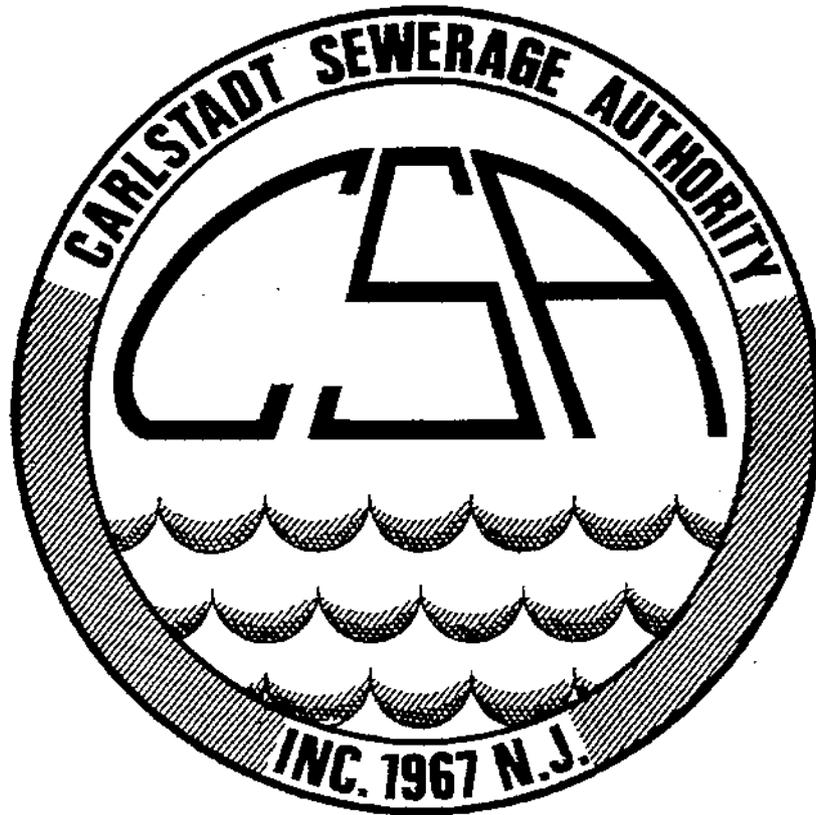


RULES AND REGULATIONS

Revised May 1998



CARLSTADT SEWERAGE AUTHORITY CARLSTADT, NEW JERSEY

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CARLSTADT SEWERAGE AUTHORITY

RULES AND REGULATIONS

DISCLAIMER

The AUTHORITY specifically reserves the right to repeal, modify and/or amend these Rules and Regulations at any time, with or without notice. None of these provisions shall be deemed to create a vested contractual right or limit the power of the AUTHORITY to repeal, modify and/or amend said Rules and Regulations.

SEVERABILITY

Should any article, section, subsection, paragraph, sentence, clause or phrase of these Rules & Regulations be adjudged by any Court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the article, section, subsection, paragraph, sentence, clause or phrase thereof directly involved in the controversy in which said judgment shall have been rendered.

CARLSTADT SEWERAGE AUTHORITY

RULES AND REGULATIONS

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**CARLSTADT SEWERAGE AUTHORITY
BERGEN COUNTY, NEW JERSEY**

RULES AND REGULATIONS

The Carlstadt Sewerage Authority, constituted and created in 1967 by virtue of the New Jersey Public Laws of 1946, Chapter 138, page 639, section I (N.J.S.A. 40:14A-1 et seq.), hereby supplements the power and authority granted and delegated to it under said statute by promulgation of the following Rules and Regulations in accordance with N.J.S.A. 40:14A-7.

The following Rules and Regulations shall be and are hereby declared to be the Rules and Regulations of the Carlstadt Sewerage Authority for the Sewerage System, which is owned, operated or under the jurisdiction of this Authority, effective by Resolution duly adopted by the Carlstadt Sewerage Authority as follows:

ARTICLE I

Definitions

Unless the context specifically indicates otherwise, the meaning of terms used in this ordinance shall be as follows:

- Section 1. The word "Authority" shall mean the Carlstadt Sewerage Authority (CSA), and/or its duly authorized agent or representative.
- Section 2. The word "Customer" shall mean the applicant for sewerage service at one household, industry or business, whether owner or tenant enters into an agreement for such service.
- Section 3. The word "Owner" shall mean the person holding title of record to the property.
- Section 4. "Engineer" shall mean the Engineer of the Carlstadt Sewerage Authority or its authorized agent or representative.
- Section 5. "Street" shall mean any public right-of-way, including but not limited to any street, road, lane, court, alley, or public square.
- Section 6. "Authority Sewer" shall mean the Authority-owned piping and appurtenances, in or along public rights-of-way, roads, streets and easements.
- Section 7. The word "Main" shall be synonymous with "Authority Sewer".

- Section 8. "Service Lateral" shall mean that part of the Authority Sewer from the main to the curb line, easement line, or the abutting property line.
- Section 9. "Residential Sewage" shall mean the normal waterborne fluid wastes from residences.
- Section 10. "Industrial Sewage" shall mean liquid wastes distinct from residential sewage being discharged from industrial and commercial establishments, including liquid wastes from manufacturing and commercial processes, trade or business, and wastes from kitchens, bathrooms, water closets, lavatories, laundries, or other facilities contained in an industrial or commercial establishment.
- Section 11. "BOD" (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter or in satisfying the oxygen demand of other materials present during incubation for a given time and at a specified temperature. It shall be reported as the amount of oxygen used in a period of five (5) days at twenty (20) degrees C., expressed in milligrams per liter.
- Section 12. "Building Drain" shall mean that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five (5) feet (1.5 meters) outside the inner face of the building wall.
- Section 13. "Building Sewer" shall mean the extension from the building drain to the Authority sewer or other place of disposal.
- Section 14. "Garbage" shall mean solid wastes from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling, storage and sale of produce.
- Section 15. "Natural Outlet" shall mean any outlet into a watercourse, pond, ditch, creek, lake, or other body of surface or groundwater.
- Section 16. "Person" shall mean any individual, firm, company, association, society, corporation, or group, and includes the State of New Jersey and agencies, districts, commissions and political subdivisions created by or pursuant to State Law.
- Section 17. "pH" shall mean the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution. Neutral water has a "pH" value of seven (7) (a hydrogen concentration of 10^7). Lower "pHs" are acid; higher "pHs" are alkaline.
- Section 18. "Chlorine Demand" shall mean the quantity of chlorine absorbed in water, sewage or other liquids, allowing a residual of one tenth (0.1) ppm by weight after fifteen (15) minutes of contact.

- Section 19. "Properly Shredded Garbage" shall mean the wastes from the preparation, cooking, and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half (½) inch (1.27 centimeters) in any direction.
- Section 20. "Sanitary Sewer" shall mean a sewer which carries sewage and other liquid wastes to which storm, surface, and groundwaters are not intentionally admitted.
- Section 21. "Sewage" shall mean a combination of the water-carried wastes from any building or structure, including but not limited to residences, business buildings, institutions, and commercial and industrial establishments, together with such ground, surface, and storm waters as may be present.
- Section 22. "Sewage Treatment Plant" shall mean the plant and facilities of the Bergen County Utilities Authority (BCUA) to which the Sewerage System is connected for the purpose of treating and disposing of Sanitary Sewage and/or Industrial Sewage collected by the Sewerage System.
- Section 23. "Sewerage System" shall mean all facilities of the Carlstadt Sewerage Authority for collecting, pumping, and disposing of sewage.
- Section 24. "Sewer" shall mean a pipe or conduit for carrying sewage.
- Section 25. "Shall" is mandatory, "May" is permissive.
- Section 26. "Slug" shall mean any discharge of water, sewage, or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four hour concentration of flows during normal operation.
- Section 27. "Storm Drain" (sometimes termed "storm sewer") shall mean a sewer which carries storm and surface waters and drainage, but excludes sewage and industrial wastes, other than unpolluted cooling water.
- Section 28. "Suspended Solids" shall mean solids that either float on the surface of, or are in suspension in water, sewage, or other liquids, and which are removable by laboratory filtering.
- Section 29. "Watercourse" shall mean a channel in which a flow of water occurs, either continuously or intermittently.
- Section 30. The abbreviation "ppm" shall mean parts per million; "mg/l" shall mean milligrams per liter.

- Section 31. "C.O.D." (denoting Chemical Oxygen Demand) shall mean the amount of oxygen required for the complete chemical oxidation of organic and oxidizable inorganic matter in a liquid.
- Section 32. "Force Main" shall mean a pipe line carrying flow under pressure.
- Section 33. "Hazardous Pollutant" shall mean:
- (1) Any toxic pollutant;
 - (2) Any substance regulated as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act, Pub.L.92-516 (7 U.S.C. & 136 et seq.);
 - (3) Any substance the use or manufacture of which is prohibited under the federal Toxic Substances Control Act, Pub.L.-94-469 (15 U.S.C. & 2601 et seq.);
 - (4) Any substance identified as a known carcinogen by the International Agency for Research on Cancer.
 - (5) Any hazardous waste as designated pursuant to section 3 of P.L. 1981, c.279(C.13:1E-51) or the "Resource Conservation and Recovery Act" Pub.L.94-580(42 U.S.C. & 6901 et seq.) or;
 - (6) Any hazardous substance as defined pursuant to section 2 of P.L. 1976. c.141 (C58:10-23.11b).
- Section 34. "Health Officer" - the Health Officer or the person duly licensed by the State of New Jersey and performing the duties of Health Officer appointed by the Borough of Carlstadt.
- Section 35. "Holding Tank Waste" shall mean any waste from holding tanks such as vessels, chemical toilets, campers, trailers, mobile homes, septic tanks, industrial storage tanks, concentrated baths and tank trucks.
- Section 36. "Industrial Cost Recovery" - A charge to industrial users based on their use of the BCUA facility to repay the capital cost outlay of the federal share given to the respective facility under the provisions of applicable federal law allocable to the treatment of the wastes from the industrial users.

- Section 37. "Industrial Wastes" or "Industrial Pollutant" shall mean non-domestic pollutants, including but not limited to, those pollutants regulated under Section 307 (a), (b) or (c) of the Act.
- Section 38. "Infiltration" shall mean water entering the Authority Sewer System from the ground, through such means as, but not limited to, defective pipes, pipe joints, connections or manhole walls. Infiltration does not include, and is distinguished from, inflow.
- Section 39. "Inflow" shall mean water discharged into the Authority Sewer System from such sources as, but not limited to, roof leaders, cellar, yard and area drains, foundation drains, cooling water discharges, drains from springs and swampy areas, manhole covers, cross connections from storm sewers and combined sewers, catch basins, storm waters, surface run-off, street wash waters or drainage. Inflow does not include, and is distinguished from, infiltration.
- Section 40. "National Categorical Pretreatment Standard" shall mean any regulation containing pollutant discharge limits promulgated by the EPA in accordance with Sections 307 (b) and (c) of the Act which applies to a specific category of industrial users. (Synonymous with "Categorical Pretreatment Standards.")
- Section 41. "National Pollutant Discharge Elimination System" (NPDES) shall mean the program for issuing, conditioning and denying permits for the discharge of pollutants from point sources into the navigable waters, the contiguous zone and the oceans pursuant to Section 402 of the Clean Water Act.
- Section 42. "New Jersey Pollutant Discharge Elimination System" (NJPDES) shall mean the program for issuing, conditioning and denying permits for the discharge of pollutants into the waters of the State pursuant to the State Act.
- Section 43. "Oil and grease" includes the non-petroleum-based pollutants of animal and vegetable origin which are analyzed by the analytical method for oil and grease referenced in 40 CFR Part 136 as of July 1, 1982, including subsequent amendments, and the petroleum-based pollutants analyzed by the method for petroleum hydrocarbons cited in Methods for Chemical Analysis of Water and Wastes., USEPA, Environmental Monitoring and Support Laboratory, Office of Research and Development., Cincinnati, OH, March 1979, including amendments and revisions.
- Section 44. "Plumbing Inspector" - the Plumbing Inspector duly appointed by the Mayor and Council of the Borough of Carlstadt.
- Section 45. "Pollutant" shall mean a substance, whether gaseous, liquid or solid, soluble or insoluble, of organic or inorganic nature, which alters the natural chemical, physical, biological or radiological properties of water.

- Section 46. "Pretreatment" shall mean application of physical, chemical and/or biological processes to reduce the amount of pollutants in or alter the nature of the pollutant properties in a wastewater prior to discharging such wastewater into the Authority Sewer System.
- Section 47. "Pretreatment Standards" shall mean all applicable Federal, State or local substantive or procedural requirements related to pretreatment, other than a National Categorical Pretreatment Standard imposed on an industrial user.
- Section 48. "Pumping Station" shall mean a facility in which wastewater is conveyed from a lower hydraulic elevation to a higher hydraulic elevation using mechanical or pneumatic devices.
- Section 49. "Regulatory Agency" shall mean agencies, such as, but not limited to, the New Jersey Department of Environmental Protection (NJDEP or DEP), the United States Environmental Protection Agency (USEPA or EPA) and the United States Army Corps of Engineers which have authority over the operation of and/or discharges from the Authority Sewer System.
- Section 50. "Sanitary Waste" shall mean wash water, culinary wastes and liquid waste containing only human excreta and similar matter, flowing in or from a building drainage system or sewer originating in a dwelling, business building, factory or institution. For the purposes of these Rules and Regulations, sanitary waste shall be characterized as containing 200 mg/l BOD and 240 mg/l SS. The term "Domestic Waste" shall have the same meaning as "Sanitary Waste".
- Section 51. "Significant Indirect User", (SIU), shall mean:
1. Any user including, but not limited to, any Significant Industrial User as defined in 40 CFR 403.3 (t) but excluding municipal collection systems, who discharges wastewater into the BCUA Treatment Works, where:
 - (a) The user is subject of Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or
 - (b) The user's average volume of process wastewater exceeds 25,000 gallons per day; or
 - (c) The amount of BOD, COD or Suspended Solids in the user's process wastewater discharge exceeds the mass equivalent of 25,000 gallons per day of the domestic waste of the BCUA's Treatment Works; or

- (d) The volume of process wastewater in the discharge exceeds five percent or more of the average daily dry weather flow of the BCUA's Treatment Works; or
 - (e) The user's discharge of process wastewater contributes five percent or more of the daily mass loading of any of the pollutants listed in N.J.A.C. 7:14A, Appendix B. Table II - VI; or
 - (f) The user is designated as an SIU by the BCUA on the basis that the user has a reasonable potential for adversely affecting the CSA operation; or
 - (g) The user is designated as an SIU by the BCUA on the basis that the user has been in violation of any Federal, State, or Local pretreatment standard or requirement, including but not limited to, significant noncompliance as defined in 40CFR 403.8 (f)2(vii); or
 - (h) The BCUA determines it would be consistent with the intent of the Act or State Act to require a permit for the indirect discharger; and
2. Any user where:
- (a) The user's discharge consists of landfill leachate, which is either pure, treated or diluted; or
 - (b) The user's discharge consists of 25,000 gallons per day or more of polluted groundwater which is pumped from the ground in order to decontaminate an aquifer; however
3. Upon a finding that any user has no reasonable potential for adversely affecting the BCUA's operation or for violating any Federal, State, or local pretreatment standard or requirement, the Authority may at any time, on its own initiative or in response to a petition received from a user, and in accordance with 40CFR 403.8(f)(6), determine that any user specific in paragraphs 1 or 2 above, unless the user is subject to Categorical Pretreatment Standards under 40CFR403.6 and 40 CFR Chapter I, Subchapter N, is not an SIU.

Section 52. "Significant Non-Complier" shall mean any person or industrial user who commits any of the following violations:

- (a) Serious violation for the same pollutant at the same discharge point source, in any two months of any six month period.

- (b) Exceedance of the monthly average or, in case of a pollutant for which no monthly average has been established, the monthly average of the daily maximums of an effluent limitation for the same pollutant at the same discharge point source by any amount in any four months of any six month period.
- (c) Technical review criteria: thirty-three (33%) percent or more of all of the measurements for each pollutant parameter during a six-month period equal to or exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH).
- (d) Chronic violation: sixty-six (66%) percent or more of all other measurements for each pollutant parameter during a six-month period exceed)by any magnitude) the average limit or the daily maximum limit.
- (e) Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the Authority determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of Authority personnel or the general public).
- (f) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the BCUA's exercise of its emergency authority under the General Pretreatment Regulations, 40 CFR 403.8(f)(1)(vi)(B) to halt or prevent such a discharge.
- (g) Failure to submit required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules, within thirty (30) days after the due date.
- (h) Failure to submit a completed periodic self-monitoring report in any two months of any six month period.
- (i) Failure to meet, within ninety (90) days after the schedule date, a compliance milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance.
- (j) Failure to accurately report noncompliance.
- (k) Any other violation or group of violations which the Authority determines will adversely affect the operation or implementation of the local pretreatment program.

- Section 53. "State Act" shall mean the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1, et seq.
- Section 54. "Toxic Substance" shall mean those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly or indirectly by ingestion through food chains, may, on the basis of information available to the NJDEP, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformation, in such organisms or their offspring. Toxic pollutants shall include but not be limited to those pollutants designated under Section 307 of the Act or Section 4 of the State Act.
- Section 55. "Treatment Works" shall mean the structures, equipment, devices, systems and processes required to collect, transport and treat wastewater and dispose of the effluent and accumulated residual solids. Treatment works include, among other things, sewage treatment facilities, sewage systems, pumping facilities, and all appurtenance additions and alterations thereof.
- Section 56. "Unpolluted Water" shall mean water to which no constituent has been added.

ARTICLE II

Use of Public Sewers Required

- Section 1. It shall be unlawful for any person to place, deposit, or permit to be deposited in any unsanitary manner on public or private property within any area under the jurisdiction of the Carlstadt Sewerage Authority, any human or animal excrement, garbage, or other objectionable waste.
- Section 2. It shall be unlawful to discharge to any natural watercourse within the area under the jurisdiction of said Carlstadt Sewerage Authority, any sewage or other polluted waters, except where suitable treatment has been provided in accordance with subsequent provisions of these Rules and Regulations, and regulations of the New Jersey Department of Environmental Protection.
- Section 3. Except as hereinafter provided, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of sewage.
- Section 4. The owner of all existing houses, buildings, or properties used for human occupancy, employment, recreation, or other purposes, situated within the area under jurisdiction of the Authority and abutting on any street, alley, or right-of-way in which there is

now located or may in the future be located an Authority sanitary sewer, is hereby required at his expense to install suitable toilet facilities therein, and to connect such facilities directly with the Authority sewer in accordance with the provisions of these Rules and Regulations, within thirty (30) days after date of official notice to do so.

ARTICLE III

Private Sewage Disposal

- Section 1. Where an Authority sewer is not available under the provisions of Article II, Section 4, the building sewer shall be connected to a private disposal system complying with the provisions of this article and the regulations of the New Jersey Department of Environmental Protection.
- Section 2. Before commencement of construction of a private sewage disposal system, the owner shall first obtain a written permit signed by Health Officer, Authority Engineer, Plumbing Inspector and the Authority. The application for such permit shall be made on a form furnished by the Authority, which the applicant shall supplement by plans, specifications, and other information as are deemed necessary by the Authority. A permit and inspection fee shall be paid to the Authority at the time the application is filed.
- Section 3. A permit for a private sewage disposal system shall not become effective until the installation is completed to the satisfaction of the Health Officer, Authority Engineer, Plumbing Inspector and the Authority. These individuals or their representatives shall have the right to inspect the work during any stage of construction. The applicant for the permit shall notify same when the work is ready for final inspection, and before any underground portions are covered.
- Section 4. The type, capacities, location, and layout of a private sewage disposal system shall comply with all regulations of the New Jersey Department of Environmental Protection and the Department of Health. No permit shall be issued for any private sewage disposal system employing subsurface soil absorption facilities. No septic tank or cesspool shall be permitted to discharge to any natural watercourse.
- Section 5. At such time as the Authority sewer becomes available to a property served by a private sewage disposal system, as provided in Article III, Section 4, a direct connection shall be made to the Authority sewer in compliance with these Rules and Regulations, and any septic tanks, cesspools, and similar private sewage disposal facilities shall be abandoned and filled as provided in Section 8 here following.

- Section 6. The owner shall operate and maintain the private sewage disposal facilities in a sanitary manner at all times, at no expense to the Authority, who shall have the right to inspect said facilities at all times.
- Section 7. No statement contained in this article shall be construed to modify any more stringent requirements that may be imposed by the New Jersey Department of Environmental Protection or the Local Health Officer.
- Section 8. When an Authority sewer becomes available, the building sewer shall be connected to said sewer within thirty (30) days and the private sewage disposal system shall be cleaned and filled with clean bank-run gravel or dirt, as approved.

ARTICLE IV

Building Sewers and Connections

- Section 1. No person shall uncover, make any connections with or opening into, use, alter, or disturb any Authority sewer or appurtenance thereof without first obtaining a written permit from the Authority.
- Section 2. There shall be two (2) classes of building sewer connections: (a) for residential service, and (b) for service to commercial establishments and industrial establishments producing commercial and industrial wastes. In either case, the owner and tenant shall make application on a special form furnished by the Authority. The application shall be supplemented by plans, specifications, or other information considered pertinent in the judgment of the Authority and its Engineer. A connection fee, or such other fees prescribed by the Authority's official Rate Schedule, shall be paid to the Authority at the time the application is filed. Permits shall be issued by the Authority upon approval of the plans and specifications by the Engineer, and the payment of permit, inspection, installation and connection fees and charges as hereinafter provided.
- Section 3. No application for service will be accepted by the Authority until the applicant has paid, or made satisfactory arrangements to pay all arrears and charges due by the applicant at any premises now or theretofore occupied by him.
- Section 4. The accepted application shall constitute a contract between the Authority and the applicant, obligating the applicant to pay to the Authority its rates as established from time to time, and to comply with its Rules and Regulations.
- Section 5. Applications for service connections will be considered, subject to there being an Authority sewer in streets or rights-of-way abutting the premises to be served.

- Section 6. When a prospective customer has made applicant for service, or has applied for the reinstatement of an existing service, the Authority shall not accept any responsibility for condition of the building sewer and fixtures on the applicant's premises.
- Section 7. A new application must be made and approved by the Authority, notwithstanding the fact that service is already provided to the building, upon any change in ownership of the property when the owner is the customer, or in any tenancy where the tenant is the customer, or in the type of discharge as described in the application, and the Authority shall have the right, upon five (5) days' notice, to discontinue the sewer service until such new application has been made and approved. Although property may be occupied or leased to a tenant and the tenant may have paid the sewer bills, the owner of the property shall be responsible for payment of any sewer bills not paid by the tenant. The owner further shall be responsible for notifying the Authority when a tenant leaves the property and for the making of new applications reflecting changes in tenancy or ownership.
- Section 8. Industrial and commercial establishments, making application for sewerage service in addition to making written application for such services, shall furnish a detailed description of the type and size of buildings; the nature of the business to be conducted in each structure; the number and type of fixtures to be served; the type, volume, and chemical characteristics of the waste to be discharged. Such applicants shall also furnish the Authority a plan showing:
- (a) The boundaries of the property.
 - (b) The location within the property of the structures to be served.
 - (c) The location and profile, with respect to the finished grade, of the services.
 - (d) Details of the proposed connections to the sewerage systems, and arrangement and details of meter installations where required.
- Section 9. The owner of any building which is connected to the Authority sewer, and is discharging industrial wastes, which changes its method of operation so that a different type of waste is to be discharged, shall notify the Authority thirty (30) days previous to such change and submit a new Application for Permit to Discharge Wastes into the Sanitary sewerage System. Failure to notify the Authority of such changes or to make a new application will subject the offending party to possible discontinuance of service in accordance with Section 7 of this Article.

- Section 10. When service has been discontinued, service will be renewed under proper application, only when the conditions under which such service was discontinued are corrected, and upon the payment of all charges provided in the rate schedule of the Authority.
- Section 11. Where there is an existing connection and an additional connection is desired, the customer shall make application in accordance with the requirements for making the original connection as set forth in these Rules and Regulations.
- Section 12. Where a sewer connection has been previously installed and service is desired, or an original or additional connections are desired, a proper application shall be signed by both the owner and the tenant.
- Section 13. The Authority will make connections to its mains, and where said mains are located in streets, will furnish, install, and maintain all service laterals from the main to the curb line, property line, or easement line, all of which service lateral shall remain the sole property of the Authority. Mains and service laterals shall not be trespassed on or interfered with in any respect. Where the Authority's main is located in a right-of-way, the Authority will make the connection between the service laterals and the Authority's main and extend the service lateral to the abutting easement line or property lines. The applicant shall pay a connection charge for each such service lateral or connection made by the Authority, in an amount provided in the official Rate Schedule of the Authority. In addition to the charges stated above, there shall also be paid to the Authority, any permit fee and any additional, extraordinary charges for restoration of street, sidewalk, paving or landscaped areas incurred by the Authority.
- Section 14. All costs and expenses incident to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the Authority from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.
- Section 15. A separate and independent building sewer shall be provided for every building; except where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard, or driveway. In such cases, the building sewer from the front building may be extended to the rear building and the whole considered one building sewer.
- Section 16. Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the Authority Engineer, to meet all requirements of these Rules and Regulations.

Section 17. The size, slope, alignment, materials of construction of a building sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the applicable Rules and Regulations of the Authority. The building sewer shall be installed by a licensed plumber, shall be inspected and approved by the Authority Engineer and local Board of Health Inspector, prior to backfilling the trench. Any construction not inspected and approved shall be immediately removed and reconstructed in an approved manner.

Section 18. The minimum diameter of a building sewer shall be as follows:

Residential	-	4 inches
Commercial and Industrial	-	6 inches

Section 19. The minimum slope of a building sewer shall be as follows:

4-inch diameter	-	¼ inch/foot
6 - and 8-inch diameter	-	⅙ inch/foot

Section 20. Pipe material shall be concrete, extra heavy weight cast iron pipe, cast iron soil pipe or ductile iron pipe, or plastic pipe (PVC) except where corrosive waste may be present, in which case vitrified clay pipe will be permitted. Pipe and joints as stated in Section 39 of this Article shall be used under the conditions stated therein.

Cast iron pipe shall comply with the ANSI Standard A21.6 or A21.8 and A21.10. Joints shall comply with ANSI Standard A21.11.

Ductile iron pipe shall comply with the ANSI Standard A21.51. Joints shall comply with ANSI Standard A21.4.

Vitrified clay pipe shall comply with the ASTM Standard C200 and NCPI Standard ER4. Joints shall comply with the ASTM Standard C425, Type III.

Plastic pipe (PVC) shall comply with the ASTM Standard D3034 with minimum wall thickness to conform to SDR35. Joints shall be of flexible type and comply with ASTM Standard D2855 and D321. Plastic pipe shall be installed in accordance with the manufacturer's recommendations and the requirements of ASTM Standard D2321 and the details shown.

Unless otherwise approved all joint ring material for building sewers shall be neoprene.

Section 21. All pipe shall be laid in accordance with the requirements of AWWA Manual M41-Ductile Iron Pipe and Fittings published by the American Water Works Association.

Alignment shall be maintained by approved methods and checked prior to backfilling the trench.

Section 22. The applicant for a sewer connection shall notify the Authority when the building sewer is ready for inspection, testing and connection to the Authority sewer. No trench shall be filled or any part of pipe or fittings covered until such inspection is made by the Engineer and the work is approved. The inspection shall be made as soon as practicable after the receipt of notice by the Authority inspector, who shall have the power to apply proper tests to the pipe or fittings. The owner or contractor doing the work shall furnish the tools and labor necessary for the tests, and shall remove defective materials and repair work improperly done as the Authority inspector directs.

Section 23. Whenever it is necessary to carry a trench containing a sewer connection under any stone, asphalt or cement sidewalk, no portion of the surface of the sidewalk shall be disturbed or removed. The trench shall be carried underneath, with the under portion of the walk supported in such a manner as to render it safe for public use. All supporting material under the walk shall be placed to prevent the sagging or falling of the walk or damage thereto. Where the Authority inspector is of the opinion that it is not possible to comply with the requirement, the Authority may, in writing, permit the surface of the walk to be removed. In such case, the surface of the walk shall be relaid by the permittee within ten (10) days from the date of permit.

Section 24. The connection of the building sewer into the Authority sewer shall conform to the requirements herein and other applicable Rules and Regulations of the Authority. All such connections shall be made gas tight and watertight. Connections to the Authority sewer shall be made utilizing a saddle connection.

No connection to the Authority sewer shall be made without inspection and approval of the Authority inspector.

Section 25. The Authority inspector shall be notified at least twenty-four hours before the commencement of any work upon sewer connections. Inspection of work will be provided between the hours of 9 a.m. and 4 p.m. on regular working days, except for emergencies. Permission for emergency inspection of work at other times, including Saturdays, Sundays and legal holidays, may be obtained from the Chairman of the Authority.

Section 26. Where plugs exist on the connection to the Authority sewer they shall be removed in the presence of the Authority inspector or his representative.

Section 27. All pipes shall be laid on approved foundation stone. Foundation stone shall be at least four (4) inches deep under the pipe and shall be carried up to the spring line of the pipe. All pipes shall be covered to a depth of at least two (2) feet above the pipe with fine earth, entirely free from stones and rubbish, and shall be well and carefully tamped. No filling shall be done above the pipe until the materials under and around the pipe have been well and carefully tamped to provide a secure and stable base for the pipe. The material above the pipe shall be applied in layers, each of which shall be not more than six (6) inches in thickness. Each layer shall be well and carefully tamped before the succeeding layer is applied. After a layer of two (2) feet has been applied, the remaining material may be carefully returned to the trench and tamped to obtain a soil density equal to the undisturbed adjacent soil.

All PVC pipe shall be laid on pea gravel foundation. The pea gravel shall be at least four (4) inches deep under the pipe and shall be carried up to $\frac{1}{4}$ of the pipe. A geotextile material shall then be placed on top of the pea gravel. The entire pipe trench shall then be filled with sand, compacted in layers of 4" or less, to 12" above the pipe. The remaining trench shall be backfilled as noted above.

Section 28. In all commercial and industrial building sewer connections, where an inspection manhole is not required, a tee shall be installed. There shall be connected to the tee a six (6) inch diameter standpipe "lamp hole", capped by a clean-out plug, brought from the tee to the surface of the ground. The standpipe shall not be installed in the tee until the portion of the trench adjacent to the standpipe can be backfilled. At that time, the standpipe shall be installed in the tee, securely braced to prevent lateral movement, and the trench shall then be backfilled immediately. Any clean-out standpipes that may be required in the line from the curb to the building wall shall be treated and constructed in the same manner. The standpipe or "lamp hole" shall be available for examination at all times by a representative of the Authority.

Section 29. No service lateral shall be laid in the same trench with any gas pipe, water service, or any other facility of any public service company, nor within three (3) feet of any open excavation, vault, meter pit, nor shall the location be in conflict with any sidewalk or driveway running at right angles to the front of the building.

The building sewer shall not be laid in the same trench with the water service connection and shall be provided with a minimum horizontal separation of ten (10) feet and normally shall be placed at a lower elevation and at least eighteen (18) inches below the bottom of the water service line. The depth shall be sufficient to afford protection from frost. The building sewer shall be laid at uniform grade and in straight alignment.

- Section 30. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building drain shall be lifted by an approved means and discharged to the building sewer.
- Section 31. No person shall make connection of roof downspouts, exterior foundation drains, areaway drains or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to the Authority sewer.
- Section 32. All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Authority.
- Section 33. Where the renewal of the service lateral from the main to the curb line or property line is found to be necessary, the Authority will renew the service in the location previously used. If the property owner or customer, for his own convenience, desires the new service lateral at some other location, and agrees to pay all expenses of such relocation in excess of the cost of laying the service lateral in the same location as previously used, and cutting and disconnecting the old service lateral, the Authority will lay the new service lateral at the location desired.
- Section 34. All connections, building sewers and fixtures furnished by the customer, shall be maintained by him in good order, and all piping and connections furnished and owned by the Authority and on the property of the customer, shall be protected properly and cared for by the customer. All leaks in the building sewer or any other pipe or fixture in or upon the premises served, must be repaired immediately by the owner or occupant of the premises. The customer shall be responsible for doing any maintenance work on the customer's building sewer. The customer shall not backfill any trench until their work has been inspected and approved by the Authority's representative. Any work not acceptable shall be immediately removed and replaced by work which is acceptable.
- Section 35. The Authority shall in no way be responsible for maintaining any portion of the building sewer owned by the customer, or for damage done by sewage escaping therefrom; or for lines or fixtures on the customer's property; and the customer shall at all times comply with applicable Rules and Regulations with respect thereto, and make changes therein, required by reason of changes of grade, relocation of mains, service laterals, or otherwise.

- Section 36. Unless otherwise approved, a service lateral shall not serve more than one property or more than one building, but any such property upon proper application of the owner may be served by two or more service laterals, each of which, for billing purposes, shall be considered as being one customer account. All additional service laterals shall be installed by the Authority. The cost of the additional service lateral shall be borne by the customer who shall reimburse the Authority the actual cost of the installation.
- Section 37. Where two or more customers are served through a single service lateral, any violation of the Rules and Regulations of the Authority, with respect to either or any of said customers, shall be deemed a violation as to all, and unless said violations are corrected after reasonable notice, the Authority may take such action as may be taken for a single customer, except that such action will not be taken until an innocent customer, who has not violated the Authority's rules, has been given a reasonable opportunity to connect his pipe to a separately controlled service lateral.
- Section 38. All residential, commercial, industrial or other buildings connected to the sewer system shall provide, as an integral part of the plumbing system, a stack vent not less than ten (10) feet above grade. Ground level curb or yard vents are prohibited and shall not be connected to the sewer system.
- Section 39. Where groundwater is normally above the invert elevation of the service lateral, "Tylox" joints, or otherwise approved cast iron soil pipe, with properly caulked lead joints, shall be used in construction of building sewers. Where the trench bottom is soft and yielding, the Authority reserves the right to require that the sewer be laid in partial or total concrete encasement. Junctions of two different types of pipe, may, at the option of the Authority, be required to be encased in concrete of mix determined by the Authority Engineer.
- Section 40. The Authority will accept industrial wastes into the sewerage system upon acceptance of formal written application, and under and subject to the provisions appearing in said application, and the Rules and Regulations stated herein. The application shall set out in detail the characteristics of the wastes, the flow conditions which shall govern and the conditions with respect to the physical connection or connections. It will be the policy of the Authority to consider each application on its own merits, and to establish specific conditions applicable to the particular situation for each application. No connection shall be made prior to acceptance of the application.
- Section 41. Prior to approving an application for a connection involving the acceptance of industrial wastes, the applicant shall submit complete data in accordance with the

forms provided by the Authority and as required by Bergen County Utilities Authority.

Section 42. In all buildings in which any building sewer or piping or drainage facilities connected thereto are too low to permit gravity flow to the public sewer, sanitary sewage carried by such drain shall be lifted by a grinder pump of a type and size acceptable to the Engineer and discharged to the service connection or building sewer. The owner shall in every instance supply and install the grinder pump system at a place and in a manner determined by the Engineer, and the homeowner shall bear the cost to connect to the building and the private sewerage system, to power and to maintain said grinder pump. Simultaneously, these homeowners shall be allowed to maintain their existing private sewage disposal systems.

Section 43. No person shall divert or pump the waste from any existing private sewage system, such as septic tanks, seepage pits, cesspools or jet-air tanks, into any of the Authority's sewer line. All such waste must be eliminated by the use of tank trucks which shall transport the waste to a sewer plant equipped for the treatment and elimination of these wastes.

The diverting and pumping of waste from the private sewage system and the transporting of the same to a sewer treatment plant shall be performed by a contractor who has been duly licensed to perform such services.

ARTICLE V

Use of Public Sewers

Section 1. No person shall discharge or cause to be discharged any storm water, surface water, groundwater, roof runoff, subsurface drainage or swimming pool water, into the Authority Sewerage System. Unless specifically approved, discharge of uncontaminated cooling water, or unpolluted industrial process waters to any sanitary sewer shall be prohibited.

Section 2. Storm water and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as storm sewers, or to a natural outlet approved by the Authority and the New Jersey Department of Environmental Protection. Industrial cooling water or unpolluted process waters may be discharged, on approval of the Authority, to a storm sewer or natural outlet.

Section 3. No person shall discharge or cause to be discharged any of the following described waters or wastes to any Authority sewers:

- (a) Any gasoline, benzene, naphtha, fuel oil, lacquers, paint or other flammable or explosive liquid, solid or gas.
- (b) Any waters or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity either singly or by interaction with other wastes, to injure or interfere with the Authority sewers or any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant, including but not limited to cyanides in excess of two (2) mg/1 as CN in the wastes as discharged to the Authority sewer.
- (c) Any waters or wastes having a pH lower than five and five tenths (5.5), or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel.
- (d) Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewerage system such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rages, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails and paper dishes, cup, milk containers, etc., either whole or ground by garbage grinders.

Section 4.

No person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely in the opinion of the Authority that such wastes can harm either the sewers, sewage treatment process, or equipment, have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming an opinion as to the acceptability of these wastes, the Authority will give consideration to such factors as the qualities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plant, and other pertinent factors. A waste flow that may be initially acceptable to the Authority may in the future, without any change in the wastes' own characteristics or volume, become unacceptable by virtue of the enactment of stricter and more extensive prohibitions of deleterious substances, materials, waters, or wastes. In such cases the Authority shall take action as provided in Section 5 of this Article. The substances prohibited are:

- (a) Any liquid or vapor having a temperature higher than one hundred fifty (150) degrees F (65 degrees C).

- (b) Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of one hundred (100) mg/1 or containing substances which may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150) degrees F (0 and 65 degrees C).
- (c) Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of three-fourths (3/4) horsepower (0.76 hp metric) or greater shall be subject to the review and approval of the Engineer.
- (d) Any waters or wastes containing strong acid iron pickling wastes, or concentrated plating solutions whether neutralized or not.
- (e) Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances; or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the connection to the sewers of the Carlstadt Sewerage Authority exceeds the limits established by the Carlstadt Sewerage Authority or the Bergen County Utilities Authority or NJDEP for such materials.
- (f) Any waters or wastes containing phenols or other taste- or odor-producing substances, in such concentrations exceeding limits which may be established by the Carlstadt Sewerage Authority or the Bergen County Utilities Authority as necessary, after treatment of the composite sewage, to meet the requirements of the State, federal, or other public agencies of jurisdiction for such discharge to the receiving waters.
- (g) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Carlstadt Sewerage Authority, the Bergen County Utilities Authority, or State or Federal regulations.
- (h) Any waters or wastes having a pH in excess of nine and five tenths (9.5).
- (l) Materials which exert or cause:
 - (1) Unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to sodium chloride and sodium sulfate).
 - (2) Excessive discoloration (such as, but not limited to dye wastes and vegetable tanning solutions).

- (3) Unusual BOD, chemical oxygen demand, or chlorine demand in such quantities as to constitute a significant load on the sewage treatment plant of the Bergen County Utilities Authority.
- (4) Unusual volume of flow or concentration of wastes constituting "slugs" as defined herein.
- (j) Waters or wastes containing substances which are not amendable to treatment or reduction by the sewage treatment processes employed, or are amendable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

Section 5. If any waters are discharged, or are proposed to be discharged to the Authority sewers, which waters contain the substances or possess the characteristics enumerated in Section 4 of this Article, or which exceeds future standards by virtue of stricter prohibitions on characteristics and which in the judgment of the Authority, may have deleterious effect upon the sewerage system, processes, equipment, or receiving waters after treatment by the Bergen County Utilities Authority, or which otherwise create a hazard to life or constitute a public nuisance, the Authority may:

- (a) Reject the wastes.
- (b) Require pretreatment to an acceptable condition for discharge to the public sewers upon application, or at some future date;
- (c) Require control over the quantities and rates of discharge; and/or
- (d) Require payment to cover the added cost of handling and treating the wastes not covered by sewer charges under the provisions of Section 12 of this Article.

If the Authority permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Authority Engineer, and subject to the requirements of all applicable codes, ordinances, and laws.

Section 6. Grease, oil, and sand interceptors shall be provided when, in the opinion of the Authority, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved

by the Authority, and shall be so located as to be readily and easily accessible for cleaning and inspection.

- Section 7. Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense and shall be subject to periodic inspection by the Authority Engineer.
- Section 8. When required by the Authority, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable control manhole in the building sewer to facilitate observation and sampling. Such manhole, when required, shall be constructed in accordance with plans approved by the Authority. The manhole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.
- Section 9. When required by the Authority, the owner of any property serviced by a building sewer carrying industrial wastes shall install a meter chamber, together with such necessary meters, instruments and other appurtenances in the building sewer to facilitate observation, sampling and measurement of the wastes. Acceptable meters are ejector lift stations, Parshall flumes and open-flow nozzles. Such meter chamber, when required, shall be accessible in an approved location and shall be constructed in accordance with plans and specifications adopted by the Authority. The meter chamber shall be installed by the owner at his expense with ownership transferring to the Authority upon completion of the meter chamber. The meter chamber and appurtenances will be maintained, and the meters and instruments will be maintained, calibrated, and read by the Authority. Subsequent repairs, replacements, modifications or new meter chambers, when required by the Authority, shall be provided by the owner at his expense.
- Section 10. Where sewage meters are not practical, the magnitude of sewage flow to the Authority system shall be based on water meter readings of the previous year and/or meter readings from well pumps. Unless sewage meters are installed, the owner will be required to furnish and install approved meters with recording and totalizing instruments on all well pumps.
- Section 11. All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in these Rules and Regulations shall be determined in accordance with the latest edition of "Standard Methods for Examination of Water and Wastewater", published by the American Public Health Association. Sampling methods, locations, times, durations and frequencies are to be determined on an individual basis subject to the approval of the Authority and/or Bergen County Utilities Authority.

Section 12. No statement contained in this article shall be construed as preventing any special agreement or arrangement between the Authority and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the Authority for treatment, subject to payment therefor by the industrial concern.

Section 13. Any existing industrial user which proposes to make any change in its facility or its processing, which significantly affects the quality or the quantity of its discharge into the system, shall submit to the Authority an application for permit to discharge industrial wastes into the sanitary sewerage system, showing the contemplated changes. Any new tenant or occupant of an existing industrial user shall submit an application for permit to discharge industrial wastes into the sanitary sewerage system. The application, if approved by the Authority, shall be sent to the BCUA, accompanied by the written approval of the Authority. Existing industrial users that have applied for permits may continue their discharge until their application has been processed by the BCUA, except for any discharges which constitute prohibited waste as otherwise provided in this Article unless notified by the BCUA to cease and desist their discharge. No certificate of occupancy shall be issued by the BCUA.

Section 14. Applications.

1. Industrial applications shall be made by the industry that generates the waste; however, the application must be signed by the owner of the property whereon the industry is located as well.
2. The BCUA classification of an application is subject to change by the BCUA upon written notification from the BCUA to the applicant by certified mail. Any change shall be accompanied by a detailed explanation of the reason for the change.
3. In the case of a sanitary application for dwellings, group of dwellings or industrial or commercial establishments with only sanitary wastes, the application shall be made solely to the Authority.

Section 15. All applications for industrial permits shall be submitted on forms to be supplied by the BCUA and shall comply with the instructions on said form. Industrial permits shall be classified as follows:

1. Categorical
 - (a) A permit is issued to an industry that is classified in the code of Federal Regulations, part 400-700. Such as metal plating, pharmaceutical, etc.

2. Significant Industry

- (a) A permit is issued to an industry that discharges over 25,000 gallons per day of flow.

3. Non-Categorical

- (a) An industry which does not meet any of the above requirements.

Section 16.

1. Any industry aggrieved by a permit classification by the BCUA shall have a right to appeal to the respective facility. Such an administrative appeal shall be taken within (30) days of notification by the BCUA to the industry of its decision. The notice to appeal shall be delivered personally to the office of the BCUA at Foot of Mehrhof Road, Little Ferry, New Jersey, or shall be sent by certified mail, return receipt requested. During the time of appeal no industry shall be released from meeting any requirements of any schedule set by the New Jersey Department of Environmental Protection or the United States Environmental Protection Agency. Upon filing of an appeal, the respective facility shall set the date and time for a hearing before the Authority.
2. The applicant shall have the right to present evidence, shall have the right to be represented by counsel and shall have the right of cross-examination. Upon the conclusion of the hearing, the Authority shall make findings of fact and conclusions.

Section 17.

In addition to the application for the permit as herein above provided, each industrial user must complete and industrial survey form which will be supplied by the BCUA and, from time to time, shall update the form when required by the facility.

Section 18.

Monitoring systems; sampling points.

1. Whenever an industry is classified as a major industry, it shall install an approved, sealed, automatic monitoring system if required by the BCUA.
2. Each major industrial user shall construct or otherwise have available a sampling point for sampling wastewater before it enters the Authority's sewer system. Other industrial users may be required to construct such sampling point, if ordered by the Authority or the BCUA. The manhole shall be installed and maintained by the owner at his expense so as to be safe and accessible at all times.

Section 19. As pretreatment standards are adopted by the United States Environmental Protection Agency for any given category of industries, then any industry within the categories must conform to the USEPA timetable for adherence to pretreatment requirements as well as all other applicable requirements promulgated by the USEPA in accordance with the provisions of law. Additionally, such industries shall comply with such more stringent standards necessitated by local conditions as determined from time to time by the BCUA. The cost to maintain the preliminary treatment or flow-equalizing facilities in an satisfactory and effective operation is to be borne by the owner.

Section 20. All industrial users shall provide immediate access to their facilities at any time during normal working hours or at any other time that there is a discharge into the BCUA system or into any waters under the jurisdiction of the BCUA. Access shall be for the purpose of checking the quality of the discharge, taking samples and making tests of the discharge or for the purpose of permitting enforcement of this Article. The access shall be made available to the employees of the BCUA, NJDEP, USEPA and/or the Authority. All industrial users shall provide access to property and premises for inspection for the purpose of determining if there is any violation of the terms or provisions of this Article.

Section 21. Requirements and standards.

1. All persons subject to this Article shall be required to provide information to the Authority and the BCUA as needed to determine compliance with this Article. These requirements may include:
 - (a) Wastewater discharge peak rate and volume over a specified time period.
 - (b) Chemical analysis of wastewater.
 - (c) Information on raw materials, processes and products affecting wastewater volume and quality.
 - (d) Quantity and disposition of specified liquid sludge, oil, solvent or other materials important to sewer use control.
 - (e) A plot plan of sewers of the user's property showing sewer and pretreatment facility locations.
 - (f) Details of wastewater pretreatment facilities.

(g) Details of systems to prevent and control the losses of materials through spills to the Authority's sewer.

(h) Water records for the facility.

2. All users shall be required to comply with the requirement of user charge regulations and industrial cost recovery system regulations adopted by the BCUA in accordance with the requirements of the USEPA. The effective date for the implementation of user charge regulations and industrial cost recovery system regulations shall be established by resolution of the BCUA. The effective date shall be certified by the BCUA, and said written certification shall be filed in the office of the Authority.

Section 22. The Bergen County Utilities Authority "Rules and Regulations for the Direct and Indirect Discharge of Wastewater to the Bergen County Utilities Authority Treatment Works", or any subsequent revision thereto, is hereby made a part of these Rules and Regulations and shall be binding upon the customers.

ARTICLE VI

Abatement Rules and Regulations

Section 1. In accordance with R.S.40:14A-1 et seq., the Carlstadt Sewerage Authority shall grant an abatement for the commercial use of water to any user who applies and qualifies for same. The abatement shall apply to the Use Charge which would otherwise be charged in accordance with the Official Rate Schedule of the Authority.

Section 2. Any owner or occupant of a building connected to or about to be connected to the Carlstadt Sewerage Authority Sewer System may apply to the Authority for an abatement by filling in the Abatement Application Form, available at the Authority Office, which form must be picked up by the applicant.

Section 3. The Abatement Application Form, completely filled in and certified by the applicant to contain a true statement of the facts as they exist, must be submitted along with a fee of One Thousand Dollars (\$1,000.00) for inspection and processing to the Authority Abatement Committee.

Section 4. Within sixty (60) days from the date of submission of the Abatement Application Form and the fee of One Thousand Dollars (\$1,000.00), the Authority will cause its Engineer and/or employees to inspect the premises of the applicant and will obtain a report from said Engineer and/or employees with regard to the abatement requested. In the event that the Engineer or employees render a report that they are unable to inspect the premises or to obtain the cooperation of the applicant with regard to

needed information, the Authority may deny the Application for Abatement forthwith.

- Section 5. Within ninety (90) days from the date of the submission of the Abatement Application Form and the fee of One Thousand Dollars (\$1,000.00), the Abatement Committee will meet and consider the application and the Engineer's report. The Abatement Committee will then render a decision in writing as to whether or not the applicant is entitled to an abatement.
- Section 6. In the event the Abatement Committee renders a decision that the applicant is not eligible for an abatement, the applicant shall have thirty (30) days from the date of receipt of the decision of the Abatement Committee to appeal same, by notifying the Authority in writing of such appeal along with the reasons therefor. The Authority shall then set a date, time and place for a hearing at which time the applicant will be given an opportunity to present any competent evidence and testimony in order to show the Authority that an abatement should be granted. The Authority will then reconsider the application in the light of the evidence submitted and render its final decision in writing.
- Section 7. In the event that the Abatement Committee renders a decision that the applicant is entitled to an abatement, the Committee shall set forth the category on the Abatement Schedule (attached Appendix B) into which the applicant falls and shall also set for the Alternative Method or Methods which may be used in the applicant's case to determine the amount of the abatement. The Alternative Methods are listed in Section 13.
- Section 8. In the event that the Authority Abatement Committee determines that the applicant is entitled to an abatement, then the applicant shall have the right to accept an abatement based on the Abatement Schedule hereinafter set forth based on the percentage listed for the category into which the applicant shall have been placed, or the applicant may elect to adopt the Alternative Method or Methods applicable to the industry or business involved, as determined by the Abatement Committee.
- Section 9. The applicant shall, within ten (10) days of the receipt of the determination of the Abatement Committee, notify the Authority in writing of its acceptance of the abatement and its election of either the percentage abatement or an abatement based on the Alternative Method or Methods. If the Alternative Method or Methods are elected, then the applicant shall proceed in accordance with the rules and regulations set forth hereinafter in Section 13 under the appropriate plan.
- Section 10. If the applicant is dissatisfied with the determination of the Abatement Committee, the applicant may, within ten (10) days of receipt of the decision of the Abatement Committee, notify the Authority in writing that he is dissatisfied with the category

into which he has been placed, or the designated Alternative Method and the reasons for his dissatisfaction. The Authority shall then set a date, time and place for a hearing, and the applicant will have the opportunity to present competent evidence and testimony with regard to the questions raised by the applicant in his notification to the Authority.

Section 11. Only industries or businesses which use water in their commercial processes will be considered for an abatement by the Authority Abatement Committee. There will be no abatements for watering lawns or maintenance of buildings, grounds or equipment of any nature.

Section 12. No applicant will be considered for an abatement unless the applicant's application for connection has been fully completed, certified and submitted to the Authority. No applicant will be considered for an abatement unless the building involved is actually connected into the sewerage system, except in the case of a building under construction. No applicant will be considered for an abatement unless at least 50% of the charges, including interest, as billed by the Authority to the date of the application, have been paid to the Authority by the applicant. In the event that an abatement is granted resulting in an overpayment of use charge, the applicant will be credited with such overpayment. No refund shall be given by the Authority to the applicant, except, however, the Authority will consider a refund, if requested by the applicant, and if the credit shall result in a prepayment by the applicant of a sum equal to more than two (2) years total sewer charges.

Section 13. Any abatements granted by the Carlstadt Sewerage Authority in accordance with the within rules and regulations is subject to periodic verification by the Authority, its employees or Engineer. In the event that an inspection reveals that the methods of processes used by the industry or business involved have changed, the Authority reserves the right to cancel the abatement entirely, decrease it, or to require the user to submit information necessary to determine whether or not the abatement should be continued.

ALTERNATIVE A - WATER METERS.

1. A system using water meters may be utilized to determine the amount of an abatement, if it is determined by the Engineer of the Authority that the process used by the applicant or the product manufactured can be reasonably adapted to a water metering system.

2. The Abatement Committee will, at the time its determination on the application is rendered, advise the applicant as to the number and location of such water meters.
3. In the event that the applicant is granted permission to use the water meter system of determination of the abatement, the Authority will supply the applicant with standards for the water meter or meters to be installed. The meter must be sealed.
4. Water meters will be installed at the sole cost and expense of the applicant, and the meters must be calibrated at the direction of the Authority Engineer, at the expense of the applicant. The water meter shall be by Hershey Products, Inc., or equal, of a type and model approved by the Authority.
5. The water meters will be read once a year by a representative of the Authority and a charge of Fifty Dollars (\$50.00) will be added to the sewerage bill as a meter reading fee.

ALTERNATIVE B - SEWERAGE METERS

1. The Authority will permit the use of sewerage meters as a method for determining the abatement in appropriate cases.
2. The same rules and regulations as set forth in Alternative with regard to water meters shall apply to sewerage meters.
3. The standards applicable to sewerage meters will be supplied to the applicant by the Authority after he has obtained permission to use a sewerage meter or meters.

ALTERNATIVE C - BATCH RECORD

1. The Authority will allow the use of batch records as a method for determining an abatement in appropriate cases.
2. In the event that the applicant is permitted by the Abatement Committee to use batch records as a method for determining an abatement, the applicant will be notified as to the type of batch records required and the dates of submission of such batch records.
3. In the event that the applicant does not comply with the directions of the Authority as to submission of batch records, no abatement shall be given to such applicant, and the entire sewerage charge, based on the water meter

reading, shall immediately become due and payable to the Authority by the applicant.

- Section 14. Any delinquency for non-payment of use charges following the award of an abatement shall result in the abrogation of the abatement for the year of non-payment and non-payment of any succeeding years.

ARTICLE VII

Protection from Damage

- Section 1. No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure or equipment which is a part of the Sewerage System. Any person violating this provision shall be subject to immediate arrest under charge of disorderly conduct.

ARTICLE VIII

Powers and Authority of Inspectors and Notices

- Section 1. The Authority and other duly authorized representatives of the Authority bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement, sampling, and testing in accordance with the provisions of these Rules and Regulations. The Authority or its representatives shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic, paper, or other industries beyond that point having a direct bearing on the kind and source of discharge to the sewers or waterways or facilities for waste treatment.
- Section 2. While performing the necessary work on private properties referred to in Article VIII, Section 1, above, the Authority or duly authorized representatives shall observe all safety rules applicable to the premises established by the company.
- Section 3. The Authority and other duly authorized representatives of the Authority shall have access to private properties through which the Authority holds a duly negotiated easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair, and maintenance of any portion of the sewage works lying within said easement. All entry and subsequent work, if any, on said easement, shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property involved.

ARTICLE IX

Penalties

- Section 1. Any person found to be violating any provision of these Rules and Regulations, except Article VII, shall be served by the Authority with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations.
- Section 2. Any person who shall continue any violation beyond the time limit provided for in Article IX, Section 1, shall be guilty of a misdemeanor, and upon conviction be punished by a fine not exceeding Five Hundred Dollars (\$500.00). Such violation of any and each day, if continued, shall be deemed to be a separate and distinct offense.
- Section 3. Any person violating any of the provisions of these Rules and Regulations shall become liable to the Authority for any expense, loss, or damage occasioned the Authority by reason of such violation.

ARTICLE X

Miscellaneous

- Section 1. The Authority reserves the right to amend these Rules and Regulations or to adopt additional Rules and Regulations from time to time as it shall deem necessary and proper in connection with the use and operation of the Sewerage System, or as may be required to meet the necessary costs and expenses.
- Section 2. No officer or employee of the Authority is authorized to modify, amend or permit a deviation from these Rules and Regulations without official action by the Authority.
- Section 3. The Authority shall not be liable for a deficiency or failure of service when occasioned by an emergency or required repairs, or failure from any cause beyond its control. The Authority reserves the right to restrict the use of sewer service whenever the public welfare may require it.
- Section 4. The Authority shall not be liable for any damage or expense occurring to any premises or within any house or building resulting from any leaks, stoppages, defective plumbing, sewerage backup or from any other cause whatsoever.

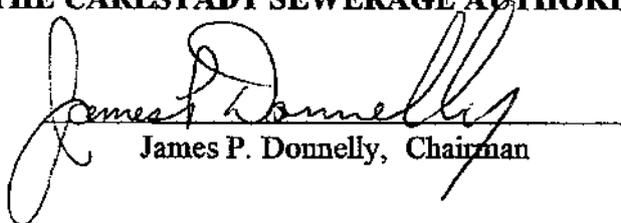
Section 5. All resolutions, or parts of resolutions, adopted by the Authority which are in conflict with these Rules and Regulations are hereby repealed.

Section 6. In the event that any provision, section, sentence, clause or part of these Rules and Regulations shall be held to be invalid, such invalidity shall not affect or impair any remaining provision, section, sentence, clause or part of these Rules and Regulations, it being the intent of the Authority that such remainder shall be and shall remain in full force and effect.

In the event that these Rules and Regulations are inconsistent with any federal or state code or regulations governing the use of sewers and the disposal of wastewater, the most stringent provisions of the federal and state codes or regulations shall govern.

Section 7. These Rules and Regulations shall become effective immediately.

BY ORDER OF THE CARLSTADT SEWERAGE AUTHORITY


James P. Donnelly, Chairman

Dated:

I hereby certify that these Rules and Regulations were
duly adopted by resolution of the Carlstadt Sewerage Authority
on 6/24/98


Arthur Buchman, Secretary

APPENDIX A

BERGEN COUNTY UTILITIES AUTHORITY

REGULATION REGARDING DELETERIOUS SUBSTANCES

PROHIBITIONS AND LIMITATIONS ON WASTEWATER DISCHARGES

- Section 1. No person shall discharge, or allow to be discharged, directly or indirectly into the Authority Treatment Works or local sewer system connected thereto any pollutants or wastewater which:
- (a) causes or would cause the influent at the Authority's treatment plant to exceed the Influent Limitations in Appendix A, Section 9; or
 - (b) contain prohibited material or substances as specified under these Rules and Regulations, except upon approval of the Authority, or except as otherwise expressly permitted by Federal or State laws and regulations; or
 - (c) are not in conformance with the Industrial Wastewater Discharge Permit, administrative order, administrative consent agreement, including interim enforcement limits or other approval issued by the Authority; or
 - (d) exceed the limitations set forth by EPA pursuant to Section 307 of the Act, or the NJDEP pursuant to Section 4 of the State Act.

When the influent at the Authority's treatment plant exceeds the Influent Limitations for one or more pollutants:

- (1) the cause of this condition shall be attributed to the industrial user or users which discharge the pollutant or pollutants in excess of that stipulated in their Industrial Wastewater Discharge Permit, or other approval issued by the Authority; or
- (2) when no industrial user has been or is determined to be discharging in excess of the stipulations in their Industrial Wastewater Discharge Permit, or where the achieving of compliance by all such industrial discharges is anticipated to not reduce the influent concentration below the Influent Limitations, then the Authority, at its discretion, may determine and designate which industry or industries are to be required to reduce their discharges sufficiently to allow the influent at the Authority's treatment plant to be at or below the Influent Limitations.

In no case shall an industrial user have a maximum single discharge that contains a concentration of pollutants or flow that exceed for any fifteen (15) minute period, more than five (5) times the approved daily maximum concentration, flow or mass discharge during normal operation as stated in their Industrial Wastewater Discharge Permit.

Section 2. No person shall discharge directly or indirectly into the local sewer system or Authority Treatment Works, any wastes or wastewater which cause, threaten to cause, or are capable of causing either alone or by interaction with other substances:

- (a) a fire or explosion hazard, including but not limited to, waste streams with a close cup flash point of less than 140 degree F or 50 degree C using the test methods specified in 40 CFR 261.21;
- (b) obstruction of flow or injury to the local sewer system or the Authority Treatment Works;
- (c) toxic gases, vapors or fumes that may cause acute health or safety problems for personnel operating or maintaining the system or to the public;
- (d) prevention of the effective operation or maintenance of the local sewer system or the Authority Treatment Works;
- (e) a strong offensive odor or air pollution by the release of toxic or malodorous gases or malodorous gas-producing substances;
- (f) interference with the Authority's treatment plant;
- (g) The Authority's effluent or any other product of the treatment process, residues, sludges, or scums, to be unsuitable for reclamation and reuse or disposal or to interfere with the reclamation and/or disposal process;
- (h) a detrimental environment impact or a nuisance in the waters of the State or a condition unacceptable to any public agency having regulatory jurisdiction over same or the right to withhold funds as a result thereof;
- (i) discoloration or any other condition in the quality of the Authority Treatment Works effluent such that receiving water quality requirements established by law cannot be met;
- (j) conditions at or near the Authority Treatment Works which violate any statute or any rule, regulation, or ordinance by any public agency, federal, state, county or local regulatory body; or

- (k) the Authority Treatment Works to be overloaded or cause excessive Authority collection or treatment costs.

Section 3. No person shall discharge storm water, groundwater, rainwater, street drainage, subsurface drainage, floor or yard drainage, or unpolluted water to any new direct or indirect connections to any separate sanitary sewer in the local sewer system or to the Authority Treatment Works.

Section 4. No person shall discharge stormwater, groundwater, rainwater, street drainage, subsurface drainage, floor or yard drainage, or unpolluted water through any new or indirect connection to any combined sewer system in a local sewer system unless approval is granted by the Authority prior to such discharge. Approval shall be granted when no reasonable alternate method of disposal is available.

Section 5. No person shall discharge or cause to be discharged, any radioactive material directly or indirectly into the local sewer system or the Authority Treatment Works except;

- (a) when the person is authorized to use radioactive materials by the New Jersey Department of Environmental Protection, the United States Nuclear Regulatory Commission or other governmental agency empowered to regulate the use of radioactive materials; and
- (b) when the waste is discharged in strict conformity with current New Jersey Department of Environmental Protection and United States Nuclear Regulatory Commission regulations and recommendations for safe disposal, and when the person is in compliance with all rules and regulations of all other applicable regulatory agencies.

Section 6. No person shall discharge waste from garbage grinders directly or indirectly to the local sewer system or the Authority Treatment Works through any new connection except:

- (a) wastes generated in preparation of food normally consumed on the premises; or
- (b) where the user has obtained approval for that specific use from the Authority and agrees to undertake whatever self-monitoring is required to enable the Authority to equitably determine the charges and fees based on the waste constituents and characteristics. An approved access point for monitoring and sampling sewage must be made available by the user.

Such grinders must shred the waste to a degree that the discharge is shredded so that all particles will be carried freely under normal flow conditions prevailing in the

local sewer system or the Authority Treatment Works. Plastic, glass, rags, paper or wood products, inert materials, garden refuse or any other commercial or industrial solid wastes shall not be discharged through a garbage grinder directly or indirectly to the local sewer system or the Authority Treatment Works.

Section 7. No person shall make any new connections to the local sewer system or discharge any wastes directly or indirectly to the local sewer system through any new connection unless such connection has been approved by the Authority except indirect 4" residential lateral connections. No person shall discharge any substances directly into a manhole or other opening leading to the local sewer system or the Authority Treatment Works that was not designed or intended to receive such wastes, unless the Authority approves such discharge and the discharge location.

Section 8. No person shall discharge any holding tank wastes directly or indirectly to the local sewer system or the Authority Treatment Works through any connection unless he has received approval from the Authority. Unless otherwise allowed by the Authority under the terms and conditions of the approval, a separate approval must be secured for each separate discharge. This approval will state the specific location and rate of discharge, the time of day the discharge is to occur, the volume of the discharge and the wastewater constituents and characteristics. If approval is granted for the direct or indirect discharge of such waste into the local sewer system or the Authority Treatment Works, the user shall pay the applicable charges and fees and shall meet such other conditions that the Authority may reasonably require. No approval will be required, however, for the discharge of domestic wastes from camper, trailer or mobile home holding tanks provided that such discharges are made into a facility to receive wastes of this nature.

Section 9. The daily maximum influent limitations for the Authority's treatment plant shall be:

- 0.002 mg/l Arsenic
- 0.006 mg/l Cadmium
- 0.132 mg/l Chromium, total
- 0.151 mg/l Copper
- 0.189 mg/l Lead
- 0.002 mg/l Mercury
- 0.138 mg/l Nickel
- 0.100 mg/l Silver
- 0.328 mg/l Zinc
- 0.771 mg/l Phenol
- Total Kjeldahl Nitrogen
- Ammonia Nitrogen

Section 10. No person shall discharge directly or indirectly to the local sewer system or the Authority Treatment Works any waste waters containing a BOD or a SS concentration in excess of 350 mg/L. without first obtaining approval from the Authority.

Section 11. No person shall discharge directly or indirectly to the local sewer system or the Authority Treatment Works any wastes or wastewater:

- (a) having heat in amounts which will inhibit the biological activity at the Authority's Treatment Plant, but in no case shall the wastewater temperature at the Treatment Plant exceed 40 degrees C (104 degrees F);
- (b) containing more than 200 mg/1 of oil or grease of non-petroleum origin;
- (c) containing, on an average monthly basis, more than 100 mg/1 of oil or grease of petroleum origin, nor shall the concentration in any single sample exceed 150 mg/1;
- (d) having a pH lower than 5.5 or higher than 9.5;
- (e) containing concentrations of the following parameters in excess of the prohibition concentration

<u>Parameter</u>	<u>Prohibition Concentration mg/L</u>
Acrolein	0.30
Acrylonitrile	8.40
Benzene	0.85
Bromoform	1.00
Carbon Tetrachloride	0.15
Chlorobenzene	10.60
Chloroethane	21.50
Chloroform	1.75
1,2-Dichlorobenzene	21.60
1,4 Dichlorobenzene	26.30
1,1-Dichloroethane	19.40
1,2-Dichloroethane	4.50
1,1-Dichloroethylene	0.14
1,2-Trans Dichloroethylene	17.00
1,2-Dichloropropane	21.20
Ethyl Benzene	9.30
Methylene Chloride	17.00

<u>Parameter</u>	<u>Prohibition Concentration mg/L</u>
1,1,2,2-Tetrachloroethane	3.85
Tetrachloroethylene	1.80
Toluene	8.10
1,1,1-Trichloroethane	65.00
1,1,2-Trichloroethane	8.60
Trichloroethylene	3.30
Trichlorofluoromethane	6.25
Vinyl Chloride	0.00024*

*Limit to be set at current detection limit of 0.002 mg/L.

- (f) containing any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the Authority Treatment Works or its operation. At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the system (or at any point in the system) be more than five percent (5%) nor any single reading over ten percent (10%) of the Lower Explosive Limit (standard methane calibration) or
- (g) containing more than 0.5 mg/l of cyanide;
- (h) containing more than 1.0 mg/l of copper; an
- (i) containing more than the allowable loading (lbs/day) of cadmium that is allocated to each industrial user of cadmium as determined by the Authority on a case by case basis based on the industry's average daily flow and an allowable concentration of 2.70 mg/l.

Section 12. All measurements, tests and analysis of the characteristics of waste waters to which reference is made in these Rules and Regulations shall be determined in accordance with methods kept on file at the Authority, which methods shall no be inconsistent with those set forth in 40 CFR Part 136. All laboratory analyses shall be performed by NJDEP or EPA certified laboratories.

Section 13. Any effluent limitations and other requirements promulgated by the United States Environmental Protection Agency, the New Jersey Department of Environmental Protection, or any other governmental entity having jurisdiction shall apply in any instance where they are more stringent than those set forth in these Rules and Regulations. The Authority may also supplement these Rules and Regulations with more stringent requirements if it determines that these Rules and Regulations:

- (a) may not be sufficient to enable the Authority to comply with the standards and limitations specified in the Authority's National or New Jersey Pollutant discharge Elimination System Permit; or
- (b) may not adequately limit the wastes received into the Authority Treatment Works so as to prevent interference, pass through, or impeding of operations or so as to allow the disposal or sales of solids or sludges or the recovery of by-products or energy therefrom.

Section 14. When the Authority shall prohibit, establish pretreatment standards, or otherwise limit the discharge of any substance or pollutant, users will be required to modify the discharge of the substances to the sewers to the levels so prescribed.

No user shall ever increase the use of process or cooling of water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the National Categorical Pretreatment Standards, or in any other pollutant-specific limitation developed by the Authority or NJDEP.

Section 15. Connections to the local sewer system shall be designed and constructed to conform to the requirements and procedures set forth in the Authority's "Standards for Connection to Authority Sewers and Related Requirements" (Appendix C) and all applicable State and local building and plumbing codes. All such connections shall be subject to the inspection and approval of the Authority.

APPENDIX B

ABATEMENT PERCENTAGES OF WATER-BASED SEWER CHARGES FOR INDUSTRIES IN THE CARLSTADT SEWERAGE AUTHORITY DISTRICT

INDUSTRY	MAXIMUM ABATEMENT PERCENTAGES
Bakeries (Wholesale)	20
Beverage Manufacturers (Soda & Soft Drinks)	15
Breweries	15
Canning Industries	15
Chemical Industry (Flavoring Extractors)	20
Confectioners (Wholesale)	10
Farming (Commercial)	75
Ice Manufacturing Plants	85
Ice Cream Manufacturers (Wholesale)	10
Metal Working	5
Paints, Varnish and Glue Manufacturers	10
Paper Processing Industries	10
Plastics Products Manufacturers	10
High Pressure Boilers (for power only in plants not included above)	10
Condiments	15
Ink Products	10
Textiles	10
Meat Processing	15

Unless otherwise approved by the Authority all other industries and commercial establishments will be billed on the total water as metered into the users building by the Water Company or well meters, as the case may be.

**CARLSTADT SEWERAGE AUTHORITY
ABATEMENT APPLICATION**

Date _____

NAME OF APPLICANT: (Firm Name) _____

ADDRESS OF APPLICANT: _____

NAME OF BLDG. OWNER: _____

ADDRESS OF BLDG. OWNER _____

1. PRODUCTS MANUFACTURED OR HANDLED _____

2. WATER SUPPLY:	SOURCE	GALLONS AVG.	PER DAY MAX.
PRODUCT PROCESSING:	_____	_____	_____
SANITARY PURPOSES:	_____	_____	_____
COOLING PURPOSES:	_____	_____	_____
OTHER: _____	_____	_____	_____
OTHER: _____	_____	_____	_____
OTHER: _____	_____	_____	_____

3. WASTE WATER DISCHARGED:

SOURCE OF WATER DISCHARGED	GALLONS AVG.	PER DAY MAX.	WHERE DISCHARGED
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

4. TOTAL WASTE WATER DISCHARGED TO CARLSTADT SEWERAGE AUTHORITY SEWER

5. TOTAL WATER (UNPOLLUTED) NOT DISCHARGED TO CARLSTADT SEWERAGE
AUTHORITY SEWER_____

A. WHERE IS WATER DISCHARGED?_____

B. IS THIS WATER METERED SEPARATELY BEFORE DISCHARGE?_____

C. IF ITEM A ABOVE DOES NOT APPLY EXPLAIN BELOW_____

6. EXPLAIN IN DETAIL REASON FOR REQUESTED ABATEMENT (ANY DOCUMENTS
VERIFYING OR SUBSTANTIATING CLAIM SHOULD BE ATTACHED.)

NAME OF COMPANY

SIGNATURE AND TITLE OF AUTHORIZED AGENT

AFFIDAVIT

**COUNTY OF BERGEN } ss.
STATE OF NEW JERSEY }**

_____, BEING DULY SWORN UPON HIS OATH, DEPOSES AND
SAYS:

1. HE IS THE _____
 AND IS AUTHORIZED TO BIND THE APPLICANT HEREIN.

2. THAT THE STATEMENTS MADE IN THE ABOVE APPLICATION ARE TRUE.

SWORN & SUBSCRIBED TO BEFORE ME

THIS _____ DAY OF _____, 19____

NOTARY PUBLIC

CARLSTADT SEWERAGE AUTHORITY

ABATEMENT METER READINGS

COMPANY NAME: _____

ADDRESS: _____

PRINCIPAL'S NAME: _____ TEL. NO. _____

TYPE OF METER: _____ SERIAL NO. _____

LOCATION: _____

<u>DATE OF READING</u>	<u>READING</u>	<u>DIFFERENCE FROM PREVIOUS READING</u>
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APPENDIX C

STANDARDS FOR CONNECTION TO AUTHORITY SEWERS AND RELATED REQUIREMENTS

INTRODUCTION

The purpose of these standards and specifications is to provide the basic requirements of the Carlstadt Sewerage Authority for all construction involving Authority Facilities. These documents are to be used by Professional Engineers in preparing plans and specifications for work involving Authority Facilities.

The information in these documents is general and must be adapted to conform to the particular requirements for the planned project.

The Authority accepts no responsibility as to the exactness of these documents.

The Authority reserves the right to modify or change these standards and details at any time without notice to any party having received a copy of these documents.

Additionally the Authority reserves the right to impose supplemental requirement on specific projects as deemed necessary for the best interests of the Authority.

The use of these standards in no way precludes the requirement that the proposed work comply with latest Federal, State or Local requirements for such work.

All connection applications must be approved by the Carlstadt Sewerage Authority as the resulting connection will become a legal addition to the Carlstadt Sewerage Authority contract with the Bergen County Utilities Authority.

A Connection Application and fee schedule is included in the Appendix to these documents. The regulations regarding deleterious substances are to conform to the requirements of the Bergen County Utilities Authority and State or Federal Agency requirements. This application should be filled out in quadruplicate and together with four copies of plans, sections, details, specifications, required design computations, and sewer system master plan for unsewered areas should be transmitted to the Carlstadt Sewerage Authority, 429 Hackensack Street, Carlstadt, New Jersey 07072.

A certified check for the application fee set forth in the Application Fee Schedule shall accompany the completed application.

It is essential to public health that the operations of existing sewerage facilities be maintained. Interruptions of normal operations shall be held to the minimum necessary for construction purposes, and only such changes in the normal operating procedures as are approved in writing by the Authority will be permitted. The Applicant will be required to work in close cooperation and coordination with the Authority to assure that a minimum of changes in the normal operating procedures and a minimum of nuisances, result from his operations.

From the commencement of the work until its completion, the Applicant is solely responsible for the damage he may do or cause to Authority structures. The Authority may suspend construction operations when in its judgement, the conditions are unsuitable or the proper precautions are not being taken to properly protect Authority structures, whatever the weather may be and in any season. At no time during construction shall any material be stored in Authority easements over existing Authority facilities to such a height that may cause damage to said facilities.

The Applicant shall restore all Authority areas and structures which have been disturbed by his operations, to their original condition or to a condition satisfactory to the Authority.

GENERAL REQUIREMENTS

APPROVAL OF PLANS AND SPECIFICATIONS. Before advertisement for bids approval of final plans and specifications must be obtained in writing from the Carlstadt Sewerage Authority.

INSURANCE. For all work involving Authority Facilities the Authority requires the Applicant to insure the Carlstadt Sewerage Authority in the amount of \$1,000,000 for any one accident and \$2,000,000 on account of all accidents. These amounts are minimum amounts and may be increased at the discretion of the Authority depending on the proposed work.

Policies naming the Authority as the insured must be submitted and approved in writing by the Authority before any construction work may start.

RIGHT TO INSPECT WORK. The Authority shall have the right to inspect all work. Their inspection or lack of same will not constitute a waiver of their rights, acceptance of defective work or unsuitable modifications, or be used as a basis of a claim against the Authority. A minimum of 48 hours notice is required prior to starting work and other critical stages of construction.

The Authority reserves the right to inspect their facilities prior to and after completion of construction to ascertain if any damage has resulted from said construction.

Any deviation from the accepted plans and specifications, unsuitable modifications or damage to Authority Facilities as a result of the proposed work must be corrected or repaired at no cost to the Authority.

From the commencement of the work until its completion the Applicant is required to keep one set of approved drawings on the site available for use by the Authority.

EASEMENTS. Permanent easements are required for all facilities whose ownership is to be turned over to the Carlstadt Sewerage Authority. The requirements of the Authority as to easements should be obtained directly from the Authority or its counsel. The permanent easements shall be transferred to the Authority as part of Authority obtaining ownership of the facilities. The following table should be used as a guide to determine the width of the easement to be provided.

EASEMENT WIDTH

<u>Pipe Diameter</u>	<u>Cut 10' or less</u>	<u>Cut 10' - 15'</u>	<u>Cut 15' - 20'</u>	<u>Cut 20' or over</u>
12" or less	10'	10'	15'	15'
15"	10'	10'	15'	15'
18"	15'	15'	20'	20'
24"	15'	15'	20'	20'
30"	20'	20'	25'	25'
36"	20'	20'	25'	25'
42"	25'	25'	30'	30'

The sewer shall generally be located at the centerline of the easement. Under all conditions manhole structures and all other facilities must clear the edge of the easement by a minimum of 18 inches.

MAINTENANCE During a period of one year subsequent to the date of the ownership of the work by the Authority, the Applicant agrees to replace the material which does not conform to the Contract requirements, and to repair any damage of the material of work, without cost to the Authority, to the satisfaction of the Authority, and in conformity with the Contract Documents, provided that orders for such replacements or repairs are received by him in writing within the one year period. The Applicant is not obligated to do any work of replacement or repair that he may prove, to the satisfaction of the Authority, is required because of abuse of the work or materials by parties other than the Applicant, after the date when the Authority puts to continuous use that part of the work requiring replacements or repairs, or after the date the Authority has accepted ownership of the work.

If the Authority shall deem it necessary, and shall so order, such replacements or repairs shall be undertaken within 24 hours after service of notice. If the Applicant unnecessarily delays or fails to make the ordered replacements or repairs within the time specified, or if any replacements or repairs are of such nature as not to admit of the delay incident to the service of a notice, then the

Authority shall have the right to make such replacements or repairs and the expense thereof shall be paid by the Applicant.

If the Authority puts any structure or equipment to the use for which it is built or installed, previous to their ownership of the work, the maintenance period for such structure or equipment shall be calculated from the time which such use begins.

SECTION I

EXCAVATION AND EARTHWORK

LIMITS OF EXCAVATION. Excavations shall be carried to the dimensions and depths indicated or as necessary. Excavations carried below the depths indicated shall be refilled to the proper grade with thoroughly compacted foundation material or concrete.

In no case shall the earth be plowed, scraped, or dug by machinery within 3 inches of the finished subgrade. The final trimming of the bottoms of excavation shall be done by hand tools just before placing concrete or pipe.

PROTECTION OF EXISTING STRUCTURES. Excavations made adjacent to or in the proximity of existing structures shall be made with special care and in such a manner as not to damage the structures or disturb the supporting backfill and foundation of such structures.

SHEETING AND BRACING. Where excavations are made with vertical sides which require supporting, the sheeting and bracing shall be of sufficient strength to sustain the sides of the excavations and to prevent movement which could in any way injure the work.

Sheeting shall be designed so that the lowest brace is no closer than 12 inches above the pipe.

The Applicant shall furnish drawings showing sheeting and bracing methods, and, for excavations over 12 feet in depth or when the excavation or sheeting method is outside the scope of the requirements of governmental agencies jurisdiction, the Applicant shall certify to the Authority that the sheeting and bracing design has been checked and approved as adequate and in accordance with existing laws and regulations by a licensed Professional Engineer, and that sheeting and bracing has been constructed in accordance with the design which was checked and approved by said Engineer. If requested by the Authority, computations and substantiating data for review shall be furnished. A certification for design shall be submitted prior to placing any sheeting and bracing, and certification for construction shall be submitted immediately after sheeting and bracing has been constructed.

Special precautions shall be taken where there is additional pressure due to the presence of other structures, and in such case, the Applicant shall submit, for approval, if requested by the Authority, an outline plan showing the lines on which he proposes to drive sheeting, the method proposed for bracing against the loads imposed by the structure and the order of installation and removal in relation to excavation.

In locations where sheeting is noted on the Drawings to be left in place all sheeting and bracing used shall remain in place unless otherwise approved in writing by the Authority.

Where sheeting is to be left in place, it must be driven in advance of excavation or, if approved, as the excavation proceeds. The Applicant will not be permitted to excavate prior to placement of sheeting or to excavate outside the sheeting lines.

DRILLING AND BLASTING. Special care shall be exercised in drilling and blasting adjacent to or in proximity of the existing structures in order to prevent damage to the structures and disturbance of their supporting foundations.

All state, municipal and other governmental regulations, together with such regulations as the Authority may require, regarding the composition, transportation, storage and use of explosives shall be strictly complied with. In particular, all blasting work shall be done in accordance with the requirements of the latest edition of "Rules and Regulations Governing Blasting on Construction and Related Operations" issued by the Department of Labor and Industry of the State of New Jersey.

Blasting shall be carried on only by authorized persons experienced in this line of work and in conformity with all laws and regulations.

DEWATERING. The Applicant shall provide, operate and maintain satisfactory facilities and equipment including well points, if necessary, with which to collect and pump all water entering excavations or other parts of the work, to suitable places for disposal. All excavations shall be kept free of water until the work or structure to be built therein is completed. Settling basins and sumps shall be provided for catching and temporarily holding water pumped from excavations that contain mud, clay, sand, or other material in suspension. Such basins shall be large enough to allow storage time for the settlement of such suspended matter. The settled material shall be cleaned out frequently and disposed. At no time shall ground water or surface water be permitted to enter the Authority system.

In locations where the use of well points would result or is resulting in a lowering of ground water which might endanger adjacent structures, the Applicant shall take necessary steps to protect Authority structures.

Any Authority structure injured or damaged as a result of the lowering of ground water shall be repaired or replaced to the satisfaction of the Authority, at the expense of the Applicant.

TUNNELING OR JACKING. Where tunneling or jacking is required, the Applicant shall submit to the Authority for approval a description of the equipment and methods to be used.

BACKFILL AND FILL. Backfill and fill shall consist of suitably selected earth, free of organic matter, boggy, peaty humus, wood, rubbish, waste, ashes, cinders and rocks or stones with a dimension greater than 6 inches. Frozen earth shall not be used for backfill.

Backfill to a height of 2 feet above the top of pipes shall be made with earth free from stones or rock fragments larger than 3 inches. Such backfill shall be uniformly placed in layers of not more

than 6 inches uncompacted thickness and in layers of not more than 6 inches uncompacted thickness and shall be compacted with approved flatfaced mechanical tampers. Special care shall be taken so as not to damage or displace the pipe.

All backfill and fill more than 2 feet above the top of pipes shall be made with earth free from stones or rock fragments larger than 6 inches. Such backfill shall be placed in layers or not more than 12 inches uncompacted thickness and shall be compacted with flatfaced mechanical tampers or vibratory compactors depending upon the backfill and fill material.

The density of all backfill shall be at least equal to that of the adjacent undisturbed soil to avoid future unequal settlement.

Where sheeting is withdrawn, all cavities left thereby shall be filled with suitable granular earth, hosed or tamped in place so as to fill all voids thoroughly.

FOUNDATION MATERIAL. Foundation material shall consist of crushed stone or gravel. Crushed stone or gravel shall consist of hard, sharp, clean material. It shall be free from any considerable amount of flat, laminated or elongated particles and shall be free from shells, clay, limestone, shale, or other deleterious matter. Crushed stone or gravel shall be supplied graded as follows:

Percent Passing - By Weight

<u>Screen or Sieve Size</u>	<u>For Pipes 30-inch Diameter or Larger</u>	<u>For Pipes Less than 30-inch Diameter and All Other Uses</u>
1 - 1/2"	100	
1 - 1/4"	95 - 100	
1"		100
3/4"	50 - 90	90 - 100
1/2"	20 - 70	
3/8"	10 - 40	20 - 55
#4	5 - 20	0 - 10
#8	0 - 2	0 - 5

Foundation material shall be placed and firmly compacted by mechanical tamping equipment. Care shall be taken to place and compact material under pipe haunches.

PEA GRAVEL AND SAND FOR PVC FOUNDATION MATERIAL. Pea gravel shall consist of crushed stone or gravel. Crushed stone or gravel shall consist of hard, sharp, clean

material. It shall be free from any considerable amount of flat, laminated or elongated particles and shall be free from shells, clay, limestone, shale or other deleterious matter.

Pea gravel shall be supplied graded as follows:

<u>Screen or Sieve Size</u>	<u>Percent Passing By Weight</u>
¾ in.	100
½ in.	90-100
⅜ in.	40-70
No. 4	0-15
No. 8	0-5

Sand shall conform to the provisions of ASTM: C33 and to the following gradation:

<u>Sieve Size</u>	<u>Retained Percent by Weight (Cumulative)</u>
⅜ in.	0
No. 4	0-3
8	15-25
16	25-40
30	40-60
50	70-88
100	92-100

Fineness modulus shall not be less than 2.40, nor more than 3.10.

Pea gravel and sand shall be placed firmly compacted by mechanical tamping equipment. Care shall be taken to place and compact pea gravel under pipe haunches.

Trenches for plastic pipe shall be backfilled with sand to a depth of not less than 12 in. above the top of the pipe, for the full width of the trench. Such backfill shall be uniformly placed on each side of the pipe in four in. layers. Where sand is placed on pea gravel or insitu gravel, the interface shall be covered with geotextile as specified hereafter.

GEOTEXTILE MATERIAL. Geotextile material shall have a minimum tensile strength of 90 lb in accordance with ASTM: D 3786, and a minimum tensile strength of 90 lb per ASTM: D 1682 and a maximum permeability coefficient of 0.2 cm/sec, and shall be Amoco Fabrics Co. Propex 4545; Mirafi, Inc., Mirafic 600X; or equal.

INSTALLATION. Areas where shown, those on which foundation material is to be placed (including the sides of the trenches), and those on which concrete shall be placed on foundation material shall be covered with geotextile material. Adjacent geotextile material strips shall overlap by three ft. Fabric shall be installed in accordance with the manufacturer's recommendations.

If geotextile should be damaged during any step of installation, a piece of geotextile material shall be cut and placed over the damaged area subject to the 3 ft minimum overlap requirement.

SECTION II

CONCRETE

MATERIALS.

(a) Cement. All cement shall be portland cement and shall conform to the requirements of ASTM : C150. Unless other types are required by these Specifications, or are authorized in writing, Type II cement shall be used.

(b) Air-Entraining Admixture. All concrete shall contain an air-entraining admixture conforming to the requirements of ASTM : C260 and shall be equal to Sika AER.

(c) Other Admixtures. A retarding-densifier admixture shall be an integral part of the design mix. The densifier shall be an adipic acid type, and shall be non-hygroscopic powder or concentrated liquid, free from calcium chloride, foaming and air-entraining agents. A recognized and approved retarding-densifier admixture is Pastiment, as manufactured by the Sika Chemical Corporation.

The use of admixtures to accelerate hardening or for water-proofing will not be permitted.

(d) Aggregates. Aggregates shall conform to the requirements of ASTM : C33, modified as follows:

- (1) Fine aggregates shall not contain more than 3 percent clay.
- (2) Fine aggregates shall be capable of developing 100 percent of the compressive strength of Ottawa Sand when tested in accordance with ASTM : C87.
- (3) Coarse aggregates shall not have an abrasion loss in excess of 35 percent.
- (4) Coarse aggregates shall not have a loss greater than five percent when subjected to the soundness test.
- (5) Deleterious substances in coarse aggregates shall limit chert to 1 percent, and coal and lignite to 0.5 percent.

Where the clear cover to the reinforcement is 2 inches or more, the maximum size of coarse aggregate shall be 1 - ½ inches; where the clear cover is less than 2 inches, the maximum size of coarse aggregate shall be ¾ inch.

(e) Water. Water shall be clear and free from injurious amounts of oil, acids, alkalis, organic materials or other deleterious substances. If there is any question as to the suitability of the water, it shall be tested in accordance with AASHO : T-26.

(f) Forms. Form lumber shall be dressed on four sides and only selected boards shall be used for form surfaces in contact with concrete. Where a smooth surface is required, pressed wood lines or sheet metal forms shall be used.

(g) Form Fastenings. Form ties and form hangers shall be provided with a water seal and shall be of such type, that after forms are stripped, the ties can be broken back a minimum of 2 inches from the surface of the concrete, or after bolts are removed, the portion of the tie remaining in the concrete shall be no closer than 2 inches to the washers, or other devices within the form which will leave a hole larger than 7/8 inch in diameter or an excessive depression back of the exposed surface of the concrete. To assure a break-back of 2 inches, the portion of the tie which is removed from the concrete shall be coated with a material which will not prevent bond between the concrete and the mortar patch specified.

(h) Curing Materials.

(1) Waterproof curing paper shall conform to the requirements of ASTM : C171.

(2) Curing solution shall conform to the requirements of ASTM : C309 and shall be equal to Sika Antisol having a pink fugitive dye.

(3) Polyethylene sheeting shall be 5 mils (0.006 in.) thick equal to Visking Co. VisQueen film.

(i) Waterstops. Waterstops shall be of polyvinyl chloride and shall conform to U.S. Army Corps of Engineers' Specification CRD-C572, shall be 6 inches wide and equal to Sericised/Durajoint Type No. 8 as manufactured by Construction Products Division, W.R. Grace and Company.

(j) Non-Shrink Grout. Non-shrink grout shall consist of Type I or II portland cement and fine sand, and shall contain a compound that will eliminate shrinkage of the grout. The non-shrink grout compound shall be equal to Sika Chemical Corp. Kemox G; Construction Products Division W.R. Grace and Co. and shall be used in strict accordance with the manufacturer's recommendations.

JOINT SEALER. Joint sealer for horizontal joints shall be cold applied, two component polysulfid base joint sealing compound equal to Toch Brothers Division of Contech, Inc., Sonolastic; or equal, and shall conform to the requirements of ANSI : A 116.1, Class A, (Self-leveling), and shall be gray in color.

Joint sealer for vertical joints shall be a cold applied, two component polysulfide base joint sealing compound equal to Toch Brothers Divisions, Carboline Co., Thiotok Sealant G/G; Sonnenborn Division of Contech, Inc., Sonolastic; or equal, and shall conform to the requirements of ANSI : A 116.1, Class B, (Non-sag), and shall be gray in color.

PREMOULDED JOINT FILLER. The premoulded joint filler where uses shall comply with ASTM : D994, shall be Servicised Asphalt Expansion Joint Filler, Code 1301 as manufactured by the Dewey and Almy Chemical Division of the W.R. Grace Construction Co., or approved equal. The premoulded joint filler shall be used in accordance with the manufacturer's recommendations.

EPOXY GROUT. Epoxy grout shall consist of a two component mineral filled, 100 percent solids thermosetting epoxy polysulfide compound, and shall be Toch Brothers Division, Carboline Co. Epotox 650 Grout; Construction Products Division, W.R. Grace and Co., Epoxite 2391 Grout or equal. The epoxy grout shall be used in strict accordance with the manufacturer's recommendations.

FORM DESIGN AND CONSTRUCTION. Forms shall be tight, adequately constructed, and securely held in place to withstand the load of the fresh concrete and the effects of the vibrating process and to prevent the leakage or mortar.

CONCRETE MIX REQUIREMENTS. The concrete mix shall be proportioned by weight and shall be determined on the basis of obtaining a concrete having suitable workability, density, impermeability, durability and required strength characteristics, without using an excessive amount of cement.

Concrete mixtures should have the following characteristics:

Specified 28-Day Compressive Strength (psi)	Maximum Water-Cement Ratio (Gal. per bag)	Air Content (% by Vol.)	Slump (In.)
3,750	5 - ¼	3 to 5	2 to 3
2,500	5 - ½	3 to 5	2 to 5

The 28-day strength of any concrete tested shall not be less than 80 percent of the specified 28-day compressive strength.

MIX PROPORTIONS. The mix shall be in accordance with ACI : 613 and ACI : 318.

READY MIX CONCRETE. Ready mix concrete shall be in accordance with ASTM : C94.

Concrete shall not be placed in mud or water. Surface of forms, embedded materials, and steel reinforcement that have been encrusted with dried mortar or grout shall be cleaned, prior to placing concrete.

Where concrete is placed on foundation material, the foundation material shall be blanketed with a 6 mils polyethylene sheeting.

All rock surfaces against which concrete is to be placed shall be clean and free from mud, dirt, oil, or other material which may prevent a tight bond between the rock and concrete.

PLACING CONCRETE. Concreting operations shall be continuous until the pour is completed.

CONCRETING DURING COLD AND HOT WEATHER. Whenever the temperature is below 40 deg. F. or when it is evident that the temperature will drop below that point, concrete shall not be placed, except when approved by the Authority. If such approval is given, special precautions shall be taken for maintaining the specified temperature of freshly placed concrete.

CONSTRUCTION JOINTS. Construction joints shall be keyed unless otherwise noted to be roughened.

Construction joints shall conform to the details shown and shall be located where they will have the least effect upon the stability, strength and watertightness of the concrete.

Whenever a stoppage of more than 30 minutes occurs in the placing of concrete, due to some emergency, construction joints shall be installed as approved.

In order to promote watertightness of structures, concreting operations shall be so scheduled as to provide a delay between pours as follows:

<u>Pours</u>	<u>Minimum Time Between Pours (Days)</u>
Slab to Slab	7
Wall to Wall	7
Wall to Slab	3
Slab to Wall	1

All construction joints shall have a row of form ties located at a distance of approximately 6 inches from the joint to permit aligning and tightening of the forms for the subsequent section.

Waterstops shall be provided in all construction joints which are exposed to the weather, are below finished grade, or are below maximum water operating level. The waterstops shall be carefully placed so that one-half of the stop will project from the initial pour and will be firmly cast into the succeeding pour. Care shall be taken that the stop does not fold back against the original concrete when the succeeding pour is made.

FINISHING CONCRETE Immediately after the removal of forms, honeycombing, pockets and open spaces shall be thoroughly wetted and scrubbed with a wire brush and then shall be compactly filled with mortar consisting of one part of portland cement and two parts sand, of the same type and quality as used in the concrete. This shall be done on all surfaces even though they will afterward be coated and/or covered with backfill. All surfaces shall be neatly finished at the edges; sprinkling with dry cement shall not be permitted.

On the interior surfaces of manholes and cambers, all fins and projections shall be ground smooth, but rubbing of entire areas will not be required.

CURING OF CONCRETE. Concrete shall be cured for a period of not less than 7 days. For the first 24 hours of the curing period, a continuous water spray shall be used to keep the concrete continuously moist. After the first 24 hours of the curing period, curing may be by means of a water spray, waterproof curing paper, or curing solution. Water spray shall keep the concrete continuously moist for the period of curing. Waterproof curing paper shall be placed on the concrete with a 1/2 inch lap on all edges, and sealed with tape. All traces of curing solution if used shall be removed prior to painting.

PROTECTION. After the curing period, concrete in slabs shall be covered with waterproof curing paper. All seams of such paper shall be overlapped at least 6 inches and sealed with tape.

All concrete shall be protected from injury.

REMOVAL OF FORMS. Forms shall not be removed until the concrete has hardened sufficiently to safely support its own load plus any superimposed loads that might be placed thereon.

Form ties shall be broken back immediately after removing forms. The holes left by such ties shall be immediately filled with mortar consisting of one part portland cement and two part sand, of the same type and quality as used in the concrete, and the surface shall be finished with a steel trowel.

BACKFILL AND FILL. Backfill and fill shall not be placed against concrete walls for a minimum of 28 days after placing of concrete. Where walls span between slabs, the upper slab shall be in place a minimum of 14 days before backfill or fill is placed against the wall.

DEFECTIVE CONCRETE. Concrete damaged by freezing or by alternate freezing and thawing, or from any other cause, or any concrete work which shall be found defective shall be removed and rebuilt or otherwise made good at no expense to the Authority.

CUTTING AND PATCHING. Where it becomes necessary to cut walls or floors for installation of pipe, conduits, sleeves, saddles, boxes, inserts, foundation bolts, anchors and other similar work, the location and size of cut and method of cutting shall be submitted to the Authority for approval including a description of the equipment and the methods to be used. Jackhammers will not be permitted. During the progress of work, the exposed ends of pipe so as to exclude, concrete, brick and other loose material from entering the Authority lines and adjacent work shall not be unnecessarily damaged. On the completion of the curing, all affected areas shall be restored to the satisfaction of the Authority.

SECTION III

STEEL REINFORCEMENT

QUALITY AND GRADE. All bar reinforcement shall meet the requirements of the "Standard Specification for Deformed Billet Steel Bars for Concrete Reinforcement," ASTM : A615, Grade 40. No rerolled or high carbon steel bars will be permitted in the work.

All steel used for reinforcement purposes shall be of clean, new stock, free from defects and bends not required by the Drawings. For No. 3 bars or larger, only deformed bars meeting the requirements of the Tentative Specifications for Minimum Requirements for the Deformation of Deformed Bars for Concrete Reinforcement, ASTM : A305, shall be used in the work.

PROTECTION. All steel shall be kept free from oil, grease, dirt or other objectionable adhering substances, and it shall be satisfactorily cleaned of scale and heavy or flaky rust before being placed in the work.

BENDING. All reinforcing bars shall be bent to the shapes as shown on the Drawings.

All bending shall be in accordance with the recommended practice as set forth in the "Manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI-315)" published by the American Concrete Institute.

All bars shall be bent cold.

Welding of reinforcement shall conform to AWS Standards.

PLACING AND LAPPING. All placing and lapping shall be in accordance with the recommended practice as set forth in the "Manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI-315)" and in the "Standard Building Code Requirements for Reinforced Concrete (ACI-318)" both as published by the American Concrete Institute.

CONCRETE COVER. Minimum concrete cover over the principal reinforcement steel shall be provided not less than indicated in the following table, unless larger cover dimensions are shown on the Drawings.

Concrete poured against earth, rock or polyethylene covered foundation cushion such as bottom slabs, footings, etc.

3 inches

Formed concrete that will be in contact with earth or water or over water, or exposed to weather:

Bars larger than #5
Bars #5 or smaller
Walls

2 inches
1-½ inches
2 inches

SECTION IV

PIPE

PIPE AND FITTING MATERIALS. Materials for pipe and fittings shall be in accordance with the following schedule:

<u>PIPE MATERIAL</u>	<u>STANDARD</u>	<u>NOTES</u>
Reinforced Concrete	ASTM: C76	(1), (2)
Clay	ASTM : C700	(3)
Concrete	ASTM: C 14	
Cast Iron	ANSI:A21.6 or:A21.8 and:A21.10	(4), (5)
Ductile Iron	ANSI:A21.51	(4), (5)
Plastic (PVC)	ASTM D 3034	(6)

Notes:

- (1) Only circular reinforcement will be permitted.
- (2) Specials and fittings shall be Type A or B in accordance with AWWA : C301.
- (3) Extra Strength.
- (4) All pipe and fittings shall have a cement mortar lining conforming to the requirements of ANSI : A21.4, but having twice the thickness specified therein.
- (5) Fittings shall be in accordance with AWWA Manual M41-Ductile Iron Pipe and Fittings published by American Water Works Association.
- (6) Minimum wall thickness to conform to SDR 35.

Where a specific kind of pipe is required by the Authority, the Applicant shall provide the kind of pipe required. Where the kind of pipe is not required, the choice of pipe shall be optional with the Applicant as follows:

PIPE STRENGTHS
REINFORCED CONCRETE PIPE
(ASTM : C76) (1), (2)

<u>Pipe Size Inches</u>	<u>Cover To Top of Pipe Feet</u>	<u>Class of Pipe</u>
12-30	3-4	IV
12-30	4-8	III
12-30	8-12	IV
12-30	12-17	V
33-48	3-4	III
33-48	4-6	II
33-48	6-9	III
33-48	9-14	IV
33-48	9-18	V

NOTES:

- (1) Only circular reinforcement will be permitted.
- (2) Specials and fittings shall be Type A or B in accordance with AWWA : C 301.

PIPE STRENGTHS, CONTINUED

**CAST IRON PIPE
(ANSIWA : 21.6, 21.8, 21.10)**

<u>Pipe Size Inches</u>	<u>Cover To Top of Pipe Feet</u>	<u>Class of Pipe</u>
4-12	3-20	22
14-20	3-10	21
14-20	10-13	22
14-20	13-17	23
14-20	17-20	24
24-30	3-8	21
24-30	8-10	22
24-30	10-13	23
24-30	13-17	24
24-30	17-20	25
36-48	3-8	21
36-48	8-10	22
36-48	10-12	23
36-48	12-15	24
36-48	15-17	25
36-48	17-20	26

**CONCRETE PIPE
(ASTM : C14)**

<u>Pipe Size Inches</u>	<u>Cover To Top of Pipe Feet</u>	<u>Class of Pipe</u>
4-8	3-12	2
4-8	12-16	3
8-12	3-8	2
8-12	8-10	3

**DUCTILE IRON PIPE
(ANSI : 21.50, 21. 50)**

<u>Pipe Size Inches</u>	<u>Cover To Top of Pipe Feet</u>	<u>Class of Pipe</u>
4-10	3-17	52
4-10	17-20	53
12-14	3-12	52
12-14	12-16	53
12-14	1-18	54
12-14	18-20	55
16-18	3-8	53
16-18	8-12	54
16-18	12-14	55
16-18	14-20	56
20	3-9	54
20	9-12	55
20	12-14	56
24	3-9	55
24	9-11	56
30	3-10	56
36	3-8	55
36	8-10	56
42-54	3-8	55
42-54	8-12	56

**EXTRA STRENGTH CLAY PIPE
(ASTM : C700)**

<u>Pipe Size Inches</u>	<u>Cover To Top of Pipe Feet</u>
4-12	3-12

PIPE JOINTS. All pipe joints shall be of a flexible type and shall be in accordance with the following schedule:

<u>PIPE MATERIAL</u>	<u>STANDARD</u>	<u>NOTES</u>
Reinforced Concrete	ASTM: C361 and: C443	(1), (2)
Clay	ASTM: C425	
Concrete	ASTM: C443	(3), (4)
Cast Iron	ANSI: A21.11	(5)
Ductile Iron	ANSI: A21.11	(5)
Plastic (PVC)	ASTM: D2855 and D 321	(6)

NOTES:

- (1) Pipe joints shall be designed to meet the shear loading requirements of ASTM: C425.
- (2) The Joint design shall provide for the deflection of a pipe unit by opening one side of the outside perimeter of the joint ½ inch wider than the compressed position without reducing its watertightness. Joints shall be of the o-ring rubber gasket type.

Joints for pipe used for jacking shall be of tongue and groove type with the outside diameter of the pipe flush at the joint.

If the joint is of the steel and rubber type, the steel plate shall be hot-dipped galvanized in accordance with ASTM: A123. The joint depth shall be at least 3-1/4 inches after the pipe is laid. The exterior and interior joint recesses shall be a minimum of ½ inch wide and shall be filled with a pre-formed flexible space filler, which shall be RAMEX gaskets as manufactured by K.T. Snyder Co., Houston, Texas, or equal. Before installation of the space filler, joints shall be primed in accordance with the manufacturer's recommendations.

- (3) Rubber rings shall conform to ASTM: D1869.
- (4) Type II.
- (5) Mechanical joint.

- (6) Joints shall be solvent cement joints or elastomeric gasket joints, tapered socket or bell and spigot. Connection to existing pipe shall be made with Fernco or equal, elastomeric donuts and couplings with stainless steel clamps in conformance to the details shown.

If requested by the Authority, certified statements from the manufacturer shall be provided indicating that the pipe has been manufactured and tested in accordance with the specifications.

PIPE LAYING. All pipe and fittings shall be installed to the lines and elevations shown and in accordance with the manufacturer's requirements. In general, all pipe shall be laid in accordance with the requirements of AWWA Manual M41-Ductile Iron Pipe and Fittings published by American Water Works Association.

Suitable tools and equipment shall be used for proper handling, storing and laying pipe and fittings. Each pipe and fitting shall be checked for defects and injuries as laying proceeds. Pipe found to be defective after laying shall be removed and replaced by undamaged pipe.

FLEXIBLE COUPLINGS. Each flexible sleeve type coupling shall be selected and sized for the type and size of pipe line in which it will be installed and for the pressure to which it will be subjected.

All flexible sleeve type couplings shall be constructed of cast iron equal to those manufactured by Dresser Industries, Inc. or Smith-Blair Products Rockwell International, or equal. All bolts shall be stainless steel.

PIPE LINES KEPT CLEAN. The interior of the pipe lines shall be cleaned of dirt, cement and superfluous materials of every description, and kept clean.

FIELD TESTS. The Applicant shall furnish all lab or, testing equipment and materials and shall perform the tests described herein at no cost, and to the satisfaction, of the Authority.

Alignment and openness of joints shall be checked in large pipe by inspection and in small diameter pipe with reflected sunlight and flashlights, and if necessary, wooden balls and water. The pipe shall be true of both line and grade; shall be free of cracks and protruding joint materials and shall be clean.

Exfiltration and infiltration tests shall be conducted on completed sections of sewers not to exceed 1000 feet in length and each test duration shall not be less than 8 hours. Shorter test sections may be required for sewers laid on steep grades. All required pumping shall be carried out.

Sewer pipes shall first be tested for exfiltration. Plugs shall be provided to isolate the test section. The pipe and manholes shall be filled with water to provide at the high point of the test section, a minimum head of 5 feet above ground water or the top of the pipe, whichever is higher.

Standpipes or test pits shall be provided for the duration of the test. Volumetric measurement of water added shall be made. Exfiltration shall be limited to a maximum of 20 gpd per inch of internal diameter per 1000 feet of pipe. Where the difference in elevation between inverts of adjacent manholes exceeds 10 feet, no exfiltration test will be required.

Upon completion of the exfiltration tests, sewer pipes shall be tested for infiltration. Ground water levels shall be permitted to return to their normal levels prior to the test. Infiltration shall be checked using weirs, gages and other measuring devices. Temporary bulkheads shall be provided to shut off all flow from above the section to be tested and pumps shall be provided downstream from the weir, to keep it continuously drained for the duration of the test. Infiltration shall be limited to a maximum of 20 gpd per inch of internal diameter per 1000 feet of pipe. All obvious leaks shall be repaired even though total infiltration meets the requirements. In addition, if requested by the Authority, and at no cost, the line shall be inspected during wet weather.

For the purpose of determining the maximum permissible infiltration and exfiltration, an allowance of ½ gallon per manhole per hour should be assumed. If infiltration or exfiltration exceed the specified amounts, the Applicant shall do whatever is necessary to reduce the infiltration or exfiltration to within the specified limit, as approved by the Authority.

The compaction procedures around plastic pipe shall be such as to limit the deflection of the pipe so that there shall be no more than 7-½ percent change in diam. Changes in diam shall be checked by passing a wooden ball through the pipe. The diam of the wooden ball shall be 7-½ percent less than the inside diam of the sewer. Wooden ball shall be tethered from both directions to ensure removal after testing. The ball shall be passed from manhole to manhole. Any cleaning of the existing pipe to permit passage of the ball and repair of pipe damaged as a result of such testing shall be at the Applicant's expense. Any section of pipe in which the change in diam exceeds 7-½ percent shall be relaid. Use of a mandrel in lieu of a wooden ball will not be permitted.

PAINING. All exterior surfaces of cast iron , ductile iron pipe and fittings shall be given one shop coat of bituminous paint meeting the requirements of Section 6-8.1 of AWWA : C106.

SECTION V

MANHOLES

MATERIALS.

- (a) Concrete and steel reinforcement shall be as specified under Section II and III.
- (b) Brick shall be sound, hard, well-burned, sewer brick conforming to the requirements of ASTM : C32, Grade MS.
- (c) Segmental concrete block shall conform to the requirements of ASTM : C139.
- (d) Precast concrete pipe manhole risers shall conform to the requirements of ASTM : C478 except that joints shall conform to the requirements of ASTM : C443.
- (e) Mortar shall consist of two parts portland cement and five parts sand, thoroughly mixed in the required proportions before adding water.
- (f) Grout shall be non-shrink grout as specified under Section II.

CONSTRUCTION. All manholes shall be constructed of reinforced concrete, concrete and brick, concrete and block or precast concrete pipe.

The concrete base slab of all manholes shall be constructed on undisturbed subgrade.

Waterways shall be formed of the same sizes and shapes as the pipes they connect to. Changes in diameter shall be made gradually and evenly. Spacial care shall be taken to form channels that will provide the best hydraulic conditions for smooth flow; steel trowel finish shall be provided. Slopes shall be provided on the benches adjacent to the waterways.

Brick or block masonry for manhole chimneys shall be laid in a full bed of mortar, with mortar spread on the sides and ends of each masonry unit, filled solidly with mortar as the work is carried up. The inside of brick or block shall be rubbed with a burlap sack to clean it of spilled mortar. The exterior surface of brick or block shall be plastered with a 3/8 inch layer of mortar. Particular care shall be taken to secure a watertight joint between the manhole chimney and the concrete on which it rests.

Attention is directed to the infiltration and exfiltration requirements as specified under Section IV.

APPURTENANCES. Castings shall be of the best quality close grained gray iron conforming to the requirements of ASTM : A48, Class 30. The casting shall be free from faults,

sponginess, cracks, blowholes and other defects affecting their strength. They shall be properly cleaned and coated with a waterproof asphaltum applied by immersion, while the casting is hot. Frames and covers shall be machined and match marked to insure a non-chattering fit. Frames shall be set to grade on a full bed of grout.

Manhole frames and covers shall be equal to the Campbell Foundry Company Pattern Numbers as specified herein, except for modifications specified herein or shown on the Drawings. All covers shall have a non-skid top pattern and lettering as detailed on the Drawings and the pick holes shall be omitted. Frames and covers for all manholes other than shallow manholes shall be equal to Campbell Pattern No. 1203 and, where required to be watertight, they shall be equal to Campbell Pattern No. 1503 with bolted and gasketed covers. For all watertight covers bolts shall be AISI Type 304 stainless steel and gaskets shall be neoprene. For watertight manhole frames and covers and for manholes that extend above the existing grade, the frames shall be anchored to the top of the manholes with three 5/8 inch stainless steel drill anchors.

Grating, frame and supports shall conform to the applicable portions of Section VI.

Manhole rungs and handholds shall be made of aluminum alloy 6061-T6. Manhole rungs shall be equal to the drop front design manhole step, Part No. 12653A, as manufactured by the Aluminum Company of America. Manhole rungs in precast concrete manhole chimneys shall be placed in careful alignment. The maximum variation from vertical alignment shall be 3/4 inch. Rungs shall be solidly anchored into precast manholes.

MANHOLE EXTENSION RING. Adjusting manhole extension ring, where approved, shall be furnished with set screws which rigidly hold the ring to the existing Authority frame. All manhole extension rings shall have machined bearing surfaces, to insure a non-chattering fit.

PAINING. Portions of aluminum manhole rungs, handholds and stop plate grooves that are to be embedded in concrete shall be given one heavy coat of Tarmastic 103 as manufactured by USS Chemicals, Division of United States Steel, or equal.

SECTION VI

AS BUILT DRAWINGS

Upon completion of work the Applicant is required to submit detailed as built drawings. The as built drawings or printed matter shall be given all dimensions and sizes to enable the Authority to have a record for the purpose intended.

The as built drawings for submission shall be coordinated by the Applicant with drawings previously submitted, with application. If the as built drawings have variances from the initial submission, the applicant shall make specific mention of such variation in his letter of transmittal. If such variations are found to be not acceptable, the Applicant will be required to rectify the same. Upon correction, final as built drawings shall be submitted.

Five copies of as built drawings or printed matter shall be submitted to the Authority for review. Three copies of the drawings or printed matter will be retained by the Authority. The two other copies will be returned to the Applicant marked in the following ways, all subject to Standard Connection requirements.

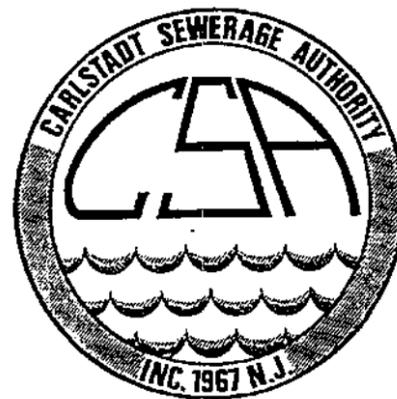
"APPROVED"--no exceptions are taken;

"NOT APPROVED"--rejected, and corrections are noted, resubmittal is required.

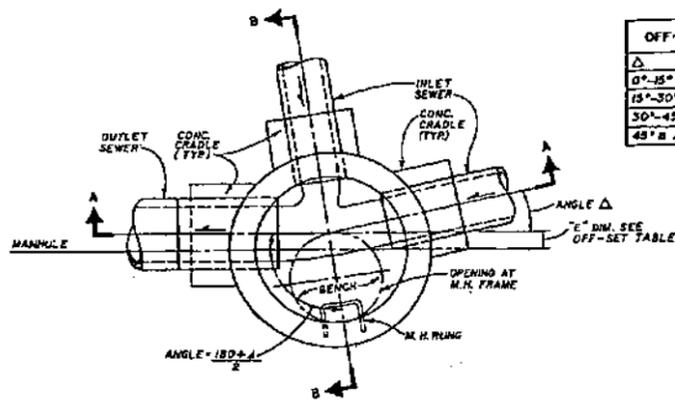
The Applicant shall be responsible for the prompt submission of all as built drawings.

CARLSTADT SEWERAGE AUTHORITY

STANDARDS FOR CONNECTION
TO AUTHORITY SEWERS



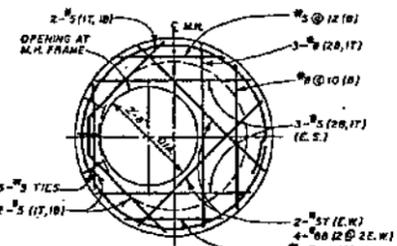
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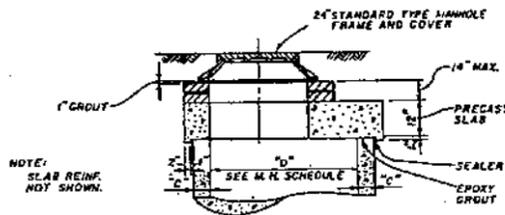
SECTIONAL PLAN

OFF-SET TABLE	
Δ	"E"
0°-15°	6"
15°-30°	4"
30°-45°	2"
45° & ABOVE	0"

- NOTES:
 1. WHEN DIMENSION "E" IS LESS THAN 8'-0" USE SHALLOW M.H.
 2. BENCH HEIGHT = 0.8 x DIA. OF LARGEST MAIN SEWER, WHICHEVER RESULTS IN THE HIGHER BENCH

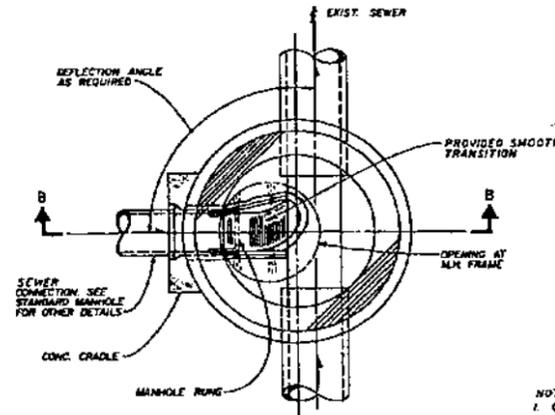


SECTIONAL PLAN

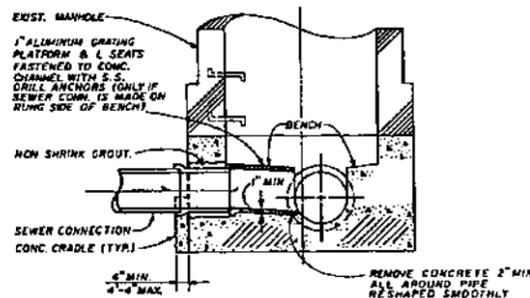


SECTION ALTERNATE TOP OF M.H. CHIMNEY

NOTE: SLAB REINF. NOT SHOWN.



SECTIONAL PLAN

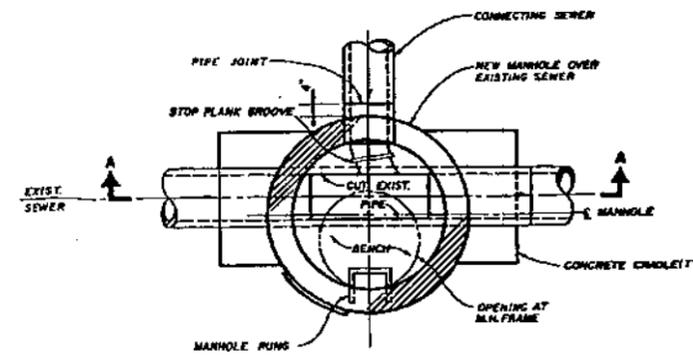


SECTION B-B SEWER CONNECTION TO EXISTING MANHOLE (NO SCALE)

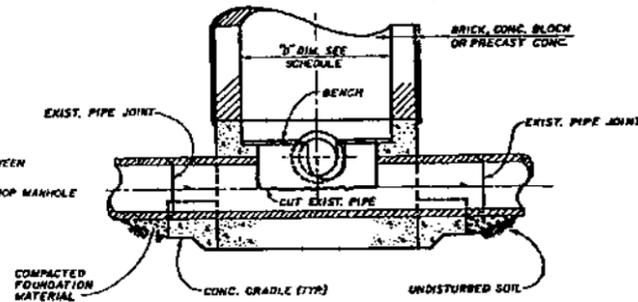
- NOTES:
 1. CLEANED AND ROUGHENED ALL SURFACES AGAINST WHICH NEW MORTAR PLACED
 2. EXIST. CONC. REMOVED TO MEET NEW CHANNEL LINES REMOVED TO A LINE AT LEAST 1' BEYOND FINISHED CHANNEL LINE AND FINISHED OFF TO NEW LINE WITH CEMENT MORTAR.



RUNG DETAIL

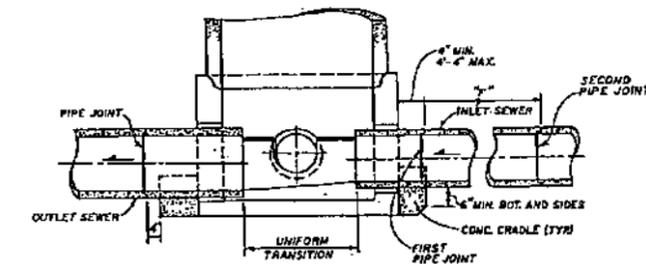


SECTIONAL PLAN



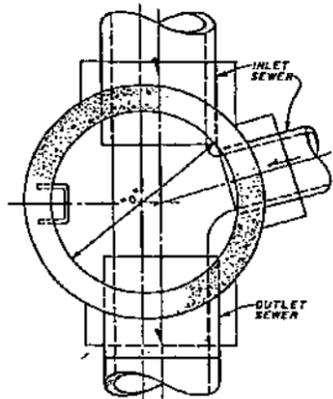
SECTION A-A NEW MANHOLE OVER EXISTING SEWER (NO SCALE)

- NOTE:
 1. LOCATE MANHOLE BETWEEN EXIST. PIPE JOINTS.
 2. SEE STANDARD AND DROP MANHOLE FOR OTHER DETAILS.

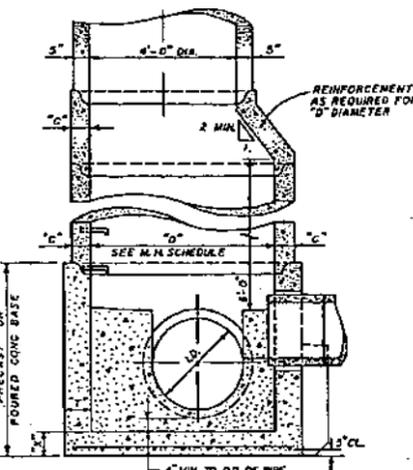


SECTION A-A

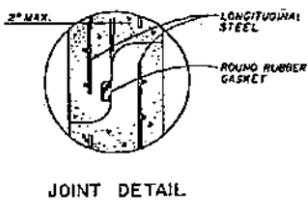
PIPE JOINTS SCHEDULE		
PIPE SIZE	MIN	MAX
18" AND SMALLER	3'-0"	4'-0"
21" TO 27"	4'-0"	6'-0"
30" TO 36"	5'-0"	8'-0"
42" TO 48"	8'-0"	10'-0"



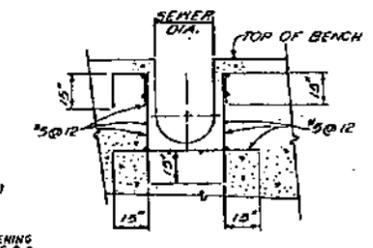
SECTIONAL PLAN



SECTION PRECAST MANHOLE (OUTLET PIPE DIA 27" TO 48" INCLUSIVE)

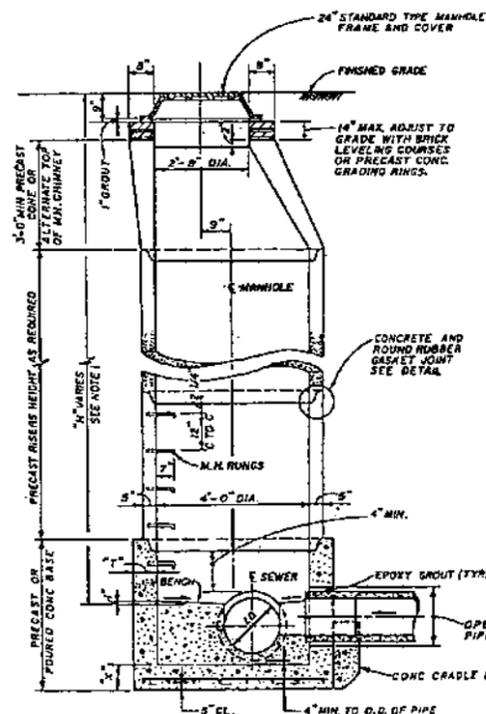


JOINT DETAIL

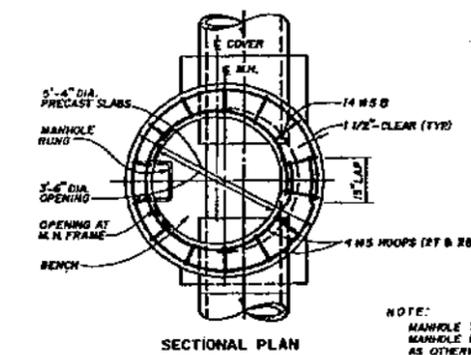


TYPICAL REINFORCEMENT DETAIL AT INLET TROUGH IN BENCH

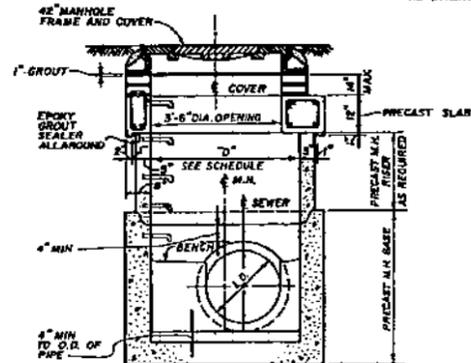
MANHOLE SCHEDULE					
PIPE SIZE	"D"	"C"	"Y"	"X"	REINF. STEEL BASE SLAB
24" & SMALLER	4'-0"	5'	5'	8'	3/8" @ 8" E.W.
27" & 30"	5'-0"	6'	6'	10'	1/2" @ 8" E.W.



SECTION B-B PRECAST MANHOLE (OUTLET PIPE DIA 24" OR SMALLER)

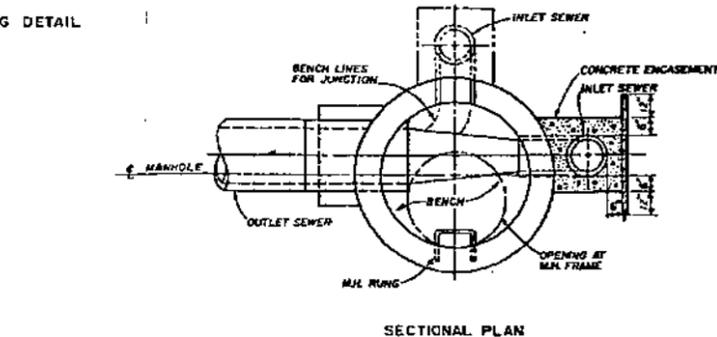


SECTIONAL PLAN

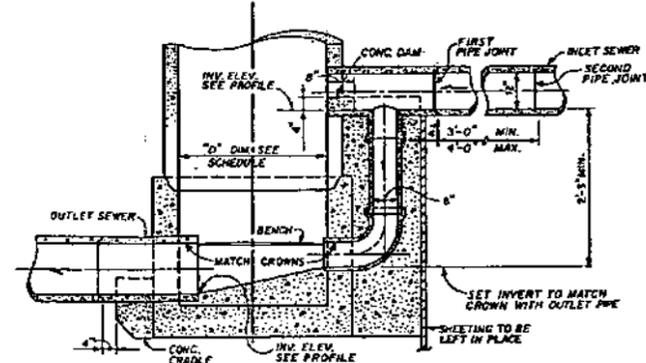


SECTION SHALLOW MANHOLE

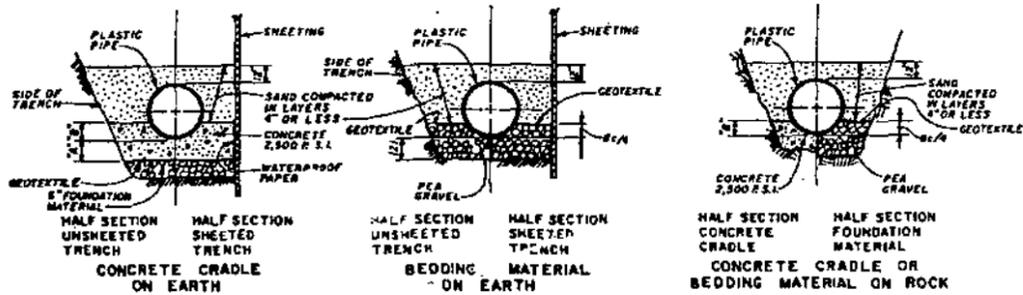
- NOTE:
 MANHOLE TO CONFORM WITH PRECAST MANHOLE DETAIL EXCEPT AS OTHERWISE SHOWN.



SECTIONAL PLAN



SECTION DROP MANHOLE (NO SCALE)

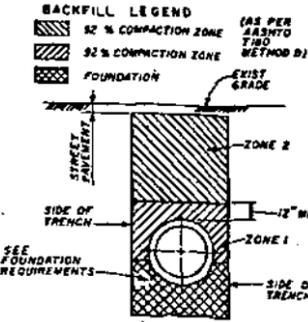


FOUNDATION REQUIREMENTS FOR PLASTIC PIPE
(NO SCALE)

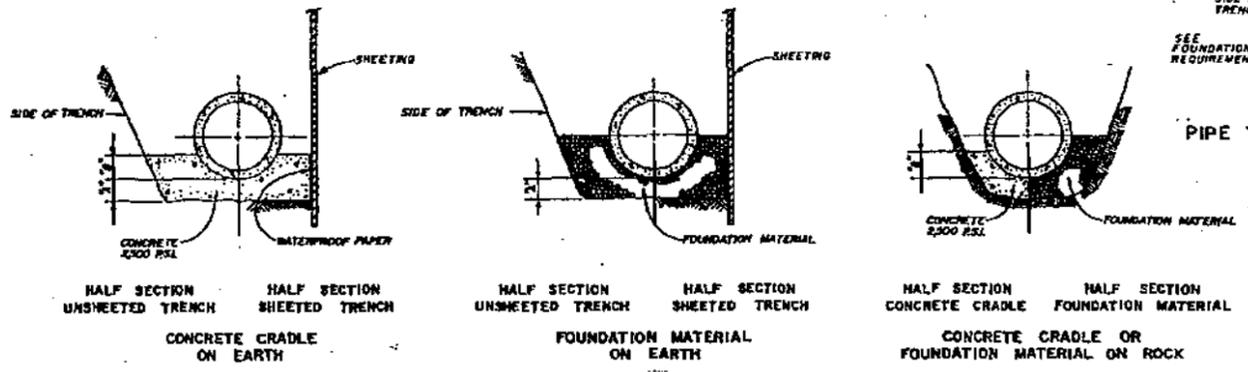
NOTES:
 1. WIDTH (1) SHALL BE AT LEAST 12" BUT NOT MORE THAN 18" FOR RIGID PIPES AND ONE PIPE DIAMETER BUT NOT LESS THAN 12" FOR PLASTIC PIPE.
 2. DIMENSION (2) SHALL BE NOT LESS THAN "A" SHOWN IN SCHEDULE FOR TRENCH IN EARTH. ADDITIONAL DEPTH SHALL BE PLACED AS DIRECTED BY THE ENGINEER - SEE DETAIL FOR BEDDING MATERIAL PAYMENT LINES.
 3. DIMENSION (2) SHALL BE NOT LESS THAN 12" FOR TRENCH IN ROCK WHEN BEDDING MATERIAL IS UTILIZED AND NOT LESS THAN "A" SHOWN IN SCHEDULE WHEN CONCRETE CRADLE IS UTILIZED.
 4. B IS DISTANCE BETWEEN THE VERTICAL PLANES TANGENT TO THE SIDES OF THE CONDUIT.

PIPE DIA.	A OR B"
6"	6"
8"	6"
10"	6"
12" AND 14"	6"
16" AND 18"	8"
20" AND 24"	12"
26"	9"
30"	10"
36"	12"
42" TO 72"	12"

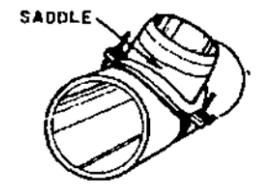
FOR BEDDING MATERIAL INCREASE 1/4" FOR EVERY FOOT THAT DEPTH TO TOP OF PIPE EXCEEDS 10'.



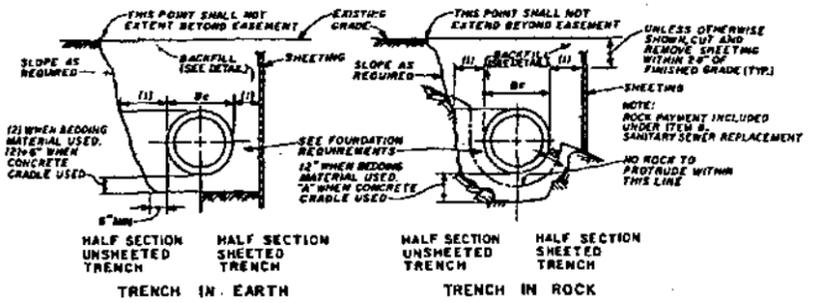
PIPE TRENCH BACKFILL DETAIL
(NO SCALE)



FOUNDATION REQUIREMENTS FOR RIGID PIPE
(NO SCALE)

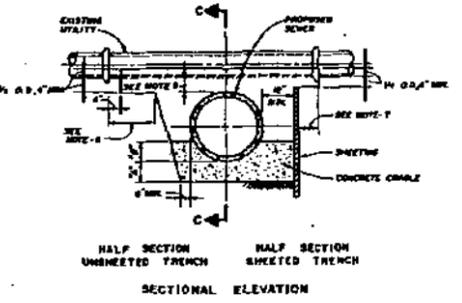


SADDLE DETAIL
NTS

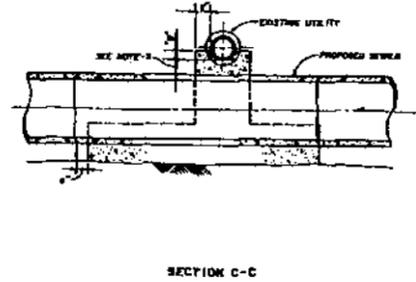


TRENCH SECTIONS
(NO SCALE)

NOTES:
 3. WHEN THIS DIMENSION IS 6" OR LESS THE DETAIL SHALL BE USED. IF IT IS MORE THAN 6" THE CONTRACTOR SHALL SUPPORT AND PROTECT EXISTING UTILITY AS APPROVED BY THE ENGINEER.
 4. WHEN THIS DIMENSION IS LESS THAN 4" THE CONCRETE CRADLE MUST BE CLAMMED TO WITHIN 4" OF THE NEXT JOINT.
 7. WHEN THIS DIMENSION IS LESS THAN 4" THE CONCRETE CRADLE MUST BE CLAMMED TO THE NEXT JOINT.
 8. FOR DIMENSIONS "A" AND "B" SEE FOUNDATION SCHEDULE.
 9. CONCRETE CONSTRUCTED ON EARTH SHALL BE PLACED ON 6" COMPACTED BEDDING MATERIAL AND GEOTEXTILE.

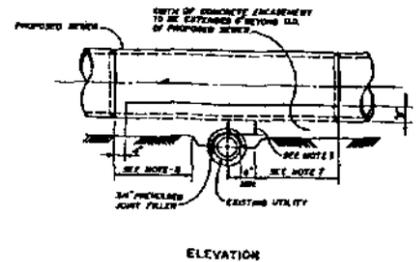


SECTIONAL ELEVATION



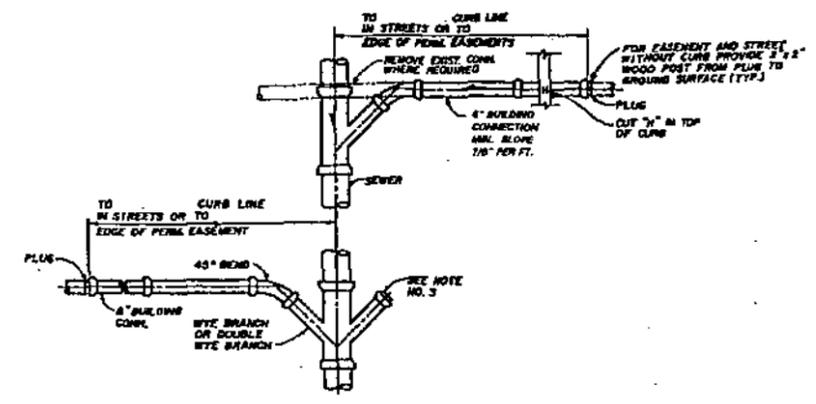
SECTION C-C

PROPOSED SEWER CROSSING BELOW EXISTING UTILITY
(NO SCALE)

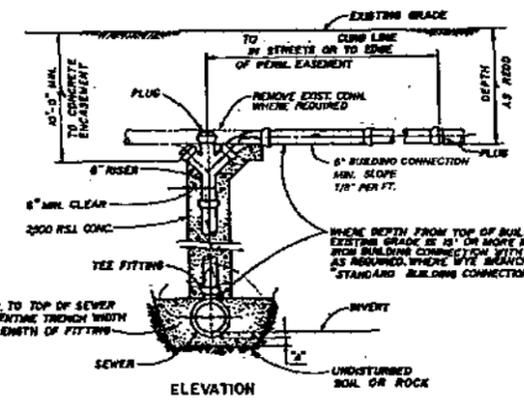


ELEVATION

PROPOSED SEWER CROSSING ABOVE EXISTING UTILITY
(NO SCALE)

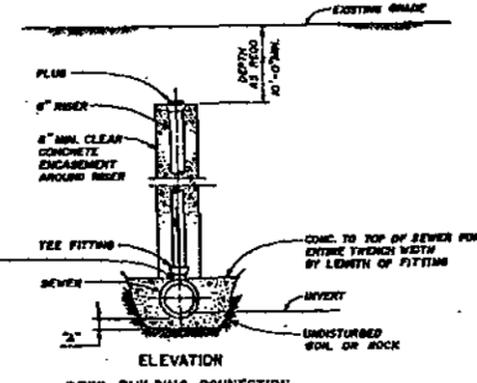


STANDARD BUILDING CONNECTION
FOR SEWERS 18" DIA. OR LESS



ELEVATION DEEP BUILDING CONNECTION

FOR EXISTING BUILDINGS AND BUILDINGS UNDER CONSTRUCTION AND WHERE INVERT OF SEWER IS DEEPER THAN 14'-0" BELOW EXIST. GRADE



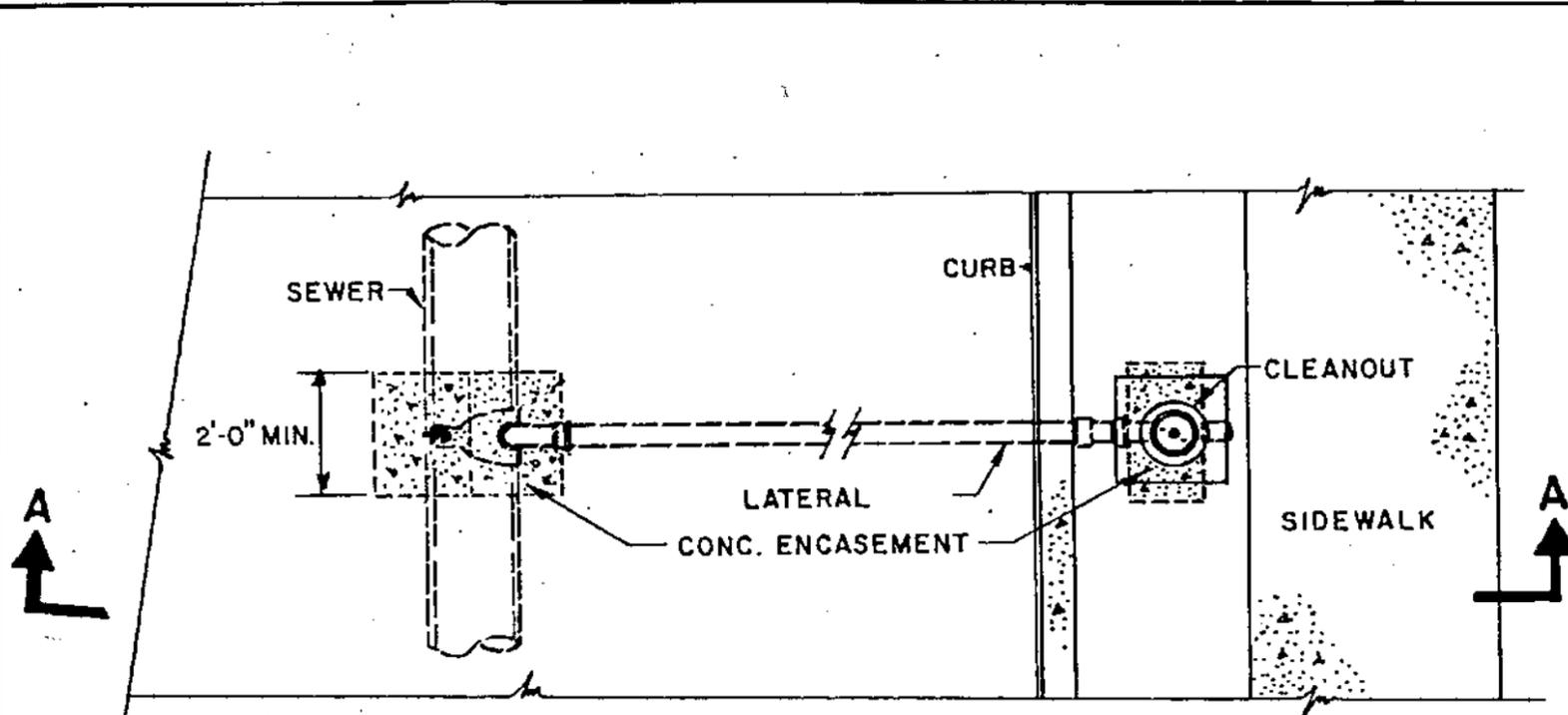
ELEVATION DEEP BUILDING CONNECTION

WHERE THERE ARE NO BUILDINGS AND WHERE INVERT OF SEWER IS DEEPER THAN 14'-0" BELOW EXIST. GRADE

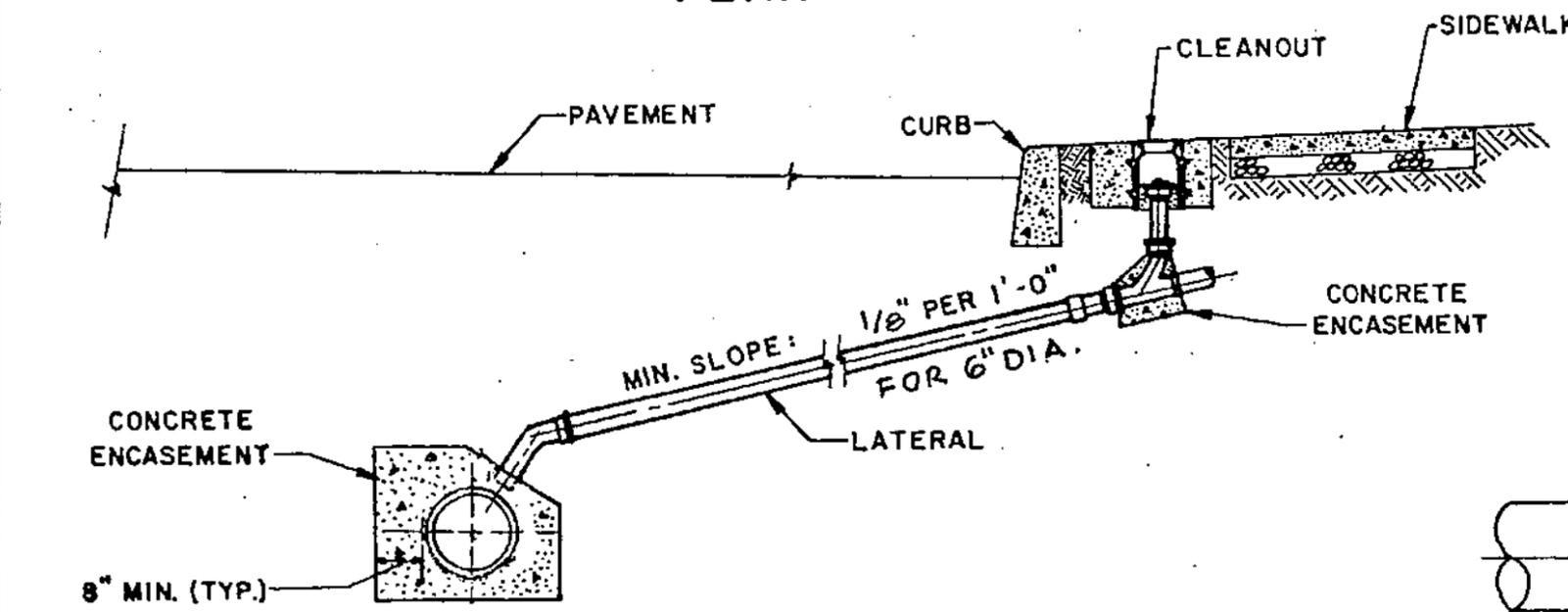
BUILDING CONNECTION TO SEWER
(NO SCALE)

NOTES:

- WHERE DEPTH FROM INV. OF SEWER TO EXISTING GRADE IS LESS THAN 14'-0" STANDARD BUILDING CONNECTIONS (SEE DETAIL, THIS DWG.) ARE TO BE PROVIDED. THESE STANDARD BUILDING CONNECTIONS ARE TO BE PROVIDED ONLY FOR EXISTING BUILDINGS AND FOR BUILDINGS UNDER CONSTRUCTION.
- WHERE DEPTH FROM INV. OF SEWER TO EXISTING GRADE IS 14'-0" OR MORE "DEEP BUILDING CONNECTIONS" (SEE DETAIL, THIS DWG.) ARE TO BE PROVIDED. CONNECTION FROM RISER TO 2 FT. WHERE CURB LINE OR EDGE OF PERM. EASEMENT ARE TO BE PROVIDED FOR EXIST. BUILDINGS AND FOR BUILDINGS UNDER CONSTRUCTION.
- PROVIDE PLUG FOR WYES WHERE BUILDING CONNECTIONS ARE NOT TO BE PROVIDED.
- LOCATION AND TYPE OF ALL BUILDING CONNECTIONS TO BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER.
- FOR EXISTING BUILDING CONNECTIONS TO BE RELOCATED REMOVE SECTION OF EXISTING PIPE AND CONNECT TO PROPOSED BUILDING CONNECTION AS REQUIRED.

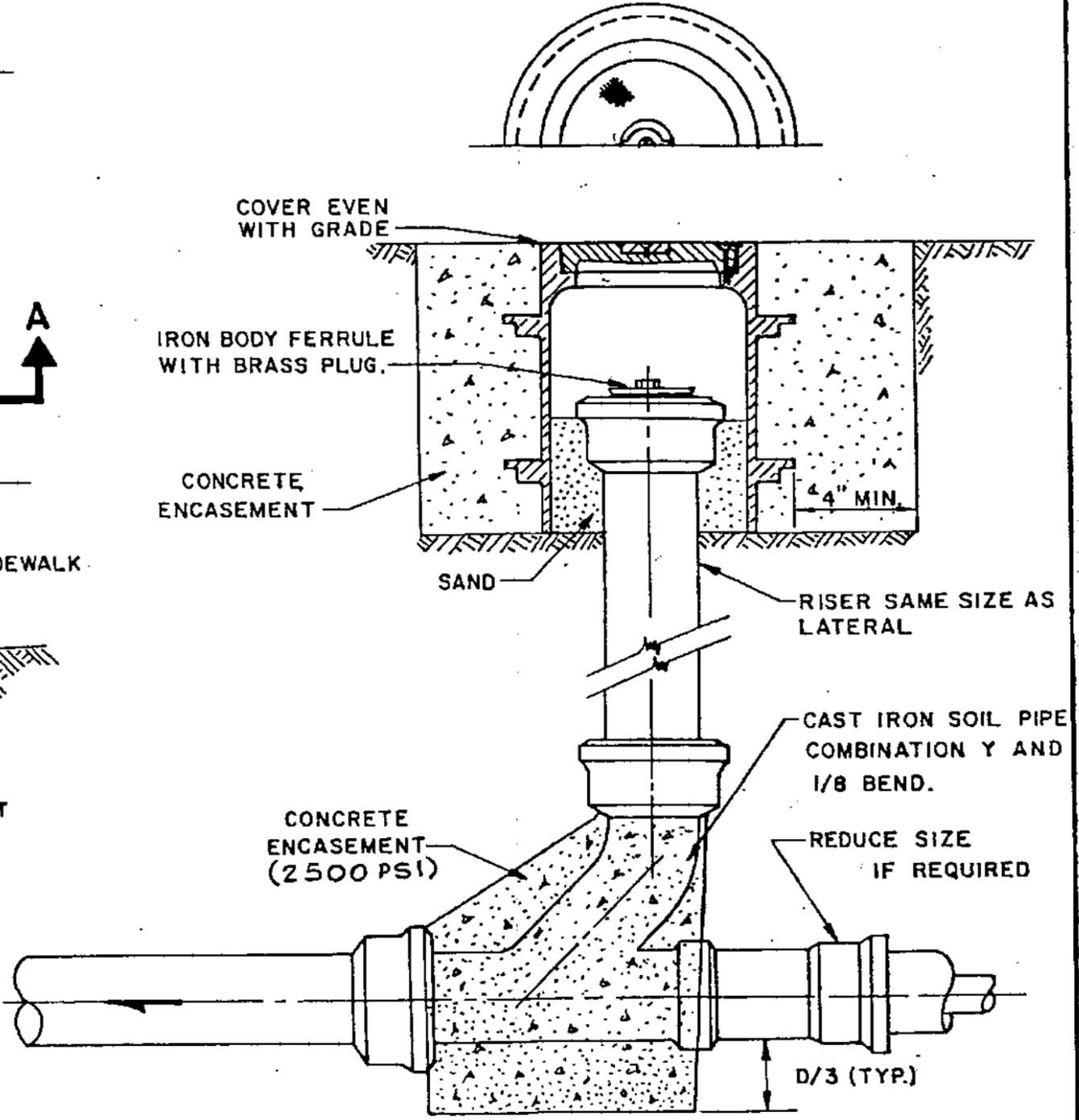


PLAN



SECTION A-A
NTS

NOTE:
CLEANOUT DETAIL SHOWN FOR CAST IRON
SOIL PIPE, FOR OTHER MATERIAL DETAIL SIMILAR



CLEANOUT DETAIL
NTS

DRAWING 3

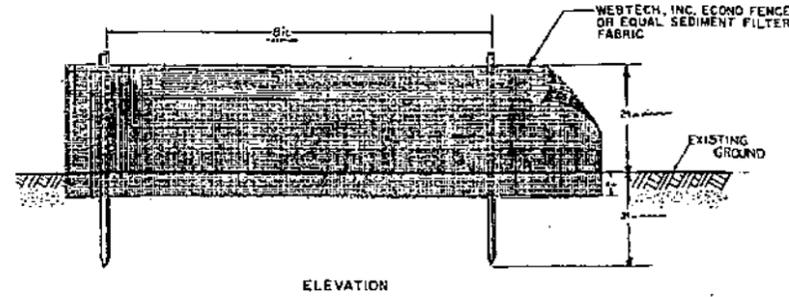
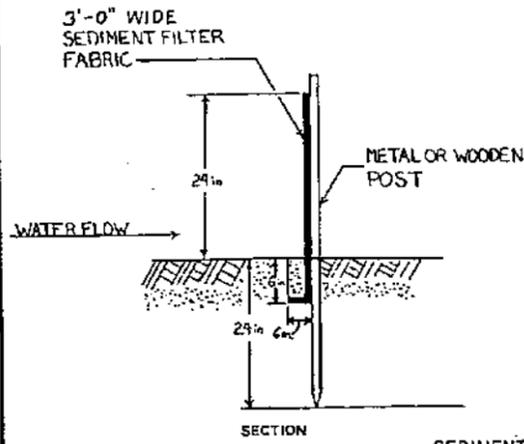
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IGNAZ ROTTENBUCHER N.J.P.E. 23542
APPROVED BY: *Ignaz Rottenbacher* DATE: 4/15/98

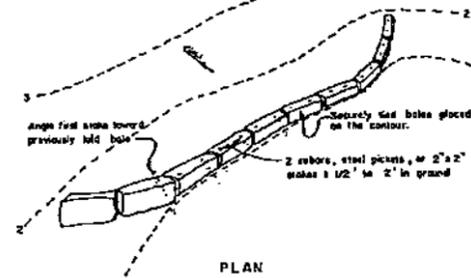
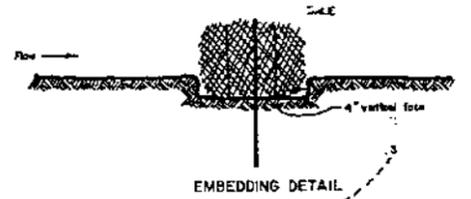
CARLSTADT SEWERAGE AUTHORITY

STANDARDS FOR CONNECTION
TO AUTHORITY SEWERS

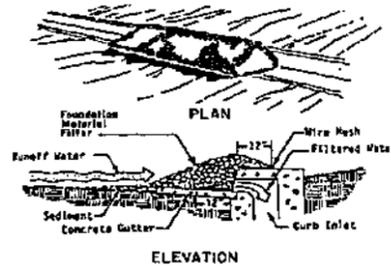
CLEANOUT DETAIL



SEDIMENT FENCE BARRIER



PLACEMENT AND ANCHORING DETAIL BALE SEDIMENT BARRIERS

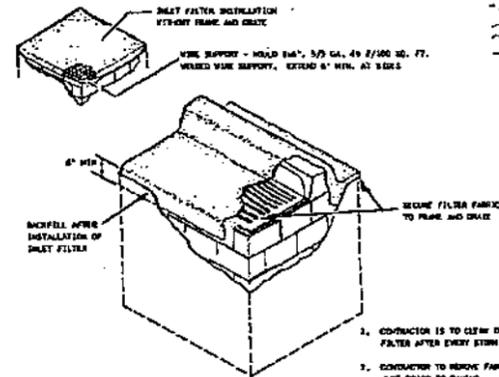


CURB INLET SEDIMENT FILTER

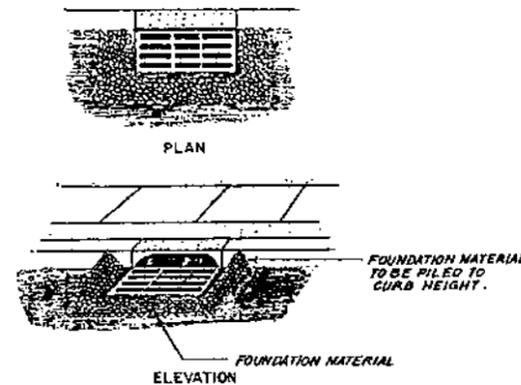
- MANHOLE CLOVE OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE PLACED OVER THE CURB INLET OPENING SO THAT AT LEAST 12 INCHES OF WIRE EXTEND FROM THE INLET BARRIERS ACROSS BOTH THE INLET COVER AND THE PAVED GUTTER, AS ILLUSTRATED.
- FOUNDATION MATERIAL SHALL BE FILLED AGAINST THE WIRE SO AS TO ANCHOR IT AGAINST THE GUTTER AND INLET, AND TO COVER THE INLET OPENING COMPLETELY.
- IF THE FOUNDATION MATERIAL FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE FOUNDATION MATERIAL MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

SPECIFIC APPLICATIONS

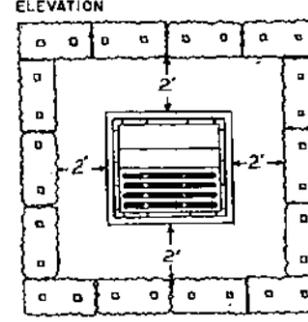
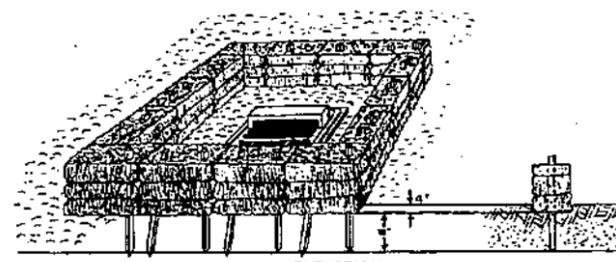
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.



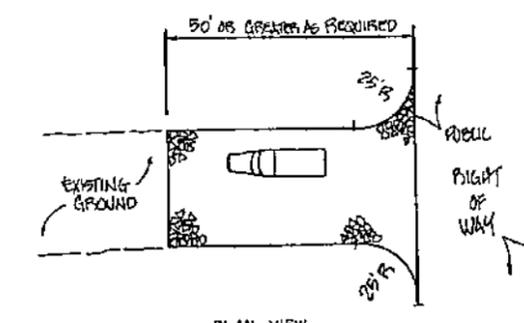
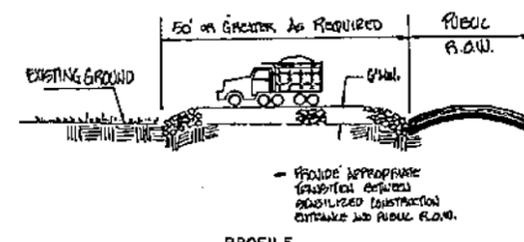
INLET FILTER DETAIL



FOUNDATION MATERIAL INLET FILTER



INLET FILTER DETAIL



STABILIZED CONSTRUCTION ENTRANCE



TYPICAL TREE PROTECTION

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH THE NJ STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, AND SHALL BE INSTALLED IN THE PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATIONS AND INSTALLATION OF PERMANENT STRUCTURES OR UTILITIES.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR AREA IS STABILIZED.
- ALL DISTURBED AREAS NOT SUBJECT TO CONSTRUCTION TRAFFIC AND NOT SCHEDULED FOR PAVING OR STONE COVER SHALL IMMEDIATELY RECEIVE A PERMANENT SEEDING AND MULCHING IF THE SEASON PERMITS PERMANENT SEEDING. THE UNSEEDED DISTURBED AREA SHALL BE MULCHED WITH SALT HAY OR EQUIVALENT, AND BOUND IN ACCORDANCE WITH THE NJ STANDARDS. (I.E. 200 AND TWICE, MULCH MIXTURE OR LIQUID MULCH MIXTURE) WITH PERMANENT SEEDING APPLIED WHEN SEASONAL CONDITIONS BECOME FAVORABLE.
- ALL DISTURBED AREAS SUBJECT TO CONSTRUCTION TRAFFIC AND NOT SCHEDULED FOR PAVING OR STONE COVER SHALL RECEIVE A TEMPORARY SEEDING AND MULCHING IMMEDIATELY AFTER THE CONSTRUCTION TRAFFIC HAS CEASED. IF THE SEASON PERMITS PERMANENT SEEDING, THE TOP-SOIL WILL BE MULCHED WITH SALT HAY OR EQUIVALENT, AND BOUND IN ACCORDANCE WITH THE NJ STANDARDS. (I.E. 200 AND TWICE, MULCH MIXTURE OR LIQUID MULCH MIXTURE) WITH TEMPORARY SEEDING APPLIED WHEN FAVORABLE CONDITIONS BECOME FAVORABLE. PERMANENT SEEDING SHALL BE APPLIED WHEN THE CONSTRUCTION TRAFFIC HAS CEASED AND SEASONAL CONDITIONS ARE FAVORABLE.
- STABILIZATION SPECIFICATIONS:
 - TEMPORARY SEEDING AND MULCHING:
 - LINE - 10 LBS PER 1000 SF OF GROUND LINESIDE.
 - FERTILIZER - 14 LBS PER 1000 SF, 16-16-16 OR EQUIVALENT WORKED INTO SOIL A MINIMUM OF 4 INCHES.
 - SEED - PERENNIAL RYE GRASS 40 LBS PER ACRE OR OTHER APPROVED SEEDS. PLANT WHEN SEASONAL CONDITIONS ARE FAVORABLE.
 - MULCH - SALT HAY OR SHALL GRASS STRAW AT A RATE OF 10 TO 15 LBS PER SF. TO BE APPLIED IN ACCORDANCE WITH THE NJ STANDARDS. MULCH SHALL BE SEEDING BY APPROVED METHODS (I.E. 200 AND TWICE, MULCH MIXTURE OR LIQUID MULCH MIXTURE).
 - PERMANENT SEEDING AND MULCHING:
 - LINE - 10 LBS PER 1000 SF OF GROUND LINESIDE.
 - FERTILIZER - 14 LBS PER 1000 SF, 16-16-16 OR EQUIVALENT WORKED INTO SOIL A MINIMUM OF 4 INCHES.
 - SEED - PERENNIAL RYE GRASS 40 LBS PER ACRE OR OTHER APPROVED SEEDS. PLANT WHEN SEASONAL CONDITIONS ARE FAVORABLE.
 - MULCH - SALT HAY OR SHALL GRASS STRAW AT A RATE OF 10 TO 15 LBS PER SF. TO BE APPLIED IN ACCORDANCE WITH THE NJ STANDARDS. MULCH SHALL BE SEEDING BY APPROVED METHODS (I.E. 200 AND TWICE, MULCH MIXTURE OR LIQUID MULCH MIXTURE).
- THE DOWNSTREAM PERIMETER OF ALL WORK ARE SURFACES SUBJECT TO RUNOFF FROM DISTURBED AREAS INDICATED ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN DRAWINGS, SHALL BE PROTECTED WITH A TEMPORARY CONTINUOUS PERIMETER BARRIERS OF STONE, STYRE FOAM BLOCKS, STAKED BARRIERS OR STONE. DETAILS OF THE SILT FENCE AND STYRE FOAM BARRIERS ARE ON THE SOIL EROSION AND SEDIMENT CONTROL DRAWING. THE STYRE FOAM BARRIERS SHALL BE FILLED WITH STYRE FOAM BLOCKS, STYRE FOAM BLOCKS SHALL BE FILLED TO A MINIMUM HEIGHT OF 24 INCHES WITH STYRE FOAM BLOCKS AT REGULAR SPACES OF 8 FEET.
- THE SITE SHALL AT ALL TIMES BE KEPT AND MAINTAINED SUCH THAT ALL STORMWATER RUN-OFF IS DIRECTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
- PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL DELIVER TO THE SITE A PORTABLE SEDIMENTATION TANK. THE TANK SHALL HAVE SUFFICIENT VOLUME TO PROVIDE SETTLING BY THE MAXIMUM RATE OF DISTURBING THROUGH THE TANK SHALL BE LIMITED TO PREVENT FROTH CARRYING. THE SEDIMENTATION TANK SHALL BE LOCATED FROM THE TOP OF THE TANK AND BE FILLED. DESIGN OF THE PORTABLE TANK SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. SEDIMENTATION TANKS SHALL REMAIN ON THE SITE UNTIL ALL EXCAVATION IS RECYCLING INTO THE SITE FILL.
- ALL SEDIMENTATION STRUCTURES SHALL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS.
- ON-SITE STOCKPILES SHALL BE LOCATED ONLY WHERE INDICATED ON THE DRAWINGS. ALL ON-SITE STOCKPILES ARE NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY. THE BASE OF ALL STOCKPILES SHALL BE PROTECTED BY A STABLE BARRIER OR SEDIMENT FENCE.
- NOT EXCAVATED MATERIAL SHALL BE STORED ON SITE IN EITHER OF THREE TWO METHODS:
 - LOADED DIRECTLY INTO WATERPROOFED MOBILE CONTAINERS WITH A WELDED OUTLET FOR LEACHATE. ALL LEACHATE FROM NOT EXCAVATED MATERIAL SHALL BE PUMPED INTO THE PORTABLE SEDIMENTATION TANKS.
 - IF STORED IN A DESIGNATED STOCKPILE AREA, THE PERIPHERY OF THE STOCKPILE AREA SHALL BE GRADED TO DRAIN ALL LEACHATE TO A CONSTRUCTED DRAIN LINE FROM WHICH THE LEACHATE CAN BE PUMPED TO THE PORTABLE SEDIMENTATION TANKS.
- A PERIMETER CONSTRUCTION BARRIER FOR VEHICLE WHEEL-CLEANING SHALL BE INSTALLED WHERE EXISTING ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN DRAWINGS. SAID STABILIZED CONSTRUCTION ENTRY SHALL CONSIST OF A 6-INCH THICK BARRIERS OF 3.5-INCH DIAMETER CHIPPED STONE UNDERLAIN WITH A SUITABLE GEOTEXTILE MATERIAL; AND SHALL BE MAINTAINED. THE SOIL EROSION AND SEDIMENT CONTROL DRAWING SHOWS A TYPICAL STABILIZED CONSTRUCTION ENTRY.
- SIDE SLOPES OF ALL SURFACES EXCEEDING 3% SHALL BE STABILIZED WITH RIP-RAP OR GEOTEXTILE OR PAVEMENT IN ACCORDANCE WITH THE DETAILS ON THE DRAWINGS.
- RIP-RAP SHALL BE COMPOSED OF A WELL WASHED MIXTURE, WITH 90 PERCENT OF THE MIXTURE BY WEIGHT LARGER THAN THE SPECIFIED MINIMUM DIAMETER (3/4"). THE MIXTURE SHALL BE COMPOSED PRIMARILY OF THE LARGEST STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF THE OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER Voids BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE IN THE MIXTURE SHALL NOT EXCEED 1.5 TIMES THE RIP-RAP THICKNESS SHALL BE 2 TIMES THE RIP-RAP PLACED ON GEOTEXTILE FILTER MATERIAL. STONE SHALL BE PLACED IN LAYERS; WITH THE THICKNESS EACH LAYER EQUAL TO 150.
- PAVED ROADWAYS MUST BE KEPT CLEAR AT ALL TIMES.
- ALL CATCH BASIN INLETS WILL BE PROTECTED WITH A CHIPPED STONE OR RAFFLES FILTERS. TYPICAL CHIPPED STONE BARRIERS AND RAFFLES FILTERS DETAILS APPEAR ON THE SOIL EROSION AND SEDIMENT CONTROL DETAIL DRAWING.
- ALL NEW STORM DRAINAGE OUTLETS SHALL BE STABILIZED AS REQUIRED BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
- THE BERGEN COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED, IN WRITING AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBANCE.
- THE BERGEN COUNTY SOIL CONSERVATION DISTRICT MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE OR ON OF-SITE EROSION PROBLEMS DURING CONSTRUCTION, WHICH SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- THE REQUIRED TYPICAL DESIGNS FOR ALL EROSION CONTROL PRACTICES ARE SHOWN ON THIS DRAWING.

(NO SCALE)

APPENDIX D

AMENDED BY-LAWS OF THE CARLSTADT SEWERAGE AUTHORITY ADOPTED FEBRUARY 25, 1998

ARTICLE I - AUTHORITY

Section 1. Name of Authority. The name of the Authority shall be "The Carlstadt Sewerage Authority."

Section 2. Office of the Authority. The office and principal business location of the Authority shall be at 429 Hackensack Street, Carlstadt, N.J. Relocation of said office, or establishment of subordinate places of business or offices may be done with prior and express authorization of a majority of the Commissioners of the Authority.

Section 3. Seal of Authority. The seal of the Authority shall be in the form of a circle and shall bear the name of the Authority and the year of its organization.

ARTICLE II - OFFICERS

Section 1. Officers. The Officers of the Authority shall be a Chairperson, a Vice Chairperson and a Secretary/Treasurer.

Section 2. Chairperson. The Chairperson shall preside at all meetings of the Authority. Except as otherwise authorized by resolution of the Authority, the Chairperson shall sign all contracts, deeds and other instruments made by the Authority. At each meeting the Chairperson shall submit such recommendations and information as he may consider proper concerning the business, affairs and policies of the Authority. The Chairperson may appoint special committees, with the consent of a majority of the members present, to serve to improve the present and future performance of the Authority. The members of these special committees shall serve without compensation unless authorization for compensation is approved at a regular meeting of the Authority. The Chairperson of each special committee shall be appointed by the Chairperson of the Authority.

Section 3. Vice Chairperson. The Vice-Chairperson shall perform the duties of the Chairperson in the absence or incapacity of the Chairperson; and in the case of the resignation or death of the Chairperson, the Vice Chairperson shall perform such duties as are imposed on the Chairperson until such time as the Authority shall select a new Chairperson.

Section 4. Secretary. The Secretary shall keep the records of the Authority, shall act as Secretary of the meetings of the Authority and record all votes and shall keep a record of the

proceedings of the Authority in a journal of proceedings to be kept for such purpose, and shall perform all duties incident to that office. The Secretary shall keep in safe custody the Seal of the Authority and shall have power to affix such Seal to all contracts and instruments authorized to be executed by the Authority.

Section 5. Treasurer. The Treasurer shall sign all orders and checks for the payment of money and shall pay out and disburse such moneys under the direction of the Authority. Except as otherwise authorized by resolution of the Authority, all such orders and checks shall be countersigned by the Chairperson. The Treasurer shall keep regular books of accounts showing receipts and expenditures and shall render to the Authority, at such regular meeting (or oftener when requested), an account of all transactions and also the financial condition of the Authority. The Treasurer shall have the care and custody of all funds of the Authority in such bank and/or financial institution, as the Authority may select. The Treasurer shall give such bond for the faithful performance of his/her duties as the Authority may determine.

Section 6. Secretary/Treasurer. The Treasurer and Secretary can be the same person and thereby vested with the powers set forth here within.

Section 7. Executive Director. There shall be appointed by the Commissioners and Executive Director of the Authority. The Executive Director shall be responsible for the management and oversight of the affairs of the Authority, such activity being reviewed by and subject to approval of the Commissioners of the Authority. The Executive Director shall attend all meetings of the Authority.

Section 8. Compensation. The compensation of the officers and members shall be determined by the Authority, in accordance with law.

Section 9. Additional duties. The officers of the Authority shall perform such other duties and functions as may from time to time be required by the Authority, its Commissioners, or the By-Laws or rules and regulations of the Authority.

Section 10. Election or appointment. The Chairperson, the Vice-Chairperson, and the Secretary/Treasurer shall be elected from among the Commissioners of the Authority, at the annual reorganization meeting to be held on the fourth Wednesday of February at 7:30 p.m. at the regular meeting place of the Authority. All elected officers shall hold office for a one (1) year term unless noted otherwise. Thereafter, the election of officers shall be scheduled at the annual meeting of the Authority as mentioned in Article III - MEETINGS, Section 1 below, and until their respective successors have been appointed and qualified.

Section 11. Vacancies. Should any office become vacant, the Authority shall elect a successor from its membership at the next regular meeting, and such election shall be for the unexpired terms of said office.

Section 12. Absences. In the absence of the Chairperson, the Vice Chairperson shall preside over the meeting. In the event that both the Chairperson and Vice Chairperson are absent, the Secretary shall preside over the meeting.

Section 13. Additional personnel. The Authority may from time to time employ such personnel as it deems necessary to exercise its powers, duties and functions as prescribed by the laws of the State of New Jersey applicable hereto. The selection and compensation of such personnel shall be determined by the Authority subject to the laws of the State of New Jersey.

Section 14. Conflict of Interest. All Commissioners, Alternates, officers and employees of the Authority are hereby bound, as applicable, to observe and follow the provisions of the Local Government Ethics Act.

ARTICLE III - MEETINGS

Section 1. Annual Meeting. The annual reorganization meeting of the Authority shall be held with notice on the fourth Wednesday of February at 7:30 p.m. at the offices of the Authority, 429 Hackensack Street, Carlstadt, N.J. At such meeting, the Authority shall conduct business related to the reorganization of the Authority, including but not limited to establishing the schedule of meetings and notice thereof, and the hiring of professionals to serve the Authority.

Section 2. Regular Meetings. Regular meetings shall be held with notice at 429 Hackensack Street in the Borough of Carlstadt, on the fourth Wednesday of each month. If the meeting falls on a legal holiday, the meeting shall be held on the fourth Monday of that month. All regular meetings shall convene at 7:30 p.m. local time.

Section 3. Special Meetings. The Chairperson of the Authority may, when it deems expedient, and shall, upon written request of three members of the Authority, call a special meeting of the Authority for the purpose of transacting any business designated in the call. The call for a special meeting shall be delivered to each member at least three days prior to the date of the special meeting. At such special meeting no business shall be considered other than as designated in the call, but if all of the members of the Authority are present at a special meeting, any and all business may be transacted at such special meeting, provided notice thereof is waived by all said members present and provided that appropriate notice under the Sunshine Law has been made.

Section 4. Quorum. The powers of the Authority shall be vested in the Commissioners thereof in office from time to time. Three Commissioners shall constitute a quorum for the purpose of conducting its business and exercising its powers and for all other purposes, but a smaller number may adjourn a regular scheduled meeting until a quorum is in attendance. Action may be taken by the Authority upon a vote of a majority of the Commissioners present.

Section 5. Order of Business. At the regular meetings of the Authority the following shall be the order of business:

1. Roll Call
2. Pledge of Allegiance
3. Sunshine Law compliance notice
4. Reading and approval of the minutes of the previous meeting
5. Communications
6. Report of the Secretary
7. Report of the Treasurer
8. Report of the Executive Directors
9. Reports of the Professionals
10. Reports of the Committees
11. Payment of bills
12. Hearing of Citizens
13. Unfinished business
14. New business
15. Adjournment

All resolutions shall be in writing and shall be copied in a journal of the proceedings of the Authority.

Section 6. Manner of voting. The voting on all questions coming before the Authority shall be by roll call, and the yeas and nays shall be entered upon the minutes of such meeting. Voting by proxy is not permitted.

ARTICLE IV - AMENDMENTS

Amendments to By-Laws. The By-Laws of the Authority shall be amended only with the approval of at least three of the members of the Authority at a regular or a special meeting. No such amendment shall be adopted unless at least seven days written notice thereof has been previously given to all of the Commissioners.

ARTICLE V - RULES OF ORDER

The deliberations of the Authority shall proceed in an orderly manner according to the provisions set forth here within. If not otherwise provided, the "Rules of Order" shall be governed by Roberts Rules of Order as revised. The Chairperson shall be designed as Parliamentarian for the purposes of determining proper conduct of the meeting, unless and by a majority vote of the Authority, another Commissioner is designated as Parliamentarian.

ARTICLE VI - RESCISSION

The By-Laws set forth herein shall supersede all By-Laws and Amendments previously adopted by the Authority and the same are hereby rescinded and declared to be null and void.

ARTICLE VII - VALIDITY

If any provision or provisions of these By-Laws, or any part thereof, is or should be held invalid, the validity of the remainder of these By-Laws shall not be effected.

ARTICLE VIII - EFFECTIVE DATE

These By-Laws shall take effect immediately upon their adoption by a majority vote of the Authority. The effective date of these By-Laws is February 25, 1998.

APPENDIX E

INDUSTRIAL OR COMMERCIAL SEWER CONNECTION APPLICATION

To the Carlstadt Sewerage Authority of the Borough of Carlstadt, New Jersey:

The undersigned being the _____

_____ of the property located at _____

_____ does hereby request to permit to _____
(Install, Use)

an industrial sewer connection serving the _____
(Name of

_____, which company is engaged in _____
Company)

_____ at said location.

1. A Plat of the property showing accurately all sewers and drains now existing is attached hereto as Exhibit "A".

2. Plans and specifications covering any work proposed to be performed under this permit is attached hereunto as Exhibit "B".

3. A complete schedule of all process waters and industrial wastes produced or expected to be produced at said property, including a description of the character of each waste, the daily volume and maximum rates of discharge, and representative analysis, prepared on the form furnished by the Authority, is attached hereunto as Exhibit "C."

4. The name and address of the person or firm who will perform the work covered by this permit is _____

In consideration of the granting of this permit the undersigned agrees:

1. To furnish any additional information relating to the installation or use of the sewer for which this permit is sought as may be requested by the Authority.
2. To maintain the building sewer at no expense to the Authority.
3. To notify the Authority when the building sewer is ready for inspection and connection to the public sewer, but before any portion of the work is covered.

Date: _____

Signed: _____
(Applicant)

(Address of Applicant)

\$ _____ Inspection fee paid.

(Certification by Authority Treasurer)

Application approved and permit issued:

Date: _____

Signed: _____
(Chairman)

PRIVATE SEWAGE DISPOSAL APPLICATION

To the Carlstadt Sewerage Authority of the Borough of Carlstadt:

The undersigned, being the _____
of the property located at _____
does hereby request a permit to install sanitary sewage disposal facilities to serve the _____
_____ at said location.

1. The proposed facilities include: _____

to be constructed in complete accordance with the plans and specifications attached hereunto as Exhibit "A."

2. The area of the property is _____ square feet.

3. The name and address of the person or firm who will perform the work is: _____

4. The maximum number of persons to be served by the proposed facilities is _____

5. The locations and nature of all sources of private or public water supply near said property are shown on the plat attached hereunto as Exhibit "B."

In consideration of the granting of this permit, the undersigned agrees:

1. To furnish any additional information relating to the proposed work that shall be requested by the Authority.

2. To accept and abide by all provisions of the Regulations of the Authority, and of all other pertinent regulations that may be adopted in the future.

3. To operate and maintain the wastewater disposal facilities covered by this application in a sanitary manner at all times, in compliance with all requirements of the Health Officer, at no expense to the Authority.

4. To notify the Authority at least twenty-four (24) hours prior to commencement of work proposed, and again at least twenty-four (24) hours prior to the covering of any underground portions of the installation.

Date: _____

Signed: _____

(Applicant)

(Address of Applicant)

\$ _____ inspection fee
paid.

(Certification by Authority Treasurer)

Application approved and permit
issued:

Date: _____

Signed: _____

(Chairman)

RESIDENTIAL SEWER APPLICATION

To the Carlstadt Sewerage Authority of the Borough of Carlstadt, New Jersey:

The undersigned, being the _____

of the property located at _____

does hereby request a permit to install and connect a building sewer to serve the residence _____

_____ at said location.

1. The following indicated fixtures will be connected to the proposed building sewer::

<u>Number</u>	<u>Fixtures</u>
_____	Kitchen Sinks
_____	Lavatories
_____	Laundry Tubs
_____	Water Closets
_____	Urinals
_____	Bath Tubs
_____	Showers
_____	Garbage Grinders

Specify other fixtures _____

2. The maximum number of persons who will use the above fixtures is _____

3. The name and address of the person or firm who will perform the proposed work is _____

4. Plans and specifications for the proposed building sewer are attached hereunto as Exhibit "A."

In consideration of the granting of this permit, the undersigned agrees:

1. To accept and abide by all provisions of the Regulations of the Carlstadt sewerage Authority, and of all other pertinent regulations that may be adopted in the future.

2. To accept and abide by all provisions of the Regulations of the Authority, and of all other pertinent regulations that may be adopted in the future.

3. To operate and maintain any waste pretreatment facilities, as may be required as a condition of the acceptance into the public sewer of the commercial and industrial wastes involved, in an efficient manner at all times, and at no expense to the Authority.

4. To cooperate at all times with the Authority and its representatives in their inspecting, sampling, and study of the commercial and industrial wastes, and any facilities provided for pretreatment.

5. To notify the Authority immediately in the event of any accident, negligence, or other occurrence that occasions discharge to the public sewers of any wastes or process waters not covered by this permit.

Date: _____

Signed: _____

Address of Applicant

\$ _____ Inspection fee paid.

Certification by Authority Treasurer

Applicant approved and permit granted:

Date: _____

Signed: _____

Chairman

**PLAN TO ACCOMPANY AND FORM PART OF APPLICATION FOR
"APPLICATION FOR PERMIT TO DISCHARGE INDUSTRIAL WASTES INTO THE
SANITARY SEWERAGE SYSTEM."**

REQUIREMENTS: (1) Draw to scale (as large as will conveniently fit form); (2) Show scale;
(3) Dimensions of lot and building (figures); (4) Street numbers; (5) Existing buildings; giving size;
(6) Proposed building or buildings; (7) Location of Sanitary Sewer Connections; (8) North Point.
NOTE "A" Information other than above shall be furnished upon request of the Authority

Give Scale Used

Location of Lot

Owner

Owner's Address

Drawn By

Date

DO NOT WRITE IN THIS SPACE

Received By

Permit No.

Date Approved

.....

**APPLICATION FOR PERMIT TO DISCHARGE INDUSTRIAL
WASTES INTO THE SANITARY SEWERAGE SYSTEM**

Date: _____, 19__

_____ hereby make application for a
permit to discharge wastes, other than domestic sewage, into the sewerage system of the _____

Name of Company

Address

Signature and Title of Authorized Agent

1. Location of Building or Plant _____
Street and Number

2. Number of employees _____

3. Indicate location and size of connection on attached plan, Sheet 7.

4. Water consumption: Gallons monthly _____

Gallons daily _____ Peak hourly rate of consumption _____ gallons.

For what period of time is the peak rate of consumption continuous _____

5. Complete information relative to the connection to and discharge of waste into the sewerage system is as follows:

(a) Existing equalizing or pre-treatment facilities: _____

(b) Description of business or process from which the waste will result and nature of waste:

1. Description of Business:

Plating _____ Manufacturing _____

Commercial Photo Developing _____ Dairy _____

Wet Industry _____ Laundry _____

Dry Cleaning _____ Other _____

General Nature of Products: _____

Quantity produced daily: _____

Amount of Chemicals and Raw Materials used per day: _____

2. Nature of Waste Discharged into Sewerage System:

Washdown of Mechanical Equipment _____ Grease _____

Grinding Wastes _____ Oil _____

Cleaning Fluids _____ Detergents _____

Soaps _____ Acids _____

Cyanides _____ Other _____

3. Solid Waste Discharged into Sewerage System:

Quantity _____ cu. ft./day

Sp. Gravity _____

Size: Diameter _____ inches Length _____ inches.

Nature _____

4. Liquid Waste Discharged into Sewerage System:

Quantity _____ gals. per day.

Nature _____

(c) Total Daily Flow _____ gallons.

(d) Period of time during which flow in (c) is discharged:

_____ hours per day. _____ days per week.

(e) Peak rate of flow _____ gallons per hours.

(f) For what period of time is the peak rate of flow continuous.

- (g) Is there a periodic cleaning or dumping time? Yes _____ No _____
 If yes, what day of week _____ For what period of day _____
- (h) Maximum Temperature of Waste: _____ Degrees Fahrenheit
- (i) Analysis of Wastes:
1. Total Solids: (a) Total _____ ppm. (b) Volatile _____ ppm
 2. Suspended Solids: (a) Total _____ ppm. (b) Volatile _____ ppm
 3. Dissolved Solids: (a) Total _____ ppm. (b) Volatile _____ ppm.
 4. 5-day Biochemical Oxygen Demand _____ ppm.
 5. Chlorine Demand (30) minute _____ ppm.
 6. pH _____
 7. Oil and Grease (Chloroform Ether Soluble) _____ ppm.
 8. Sulfides _____ ppm.
 9. Total Acidity: _____ ml N/50 Sodium Hydroxide in 100 ml sample with Phenolphthalein = _____ ppm of CaCO_3
 10. Free Mineral Acidity _____ ml N/50 Sodium Hydroxide in 100 ml sample with Methyl Orange = _____ ppm of CaCO_3
 11. Caustic Alkalinity: _____ ml N/50 Sulphuric Acid in 100 ml sample with Phenolphthalein = _____ ppm of CaCO_3
 12. Total Alkalinity: _____ ml N/50 Sulphuric Acid in 100 ml sample with Methyl Orange = _____ ppm of CaCO_3
 13. Phenols: _____ ppm.
 14. Toxic: Yes _____ No _____ Degree of Toxicity _____
 15. Maximum Size of Solids _____ inches.
6. Date and times at which sample was obtained: _____

7. Date sample was analyzed _____

8. Name and address of laboratory or individual making the analysis: _____

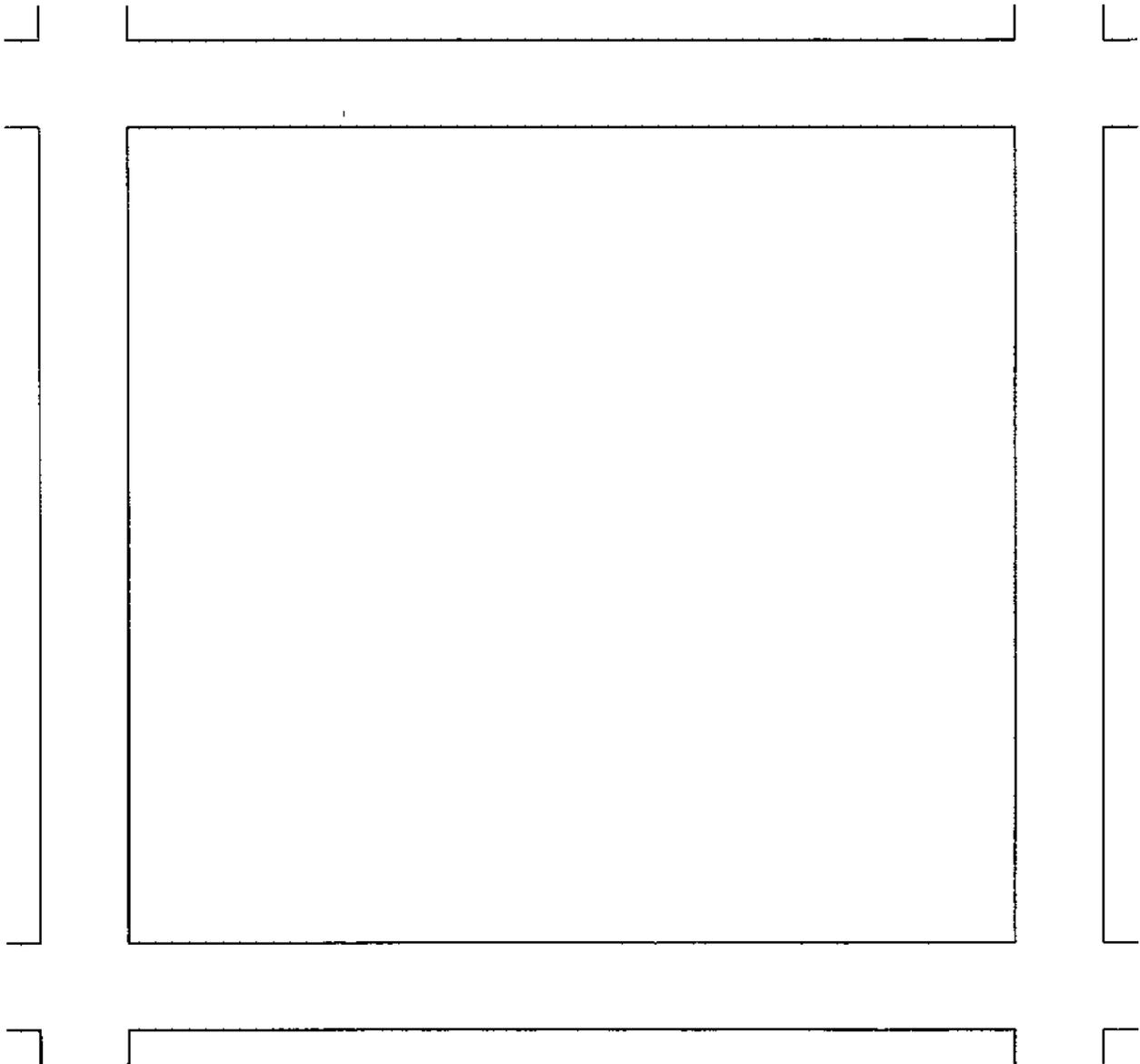
9. Means to be provided to allow the Authority or its representatives to make periodic examination and determination of the volume, character and concentration of waste being discharged into the sewers or laterals tributary thereto: _____

Name of Company

Signature and Title of Authorized Agent

PLAN TO ACCOMPANY AND FORM PART OF APPLICATION FOR
"APPLICATION FOR PERMIT TO DISCHARGE INDUSTRIAL WASTES INTO THE
SANITARY SEWERAGE SYSTEM."

- REQUIREMENTS: (1) Draw to scale (as large as will conveniently fit form); (2) Show scale;
(3) Dimensions of lot and building (figures); (4) Street numbers; (5) Existing buildings; giving size;
(6) Proposed building or buildings; (7) Location of Sanitary Sewer Connections; (8) North Point.
NOTE "A" Information other than above shall be furnished upon request of the Authority



Give Scale Used

Location of Lot

Owner

Owner's Address

Drawn By

Date

DO NOT WRITE IN THIS SPACE

Received By

Permit No.

Date Approved

.....

APPENDIX F

**CARLSTADT SEWERAGE AUTHORITY
ONE TIME PERMIT NOTICE**

Applicant: _____

Block _____ Lot _____

Work Site Location _____

AUTHORIZED FOR CONSTRUCTION OF THE FOLLOWING:

- _____ Discharge Flow Meter
- _____ Sewer Connection
- _____ Sewer Repair
- _____ Other _____

This permit does not eliminate the necessity for applicant to obtain authorization from the Carlstadt Construction Office for applicable plumbing, electrical, fire protection, etc. permits. Applicant is further obligated to obtain any other applicable Federal, State or County Permits.

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed above.

Witness

Signature Owner/Agent

This notice shall be posted conspicuously at the work site.

Approved by:

Dated: _____

Chairman, Carlstadt Sewerage Authority

Flow charges originating from a One Time Permit Notice will be calculated on a case-by-case, individual basis, with reference being made to the Authority billing rates.

STREET OPENING PERMIT

BOROUGH OF CARLSTADT

STATE OF NEW JERSEY



Public Utilities Co.: _____

Date Issued: _____

Contractor: _____

No. of Openings: _____

Locations: _____

Purpose of Opening: _____

Name of Property Owner: _____

ROAD OPENING PERMIT REQUIREMENTS - EXCAVATION AND BACKFILL PROCEDURES

The contractor shall remove and dispose of the excavated material offsite, including existing roadway, piping, debris, earth, rocks, boulders, stone and concrete masonry, and other materials encountered of whatever nature that exists within the construction limits.

Backfill material shall be 3/4 inch stone.

Roadway surface shall be the application of a four (4) inch thick (average) layer of stabilized base course over stone subsurface within the disturbed area, and a two (2) inch thick FABC final surface course.

Prior to application of the FABC, the existing roadway shall be neatly cut back along the edge of the disturbed area.

Fees: \$ _____

Amt. Refund: \$ _____

No 000

Signature: _____

G-1

APPENDIX G

APPENDIX H

**CARLSTADT SEWERAGE AUTHORITY
BUILDING CONNECTION TO SEWER SYSTEM**

CERTIFICATION OF INSPECTION

LOCATION:

DATE:

INSPECTOR'S SIGNATURE

APPENDIX I

RESOLUTION FOR THE CREATION OF AN APPLICANT ESCROW DEPOSIT ACCOUNT FOR PROFESSIONAL FEES & COSTS

WHEREAS, the Carlstadt Sewerage Authority ("CSA") desires to require all applicants before the "CSA" to establish a deposit of monetary funds in escrow with the "CSA" to cover the cost of professional fees and costs in connection with "CSA" applications and any related matters; and

WHEREAS, it is necessary for the "CSA" to rely upon the expertise of the various professionals and consultants retained by it in connection with applications before the Authority; and

WHEREAS, a public hearing on this matter was held on Wednesday, April 22, 1998 at 7:30 p.m. at the Authority office; and

WHEREAS, the Commissioners of the "CSA" have deemed it in the best interest of the Authority and Borough to impose development fees & costs connected to a "CSA" application as permitted under the Laws of the State of New Jersey.

NOW, THEREFORE, BE IT RESOLVED BY THE CARLSTADT SEWERAGE AUTHORITY as follows:

Projects Requiring Escrow Deposits.

- A. Any Applicant before the "CSA" for sewerage connection, new applicant inspection, and/or any other forms of development or maintenance application related to the "CSA" must deposit an escrow fee with the Executive Director of the "CSA" to cover the Authority's estimated costs and expenses for professional services and costs in connection with application review. Such services shall include, but not be limited

to Attorneys, Engineers, Planners, Court Stenographers and any other professionals or consultants hired by the "CSA" to aid or assist it in reviewing, evaluating and acting upon applications affecting the Authority.

- B. Escrow funds may also be utilized to cover the Authority's disbursement costs incurred for the technical review and analysis of the application.
- C. Said professional service and cost escrow deposits shall be in addition to the required particular application/permit fee for the project in question. All escrow fees required herein shall be paid prior to any application being deemed complete. Moreover, the payment of the required fee(s) in question shall not deem an application complete.
- D. In addition to any applicable application/permit fee, the Authority reserves the right to calculate and set specific "project" rates based upon special circumstances and necessities of an application.

BE IT FURTHER RESOLVED as follows:

Amount to be Deposited.

- A. All escrow monies are to be deposited and made payable to the "Carlstadt Sewerage Authority".
- B. Applicant may be advised of the status of his escrow account by the Executive Director of the "CSA". An applicant shall have the right, upon fourteen (14) days' notice, to demand a written accounting of funds deposited by the Applicant in said escrow account to the Executive Director of the "CSA". The Applicant shall be responsible for any costs incurred by the Professional and/or Administrative staff in addressing applicant's accounting demands which are out of the normal course of business.

- C. In the event the cost of review services by professionals and consultants exceed the amount of the initial escrow deposit, sufficient additional escrow monies shall be placed on deposit prior to final approval on the application.
- D. Any Professional or Consultant fees incurred by the "CSA" which remain unpaid shall become a lien upon the subject premises until the same is satisfied. Any Professional or Consultant vouchers which remain unpaid for sixty (60) days or which cannot be satisfied from existing escrow deposits shall be certified by the Executive Director to the Borough Tax Collector for execution of a municipal lien upon the property in question. Said sums shall be levied and collected at the same time and in the same manner as other Borough taxes. All such monies received by the Collector shall be paid over to the Executive Director to be applied only to the purpose for which it is levied.
- E. Said expenses and fees shall extend to any judicial or administrative appeals related to an application before the "CSA".

BE IT FURTHER RESOLVED as follows"

Disbursement of Escrow Monies.

- A. All professionals and consultants retained by the "CSA" shall submit vouchers for services rendered. All fees charged shall be reasonable as determined by the practice in their respective field of expertise.
- B. All professional and consultant charges in connection with an application shall be withdrawn from the Applicant's escrow account upon written submission of a duly executed voucher to the Executive Director of the "CSA" and subject to approval by the Authority on its monthly list of bills.

Return of Escrow Monies.

Subsequent to final review and approval of an application, any escrow monies remaining on deposit with the Executive Director, shall be refunded to the Applicant within forty-five (45) days of submission of the final invoice by the "CSA" professionals and consultants with respect to said application.

BE IT FURTHER RESOLVED as follows:

Should any article, section, subsection, paragraph, sentence, clause or phrase of this Resolution be adjudged by any Court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the article, section, subsection, paragraph, sentence, clause or phrase thereof directly involved in the controversy in which said judgment shall have been rendered.

ARTHUR BUCHMAN
Secretary

APPENDIX J

RATE SCHEDULE

The following rates shall apply to all industrial and commercial users:

The rate is made up of two component charges: (1) Connection Fee; (2) Use Charge.

1. Connection Fee

(a) This fee applies to all buildings presently existing or to be erected in the future which are or are to be occupied or used by persons or are supplied with water not already connected to the sewerage system. This fee is required to be paid for the first connection of such a building to the sewerage system. Existing or prospective users may apply to the Authority for additional connections of the same building to the sewerage system. The connection fee for any additional connections of the same building will be determined by the Authority upon application for same, if permitted, and shall be in an amount sufficient to reimburse this Authority for any costs and expenses it may incur in connection with the application and provision of additional connections to the same building.

(b) Payment must begin prior to actual connection to the sewerage system. The fee is payable over a ten (10) year period without interest, so long as all installments are paid when due.

(c) Owners of vacant property may pay this fee in advance, before improvement of the property for any number of anticipated future connections. In case of advance payment, the amount of the fee or fees shall be calculated using the service unit charge promulgated by the Authority for the year that the payment begins, and will be based on an estimated number of service units determined to be a reasonable estimate by the Authority. In the event that the anticipated building or buildings, when constructed, shall be designated as having more service units than estimated, then the owner shall be required to pay the balance due prior to the actual connection of the building or buildings to the sewer system. The owner shall also be charged interest on the balance due at the statutory rate permitted to be charged by the Authority on delinquent user accounts.

In the event that the anticipated building or buildings, when constructed, shall be designated with less service units than estimated, then the owner shall receive a credit for any overpayment against future connection fee installments and use charges.

(d) The amount of the connection fee shall be computed at the end of each calendar year by the Authority after a public hearing as required by statute. The connection fee shall be computed in accordance with N.J.S.A. 40:14A-8(b) and shall be charged for the next ensuing calendar year.

(e) For those who pay in advance of erection of a building, the initial payment, which will determine the year in which payment begins, must be received on or before December 31st of any year to qualify as payment for that year.

(f) In the case of those who pay in advance of erection of a building, if an initial payment is made and any of the nine succeeding annual payments are not made by December 31 of the year in which it is due, then the fee shall escalate to the year in which the building is actually erected and connected, with credit for any prior payments. Interest at the statutory rate charged by the Authority on delinquent user charges shall be charged on any payment received between February 1st and December 31st of any year.

(g) Upon actual connection of a building to the sewerage system, this fee shall be due and payable in annual installments on February 1st of each year, and if payment is not received by March 1st of each year, interest at the statutory rate permitted to be charged by the Authority on delinquent user accounts shall be charged, and a lien shall be placed on the real property involved.

(h) No connection to the sewerage system shall be permitted except upon prior application to the Sewerage Authority on forms provided by it, payment of the appropriate connection fee, and compliance with the Rules and Regulations of the Authority.

(i) The service unit fee for the calendar year 1998 shall be \$4,857.94.

2. Use Charge

(a) This charge is based on flow as measured by water meter readings and/or well meter readings and/or sewer meters. This charge became effective on January 1, 1995 and shall remain in effect until a revision to this Rate Schedule is duly adopted by this Authority. The use charge for users classified as industrial-commercial shall be \$7.75 per 1,000 gallons of flow.

(b) The Use Charge shall be subject to an abatement for the commercial use of water for those who apply to the Authority for such abatement and qualify under the Rules for Abatements adopted by the Authority.

CARLSTADT SEWERAGE AUTHORITY

RULES AND REGULATIONS

DISCLAIMER

The AUTHORITY specifically reserves the right to repeal, modify and/or amend these Rules and Regulations at any time, with or without notice. None of these provisions shall be deemed to create a vested contractual right or limit the power of the AUTHORITY to repeal, modify and/or amend said Rules and Regulations.

SEVERABILITY

Should any article, section, subsection, paragraph, sentence, clause or phrase of these Rules & Regulations be adjudged by any Court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the article, section, subsection, paragraph, sentence, clause or phrase thereof directly involved in the controversy in which said judgment shall have been rendered.

*Buchman
Donnelly*

4-0

**RESOLUTION FOR THE AMENDMENT OF
THE CARLSTADT SEWERAGE AUTHORITY
RULES AND REGULATIONS**

WHEREAS, the Carlstadt Sewerage Authority ("Authority") has reviewed and discussed the proposed amendment to the Authority Rules and Regulations as related to Article IV, Section 4 relating to an accepted application being deemed a contract; and

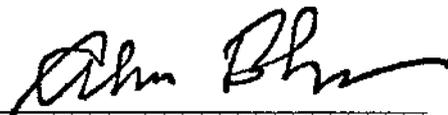
WHEREAS, the Authority through the recommendation of its Authority Attorney and Authority Engineer has determined that the acceptance of an application by the Authority shall not constitute a contract between the Authority and the applicant as defined under the New Jersey Tort Claims Act, and

NOW, THEREFORE, BE IT RESOLVED BY THE CARLSTADT SEWERAGE AUTHORITY, that the proposed amendment to the Rules and Regulation, attached hereto, are hereby adopted:

"Acceptance of the application shall not constitute a contract between the Authority and the applicant. In addition, nothing in these Rules & Regulations shall be deemed to be a written or implied contract between the Authority and the applicant, but these rules and regulations merely set forth the acceptable administrative procedure in dealing with the Authority."

This Resolution was passed on February 24, 1999 and memorialized at the February 24, 1999 meeting pursuant to the following.

ON ROLL 5-0



ARTHUR BUCHMAN
Secretary

Brian Curreri	<u><i>YES</i></u>
James Donnelly	<u><i>YES</i></u>
Robert Lahullier	<u><i>YES</i></u>
Robert DeLeasa	<u><i>YES</i></u>
Arthur Buchman	<u><i>YES</i></u>

10/10

**RESOLUTION FOR THE AMENDMENT OF
THE CARLSTADT SEWERAGE AUTHORITY
RULES AND REGULATIONS**

WHEREAS, the Carlstadt Sewerage Authority ("Authority") has reviewed and discussed the proposed amendment to the Authority Rules and Regulations as related to an internal appeal procedure; and

WHEREAS, the Authority through the recommendation of its Authority Attorney and Authority Engineer has determined that the internal appeal procedure can serve to resolve and clarify certain disputes regarding billing charges and billing charge procedure prior to the institution of legal action, and

NOW, THEREFORE, BE IT RESOLVED BY THE CARLSTADT SEWERAGE AUTHORITY, that the proposed amendment to the Rules and Regulation, attached hereto, is hereby adopted:

INTERNAL APPEAL PROCEDURE

If any owner and/or utility paying occupant of a building connected to or about to be connected to the Authority sewer system is dissatisfied with the billing charge(s) or proposed billing charge(s) of the Authority and formally in writing disputes the same, the owner and/or utility paying occupant (hereinafter "owner/occupant") may, within thirty (30) days of the receipt of the disputed billing of the Authority, notify the Authority in writing of its objection to the billing. The owner/occupant shall provide a detailed analysis as to the basis of the objection or dispute in the Authority billing.

This formal objection and appeal shall be mailed by certified mail return receipt requested to the Authority. The Executive Director of the Authority shall review the owner/occupants objection and analysis during the next regularly scheduled monthly meeting of the Authority or within forty-five (45) days of receipt whichever is sooner.

Thereafter the Executive Director of the Authority shall advise the owner/occupant of the Executive Director's decision in writing along with the reasons therefore with regard to the objection and appeal to the Authority's billing.

If the owner/occupant is dissatisfied with the determination of the Executive Director, the owner/occupant may, within ten (10) days of receipt of the decision of the Authority, notify the Authority in writing that the owner/occupant is dissatisfied with the Authority's decision and request a full plenary hearing. The Authority shall then set a date, time and place for a plenary hearing and the owner/occupant will have the opportunity to present competent evidence and testimony with regard to the questions raised by the owner/occupant. This hearing will be scheduled for the next regularly scheduled monthly meeting of the Authority or within forty-five (45) days whichever is sooner unless extreme circumstances are presented to warrant scheduling of a special meeting.

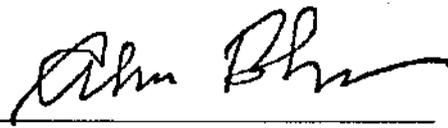
The owner/occupant must pay in full the determination of the Executive Director including interest and penalties prior to the Authority hearing. The objecting party is also solely responsible for any cost associated with the hearing, i.e., Court Reporter, Authority's professional attendance fees and any other reasonable applicable disbursement. A \$250 initial hearing fee must accompany the formal hearing request correspondence. The hearing fee is subject to the terms and conditions of the Authority's escrow ordinance.

The payment of the Executive Director's findings shall not act as a waiver of the owner/occupant's position.

The determination of the Authority shall be the final finding of the Authority and binding on owner/occupant.

This Resolution was passed on February 24, 1999 and memorialized at the February 24, 1999 meeting pursuant to the following.

ON ROLL 5-0



ARTHUR BUCHMAN
Secretary

Brian Curreri	<u>YES</u>
James Donnelly	<u>YES</u>
Robert Lahullier	<u>YES</u>
Robert DeLeasa	<u>YES</u>
Arthur Buchman	<u>YES</u>