to the surface.
2. Traps should be designed with a baffle (a deflector guide or grid) which forces the wastewater to flow downward beneath a free surface.
3. Traps should be placed on kitchen waste lines only (not on bathroom waste lines) if possible. The object is to avoid settling of sewage solids.
4. Grease traps should be easily accessible to encourage regular maintenance.
5. The trap access cover should be tightly sealed, since this matter is highly likely to become putrid.

TYPICAL GREASE TRAP



NOTES:

1. Design for approximately 30 min. detention time.
2. Clean frequently but do not allow to block inlet pipe.
3. Clean by dipping and not pumping.

CROSS SECTION OF A GREASE TRAP

How Should They Be Maintained?

1. Dip or skim grease from the surface of the liquid in the trap frequently. This may be daily for restaurants using large amounts of oil for food preparation. If traps are not regularly cleaned, they are of little value.
2. Store the skimming in covered containers and dispose as a solid waste or sell.
3. To encourage regular maintenance by the grease trap owner, it is necessary for the municipality to require, via sewer use ordinance, that grease loading to sewage collection systems be limited. Grease & oil content (less than or equal to 100 mg/l liter wastewater) is usually required. This requirement must be enforced by field inspection and occasional lab testing to be effective. Most high grease users are willing to limit O&G discharge to POTWs if they are educated about the undesirable effects that result. Therefore, education of the grease users is recommended as a first effort. If this doesn't produce the desired results, strong enforcement of the sewer use ordinance with penalty assessments may be necessary.

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