CHAPTER 11

WASTEWATER DISCHARGE CONTROL

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INDEX

Graphics

Drawing No.	
GT-1	Grease Interceptor/Type "A" Commercial
GT-2	Grease Interceptor/Type "B" Commercial
GT-3	Grease Interceptor/Type "C" Industrial
GT-4	Sand & Oil Interceptor/Type "A" Commercial
GT-5	Sand & Oil Interceptor/Type "B" Commercial
GT-6	Acid Neutralization Unit

11.0 WASTEWATER DISCHARGE CONTROL

11.1 GENERAL INFORMATION AND DEFINITIONS

A) Authority. These Rules, Regulations and Standards were established by the Town of Bennett in order to insure that the Town's sanitary sewer collection system and associated sewage treatment plant are not unduly impacted by wastewater discharges generated by commercial and industrial businesses. They shall be enforced through the Administrative Public Works and Engineering Departments at the Town.

B) Definitions. In Addition to the definitions set forth in Article IV, Division 1, Chapter 39 of the Town Code entitled "Wastewater Control" and as used in these Rules and Regulations; unless the context clearly indicates otherwise, the present words and expressions shall be defined as follows:

1) Acid Neutralization Unit. A vessel made in various sizes and filled to a specified level with an approved Acid Neutralizing agent through which acidic liquid wastes can be passed for acid neutralization. See Standard 307 in the appendix.

2) Fixture Unit. A rating in terms of gallons per minute (G.P.M.) representing the maximum amount of water which can drain from a fixture or piece of equipment in one minute. The value of one fixture unit (F.U.) is equal to 7.5 G.P.M.

3) Flow-Equalization Device. A structure or structures with equipment or attachments for the purpose of delaying, detaining, equalizing or otherwise controlling the flow or discharge of wastewater from a premise, through a building sewer, into a public sewer.

4) "In Line" Grease Interceptor. A prefabricated unit generally, but not necessarily, made of metal for the trapping of grease and oils and normally set indoors. They are set outside of any dry food preparation area.

5) Monitoring Facility. (Also referred to as Control Structure or Monitoring Structure) A structure

that is accessible for the purpose of monitoring, sampling and testing the flow through a building sewer.

6) Treatment Facilities. Structures, devices or equipment for the purpose of neutralizing or removing deleterious wastes from wastewater generated from a premise prior to its discharge into a public sewer. The definition also includes flow equalization devices.

7) Production Units. Units of measurement of a product or industry.

8) Sampling. A periodic collection of wastewater as it flows through a sewer.

9) Testing. The analysis of wastewater.

10) Types A, B and C Grease Interceptors. Two compartment interceptors normally located outside a building and of the following water capacity sizes:

a) Type "A" 320 - 1250 gallons capacity
b) Type "B" 1565 - 3445 gallons capacity
c) Type "C" 4160 - 6080 gallons capacity
See Drawing No.'s GT-1, GT-2 and GT-3 within the back of this Chapter.

11) Types A & B Sand & Oil Interceptors. (also referred to as Combination Sand & Oil Interceptors.)

Two compartment interceptors normally located outside a building and of the following water capacity sizes:

a) Type "A" 320 - 1060 gallons capacity
b) Type "B" 1565 - 3445 gallons capacity

See Drawing No.'s GT-4 and GT-5 within the back of this Chapter.

11.2 REVIEW OF PLANS

If any waters or wastes containing the substances or possessing the characteristics enumerated in paragraph 11.4 are proposed to be discharged to the public sewers, it shall be the responsibility of the owner of the business or industry or his authorized representative to contact the Engineering or Public Works Department for the purpose of plan review. The plan review shall determine pretreatment needs and methods to be used to control the wastes and make them acceptable for discharge into the public sewer system.

The Town Engineer or Director of Public Works may request and shall be given additional plans and information which may be needed to determine the impact on the wastewater collection and storm drainage systems of the proposed wastes, and the size of the pretreatment facilities which may be required.

In the event it becomes necessary for the Town Engineer or Director of Public Works to require an existing business or industrial user to install suitable waste pretreatment and/or flow equalization units, a written explanation for the requirement shall be furnished to the owner or the authorized agent thereof. Such a requirement may arise when it becomes apparent that waste emanating from the business or industry concerned may cause harm to the public sewer system; persons entering said system to perform maintenance; the treatment process and/or the environment. The request shall be based on one of the following determinations.

A) Direct Sampling. Direct sampling shall be used wherever possible. A sample taken at a control structure shall be laboratory analyzed.

B) Comparisons. When direct sampling is not possible, comparison with another similar process, the composition and/or volume of the wastewater being known to be of a similar nature to that of the business or industry in question, shall be used.

C) Best Judgement. Best judgement shall be made where it is not possible to sample and where a similar process to which a comparison may be made does not exist. Best judgement shall be based on a reasonable

knowledge of the processes involved, the nature of the wastewater's produced by such processes and the amount of water consumption.

11.3 COMMERCIAL AND INDUSTRIAL DISCHARGE PERMIT LETTERS

Businesses wishing to use the Town of Bennett collection system to discharge wastes from any business (commercial or industrial) shall apply to the Town Engineer or Director of Public Works, in writing or in person, for an appropriate Wastewater Discharge Permit letter.

A) Commercial Wastewater Discharge Permit Letters.

1) Type 1 Commercial Wastewater Permit Letter.
Commercial establishments discharging only domestic wastes, and establishments discharging non-domestic wastes that do not significantly impact the sanitary sewer collection system shall apply for, and receive, a Commercial Wastewater Permit letter stating that their service tap connection will be unconditionally allowed.

2) Type 2 Commercial Wastewater Permit Letter.
Commercial establishments discharging wastes that have a reasonable potential to exceed the Town's discharge limitations shall apply for, and receive a Commercial Wastewater Permit letter stating the conditions under which the Town will allow discharge into their sanitary sewer collection system. These conditions generally consist of the installation of properly sized grease or sand & oil interceptors.

B) Industrial Wastewater Discharge Permit Letter.
Industrial users are required to obtain a Water Discharge Permit letter stating the conditions, such as the design and installation of a pre-treatment plant. Under which the Town will allow discharge into their sanitary sewer collection system.

11.4 DISCHARGE LIMITATIONS ON WASTEWATER

Wastewater discharged into the sanitary sewer system shall not have or contain:

A) A flash point lower than 187° (86°C).

B) A pH value lower than 5.0, or higher than 10.0 or that contain chemical properties which are hazardous or capable of causing damage to any part of the system or harm to any system personnel.

C) Any liquid or vapor having a temperature higher than 150°F (66°C), or exceeding any lower limit fixed by the Director to prevent odor nuisance where the volume of discharge is greater than 10% of the total flow through a particular sewer.

D) Any water or wastes containing grease, oil, hydrocarbons, fatty acids, soaps, fats, waxes which exceed 200 mg/L as determined by solvent (Freon) extraction.

E) Any substances or water containing substances, not mentioned in paragraph D, which may solidify or become discernable viscous at temperatures between 32°F and 150°F.

F) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, each in amounts that will cause interference with the proper functioning of the system.

G) Pollutants which result in the presence of toxic gases, vapors, or fumes within the system in a quantity that may cause acute worker health and/or safety problems.

H) Any trucked or hauled pollutants.

I) Any wastewater capable of raising the Lower Explosive Limit (L.E.L.) of the ambient atmosphere in any sewer to 5% for any two successive readings or to 10% for any single reading on an explosion hazard meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohol's, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides.

J) Any wastes containing phenolic compounds over 10 mg/L expressed as phenol.

K) Any wastes containing more than 2 mg/L of cyanide expressed as hydrogen cyanide. Discharge of lesser amounts of any cyanides shall be permitted only upon evidence of satisfactory and continuous control of the concentration and the volume of the discharge.

L) Any wastes containing sulfides over 3 mg/L expressed as hydrogen sulfide.

M) Any wastes which, at any time or over any period of time, contain concentrations of materials and substances in excess of the Discharge Limitations set forth by the State Health Department.

N) Any radioactive substances the discharge of which does not comply with Section RH 4.18 of the Colorado Department of Health RULES AND REGULATIONS PERTAINING TO RADIATION CONTROL.

O) Any waters or wastes containing 50 ug/L or more of benzene.

P) Any waters or wastes containing a total concentration of 750 ug/L of BTEX (Benzene, Toluene, Ethylbenzene and Xylene).

Q) Any waste or waste product not specifically mentioned here which may interfere with the operation of the POTW.

Notwithstanding the provisions of the preceding paragraphs "Discharge Limitations on Wastewater", the Town Engineer or Director of Public Works may, on a case by case basis, require more stringent limitations in a wastewater discharge permit letter issued to a particular user, to prevent interruptions of service, increased maintenance for the Town, or any other interference with the operation of the system.

11.5 INSPECTIONS AND MAINTENANCE REQUIREMENTS

A) The owners of any establishment requiring a pretreatment facility shall notify the Director of Public Works as follows:

1) Upon any deviation from the plumbing plans which would generate a change in the type or size of such facility.

2) Upon installation of the pretreatment facility prior to the water test of the plumbing system for on site review and approval of the facility.

B) Periodic maintenance reviews shall be performed by the Public Works Department to ensure compliance with these Regulations, and Wastewater Discharge Permit letters. It shall be the responsibility of those engaged in the operation of a business (commercial or industrial) activity to maintain their associated pretreatment facilities in efficient functioning order.

1) Grease interceptors shall be pumped and cleaned of their accumulated matter at least once every three months or more often if necessary to ensure maximum efficiency.

2) Sand and oil interceptors shall be cleaned and/or pumped at least once every three months or more often if necessary to ensure maximum efficiency.

3) Acid neutralization units shall be, inspected by their owners at least quarterly to ensure the neutralization media is at its prescribed level.

4) All flow equalization devices (holding tanks) and other waste pretreatment facilities not specifically mentioned here must be inspected periodically by their respective owners.

5) Access to pretreatment facilities shall remain unobstructed at all times. The removal of large objects such as boxes, crates, cans etc. or the need for a ladder to inspect a pretreatment facility shall constitute a violation.

C) The Town Engineer or Director of Public Works shall determine when and where pretreatment facilities are required.

11.6 GREASE INTERCEPTORS

A) These Rules and Regulations shall apply to all food serving, food preparing, food catering, meat cutting establishments; fish, fowl, animal slaughter houses, soap factory, tallow rendering, fat rendering, hide curing establishments; and others capable of

discharging significant amounts of grease into the Town of Bennett's Sanitary Sewer System. Grease interceptors shall not be required for private residences or dwellings. Owners of businesses that may require grease interceptors shall submit plans to the Utilities Department for review and approval.

B) Type A, B and C Interceptors.

1) All interceptors shall be located outside, on private property wherever possible within 30' of the facility served. The location of a food establishment above the first floor of its respective building shall not be considered sufficient reason to eliminate the requirement for a type A, B or C unit.

2) All type A, B and C grease interceptors shall be installed in accordance with Drawings 1, 2 and 3 of the appendix. They shall have two compartments, the smallest of which shall have at least one-third the capacity of the entire interceptor.

3) The size shall be determined by the Public Works Department and shall be computed as follows:

a) Where the seating capacity can be determined, the following method shall be used:

1) Number of seats multiplied by a full capacity factor of 0.9 multiplied by a turnover (T.O) rate of 2.2 per meal period. This shall equal the number of meals served per meal period.

2) Number of meals per meal period multiplied by 2.5 gallons per meal = volumetric capacity of the grease interceptor. Example: 214 seats x .9 = 192.6 estimated full capacity. 192.6 x2.2 T.O. Rate = 423.7 estimated number of meals/period. 423.7 x 2.5 gallons = 1,059.3 gallons. A 1,000 gallon capacity unit would be satisfactory for this example.

3) 10% Rule: If the computed size is within 10% of a smaller standard approved "shelf"

available grease interceptor. The smaller unit shall be acceptable.

a) Where food is prepared, but as a general rule not consumed on the premises, or where seating capacity or number of meals served cannot adequately be determined, the following rule shall apply.

   1) Table 1 establishes the fixture unit values for various pieces of kitchen equipment, which may require connection to a grease interceptor. One fixture unit shall equal 7.5 GPM. The total number of fixture units shall be multiplied by 7.5 GPM to determine maximum rate of flow (GPM) possible into the grease interceptor. The volumetric capacity of the unit shall be five times the maximum rate of flow.

Example:

A total of 14 fixture units are to be discharged to a grease interceptor.

14 F.U.x 7.5 GPM x 5 minute retention=525 gallons

   2) The 10% rule is applied with this fixture unit count method also. 14 F.U., which would call for a 525 gallon interceptor, may be connected to a 500 gallon unit.

TABLE 1

KIND OF FIXTURE & TRAP ARM SIZE	MINIMUM TRAP	FIXTURE UNITS
Floor Drains	2"	2
Interceptors for grease,	2"	2
Oil, solids, etc.	3"	3
Interceptors for sand & oil	2"	3
(non vehicle wash)	3" or 4"	6
Interceptors for sand & oil (vehicle wash)	3" or 4"	8
Laundry tubs	1½"	2
Clothes Washers	2"	2
Receptors (floor sinks) Indirect waste receptors For refrigerators, coffee Urn, water stations, etc.	1½	1
Receptors, indirect waste for Commercial sinks, dish-Washers, air washers, etc.	2	3
Sinks, bar, private (1½ min. Waste)	1½	1
Sinks, bar, commercial (2"min. Waste) Sinks, commercial or Industrial, schools, etc., Including dishwashers, wash Up sinks and wash fountains (2" min. waste)	1½	3
Sinks, service	2	3
Wash basins (lavatories) Single	1¼	1
Wash basins, in sets	1½	2

The unit equivalent of fixtures and devices not shown on Table 1 shall be based on the rated discharge capacity in gallons per minute in accordance with Table 2.

TABLE 2

DISCHARGE CAPACITY (IN GALLONS PER MIN) FOR INTERMITTENT FLOW ONLY

0-7.5 GPM	=	1 unit
8-15	=	2 units
16-30	=	4 units
31-50	=	6 units

Adopted from uniform Plumbing Code, 1976 Ed., page 37, Tables 4-2, Pub. By IAPMO.

Note: For a continuous flow into a drainage system, 2 F.U. shall be allowed for each gallon per minute of flow.

C) In-Line Grease Interceptors.

1) In-line grease interceptors shall be, allowed by the Town Engineer or Public Works Director only where it is impractical to install a larger type A, B or C grease interceptor outside.

2) Sizing.

a) The sizing shall be the responsibility of the Engineering or Public Works Department and shall be as follows:

Number of fixture units x 7.5 GPM x 1.5 min. retention = size of grease interceptor.

b) No more than two (2) fixtures shall be connected to the same in-line interceptor.

c) Dishwashers shall not be connected to in-line interceptors.

d) In-line grease interceptors shall be rated according to GPM and pounds capacity. The number of pounds shall always equal twice the GPM rating. Example: 100 GPM/200 Lbs. capacity.

e) No in-line grease interceptor rated at less than the 20 GPM/40 lbs. Capacity shall be allowed.

3) Materials and Structures.

a) Each in-line grease interceptor shall be constructed of durable materials satisfactory to the Director and shall have a gas-tight cover which can be easily and readily removed.

b) Water jacketed grease interceptors shall not be approved or installed. (cross connection problem)

c) Each in-line grease interceptor shall have an approved water seal of not less than 2" in depth or the diameter of it's outlet, whichever

is greater. (Prevents toxins/odors from being released and allows for variance in flow.)

4) Food waste disposals shall not be connected to any grease interceptor unless authorized in writing by the Director of Public Works.

5) Due to their relative small size, in-line interceptors require cleaning at more frequent intervals than the larger units located outside. Manufactures often recommend, and the Town requires that maintenance be performed on a weekly basis to promote maximum efficiency.

D) Schools (Public and Private).
The sizing of grease interceptors for school kitchens shall be as follows:

1) Number of students x .6 (average daily participation) x 2.5 gallons per meal served = volumetric capacity of grease interceptor. Example: 650 students x .6 ADP = 390 meals. 390 meals x 2.5 gallons/meal = 975 gallons.

2) School pretreatment units shall be in accordance with the Town of Bennett's Standards.

11.7. FLOW EQUALIZATION UNITS

A) These rules and regulations shall apply to all types of car or truck washing facilities, and other users of the collection system capable of discharging large volumes of wastewater. Plans for these facilities and operations shall be submitted to the Engineering or Public Works Department for approval of the type and size of pretreatment facility that may be required and to determine the need for a wastewater holding tank.

B) The need for a storage tank (holding tank) shall be based on actual or anticipated flows in the wastewater collection system at the point of connection and downstream so as to avoid sewer line surcharge. In the event such a tank is required it shall have the following characteristics:

1) The storage tank shall have the capacity to hold one day's (24 hours) output of wastewater. It shall be the responsibility of the owner to ensure the adequacy of the storage tank.

2) Under no circumstance shall by-pass facilities be installed between the washing operation and the sanitary sewer.

3) A submersible sump pump with the capacity to drain the storage tank during a 5 to 6 hour period and, approved by the Public Works Department shall be installed. The maximum flow of the pump shall not exceed 225 GPM.

4) The submersible pump shall be controlled by a timing device which shall allow the pump to operate during the period of midnight to six o'clock (6:00 a.m.). Consequently, no more than 81,000 gallons of wastewater may be discharged during this 6 hour period. Manual controls shall not be allowed and the control panel shall be locked at all times. The Town reserves the right to place a lead seal on the timer box door.

   a) Any time a seal must be broken in order to perform emergency repairs on the timer, and after the repairs have been completed, the seal shall be, replaced by the Public Works Department.

   b) It shall be unlawful to remove a seal on the timer control box in order to change the hour at which the pump is to operate.

   c) All vehicle washing facilities shall be subject to periodic routine evaluations by authorized Public Works Department personnel.

C) Firms Washing Five Cars or Less Per Day.

1) These firms shall not be required to install wastewater holding tanks.

2) They shall, however, be required to install an approved type interceptor.

11.8 ACID NEUTRALIZATION

A) Those individuals engaged in activities where acids are used, or stored shall be required to install and maintain acid neutralization pretreatment units. Only those drains which may receive acids intentionally or accidentally, shall be connected to the neutralization unit.

B) Neutralization units shall be installed in accordance with Drawing No. GT-6 in the back of this Chapter.

C) Materials. Acid neutralization units shall be made of vitrified clay, high density polyethylene, polypropylene or other material specified by a manufacturer for a specific application and approved by the Director of Public Works. Concrete units lined with "acid resistant materials" shall not be approved.

D) Size Determination.

1) Sizing of any acid neutralization unit shall be the responsibility of the Town Engineer or Director of Public Works and shall be as follows:

a) The number of sinks x 3.75 gallons per sink = Volumetric capacity of the unit (nearest size up).

b) In case a sink has more than one compartment, each compartment shall be considered a separate sink.

c) The smallest acid neutralization tank allowed shall be a five (5) gallon capacity unit.

E) Neutralization Media. Limestone chips or lumps are used in most acid pretreatment units. These chips or lumps shall not be less than 1" or more than 3" in any dimension.

F) Other Chemical Waste Pretreatment Methods. Other chemical pretreatment methods exist and may be approved by the Town of Bennett upon demonstration that they are safe, conform to all applicable standards, and produce an effluent that is acceptable to the Town.

11.9 SAND AND OIL INTERCEPTORS

A) These rules and regulations shall apply to service stations, truck or car wash facilities, vehicle maintenance facilities, machine shops and others where significant amounts of sand, oil and/or flammable wastes could enter the public sewer system.

B) Location, Design.

1) All sand and oil interceptors shall be located outside, on private property, within 30' and not less than 5' of the facility served and shall be accessible at all times for maintenance and examination.

2) All sand and oil interceptors shall have two compartments, the smallest of which shall have at least one third capacity of the entire interceptor (see Drawing No.'s 4 and 5).

C) Sizing for all Combination Sand & Oil Interceptors.

1) The sizing shall be the responsibility of the Town Engineer or Director of Public Works and shall be as follows:

a) Three (3) inch diameter floor drains shall be rated at six (6) fixture units (F.U.).

b) Four (4) inch floor drains shall be rated at eight (8) fixture units (F.U.).

c) One F.U. equals 7.5 GPM

d) Sizing formula shall be as follows:
Fixture units connected x 7.5 GPM x 5 minutes = interceptor size.

2) Where trough drains are used, each bay, or compartment, or area equaling the square foot surface of a standard service station bay, which is served by a trough drain shall be rated at six (6) F.U. per bay. Vehicle wash drains will be rated at eight (8) F.U. each regardless of size. (see Table I)

3) No combination sand and oil interceptor smaller than 320 gallon capacity shall be installed at a

single bay facility.

4) All interceptors shall be installed in accordance with the standard drawings of the Town of Bennett.

11.10 MONITORING FACILITIES

A) Installation of Monitoring Facilities. In order for the Town to establish strength indexes by sampling, analyzing and testing and to monitor sewage for deleterious wastes, some users may be required to install monitoring facilities together with such meters and equipment as may be needed. The following Rules and Regulations are established relative to this requirement.

1) To monitor a facility to determine strength indexes by sampling and testing, the Town Engineer or Director of Public Works shall first be satisfied that, the strength indexes cannot adequately be established by either the comparison method or the best judgement method.

2) To require a monitoring facility for the purpose of monitoring sewage or deleterious wastes, the Town Engineer or Director of Public Works shall first be satisfied that such monitoring cannot be accomplished by examination and observation of the operations or process that produce the sewage that he suspects to contain deleterious wastes.

3) After the Town Engineer or Director has determined the need for a control structure, he shall issue a notice to the user affected to have such a facility installed at that user's expense, in accordance with these Rules and Regulations.

4) Meters to be used to measure flow, directly or indirectly, to any Town of Bennett sewer system shall be capable of recording up to 999,999 gallons, and shall conform to all applicable Town Specifications. Such meters shall be inspected and approved for use by the Public Works Department.

B) Installation of Water Meter. In the event that the customer has an unmetered water supply separate from that of the Town of Bennett, the Director of Public Works may require that the user install a water meter in order to measure the quantity of water from that source, some part of which may be entering the Municipal Wastewater Works. The meter readings shall be used to estimate the discharge to the Town sewer from the private source. The notice of requirement will contain the following information:

1) Name and address of the person being notified to comply with the requirement of installing the meter.

2) Location of the building that the meter would serve.

3) Minimum specifications of the meter.

4) Time limit for the submission of Specifications for the Director's approval.

5) Time limit for the completion of the installation.

6) Statement of reasons for the requirement by the Director.

7) Statement of penalty for non-compliance.

C) Ownership. Meters, which are read for billing purposes by the Town, shall be owned by, and installed by the owner of the premises served by such meters.

D) Size and Type. The size, type and quality of all meters shall provide for accurate measurement of flow, excellence of material, and minimum line loss under all anticipated conditions of use for each size meter.

E) Location. All meters must be located as to allow free and non-hazardous access at reasonable times for reading, removal, examination verification and replacement, and so that the metered supply

of water to the premises will at all times be measured accurately. If, at any time, an existing meter location does not conform to the standards enumerated in this section, the owner shall be required to take corrective action.

11.11 TRAILER COURTS AND MOBILE HOME PARKS

A) All lot drain inlets shall extend not more than 4" above ground. Mobile home lot drain inlets and extensions to grade shall be of material approved for underground use within a building.

B) All materials used for sewer connections between a mobile home and the inlet shall be rigid, corrosion resistant, non-absorbent, and durable. The inner surface shall be smooth.

C) Provision shall be made for plugging or capping the lot inlet when a mobile home does not occupy the lot.

D) Connections from the drain outlet to the lot drain inlet shall be water and air tight. When a mobile home lot is vacant, the drain on the lot shall be capped, so as to be water and air tight.

11.12 VENTING

A) Vents not required. Where permitted by the Public Works Department, vent piping may be omitted on an interceptor when such interceptor acts as a primary settling tank and discharges through a horizontal indirect waste pipe into a secondary interceptor. The second interceptor shall be properly trapped and vented.

B) Materials. Vent pipe shall be cast iron, galvanized steel, galvanized wrought iron, lead, copper or brass. Where combustible construction is allowed, ABS and PVC vent pipe will be approved.

1) No galvanized wrought iron or galvanized steel pipe shall be used underground, but shall be kept at least 6" above the ground.

2) Vent fittings shall be cast iron, galvanized steel, galvanized malleable iron, copper,

brass, ABS, PVC, except that no galvanized iron or galvanized steel fitting shall be used underground but shall be kept at least 6" above the ground.

3) Changes in direction of vent piping shall be made by the appropriate use of approved fittings and no such pipe shall be strained or bent. Burred ends shall be reamed to the full bore of the pipe.

C) Size of Vents.

1) The size of vent piping shall be determined from its length and the total number of fixture units connected thereto, as set forth in Table 3.

2) A vent may exceed one-third of the maximum horizontal length as limited by Table 3 only if the vent is increased one pipe size for its entire length.

D) Vent Pipe Grades and Connections.

1) All vent and branch vent pipes shall be free from drops or sags and each such vent shall be level or shall be so graded and connected as to drip back by gravity to the drain pipe it serves.

2) Where vents connect to a horizontal drain pipe, each vent pipe shall be taken off the center line of such pipe ahead of the trap being served.

3) Unless prohibited by structural conditions, each vent shall rise vertically to a point not less than 6" above the flood level rim of the fixture served before offsetting horizontally, and whenever two or more vent pipes converge, each such vent pipe shall rise to a point at least 6" in height above the flood level rim of the plumbing fixture it serves before being connected to any other vent. When horizontal vents are less than 6" above flood level rim of the fixture, the horizontal portion shall be installed with approved drainage material.

4) All vent pipes shall extend undiminished in size above the roof, or shall be reconnected with a soil or waste vent of proper size. Weather heads will not be allowed.

E) Vent Termination.

1) Each vent pipe or stack shall extend through it's flashing and shall terminate vertically not less than 10" above the roof nor less than 1' from any vertical surface.

2) Each vent shall terminate not less than 10' from or at least 3' above any window, door, opening air intake or vent shaft, nor less than 3' in any direction from any lot line; alley and street excepted.

3) Vent pipes shall be extended separately or combined, of full required size, not less than 10" above the roof or fire wall.

4) Vent pipes for outdoor installations shall extend at least 10' above the surrounding ground and shall be securely supported.

5) Joints around vent pipes shall be made water tight by the use of approved flashing or flashing material.

TABLE 3

Venting for Grease & Combination Sand & Oil Interceptors

Pipe Size	Max. F. Units		Max. Lengths
1½"	1		45
1½"	8	(1)	60
2" (Min. vent size for exterior installations)	24		120
2½"	48		160
3" (2)	84		212
4"	256		300
5"	600		390
6"	1380		510

Note: (1) except six-unit traps

(2) Minimum pipe diameter of inlet and outlet of Type A, B and C grease interceptors, Type A and B combination sand and oil interceptors.

Note: The diameter of an individual vent shall not be less than 1¼" or less than one-half of the diameter of the drain to which it is connected.

F) Where the venting of an interceptor is connected to other vent piping, the authority of the Public Works Department will stop just prior to that connection.

11.13 SWIMMING POOLS

A) These Rules and Regulations shall apply to all swimming pools and all those private individuals, commercial and industrial firms with facilities to store large amounts of unpolluted water which are not normally allowed, unless by written authorization of the Town Engineer or Director of Public Works, in the public sanitary sewer.

1) Backwash filter wastewater discharge shall be connected only to the sanitary sewer. Pretreatment prior to discharge may be required.

2) Pools may be drained to the curb and gutter so long as no less than two days have been allowed to pass since chlorination has ceased. No pool drain shall be physically connected to the storm sewer system.

3) Pool water may be used for irrigation of the owner's property at his discretion and risk. Persons wishing to dispose of pool water in this manner should make sure there is no chlorine left in the water prior to disposal.

4) In operation of a swimming pool facility, the following must be strictly adhered to when the facility is directly or indirectly connected to the sanitary sewer system.

a) Draining the pool shall be accomplished only between the hours of 12 midnight and 6:00 a.m. or as established by the Director of Public Works.

b) The owner or manager shall request permission from the Public Works Department

at least twenty four (24) hours in advance of each time the pool is drained.

c) The drain from the pool shall be permanently controlled to discharge no more than 0.5 cubic feet per second or 225 gallons per minute (GPM).

5) No swimming pool wastewater shall be discharged where it will empty into a public right-of-way at a rate exceeding 225 GPM, or at any rate that endangers property of other owners. No pool wastewater shall be discharged into the public right-of-way during freezing weather.

6) The Public Works Department accepts no responsibility for damage resulting from the discharging of any swimming pool waters. Any variation from this procedure will be considered a direct violation and will be grounds for issuance of a Notice of Violation or Summons and Complaint by the Town.

11.14 STORM SEWER AND DRAINAGE SYSTEM CONNECTIONS

No direct physical connection (TAP) shall be allowed into the storm drainage system unless, such connection is approved by the Director of Public Works or Town Engineer.

11.15 ABANDONMENT OF PRETREATMENT FACILITIES

In the event the use of a building changes to one in which no pretreatment of wastes is needed or one in which a different form of pretreatment of wastes is required, the abandoned facilities shall be pumped and cleaned of accumulated material and:

A) Disconnected from service; removed from the ground and hauled away for proper disposal or;

B) Disconnected from service, filled with sand or other approved material and by-passed.

C) As an abandoned pretreatment facility may constitute a danger to those in the area and/or the public sewer system, improper abandonment shall be considered a safety violation and shall be dealt with accordingly.

D) Proper abandonment shall be considered the responsibility of the present owner(s) or tenant(s).

E) All pretreatment unit abandonment activities, must be approved by the Department of Public Works.

11.16 VIOLATIONS

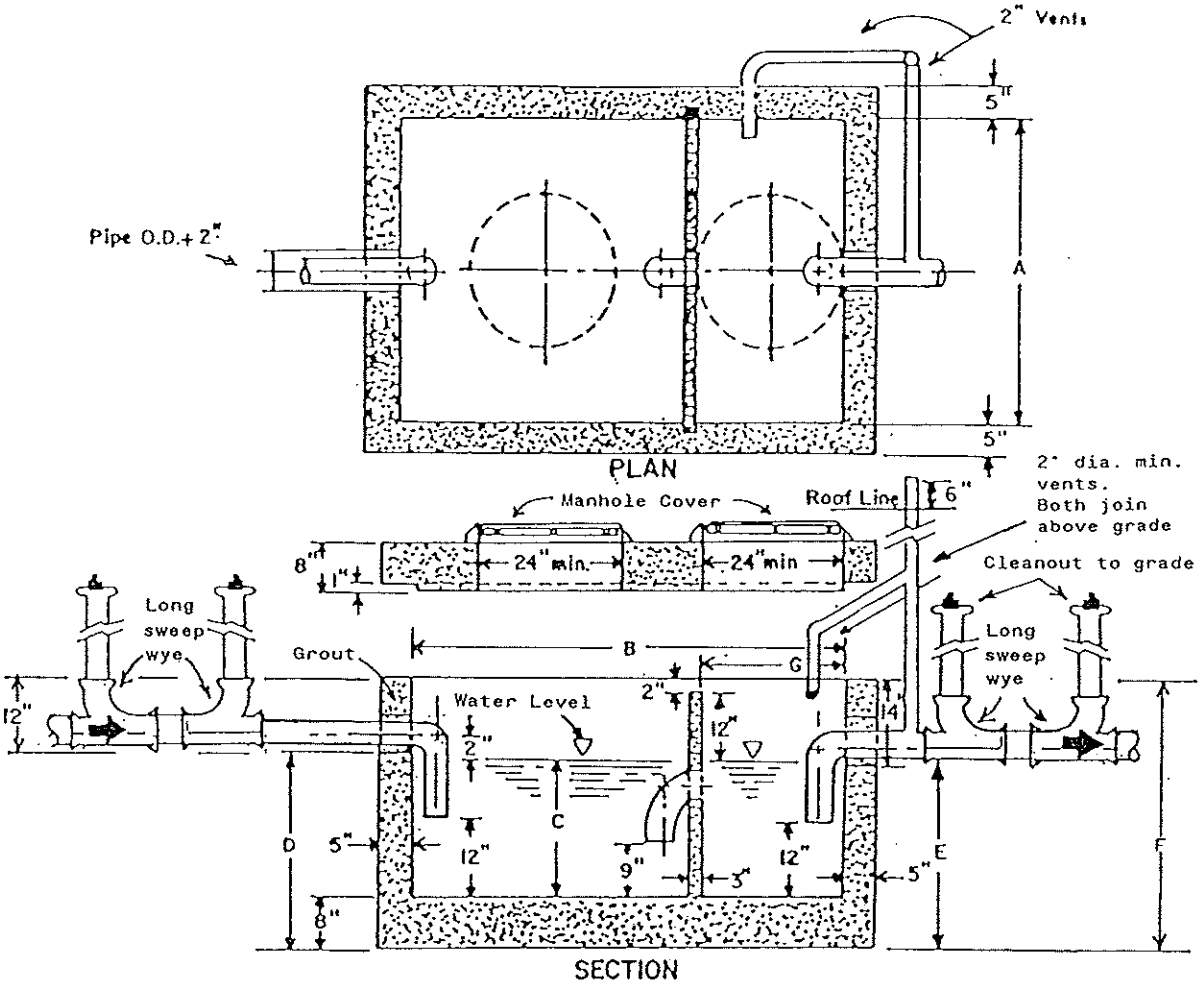
A) Failure to maintain any pretreatment facility in efficient working condition shall constitute a safety violation.

B) Any unauthorized alteration or damage to any pretreatment facility or method shall constitute a safety violation.

C) When a violation to these Rules and Regulations, Wastewater Discharge Permit letter or any applicable Code or Rules or Regulations is determined to exist, the Director of Public Works or his authorized agent shall issue to the responsible person a notice of violation. This notice shall contain at least the following:

1) The name of the person cited for the violation.
2) Location of the violation.
3) Details of the violation.
4) Corrective action to be taken by the cited person.
5) Time limit for the corrective action to be taken.
6) Recommendations if any.
7) Penalty for non-compliance.
8) Statement on alternative immediate action available to the Town in accordance with existing Ordinances.

D) Should the violation still exist after the time limit on the notice to comply has elapsed, the Director of Public Works or the authorized representative thereof may issue a summons and complaint.



NOTES

1. Secondary compartment has volume equal to 1/3 of total capacity.
2. All pipe and fittings to be cast iron. Minimum 3" diameter.
3. Walls and bottom reinforced throughout with 2x16 6/10 remesh
4. Covers to be reinforced longitudinally with No. 6 rebar on 6" centers, No. 4 rebar on 6" centers widthwise, and No. 8 rebar diagonally around the access holes.
5. Clean out shall be an iron body ferrule with brass screw plug.
6. Vent pipe shall be cast iron to a point 6" above ground.
7. Manhole ring and cover shall be Neenah R-1706, or equal.
8. Check with supplier for exact dimensions.
9. No boltdown covers allowed without permission of the Bennett Public Works Department.

Water Capacity Approx-imate Gallons	Grease Capacity Approx-imate Cubic. Ft.	DIMENSIONS Two Compartment Tank INCHES						
		A	B	C	D	E	F	G
320	17	48	72	22	32	30	44	24
500	32	48	72	36	46	44	58	24
780	47	48	96	40	50	48	62	20
1060	74	72	102	34	44	42	56	30
1250	87	80	112	35	43	41	57	36

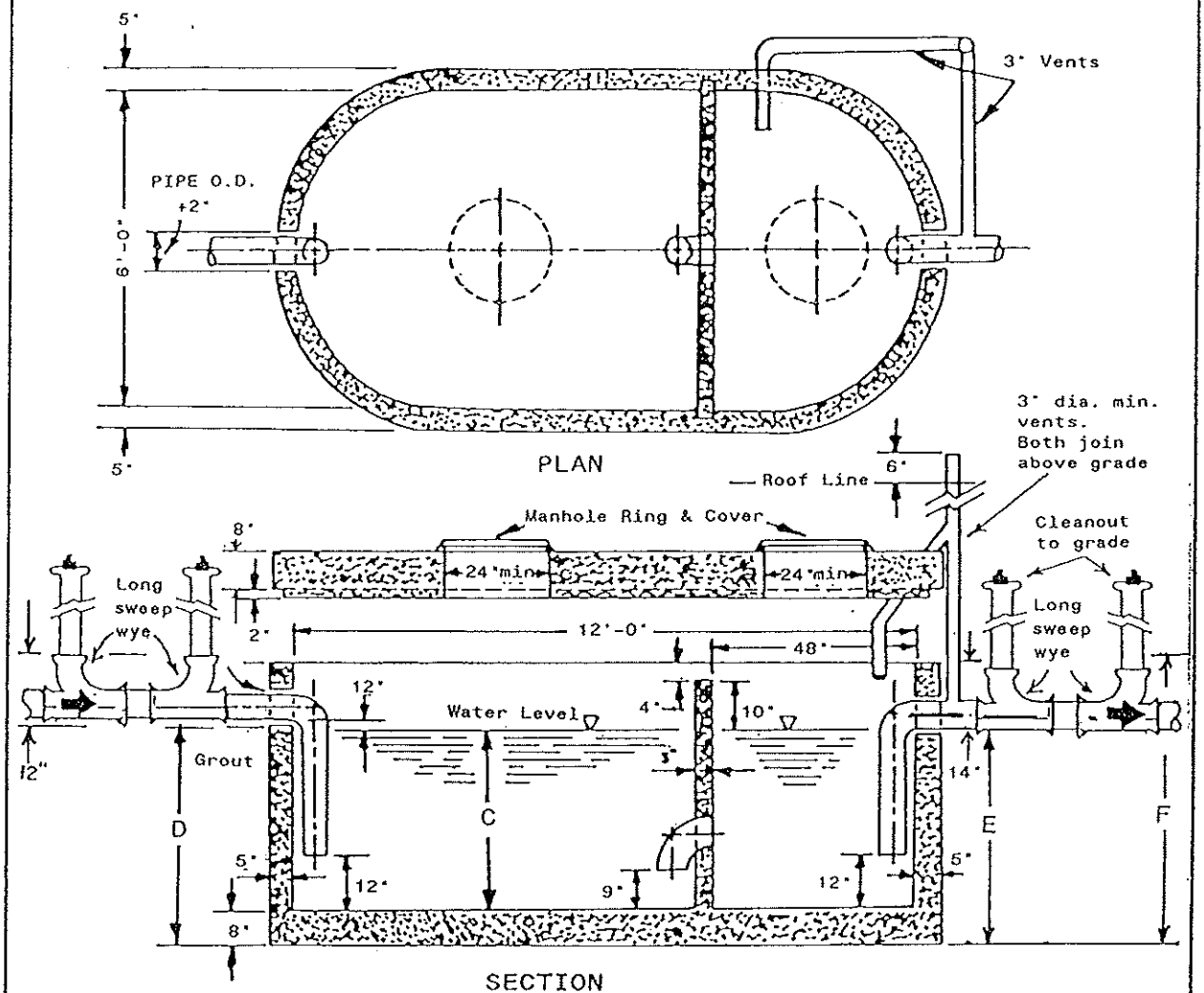
GREASE INTERCEPTOR
TYPE "A" COMMERCIAL

Town of Bennett

Issued: _____

Revised: _____

Drawing No.
GT-1



NOTES

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2. All pipe and fittings to be cast iron. Minimum 3" diameter.
3. Walls and bottom reinforced throughout with 2x16 6/10 remesh
4. Covers to be reinforced longitudinally with No. 6 rebar on 6" centers, No. 4 rebar on 6" centers widthwise, and No. 8 rebar diagonally around the access holes.
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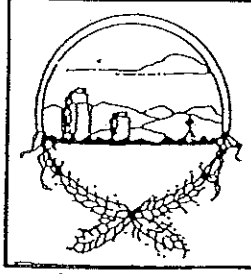
6. Vent pipe shall be cast iron to a point 6" above ground.
7. Manhole ring and cover shall be Neenah R-1706, or equal.
8. Check with supplier for exact dimensions.
9. No boltdown covers allowed without permission of the Bennett Public Works Department.

Grease capacity rated for large compartment only

Water Capacity (approx.) Gals.	Grease Capacity (approx.) Cu.Ft.	Dimensions (inches)			
		C	D	E	F
1565	100	40	50	48	62
1800	121	46	56	54	68
2035	143	52	62	60	74
2505	186	64	74	72	86
2975	229	76	86	84	98
3210	250	82	92	90	104
3445	271	88	98	96	110



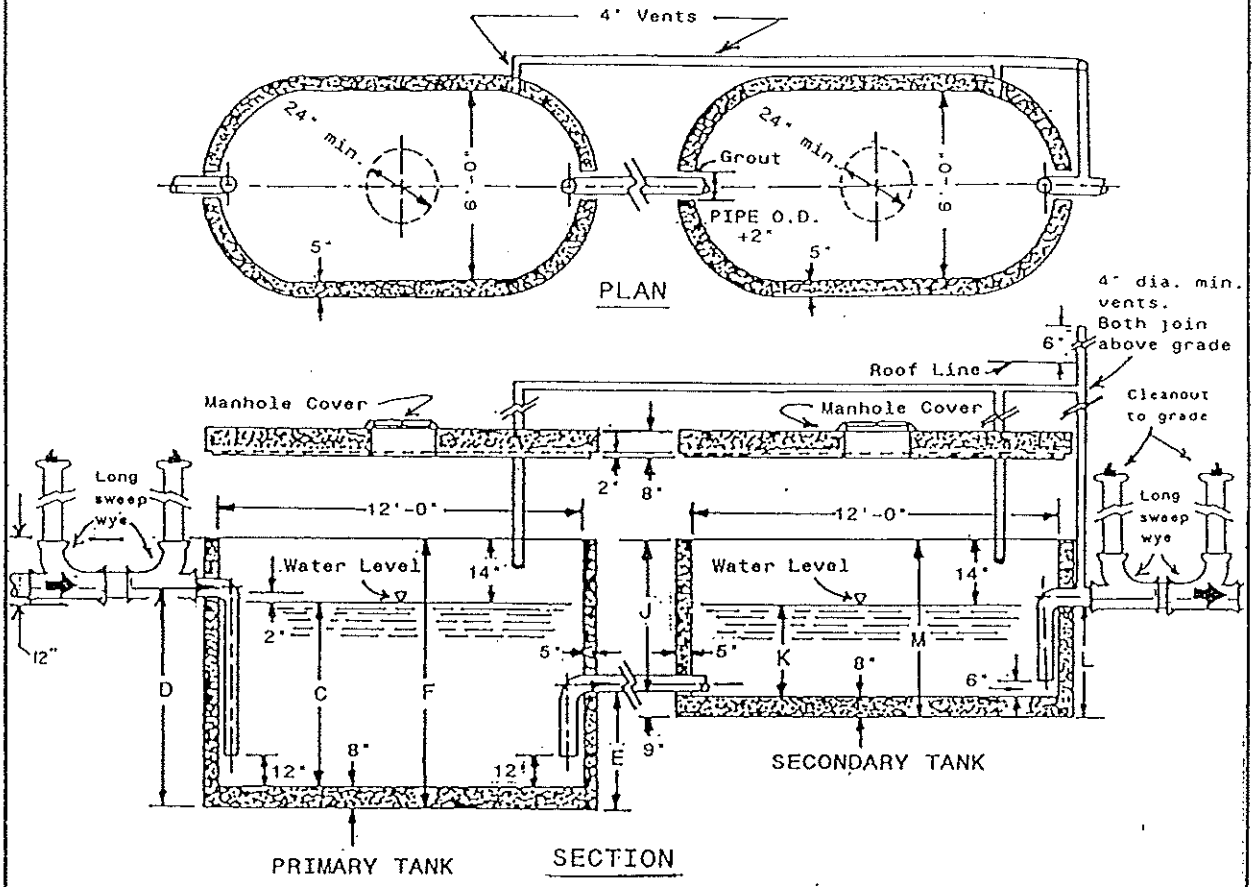
GREASE INTERCEPTOR TYPE "B" COMMERCIAL

Issued: _____

Revised: _____

Town of Bennett

Drawing No. GT-2

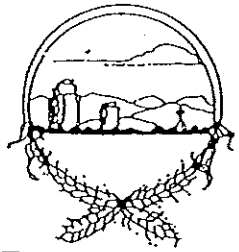


NOTES

1. Secondary compartment has volume equal to 1/3 of total capacity.
2. All pipe and fittings to be cast iron. Minimum 3" diameter.
3. Walls and bottom reinforced throughout with 2x16 6/10 remesh
4. Covers to be reinforced longitudinally with No. 6 rebar on 6" centers, No. 4 rebar on 6" centers widthwise, and No. 8 rebar diagonally around the access holes.
5. Clean out shall be an iron body ferrule with brass screw plug.
6. Vent pipe shall be cast iron to a point 6" above ground.
7. Manhole ring and cover shall be Neenah R-1706, or equal.
8. Check with supplier for exact dimensions.
9. No boltdown covers allowed without permission of the Bennett Public Works Department.

Water Capacity (approx.) Gals.	Grease Capacity (approx.) Cu.Ft.	Dimensions (inches)							
		primary				secondary			
		C	D	E	F	J	K	L	M
4160	311	70	80	45	32	47	34	42	56
4640	343	76	96	45	98	53	40	48	62
4880	375	82	92	51	104	53	40	48	62
5360	407	88	98	51	110	59	46	54	68
5600	439	94	104	57	116	59	46	54	68
6060	471	100	110	57	122	65	52	60	74

Grease capacity rated for large compartment only



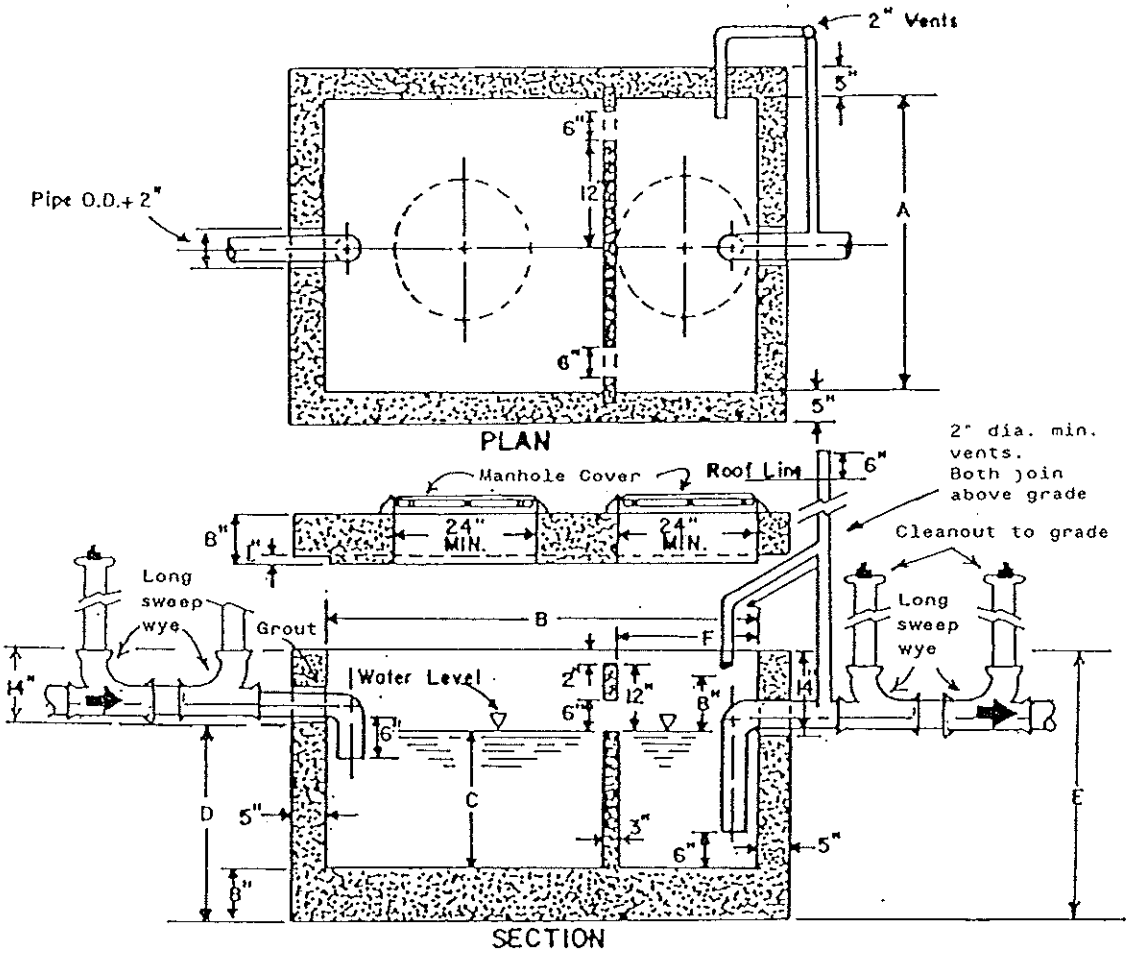
GREASE INTERCEPTOR
TYPE "C" INDUSTRIAL

Issued: _____

Revised: _____

Town of Bennett

Drawing No. GT-3



NOTES

1. Secondary compartment has volume equal to 1/3 of total capacity.
2. All pipe and fittings to be cast iron. Minimum 3" diameter.
3. Walls and bottom reinforced throughout with 2x16 6/10 remesh
4. Covers to be reinforced longitudinally with No. 6 rebar on 6" centers, No. 4 rebar on 6" centers widthwise, and No. 8 rebar diagonally around the access holes.
5. Clean out shall be an iron body ferrule with brass screw plug.
6. Vent pipe shall be cast iron to a point 6" above ground.
7. Manhole ring and cover shall be Neenah R-1706, or equal.
8. Check with supplier for exact dimensions.
9. No boltdown covers allowed without permission of the Bennett Public Works Department.

Water Capacity Approx-imate Gallons	DIMENSIONS Two Compartment Tank INCHES					
	A	B	C	D	E	F
320	48	72	22	30	44	24
500	48	72	36	46	44	58
780	48	96	40	48	62	20
1060	72	102	34	42	56	30

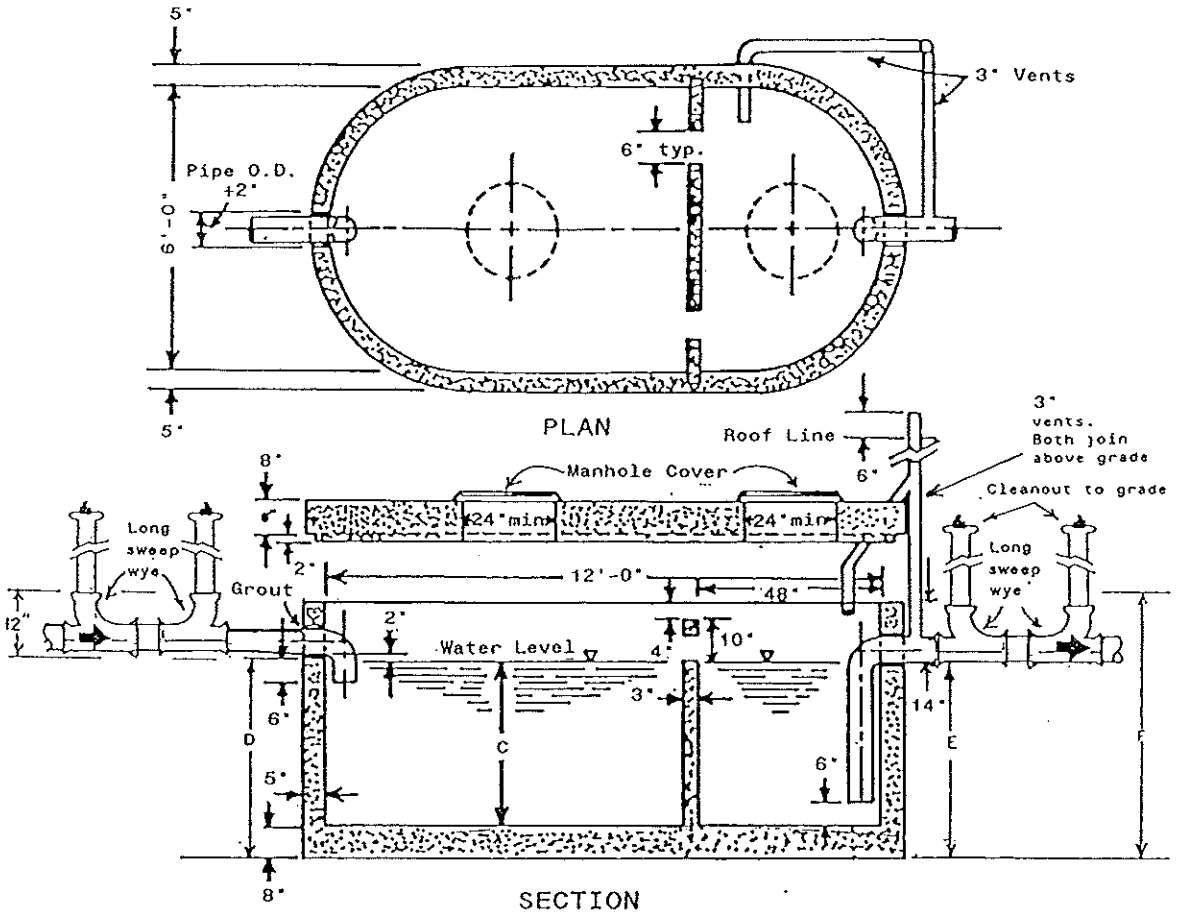
SAND & OIL INTERCEPTOR
TYPE "A" COMMERCIAL

Issued: _____

Revised: _____

Town of Bennett

Drawing No. GT-4



NOTES

1. Secondary compartment has volume equal to 1/3 of total capacity.
2. All pipe and fittings to be cast iron. Minimum 3" diameter.
3. Walls and bottom reinforced throughout with 2x16 6/10 remesh
4. Covers to be reinforced longitudinally with No. 6 rebar on 6" centers, No. 4 rebar on 6" centers widthwise, and No. 8 rebar diagonally around the access holes.
5. Clean out shall be an iron body ferrule with brass screw plug.
6. Vent pipe shall be cast iron to a point 6" above ground.
7. Manhole ring and cover shall be Neenah R-1706, or equal.
8. Check with supplier for exact dimensions.
9. No boltdown covers allowed without permission of the Bennett Public Works Department.

Water Capacity (approx.) Gals.	Dimensions inches			
	C	D	E	F
1565	40	50	48	62
1800	46	56	54	68
2035	52	62	60	74
2505	64	74	72	96
2975	76	86	84	98
3210	82	92	90	104
3445	86	96	96	110

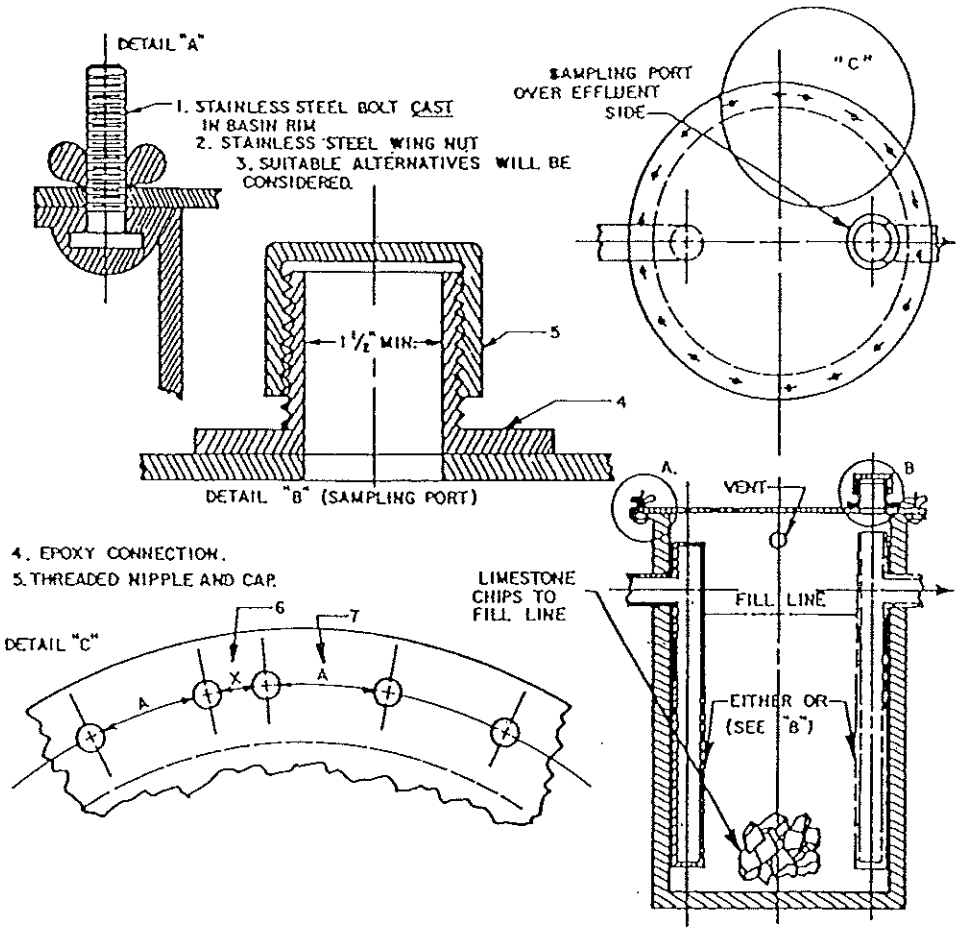
SAND & OIL INTERCEPTOR TYPE "B" COMMERCIAL

Issued: _____

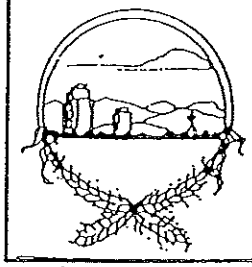
Revised: _____

Town of Bennett

Drawing No. GT-5



6. INTERVAL "X" PROVIDES KEY SO THAT COVER WILL FIT ONLY WHEN SAMPLING PORT IS IN CORRECT POSITION. SUITABLE ALTERNATIVES WILL BE CONSIDERED.
7. ALL OTHER INTERVALS ARE "A".
8. MOST MANUFACTURERS WILL PLACE THE RISER TO SUIT THE NEEDS OF THE CUSTOMER. THE RISER MUST BE IN ONE LOCATION OR THE OTHER - NOT BOTH.
9. ALL UNITS MUST BE INSTALLED SO THAT THEY ARE EASILY ACCESSIBLE FOR MAINTENANCE AND TESTING.
10. WHERE A UNIT IS TO BE LOCATED UNDERGROUND A CONCRETE VAULT MUST BE PROVIDED AND SAMPLING PORT MUST BE EXTENDED TO A POINT NO LESS THAN 6" AND NO MORE THAN 12" BELOW THE LEVEL OF THE FINISHED FLOOR OR GROUND.
11. MATERIALS - SPECIFIC MATERIALS MUST BE SELECTED FOR SPECIFIC APPLICATIONS.
    A. HIGH DENSITY POLYETHYLENE AND POLYPROPYLENE MATERIALS ARE RECOMMENDED IN MOST CASES.
    B. VITRIFIED CLAY UNITS ARE SUITABLE IN MOST INSTANCES.
    C. CONCRETE UNITS LINED WITH "ACID RESISTANT" MATERIAL WILL NOT BE APPROVED.
12. ACID NEUTRALIZATION TANKS AND INSTALLATIONS THEREOF MUST BE INSPECTED AND APPROVED BY THE TOWN OF BENNETT PUBLIC WORKS DEPARTMENT.



ACID NEUTRALIZATION UNIT

Issued: _____

Revised: _____

Town of Bennett

Drawing No. GT-6