



## GREASE CONTROL PROGRAM

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## **I. PURPOSE OF THE GREASE CONTROL PROGRAM**

Grease is one of the primary causes of stoppages, backups, and overflows in a wastewater collection system. Grease buildup in the sewers also causes restrictions and capacity problems. Newport Utilities' goal is to improve sewer service by reducing the impact of grease. This goal will be achieved through two related programs:

### **Grease Control Program**

Newport Utilities' "source control" program, through which Food Service Facilities (FSF's) are required to capture and properly dispose of the grease generated by their operation. The focus of this document is the Grease Control Program, including the proper sizing, installation, and maintenance of grease trap/interceptor. The administrative and inspection requirements are established as well. Through the cooperative efforts of FSF's with Newport Utilities, the goal of improved sewer service through proper grease control can be achieved.

## **II. DEFINITIONS**

Unless otherwise expressly stated or the context clearly indicates a different intention, the following terms shall, for the purpose of this document, have the meanings indicated in this section:

### **A. Black Water**

Waste water from sanitary fixtures such as toilets and urinals.

### **B. Bulk Service Kitchen**

A facility which prepares bulk quantities of food, such as hospitals, schools, or caterers.

### **C. Common Grease trap/interceptor**

A device to which grease wastes are directed from more than one facility having different operators or type of operations, such as in a Food Court.

### **D. Customer**

A user of the sanitary sewer system who produces wastes from their process operations. The customer is responsible for assuring that the produced waste is disposed of in accordance with all Federal, State and local disposal regulations.

### **E. Deli**

A facility engaged in the sale or preparation of cold-cut and/or microwave sandwiches, subs or hoagies, and possibly other foods with no frying or grilling on site.

**F. Food Courts**

Areas predominantly found in shopping centers, amusement parks and facilities where several food preparation establishments have different owners sharing space and/or plumbing facilities.

**G. Food Service Facility (FSF)**

Any facility, which cuts, cooks, bakes, prepares, serves food, or disposes of food related wastes.

**H. Garbage Grinder**

A device, which shreds or grinds up solid or semisolid waste materials into smaller portions for discharge into the sanitary sewer collection system.

**I. Gray Water**

Refers to all wastewater other than “Black Water” as defined in this section.

**J. Grease**

A material composed primarily of fats, oil, and grease (FOG) from animal or vegetable sources. The terms fats, oil, and grease shall be deemed as Grease by definition. Grease does not include petroleum-based products.

**K. Grease interceptor**

A large tank or device so constructed as to separate and trap or hold fats, oil, and grease substances from the sewage discharged from a facility in order to keep fats, oil, and grease substances from entering the sanitary sewer collection system. Grease interceptors are typically located outside of food service facilities.

**L. Hauler**

One who transfers waste from the site of a customer to an approved site for disposal or treatment. The hauler is responsible for assuring that all Federal, State and local regulations are followed regarding waste transport.

**M. NPDES**

Stands for National Pollution Discharge Elimination System under which the Newport Utilities’ Wastewater Treatment Plant is permitted.

**N. POTW**

Stands for Publicly-Owned Treatment Works or “Treatment Works” as defined by Section 212 of the Clean Water Act (33 U.S.C. § 1292), which is owned or operated in this instance by the Newport Utilities. This definition includes any sewers that convey wastewater to Newport Utilities’ sewage treatment plant.

**O. Pretreatment Coordinator**

An individual employed by Newport Utilities who is charged with the responsibility of administering the provisions of the pretreatment program to ensure compliance by users with applicable laws, rules, regulations, resolutions and ordinances relative to

the concentration(s) of substances found in the waste stream of facilities connected to the POTW.

**P. Sewage**

The liquid and water-carried domestic or industrial wastes from dwellings, commercial establishments, industrial facilities, and institutions, whether treated or untreated. The terms “waste” and “wastewater” shall be deemed as Sewage by definition.

**Q. Sewer Lateral**

A sewer line or lines maintained and controlled by private persons for the purpose of conveying sewage from the waste producing location to the public sanitary sewer collection system.

**R. Single Service Restaurant**

A restaurant where the meals are served on throwaway plates and utensils.

**S. Standard Restaurant**

A restaurant where meals are served on plates and utensils that are washed and re-used.

**T. “Under the Sink” Grease trap (Thermaco Big Dipper Model W-200-IS or equivalent automatic cleaning trap) Minimum**

A device placed under or in close proximity to sinks or other facilities likely to discharge grease in an attempt to separate, trap or hold, oil and grease substances to prevent their entry into the sanitary sewer collection system. Grease traps are commonly sized based on their flow and grease retention capacity. Grease traps must have a flow restrictor installed and be properly vented.

**U. User**

Shall mean a Newport Utilities customer operating a “food service facility” inside the Newport Utilities wastewater service area.

**V. Waste**

The liquid and water-carried domestic or industrial wastes from dwellings, commercial establishments, industrial facilities, and institutions, whether treated or untreated. Wastes may include but not be limited to, discharges from scullery sinks, pot and pan sinks, dishwashing machines, soup kettles, and floor drains located in areas where grease-containing materials may exist. The terms “sewage” and “wastewater” shall be deemed as Waste by definition.

**W. 25% Rule**

If 25% of Interceptor capacity is taken up by FOG and Solids, then the interceptor needs pumping. Example: Interceptor depth is 48” and has 6” of FOG and 6” of settled solids, then 25% of capacity is met.

### III. GENERAL CRITERIA

#### **A. Installation Requirements for New Food Service Facilities.**

All proposed or newly remodeled food service facilities inside the Newport Utilities Wastewater Service area shall be required to install an approved, properly operated and maintained grease trap/interceptor.

#### **B. Phased Implementation Plan for Existing Food Service Facilities.**

All existing food service facilities inside the Newport Utilities Wastewater Service area are expected to conduct their operations in such a manner that grease is captured on the user's premises and then properly disposed of. Existing Food Service Facilities will typically be handled under Newport Utilities' Grease Control Program as follows:

- 1) Newport Utilities will periodically inspect each Food Service Facility on an as-needed basis to assure that each facility is complying with the intent of the Grease Control Program. Newport Utilities' goal is to achieve compliance by all existing Food Service Facilities.
- 2) Through preventive maintenance records or emergency calls related to grease, Newport Utilities will identify and target "grease problem areas" in the wastewater collection system. Food Service Facilities located upstream of these problem areas and discharge their waste water into the "problem" lines will be identified as potential contributors to the grease build-up. Newport Utilities will inspect the grease trap/interceptors of all food service facilities in the vicinity of the "problem area", making note of maintenance records, sizing, and condition.
- 3) Each Food Service Facility in the vicinity of the problem area will be inspected. The facilities' Grease Control Program practices and the adequacy of their grease trap/interceptor will be assessed. Maintenance records will also be reviewed.
- 4) Following the inspections, Newport Utilities will send written notice to the inspected food service facilities, containing an educational brochure on grease in the sewer system, a summary of the policy requirements, and the results of the inspection. The inspections will typically result in one of the following actions:
  - a) Facilities equipped with an appropriate and adequately sized grease trap/interceptor who are meeting the intent of the Grease Control Program through effective grease control practices will be commended for their compliance.
  - b) Facilities may be required to develop and submit to Newport Utilities a proposed plan designed to achieve compliance through improved housekeeping and increased maintenance and pumping on the existing grease trap/interceptor/equipment.
  - c) Facilities that are not successful in achieving compliance with the intent of the Grease Control Program through improved housekeeping and increased

maintenance and pumping on the existing grease trap/interceptor/equipment will be required to install the necessary trap/equipment to bring the facility into compliance. An appropriate amount of time will be agreed upon between Newport Utilities and the Customer.

**C. Prohibited Discharges.** Black water shall not be discharged to the grease trap/interceptor unless specifically approved, in writing, by Newport Utilities.

**D. Floor Drains.** Only floor drains which discharge or have the potential to discharge grease shall be connected to a grease trap/interceptor.

**E. Garbage Grinders and Dishwashers.**

Newport Utilities recommends that solid food waste products be disposed of through normal solid waste/garbage disposal procedures. The use of garbage grinders, which discharge to the sanitary sewer, is discouraged within the Newport Utilities wastewater service area but in the event that the device is used in a commercial or industrial facility, it must not be connected to the grease trap/interceptor. Food particles from garbage grinders decreases the operational capacity of the grease trap/interceptor and will require an increased pumping frequency to ensure continuous and effective operation. Commercial dishwasher connections must be connected to the grease trap/interceptor. Dishwashers discharge hot water and soap, which can melt grease stored in an overburdened trap. Melted grease may then pass through the trap into the customer's service line and the public sewer system, where the grease hardens and causes line clogs.

1) Although not recommended, existing food service facilities may allow any fixture to remain connected to a grease trap/interceptor, except fixtures, which may discharge black water.

2) Proposed and remodeled food service facilities may not connect janitor sinks or black water fixtures to a grease trap/interceptor. Mop sinks inside the kitchen area shall be connected to a grease trap/interceptor. See Appendix B

**F. Location**

1) Each grease trap/interceptor shall be installed and connected so that it is easily accessible for inspection, cleaning, and removal of the intercepted grease at any time. A grease trap/interceptor may not be installed in any part of a building unless approved in writing by Newport Utilities.

2) Location of grease trap/interceptor shall meet the approval of Newport Utilities. The best location is in an area outside of an outside wall, but upstream from the black water drain line(s).

**IV. DESIGN CRITERIA**

**A. Compliance.** Grease trap/interceptors shall be constructed to discharge an effluent with a temperature of less than 140 degrees Fahrenheit, 100 mg/l Fats, Oils & Grease (FOG) and 250 mg/l Total Suspended Solids (TSS).

**B. Construction of Trap.** Grease trap/interceptor shall be constructed in accordance with Newport Utilities' standards and shall have a minimum of two compartments with fittings designed for grease retention. All grease removal devices or technologies shall be subject to the written approval of Newport Utilities. Such approval shall be based on demonstrated removal efficiencies of the proposed technology and Newport Utilities' standard drawing for grease trap/interceptor.

**C. Access.** Access to grease trap/interceptors shall be available at all times, to allow for their maintenance and inspection. Access to outside grease interceptors shall be provided by 2 (two) manholes terminating 1-inch above finished grade with 24" cast iron frame and cover.

**D. Load-Bearing Capacity.** In areas where additional weight loads may exist, the grease interceptor shall be designed to have adequate load-bearing capacity (example: vehicular traffic in parking or driving areas).

**E. Inlet and Outlet Piping.** Wastewater discharging to a grease trap/interceptor shall enter only through the inlet pipe of the trap. Each grease trap/interceptor shall have only one inlet and one outlet pipe. A by-pass path is prohibited. A test cross tee shall be installed on outlet piping so to collect samples.

**F. Interceptor Sizing.** Using the Newport Utilities Grease Interceptor Sizing formula shown in Appendix C shall approximate the required size of a grease interceptor. Most grease interceptors will have a capacity of not less than 1,000 gallons nor exceed a capacity of 1,500 gallons. If the calculated capacity using the Newport Utilities Grease interceptor sizing formula exceeds 1,500 gallons, multiple units in series shall be installed.

**See Appendix C for example of formula**

Grease interceptor designs represent minimum standards for normal usage. Installations with heavier usage require more stringent measures for which the user is responsible and shall pay the costs to provide additional measures if required by Newport Utilities. Newport Utilities reserves the right to evaluate trap sizing on an individual basis for facilities with special conditions, such as highly variable flows, high levels of grease discharge, or other unusual situations that are not adequately addressed by the formula.

## **V. GREASE TRAP/INTERCEPTOR MAINTENANCE**

**A. Cleaning/Pumping.** The user at the user's expense shall maintain all grease trap/interceptors. Maintenance of "under the sink" grease trap shall include the removal of all fats, oil, and grease from the detention compartment of the trap. Removal is usually accomplished by hand dipping or scooping the collected grease from the trap. Maintenance of exterior grease interceptors shall include the complete removal of all contents, including floating materials, wastewater, and bottom sludge's

and solids. Decanting or discharging of removed waste back into the trap from which the waste was removed or any other grease interceptor, for the purpose of reducing the volume to be disposed, is prohibited.

**B. Cleaning/Pumping Frequency.** “Under the sink” grease trap must be cleaned no less than weekly. If grease traps are more than 50% full when cleaned weekly, the frequency shall be increased. Exterior grease interceptors must be pumped out completely a minimum of once every three months, or more frequently as needed (based on the 25% rule) to prevent carry over of grease into the sanitary sewer collection system, unless it can be demonstrated to Newport Utilities that the pumping frequency can be extended past the three-month period.

**C. Disposal of Grease trap/interceptor Waste.** All waste removed from each grease trap/interceptor must be disposed of at a facility approved by Newport Utilities to receive such waste in accordance with the provisions of this program. In no way shall the pumpage be returned to any private or public portion of the sanitary sewer collection system.

**D. Additives.** Any additive(s) placed into the grease trap/interceptor or building discharge line system on a constant, regular, or scheduled basis shall be reported to Newport Utilities. Such additives shall include, but not be limited to, enzymes, commercially available bacteria, or other additives designed to absorb, purge, consume, treat, or otherwise eliminate fats, oils, and grease. The use of Additives shall in no way be considered as a substitution to the maintenance procedures required herein.

**E. Chemical Treatment.** Chemical treatments such as drain cleaners, acid and other chemicals designed to dissolve or remove grease shall not be allowed to enter the grease trap/interceptor.

**F. Manifest.** All pumpage from grease trap/interceptors must be tracked by a manifest, which confirms pumping, hauling, and disposal of waste. The customer must obtain a copy of the original manifest from the hauler. The original manifest with original signatures must be left at the disposal facility. The customer is required to utilize only Newport Utilities permitted haulers for the disposal of grease.

**G. Maintenance Log.** A Grease trap/interceptor Cleaning Record Maintenance Log indicating each pumping for the previous 24 months shall be maintained by each FSF. This log shall include the date, time, amount pumped, hauler, and disposal site and shall be kept in a conspicuous location for inspection. Said log shall be made immediately available to the Newport Utilities representative upon request.



## VI. ADMINISTRATIVE REQUIREMENTS

**A. Initial Data Acquisition.** Upon inspection of each FSF, Newport Utilities' inspector shall collect the necessary Grease Control data to facilitate the population of Newport Utilities' Grease Control Program database. The database will be updated with additional or modified information after each inspection.

**B. Administrative Fees & Penalties.** An administrative fee for facilities with grease discharges shall be set by Newport Utilities. The fee shall be established to ensure full cost recovery and shall include but not be limited to the cost of field, administrative, engineering, and clerical expenses involved. The fees shall be not less than \$75.00 per year for each facility. The annual administrative fee shall be applied to the customer's Water & Sewer service bill. If interference or obstruction of NU's sewer main occurs due in part or in whole to the accumulation of grease in the sewer main from a FSF, the FSF shall reimburse NU for expenses related to unstopping the sewer line, removing the accumulated grease, and cleanup of any overflows caused by the interference or obstruction.

**C. Monitoring.** As a condition for service, the user shall provide, operate, and maintain, at user's expense, safe and accessible monitoring facilities (such as a suitable manhole) at all times to allow observation, inspection, sampling, and flow measurement of the building sewer or internal drainage systems. There shall be ample room in or near such monitoring facility to allow accurate sampling and preparation of samples for analysis. When the physical location and hydraulic conditions are suitable, a manhole or similar facility existing on the sanitary sewer collection system may be utilized as the user's manhole when agreed to by both the user and Newport Utilities.

**D. Inspection and Entry.** Authorized personnel of Newport Utilities, bearing proper credentials and identification, shall have the right to enter upon all properties subject to this program, at any time and without prior notification, for the purpose of inspection, observation, measurement, sampling, testing or record review, in accordance with this program.

## VII. ENFORCEMENT

Newport Utilities shall have the administrative authority to enforce this program. Whenever Newport Utilities finds that any user has violated or is violating this program, or any prohibition, limitation, or requirements contained herein, Newport Utilities will initiate corrective action, which may include but not be limited to the following:

**A. Notice of Violation.** Newport Utilities may issue any user a written notice stating the nature of violation. Within fifteen (15) days of the date of notice, the user shall submit a plan for the satisfactory correction to Newport Utilities.

**B. Consent Order.** Newport Utilities may enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with the user responsible for noncompliance. Such orders will include specific action to be taken by the user to correct the noncompliance with a time period specified by the order.

**C. Administrative Order.** When Newport Utilities finds that a user has violated or continues to violate the provisions set forth in this program, or the order issued there under, Newport Utilities may issue an order for compliance to the user responsible for the discharge. Orders may contain any requirements as might be reasonable, necessary, and appropriate to address the noncompliance, including but not be limited to the installation of pretreatment technology, additional self-monitoring, and management practices.

**D. Emergency Suspension of Services.** Newport Utilities may suspend water or sewer service when in the opinion of Newport Utilities, discharge from the facility.

- 1) Presents or may present an imminent or substantial endangerment to the health or welfare of persons or the environment;
- 2) Causes stoppages, sanitary sewer overflows, or excessive maintenance to be performed to prevent stoppages in the sanitary sewer collection system;
- 3) Causes interference to the POTW; or
- 4) Causes Newport Utilities to violate any condition of its NPDES Permit.

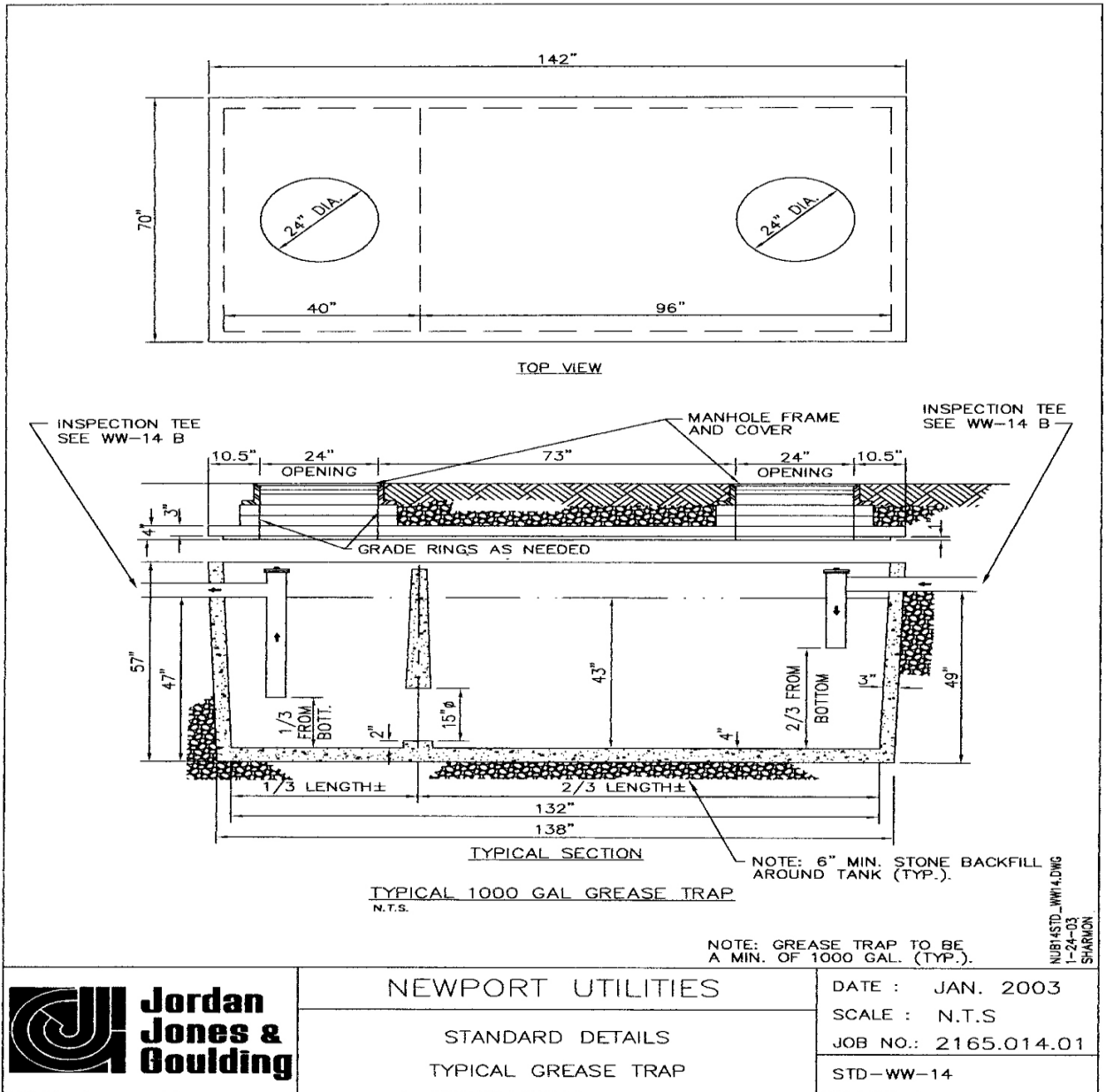
Any person notified of a suspension of the water or sewer service shall immediately stop or eliminate the discharge. In the event of a failure of the Person to comply voluntarily with the suspension order, Newport Utilities shall take such steps as deemed necessary, including immediate termination of water or sewer service, to prevent or minimize damage to the POTW system or sewer connection or endangerment to any individuals. Newport Utilities shall reinstate the water or sewer service when such conditions causing the suspension have been eliminated and the published reconnection fee paid. A detailed written statement submitted by the user describing the cause(s) of the harmful discharge and the measure(s) taken to prevent any future occurrence shall be submitted to Newport Utilities within fifteen (15) days of the date of occurrence.

**E. Administrative Penalty.** Notwithstanding any other remedies or procedures available to Newport Utilities, any user who is found to have violated any provision of this program, or any order issued hereunder, may be assessed an administrative penalty of not to exceed fifty dollars (\$50.00) per violation. Each day on which noncompliance shall occur or continue shall be deemed a separate and distinct violation. Such assessment may be added to the user's next scheduled sewer

service charge and Newport Utilities shall have such other collection remedies as are available by law.

**F. Request for Hearing and Appeal.** Any person affected by a penalty, order, or directive issued by Newport Utilities issued pursuant to this program may, within ten (10) days of the issuance of such penalty, order, or directive, request a hearing in writing before Newport Utilities to show cause why such should be modified or made not to apply to such person. The requested hearing shall be held as soon as practical after receiving the request, at which time the person affected shall have an opportunity to be heard. At the conclusion of the hearing, Newport Utilities shall issue a written response to the person requesting the hearing affirming, modifying, or rescinding the penalty, order, or directive at issue. Any party affected by a ruling from the Newport Utilities shall have an absolute right to appeal said ruling to the Circuit Court of Cocke County, Tennessee, for a hearing De Nova by that Court. The appealing party shall file a Notice of Appeal within ten (10) days from the date that party received notice of the decision rendered against it by the Newport Utilities Board. The hearing in Circuit Court shall be similar to hearings of appeals from the Municipal Court of Newport or from the Court of General Sessions of Cocke County.

VII. APPENDICES  
APPENDIX A

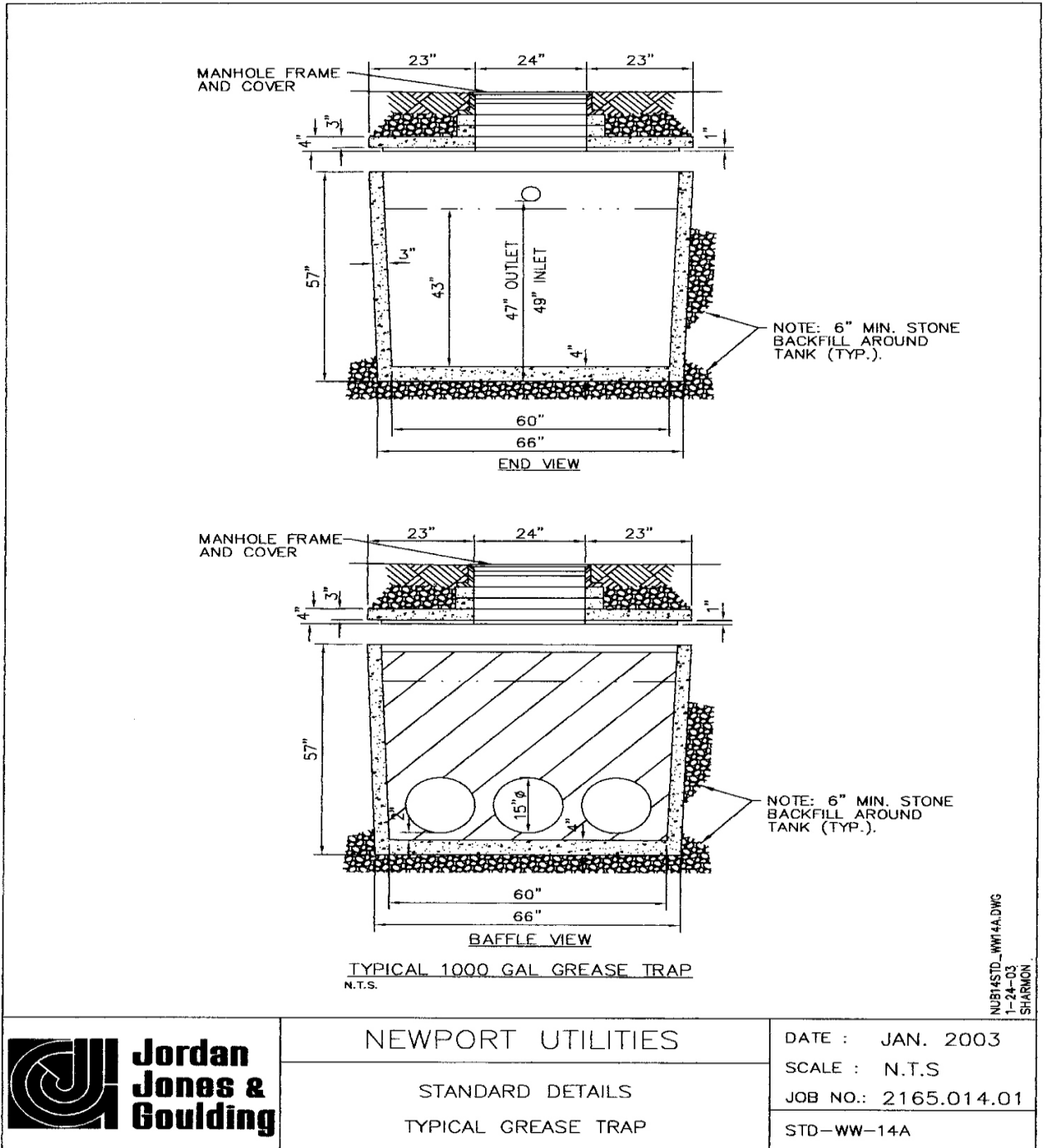



NEWPORT UTILITIES

STANDARD DETAILS  
TYPICAL GREASE TRAP

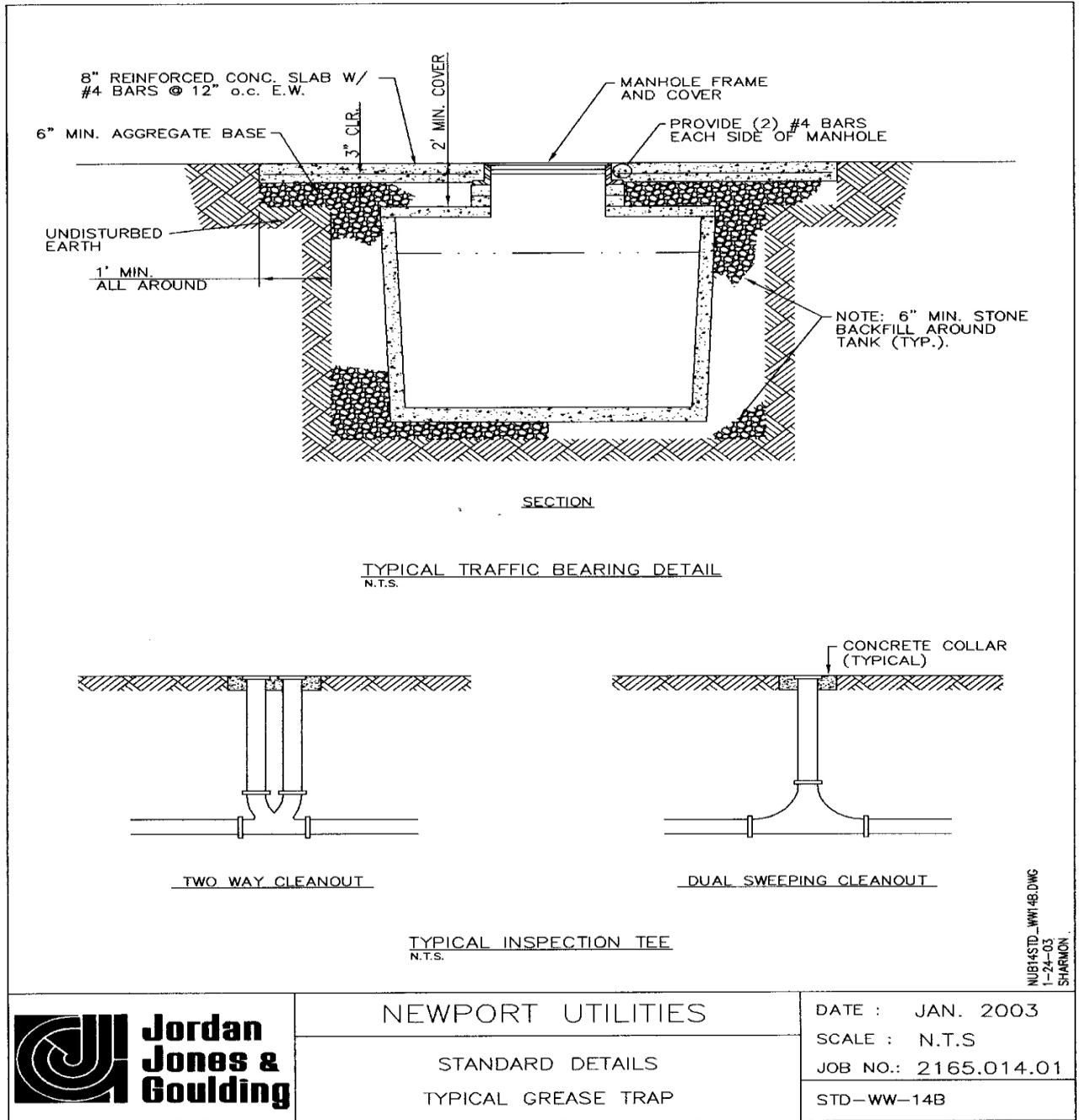
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STD-WW-14

Appendix A  
(Con't)

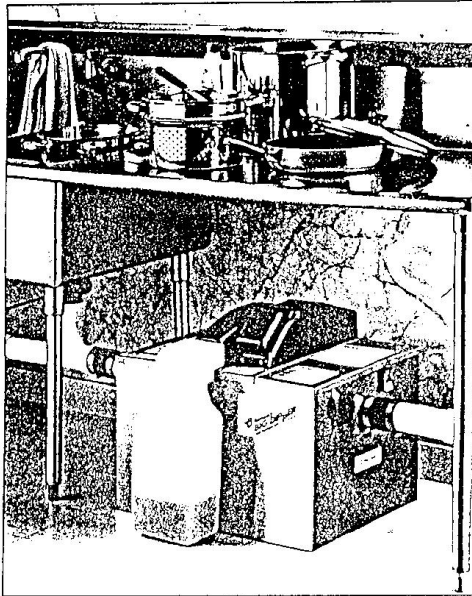


 <b>Jordan Jones &amp; Goulding</b>	NEWPORT UTILITIES	DATE : JAN. 2003
	STANDARD DETAILS TYPICAL GREASE TRAP	SCALE : N.T.S JOB NO.: 2165.014.01 STD-WW-14A

# Appendix A (Con't)



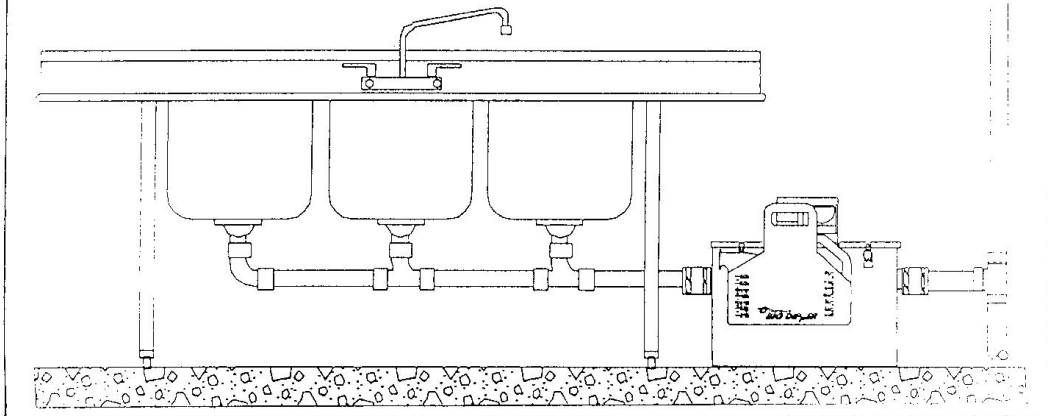
Appendix A (Con't)



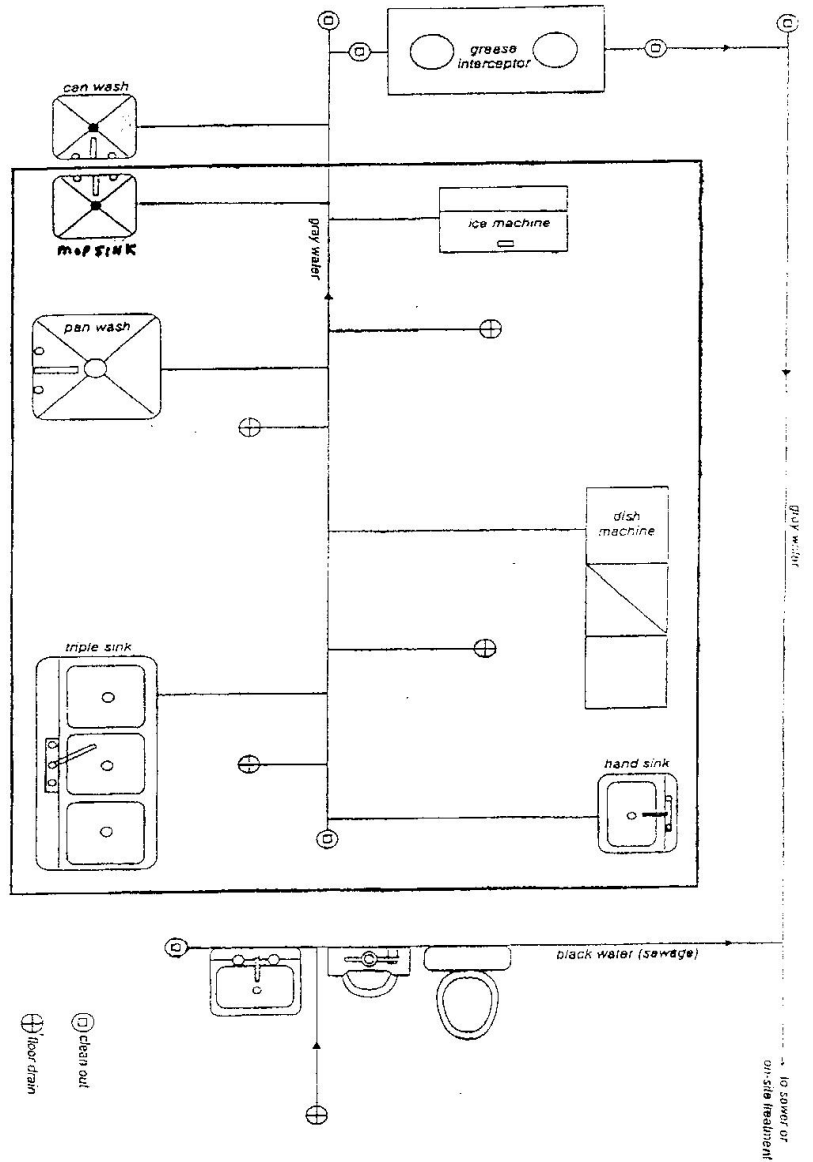
BIG DIPPER® W-200-IS

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# APPENDIX B





## APPENDIX C

### Recommended Grease interceptor Sizing

#### Type of Restaurant Fixture Flow Rate

Restaurant kitchen sink 15 gpm  
Single compartment sink 20 gpm  
Double compartment sink 25 gpm  
2, single compartment sinks 25 gpm  
2, double compartment sinks 35 gpm  
Triple sink, 1 ½ or 2 in. drain 35 gpm  
Trash can wash station 35 gpm  
30 gal. Dishwasher 15 gpm  
50 gal. Dishwasher 25 gpm  
50 - 100 gal. Dishwasher 40 gpm  
Garbage disposal 40 gpm

**Total Flow Rate:** \_\_\_\_\_ *gpm*

**\*\*Note\*\* Calculate average flow rate for all fixtures in the restaurant.**

**A. Total Flow Rate** \_\_\_\_\_ *gpm* / Number of fixtures \_\_\_\_\_ = \_\_\_\_\_ *gpm*

#### Restaurant Type and Sizing Factors:

Fast food (no dishes) = .125  
Dine-in (0-25 seats) = .125  
Dine-in (26-50 seats) = .25  
Dine-in (51-100 seats) = .50  
Dine-in (>100 seats) = .60  
Food Production = .85

**B. Sub Total = A X Sizing Factor,** \_\_\_\_\_ *gpm* X \_\_\_\_\_ Factor = \_\_\_\_\_ *gpm*

**C. Sub Total = B X 60 min. = avg. flow for 1 hour =** \_\_\_\_\_ X 60 = \_\_\_\_\_ *gph*

**D. Total = C x 2 hrs retention time = trap volume =** \_\_\_\_\_ X 2 = \_\_\_\_\_ *gal*

For use in a Deli type facility or under extenuating circumstances, where available space for a properly sized interceptor is limited, a minimum 20 gpm, 40# "under the sink" (Thermaco Big Dipper Model W-200-IS or equivalent automatic cleaning trap) grease trap may be authorized by the Newport Utilities Pretreatment Coordinator.