REMEDIAL ACTION WORK PLAN
186 AND 200 WESTCHESTER AVENUE
WHITE PLAINS, NY 10601

SITE NO. C360148

PREPARED FOR

Rimawi Inc.
c/o Nabiel Rimawi
186 Westchester Avenue
White Plains, NY 1061

PREPARED BY

WCD GROUP LLC
10 WALDRON AVENUE
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August 2016

PROFESSIONAL ENGINEER CERTIFICATION

This is to certify that to the best of my knowledge, information and belief this Remedial Work Plan has been prepared under my supervision by personnel of WCD Group LLC. In addition, an engineering evaluation of the proposed remedy has been conducted in accordance the NYSDEC Brownfield Cleanup Program. Note: The details shown in section "3.7 – In-situ Chemical Treatment" are shown in this Remedial Work Plan for continuity. The actual design shall be by others.

S. E. McDonald

Signature, Registered Professional Engineer

Scott McDonald. P.E.

Printed Name, Registered Professional Engineer

License No. 092879, State Of New York

4-28-16

Date

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1.0 INTRODUCTION

WCD Group, LLC (WCD) has prepared this Remedial Action Work Plan (RAWP) to satisfy the requirements of the Brownfield Cleanup Program (BCP) Agreement executed on December 4, 2015 for the site located at 186-200 Westchester Avenue, in the city of White Plains, NY (the Site). The participant in the program, Mr. Nabiel Rimawi, on behalf of Rimawi Inc., plans to redevelop the site for use as a filling station with a convenience store. A site Location Map has been provided as **Figure 1**. The new development plans do not reflect a change in use. A Remedial Action meeting Unrestricted Use Soil Cleanup Objectives 6 NYCRR part 375, Soil Cleanup Levels for Gasoline Contaminated Soils CP-51 and Ambient Water Quality Standards is proposed for this Site. This RAWP is designed to ensure protection of human health and the environment and incorporates the following actions:

1. Excavation and off-site disposal of soils exceeding applicable soil cleanup levels.
2. Removal and treatment of petroleum affected groundwater during construction.
3. In-situ situ treatment with chemical oxidation and enhanced biodegradation
4. Natural attenuation.
5. Management of potential vapor impacts through institutional and engineering controls for any redevelopment and new construction on the site.

2.0 SITE HISTORY AND BACKGROUND

2.1 Site Description and History

The Site is identified as Tax Map/Parcel No. 126.61-5-3 (186 Westchester Avenue) and Tax Map/Parcel No. 126.61-5-4 (200 Westchester Avenue). Collectively the two parcels total 0.4 acres in size and are scheduled for development as one Site. The current use of the individual parcels is as follows:

186 Westchester Avenue: BP AMOCCO Station

200 Westchester Avenue: Currently vacant most recent use is Seabergh's Frozen Foods

Throughout this document where necessary, the two parcels are referred to as the 186 Parcel and 200 Parcel. The Site is bordered on the north by Splash Carwash, to the east by the City of White Plains Department of Purchase (office building), to the south by Westchester Avenue beyond which is Interstate Highway 287 and to the west by South Kensico Avenue beyond which is a Mobil service station. **Figure 2** shows the surrounding land usage.

Site History – 186 Westchester Avenue

According to available information, the site has been developed since 1928 and has been used as a garage, auto wrecking facility and filling station. Various tank installations and removals have been documented over the development of the Site of which two (2) 8,000-gallon diesel underground storage tanks (USTs) and one (1) 10,000-gallon gasoline UST are currently in use. Data gaps exist with regard to the fate of other tanks that may have been used therefore one or more out of service USTs may be located on the Site. The site currently operates as a BP Filling Station. According to the New York spills and leaking tanks databases the following spill numbers are associated with the site:

- 88-08460 assigned on January 24, 1989 and closed on 02/02/2016 without meeting standards, to be addressed by the Brownfield program. This spill number is used to coordinate and consolidate all other spill activities for this site.
- 90-01665 assigned May 12, 1990 and closed on August 1, 1990; three non-leaking 55 gallon

drums labelled as D-001 solid hazardous waste. Drums removed from site without leaking.

- 88-08631 Tank test failure; assigned on February 1, 1989 and closed on July 1, 1998 as not meeting standards;
- 12-12796 assigned on November 29, 2012; Spill number 12-12796 was later addressed by Groundwater & Environmental Services, Inc. as not being attributed to Exxon Mobil Environmental Company and a request was made to re-assign the spill number (Semi-annual Monitoring Report & Request For No Further Action, GES, October 16, 2015, Appendix A). The NYSDEC has not accepted GES's statement. The cause of the spill was reported as free product "mousse" from an off-site source. The spill number is closed to be addressed under spill number 88-08460.
- 8808461 – S. Kensico Avenue and 186 Westchester Avenue manhole #4609; files associated with this spill number were consolidated with spill number 88-08460.
- 9402527 – assigned on 05/18/1994 and closed on 07/18/1994. Westchester Avenue and Kensico Avenue – contaminated soil was found during trench excavation work. The report for this spill references spill number 8808461.
- 0403907 – assigned on 7/12/2004, closed on 07/15/2004 and being tracked under spill number 8808460

The following information pertaining to the timeline development of the Site was obtained from the Desktop Review Letter by Langan dated January 23, 2014:

- March 1928 – Bopps Garage – the Subject Site was re-developed as an automobile service station with a motor fuel storage and delivery system consisting of up to five 550-gallon gasoline USTs.
- February 1942 – Bopps Garage – the Subject Site was re-developed with four 1,000-gallon gasoline USTs with one of the existing 550-gallon gasoline USTs converted for the storage of waste oils.
- January 1962 – Colonial Garage – the Subject Site was re-developed with two 3,000-gallon

gasoline USTs and three 2,000-gallon gasoline USTs; records also indicated that there were three pump islands.

• May 1962 – Colonial Garage – correspondence from SHAY Construction Company, Inc. indicated that the four 1,000-gallon gasoline USTs installed in 1942 were abandoned in place in accordance with Fire Department requirements. (Please note: WCD has submitted a Freedom of Information Request for tank Closure Reports relating to the subject Site, but as of this writing, no reports have been received.)

• June 1990 – Exxon Service Station #3-1356 – ExxonMobil sold the motor fuel storage and delivery systems at the Subject Site to the station operator and the USTs at the Subject Site were replaced by the new owner of the Site.

• December 1995 – Exxon Service Station #3-1356 – three 1,000-gallon steel USTs were removed from the Subject Site; these may be three of the four tanks that were installed in 1942 and abandoned in place in 1962. Approximately 40 cubic yards of soil and 1,200-gallons of residual fluids from inside the tanks were removed and transported from the Subject Site.

• January 2006 – the Subject Site was re-branded as a BP AMOCO Station.

Since 1989, free phase petroleum hydrocarbons and dissolved aromatic hydrocarbons have been identified on the 186 Parcel. Free phase petroleum, identified as gasoline, was reported by Consolidated Edison Company (Con Ed), within a manhole and associated subsurface vault beneath South Kenisco Road located west of the Subject Site. This resulted in spill number 8808460. Several investigations were conducted at the Site by others (a list of reports may be found in **Appendix A**) to delineate the extent of the impacts observed.

In March 1989, IT Environmental Services conducted an environmental site assessment to evaluate subsurface petroleum related contamination at 186 Westchester Avenue in response to the reported release by ConEd. Four groundwater monitoring wells were installed at 186 Westchester Avenue and two existing wells on the 200 Westchester Avenue Site were gauged. Through this investigation IT identified free phase petroleum hydrocarbons and dissolved aromatic hydrocarbons in wells on the 186

Westchester Avenue Site. No free phase hydrocarbon was detected in the previously installed wells on the 200 Westchester Avenue Site. Although it was noted in the report that the ConEd vault was located upgradient of the tank field on the 186 Parcel, it does not appear that this possible off-site contamination was investigated/addressed in subsequent investigations at the Site.

In May 1989, IT Environmental Services responded to a report of a vapor intrusion problem on the 200 Parcel (former Seabergh's Frozen Food). A temporary ventilation system was installed by IT within the store and four additional groundwater monitoring wells were installed. Two ConEd utility vaults located on South Kenisco Road and Westchester Avenue were found to contain floating product and were vacuumed out. IT identified separate phase hydrocarbon contamination in several wells on the 186 Parcel (OW-1, OW-2, OW-3, OW-5, and OW-6). Free phase product (confirmed as fuel oil) was also found in wells on the 200 Westchester Avenue Site (OW-5 and OW-6) within 15 feet of a fuel oil underground storage. IT Environmental concluded that two separate hydrocarbon plumes existed within the 186 and 200 Westchester Avenue:

1. A separate phase gasoline plume on Exxon Site in the vicinity of OW-11 and OW-2
2. A separate phase fuel oil plume exists on Seabergh's Site in the vicinity of OW-5 and OW6, presumably the result of the Seabergh's fuel oil tank. (Note: WCD has not been able to identify OW-5 in the data reviewd.)

IT concluded that "Multiple sources exist for subsurface contamination within the study area. In addition to the gasoline underground storage tanks at the Exxon site and the fuel oil tank at Seabergh's, there are also underground storage tanks on the Mobil Site located across S. Kenisco Avenue, and the Westchester County DPW garage located just north of Exxon. Sources of solvent contamination also are present in the area, from an auto detailing service and an auto parts store located adjacent to the Exxon station along S. Kenisco Avenue." IT recommended a recovery system be installed to remediate the gasoline plume on the 186 Westchester Avenue Site.

In August 1989 IT Corporation installed a dual- pump recovery system consisting of the installation of recovery well RW-1 and an east-west transecting lateral recovery trench; RW-1 was installed through

one of the 1,000-gallon USTs that were likely abandoned in place in 1962. During the installation of the lateral recovery trench two additional 1,000-gallon USTs were discovered that had been abandoned in place. In May 1991 six additional groundwater monitoring wells (OW-9, OW-10, OW-11, OW-12, OW-13, and OW-14) were installed on the 186 Westchester Avenue Site. It is believed that all wells are still viable wells.

In April 3, 2007 Groundwater & Environmental Services, Inc. (GES) proposed further site investigations and remedial technique pilot testing and design for the 186 Westchester Avenue Site consisting of soil vapor extraction (SVE), air sparge (AS), vacuum enhanced groundwater extraction (VEGE), total phase extraction (TPE), monitored natural attenuation and potentially, the injection of hydrogen peroxide. Further remediation activities performed by GES at the 186 Westchester Avenue Site (April 23, 2010) included the installation of one injection point to delineate vertical and horizontal site impacts and a month long dissolved oxygen injection pilot test. Based on the results of the investigation and pilot test, GES concluded the following:

- "Oxygen injection is an effective technology for increasing dissolved oxygen concentrations at the site. The increased DO concentrations can accelerate the biodegradation rate of petroleum compounds in the subsurface saturated zone soil and groundwater."

A dissolved BTEX plume was identified and ultimately a Remedial Action Plan was prepared by GES dated February 10, 2011 and approved by the NYSDEC. GES proposed remediation of the groundwater plume by enhanced bioremediation. Between October 25 and November 10, 2010, a dissolved oxygen system was installed and was operated from May 2011 through August 2013 to increase dissolved oxygen concentrations in targeted areas of the Site. Over this time period, increased oxygen concentrations enhanced naturally occurring biological processes and attenuation of volatile organic compounds. On May 20, 2015, with approval from NYSDEC, GES terminated operation of the system with the final removal of injection wells. According to GES, no soil sampling was conducted as part of the decommissioning of the system. Due to decreasing trends in contaminant concentration a request for case closure was made to the NYSDEC by GES on October 16, 2015. However, sampling conducted

by GES on September 21, 2015 indicate that benzene levels exceed the Ambient Groundwater Standards for class GA groundwater in six (6) monitoring wells that comprise the treatment area.

Site History – 200 Westchester Avenue

According to available information, the site has been developed since 1930 and has been used as an Ice Cream Plant and later in the 1980's as Seabergh's, a frozen food storage retailer. There is one (1) one-story building constructed of brick and cinderblock with an attached garage that has apparently been vacant since the early 2000's. A NYSDEC spill (spill #9109951) was reported for 200 Westchester Avenue related to an on-site #2 fuel oil (heating oil) UST release; corrective action was taken and the spill was closed on 24 March 2010 but without meeting standards. The spill is being further addressed under this RAWP. In February of 2014 a subsurface investigation was conducted by Langan Engineering and Environmental Services (Langan) and it was determined, by Langan, that soil and groundwater were impacted from the adjoining 186 Westchester Avenue parcel. Based on this observation, spill number 1310694 was assigned to the Site. Historical information also indicates that a heating oil UST and gasoline UST may have been located on the Site. The refrigeration compressors needed for the frozen foods business remain on site and constitute one of the areas of concern for the Site identified in section 2.3.

As previously mentioned both properties have become part of the BCP agreement and are schedule for development as one (1) Site therefore both locations and associated open spill numbers are addressed in this RAWP. The proposed remedial efforts are anticipated to address the releases on both parcels and obtain closure.

2.1.1 Nature and Extent of Contamination

Soil

The most recent subsurface investigation conducted at the Site was performed by Langan at the 200 Parcel on 2/6/2014. Ten soil borings were installed of which six were converted into monitoring wells (LMW-1 through LMW-6). The analytical results from the soil investigation conducted by Langan

indicated semi-volatile organic compounds exceeding the Unrestricted Use Soil Cleanup Objective (UUSCO) in two samples, LB-2 located east (and possibly downgradient) of the current in service gasoline USTs and LB-3 located north of the current in service gasoline USTs. The following compounds exceeded the UUSCO within the 4-6 feet depth: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and naphthalene. Several volatile organic compounds (VOCs) exceeding the UUSCO were also reported in these two samples (benzene, n-butylbenzene, ethylbenzene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and xylenes). Additionally, visible free product was also noted on the soil log of LB-3. VOCs were exceeded in the following soil samples: LMW-2, LMW-3, LB-4, LMW-5. Exceedances were detected both in the shallow 4-6 feet depth and also for samples along the southern border of the Site bordering Westchester Avenue in the deeper 11-12 feet depth. Exceedance of the UUSCO for metals was generally not present - only one metal arsenic exceeded the SCO Arsenic (LMW-4).

Other soil data reviewed for the site included soil samples obtained by GES on 11/9/2010 during the facilitation of injections points for the oxygen remediation system. Of the eight soil samples obtained during the installation of the dissolved oxygen system, five samples exceeded the UUSCO for VOCs with the greatest exceedance in the soil sample obtained from injection point IP-3, located south of the current tank field. All of the GES samples were obtained from 8-12 feet below grade. The soil samples that did not indicate a petroleum impact were located southwest and north of the exiting tank field.

Groundwater

The analytical results from the September 21, 2015 semi-annual groundwater sampling by GES (most recent groundwater sampling data) indicated that VOCs were detected above the Ambient Water Quality Standards in six of the eight wells sampled - benzene levels detected were greater than 1 ug/L in six wells. Permanent monitoring well locations are shown on Figure 4. Based on the GES semi-annual sampling data, VOC concentrations at the site have generally decreased but a VOC plume still exists at the Site.

2.1.2 Conceptual Site Model

Developing a Conceptual Site Model (CSM) serves to conceptualize the relationship between sources of contamination and receptors by considering the potential or actual migration and exposure pathways. The CSM incorporates an understanding of the site, helps to identify data gaps and therefore determine future data collection strategies. A CSM identifies areas of potential releases, determines nature and extent of impacts, determines the predominant mode of transport of contaminants at the site, and specifies potential exposure pathways and receptors that may be impacted. A CSM has been developed for the Site and will be maintained and updated as new information is collected throughout the duration of this project. A CSM table is attached as **Appendix F**. Release mechanisms identified are releases to the surface and groundwater from the refrigeration compressors, existing USTs and former USTs.

The primary potential migration pathways at the subject Site consists of:

- Release to the sub-surface followed by volatilization from soil and groundwater into the air,
- Leaching from soil to groundwater
    - The primary contaminants of concern are VOCs which have the ability to dissolve in water. The sand and gravel underlying the site provides a conduit for VOCs to be transported from the vadose zone to the saturated zone and shallow groundwater beneath the Site.
- Groundwater flow
    - VOCs in the saturated zone will migrate with the groundwater flow across the site and has the potential to migrate off-site. The VOCs will tend not to migrate downward through the overburden aquifer to bedrock.

Exposure pathways associated with soil and or groundwater impacts at the Site include direct exposure to impacted soil which is most likely to occur during site development and future utility work (trenching etc.), ingestion of impacted soil and water and volatilization of contaminants from groundwater. Soil impacts are located approximately 5 to 7 feet below grade in the northern half of the Site and deeper in

the 8-12 feet depth in the southern portion of the Site, therefore direct exposure to impacted soil is unlikely except during site work as mentioned.

The primary potential ecological concern is a stream identified as Mamaroneck River on the Westchester County GIS map located approximately 748 east of the Site. Ecological receptors include plant, wildlife and aquatic receptors. Exposure pathways would be through direct contact to groundwater (aquatic receptors), sediment (benthic macroinvertebrates) and soil (plants and animals).

Data gaps identified through the CSM are:

1. The off-site impacts to soil and groundwater have not been fully determined/proven. Additional soil and groundwater sampling data to further characterize the Site and specifically the eastern and southern boundaries of the Site must be obtained. Previous soil sampling data has indicated that soil contamination lies within the 4 – 12 foot depth at the site. The data suggests that the lens of contamination is shallower (4-6 feet) in the soils north of the existing tank field and deeper (8-12) in the soils south of the existing tank field.
2. Groundwater flow direction has not been accurately established to determine the potential for off-site impacts. Additional groundwater sampling wells should be installed on the 200 Parcel and all site wells resurveyed to a common datum.

2.2 Geology/Hydrogeology

According to the Geologic Map of New York, the subsurface geology consists of poorly sorted glacial till (outwash sand, gravel, clay, and silt), which comprises the regional bedrock geology. The subsurface geology observed during previous investigation activities by others, identified a moderately permeable fill material consisting of sandy silts and gravel. The fill overlies a moderate to highly permeable sand and gravel unit which extends to bedrock. Bedrock refusal was encountered at depths ranging from 12 to 17 feet below grade (bg) on the 186 parcel (GES data) and from 11-13 feet bg on the 200 parcel (Langan data). Shallow groundwater beneath the Site has been documented from approximately 5 feet to 8 feet bg. Various groundwater flow directions have been reported: west (Semi-Annual Monitoring

Report, GES, October 16 2015), southeast (Remedial Feasibility Summary Report, GES, April 23, 2010) and north east (Semi-Annual Monitoring Report, GES, November 18 2014 and Draft Limited Phase II Environmental Site Investigation Report, Langan, March 10, 2014). The variation may be due to localized gradients beneath the Site and/or seasonally influenced fluctuations. Mamaroneck River, a stream of Silver Lake is located approximately 748 feet east of the Site. No wetlands are located on the Site.

2.3 Areas Of Concern

Based on the review of available data the following areas of concern have been identified on the Site:

AOC 1: Documented groundwater gasoline plume on 186 Parcel that may have migrated onto 200 Parcel

AOC 2: Soil contamination relating to former and/or current UST's (186 Parcel and 200 Parcel)

AOC 3: Out of service USTs - not clearly identified (186 Parcel and 200 Parcel)

AOC 4: In service USTs (diesel and gasoline, 186 Parcel)

AOC 5: Out of service refrigeration compressors (200 Parcel)

2.4 Site Development Plan

The planned development will encompass the 0.4 acre site as a new retail filling station with a convenience store. The convenience store will be erected as a slab on grade structure. All existing buildings will be razed and currently in use USTs will be removed. Two (2) new 15,000-gallon USTs will be installed along with a new pump island. Except for the perimeter of the Site that will be landscaped with a minimum of 12 inches of new topsoil the Site will be effectively capped with paved asphalt driveways and parking areas. Utility services to the Site include gas and electric by Consolidated Edison and municipal water and sewer service by the City of White Plains. Proposed development plans are presented in **Figure 3**.

3.0 SITE SPECIFIC TASKS

3.1 Citizen Participation Program

A Citizen Participation Plan (CPP) has been prepared for the Site. Upon approval of this RAWP, the Construction Notice fact sheet containing information about the remedial action will be developed by the NYSDEC Project Manager and provided to Rimawi for review and comment. After addressing any comments, the fact sheet will be finalized and transmitted by NYSDEC to those individuals on the most recent CPP contact list, including Site owners and residents in the vicinity of the Site, environmental groups, local political representatives, and interested regulatory agencies. The intent of this effort is to seek community cooperation, minimize disruption of the neighborhood, and facilitate a safe and secure work site. A copy of the final RAWP will be made available for public review at the NYSDEC Albany office and the designated document repository located at White Palins City Library, 100 Marine Avenue, White Plains NY 10601. The library is opened for public use from 10 am to 9 pm Monday through Thursday, from 10 am to 6:00 pm on Fridays and from 1:00 pm to 5:00 pm on Saturdays and Sundays.

3.2 Pre-Remedial Action Meeting

A pre-remedial action meeting will be held with key representatives involved in this project before the site activities begins. The NYSDEC Project Manager, the New York State Department of Health (NYSDOH) representative and the Westchester County Department of Health (WCDH) representative will also be notified and invited to attend. Items to be discussed may include but not be limited to:

- Construction schedule/work hours
- Work sequencing
- Designation of responsibilities, contact personnel, and phone numbers
- Project documentation requirements
- Health and safety requirements
- Temporary controls (dust suppression, storm water management etc.)
- Site security

Meeting minutes will be prepared and distributed to all attendees.

3.3 Baseline Groundwater Sampling and Determination of Groundwater Flow Direction

If accessible, groundwater samples will be collected using low-flow sampling techniques to document pre-remedial groundwater quality from the existing fourteen (14) on-site wells. These include the following wells:

- Wells Located on 186 Parcel
    - OW/MW-6
    - OW/MW-7
    - OW/MW-9
    - OW/MW-10
    - OW/MW-11
    - OW/MW-12
    - OW/MW-13
    - OW/MW-14
- Wells located on 200 Parcel
    - LMW-1
    - LMW-2
    - LMW-3
    - LMW-4
    - LMW-5
    - LMW-6

Note: One Additional well (OW/MW-5) has been mentioned in the documents (OW/MW-5) but has not been identified on the drawings provided to WCD.

One sample from each well plus one blind duplicate sample will be analyzed for volatile and semi-volatile organic compounds using EPA Methods 8260 and 8270, Pesticides/PCBs and TAL metals.

Prior to sampling, groundwater will be purged until field parameters have stabilized, using the procedures described in "Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells" (USEPA, January 2010). The flow rate will be maintained between 100 and 500 milliliters per minute (ml/min). Groundwater quality indicator parameters will be monitored using a calibrated water quality meter equipped with a flow-through cell. Field parameters including turbidity, temperature, conductivity, pH, and dissolved oxygen (DO) will be monitored and recorded during and after purging, and before sampling. Field parameters will be considered stabilized when the following is achieved for at least three (3) consecutive readings measured 5 minutes apart:

- Turbidity = 10% for values greater than 5NTU; if three Turbidity values are less than 5 NTU, the value will be considered as stabilized
- Dissolved Oxygen = 10% for values greater than 0.5 mg/L; if three dissolved oxygen values are less than 0.5 mg/L, the value will be considered as stabilized
- Specific conductance = 3%
- Temperature = 3%
- pH = $\pm$ 0.1 unit
- Oxidation/reduction potential = $\pm$ millivolts

During purging, WCD will actively monitor and track the volume of water purged and the field parameter readings. It is anticipated that no more than three well volumes will be purged in order for turbidity to reach a minimum and the other parameters to stabilize. Data will be recorded in a field logbook. Once groundwater conditions have stabilized, samples will be collected.

Groundwater samples will be containerized in laboratory prepared jars, labeled, sealed, and placed in a chilled cooler for shipment to the laboratory. Groundwater samples will be analyzed by an Environmental Laboratory Approval Program (ELAP) certified laboratory approved by the NYSDOH. The selected laboratory for this remedial action is York Analytical Laboratories, Inc. of Stratford, Connecticut.

The ground water direction is generally given as to the northeast but has been reported inconsistently in various reports reviewed. An unexplainable groundwater mound also appears in the middle of the 200 Parcel. The inconsistency in the data could be due to the wells being installed and surveyed in different stages. In order to determine groundwater flow direction, a survey of all wells by a professional land surveyor will be conducted prior to or during the sampling of the monitoring wells. Depth to water will be determined in each well using an ORS^{TM} oil/water interface probe. Groundwater elevation will be depicted on a map to allow determination of a more accurate groundwater flow direction.

3.4 Installation of On Site Monitoring Wells

Two (2) monitoring wells will be installed in the area of the former Seabergh building on the 200 parcel which was inaccessible during the previous subsurface investigation conducted by Langan (the most recent subsurface investigation conducted on the 200 parcel). The wells will be installed to document the groundwater quality beneath the building along the eastern most side of the Site. One (1) additional well will be installed in the location of LB-3 Installed by Langan in 2014. The soil log for the sample obtained from LB-3 indicated “free product visible in the soil core from 10’-15’”. Installation of a well at LB-3 will help clarify the nature and extent of contamination in this portion of the site. The proposed well locations are shown on Figure 4. The wells will be installed using direct push technique with the drill cuttings being contained in 55-gallon DOT drums for later disposal. It is assumed that the drums will be disposed of as non-hazardous petroleum contaminated soil. Continuous samples will be obtained from each well installation in order to additionally characterize the subsurface soil conditions. The soil sample above the soil groundwater interface or the soil sample with the highest Photoionization Detector (PID) reading will be collected for analysis. Well log and construction diagrams will be provided detailing the stratigraphy. PID readings of the soil core will also be recorded. The monitoring wells will be constructed with the screened interval being placed across the water table using factory-slotted (0.020 slot) PVC screen. PVC riser pipe with locking caps will be placed on top the screened interval which will be surrounded by a sand pack; a bentonite seal will be placed atop the sand pack with the remaining annular space filled with a cement slurry mixture; the wells will be finished as flush mounts. Following installation, the wells will be developed by removing water until turbidity subsides within acceptable levels as

measured by a turbidimeter and the water runs clear. Well development will also surge the well screen to flush out the fines from the screen pack. The wells will be allowed to stabilize for approximately one (1) week before groundwater samples are obtained. Groundwater samples will be obtained and analyzed as described in section 3.3. Providing all wells mentioned in section 3.3 and 3.4 can be utilized, no additional well installations are planned. If an off-site assessment of groundwater contaminant migration cannot be established with data obtained from the proposed and existing wells (17 wells total), additional wells will be installed as necessary. This may include installation of wells closer to the Site boundary and possibly off-site.

3.5 Subsurface Investigation

Previous soil sample data were obtained in 2010 (by GES on the 186 Parcel) and 2014 (by Langan on the 200 Parcel). Soil sample results indicate exceedances of SVOCS and VOCs of the UUSCO. Although these investigations have documented the contamination on the Site additional delineation for soil is necessary to more accurately depict the distribution of contaminants across the site and provide a current framework or baseline. Soil data information and soil samples will be obtained and analyzed from installation of wells mentioned in section 3.4 which will supplement the information. Additionally, a subsurface investigation will be conducted. It is noted that soil data north of the existing tank field represents a current gap in the data.

It is anticipated that up to ten (10) soil borings will be installed across the site to supplement the information. The soil borings will be installed using a Geoprobe™ unit with samples being collected from the subsurface with Macro Core open tube samplers measuring 2" in diameter and 44" in length. All soil samples will be screened with a PID to determine the sample to be analyzed. The sample with the highest PID reading or the sample above the ground water interface will be selected for laboratory analysis. All soil borings logs and field observations will be provided as part of the documentation of the project. All samples will be analyzed for VOCs using EPA Method 8260 and SVOCs using EPA Method 8270. Proposed soil boring locations are identified on Figure 4.

3.6 Off-site Assessment of Potential Groundwater Contaminant Migration

As required by the Brownfield Cleanup Program, an assessment of potential contaminant migration off-site is required. The tasks outlined in sections 3.3, 3.4 and 3.5 will provide information to aid in the assessment. Utility lines will be marked during the GPR Survey (described below) which will aid in the assessment. At the completion of item 3.3 the groundwater flow direction and hydraulic gradient will be established. Additionally the groundwater survey (section 3.3) coupled with the additional soil and groundwater sampling data will be evaluated to determine if a plume is migrating off site. As new information is obtained the CSM will be updated. If a conclusive determination cannot be made of the direction of contaminant migration with the suggested methods, it may be necessary to employ additional hydrogeological survey methods, for example nested wells and piezometers, pumping test. However, it is believed that a determination will be made upon the completion of the work described in this RAWP.

3.7 Ground Penetrating Radar Survey

The historical records reviewed gives no indication of the current status of five (5) 550-gallon USTs installed in March 1928 under the name of Bopps Garage. To address this and determine if other USTs are present on the site, a ground penetrating radar survey will be performed on the entire Site (186-200 Westchester Avenue). The GPR survey is being performed due to the inconsistency in the data concerning the various installations and removal of USTs.

3.8 Underground Storage Tank Removal

The three USTs currently in use on the Site are scheduled to be removed as part of the development plans for the Site (shown on **Figure 3**). Removal of the tanks will be conducted according to Permanent Closure of Petroleum Storage Tanks, NYSDEC 1987, Rev. 1988 & 2003. Although not a remedial activity, removal of the tanks will effectively remove a potential source of contamination. During the tank removal process, contaminated soils encountered will be removed as part of the remedial actions. A full site assessment will be conducted for all tank removals including collection of post-excavation soil samples as end point sampling. Post-excavation samples will be compared to the Unrestricted Use Soil

Cleanup Objectives and Soil Cleanup Levels for Gasoline Contaminated Soils as well as the appropriate SCO for the anticipated future land use. Site assessment will be conducted according to DER 10/Technical Guidance for Site Investigation and Remediation and the protocols of the Westchester County Health Department.

The tank removal work will include excavating overlying or adjacent soil to expose the USTs, removing and disposing of tank contents, removing the tank from the excavation, disposing of the tank, and backfilling the excavation (per the development specifications). The removal of the tank and tank contents will be conducted in accordance with 6 CRR-NY 598.10 and the detailed procedure presented below. A layout of the tank locations is shown in **Figure 4**.

The proposed tank removal program is as follows:

1. The excavation and tank removal process will be photographed and logged and the results reported to the NYSDEC as part of the final report for site closure.

2. In accordance with this RAWP, Section 7, air monitoring will be conducted in the work zone, and upwind and downwind of the work zone, for total VOCs, respirable particulate matter less than 10 microns (RPM10), and odors. Monitoring will commence prior to starting intrusive work and continue until tank removal and soil excavation activities have been completed. Sufficient materials will be maintained on site (e.g., plastic sheeting) to control potential odors generated during tank removal and soil excavation activities. Air monitoring will follow the New York State Department of Health (NYSDOH) Community Air Monitoring (CAMP) Plan. A copy of the CAMP is included in **Appendix E**.

3. The soil overlying the tanks will be removed and the soil around the perimeter of the tanks will be excavated, screened and temporarily staged on plastic sheeting and covered with plastic sheeting, pending results of waste classification analysis.

4. All liquid inside the tank will be pumped from the top of the tank to adjacent liquid-tight trucks or for off-site transport to an appropriately permitted and licensed facility. Liquid waste removed from the tanks will not be stored on-site overnight. Final cleaning of the tanks will be accomplished after the internal atmosphere has achieved appropriate levels for confined space entry procedures as outlined in the site specific Health and Safety Plan (HASP) to be developed for the site and according to 29 CFR 1910.146. All waste material will be properly drummed for disposal.

5. When the contents of the tanks have been removed, the empty tank and accessible piping will be inspected, noting any areas of questionable integrity. The tank and any associated piping will be photographed.

6. The empty tanks will be removed from the excavation using an excavator and transported to a licensed facility for recycling and disposal.

7. After removing the tanks from the excavation, bottom and sidewall soil samples will be collected and field-screened with a PID to assess the presence of residual contamination. Contaminated soil that may remain after removal of the tank will be documented and removed as part of the remedial activities. Because the tanks are located adjacent to each other removal will most likely result in one contiguous excavation. Therefore sidewall samples will be collected at a frequency of one (1) sidewall soil sample and one (1) bottom sample for every 15 linear feet of trench based on visual and olfactory impacts and PID readings. The sample results will be used in evaluating the final site-wide remedial excavation limits for tank removal. If it is determined that potentially contaminated soils will remain in the excavation, a geotextile fabric will be placed in the excavation between the clean fill and potentially contaminated soil.

8. Sampling equipment used for sample collection (e.g., sample spoons, hand trowels) will be decontaminated prior to use and reuse or disposable sampling equipment will be used per NYSDEC DER-10. At the conclusion of tank removal activities, post-excavation soil samples will be collected as

previously stated. The post-excavation soil samples will be collected directly from the excavator bucket using clean hand sampling devices, with care being exercised to obtain samples that have not come in contact with the excavator bucket. Each sample for SVOC analysis will be placed in a pre-cleaned laboratory supplied jar and each sample for VOC analysis will be collected using a methanol/deionized water sample kit and kept at approximately 4 degrees centigrade for transportation to the laboratory.

9. Decontamination waste will be collected and placed in 55-gallon United Sates Department of Transportation (USDOT) approved drums pending off-site disposal at an appropriately permitted and licensed facility.

10. The horizontal limits of the tank excavation will be marked using GPS coordinates and measured from a permanent land marker. Depth measurements during excavation will be recorded using a transit and stadia rod and will be used in conjunction with the GPS coordinates to record the extent of the excavation.

11. Clean fill from a NYSDEC approved source will be imported and used to fill the excavation to the surface as required by the development specifications. Imported backfill material will meet the requirements of 6 NYCRR 375-6.7(d) and comply with any remedial action outcomes (RAOs) which may be identified for a soil cover comprising a cap.

3.9 Hot Spot Soil Excavation

The 2014 sampling by Langan indicated exceedance of the UUSCO in soils samples LB-2 and LB-3 obtained from the 200 Parcel at a depth of 5-6 fbg and 4-5 fbg, respectively. As mentioned in section 3.5 the LB-2 area will be excavated during the excavation of the tank removals and this area will be addressed with the collection of post-excavation/endpoint soil samples. A test pit will be advanced in the area of LB-3 and if possible based on field screening a hot-spot excavation of LB-3 will occur. Based on the findings of the subsurface investigation additional hot spot areas may also be identified for excavation.

3.9.1 Contaminated Soil Removal

During the tank removal process, all soils removed from the excavation will be continuously screened for the presence of organic vapors. Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional.

Excavated soil that have been determined to be impacted based on PID readings of greater than 50 ppm will be stockpiled separately and will be segregated from clean soil and construction materials. Stockpiles will be removed as soon as practicable within 30 days of excavation and upon receipt of waste characterization soil samples. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Excavated soils will be stockpiled on, at minimum, double layers of 8-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off. Soil stockpiles will be placed in a manner that will not affect the implementation of erosion controls. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters and other discharge points.

Materials Excavation, Load-Out and Departure

The QEP overseeing the remedial action will:

1. Oversee remedial work and the excavation and load-out of excavated material.

2. Ensure that there is a competent person on site for the safe excavation of tanks and contaminated soil performed under this work plan.

3. Ensure that Site development activities and development-related grading cuts will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP.

4. Ensure that the presence of utilities and easements on the Site have been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;

5. Ensure that all loaded outbound trucks are properly sealed and tarped, inspected and cleaned if necessary before leaving the Site.

6. Ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation.

7. Ensure that no off-site queuing of trucks occur.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Off-Site Materials Transport

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance. Off-Site queuing will be minimized.

The destination and quantities of all material removed from the Site during this remedial action will be documented and records and approvals for receipt of the material will be provided. This information will be presented in the final report for the Site.

It is expected that soil removed from the site will be managed as regulated non-hazardous material and will be disposed in accordance with applicable laws and regulations. Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits.

3.10 Dewatering and Treatment of Groundwater During Construction

The groundwater depth at the site has been determined to be between 5 to 8 fbg. During development of the site, dewatering will take place during certain construction activities (tank removal and installation) and will be a short-term remedial measure. Dewatering at this site will serve dual purpose: to maintain dry conditions during construction and enhance remediation by the removal of affected groundwater. It is the objective to ensure that all site dewatering activities are completed in a manner that does not cause harm to the environment. To achieve this, a site-specific Health & Safety plan will be developed for all construction involving tank installation and removal to ensure that dewatering actions are planned, approved and supervised to minimize impacts on the receiving environment. No construction site dewatering activity will be carried out unless it is in accordance with guidelines and/or permits of the NYSDEC, WCDH and the City of White Plains. Water quality sampling and testing will be conducted to ensure that the water quality objectives are met prior to either reuse or discharge of the water. Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by New York State Department of Environmental Conservation however, it is not expected that a SPDES permit will be required for this project.

A temporary on-site dewatering system will be used during construction activities where dewatering will most likely be necessary (tank installation and removal) for treatment of affected groundwater.

Final effluent parameters will be measured to ensure quality discharge parameters according to permit criteria are met. It is expected that after treatment, discharge parameters will be met and fluids will be discharged to the sanitary sewer. If liquids are to be removed from the site, it will be handled, transported and disposed in accordance with applicable laws and regulations.

The water treatment system (WTS) planned for this site will include pumping water from the excavation into a storage tank appropriately sized for the volume and flow. Flow rates will be determined prior to mobilization of the WTS however it is not expected that flow rates will exceed 200 gallon per minute (gpm). A 21,000 gallon storage tank will be plumbed for flow from the excavation after which water will be pumped through a multi-stage bag filter housing for particulate removal, followed by activated carbon for benzene, toluene, ethyl benzene, xylene (BTEX) and methyl tert-butyl ether (MTBE) removal. Pending results of analyses of the treated water (i.e. WTS effluent), discharge will either be to the sanitary sewer or to a frac tank for off-site transportation and disposal. A typical WTS diagram is provided in the appendices. As previously mentioned dewatering for the site is a function of construction activities and serves as an added remedial option for the Site.

3.11 In-situ Chemical Remediation

A complimentary site specific in situ process including chemical oxidation and enhanced biodegradation will be used on site after the in service USTs have been removed, the new USTs have been installed and dewatering activities have ceased and the additional soil and groundwater investigations completed. This sequencing assumes that dewatering (as a function of construction activities) is complete prior to the start of in-situ chemical oxidation. Complete site remediation can then be achieved within a shorter time frame by employing cost effective in situ technologies as a polishing effect. It is the goal to achieve final remedial objectives with the use of specifically directed in situ oxidative technologies applied to the most contaminated areas remaining at the site. Based on available data, this appears to be the areas south, southeast and east of the existing tank field and also the locations encompassing LB-3 and LWN-5 on the 200 Parcel. Through direct push injection and injections

through fixed PVC wells (to be installed) treatment goals are to achieve NYSDEC cleanup goals for petroleum compounds in soil and groundwater (Unrestricted Use Soil Cleanup Objectives 6 NYCRR part 375, Soil Cleanup Levels for Gasoline Contaminated Soils CP-51 and Ambient Water Quality Standards).

A direct push technique (DPT) for reagent delivery will be used at this site. This will allow delivery of large volumes of oxidant at the early stages of treatment when oxidant demand is greatest. DPT will also provide a means of targeting specific vertical intervals to achieve the best contact between contaminants and oxidizer. Each DPT injection will be designed to inject approximately 10% of the treatment zone pore volume. Following the first two DPT injections and progress testing, PVC injection wells for polishing treatments will be installed, if needed. It is estimated that the area requiring polishing will be smaller than the original treatment area. Polishing doses will be applied into the PVC injection wells. Oxidizing reagents will include catalyzed peroxide initially so that the most contaminant mass reduction can be realized using the lowest cost oxidizer. Iron-initiated persulfate may be used for polishing. Rates of applications will be calculated based upon laboratory results from the subsurface investigation and groundwater sampling. The proposed treatment area is presented on **Figure 5**. Prior to execution of the in-situ treatment, the final design will be submitted to the NYSDEC for approval. It must be noted that the scope of work may change as the additional groundwater data becomes available.

3.12 Natural Attenuation and Quarterly Groundwater Sampling

After evaluating the groundwater results it may be practical to allow natural attenuation to occur to decrease the levels of residual compounds. By the completion of items 3.9, 3.10 and 3.11 the source of contaminated soil and groundwater will be removed. Residual contamination will be addressed by natural attenuation. If allowed to occur, (based on the results of post remediation groundwater sampling), then the groundwater will be monitored on a quarterly basis and sampled for the contaminants of concern. The groundwater will be sampled as mentioned in section 3.3.

4.0 SAMPLE RESULTS/GUIDANCE VALUES

Guidance values have been established by the NYSDEC in the Division of Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels. The Soil Cleanup Objectives and Cleanup Levels are given in **Appendix B** and the compounds listed are indicative of petroleum releases. All results will be compared to the established UUSCO to determine exceedances of and direct remedial designs and efforts. The screening value response to a PID calibrated for benzene is selected as 50 parts per million.

All groundwater samples will be compared to the Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitation, June 1998.

5.0 SOIL AND SEDIMENT CONTROL

Before and during soil removal activities, soil and erosion control measures will be implemented for soil stabilization. Prior to removing soil from the site, a silt fence will be installed along the south west, south and south eastern edge of the Site (along the intersection of South Kensico Avenue and Westchester Avenue in the area of the existing UTSs). The silt fence will avoid loose sediments from leaving the work site. If necessary and prior to out-loading soil, a temporary access roadway from the work zone to the designated site exit will be built using filter fabric and 1 ½ inch stone to prevent trucks from transferring site soils to public roadways. If necessary, a commercial street sweeper will be utilized to clean the public roadway/truck route.

All soil and erosion control activities will be approved by the City of White Plains Highway Department prior to commencing activities.

The following Best Management Practices will be utilized on site:

1. Minimize Disturbed Area and Protect Natural Features and Soil

Topsoil removed from the USTs to be removed will be stockpiled adjacent to the excavation. The area of removed topsoil and the size of the excavation will be kept sufficiently large to accommodate removal of the tank. All soils will be field screened for the presence of contamination. All contaminated soils removed will be staged on and covered with plastic. As the site is to be re-developed per the design specifications in Figure 3 it is not expected that excavated material will be reused on-site.

2. Phase Construction Activity

Based on available information, the three (3) in service USTs are located adjacent to each other in the southwestern section of the site. WCD will remove and backfill one UST location before proceeding to remove the next underground storage tank. Three (3) underground storage tanks will be removed as part of this project however there is the possibility that unknown USTs may be encountered during site development. A NYSDOH compliant CAMP will be conducted during all UST removal/soil excavation activities. Additional USTs will be addressed in an addendum to this RAWP if encountered. It is anticipated that tank removal, excavation and backfilling will occur consecutively thus minimizing the possibility of erosion.

3. Control Storm Water Flowing Onto and Through the Project

It is not expected that excavations will be open and exposed for more than a 24-hour time period. If necessary, storm water will be diverted from the open excavation. If necessary soil staged on plastic will be protected from storm water run-off with hay bales. Hay bales will be placed up slope to direct surface water away from open excavations.

4. Stabilize Soils

After excavation is completed, each excavation will be backfilled to grade and the location re-stabilized to the existing condition. It is anticipated that backfilling will occur per the site development specifications.

5. Protect Slopes

The aggregate tank removal location is relatively flat and lies up gradient of the 200 Westchester parcel therefore slope protection is applicable to this project. The down slope perimeter (northeastern side) of the excavation on the 186 parcel will be secured with hay bales.

6. Protect Storm Drain Inlets

Any storm drain inlet that is adjacent to a tank or soil removal location will be protected by filter fabric, hay bales and /or gravel bags. Each inlet will be inspected after a rainfall. The surrounding paved areas will also be swept regularly to prevent the accumulation of soil and debris.

7. Establish Perimeter Controls and Sediment Barriers

The approximate size of disturbance for the underground storage tank removal location is 36 feet by 32 feet. Over excavating to remove contaminated soil may increase this size, as such, site perimeter controls using hay bales will be established where necessary.

8. Establish Stabilized Construction Exits

It is not expected that vehicles entering and leaving the site will track significant amounts of sediment onto the street except during out loading of contaminated soil addressed in section 3.5.1. However, if this situation arises, crushed stone will be placed over a layer of geotextile fabric to reduce the mitigation of sediment. Trucks will be inspected before leaving the site and will be brushed clean.

6.0 STORM WATER MANAGEMENT

Potential sources of sediment to stormwater runoff include:

- Site excavation operations
- Vehicle tracking
- Topsoil stripping and stockpiling

Potential pollutants and sources, other than sediment, to stormwater runoff include:

- tank contents diesel, gasoline, and possibly fuel oil from construction activity during tank removal and listed below:

Trade Name Material	Stormwater Pollutants	Location
Gasoline	Volatile organic compounds	Southwest portion of site during tank removal
Diesel Fuel	Volatile organic compounds and semi-volatile organic compounds	Southwest portion of site during tank removal
Fuel Oil	Volatile organic compounds and semi-volatile organic compounds	TBD

<u>Spill Prevention and Control Procedures</u>

1. All employees will be trained via biweekly tailgate sessions, as detailed in the site specific HASP to be prepared for the project.

2. Vehicles and equipment will be serviced off-site. All vehicles and equipment including subcontractor vehicles will be checked for leaking oil and fluids. Vehicles leaking fluids will not be allowed on-site.
3. Hazardous materials will be stored in accordance with federal and municipal regulations.
4. Spill kits will be available on site.
5. All spills will be cleaned up immediately upon discovery. Spent absorbent materials and rags will be drummed for disposal in sealed and labeled 55-gallon DOT approved drums. Spills large enough to discharge to surface water will be reported to the NYSDEC Spill Hotline at 1-800-457-7362.
6. Material safety data sheets, a material inventory, and emergency contact information will be maintained on site.

Storm-water Pollution Prevention

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAWP (silt fences and barriers, and hay bales) will be installed around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale barriers functional. Undercutting or erosion of the silt fence anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

7.0 MONITORING AND DUST CONTROL

Air monitoring will follow the New York State Department of Health (NYSDOH) Community Air Monitoring (CAMP) Plan. A copy of the generic CAMP is included in **Appendix E**. The air will be monitored in real-time during all on-site activities using two (2) Dustrak™ II aerosol Monitors. Air monitoring for particulates (i.e., dust) will be performed continuously, during working hours, using both air monitoring equipment and visual observations. Monitoring equipment capable of measuring particulate matter smaller than 10 microns (PM-10) and capable of integrating (averaging) over periods of 15 minutes or less, at a minimum, will be set up at upwind (background) and downwind locations. This equipment will log the 15-minute average concentrations for subsequent downloading and reporting.

An alarm on the downwind particulate monitoring device will be set at 100 micrograms per cubic meter ($\mu g/m^3$) above the background level (i.e., the upwind location). Upwind concentrations will be measured at the start of each workday and periodically throughout the day thereafter to establish background conditions and to ensure that any detected impacts are not from offsite activities.

The particulate monitoring results will be compared to the following:

1. If the downwind PM-10 particulate level is 150 $\mu g/m^3$ greater than background (upwind AMS) for 1-hour average or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques, provided that downwind PM-10 particulate levels do not exceed 150 $\mu g/m^3$ above the upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 $\mu g/m^3$ above the upwind level, work will be stopped and a re-evaluation of work activities will be initiated to reduce particulate levels to less than 150 $\mu g/m^3$ above background conditions and to prevent visible dust migration

All readings will be recorded and be available for review by regulatory personnel.

Dust management during invasive on-Site work may include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.
- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress and other roadways to provide a clean and dust-free road surface.

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected.

8.0 ODOR AND ORGANIC VAPOR CONTROL

The odor control plan is capable of controlling emissions of nuisance odors off-Site. Every effort will be made to minimize the generation of vapors and/or odors. A properly calibrated PID will be in use during all soil excavation and other intrusive activities. Excavated soil that have been determined to be impacted based on PID readings of greater than 50 ppm will be stockpiled separately and will be segregated from clean soil and construction materials. If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be stopped and the source of odors will be identified and corrected. Work will not resume until nuisance odors have been abated. The NYSDEC and the WCD will be notified of odor events and other reasonable complaints about the project. Implementation of odor controls, including stoppage of work, is the responsibility of WCD. Odor control measures implemented will be provided to NYSDEC in the progress reports. Necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, these measures may include: (a) limiting the area of open excavations and size of soil stockpiles; (b) covering open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances may include: (a) direct load-out

of soils into trucks for off-site disposal; (b) use of chemical odorants in spray or misting systems; and, (c) the placement of monitors to assess the presence of odors in surrounding neighborhoods. If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-Site conditions or close proximity to sensitive receptors, work will cease and alternate methods of controls will be considered

Air monitoring will be conducted using direct-reading instruments. On this site a MiniRae Photionization Detector will be used.

9.0 TRAFFIC CONTROL AND SITE ACCESS

This site control program is designed to reduce the spread of hazardous substances from contaminated areas to clean areas, to identify and isolate contaminated areas of the site, to facilitate emergency evacuation and medical care, to prevent unauthorized entry to the site, and to deter vandalism and theft. The site control program will be detailed in the HASP and will include the following site-specific information:

* site access procedures
* site security
* standard operating procedures
* internal (on-site) and external communications

The site control program will be updated regularly to reflect current site conditions, work operations, and procedures. Access to this site will be restricted during remediation to reduce the potential for exposure to its safety and health hazards. During hours of site operation, site entry and exit will be authorized only at the point(s) identified. Entry and exit will be controlled by temporary barricades/fencing and site personnel. Visitors to the site will be escorted at all times. Visitors are expected to comply with the requirements of site specific HASP. Security at this site will be maintained during both working hours and non-working hours. During non-working hours all equipment will be secured. Traffic control during out loading of soil will be maintained by flagmen.

10.0 SITE SAFETY

WCD will be responsible for Site control and for the health and safety of its authorized Site workers. All subcontractors and other parties involved in on-site construction will be required to develop a HASP as, or more, stringent than WCDs HASP. The HASP will be subject to revision, as necessary, based on new information that is discovered during the remedial action. WCD will also be responsible for the performance of community air monitoring during intrusive remedial action activities involving subgrade disturbance as previously discussed during tank removal and soil excavation and removal process.

11.0 ANTICIPATED SCHEDULE AND PROGRESS REPORTS

The following schedule is anticipated for this project:

Task Objective	Days After Approval of RAWP
Pre-remedial Action Meeting	15
Baseline Sampling	20
Installation of Monitoring Wells	25
UST Removal	35
Contaminated Soil Removal	40
Dewatering	After and during UST Removal and New Tank Installation
In-situ Treatment	80
Reporting	200

Throughout the remedial action activities, project progress will be documented and submitted to NYSDEC as part of the BCP requirements. The NYSDEC and NYSDOH and WCDH will be invited to attend all remedial action meetings pertinent to the implementation of this RAWP.

12.0 PROJECT MANAGEMENT

All work performed on this project will be coordinated by WCD personnel and or the selected consultant. The project coordinator is Sharima Ryan, who will be responsible for the overall QA/QC for the project. Tracking and scheduling of will be the responsibility of the project coordinator. Upon sample delivery to the laboratory, laboratory personnel will be required to complete the scheduled analyses within the allotted time period. The contracted laboratory for this project is York Analytical Laboratory of Stratford, CT, a NYSDEC certified laboratory (NELAP # 10854). All written and verbal communication from WCD to the Participant shall be addressed to:

Rimawi Inc.
Attn: Nabiel Rimawi
186 Westchester Avenue
White Plains, NY 10601
bnrimawi@aol.com

13.0 REPORTING

At the conclusion of each scheduled task, WCD will issue a progress report summarizing the field activities completed at the site. Also included in the report will be groundwater sample results and field observations. A soil boring report (if applicable) will also be submitted.

A Construction Completion Report (CCR) will be prepared and submitted to the NYSDEC at the Completion of the remedial action activities described herein. The CCR will be prepared consistent with the requirements of Section 5.8 of DER-10 and will include:

- Text describing the soil/fill excavating, backfilling, and grading activities performed
- Test describing the chemical treatment utilized
- In-situ treatment system and location of associated injection monitoring wells/points

- A description of all institutional controls and site management plan if applicable
- All post remedial sampling results
- A description of problems encountered, deviations from the Remedial Action Work Plan, and associated corrective measures taken
- Other pertinent information necessary to document that the remedial action activities were carried out in accordance with this Remedial Action Work Plan
- Site or area map showing the extent of soil excavation.
- A survey map of the pre- and post-clean soil cover system grades
- The soil disposal documentation of the excavated soil from the off-site disposal facility and manifests form all other waste streams generated
- Copies of daily field reports and, if applicable, problem identification and corrective measure reports
- A certification by a licensed NYS Professional Engineer in accordance with Section 1.5 of DER-10.

Copies of all reports (one unbound copy and one electronic copy) will be submitted to the following parties:

Wayne Mizerak
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7014
wayne.mizerak@dec.ny.gov
.

Brad Wenskoski (electronic copy only)
New York State Department of Health
Bureau of Environmental Exposure Investigation
Empire State Plaza
Corning Tower Room 1787
Albany, NY 12237
BEEI@health.ny.gov

Dolores Tuohy, Esq. (correspondence only)
New York State Department of Environmental Conservation
Office of General Counsel
625 Broadway
Albany, NY 12233-1500
dolores. tuohy@dec. ny.qov

Rimawi Inc.
Attn: Nabiel Rimawi
186 Westchester Avenue
White Plains, NY 10601
bnrimawi@aol.com

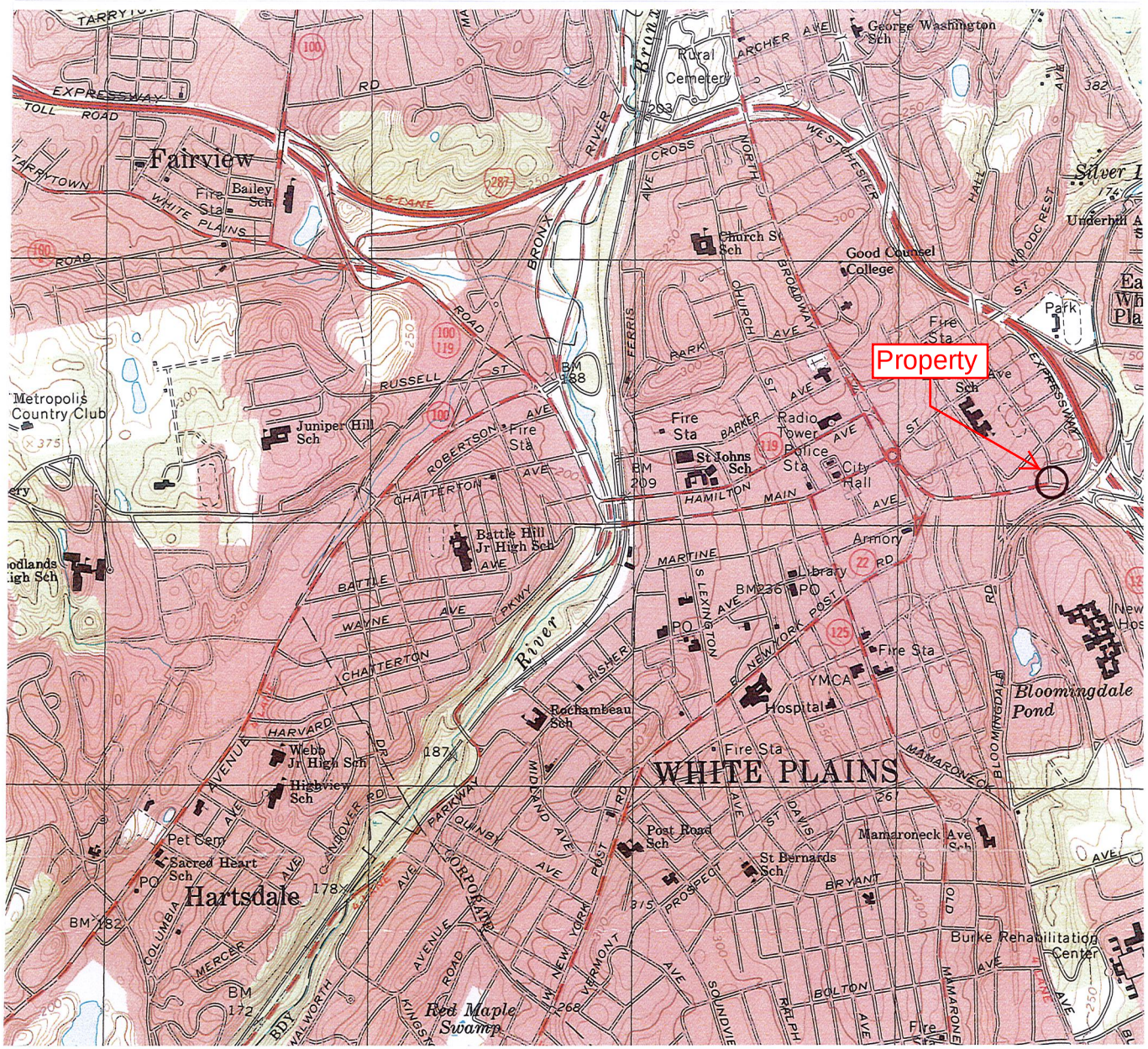
14.0 SITE MANAGEMNET PLAN, ENGINEERING, INSTITUTIONAL CONTROLS

At the successful completion of the remedial actions described herein, a Site Management Plan (SMP) outlining all engineering and or institutional controls will be prepared according to DER-10. The plan will be submitted to the NYSDEC for review and approval. It is not expected that any remedial systems will remain at the site however controls for residual contamination may be instituted including an environmental easement. The SMP will provide a detailed description of all procedures required to manage remaining contamination at the site after completion of the remedial action, including: (1)implementation and management of all engineering and institutional controls; (2) groundwater monitoring; (3) performance, periodic inspections, certification of results, and submittal of Periodic Review Reports.

REFERENCES

1. Sampling Guidelines and Protocols, Bureau of Spill Prevention and Response, Division of Water New York State Department of Environmental Conservation, March 1991.
2. Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, New York State Department of Environmental Conservation, January 1994.
3. DER -10: Technical Guidance For Site Investigation and Remediation, New York State Department of Environmental Conservation, 6/18/2010

FIGURE 1 - Site Location Map



WCD GROUP

For pivotal matters.™

WCD Group LLC
10 Waldron Avenue
Nyack, NY 10960
Phone: 845-348-6355
Fax: 845-341-1791
www.wcdgroup.com

Client:
Rimawi Inc.
186 Westchester Avenue
White Plains, NY

Project Location:
186-200 Westchester Avenue
White Plains, NY

Description:
USGS Topographic Map
White Plains, NY Quadrangle

Project No.:

Date:
Map Date 1994

FIGURE 2 - Surrounding Land Usage

WCD GROUP
For pivotal matters.™

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Nyack, NY 10960
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Project Location:
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White Plains, NY

Description:
Figure 2
Surrounding Land Usage

Project No.:

Date:

FIGURE 3 - Proposed Development Plan

Site Plans

Issued for: **Site Plan Application**

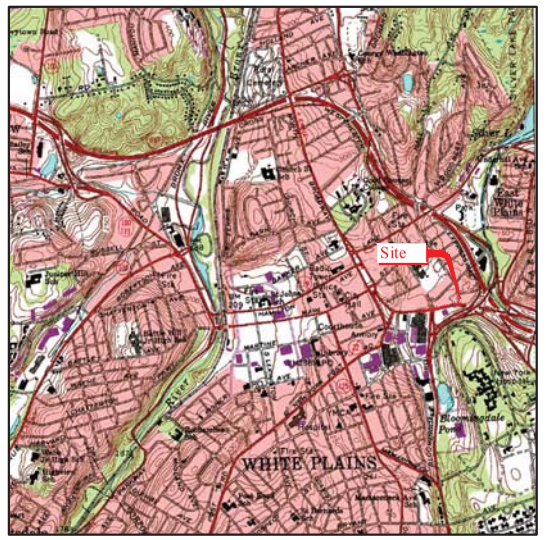
Date Issued: November 10, 2014

Latest Issue: March 12, 2015

Sheet Index

Proposed Gas Station Redevelopment

186 - 200 Westchester Avenue
City of White Plains, Westchester Co., N.Y.



Site Location Map

Property Owners

Owner/Applicant:
Rimawi Inc
13037 Holmespoint Drive NE
Kirkland, WA 98034
Phone: 914-837-8150

Section: 126.61
Block: 5
Lots: 3 and 4

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VHB Project No. 29233.00
186 Westchester Ave, White Plains, New York
Issued for: Site Plan Application

Legend

Exist.	Prop.	
———	— — —	PROPERTY LINE
━━━	━━━	PROJECT LIMIT LINE
———	— — —	RIGHT-OF-WAY/PROPERTY LINE
— — —	— — —	EASEMENT
———	———	BUILDING SETBACK
	———	PARKING SETBACK
10+00	10+00	BASELINE
	— - —	CONSTRUCTION LAYOUT
- - - - -	- - - - -	ZONING LINE
— - —		TOWN LINE
— — —		LIMIT OF DISTURBANCE
——△——		WETLAND LINE WITH FLAG
—— - ——		FLOODPLAIN
——BLSF——		BORDERING LAND SUBJECT TO FLOODING
——BZ——		WETLAND BUFFER ZONE
——NDZ——		NO DISTURB ZONE
——200'RA——		200' RIVERFRONT AREA
— — —	— — —	GRAVEL ROAD
EOP	— — —	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
═══	CG	CURB AND GUTTER
CC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
	═══	LIMIT OF CURB TYPE
	— — —	SAWCUT
▨	∟	BUILDING
	EN	BUILDING ENTRANCE
	LD	LOADING DOCK
·	•	BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
= = =	= = =	PATH
		TREE LINE
—×—	—×—	WIRE FENCE
—○—	—●—	FENCE
		STOCKADE FENCE
○○○○	○○○○	STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
—×—	—×—	SILT FENCE
—4—	—4—	MINOR CONTOUR
—20—	—20—	MAJOR CONTOUR
(10)	(10)	PARKING COUNT
	(C10)	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
▥	▥	CROSSWALK
		ACCESSIBLE CURB RAMP
♿	♿	ACCESSIBLE PARKING
♿ VAN	♿ VAN	VAN-ACCESSIBLE PARKING
▨	▨	CONCRETE
	▭	HEAVY DUTY PAVEMENT
▨	▨	RIPRAP
	▨	CONSTRUCTION ENTRANCE
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW 38.5 BW ×	45.0 TW 38.5 BW ×	TOP & BOTTOM OF WALL ELEVATION
⊕	⊕	BORING LOCATION
◪	◪	TEST PIT LOCATION
MW	MW	MONITORING WELL
—UD—	—UD—	UNDERDRAIN
12"D	12"D→	DRAIN
—6"RD—	6"RD→	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
—OHW—	—OHW—	OVERHEAD WIRE
—6"W—	—6"W—	WATER
—4"FP—	—4"FP—	FIRE PROTECTION
	—2"DW—	DOMESTIC WATER
—3"G—	—G—	GAS
—E—	—E—	ELECTRIC
—STM—	—STM—	STEAM
—T—	—T—	TELEPHONE
—FA—	—FA—	FIRE ALARM
—CATV—	—CATV—	CABLE TV
▦	▦	CATCH BASIN
▦	▦	DOUBLE CATCH BASIN
▦	▦	GUTTER INLET
Ⓓ	●	DRAIN MANHOLE
=TD=	▬	TRENCH DRAIN
[	[	PLUG OR CAP
CO	CO	CLEANOUT
▶	▶	FLARED END SECTION
_/	_/	HEADWALL
Ⓢ	●	SEWER MANHOLE
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		SIAMESE CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
◎	◎	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
Ⓔ	● EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
✲	✲	LIGHT POLE
Ⓣ	● TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
○	●	UTILITY POLE
○	●	GUY POLE
⊥	⊥	GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX
	Matchline	MATCHLINE

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EXIST	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes:

General

1. CONTRACTOR SHALL NOTIFY "DIG SAFELY NY" (1-800-762-7962) AT LEAST 72 HOURS BEFORE THE START OF ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES OF TOPSOIL AND SEED.
5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN COUNTY RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE COUNTY HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:

   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH

   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH

   C. LANDSCAPE, TOPSOIL AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:

   A. WATER PIPES SHALL BE DUCTILE IRON PIPE, CLASS 52

   B. SANITARY SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE, SDR 35

   C. STORM DRAINAGE PIPES SHALL BE POLYVINYL CHLORIDE (PVC), SDR 35 AND REINFORCED CONCRETE (RCP), CLASS V
8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.

Layout and Materials

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURB RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
3. CURBING SHALL BE CAST-IN-PLACE CONCRETE WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
7. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
8. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control Notes

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2. A PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, OWNER, CITY OF WHITE PLAINS. AT THE MEETING, THE INDIVIDUAL RESPONSIBLE FOR MAINTAINING THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE DESIGNATED. EROSION CONTROL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REGULATIONS SET FORTH BY THE NYSDEC (REFER TO NYSDEC SPDES GENERAL PERMIT GP-0-10-001 PART IV.C.). A LOG OF ALL INSPECTIONS AND A COPY OF THE CURRENT DESIGN PLANS SHALL BE KEPT ON SITE AND BE AVAILABLE FOR VIEWING AT ALL TIMES.
3. THE EROSION AND SEDIMENT CONTROLS SHALL BE MODIFIED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AND/OR THE DESIGNATED VILLAGE REPRESENTATIVE AS NECESSITATED BY CHANGING SITE CONDITIONS DURING CONSTRUCTION.
4. ALL DEWATERING WASTE WATERS SHALL BE DISCHARGED IN A MANNER WHICH MINIMIZES THE DISCOLORATION OF THE RECEIVING WATERS. THE SITE SHOULD BE KEPT CLEAN OF DEBRIS, LITTER AND BUILDING MATERIALS IN ORDER THAT NONE OF THE ABOVE ENTERS WETLANDS OR WATERCOURSES.
5. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
6. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
7. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
8. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
9. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (NYSDEC, AUG. 2005).
10. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND SHALL BE IN ACCORDANCE WITH "WESTCHESTER COUNTY BEST MANAGEMENT PRACTICES" AS WELL AS THE NYSDEC REQUIREMENTS.
11. THE CITY OF WHITE PLAINS, NYSDEC OR THE SITE ENGINEER MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE THE POTENTIAL FOR ONSITE OR OFFSITE EROSION PROBLEMS THAT MAY OCCUR DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THESE MEASURES.
12. NO DISTURBED AREA SHALL BE LEFT EXPOSED FOR MORE THAN 14 DAYS AFTER WORK STOPPAGE. THESE AREAS MUST IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL. THE SEEDING WILL BE DONE IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. AREAS SUBJECT TO CONSTRUCTION TRAFFIC ARE TREATED USING WATER BARS AND BY DIRECTING THE SURFACE WATER FLOW TO TREATMENT AREAS. THESE AREAS ARE NOT SUBJECT TO THE TEMPORARY SEEDING REQUIREMENT DUE TO THE OTHER EROSION AND SEDIMENT CONTROL TREATMENTS AS DESCRIBED HEREIN.
13. ANY GRADED AREAS NOT SUBJECT TO FURTHER DISTURBANCE OR CONSTRUCTION TRAFFIC SHALL, WITHIN 10 DAYS OF FINAL GRADING, RECEIVE PERMANENT VEGETATIVE COVER IN COMBINATION WITH SUITABLE MULCH AS PER THE SPECIFICATIONS.
14. CUT OR FILL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
15. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
16. ALL STORM DRAINAGE OUTLETS SHALL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
17. CONSTRUCTION FENCING SHALL BE USED TO PROTECT EXISTING TREES TO REMAIN, WETLANDS AND OTHER SENSITIVE AREAS. REFER TO TREE PROTECTION NOTES ON LANDSCAPE PLAN FOR ADDITIONAL INFORMATION.
18. IF FOR ANY REASON THE CONSTRUCTION IS HALTED FOR EXTENDED PERIODS, THE CONTRACTOR SHALL STABILIZE THE SELECT MATERIAL BY HYDRO-SEED OR OTHER MEANS, TO THE SATISFACTION OF THE ENGINEER FOR ALL AREAS DEVOID OF VEGETATION.
19. STORM WATER FROM DISTURBED AREAS MUST BE PASSED THROUGH AN APPROVED CONTROL DEVICE BEFORE BEING DISCHARGED BEYOND DISTURBED AREAS OR DISCHARGED INTO INLETS OR OTHER DRAINAGE SYSTEMS.
20. DUST CONTROL - WATER SHALL BE APPLIED BY SPRINKLER OR WATER TRUCK DURING GRADING OPERATIONS TO MINIMIZE SEDIMENT TRANSPORT AND MAINTAIN ACCEPTABLE AIR QUALITY CONDITIONS. REPETITIVE TREATMENTS SHALL BE DONE AS NEEDED UNTIL GRADES ARE STABILIZED.
21. THE TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED WEEKLY, AND AFTER EACH RAINFALL IN EXCESS OF 1/2 INCH TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
22. THE CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED EROSION CONTROL DEVICES IMMEDIATELY, AND IN NO CASE, MORE THAN TWENTY FOUR (24) HOURS AFTER OBSERVING SUCH DEFICIENCIES.
23. THE CONTRACTOR SHALL BE PREPARED TO IMPLEMENT INTERIM DRAINAGE CONTROLS AND EROSION CONTROL MEASURES AS MAY BE NECESSARY DURING THE COURSE OF CONSTRUCTION.
24. THE CONTRACTOR SHALL MAKE AVAILABLE ONSITE ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM EMERGENCY EROSION CONTROL AND DRAINAGE IMPROVEMENTS WITHIN FOUR (4) HOURS OF ANY IMPENDING EMERGENCY SITUATION.
25. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE SITE WORK BY THE OWNER. UPON CERTIFICATION OF FINAL ACCEPTANCE, THE OWNER WILL ASSUME RESPONSIBILITY FOR THE CONTINUED MAINTENANCE OF PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES.
26. PHASES OF CONSTRUCTION INCLUDING CLEARING AND GRUBBING, PRELIMINARY SITE PREPARATION, UTILITY INSTALLATION, PRELIMINARY GRADING, ETC., REQUIRE TREE PROTECTION MEASURES TO BE IN PLACE.
27. NO CONSTRUCTION ACTIVITIES OF ANY KIND SHOULD OCCUR WITHIN THE LIMITS OF THE PROTECTED AREAS INCLUDING, BUT NOT LIMITED TO GRADING, EXCAVATION, STOCKPILING OF MATERIALS, STORAGE OF CONSTRUCTION EQUIPMENT, VEHICLE PARKING, MOVEMENT OF WORKERS OR MACHINERY, OR DUMPING OF CONSTRUCTION DEBRIS.
28. CONTRACTOR SHALL REFER TO THE EROSION DETAILS FOR THE PROTECTION MEASURES PROPOSED.
29. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
30. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS DESCRIBED IN THE PLANS.
31. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOPSOIL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED WITHIN 14 DAYS.
32. THE CONTRACTOR IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
33. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
34. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE SURROUNDING DRAINAGE AREA.

Existing Conditions Information

1. TOPOGRAPHY AND EXISTING CONDITIONS SHOWN ON THESE PLANS IS BASED UPON FIELDWORK PERFORMED BY GABRIEL E. SENOR, P.C. COMPLETED OCTOBER 28, 2014. CONTOUR INTERVAL = 2 FOOT.
2. THE EXISTING CONDITIONS SHOWN ON THESE PLANS IS BASED UPON AN ARBITRARY HORIZONTAL AND VERTICAL DATUM.

Document Use

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No.	Revision	Date	Appvd.
2	ZBA COMMENTS	6/12/15	MWJ
1	REVISED LAYOUT	3/12/15	MWJ

Designed by MWJ | Drawn by DAR | Checked by CJO
CAD checked by CJO | Approved by MWJ
Scale | Date November 10, 2014

Project Title
Proposed Gas
Station Redevelopment
Section 126.61, Block 5, Lots 3 and 4
186 - 200 Westchester Avenue
City of White Plains, Westchester Co.,N.Y.

Issued for
Site Plan Application

Drawing Title
Legend and
General Notes

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-1

Sheet 2 of 17

Project Number
29233.00

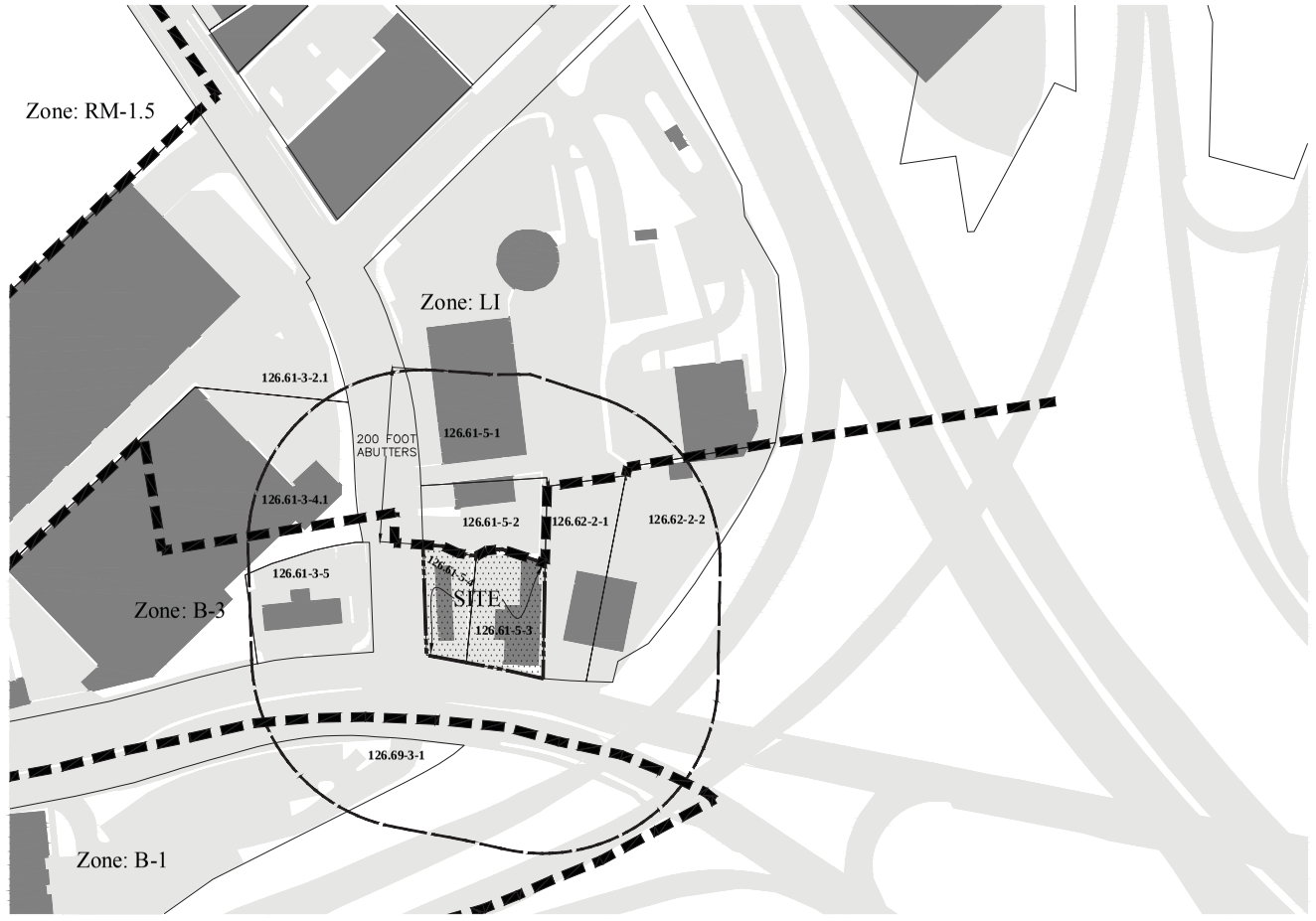
Abutter's List (Within 200 Feet of Project Site)

Date: 9/24/2014 Time: 11:19 AM

Selected Parcels

Parcel ID	Owner	Legal Address	Cls
126.61-5-4	BONNIE REALTY CORP	186 WESTCHESTER AVE	432
126.61-5-3	RIMAWI, NABIEL	200 WESTCHESTER AVE	446
126.61-3-2.1	120 WESTCHESTER	120 WESTCHESTER AVE	437
126.61-3-4.1	BRONCOWEST PARTNERS I LLC	154 WESTCHESTER AVE	454
126.61-3-5	GTY NY LEASING INC	174 WESTCHESTER AVE	432
126.69-3-1	XTP VENTURES, LLC	145 WESTCHESTER AVE	450
126.61-5-1	CITY OF WHITE PLAINS	128-138 SO KENSICO AVE	651
126.61-5-2	ESPOSITO KENSICO	170 SO KENSICO AVE	434
126.62-2-1	CITY OF WHITE PLAINS	212 WESTCHESTER AVE	449
126.62-2-2	CITY OF WHITE PLAINS	216-230 WESTCHESTER AVE	440

Abutter's Map



Tax Map Source: http://giswww.westchestergov.com/taxmaps/default.aspx?sMun=WhitePlains
Zoning Line Source: City of White Plains Zoning Map, dated 2007.

North 0 50 100 Feet

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Drawing Title
Abutter's List and Map

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-2

Sheet 3 of 17

Project Number
29233.00

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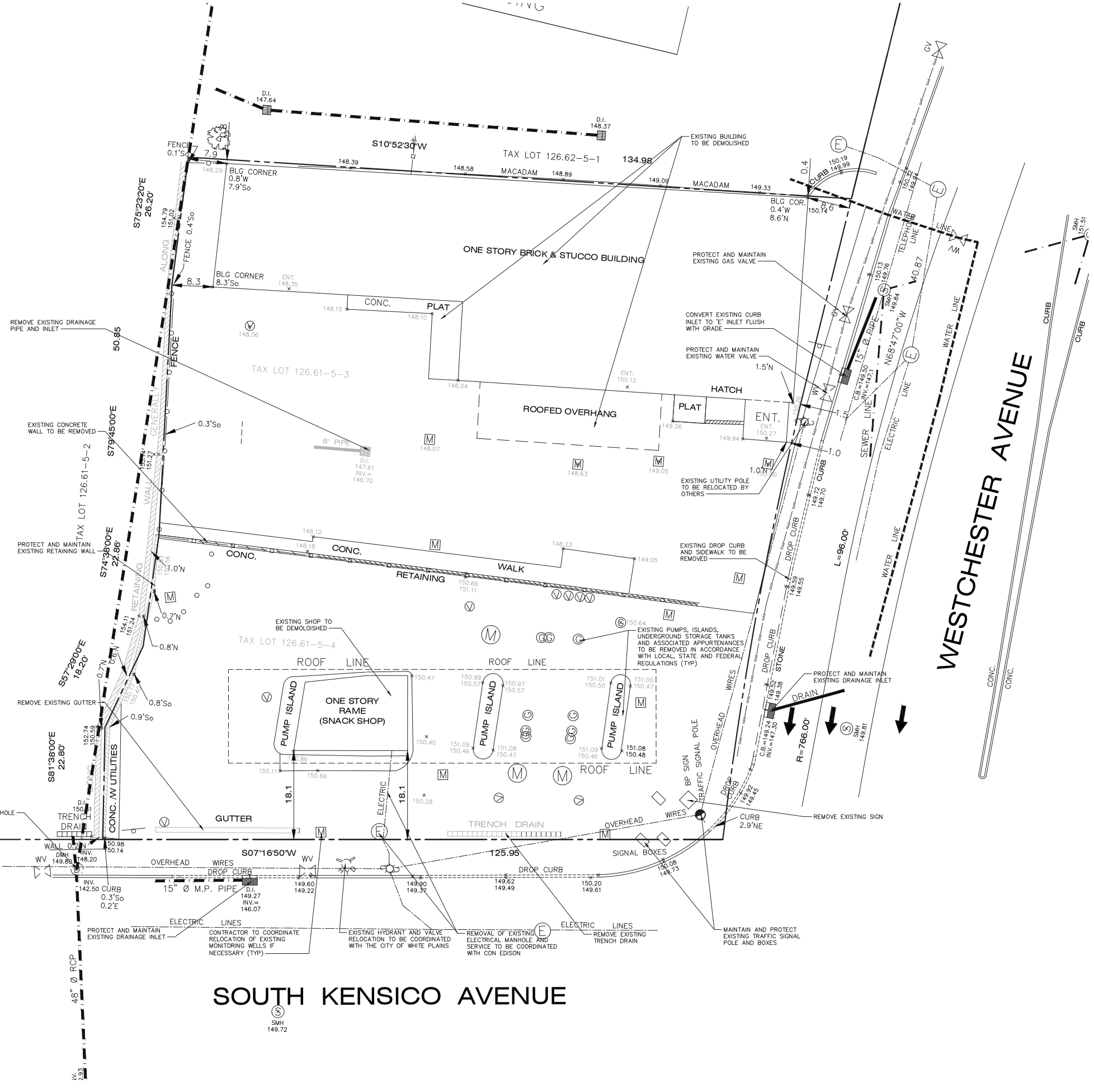

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Existing Conditions and Demolition Plan

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-3

Sheet 4 of 17

Project Number
29233.00

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Zoning Summary Chart

Zoning District(S):	B-3 (Intermediate Business)		
Zoning Regulation Requirements	Existing	Required	Provided
MINIMUM LOT AREA	0.4 Acres	–	0.4 Acres
FRONTAGE	243.0 Feet	–	243.0 Feet
MINIMUM LOT DEPTH	0 Feet	0 Feet	0 Feet
FRONT YARD SETBACK (PRINCIPAL)	1.5 Feet	5 Feet	11 Feet
SIDE YARD SETBACK (PRINCIPAL)	0 Feet	0 Feet	0 Feet
REAR YARD SETBACK (PRINCIPAL)	8 Feet	15 Feet	15 Feet
MAXIMUM FLOOR AREA RATIO	0.3	2.0	0.1
MAXIMUM BUILDING HEIGHT (PRINCIPAL)	1 STY	4 STY / 50 Feet	18 Feet
MAXIMUM BUILDING COVERAGE (ALL)	37.5 %	80.0 %	33.30%
MAXIMUM IMPERVIOUS	100.0 %	–	94.40%

Parking Summary Chart

Description	Size			
	Required	Provided	Required	Provided
STANDARD SPACES – RETAIL 5.7 SPACES PER 1,000 SF	9 x 18	9 x 18	10	11
STANDARD ACCESSIBLE SPACES *	8 x 18	8 x 18	1	1
GAS FILL SPACES (1 PER POSITION)	–	–	10	10
TOTAL SPACES			21	22

* A PARKING FACILITY WITH 1 TO 25 PARKING SPACES REQUIRES A MINIMUM OF 1 ACCESSIBLE PARKING SPACE

PLANT SCHEDULE

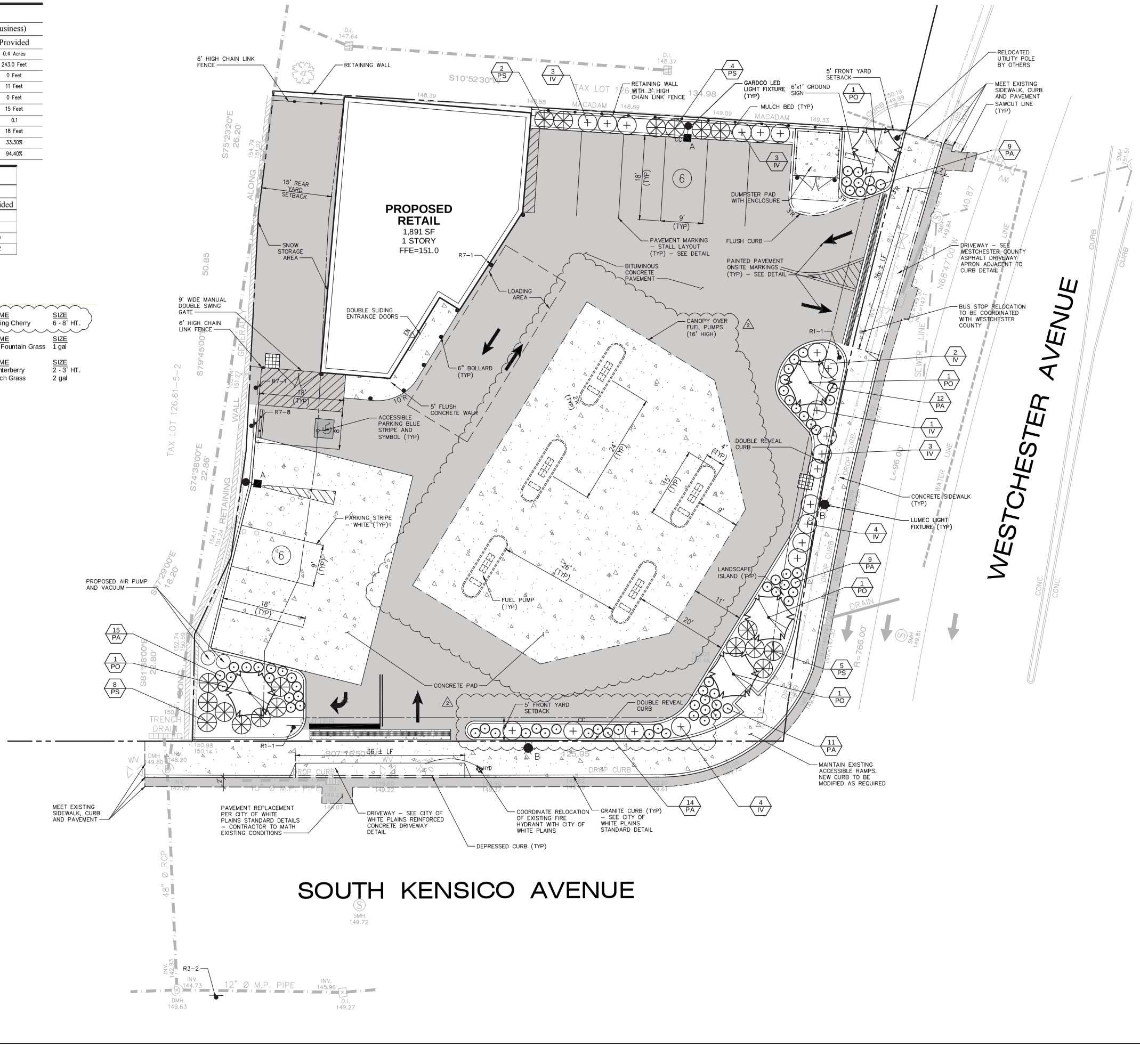
	QTY	BOTANICAL NAME	COMMON NAME	SIZE
FLOWERING TREES				
PO	5	Prunus incisa x campanulata	Okame Flowering Cherry	6 - 8` HT.
GRASSES				
PA	70	Pennisetum alopecuroides Hameln	Hameln Dwarf Fountain Grass	1 gal
SHRUBS				
IV	20	Ilex verticillata `Jim Dandy`	Jim Dandy Winterberry	2 - 3` HT.
PS	19	Panicum virgatum `Shenendoah`	Burgundy Switch Grass	2 gal

Landscape Notes

1. ALL PROPOSED PLANTING LOCATIONS SHALL BE STAKED AS SHOWN ON THE PLANS FOR FIELD REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL BELOW GRADE AND ABOVE GROUND UTILITIES AND NOTIFY OWNERS REPRESENTATIVE OF CONFLICTS.
3. NO PLANT MATERIALS SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICT.
4. A 3-INCH DEEP MULCH PER SPECIFICATION SHALL BE INSTALLED UNDER ALL TREES AND SHRUBS, AND IN ALL PLANTING BEDS, UNLESS OTHERWISE INDICATED ON THE PLANS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
5. ALL TREES SHALL BE BALLED AND BURLAPPED, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.
6. FINAL QUANTITY FOR EACH PLANT TYPE SHALL BE AS GRAPHICALLY SHOWN ON THE PLAN. THIS NUMBER SHALL TAKE PRECEDENCE IN CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND ON THE PLAN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLANT LIST AND PLANT LABELS PRIOR TO BIDDING.
7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE REVIEWED BY LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE. THE PROPOSED PLANT SUBSTITUTIONS MUST ALSO BE REVIEWED AND APPROVED BY THE CITY.
8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND CONTRACT DOCUMENTS.
9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
10. AREAS DESIGNATED "TOPSOIL & SEED" SHALL RECEIVE MINIMUM 6" OF TOPSOIL AND SPECIFIED SEED MIX. LAWNS OVER 2:1 SLOPE SHALL BE PROTECTED WITH EROSION CONTROL FABRIC.
11. ALL DISTURBED AREAS NOT OTHERWISE NOTED ON CONTRACT DOCUMENTS SHALL BE TOPSOIL AND SEEDED OR MULCHED AS DIRECTED BY OWNER'S REPRESENTATIVE.
12. THIS PLAN IS INTENDED FOR PLANTING PURPOSES. REFER TO SITE / CIVIL DRAWINGS FOR ALL OTHER SITE CONSTRUCTION INFORMATION.

Plant Maintenance Notes

1. CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE OF THE LAWNS AND PLANTINGS. NO IRRIGATION IS PROPOSED FOR THIS SITE. THE CONTRACTOR SHALL SUPPLY SUPPLEMENTAL WATERING FOR NEW LAWNS AND PLANTINGS DURING THE ONE YEAR PLANT GUARANTEE PERIOD.
2. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE LANDSCAPE MAINTENANCE WORK. WATER SHALL BE PROVIDED BY THE CONTRACTOR.
3. WATERING SHALL BE REQUIRED DURING THE GROWING SEASON, WHEN NATURAL RAINFALL IS BELOW ONE INCH PER WEEK.
4. WATER SHALL BE APPLIED IN SUFFICIENT QUANTITY TO THOROUGHLY SATURATE THE SOIL IN THE ROOT ZONE OF EACH PLANT.
5. CONTRACTOR SHALL REPLACE DEAD OR DYING PLANTS AT THE END OF THE ONE YEAR GUARANTEE PERIOD. CONTRACTOR SHALL TURN OVER MAINTENANCE TO THE FACILITY MAINTENANCE STAFF AT THAT TIME.



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Sign Summary

M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
R7-8	12"	18"	RESERVED PARKING SIGN
R3-2	24"	24"	
R1-1	18"	18"	STOP
R7-1	12"	18"	NO PARKING SIGN

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SCALE IN FEET

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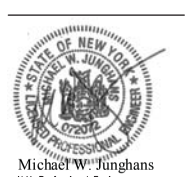
Drawing Title
Layout and Landscaping Plan

Drawing Number
C-4

Sheet of
5 17

Project Number
29233.00



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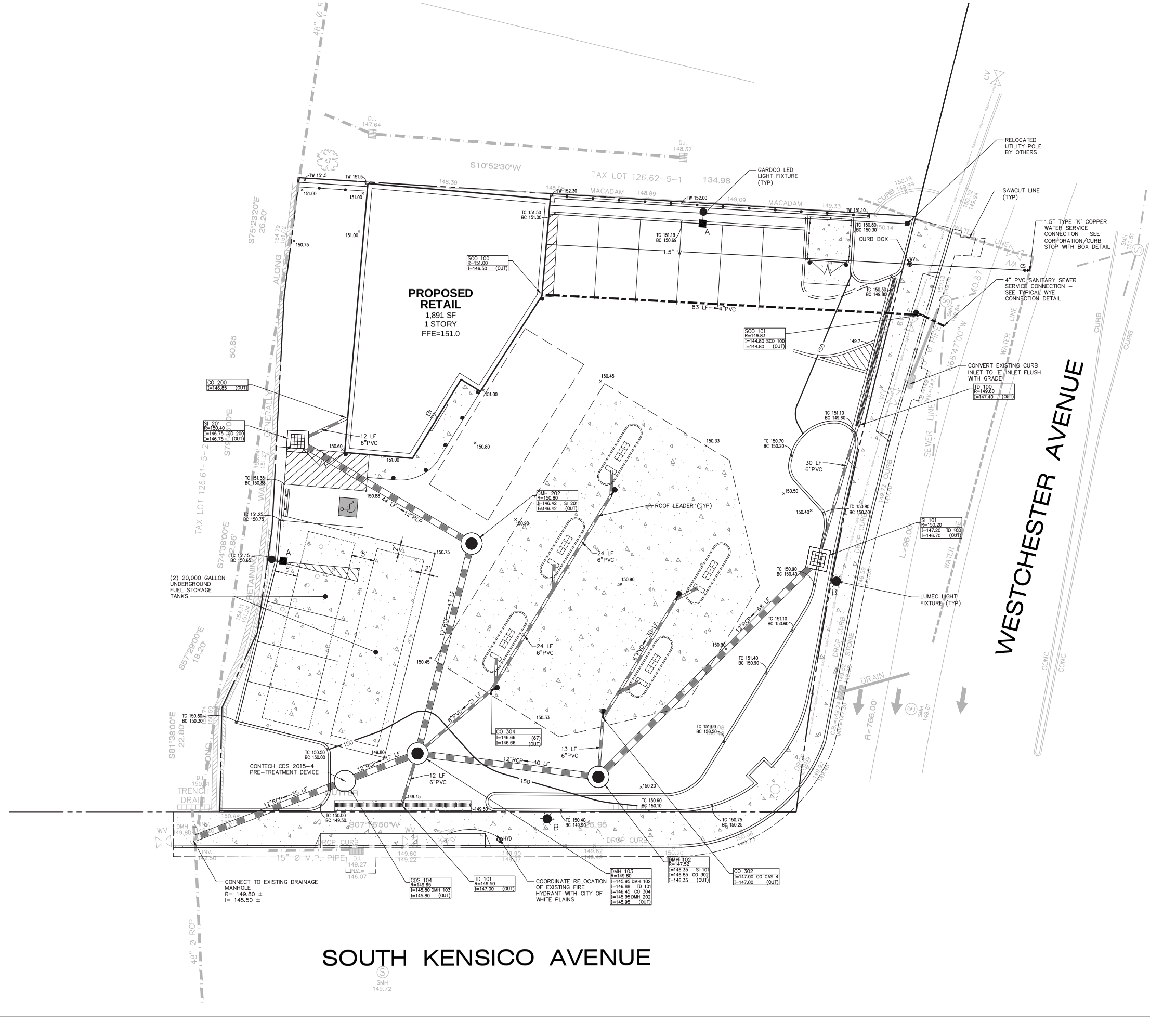

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Estimate of Earthwork

TO CONSTRUCT THE PROPOSED IMPROVEMENTS APPROXIMATELY 293 CUBIC YARDS OF FILL WILL BE REQUIRED.

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Site Plan Application

Drawing Title

Grading, Drainage and Utility Plan

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-5
Sheet 6 of 17
Project Number 29233.00

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Proposed Gas Station Redevelopment

Section 126.61, Block 5, Lots 3 and 4
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City of White Plains, Westchester Co.,N.Y.

Issued for
Site Plan Application

Drawing Title

Erosion and Sediment Control Plan

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-6
Sheet 7 of 17
Project Number
29233.00

29233.00_ER.DWG

Erosion Control Notes

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2. A PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, OWNER, VILLAGE OF TARRYTOWN, AT THE MEETING, THE INDIVIDUAL RESPONSIBLE FOR MAINTAINING THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE DESIGNATED. EROSION CONTROL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REGULATIONS SET FORTH BY THE NYSDEC (REFER TO NYSDEC SPDES GENERAL PERMIT GP-0-10-001 PART IV.C.). A LOG OF ALL INSPECTIONS AND A COPY OF THE CURRENT DESIGN PLANS SHALL BE KEPT ON SITE AND BE AVAILABLE FOR VIEWING AT ALL TIMES.
3. THE EROSION AND SEDIMENT CONTROLS SHALL BE MODIFIED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AND/OR THE DESIGNATED VILLAGE REPRESENTATIVE AS NECESSITATED BY CHANGING SITE CONDITIONS DURING CONSTRUCTION.
4. ALL DEWATERING WASTE WATERS SHALL BE DISCHARGED IN A MANNER WHICH MINIMIZES THE DISCOLORATION OF THE RECEIVING WATERS. THE SITE SHOULD BE KEPT CLEAN OF DEBRIS, LITTER AND BUILDING MATERIALS IN ORDER THAT NONE OF THE ABOVE ENTERS WETLANDS OR WATERCOURSES.
5. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
6. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
7. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
8. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
9. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (NYSDEC, AUG. 2005).
10. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND SHALL BE IN ACCORDANCE WITH "WESTCHESTER COUNTY BEST MANAGEMENT PRACTICES" AS WELL AS THE NYSDEC REQUIREMENTS.
11. THE VILLAGE OF TARRYTOWN, NYSDEC OR THE SITE ENGINEER MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE THE POTENTIAL FOR ONSITE OR OFFSITE EROSION PROBLEMS THAT MAY OCCUR DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THESE MEASURES.
12. NO DISTURBED AREA SHALL BE LEFT EXPOSED FOR MORE THAN 14 DAYS AFTER WORK STOPPAGE. THESE AREAS MUST IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL. THE SEEDING WILL BE DONE IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. AREAS SUBJECT TO CONSTRUCTION TRAFFIC ARE TREATED USING WATER BARS AND BY DIRECTING THE SURFACE WATER FLOW TO TREATMENT AREAS. THESE AREAS ARE NOT SUBJECT TO THE TEMPORARY SEEDING REQUIREMENT DUE TO THE OTHER EROSION AND SEDIMENT CONTROL TREATMENTS AS DESCRIBED HEREIN.
13. ANY GRADED AREAS NOT SUBJECT TO FURTHER DISTURBANCE OR CONSTRUCTION TRAFFIC SHALL, WITHIN 10 DAYS OF FINAL GRADING, RECEIVE PERMANENT VEGETATIVE COVER IN COMBINATION WITH SUITABLE MULCH AS PER THE SPECIFICATIONS.
14. CUT OR FILL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
15. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
16. ALL STORM DRAINAGE OUTLETS SHALL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
17. CONSTRUCTION FENCING SHALL BE USED TO PROTECT EXISTING TREES TO REMAIN, WETLANDS AND OTHER SENSITIVE AREAS. REFER TO TREE PROTECTION NOTES ON LANDSCAPE PLAN FOR ADDITIONAL INFORMATION.
18. IF FOR ANY REASON THE CONSTRUCTION IS HALTED FOR EXTENDED PERIODS, THE CONTRACTOR SHALL STABILIZE THE SELECT MATERIAL BY HYDRO-SEED OR OTHER MEANS, TO THE SATISFACTION OF THE ENGINEER FOR ALL AREAS DEVOID OF VEGETATION.
19. STORM WATER FROM DISTURBED AREAS MUST BE PASSED THROUGH AN APPROVED CONTROL DEVICE BEFORE BEING DISCHARGED BEYOND DISTURBED AREAS OR DISCHARGED INTO INLETS OR OTHER DRAINAGE SYSTEMS.
20. DUST CONTROL – WATER SHALL BE APPLIED BY SPRINKLER OR WATER TRUCK DURING GRADING OPERATIONS TO MINIMIZE SEDIMENT TRANSPORT AND MAINTAIN ACCEPTABLE AIR QUALITY CONDITIONS. REPETITIVE TREATMENTS SHALL BE DONE AS NEEDED UNTIL GRADES ARE STABILIZED.
21. THE TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED WEEKLY, AND AFTER EACH RAINFALL IN EXCESS OF 1/2 INCH TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
22. THE CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED EROSION CONTROL DEVICES IMMEDIATELY, AND IN NO CASE, MORE THAN TWENTY FOUR (24) HOURS AFTER OBSERVING SUCH DEFICIENCIES.
23. THE CONTRACTOR SHALL BE PREPARED TO IMPLEMENT INTERIM DRAINAGE CONTROLS AND EROSION CONTROL MEASURES AS MAY BE NECESSARY DURING THE COURSE OF CONSTRUCTION.
24. THE CONTRACTOR SHALL MAKE AVAILABLE ONSITE ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM EMERGENCY EROSION CONTROL AND DRAINAGE IMPROVEMENTS WITHIN FOUR (4) HOURS OF ANY IMPENDING EMERGENCY SITUATION.
25. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE SITE WORK BY THE OWNER. UPON CERTIFICATION OF FINAL ACCEPTANCE, THE OWNER WILL ASSUME RESPONSIBILITY FOR THE CONTINUED MAINTENANCE OF PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES.
26. PHASES OF CONSTRUCTION INCLUDING CLEARING AND GRUBBING, PRELIMINARY SITE PREPARATION, UTILITY INSTALLATION, PRELIMINARY GRADING, ETC., REQUIRE TREE PROTECTION MEASURES TO BE IN PLACE.
27. NO CONSTRUCTION ACTIVITIES OF ANY KIND SHOULD OCCUR WITHIN THE LIMITS OF THE PROTECTED AREAS INCLUDING, BUT NOT LIMITED TO GRADING, EXCAVATION, STOCKPILING OF MATERIALS, STORAGE OF CONSTRUCTION EQUIPMENT, VEHICLE PARKING, MOVEMENT OF WORKERS OR MACHINERY, OR DUMPING OF CONSTRUCTION DEBRIS.
28. CONTRACTOR SHALL REFER TO THE EROSION DETAILS FOR THE PROTECTION MEASURES PROPOSED.
29. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
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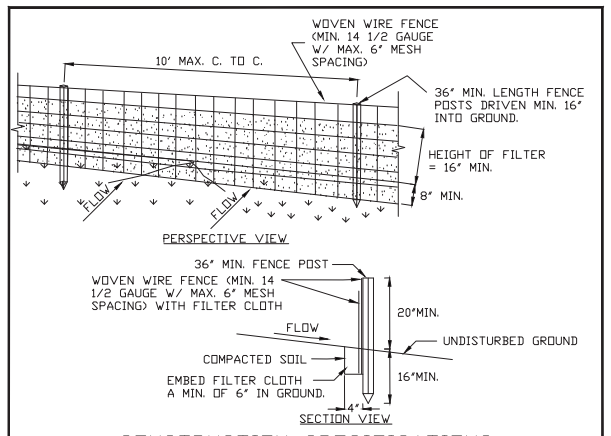
33. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
34. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE SURROUNDING DRAINAGE AREA.

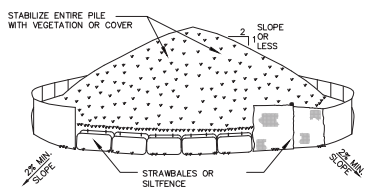


CONSTRUCTION SPECIFICATIONS

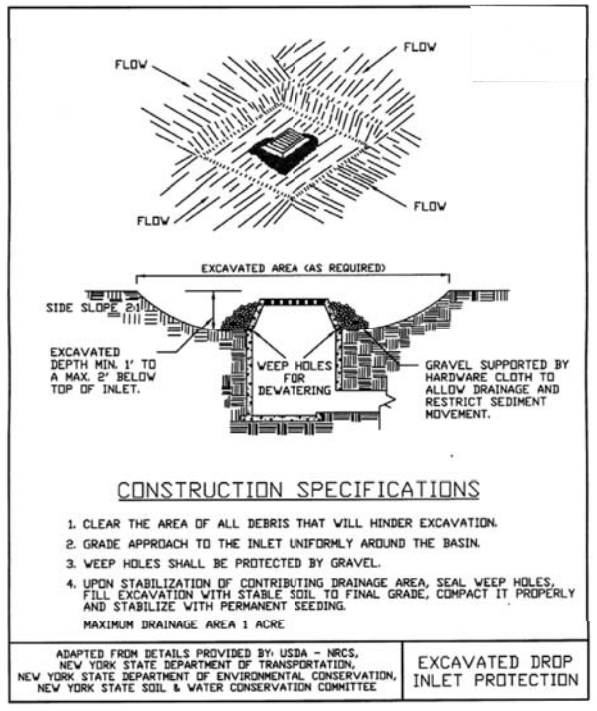
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 'T' OR 'U' TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	SILT FENCE

Notes:
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SILT FENCE DETAIL ON THIS SHEET



Soil Stockpiling
N.T.S.

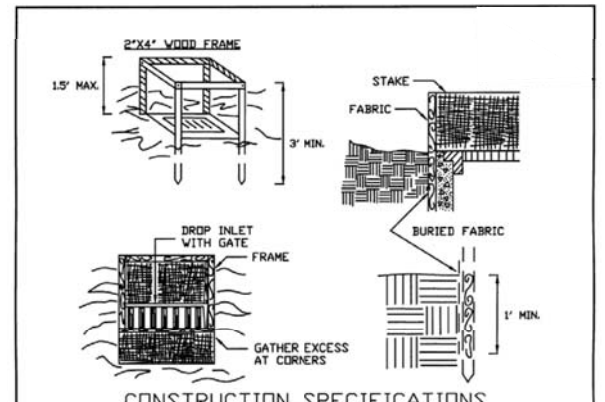


CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	EXCAVATED DROP INLET PROTECTION

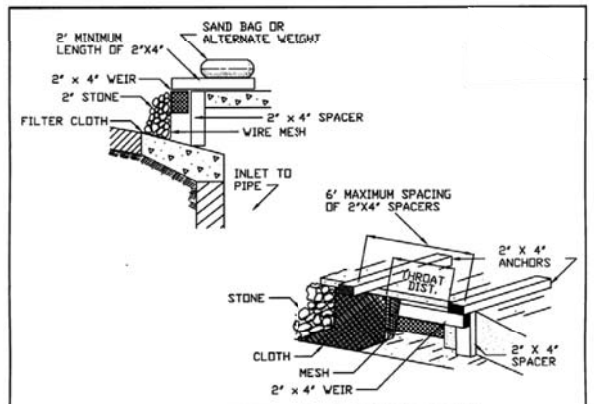


CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP, SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	FILTER FABRIC DROP INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN AOS OF 40-85.
2. WOODEN FRAME SHALL BE CONSTRICTED OF 2" x 4" CONSTRUCTION GRADE LUMBER.
3. WIRE MESH ACROSS THROAT SHALL BE A CONTINUOUS PIECE 30 INCH MINIMUM WIDTH WITH A LENGTH 4 FEET LONGER THAN THE THROAT. IT SHALL BE SHAPED AND SECURELY NAILED TO A 2" x 4" WEIR.
4. THE WEIR SHALL BE SECURELY NAILED TO 2" x 4" SPACERS 9 INCHES LONG SPACED NO MORE THAN 6 FEET APART.
5. THE ASSEMBLY SHALL BE PLACED AGAINST THE INLET AND SECURED BY 2" x 4" ANCHORS 2 FEET LONG EXTENDING ACROSS THE TOP OF THE INLET AND HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHTS.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	CURB DROP INLET PROTECTION

VHB
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Planning
Transportation
Land Development
Environmental Services
50 Main Street - Suite 360
White Plains, NY 10606
914.467.6600 • FAX 914.761.3759

No.	Revision	Date	Appvd.
2	ZBA COMMENTS	6/12/15	MWJ
1	REVISED LAYOUT	3/12/15	MWJ

Designed by MWJ | Drawn by DAR | Checked by CJO
CAD checked by CJO | Approved by MWJ
Scale N.T.S. | Date November 10, 2014

Project Title
Proposed Gas Station Redevelopment
Section 126.61, Block 5, Lots 3 and 4
186 - 200 Westchester Avenue
City of White Plains, Westchester Co.,N.Y.

Issued for
Site Plan Application

Drawing Title
Erosion and Sediment Control Notes and Details

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-7
Sheet 8 of 17
Project Number 29233.00

29233.00_ER.DWG

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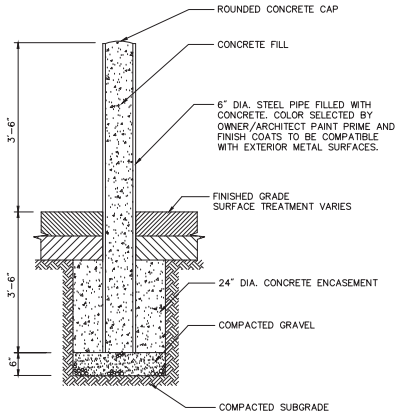
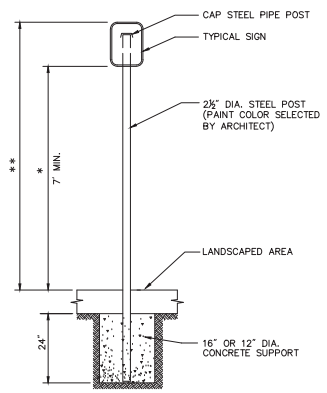


Bollard

6/08

N.T.S. Source: VHB LD_700



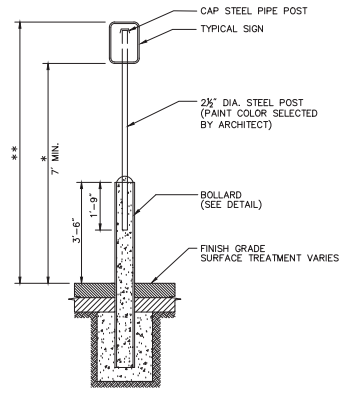
* THIS DIMENSION SHALL BE A MINIMUM OF 5' FOR ACCESSIBLE SIGNAGE.

** THIS DIMENSION SHALL BE A MAXIMUM OF 8' FOR ACCESSIBLE SIGNAGE.

Sign Post - Type 'A'

4/12

N.T.S. Source: VHB LD_701



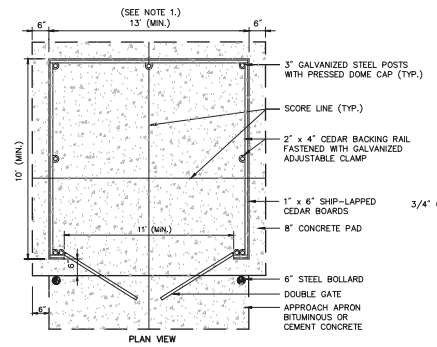
* THIS DIMENSION SHALL BE A MINIMUM OF 5' FOR ACCESSIBLE SIGNAGE.

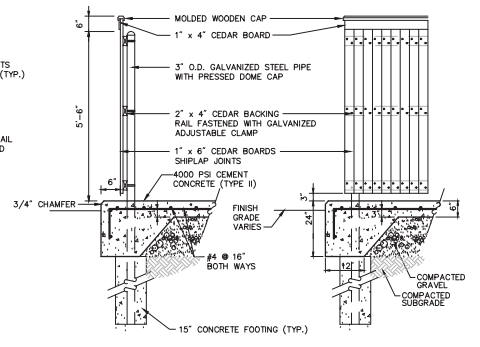
** THIS DIMENSION SHALL BE A A MAXIMUM OF 8' FOR ACCESSIBLE SIGNAGE.

Bollard Mounted Sign

4/12

N.T.S. Source: VHB LD_703





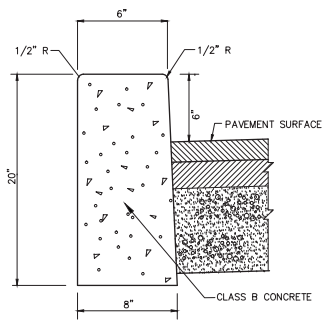
Notes:

1. DUMPSTER PAD DIMENSIONS SHOWN AS MINIMUM. REFER TO PLAN FOR ACTUAL DIMENSION.

Dumpster Pad w/ Enclosure

2/09

N.T.S. Source: VHB LD_713

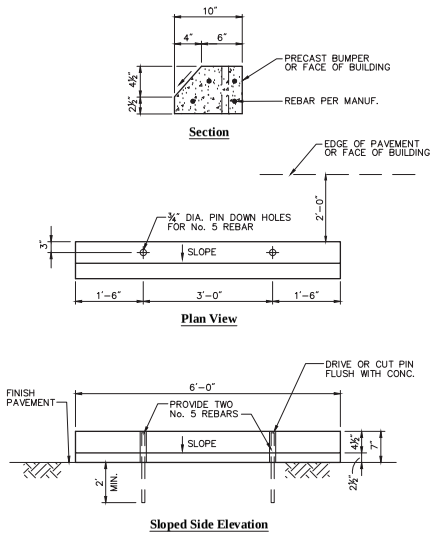


Notes:

1. CONCRETE TO TEST 4500 PSI MINIMUM ON 28 DAY TEST AIR EXTRAINMENT 4% TO 7% SLUMP TO BE 5" MAXIMUM
2. ALL CONCRETE IS TO BE PROPERLY CURED USING A CURING COMPOUND, SALT HAY, BURLAP OR OTHER METHOD ACCEPTABLE TO TOWNSHIP ENGINEER.
3. STEEL SEPARATORS SHALL BE USED WITH ALL THE FORMS TO CREATE A CONSTRUCTION JOINT EVERY 10 FEET ALONG THE CURB.
4. A HALF INCH EXPANSION JOINT OF A NON-EXTRUDABLE, BITUMASTIC MATERIAL SHALL BE PLACED ON 20 FT. CENTERS MAXIMUM.

Cast In Place Site Curb

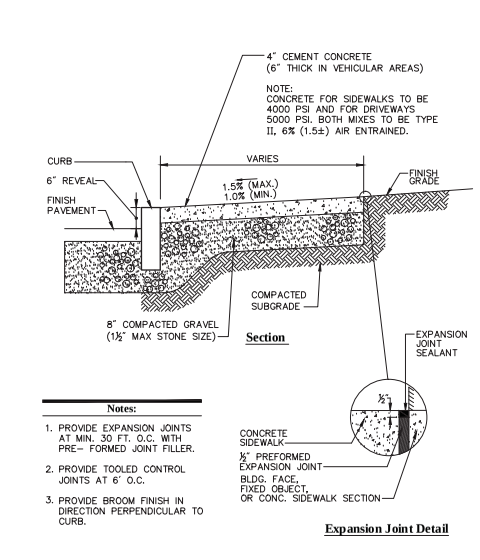
N.T.S.



Concrete Bumper

6/08

N.T.S. Source: VHB LD_417



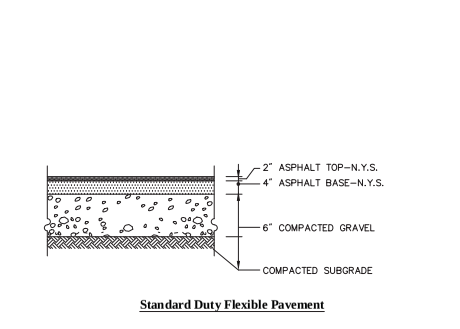
Notes:

1. PROVIDE EXPANSION JOINTS AT MIN. 30 FT. O.C. WITH PRE– FORMED JOINT FILLER.
2. PROVIDE TOOLED CONTROL JOINTS AT 6' O.C.
3. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.

Concrete Sidewalk

4/11

N.T.S. Source: VHB LD_420



Standard Duty Flexible Pavement

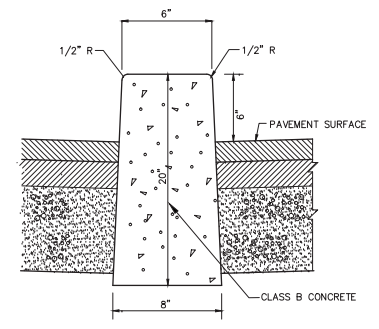
Notes:

PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS BUT NOT LESS THAN EXISTING PAVEMENT SECTION THICKNESS.

Bituminous Concrete Pavement Sections

12/11

N.T.S. Source: VHB LD_430

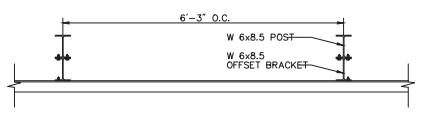


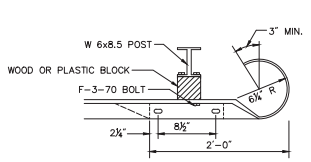
Notes:

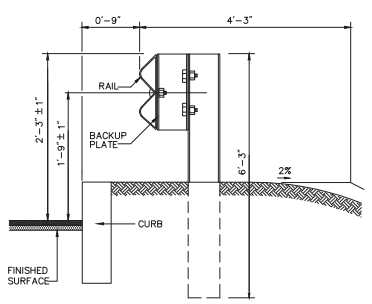
1. CONCRETE TO TEST 4500 PSI MINIMUM ON 28 DAY TEST AIR EXTRAINMENT 4% TO 7% SLUMP TO BE 5" MAXIMUM
2. ALL CONCRETE IS TO BE PROPERLY CURED USING A CURING COMPOUND, SALT HAY, BURLAP OR OTHER METHOD ACCEPTABLE TO TOWNSHIP ENGINEER.
3. STEEL SEPARATORS SHALL BE USED WITH ALL THE FORMS TO CREATE A CONSTRUCTION JOINT EVERY 10 FEET ALONG THE CURB.
4. A HALF INCH EXPANSION JOINT OF A NON-EXTRUDABLE, BITUMASTIC MATERIAL SHALL BE PLACED ON 20 FT. CENTERS MAXIMUM.

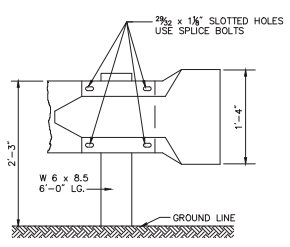
Double Reveal Concrete Curb

N.T.S.





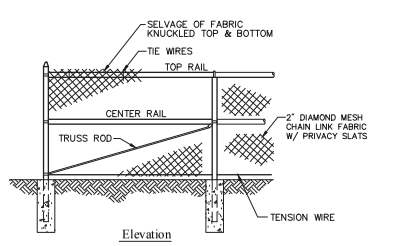




Steel Beam Guardrail with Steel Post

2/09

N.T.S. Source: VHB LD_456



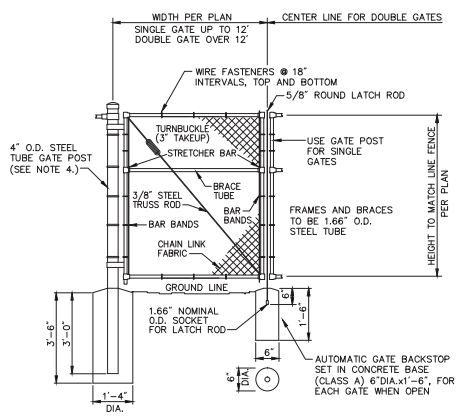
Note:

1. MATERIALS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH "CHAIN LINK MANUFACTURER'S INSTITUTE" PRODUCT MANUAL.

6' or Greater Chain Link Fence

6/08

N.T.S. Source: VHB LD_480



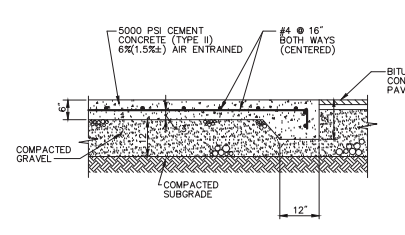
Notes:

1. CHAIN LINK FABRIC FOR GATES TO BE THE SAME AS REQUIRED FOR FENCE.
2. GATE POST BASE–PORTLAND CEMENT CONCRETE (3000 PSI).
3. FENCE FABRIC, POSTS, FRAMEWORKS, AND HARDWARE SHALL BE GALVANIZED STEEL PER SPECIFICATIONS.
4. GATE POSTS TO BE USED ON EACH SIDE OF SINGLE AND DOUBLE GATE OPENINGS.

Chain Link Fence Gate

6/08

N.T.S. Source: VHB LD_482



Notes:

1. SIZE OF PAD TO BE AS INDICATED ON PLANS.
2. CONSTRUCTION JOINTS SHALL BE SPACED NO MORE THAN 30 FEET ON CENTER AND SHALL BE EQUALLY SPACED OVER THE LENGTH AND WIDTH OF THE PAD.

Concrete Pad

4/11

N.T.S. Source: VHB LD_710

No.	Revision	Date	Appvd.
2	ZBA COMMENTS	6/12/15	MWJ
1	REVISED LAYOUT	3/12/15	MWJ

Designed by MWJ | Drawn by DAR | Checked by CJO
CAD checked by CJO | Approved by MWJ
Scale As Shown | Date November 10, 2014

Project Title

Proposed Gas Station Redevelopment

Section 126.61, Block 5, Lots 3 and 4
186 - 200 Westchester Avenue
City of White Plains, Westchester Co.,N.Y.

Issued for

Site Plan Application

Drawing Title

Site Details 1

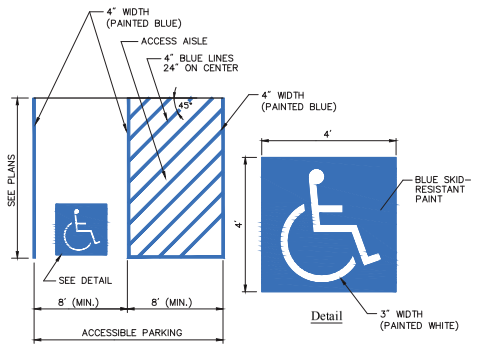
Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number C-8

Sheet 9 of 17

Project Number 29233.00

29233.00_DT.DWG

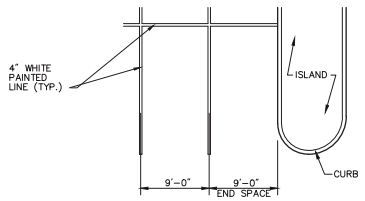


Notes:

1. ALL DIMENSIONS TO EDGES OF 4" PAVEMENT STRIPING.
2. 8' STALL WIDTH REFERS TO 8' CLEAR BETWEEN INSIDE EDGES OF PAVEMENT MARKINGS.
3. ALL SLOPES THROUGHOUT THE ACCESSIBLE PARKING AND AISLE AREAS SHALL NOT EXCEED 1.5%.

Accessible Parking Space 11/10

N.T.S. Source: VHB LD_552

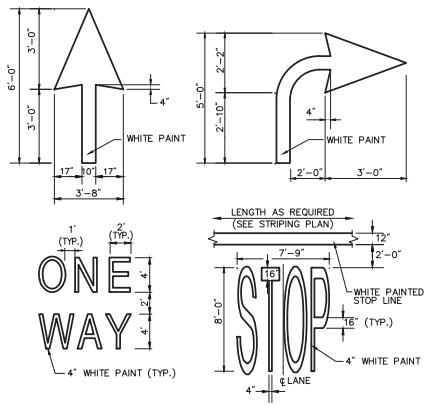


Notes:

1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.

Pavement Markings - Stall Layout 10/02

N.T.S. Source: VHB REV LD_

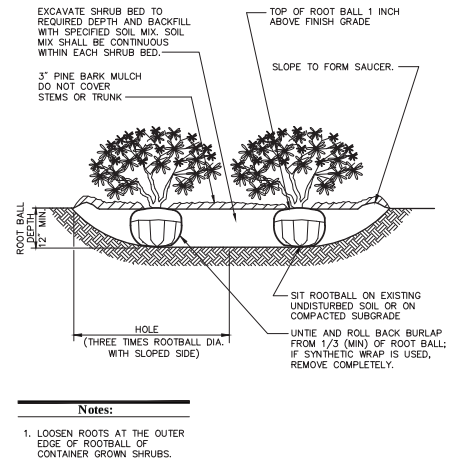


Notes:

1. PAVEMENT MARKINGS TO BE INSTALLED FOR ON SITE WORK IN LOCATIONS SHOWN.

Painted Pavement Markings - On Site 6/08

N.T.S. Source: VHB LD_554

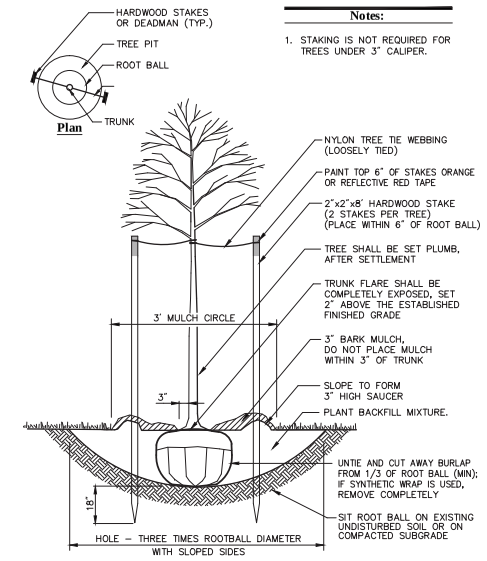


Notes:

1. LOOSEN ROOTS AT THE OUTER EDGE OF ROOTBALL OF CONTAINER GROWN SHRUBS.

Shrub Bed Planting 6/08

N.T.S. Source: VHB LD_601



Notes:

1. STAKING IS NOT REQUIRED FOR TREES UNDER 3" CALIPER.

Tree Planting (For Trees Under 4" Caliper) 1/10

N.T.S. Source: VHB LD_602

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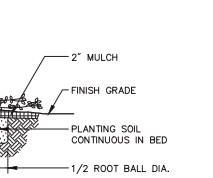
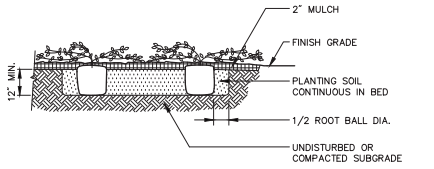
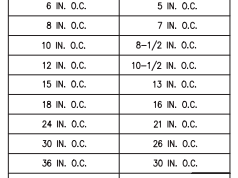
PLANT SPACING ("A")	ROW SPACING ("B")
6 IN. O.C.	5 IN. O.C.
8 IN. O.C.	7 IN. O.C.
10 IN. O.C.	8-1/2 IN. O.C.
12 IN. O.C.	10-1/2 IN. O.C.
15 IN. O.C.	13 IN. O.C.
18 IN. O.C.	16 IN. O.C.
24 IN. O.C.	21 IN. O.C.





Ground Cover Planting 11/09

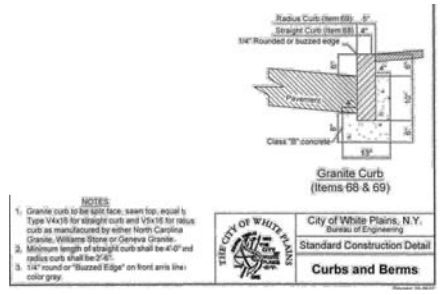
N.T.S. Source: VHB LD_615

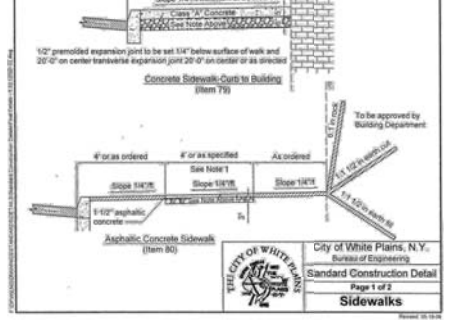


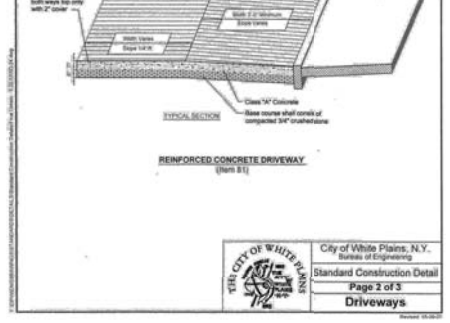
PLANT SPACING ("A")	ROW SPACING ("B")
6 IN. O.C.	5 IN. O.C.
8 IN. O.C.	7 IN. O.C.
10 IN. O.C.	8-1/2 IN. O.C.
12 IN. O.C.	10-1/2 IN. O.C.
15 IN. O.C.	13 IN. O.C.
18 IN. O.C.	16 IN. O.C.
24 IN. O.C.	21 IN. O.C.
30 IN. O.C.	26 IN. O.C.
36 IN. O.C.	30 IN. O.C.
48 IN. O.C.	42 IN. O.C.
54 IN. O.C.	48 IN. O.C.
60 IN. O.C.	54 IN. O.C.

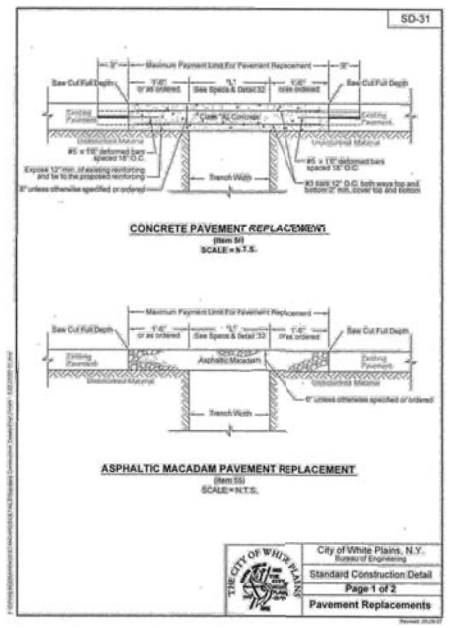
Ground Cover and Shrub Spacing Chart 6/08

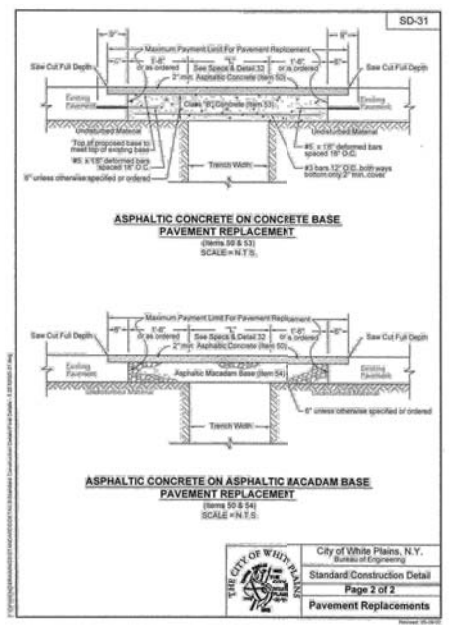
N.T.S. Source: VHB LD_616

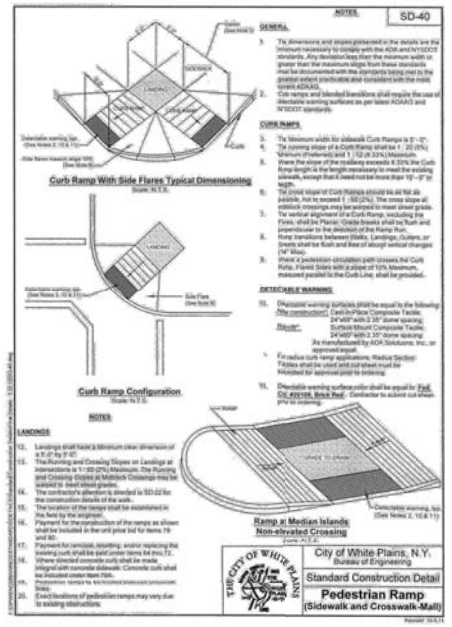


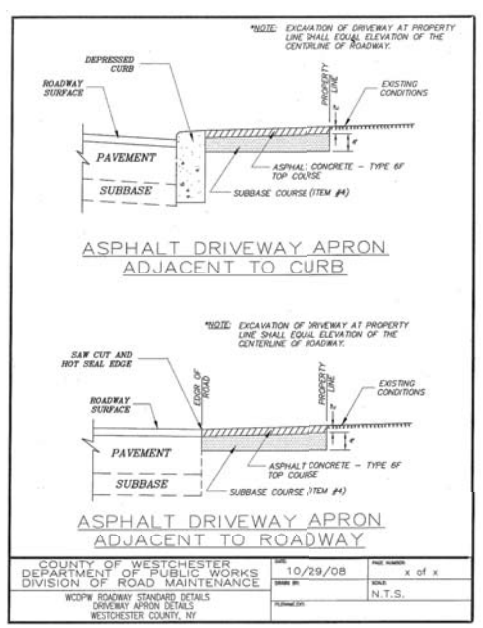












No.	Revision	Date	Appvd.
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1	REVISED LAYOUT	3/12/15	MWJ

Designed by MWJ | Drawn by DAR | Checked by CJO
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Scale As Shown | Date November 10, 2014

Project Title

Proposed Gas Station Redevelopment

Section 126.61, Block 5, Lots 3 and 4
186 - 200 Westchester Avenue
City of White Plains, Westchester Co.,N.Y.

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Drawing Title

Site Details 2

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

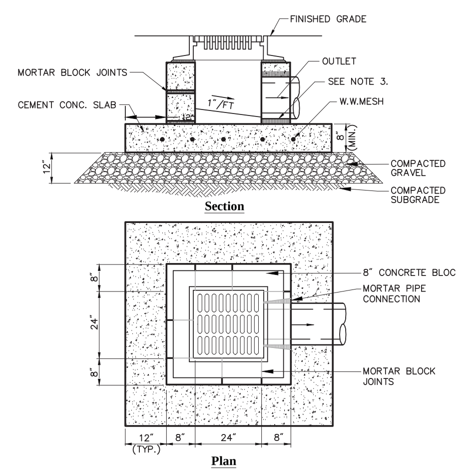
Drawing Number C-9

Sheet 10 of 17

Project Number 29233.00

\\VHB\PROJ\WHITEPLAINS\29233.00 DUNKIN DONUTS-WP\CAD\LD\PLANSET\29233.00_DT

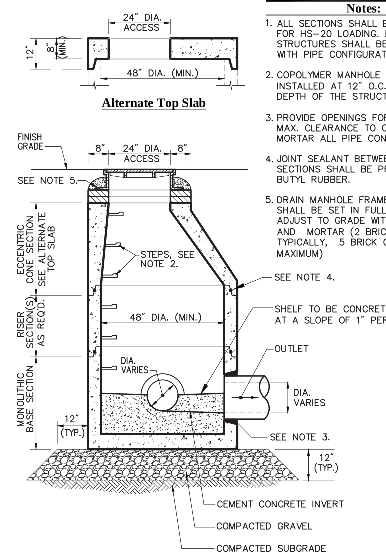
Saved Friday, February 13, 2015 10:44:26 AM MWJUNGHANS Plotted Tuesday, July 07, 2015 9:00:51 AM Rosenberg, David



Notes:

1. FRAMES AND GRATE SHALL BE SET IN FULL BED OF MORTAR. ADJUST TO GRADE WITH CLAY BRICKS AND MORTAR AS REQUIRED.
2. CONSTRUCTION MATERIAL FOR STRUCTURE TO CONSIST OF SOLID CONCRETE BLOCK SET IN MORTAR OR PRECAST CONCRETE DESIGNED FOR H-20 LOADING.
3. PROVIDE OPENINGS FOR PIPES WITH 2" CLEARANCE TO OUTSIDE OF PIPE (IF PRECAST). MORTAR ALL PIPE CONNECTIONS.
4. MORTAR ALL JOINTS.

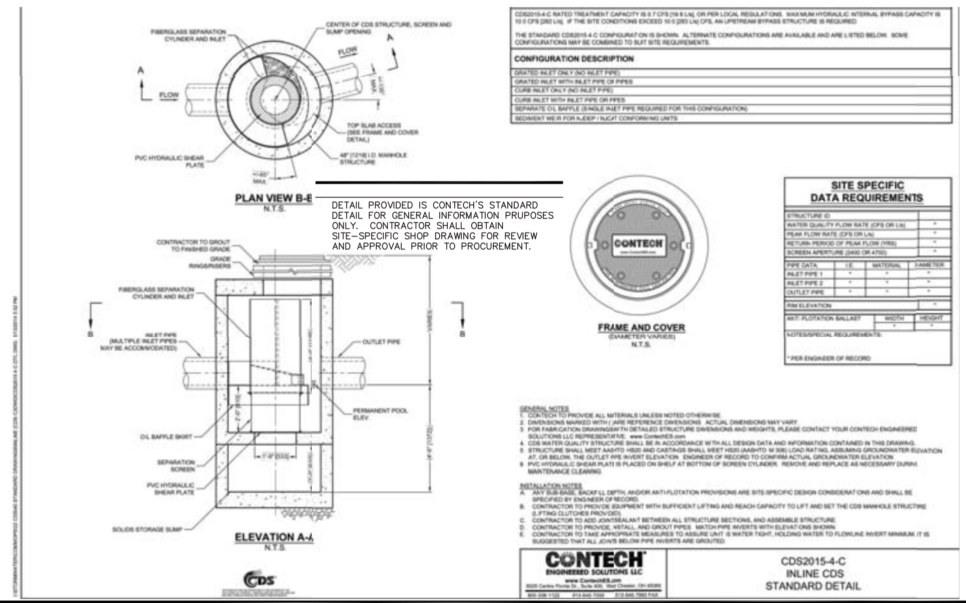
Shallow Inlet (SI) 6/08
N.T.S. Source: VHB LD_107



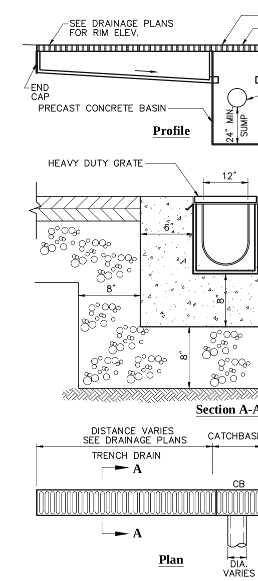
Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. DIAMETER OF STRUCTURES SHALL BE COORDINATED WITH PIPE CONFIGURATIONS.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

Drain Manhole (DMH) 4/11
N.T.S. Source: VHB LD_115



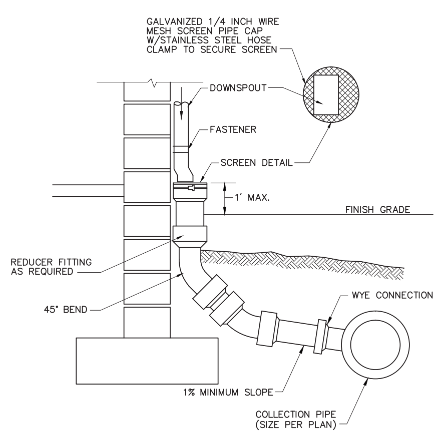
CDS2015-4 (Pre-Treatment Device) 8/2014
N.T.S. Source: Contech Stormwater Solutions



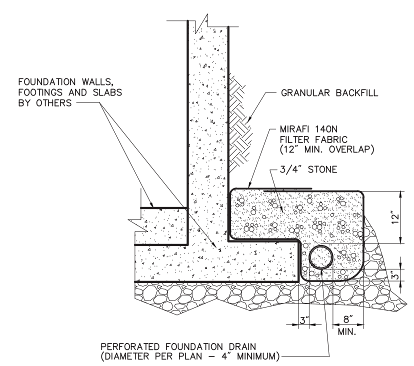
Notes:

1. TRENCH DRAIN SHALL BE HEAVY DUTY TYPE DESIGNED FOR HS-20 LOADING.
2. CONCRETE SHALL BE 5000 PSI CEMENT CONCRETE (TYPE II) 6% (1.5%±) AIR ENTRAINED.
3. TRENCH DRAIN GRATE SHALL MEET AMERICANS WITH DISABILITY ACT (ADA) REGULATIONS.

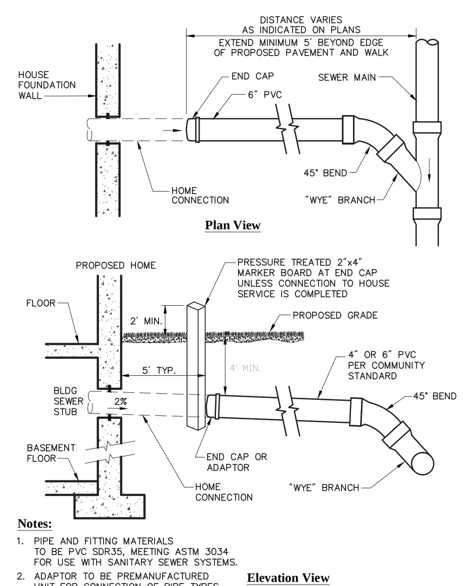
Trench Drain (Truck Dock) 3/13
N.T.S. Source: VHB LD_190-B



Downspout Rain Leader 6/08
N.T.S. Source: VHB LD_195



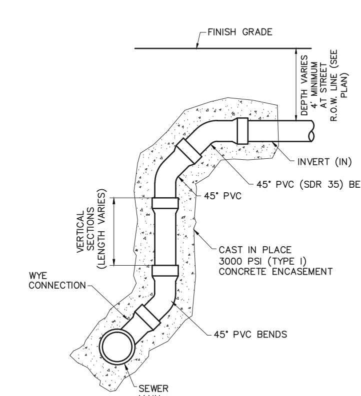
Foundation Drain 6/08
N.T.S. Source: VHB LD_196



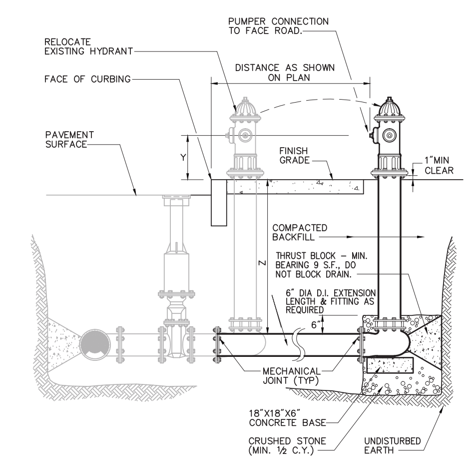
Notes:

1. PIPE AND FITTING MATERIALS TO BE PVC SDR35, MEETING ASTM 3034 FOR USE WITH SANITARY SEWER SYSTEMS.
2. ADAPTOR TO BE PREMANUFACTURED UNIT FOR CONNECTION OF PIPE TYPES.

Typical Wye Connection Detail (Residential) 6/08
N.T.S. Source: VHB LD_223



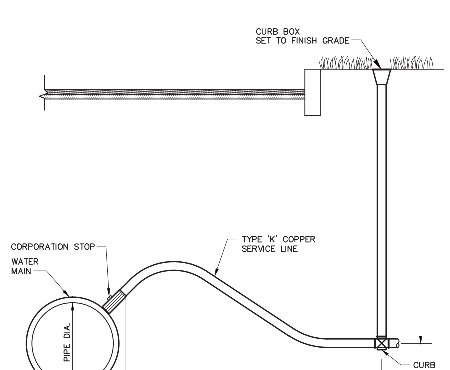
Sewer Service Chimney 6/08
N.T.S. Source: VHB LD_221



Notes:

1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHOD OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
2. DIMENSIONS Y AND Z SHALL MEET MUNICIPAL REQUIREMENTS.

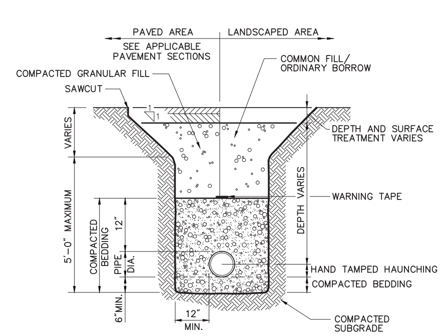
Hydrant Relocation Detail 6/08
N.T.S. Source: VHB LD_251



Notes:

1. INSTALLATIONS SHALL CONFORM WITH MUNICIPAL WATER WORKS SPECIFICATIONS AND STANDARDS.

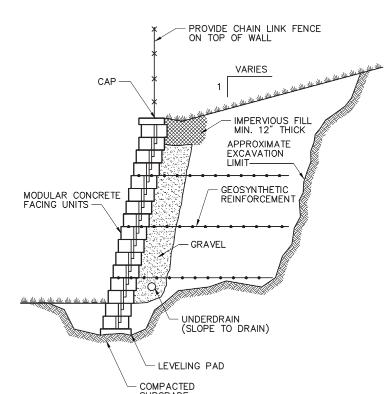
Corporation/Curb Stop with Box 6/08
N.T.S. Source: VHB LD_256



Notes:

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.

Utility Trench 8/11
N.T.S. Source: VHB LD_300



Note:

DETAIL PROVIDED FOR GENERAL INFORMATION ONLY. STAMPED FINAL DESIGN OF MODULAR WALL SYSTEM TO BE PROVIDED BY WALL MANUFACTURER BASED ON GEOTECHNICAL ENGINEERS RECOMMENDATIONS.

Modular Retaining Wall 6/08
N.T.S. Source: VHB LD_750

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No.	Revision	Date	Appvd.
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Drawing Title
Site Details 3

Drawing Number
C-10
Sheet 11 of 17

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N.Y. Professional Engineer
NY Lic. No. 072072

Project Number
29233.00

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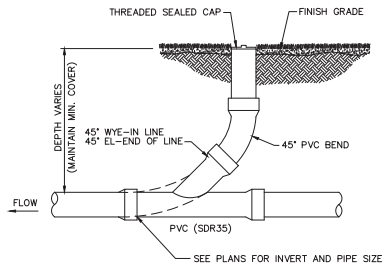
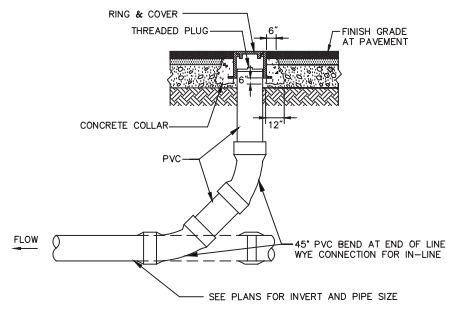


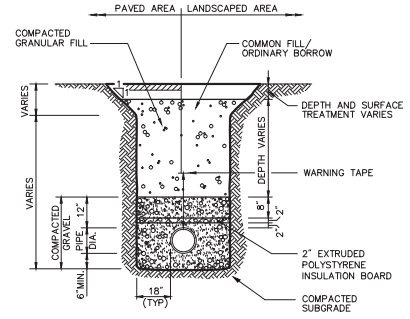
Cleanout - Landscape Area 6/08

N.T.S. Source: VHB LD_302



Cleanout - Paved Area 5/13

N.T.S. Source: VHB LD_303

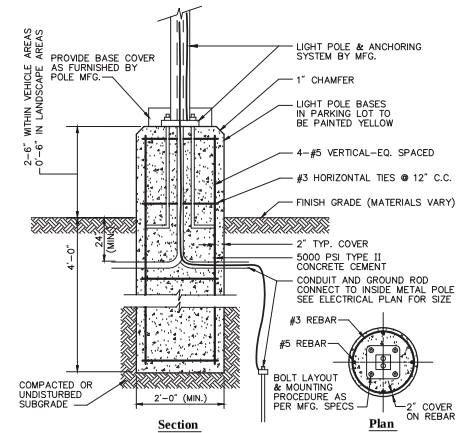


Note:

1. SEWER LINE SHALL BE INSULATED WHEN COVER IS LESS THAN FOUR (4) FEET AND WHERE SHOWN ON PLANS.
2. WATER LINE SHALL BE INSULATED WHEN COVER IS LESS THAN FIVE (5) FEET AND WHERE SHOWN ON PLANS.
3. BACKFILL PLACED IN UTILITY TRENCHES INCLUDING DISTURBED AREAS SURROUNDING UTILITY TRENCHES SHALL BE PLACED AND COMPACTED IN 12" (MAX.) VERTICAL LIFTS.

Utility Trench - Pipe Insulation 6/08

N.T.S. Source: VHB LD_305



Notes:

LIGHT POLE FOUNDATION DESIGN IS SUBJECT TO CHANGE BASED ON FINAL POLE AND FIXTURE SELECTION AND GEOTECHNICAL SITE INVESTIGATION.

Light Pole Foundation Detail (Up to 15' Pole) 2/11

N.T.S. Source: VHB LD_310a

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No.	Revision	Date	Appvd.
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Drawing Title

Site Details 4

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-11
Sheet 12 of 17
Project Number 29233.00

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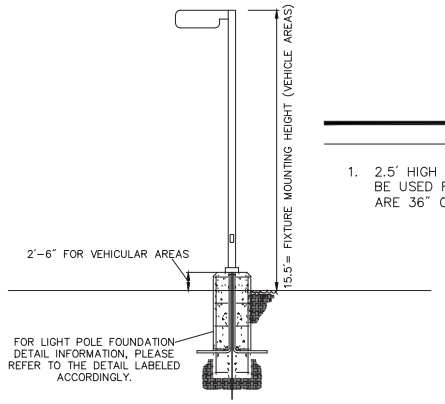


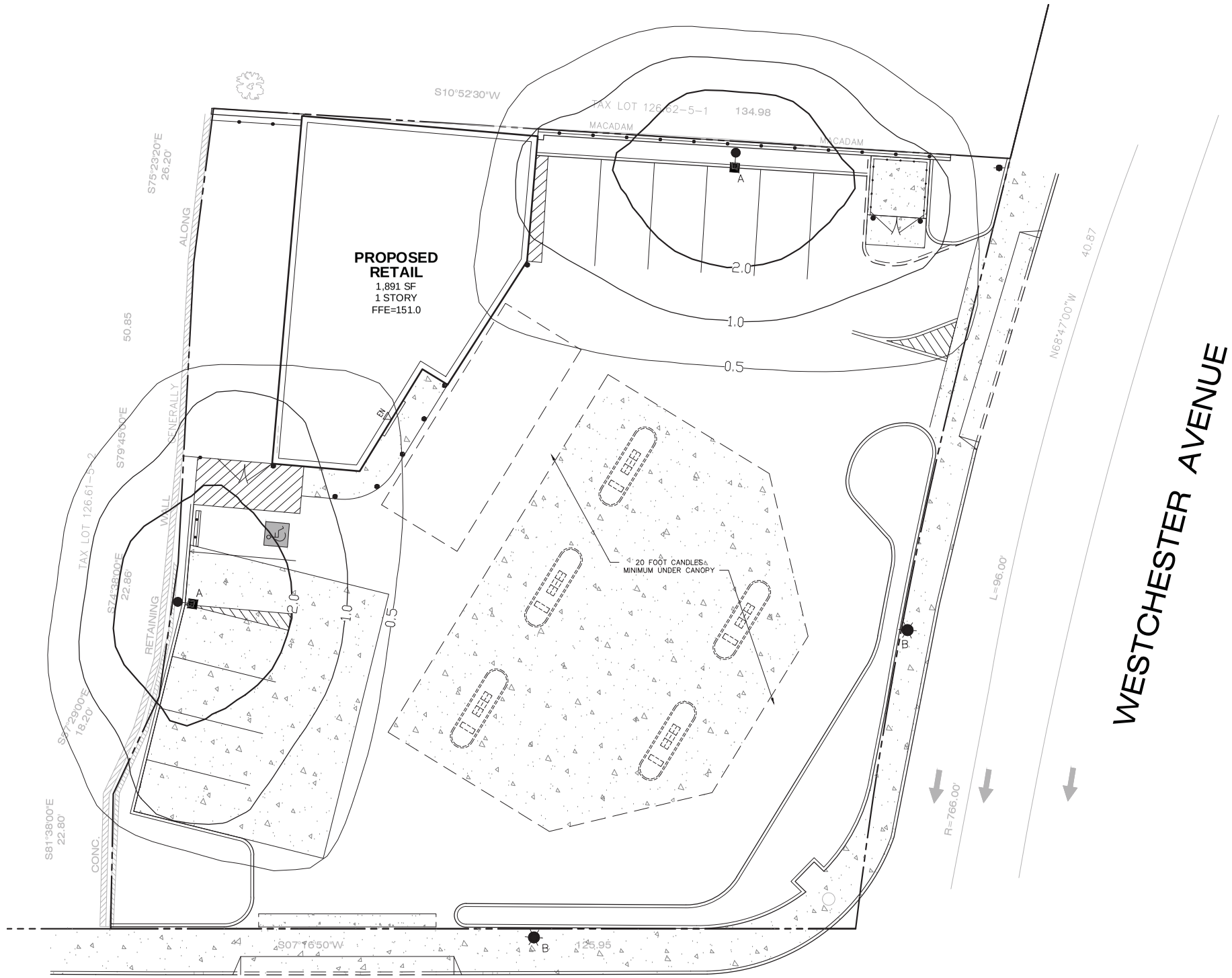
Notes:

1. 2.5' HIGH CONCRETE PEDESTAL SHALL BE USED FOR ALL LIGHT POLES THAT ARE 36" OR LESS FROM THE CURB.

Typical Height of Pole Mounted Light 3/2014

N.T.S. Source: VHB N/A

Luminaire Schedule					
Symbol	Qty	Label	Lumens	LLF	Description
A	2	A		0.850	MODEL: EH14L - 1 - 3 - 85LA - CW - UNIV - BLA POLE: SSA4 - STB - 12 - D1 - BLA
B	2	B		-	MODEL: L82 - 90W49LED4K - ES - PC - CS - LE3 - 120 - SF80 - BKTX POLE: R80A - 12 - TBC2 - 3/4x20 - 12 - 1/2 - DEC - BKTX



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Notes:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE CORRECT FIXTURES WITH THE CORRECT DISTRIBUTION TYPES ARE USED. CONTRACTOR SHALL SUBMIT SITE-SPECIFIC SHOP DRAWINGS FOR ALL FIXTURES AND POLES FOR REVIEW AND APPROVAL PRIOR TO PROCUREMENT.
2. CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE ENTITY TO ENSURE COMPLIANCE WITH DESIGN.
3. THE PROPOSED LIGHT FIXTURES SHALL BE LED.

N

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SCALE IN FEET

No.	Revision	Date	Appvd.
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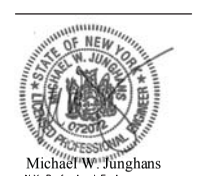
Lighting Plan



Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-12

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Project Number
29233.00

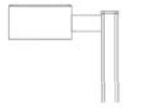
29233.00_LT.DWG

Job: **29233.00**
Type:
Notes:

Form 10 Square LED

Page 1 of 3 — EH / H / Arm Mount

The Philips Gardco arm mounted Square Form 10 LED products are cutoff luminaires featuring LED arrays. Square Form 10 LED luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer the potential for energy savings up to 50 % when compared to HID systems. The EH units are manufactured from mitered extruded aluminum and finished in an Architectural Class 1 anodizing. The H style luminaires are die formed aluminum with a thermoset polyester finish. Form 10 Square LED luminaires provide full cutoff performance and feature a flat glass lens.



PREFIX	MOUNTING	DISTRIBUTION	LED WATTAGE	LED SELECTION	VOLTAGE	FINISH	OPTIONS
EH14L	1	3	85LA	CW	UNIV	BLA	

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX

Available in 70LA and 85LA LED Wattages Only	
EH14L	14" Square Extruded Luminaire LED - Constant Wattage
EH14L-DIM	14" Square Extruded Luminaire LED - 0-10V Dimming
H14L	14" Square Fabricated Luminaire LED - Constant Wattage
H14L-DIM	14" Square Fabricated Luminaire LED - 0-10V Dimming
Available in 110LA and 160LA LED Wattages Only	
EH19L	19" Square Extruded Luminaire LED - Constant Wattage
EH19L-DIM	19" Square Extruded Luminaire LED - 0-10V Dimming
H19L	19" Square Fabricated Luminaire LED - Constant Wattage
H19L-DIM	19" Square Fabricated Luminaire LED - 0-10V Dimming

Retrofit Kits for existing Form 10 Square 14" and 19" HID luminaires are available. See Legacy LED Retrofit Kits Submittal Data Sheet (G200-21) for Retrofit Kit information.

MOUNTING

1	Single Pole Mount
2	Twin Pole Mount at 180°
2@90	Twin Pole Mount at 90°
3	3-way Pole Mount at 90°
3@120°	3-way Pole Mount at 120°
4	4-way Pole Mount

DISTRIBUTION

2	Type II
3	Type III
4	Type IV
5	Type V

Type II, Type III and Type IV optics are field rotatable. Type V optics feature unitized lens.

LED WATTAGE AND LUMEN VALUES

Ordering Code	Average System Watts[1]	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens[2,3] TYPE 2	TYPE 3	TYPE 4	TYPE 5
70LA	70	350	CW	6,517	6735	6,568	6,438
			NW	5,938	6124	5,989	5,874
85LA	85	350	CW	7,860	8114	8,342	8,245
			NW	7,468	7697	7,491	7,323
110LA	110	350	CW	9,535(6)	9,908(6)	9,641(6)	9,526(6)
			NW	8,911	9260	9,010	8,903
160LA	160	530	CW	13,170(6)	13698(6)	13,244(6)	13,180(6)
			NW	12,308	12,802	12,378	12,311

Basis of Lumen Data: *Photometric tests performed in compliance with IESNA LM-79, except where otherwise indicated.*

Notes:
1. *Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.*
2. *Values shown are for luminaires without the HS watercut shield option. Tests are in process for luminaires with the HS option and WW luminaires. Contact Gardco.applications@philips.com if approximate estimates are required for design purposes.*
3. *LED array fixture LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79.*
(6) *Marked values are scaled from NW tests as the same luminaire.*

LED SELECTION

CW	Cool White - 5700°K - 75 CRI
NW	Neutral White - 4000°K - 70 CRI
WW	Warm White - 3000°K - 80 CRI

VOLTAGE

UNIV	120V through 277V, 50hz or 60hz
HVU	347V through 480V, 50hz or 60hz (High Voltage Universal)

1611 Clovis Barker Road, San Marcos,TX 78666
(800) 227-0758 (512) 753-1000 FAX:(512) 753-7855 sitelighting.com

G200-022/1012

PHILIPS GARDCO

Form 10 Square LED

Page 2 of 3 — EH / H / Arm Mount

FINISH

EH Style

BRA	Bronze Anodized
BLA	Black Anodized
NA	Natural Anodized
OC	Optional Color Paint. *Specify Optional Color or RAL ex: OCLGP or OCRAL7024.*
SC	Special Paint. *Specify. Must supply color chip.*

H Style

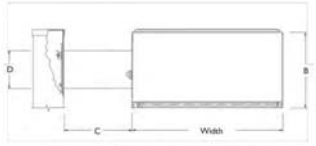
BRP	Bronze Paint
BLP	Black Paint
OC	Optional Color Paint. *Specify Optional Color or RAL ex: OCLGP or OCRAL7024.*
SC	Special Paint. *Specify. Must supply color chip.*

OPTIONS

F[1]	Fusing In Head
LF	In-Line/In-Pole Fusing
PC[2]	Photocontrol and Receptacle
PCR	Photocontrol Receptacle only
MF	Mast Arm Fitter *Requires 2 3/8" OD mast arm.*
HU	10° Uptilt Bracket
AP[3]	Adjustable Knuckle - Square Pole Mount
PTF2	Pole Top Fitter - 2 3/8" - 3" Dia. Tenon
PTF3	Pole Top Fitter - 3" - 3 1/2" Dia. Tenon
PTF4	Pole Top Fitter - 4" O.D.* - 4".Dia. Tenon
SPR[4]	Surge Protection for 120V through 277V Input meeting ANSI C62.41.2
SPRH[5]	Surge Protection for 347V through 480V Input meeting ANSI C62.41.2

4. Not available in 480V. Provia specific input voltage.
5. Only available with 1 way and 2 @ 180° mounting. Square pole mount only.
6. Not available with Fusing (F) option.

DIMENSIONS AND EPA



Size	Width	B	C	D
EH14	14" 35.56 cm	7" 17.78 cm	6" 15.24 cm	7" 12.3 cm
H14	14" 35.56 cm	7" 17.78 cm	6" 5.08 cm	7" 12.3 cm
EH19	19" 48.26 cm	10" 25.40 cm	9" 22.86 cm	7" 12.3 cm
H19	19" 48.26 cm	10" 25.40 cm	9" 5.08 cm	7" 12.3 cm

Size	Effective Projected Area (EPA) Single	Twin	3/4	Approximate Weight Single
14"	1.1 ft² .10 m²	2.3 ft² .21 m²	2.9 ft² .27 m²	30 lbs 13.61 kg
19"	2.1 ft² .20 m²	4.0 ft² .37 m²	5.5 ft² .51 m²	55 lbs 14.95 kg

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G200-022/1012

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Form 10 Square LED

Page 3 of 3 — EH / H / Arm Mount

LUMINAIRE CONFIGURATION INFORMATION

CONSTANT WATTAGE CONFIGURATIONS: Standard LED luminaires provide constant wattage and constant light output when power to the luminaire is energized.

DIMMIBG "-DIM" CONFIGURATIONS: Dimmable LED luminaires are providedwith 0 - 10V dimming for connection to a control system provided by other.

SPECIFICATIONS

GENERAL: The Philips Gardco arm mounted Square Form 10 LED products are cutoff luminaires featuring LED arrays. Square Form 10 LED luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer the potential for energy savings up to 50 % when compared to HID systems. The EH units are manufactured from mitered extruded aluminum and finished in an Architectural Class 1 anodizing. The H style luminaires are die formed aluminum with a thermoset polyester finish. Form 10 Square LED luminaires provide full cutoff performance and feature a flat glass lens.

HOUSING: Extruded housings (EH style) are composed of precisely mitered anodized aluminum extrusions. Fabricated (H style) units are one piece, multi-formed aluminum with an integral reinforcing spline and a single concealed joint. Pressure injected silicone provides a continuous weather tight seal at all miters and points of material transition.

ARM: Extruded aluminum arm is wired and secured to luminaire by contractor. Assembly is suitable for mounting to pole without requiring access to luminaire.

LENS: Mitered, extruded anodized aluminum door frame retains the optically clear, heat and impact resistant tempered flat glass in a sealed manner using hollow section, high compliance, memory retentive extruded silicone rubber. Concealed stainless steel latch and hinge permit easy toolless access to the luminaire.

THERMAL MANAGEMENT: The Philips Gardco Form 10 Square LED luminaires utilize extruded aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

OPTICAL SYSTEMS: Philips Gardco Form 10 Square LED luminaires utilize lensed LED arrays set to achieve IES Type II, Type III, Type IV and Type V distributions. Individual LED arrays are replaceable. Optical systems are field rotatable.Luminaires feature high performance Class 1 LED systems.

ELECTRICAL: Luminaires include a complete prewired LED driver assembly, provided as part of the optical assembly. Luminaires include a LED driver that accepts 120V through 277V, or 347V through 480V, 50hz to 60hz, input. Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of sted current and is listed by UL for use at 600 VAC or higher.Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state.

FINISH: Extruded housings (EH style) are standard with natural, bronze, or black Aluminum Association Architectural Class 1 anodized finish. Special color polyester finishes are available. Formed housings (H style) are standard with a chromatic acid pretreatment. The finish coat is a thermosetting polyester baked at 450°F / 232°C to achieve an H-2H hardness measu. 2

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco Form 10 Square LED luminires feature a 5 year limited warranty, including a 5 year limited warranty coering LED arrays and LED drivers. See Warranty Information on www.sitelighting.com for complete details and exclusions.

LED RELIABILITY:

PREDICTED LUMEN DEPRECIATION DATA		
Ambient Temperature °C	Driver mA	L_{70} Hours[7]
25 °C	350 mA	150,000
	530 mA	100,000
40 °C	350 mA	100,000
	530 mA	70,000

7. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output.

FULL CUTOFF PERFORMANCE: Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

CUTOFF PERFORMANCE: Cutoff performance means a luminaire distribution where the candela per 1000 lamp lumens does not numerically exceed 25 (.5 percent) at an angle at or above 90° above nadir, and 100 (10 percent) at a vertical angle of 8° above nadir. This applies to all lateral angles around the luminaire.

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G200-022/1012

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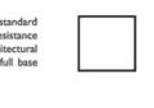
Gardco LED Light Fixture — 3/2014
N.T.S. — Source: Phillips — N/A

Job: **29233.00**
Type:
Notes:

Poles

Page 1 of 4 — 4" Straight Square Aluminum - Tenon Base

The Philips Gardco SSA4 straight aluminum pole consists of a one-piece 4" square extruded aluminum lighting standard mounted to a structural quality carbon galvanized steel base tenon. This construction offers the corrosion resistance and flexibility of aluminum with the strength and integrity of steel. Tie poles are finished with either Architectural Class 1 anodizing or electrostatically applied TGIC polyester powdercoat. All poles include anchor bolts, full base cover, hand hole, ground lug and top cap.



PREFIX	BASE	HEIGHT[1]	DRILLING	FINISH	OPTIONS
	STB	12	D1	BLA	

Enter the order code into the appropriate box above. Note: Gardco reserves the rights refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX

SSA4

BASE

STB Steel Tenon Base

Hinged Bases are available for this pole. Please refer to Hinged Base Pole sheet 79415-23 for specifications and dimensions.

HEIGHT

8'	
10'	
12'	
15'	
18' L, M, H[1]	
20' L, M, H[1]	

1. Refers to steel base tenon size (length and thickness) based on wind load factors.
L = Light, M = Medium; H = Heavy.

DRILLING

D1	1 Way
D2	2 Way
D2@90	2 Way at 90°
D3	3 Way
D4	4 Way
T2	2 3/8" OD Tenon
T4	4" OD Tenon

FINISH

BRP	Bronze Paint
BLP	Black Paint
WP	White Paint
NP	Natural Aluminum Paint
BRA	Bronze Anodized
BLA	Black Anodized
NA	Natural Anodized
OC	Optional Color Paint. *Specify Optional Color or RAL ex: OCLGP or OCRAL7024.*
SC	Special Color Paint. *Specify. Must supply color chip.*

OPTIONS

SR Single Receptacle *(Replaces hand hole and is located 18" above pole base.)*

VDA Vibration Dampener

Nipples and Couplings
Indicate size (1/2",3/4", 1", 1 1/4", 1 1/2",) Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 4.

NL Nipple - External thread

CL Coupling - Internal thread

Single Mount Bolthorn Brackets
Indicate height above base and orientation to hand hole. See Pole Orientation Information on Page 4.

A1SBH-19 single - 1.9" OD
A1SBH-24 single - 2.4" OD
A2ISBH-19 t-Tenon - 1.9" OD
A2ISBH-24 t-Tenon - 2.4" OD

Motion Response Provisions

GMR Provision for Gardco IRD Motion Response System
Minimum Pole Height is 18'. Includes a 1/2" coupling placed 180° to the hand hole, 12' above the pole xxm.

MSM Motion Sensor Mounting Provision for LED Luminaires available with Motion Response
Minimum Pole Height is 18'. Includes a special bind hole with 1/2" coupling placed in the cover plate, 180° to the hand hole, 15' above the pole base.

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Poles

Page 2 of 4 — 4" Straight Square Aluminum - Tenon Base

POLE DATA

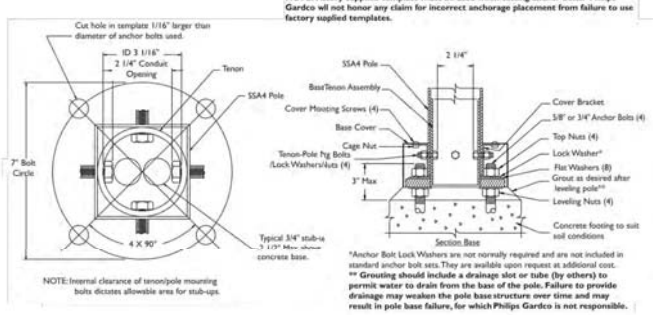
CATALOG NUMBER / PREFIX - BASE - HEIGHT	POLE SIZE ACTUAL HEIGHT	BASE TENON HEIGHT (h.)	WALL THICKNESS (inches.)	MAXIMUM LUMINAIRE LOADING[2] 100 MPH EPA-FT²	90 MPH EPA-FT²	80 MPH EPA-FT²	ANCHOR BOLT DATA[3] BOLT CIRCLE (inches)	BOLT SIZE (inches)	MAX PROJ. (inches)
SSA4-STB-8	7' 8"	1.25	.100	13.4	17.0	21.9	7.0"	5/8 x 18 x 3	3.0"
SSA4-STB-10	9' 8"	1.25	.100	9.2	11.9	15.7	7.0"	5/8 x 18 x 3	3.0"
SSA4-STB-12	11' 8"	1.25	.100	6.5	8.6	11.6	7.0"	5/8 x 18 x 3	3.0"
SSA4-STB-15	14' 9"	2	.100	3.1	4.5	6.4	7.0"	3/4 x 17 x 3	3.0"
SSA4-STB-18L	17' 9"	2	.100	1.1	2.1	3.6	7.0"	3/4 x 17 x 3	3.0"
SSA4-STB-18M	17' 9"	4	.100	2.0	3.2	4.9	7.0"	3/4 x 17 x 3	3.0"
SSA4-STB-18H	17' 9"	6	.100	3.2	4.5	6.5	7.0"	3/4 x 17 x 3	3.0"
SSA4-STB-20L	19' 9"	2	.100	-	-	2.2	7.0"	3/4 x 17 x 3	3.0"
SSA4-STB-20M	19' 9"	4	.100	-	1.8	3.2	7.0"	3/4 x 17 x 3	3.0"
SSA4-STB-20H	19' 9"	6	.100	1.7	2.8	4.4	7.0"	3/4 x 17 x 3	3.0"

2. **Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.

3. Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.

DIMENSIONS

NOTE: Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.



*Anchor Bolt Lock Washers are not normally required and are not included in standard anchor bolt sets. They are available upon request at additional cost.
** **Grouting should include a drainage slot or tube (by others) to permit water to drain from the base of the pole. Failure to provide drainage may weaken the pole base structure over time and may result in pole base failure, for which Philips Gardco is not responsible.**

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Poles

Page 3 of 4 — 4" Straight Square Aluminum - Tenon Base

SPECIFICATIONS

POLE SHAFT: The pole shaft is a one-piece, 4" square, seamless 6000 series extruded aluminum tubing and is heat treated to achieve a T6 temper with a guaranteed minimum yield strength of 31 KSI. Pole wall thickness is .100".

BASE TENON ASSEMBLY: The tenon anchor base assembly consists of structural quality carbon steel tubing with a minimum 46 KSI yield strength welded to a structural steel base with a guaranteed minimum yield strength of 50 KSI. The base plate telescopes the pole shaft and is circumferentially welded on both top and bottom. The base is provided with slotted bolt holes to accommodate a ± .5" variation in the rotational flexibility. The entire assembly is hot-dipped galvanized. Four (4) mechanically galvanized fasteners secure the aluminum pole shaft to the base tenon assembly.

ANCHOR BOLTS: Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar that meets or exceeds a minimum guaranteed yield strength of 50,000 psi. Bolts have an "L" bend on one end and threaded on the opposite end. Anchor bolts are completely hot dipped galvanized. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts and two (2) flat washers, are provided per pole, unless otherwise specified.

BASE COVER: A two-piece, fabricated aluminum cover completely conceals the entire base plate and anchorage. The base cover is secured to the base assembly with four (4) stainless steel fasteners.

HAND HOLE: The hand hole has a nominal rectangular 2" X 4" inside opening in the pole shaft and tenon assembly. Included is an aluminum cover plate with attachment screws. The hand hole is located 18" above the base and 180° clockwise with respect to the luminaire arm when viewed from the top of the pole for one arm. For two arms the hand hole is located directly under one arm.

POLE TOP CAP: Each pole assembly is provided with a removable composite friction-fit pole top cap.

FINISH: Poles are available with bronze, natural or back Aluminum Association Architectural Class 1 anodized finish. Electrostatically applied, thermally cured TGIC polyester powdercoat finish is also available.

GENERAL POLE INFORMATION

DESIGN: The poles as charted are designed to withstand dead loads and predicted dynamic loads developed by variable wind speeds with an additional 30% gust factor under the following conditions:

The charted weights include luminaire(s) and/or mounting bracket(s).

The wind velocities are based on 10 mph increments from 80 mph through 100 mph. Poles to be located in areas of known abnormal conditions may require special consideration. For example: coastal areas, airports and areas of special winds.

Poles are designed for ground mounted applications. Poles mounted on structures (such as buildings and bridges) may also necessitate special consideration requiring Philips Gardco's recommendation.

Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the pole.

WARNING: This design information is intended as a generl guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessory and foundation under the given site condition and intended usage. The addition of any items to the pole, in addition to the luminaire, will dramatically impact the EPA load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loadsgiven the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Philips Gardco assumes no responsibility for such proper analysis or product selections. **Failure to insure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.**

GENERAL INFORMATION: Mounting height is the vertical distance from the base of the lighting pole to the center of the luminaire arm at the point of luminaire attachment.Twin arms as charted are oriented at 180° with respect to each other. For applications of two (2) arms at 90° or other multiple arm applications, consult the factory.

WARRANTY: Philips Gardco poles feature a 1 year limited warranty. See Warranty Information on www.sitelighting.com for complete details and exclusions.

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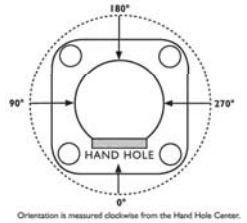
Poles

Page 4 of 4 — 4" Straight Square Aluminum - Tenon Base

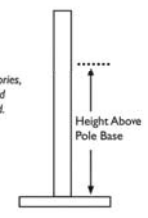
ORIENTATION INFORMATION

FACTORY INSTALLED OPTIONS AND ACCESSORIES

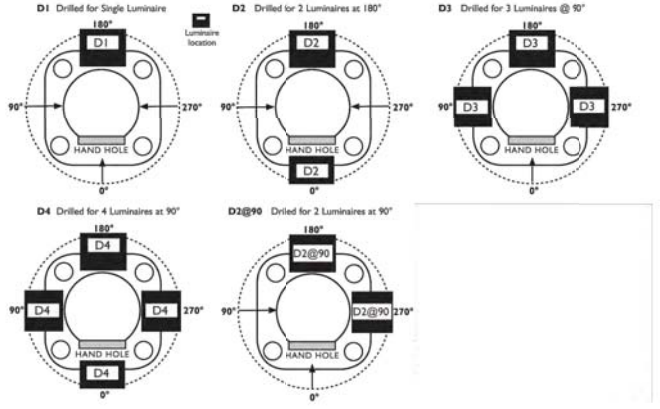


Orientation is measured clockwise from the Hand Hole Center.

For Factory Installed Options and Accessories, Specify Orientation from Hand Hole and Height Above Pole Base Where Required.



STANDARD ARM MOUNT LUMINAIRE ORIENTATION



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Gardco Light Pole — 1/2014
N.T.S. — Source: Phillips — N/A

VHB
Engineering, Surveying & Landscape Architecture, P.C.
Planning
Transportation
Land Development
Environmental Services
50 Main Street - Suite 360
White Plains, NY 10606
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No.	Revision	Date	Appvd.
2	ZBA COMMENTS	6/12/15	MWJ
1	REVISED LAYOUT	3/12/15	MWJ

Designed by MWJ | Drawn by DAR | Checked by CJO
CAD checked by CJO | Approved by MWJ
Scale N.T.S. | Date November 10, 2014

Project Title
Proposed Gas Station Redevelopment
Section 126.61, Block 5, Lots 3 and 4
186 - 200 Westchester Avenue
City of White Plains, Westchester Co.,N.Y.

Issued for
Site Plan Application

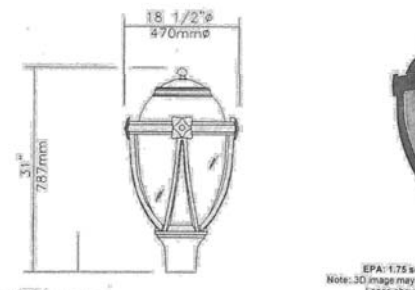
Drawing Title
Lighting Details 1

Drawing Number C-13
Sheet 14 of 17
Project Number 29233.00

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

29233.00_LT.DWG

White Plains City Standard New SFPH4 (34721)



EPA: 1.75 sq ft / weight: 45 lb (20.45 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

Qty 1 Luminaire LI2-90W49LED4K-ES-PC-CS-LE3-120-SF80-BKTX

Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Hood: A spun aluminum dome, mechanically assembled to the cast aluminum heat sink.

Guard: In a round shape with 4 arms, this guard is a one-piece cast 356 aluminum mechanically assembled to the fitter.

Access-Mechanism: A gravity die cast 356 aluminum frame with latch and hinge. The mechanism shall offer tool-free access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Globe: (PC-CS). Made of one-piece seamless injected-moulded satin clear polycarbonate. The globe is assembled on the access-mechanism.

Lamp: *(Included)*, Lamp type Philips Lumileds Febel ES. Composed of 49 high-performance white LEDs, 90w lamp wattage, Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan after which the system emits 70% of its original lumen output, all of those parameters are tested for 100% of light engines. Use of a metal core board insures greater heat transfer and longer lifespan of the light engine.

Optical System: (LE3). I.E.S type III (asymmetrical). Composed of high-performance acrylic collimators optimized with varying beam angles to achieve desired distribution. Performance shall be tested per LM63 and LM79 (IESNA) certifying its photometric performance. Street-side indicated.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device)

PHILIPS LUMEC 640 Cure Boivin Boisbriand (Quebec) Canada J7G 2A7

White Plains City Standard New SFPH4 (34721)

Driver: High power factor of 80%. Electronic driver, operating range 50-60 Hz. **Auto-adjusting to a voltage between 120 and 277 volt AC rated for both application line to line or line to neutral. Class II.** THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to cULus requirement. Dry and damp location. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

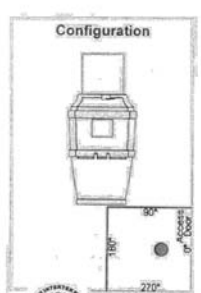
The current supplying the LEDs will be reduced by the driver if the internal temperature exceeds 185F(85C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction.

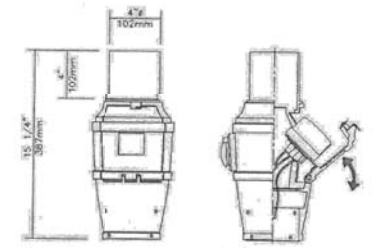
Surge Protector: LED Driver 3 poles 10KV surge Protectors that protect Line-Ground, Line-Neutral, and Neutral-Ground in accordance with IEEE / ANSI C62.41.2 guidelines.

Fitter: (SF80), Cast 356 aluminum c/w 4 set screws 3/8-16 UNC. Slip-fits on a 4"(102mm) outside diameter x 4" (102mm) long tenon.

PHILIPS LUMEC 640 Cure Boivin Boisbriand (Quebec) Canada J7G 2A7

White Plains City Standard New SFPH4 (34721)





Qty 1 Bracket SFPH4-003-PH8/120-SR2-BKTX

Description of Components:

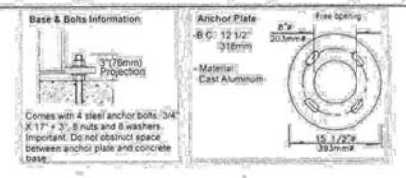
Adaptor: Cast aluminum 356 with a tool free cast-in door giving access to the internal components, **with 2 rows of 4 holes at 90 degrees around the fitter for set screws, the top row has enlarged holes for more stability. The bracket will come with 2 sets of 8 set-screws made especially to accommodate fluted poles.**

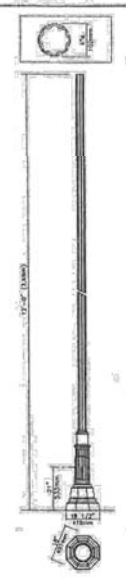
The first set includes: 4 x 3/8-16, 1" long and 4 x 1/4-20, .75" long.
The second set includes: 4 x 3/8-16, .75" long and 4 x 1/4-20, .5" long

Bracket Options: (PH8/120). PH8 twist lock type photocell, 120 volt c/w receptacle. Connection done on site by others. (SR2). Single receptacle, 15 A, 120 volts, complete with a weatherproof cover.

PHILIPS LUMEC 640 Cure Boivin Boisbriand (Quebec) Canada J7G 2A7

White Plains City Standard New SFPH4 (34721)





Qty 1 Pole R80A-12-TBC2-3/4t20-12 1/2-DEC-BKTX

Description of Components:

Pole Shaft: Shall be made from a 4" (102mm) 8 fluted round extruded 6061-T6 aluminum tubing, having a 0.187" (4.2mm) wall thickness, welded to the pole base.

Joint Cover: One-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Base: Shall be made from a round fluted cast 356-T6 aluminum base having a 0.375" (9.5mm) wall thickness, complete with a cast-in anchor plate.

Maintenance Opening: The pole shall have a 4" x 9" (102mm x 229mm) maintenance opening centered 21" (533mm) from the bottom of the ancho plate; complete with a weatherproof cast 356 aluminum cover and a copper ground lug.

Base Cover: Two piece hexagonal base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

IMPORTANT: Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

PHILIPS LUMEC 640 Cure Boivin Boisbriand (Quebec) Canada J7G 2A7

White Plains City Standard New SFPH4 (34721)

Miscellaneous

Description of Components:

Hardware: All exposed screws shall be stainless steel with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone.

Finish: Color to be **black textured (BKTX)** and in accordance with the AAMA 2603 standard. Application of a polyester power coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resias provides a discoloration resistant finish in accordance with the ASTM D 2244 standard, as well as luster retention in keeping with the ASTM D 523 standard and humidity proof in accordance with the ASTM-D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with the tests performed and the ASTM-B117 standard.

Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Certification: The manufacturer will have to supply a copy of approval products certificate, CSA or UL.

Mechanical resistance: In order to ensure the mechanical resistance of the poles, the projected area shouldbe calculated according to AASHTO 2001.

Web site information details: Click on any specific information details you need:

Paint finish / Warranties / Installation pictures / Driver Specification / ISO 9001-2008 Certification / ISO 14001-2004 Certification / ISO 9001-2008 Certification / ISO 14001-2004 Certification / cULus Certification

PHILIPS LUMEC 640 Cure Boivin Boisbriand (Quebec) Canada J7G 2A7

White Plains City Standard New SFPH4 (34721)

Lamp technical information for L80 L81 L82

LED = Philips Lumileds Rebel ES, CRI = 70, CCT = 4000K (+/- 350K)
LED rated life = 100,000 hrs * - Driver rated life = 50,000 hrs

Lamp	Typical delivered lumens *	Typical lamp wattage (W)	Typical system wattage * (W)	Typical current @ 120V (A)	Typical current @ 208 V (A)	Typical current @ 277 V (A)	LED current (mA)	NPS maintained *	Luminaire Efficacy Rating (LER/W)
40W49L1044 ES	3100	42	47	0.39	0.20	0.17	285	70 W	66
67W49L1044 ES	4185	65	72	0.60	0.35	0.26	428	100 W	58
90W49L1044 ES	4970	90	102	0.85	0.43	0.37	571	150 W	49

* L70 = 100,000 hrs (at ambient temperature = 25°C and forward current = 700 mA)
* May vary depending on the optical distribution used
* System wattage includes the lamp and the LED driver
* Contacted an Eamesmagic's factory representative should always be confirmed by a photometric layout

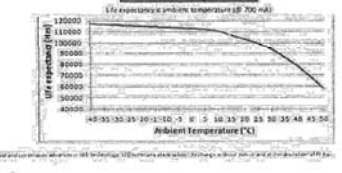
Photometric tests are done at 25°C ambient (as requested by LM-79). If our product is used at a different ambient temperature (regularly averaged), you can multiply the lumens by the percentage below:

Ambient (°C)	<0	<10	0	5	10	15	20	25
% Flux	105.8	105	104.2	103.8	102.8	101.9	101	100

At 4000K is our standard, photometric tests are only done with this CCT. If you want to use another CCT (4000K or 3000K) you can multiply the lumens by the percentage below:

CCT (K)	6000	4000	3000
% Flux	100	100	59.28

Life expectancy at ambient temperature (@ 700 mA):



PHILIPS LUMEC 640 Cure Boivin Boisbriand (Quebec) Canada J7G 2A7

Lumec Light Fixture 8/2014

N.T.S. Source: White Plains DPW N/A

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No.	Revision	Date	Appvd.
2	ZBA COMMENTS	6/12/15	MWJ
1	REVISED LAYOUT	3/12/15	MWJ

Designed by MWJ | Drawn by DAR | Checked by CJO
CAD checked by CJO | Approved by MWJ
Scale N.T.S. | Date November 10, 2014

Project Title

Proposed Gas Station Redevelopment

Section 126.61, Block 5, Lots 3 and 4
186 - 200 Westchester Avenue
City of White Plains, Westchester Co.,N.Y.

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Site Plan Application

Drawing Title

Lighting Details 2

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

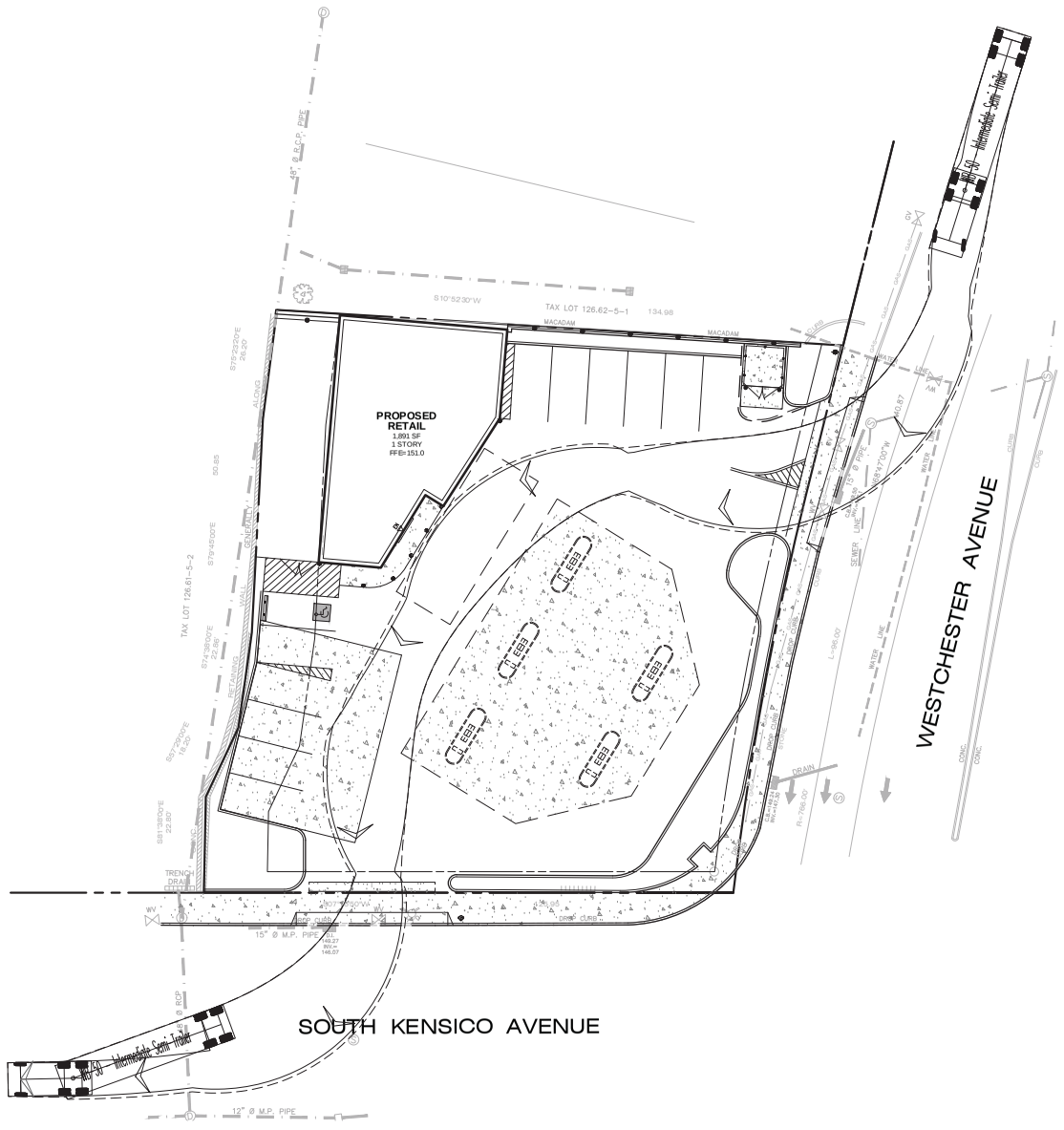
Drawing Number

C-14

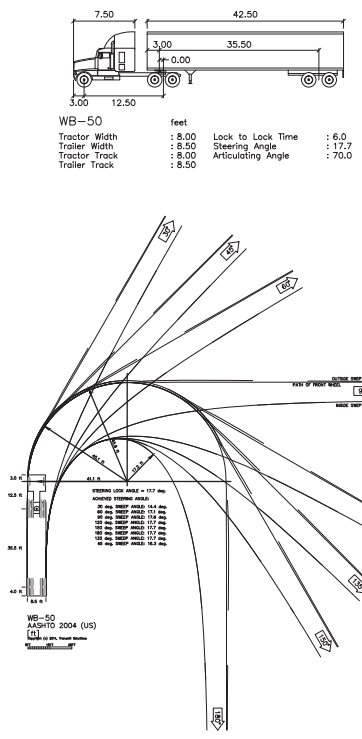
Sheet 15 of 17

Project Number 29233.00

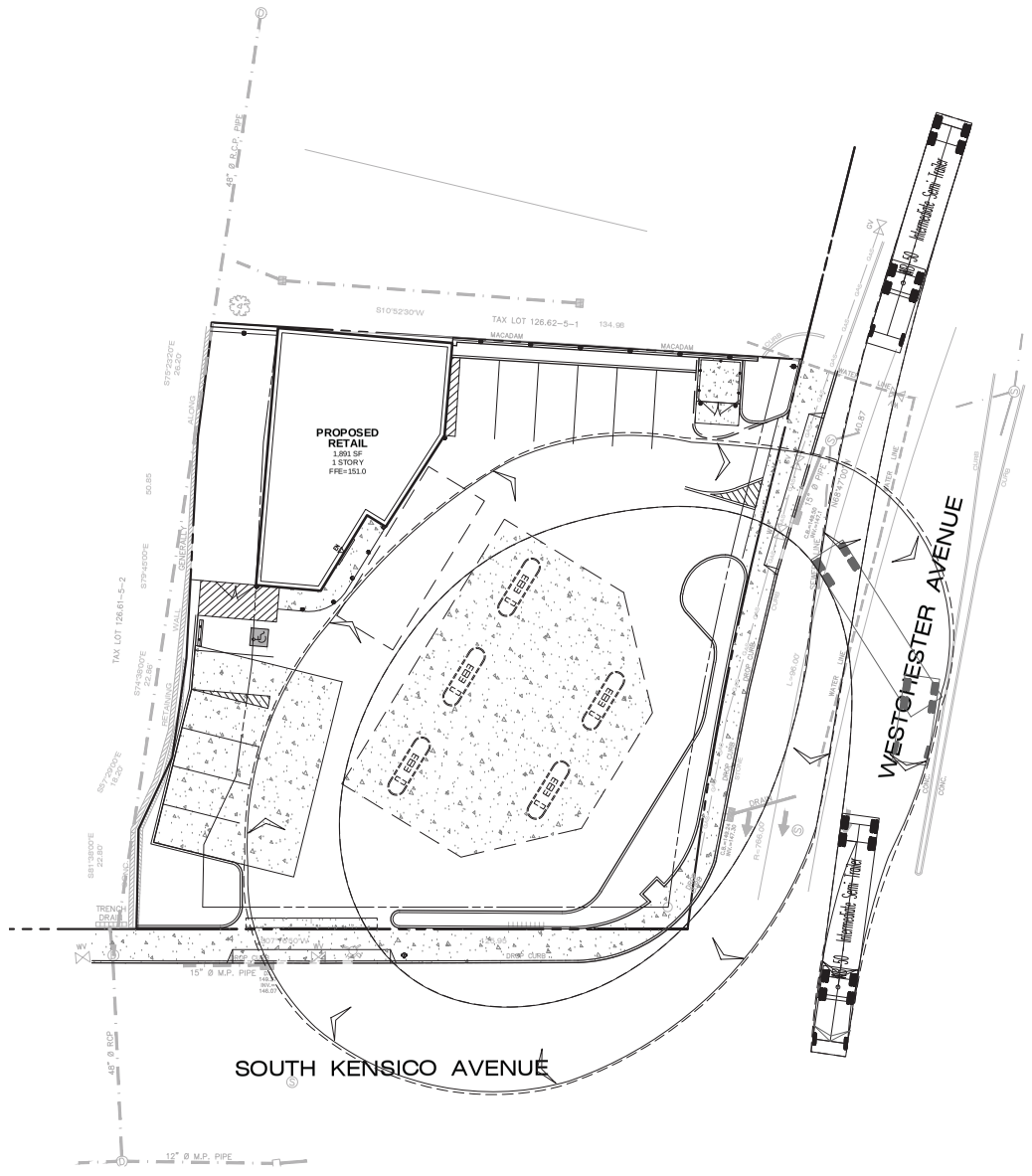
29233.00_LT.DWG



Entry Off Westchester Avenue



WB-50 Delivery Truck Turning Template



Entry Off South Kensico Avenue

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Project Title
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Drawing Title
Vehicle Maneuevering Plan - Delivery Truck

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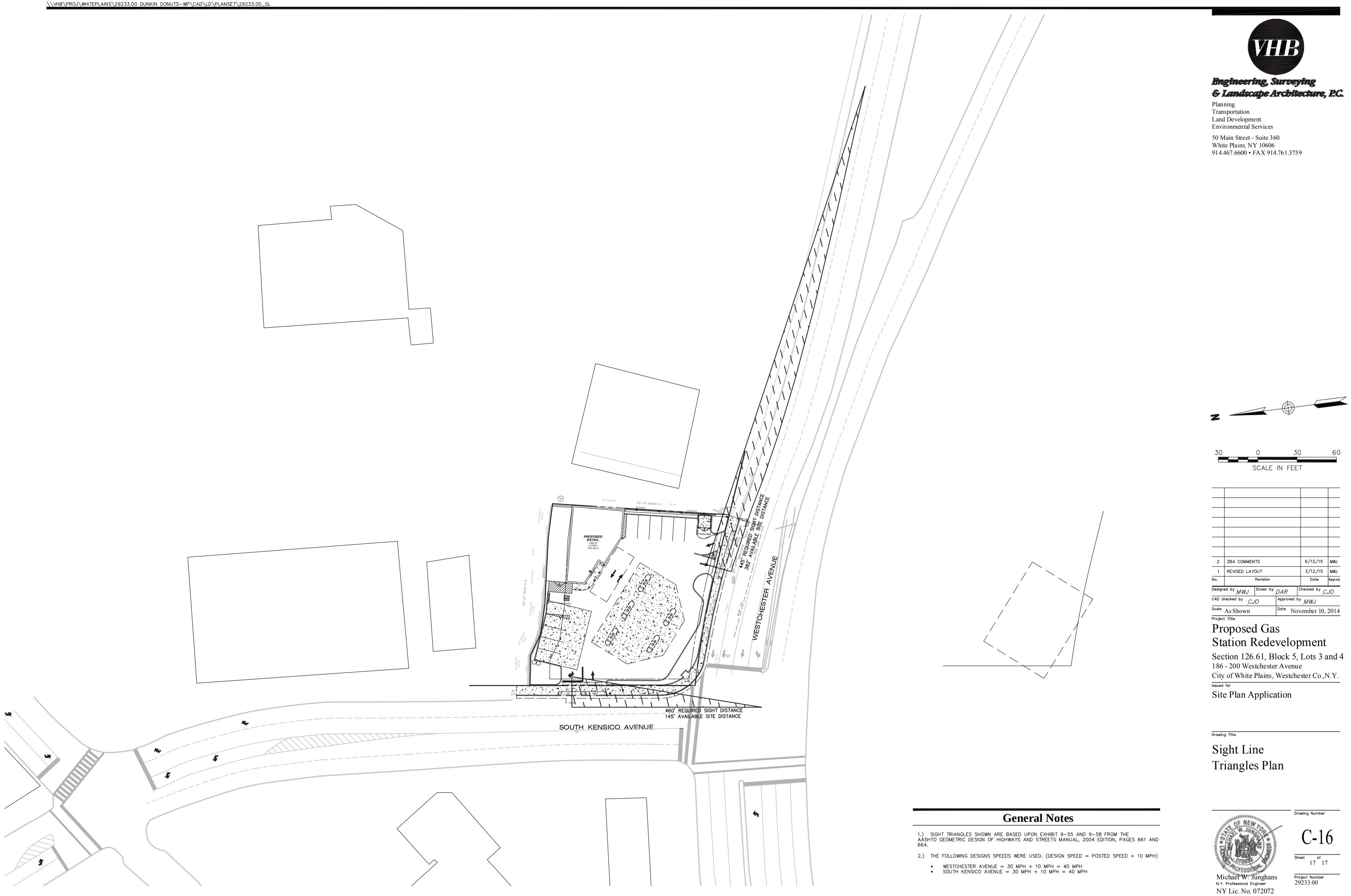
N.Y. Professional Engineer
NY Lic. No. 072072

Drawing Number
C-15

Sheet 16 of 17

Project Number
29233.00

29233.00_VM.DWG



General Notes

1.) SIGHT TRIANGLES SHOWN ARE BASED UPON EXHIBIT 9-55 AND 9-58 FROM THE AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREETS MANUAL, 2004 EDITION, PAGES 661 AND 664.

2.) THE FOLLOWING DESIGNS SPEEDS WERE USED. (DESIGN SPEED = POSTED SPEED + 10 MPH)

- WESTCHESTER AVENUE = 30 MPH + 10 MPH = 40 MPH
- SOUTH KENSICO AVENUE = 30 MPH + 10 MPH = 40 MPH

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30 0 30 60
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Drawing Title
Sight Line Triangles Plan

Drawing Number
C-16
Sheet 17 of 17
Project Number 29233.00

STATE OF NEW YORK * MICHAEL W. JUNGHANS * 072072 * LICENSED PROFESSIONAL ENGINEER

Michael W. Junghans
N.Y. Professional Engineer
NY Lic. No. 072072

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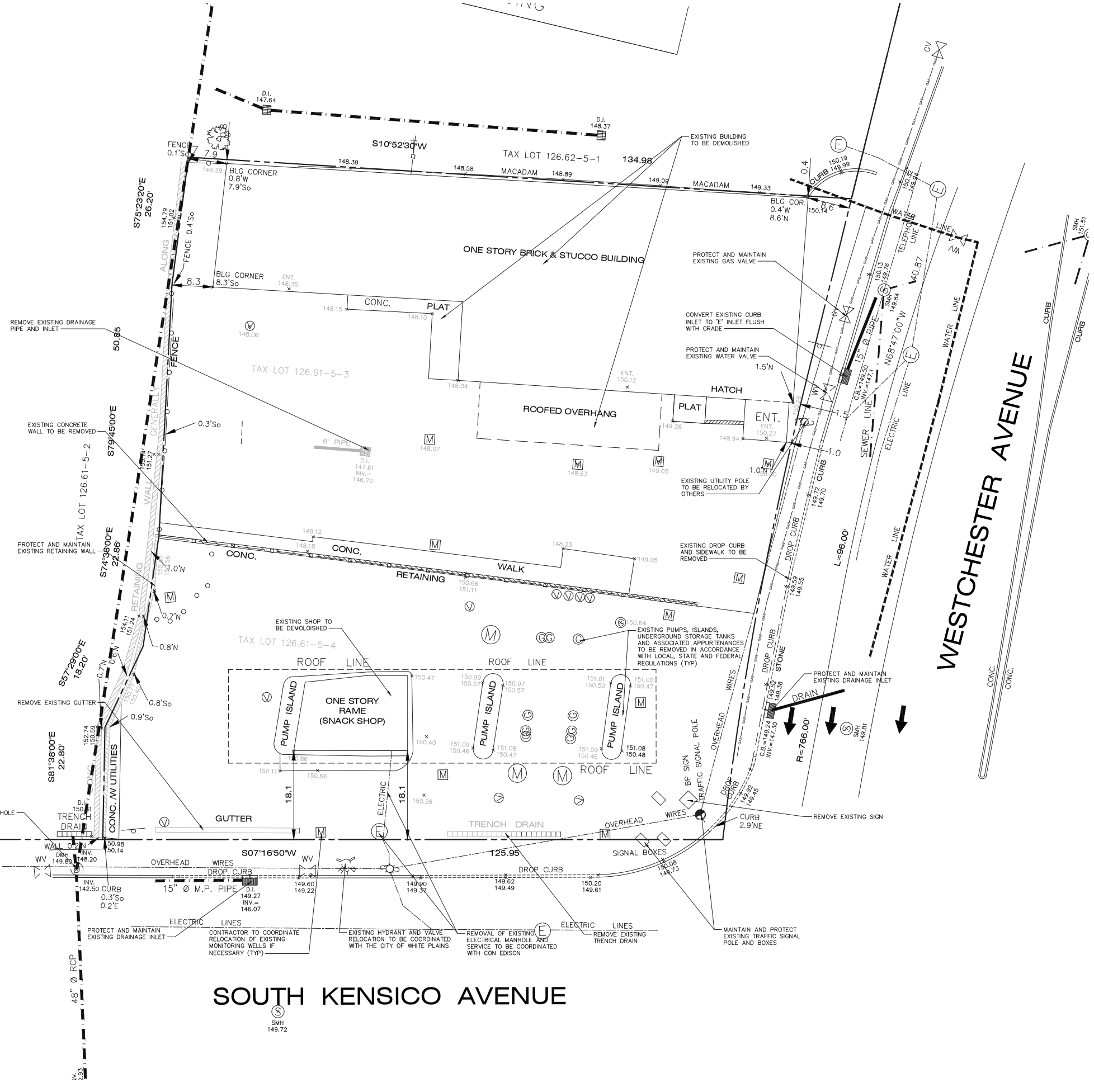

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Drawing Title

Existing Conditions and Demolition Plan

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NY Lic. No. 072072

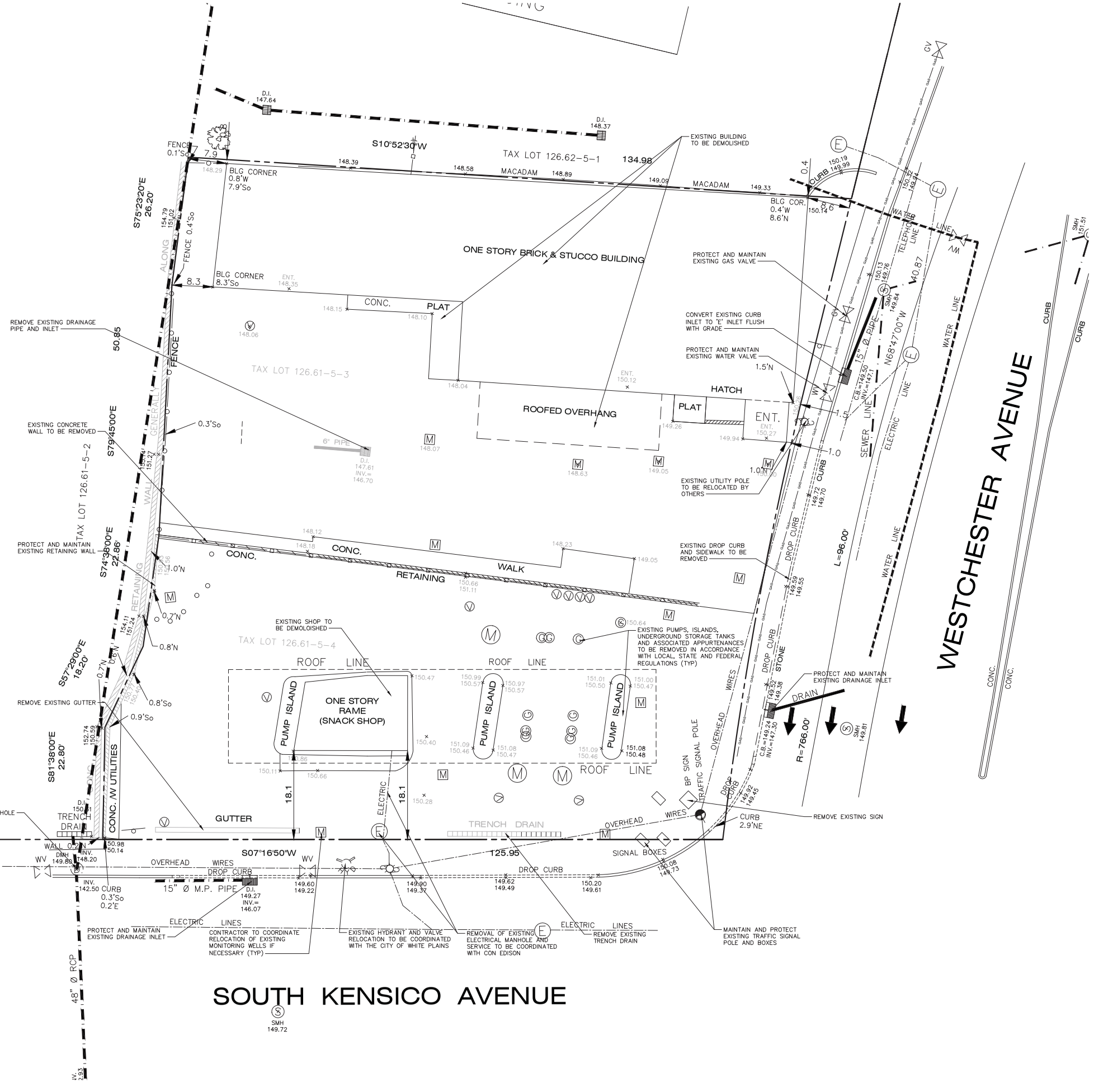
Drawing Number
C-3

Sheet 4 of 17

Project Number
29233.00

29233.00_EC.DWG

FIGURE 3A - Site Survey (Taken From Proposed Development Plan)



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Drawing Number
C-3

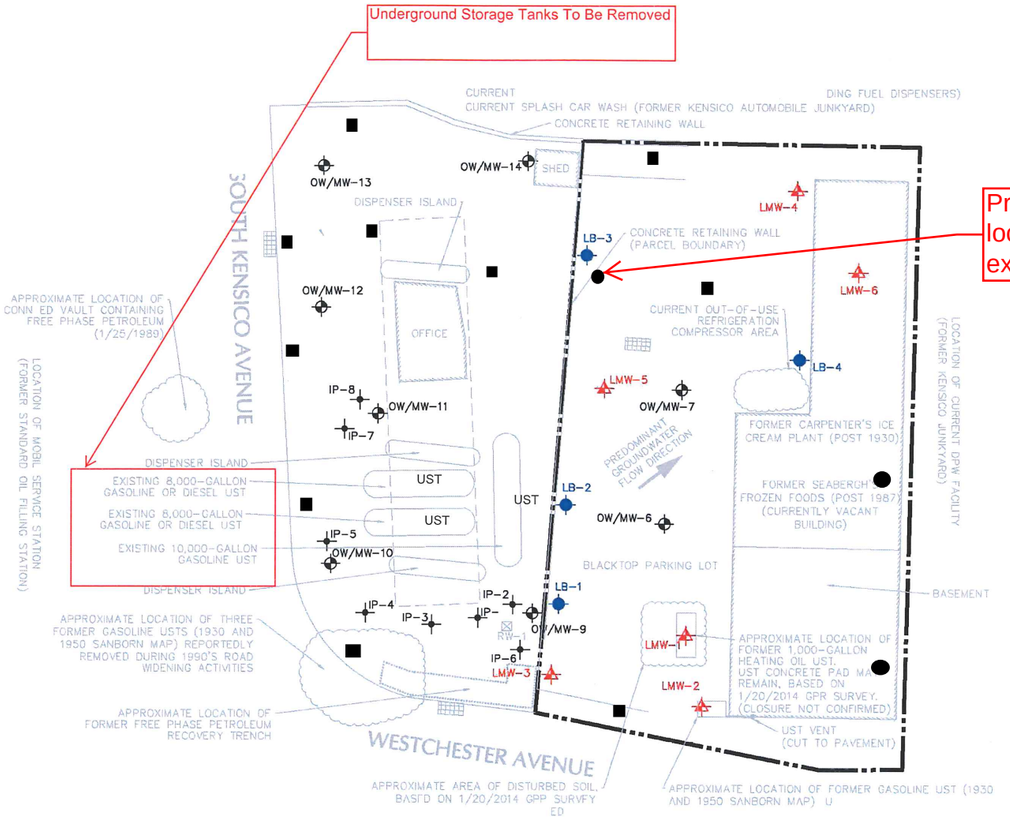
Sheet 4 of 17

Project Number
29233.00

29233.00_EC.DWG

FIGURE 4 Underground Storage Tanks To Be Removed

GW Depth 5-8' bg



LEGEND

- PROPERTY LINE
- CANOPY
- BUILDING LINE
- CATCH BASIN
- DISPENSER ISLAND
- IP-2: DO SYSTEM INJECTION POINTS INSTALLED BY GROUNDWATER & ENVIRONMENTAL SERVICES, INC., 2010
- RW-1: FORMER RECOVERY WELL INSTALLED BY IT CORPORATION, 1989
- OW/MW-7: EXISTING MONITORING WELLS INSTALLED BY IT ENVIRONMENTAL SERVICES, INC., [1989-1991]
- LMW-1: LANGAN MONITORING WELL INSTALLED 2014
- LB-1: LANGAN SOIL BORINGS INSTALLED 2014

■ Proposed Soil Boring Location

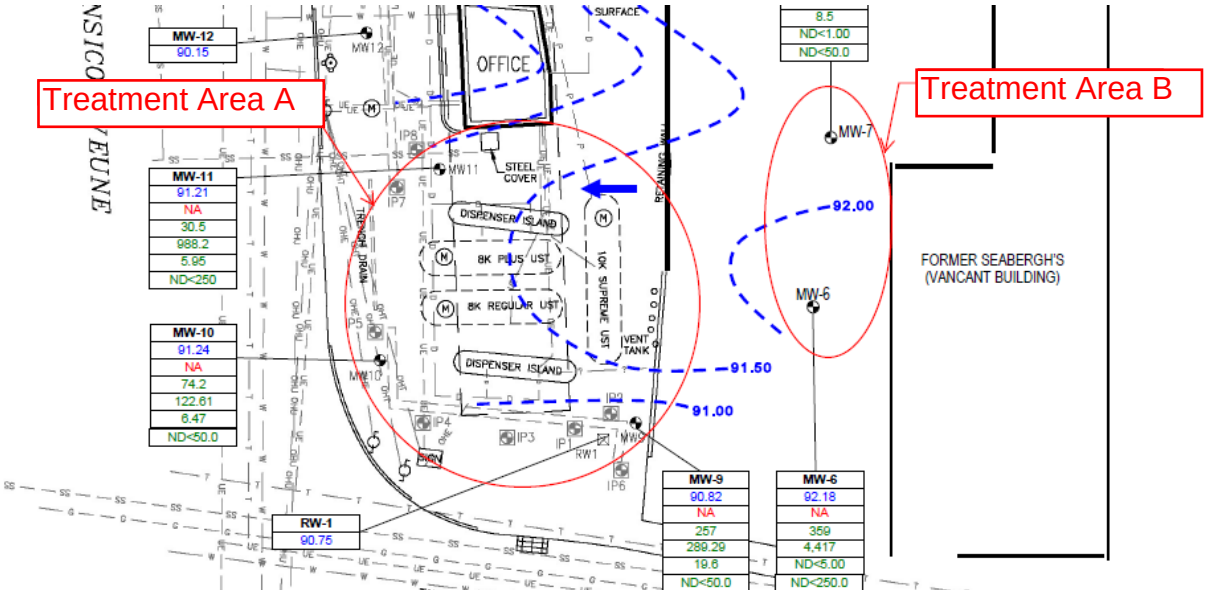
● Proposed Well Location

20 0 5 10 20
SCALE IN FEET

	Project: 186 & 200 WESTCHESTER AVENUE, WHITE PLAINS, WESTCHESTER COUNTY, NEW YORK	Drawing Title: LOCATION OF EXISITNG UNDERGROUND STORAGE TANKS TO BE REMOVED PRIOR TO SITE DEVELOPMENT - (2) 8,000-GALLON DIESEL USTs AND (1) 10,000-GALLON GASOLINE UST. ADAPTED FROM DRAWING BY LANGAN ENGINEERING 9/2/15	Project No. Date Scale: 1" = 20'
			Drawing No.: 4

FIGURE 5 - In-Situ Treatment Area

BCP Site C360148
Current BP (Former Exxon 3-1356) - 186 Westchester Avenue
and
200 Westchester Avenue
White Plains, NY



Proposed treatment areas for in-situ chemical oxidation.

Appendix A

Subsurface Site Assessment, Exxon S/S #3-1356, 186 Westchester Avenue, White Plains, New York, IT Environmental Services, March 22, 1989

Subsurface Assessment and Remedial Plan, Exxon S/S #3-1356, 186 Westchester Avenue, White Plains, New York, IT Environmental Services, July27, 1989

Groundwater and Soil Investigation Report, Mobil Service Station #N5B, White Plains, New York, Groundwater Technology, Inc., April 27, 1990

Remedial Investigation/Feasibility Study, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., February 2008

Remedial Feasibility Summary Report, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., April 23, 2010

Remedial Action Plan, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., February 10, 2011

Quarterly Monitoring Report & Requests, 186 Westchester Avenue, White Plains, New York prepared by Groundwater & Environmental Services, Inc., dated July 19, 2013

Semi-annual Monitoring Report, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., November 2014

Injection Well Abandonment Letter, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., May 2015

Semi-annual Monitoring Report & Request for No Further Action, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., October 2015

Desktop Environmental Records Review 186 and 200 Westchester Avenue, Langan, January 2014

Draft Limited Phase II Environmental Site Investigation Report 200 Westchester Avenue, Langan, February 2014

APPENDIX B - NYSDEC SCO's and Ambient Groundwater Quality Standards

375-6.8 Soil cleanup objective tables.

(a) Unrestricted use soil cleanup objectives.

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
Metals		
Arsenic	7440-38-2	13 [c]
Barium	7440-39-3	350 [c]
Beryllium	7440-41-7	7.2
Cadmium	7440-43-9	2.5 [c]
Chromium, hexavalent [e]	18540-29-9	1[b]
Chromium, trivalent [e]	16065-83-1	30 [c]
Copper	7440-50-8	50
Total Cyanide [e, f]		27
Lead	7439-92-1	63 [c]
Manganese	7439-96-5	1600 [c]
Total Mercury		0.18 [c]
Nickel	7440-02-0	30
Selenium	7782-49-2	3.9[c]
Silver	7440-22-4	2
Zinc	7440-66-6	109 [c]
PCBs/Pesticides		
2,4,5-TP Acid (Silvex) [f]	93-72-1	3.8
4,4'-DDE	72-55-9	0.0033 [b]
4,4'-DDT	50-29-3	0.0033 [b]
4,4'-DDD	72-54-8	0.0033 [b]
Aldrin	309-00-2	0.005 [c]
alpha-BHC	319-84-6	0.02
beta-BHC	319-85-7	0.036
Chlordane (alpha)	5103-71-9	0.094

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
delta-BHC [g]	319-86-8	0.04
Dibenzofuran [f]	132-64-9	7
Dieldrin	60-57-1	0.005 [c]
Endosulfan I [d, f]	959-98-8	2.4
Endosulfan II [d, f]	33213-65-9	2.4
Endosulfan sulfate [d, f]	1031-07-8	2.4
Endrin	72-20-8	0.014
Heptachlor	76-44-8	0.042
Lindane	58-89-9	0.1
Polychlorinated biphenyls	1336-36-3	0.1
Semivolatile organic compounds		
Acenaphthene	83-32-9	20
Acenapthylene [f]	208-96-8	100 [a]
Anthracene [f]	120-12-7	100 [a]
Benz(a)anthracene [f]	56-55-3	1 [c]
Benzo(a)pyrene	50-32-8	1 [c]
Benzo(b)fluoranthene [f]	205-99-2	1 [c]
Benzo(g,h,i)perylene [f]	191-24-2	100
Benzo(k)fluoranthene [f]	207-08-9	0.8 [c]
Chrysene [f]	218-01-9	1 [c]
Dibenz(a,h)anthracene [f]	53-70-3	0.33 [b]
Fluoranthene [f]	206-44-0	100 [a]
Fluorene	86-73-7	30
Indeno(1,2,3-cd)pyrene [f]	193-39-5	0.5 [c]
m-Cresol [f]	108-39-4	0.33 [b]
Naphthalene [f]	91-20-3	12
o-Cresol [f]	95-48-7	0.33 [b]

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
p-Cresol [f]	106-44-5	0.33 [b]
Pentachlorophenol	87-86-5	0.8 [b]
Phenanthrene [f]	85-01-8	100
Phenol	108-95-2	0.33 [b]
Pyrene [f]	129-00-0	100
Volatile organic compounds		
1,1,1-Trichloroethane [f]	71-55-6	0.68
1,1-Dichloroethane [f]	75-34-3	0.27
1,1-Dichloroethene [f]	75-35-4	0.33
1,2-Dichlorobenzene [f]	95-50-1	1.1
1,2-Dichloroethane	107-06-2	0.02 [c]
cis -1,2-Dichloroethene [f]	156-59-2	0.25
trans-1,2-Dichloroethene [f]	156-60-5	0.19
1,3-Dichlorobenzene [f]	541-73-1	2.4
1,4-Dichlorobenzene	106-46-7	1.8
1,4-Dioxane	123-91-1	0.1 [b]
Acetone	67-64-1	0.05
Benzene	71-43-2	0.06
n-Butylbenzene [f]	104-51-8	12
Carbon tetrachloride [f]	56-23-5	0.76
Chlorobenzene	108-90-7	1.1
Chloroform	67-66-3	0.37
Ethylbenzene [f]	100-41-4	1
Hexachlorobenzene [f]	118-74-1	0.33[b]
Methyl ethyl ketone	78-93-3	0.12
Methyl tert-butyl ether [f]	1634-04-4	0.93
Methylene chloride	75-09-2	0.05

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
n - Propylbenzene [f]	103-65-1	3.9
sec-Butylbenzene [f]	135-98-8	11
tert-Butylbenzene [f]	98-06-6	5.9
Tetrachloroethene	127-18-4	1.3
Toluene	108-88-3	0.7
Trichloroethene	79-01-6	0.47
1,2,4-Trimethylbenzene [f]	95-63-6	3.6
1,3,5-Trimethylbenzene[f]	108-67-8	8.4
Vinyl chloride[f]	75-01-4	0.02
Xylene (mixed)	1330-20-7	0.26

All soil cleanup objectives (SCOs) are in parts per million (ppm).

Footnotes

[a] The SCOs for unrestricted use were capped at a maximum value of 100 ppm. See Technical Support Document (TSD), section 9.3.

[b] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.

[c] For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 1 SCO value for this use of the site.

[d] SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

[e] The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

[f] Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with “NS”. Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources SCO according to the TSD.

(b) Restricted use soil cleanup objectives.

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Metals							
Arsenic	7440-38-2	16[f]	16[f]	16[f]	16[f]	13[f]	16[f]
Barium	7440-39-3	350[f]	400	400	10,000 [d]	433	820
Beryllium	7440-41-7	14	72	590	2,700	10	47
Cadmium	7440-43-9	2.5[f]	4.3	9.3	60	4	7.5
Chromium, hexavalent [h]	18540-29-9	22	110	400	800	1[e]	19
Chromium, trivalent [h]	16065-83-1	36	180	1,500	6,800	41	NS
Copper	7440-50-8	270	270	270	10,000 [d]	50	1,720
Total Cyanide [h]		27	27	27	10,000 [d]	NS	40
Lead	7439-92-1	400	400	1,000	3,900	63[f]	450
Manganese	7439-96-5	2,000[f]	2,000[f]	10,000 [d]	10,000 [d]	1600[f]	2,000[f]
Total Mercury		0.81[j]	0.81[j]	2.8[j]	5.7[j]	0.18[f]	0.73
Nickel	7440-02-0	140	310	310	10,000 [d]	30	130
Selenium	7782-49-2	36	180	1,500	6,800	3.9[f]	4[f]
Silver	7440-22-4	36	180	1,500	6,800	2	8.3
Zinc	7440-66-6	2200	10,000 [d]	10,000 [d]	10,000 [d]	109[f]	2,480
PCBs/Pesticides							
2,4,5-TP Acid (Silvex)	93-72-1	58	100[a]	500[b]	1,000[c]	NS	3.8
4,4'-DDE	72-55-9	1.8	8.9	62	120	0.0033 [e]	17
4,4'-DDT	50-29-3	1.7	7.9	47	94	0.0033 [e]	136
4,4'- DDD	72-54-8	2.6	13	92	180	0.0033 [e]	14
Aldrin	309-00-2	0.019	0.097	0.68	1.4	0.14	0.19
alpha-BHC	319-84-6	0.097	0.48	3.4	6.8	0.04[g]	0.02
beta-BHC	319-85-7	0.072	0.36	3	14	0.6	0.09
Chlordane (alpha)	5103-71-9	0.91	4.2	24	47	1.3	2.9

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
delta-BHC	319-86-8	100[a]	100[a]	500[b]	1,000[c]	0.04[g]	0.25
Dibenzofuran	132-64-9	14	59	350	1,000[c]	NS	210
Dieldrin	60-57-1	0.039	0.2	1.4	2.8	0.006	0.1
Endosulfan I	959-98-8	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan II	33213-65-9	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan sulfate	1031-07-8	4.8[i]	24[i]	200[i]	920[i]	NS	1,000[c]
Endrin	72-20-8	2.2	11	89	410	0.014	0.06
Heptachlor	76-44-8	0.42	2.1	15	29	0.14	0.38
Lindane	58-89-9	0.28	1.3	9.2	23	6	0.1
Polychlorinated biphenyls	1336-36-3	1	1	1	25	1	3.2
Semivolatiles							
Acenaphthene	83-32-9	100[a]	100[a]	500[b]	1,000[c]	20	98
Acenapthylene	208-96-8	100[a]	100[a]	500[b]	1,000[c]	NS	107
Anthracene	120-12-7	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benz(a)anthracene	56-55-3	1[f]	1[f]	5.6	11	NS	1[f]
Benzo(a)pyrene	50-32-8	1[f]	1[f]	1[f]	1.1	2.6	22
Benzo(b)fluoranthene	205-99-2	1[f]	1[f]	5.6	11	NS	1.7
Benzo(g,h,i)perylene	191-24-2	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benzo(k)fluoranthene	207-08-9	1	3.9	56	110	NS	1.7
Chrysene	218-01-9	1[f]	3.9	56	110	NS	1[f]
Dibenz(a,h)anthracene	53-70-3	0.33[e]	0.33[e]	0.56	1.1	NS	1,000[c]
Fluoranthene	206-44-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Fluorene	86-73-7	100[a]	100[a]	500[b]	1,000[c]	30	386
Indeno(1,2,3-cd)pyrene	193-39-5	0.5[f]	0.5[f]	5.6	11	NS	8.2
m-Cresol	108-39-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
Naphthalene	91-20-3	100[a]	100[a]	500[b]	1,000[c]	NS	12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
o-Cresol	95-48-7	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
p-Cresol	106-44-5	34	100[a]	500[b]	1,000[c]	NS	0.33[e]
Pentachlorophenol	87-86-5	2.4	6.7	6.7	55	0.8[e]	0.8[e]
Phenanthrene	85-01-8	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Phenol	108-95-2	100[a]	100[a]	500[b]	1,000[c]	30	0.33[e]
Pyrene	129-00-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Volatiles							
1,1,1-Trichloroethane	71-55-6	100[a]	100[a]	500[b]	1,000[c]	NS	0.68
1,1-Dichloroethane	75-34-3	19	26	240	480	NS	0.27
1,1-Dichloroethene	75-35-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33
1,2-Dichlorobenzene	95-50-1	100[a]	100[a]	500[b]	1,000[c]	NS	1.1
1,2-Dichloroethane	107-06-2	2.3	3.1	30	60	10	0.02[f]
cis-1,2-Dichloroethene	156-59-2	59	100[a]	500[b]	1,000[c]	NS	0.25
trans-1,2-Dichloroethene	156-60-5	100[a]	100[a]	500[b]	1,000[c]	NS	0.19
1,3-Dichlorobenzene	541-73-1	17	49	280	560	NS	2.4
1,4-Dichlorobenzene	106-46-7	9.8	13	130	250	20	1.8
1,4-Dioxane	123-91-1	9.8	13	130	250	0.1[e]	0.1[e]
Acetone	67-64-1	100[a]	100[b]	500[b]	1,000[c]	2.2	0.05
Benzene	71-43-2	2.9	4.8	44	89	70	0.06
Butylbenzene	104-51-8	100[a]	100[a]	500[b]	1,000[c]	NS	12
Carbon tetrachloride	56-23-5	1.4	2.4	22	44	NS	0.76
Chlorobenzene	108-90-7	100[a]	100[a]	500[b]	1,000[c]	40	1.1
Chloroform	67-66-3	10	49	350	700	12	0.37
Ethylbenzene	100-41-4	30	41	390	780	NS	1
Hexachlorobenzene	118-74-1	0.33[e]	1.2	6	12	NS	3.2
Methyl ethyl ketone	78-93-3	100[a]	100[a]	500[b]	1,000[c]	100[a]	0.12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Methyl tert-butyl ether	1634-04-4	62	100[a]	500[b]	1,000[c]	NS	0.93
Methylene chloride	75-09-2	51	100[a]	500[b]	1,000[c]	12	0.05
n-Propylbenzene	103-65-1	100[a]	100[a]	500[b]	1,000[c]	NS	3.9
sec-Butylbenzene	135-98-8	100[a]	100[a]	500[b]	1,000[c]	NS	11
tert-Butylbenzene	98-06-6	100[a]	100[a]	500[b]	1,000[c]	NS	5.9
Tetrachloroethene	127-18-4	5.5	19	150	300	2	1.3
Toluene	108-88-3	100[a]	100[a]	500[b]	1,000[c]	36	0.7
Trichloroethene	79-01-6	10	21	200	400	2	0.47
1,2,4-Trimethylbenzene	95-63-6	47	52	190	380	NS	3.6
1,3,5- Trimethylbenzene	108-67-8	47	52	190	380	NS	8.4
Vinyl chloride	75-01-4	0.21	0.9	13	27	NS	0.02
Xylene (mixed)	1330-20-7	100[a]	100[a]	500[b]	1,000[c]	0.26	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm).
NS=Not specified. See Technical Support Document (TSD).

Footnotes

[a] The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

[b] The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

[c] The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

[d] The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

[e] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

[f] For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

[g] This SCO is derived from data on mixed isomers of BHC.

[h] The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

[i] This SCO is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[j] This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

Table 1

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Acenaphthene	A, A-S, AA, AA-S, B, C		5.3	A(C)	
(83-32-9)	A, A-S, AA, AA-S, B, C, D		48	A(A)	
	SA, SB, SC, I		6.6	A(C)	
	SA, SB, SC, I, SD		60	A(A)	
	A, A-S, AA, AA-S	20		E	U
	GA		20	E	U
Acetone	A, A-S, AA, AA-S		50	H(WS)	Z
(67-64-1)	GA		50	H(WS)	Z
Acrolein	A, A-S, AA, AA-S		5*	H(WS)	I
(107-02-8)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Acrylamide	A, A-S, AA, AA-S		5*	H(WS)	I
(79-06-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Acrylic acid	A, A-S, AA, AA-S		50	H(WS)	Z
(79-10-7)	GA		50	H(WS)	Z
Acrylonitrile	A, A-S, AA, AA-S		0.07	H(WS)	A
(107-13-1)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Alachlor	A, A-S, AA, AA-S	0.5		H(WS)	A
(15972-60-8)	GA	0.5		H(WS)	A
Aldicarb	A, A-S, AA, AA-S	7		H(WS)	B
(116-06-3)	GA	*		H(WS)	
Remark: * Refer to entry for "Aldicarb and Methomyl."					
Aldicarb and Methomyl	GA	0.35*		H(WS)	F
(116-06-3;16752-77-5)					
Remark: * Applies to the sum of these substances.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Aldicarb sulfone	A, A-S, AA, AA-S		2*	H(WS)	G
(1646-88-4)	GA		2*	H(WS)	G
Remark: * This substance did not receive a review beyond determining the existence of a Specific MCL. A more in-depth review, currently underway, could lead to a more (but not less) stringent guidance value.					
Aldicarb sulfoxide	A, A-S, AA, AA-S		4*	H(WS)	G
(1646-87-3)	GA		4*	H(WS)	G
Remark: * This substance did not receive a review beyond determining the existence of a Specific MCL. A more in-depth review, currently underway, could lead to a more (but not less) stringent guidance value.					
Aldrin	A, A-S, AA, AA-S		0.002	H(WS)	A
(309-00-2)	GA	ND		H(WS)	F
	A, A-S, AA, AA-S, B, C, D	*		H(FC)	
	SA, SB, SC, SD	*		H(FC)	
	I		*	H(FC)	
Remark: * Refer to entry for "Aldrin and Dieldrin."					
Aldrin and Dieldrin	A, A-S, AA, AA-S, B, C, D	0.001*		H(FC)	
(309-00-2; 60-57-1)	SA, SB, SC, SD	0.001*		H(FC)	
	I		0.001*	H(FC)	
Remark: * Applies to the sum of these substances.					
Alkyl dimethyl benzyl	A, A-S, AA, AA-S		50	H(WS)	Z
ammonium chloride	GA		50	H(WS)	Z
(68391-01-5)	A, A-S, AA, AA-S, B, C	*		A(C)	
Remark: * Refer to entry for "Quaternary ammonium compounds."					
Alkyl diphenyl oxide sulfonates	A, A-S, AA, AA-S		50*	H(WS)	Z
(CAS No. Not Applicable)	GA		50*	H(WS)	Z
Remark: * Applies to each alkyl diphenyl oxide sulfonate individually.					
Allyl chloride	A, A-S, AA, AA-S		5*	H(WS)	I
(107-05-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Aluminum, ionic	A, A-S, AA, AA-S, B, C	100*		A(C)	
(CAS No. Not Applicable)					
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Ametryn	A, A-S, AA, AA-S		50	H(WS)	Z
(834-12-8)	GA	50		H(WS)	J

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
4-Aminobiphenyl	A, A-S, AA, AA-S		5*	H(WS)	I
(92-67-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Aminocresols	A, A-S, AA, AA-S	*		E	
(95-84-1; 2835-95-2;	GA	*		E	
2835-99-6)	A, A-S, AA, AA-S, B, C	**		E	
	D	**		E	
Remarks: * Refer to entry for "Phenolic compounds (total phenols)."					
** Refer to entry for "Phenols, total unchlorinated."					
Aminomethylene	A, A-S, AA, AA-S		50*	H(WS)	Z
phosphonic acid salts	GA		50*	H(WS)	Z
(CAS No. Not Applicable)					
Remark: * Applies to each aminomethylene phosphonic acid salt individually.					
Aminopyridines	A, A-S, AA, AA-S		1*	H(WS)	B
(462-08-8; 504-24-5;	GA		1*	H(WS)	B
504-29-0; 26445-05-6)					
Remark: * Values listed apply to sum of these substances.					
3-Aminotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(108-44-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Aminotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(106-49-0)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Ammonia and Ammonium	A, A-S, AA, AA-S	2,000*		H(WS)	H
(7664-41-7;	GA	2,000*		H(WS)	H
CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	**		A(C)	
	D	**		A(A)	

Remarks: * $NH_3 + NH_4^+$ as N.

** Un-ionized ammonia as NH_3; tables below provide the standard in ug/L at varying pH and temperature for different classes and specifications. Linear interpolation between the listed pH values and temperatures is applicable.

Classes A,A-S, AA, AA-S, B, C with the (T) or (TS) Specification

pH	0°C	5°C	10°C	15°-30°C
6.50	0.7	0.9	1.3	1.9
6.75	1.2	1.7	2.3	3.3
7.00	2.1	2.9	4.2	5.9
7.25	3.7	5.2	7.4	11
7.50	6.6	9.3	13	19
7.75	11	15	22	31
8.0-9.0	13	18	25	35

Classes A, A-S, AA, AA-S, B, C without the (T) or (TS) Specification

pH	0°C	5°C	10°C	15°C	20°-30°C
6.50	0.7	0.9	1.3	1.9	2.6
6.75	1.2	1.7	2.3	3.3	4.7
7.00	2.1	2.9	4.2	5.9	8.3
7.25	3.7	5.2	7.4	11	15
7.50	6.6	9.3	13	19	26
7.75	11	15	22	31	43
8.0-9.0	13	18	25	35	50

Class D

pH	0°C	5°C	10°C	15°C	20°C	25°-30°C
6.50	9.1	13	18	26	36	51
6.75	15	21	30	42	59	84
7.00	23	33	46	66	93	131
7.25	34	48	68	95	140	190
7.50	45	64	91	130	180	260
7.75	56	80	110	160	220	320
8.0-9.0	65	92	130	180	260	370

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

Total Ammonia (mg/L NH_3)

Classes A, A-S, AA, AA-S, B, C with the (T) or (TS) Specification

pH	0°C	5°C	10°C	15°C	20°C	25°C	30°C
6.50	2.5	2.4	2.2	2.2	1.5	1.0	.73
6.75	2.5	2.4	2.2	2.2	1.5	1.0	.73
7.00	2.5	2.4	2.2	2.2	1.5	1.0	.74
7.25	2.5	2.4	2.2	2.2	1.5	1.0	.74
7.50	2.5	2.4	2.2	2.2	1.5	1.1	.74
7.75	2.3	2.2	2.1	2.0	1.4	.99	.71
8.00	1.5	1.4	1.4	1.3	.93	.66	.47
8.25	.87	.82	.78	.76	.54	.39	.28
8.50	.49	.47	.45	.44	.32	.23	.17
8.75	.28	.27	.26	.27	.19	.15	.11
9.00	.16	.16	.16	.16	.13	.10	.08

Classes A, A-S, AA, AA-S, B, C without the (T) or (TS) Specification

pH	0°C	5°C	10°C	15°C	20°C	25°C	30°C
6.50	2.5	2.4	2.2	2.2	2.1	1.5	1.0
6.75	2.5	2.4	2.2	2.2	2.1	1.5	1.0
7.00	2.5	2.4	2.2	2.2	2.1	1.5	1.0
7.25	2.5	2.4	2.2	2.2	2.1	1.5	1.1
7.50	2.5	2.4	2.2	2.2	2.1	1.5	1.1
7.75	2.3	2.2	2.1	2.0	1.9	1.4	1.0
8.00	1.5	1.4	1.3	1.3	1.3	.93	.67
8.25	.87	.82	.78	.76	.76	.54	.40
8.50	.49	.47	.45	.44	.45	.33	.25
8.75	.28	.27	.26	.27	.27	.21	.16
9.00	.16	.16	.16	.16	.17	.14	.11

Class D

pH	0°C	5°C	10°C	15°C	20°C	25°C	30°C
6.50	35	33	31	30	29	29	20
6.75	32	30	28	27	27	26	19
7.00	28	26	25	24	23	23	16
7.25	23	22	20	20	19	19	14
7.50	17	16	16	15	15	15	10
7.75	12	11	11	11	10	10	7.3
8.00	8.0	7.5	7.1	6.9	6.8	6.8	4.9
8.25	4.5	4.2	4.1	4.0	3.9	4.0	2.9
8.50	2.6	2.4	2.3	2.3	2.3	2.4	1.8
8.75	1.4	1.4	1.3	1.4	1.4	1.5	1.1
9.00	.86	.83	.83	.86	.91	1.0	.82

This table provides total ammonia concentrations that will contain the un-ionized ammonia concentration at the level of the standard at the respective pH and temperatures based on relationships established in USEPA 1985, Ambient Water Quality Criteria for Ammonia - 1984. Office of Water, Criteria & Standards Division, Washington, D.C. 20460. EPA 440/5-85-001. January 1985. (Cited, Thurston, R.V., R.C. Russo, and K. Emerson. 1979. Aqueous ammonia equilibrium - tabulation of percent un-ionized ammonia. EPA Ecol. Res. Ser. EPA-600/3-79-091. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN: 427 p.)

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Aniline	A, A-S, AA, AA-S	5		H(WS)	I
(62-53-3)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Anthracene	A, A-S, AA, AA-S		50	H(WS)	Z
(120-12-7)	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C		3.8	A(C)	
	A, A-S, AA, AA-S, B, C, D		35	A(A)	
Antimony	A, A-S, AA, AA-S	3		H(WS)	B
(CAS No. Not Applicable)	GA	3		H(WS)	B
Arsenic	A, A-S, AA, AA-S	50		H(WS)	G
(CAS No. Not Applicable)	GA	25		H(WS)	F
	A, A-S, AA, AA-S, B, C	150*		A(C)	
	A, A-S, AA, AA-S, B, C, D	340*		A(A)	
	SA, SB, SC	63*		A(C)	
	I		36*	A(C)	
	SD	120*		A(A)	
Remark: * Dissolved arsenic form.					
Aryltriazoles	A, A-S, AA, AA-S		50*	H(WS)	Z
(CAS No. Not Applicable)	GA		50*	H(WS)	Z
Remark: * Applies to each aryltriazole individually.					
Asbestos	A, A-S, AA, AA-S	*		H(WS)	G
(CAS No. Not Applicable)	GA	*		H(WS)	G
Remark: * 7,000,000 fibers (longer than 10 um)/L.					
Atrazine	A, A-S, AA, AA-S		3*	H(WS)	G
(1912-24-9)	GA	7.5		H(WS)	F
Azinphosmethyl	A, A-S, AA, AA-S		0.07	H(WS)	A
(86-50-0)	GA	4.4		H(WS)	F
	A, A-S, AA, AA-S, B, C	0.005*		A(C)	
	SA, SB, SC	0.01		A(C)	
	I		0.01	A(C)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Azobenzene	A, A-S, AA, AA-S		0.5	H(WS)	A
(103-33-3)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Barium	A, A-S, AA, AA-S	1,000		H(WS)	G
(CAS No. Not Applicable)	GA	1,000		H(WS)	F

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Benefin (1861-40-1)	GA	35		H(WS)	F
Benz(a)anthracene (56-55-3)	A, A-S, AA, AA-S		0.002	H(WS)	A
	GA		0.002	H(WS)	A
	A, A-S, AA, AA-S, B, C		0.03	A(C)	
	A, A-S, AA, AA-S, B, C, D		0.23	A(A)	
Benzene (71-43-2)	A, A-S, AA, AA-S	1		H(WS)	A
	GA	1		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	10		H(FC)	A
	SA, SB, SC, I, SD	10		H(FC)	A
	A, A-S, AA, AA-S, B, C		210	A(C)	
	A, A-S, AA, AA-S, B, C, D		760	A(A)	
	SA, SB, SC, I		190	A(C)	
	SA, SB, SC, I,SD		670	A(A)	
Benzidine (92-87-5)	A, A-S, AA, AA-S		0.02	H(WS)	A
	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C	0.1**		A(C)	
	D	0.1**		A(A)	

Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

** For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).

Benzisothiazole (271-61-4)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
Benzo(b)fluoranthene (205-99-2)	A, A-S, AA, AA-S		0.002	H(WS)	A
	GA		0.002	H(WS)	A
Benzo(k)fluoranthene (207-08-9)	A, A-S, AA, AA-S		0.002	H(WS)	A
	GA		0.002	H(WS)	A
Benzo(a)pyrene (50-32-8)	A, A-S, AA, AA-S		0.002	H(WS)	A
	GA	ND		H(WS)	F
	A, A-S, AA, AA-S, B, C, D		0.0012	H(FC)	
	SA, SB, SC, I, SD		6×10^{-4}	H(FC)	
Beryllium (CAS No. Not Applicable)	A, A-S, AA, AA-S		3	H(WS)	B
	GA		3	H(WS)	B
	A, A-S, AA, AA-S, B, C	*		A(C)	

Remarks: * 11 ug/L, when hardness is less than or equal to 75 ppm; 1,100 ug/L when hardness is greater than 75 ppm.

* For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).
Aquatic Type standards apply to acid-soluble form.

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,1'-Biphenyl	A, A-S, AA, AA-S		5*	H(WS)	I
(92-52-4)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Bis(2-chloroethoxy)methane	A, A-S, AA, AA-S		5*	H(WS)	I
(111-91-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Bis(2-chloroethyl)ether	A, A-S, AA, AA-S		0.03	H(WS)	A
(111-44-4)	GA	1.0		H(WS)	F
Bis(chloromethyl)ether	A, A-S, AA, AA-S		5*	H(WS)	I
(542-88-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Bis(2-chloro-1-methylethyl)ether	A, A-S, AA, AA-S		5*	H(WS)	I
(108-60-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Bis(2-ethylhexyl)phthalate	A, A-S, AA, AA-S	5		H(WS)	A
(117-81-7)	GA	5		H(WS)	A
	A, A-S, AA, AA-S, B, C	0.6		A(C)	
Boric acid, Borates & Metaborates	A, A-S, AA, AA-S		125*	H(WS)	B
(CAS No. Not Applicable)	GA		125*	H(WS)	B
Remarks: * Applies as boron equivalents. Values listed apply to the sum of these substances.					
Boron	GA	1,000		H(WS)	H
(CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	10,000*		A(C)	
	SA, SB, SC	1,000		A(C)	
	I		1,000	A(C)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic standard if so determined under 702.15 (c). Aquatic Type standards and guidance value apply to acid-soluble form.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Bromacil (314-40-9)	GA	4.4		H(WS)	F
Bromide (CAS No. Not Applicable)	A, A-S, AA, AA-S		2,000	H(WS)	B
	GA		2,000	H(WS)	B
Bromobenzene (108-86-1)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Bromochloromethane (74-97-5)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Bromodichloromethane (75-27-4)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
Bromoform (75-25-2)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
Bromomethane (74-83-9)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Butachlor (23184-66-9)	GA	3.5		H(WS)	F
cis-2-Butenal (15798-64-8)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
trans-2-Butenal (123-73-9)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
cis-2-Butenenitrile	A, A-S, AA, AA-S		5*	H(WS)	I
(1190-76-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
trans-2-Butenenitrile	A, A-S, AA, AA-S		5*	H(WS)	I
(627-26-9)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Butoxyethoxyethanol	A, A-S, AA, AA-S		50	H(WS)	Z
(112-34-5)	GA		50	H(WS)	Z
Butoxypropanol	A, A-S, AA, AA-S		50	H(WS)	Z
(5131-66-8)	GA		50	H(WS)	Z
Butylate	A, A-S, AA, AA-S		50	H(WS)	Z
(2008-41-5)	GA	50		H(WS)	J
n-Butylbenzene	A, A-S, AA, AA-S	5		H(WS)	I
(104-51-8)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
sec-Butylbenzene	A, A-S, AA, AA-S	5		H(WS)	I
(135-98-8)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
tert-Butylbenzene	A, A-S, AA, AA-S	5		H(WS)	I
(98-06-6)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Butyl benzyl phthalate	A, A-S, AA, AA-S		50	H(WS)	Z
(85-68-7)	GA		50	H(WS)	Z
Butyl isopropyl phthalate	A, A-S, AA, AA-S		50	H(WS)	Z
(CAS No. Not Applicable)	GA		50	H(WS)	Z

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Cadmium	A, A-S, AA, AA-S	5		H(WS)	B,G
(CAS No. Not Applicable)	GA	5		H(WS)	B,G
	SA, SB, SC, I, SD		2.7	H(FC)	
	A, A-S, AA, AA-S, B, C	*		A(C)	
	A, A-S, AA, AA-S, B, C, D	**		A(A)	
	SA, SB, SC, I	7.7		A(C)	
	SD	21		A(A)	
Remarks: * (0.85) exp(0.7852 [ln (ppm hardness)] - 2.715)					
** (0.85) exp(1.128 [ln (ppm hardness)] - 3.6867)					
Aquatic Type standards apply to dissolved form.					
Captan	GA	18		H(WS)	F
(133-06-2)					
Carbaryl	GA	29		H(WS)	F
(63-25-2)					
Carbofuran	A, A-S, AA, AA-S	15		H(WS)	B
(1563-66-2)	GA		15	H(WS)	B
	A, A-S, AA, AA-S, B, C	1.0*		A(C)	
	D	10*		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Carbon tetrachloride	A, A-S, AA, AA-S		0.4	H(WS)	A
(56-23-5)	GA	5		H(WS)	F
Carboxin	A, A-S, AA, AA-S		50	H(WS)	Z
(5234-68-4)	GA	50		H(WS)	J
Chloramben	A, A-S, AA, AA-S		50*	H(WS)	Z
(CAS No. Not Applicable)	GA	50*		H(WS)	J
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.					
Chloranil	A, A-S, AA, AA-S		5*	H(WS)	I
(118-75-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Chlordane	A, A-S, AA, AA-S	0.05		H(WS)	A
(57-74-9)	GA	0.05		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	2×10^{-5}		H(FC)	A
	SA, SB, SC, I, SD	2×10^{-5}		H(FC)	A
Chloride	A, A-S, AA, AA-S	250,000		H(WS)	H
(CAS No. Not Applicable)	GA	250,000		H(WS)	H

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Chlorinated dibenzo-p-dioxins and Chlorinated dibenzofurans (CAS No. Not Applicable)	A, A-S, AA, AA-S	7×10^{-7}*		H(WS)	A
	GA	7×10^{-7}*		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	6×10^{-10}*		H(FC)	A
	SA, SB, SC, I, SD	6×10^{-10}*		H(FC)	A
	A, A-S, AA, AA-S, B, C, D	3.1×10^{-9}**		W	
	SA, SB, SC, I, SD	3.1×10^{-9}**		W	

Remarks: * Value is for the total of the chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans that are listed in the table below as equivalents of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD).

The 2,3,7,8-TCDD equivalent for a congener for the H(WS) standards is obtained by multiplying the concentration of that congener by its Toxicity Equivalency Factor (TEF) from the table below. The 2,3,7,8-TCDD equivalent for a congener for the H(FC) standards is obtained by multiplying the concentration of that congener by its TEF and its Bioaccumulation Equivalency Factor (BEF) from the table below.

** Applies only to 2,3,7,8-TCDD

CONGENER	TEF	BEF
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1	1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.5	0.9
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.3
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	0.1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	0.05
Octachlorodibenzo-p-dioxin	0.001	0.01
2,3,7,8-Tetrachlorodibenzofuran	0.1	0.8
1,2,3,7,8-Pentachlorodibenzofuran	0.05	0.2
2,3,4,7,8-Pentachlorodibenzofuran	0.5	1.6
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	0.08
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	0.2
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	0.7
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	0.6
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	0.01
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	0.4
Octachlorodibenzofuran	0.001	0.02

Chlorine, Total Residual (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	5		A(C)	
	D	19		A(A)	
	SA, SB, SC, I	7.5		A(C)	
	SD	13		A(A)	
2-Chloroaniline (95-51-2)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J

Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.

** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
3-Chloroaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(108-42-9)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Chloroaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(106-47-8)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Chlorobenzene	A, A-S, AA, AA-S	5		H(WS)	I
(108-90-7)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C, D	400		H(FC)	B
	SA,SB, SC, I, SD	400		H(FC)	B
	A, A-S, AA, AA-S, B, C	5		A(C)	
	SA, SB, SC, I		5	A(C)	
	A, A-S, AA, AA-S	20		E	U
	D	50		E	V
	SD		50	E	V
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Chlorobenzotrifluoride	A, A-S, AA, AA-S	5		H(WS)	I
(98-56-6)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1-Chlorobutane	A, A-S, AA, AA-S		5*	H(WS)	I
(109-69-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Chloroethane	A, A-S, AA, AA-S		5*	H(WS)	I
(75-00-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Chloroform	A, A-S, AA, AA-S	7		H(WS)	A
(67-66-3)	GA	7		H(WS)	A

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Chloromethyl methyl ether	A, A-S, AA, AA-S		5*	H(WS)	I
(107-30-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2-Chloronaphthalene	A, A-S, AA, AA-S	10		E	U
(91-58-7)	GA		10	E	U
2-Chloronitrobenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(88-73-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3-Chloronitrobenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(121-73-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Chloronitrobenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(100-00-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Chloroprene	A, A-S, AA, AA-S		5*	H(WS)	I
(126-99-8)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Chlorothalonil	A, A-S, AA, AA-S		5*	H(WS)	I
(1897-45-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
2-Chlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(95-49-8)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3-Chlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(108-41-8)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Chlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(106-43-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Chloro-o-toluidine	A, A-S, AA, AA-S		5*	H(WS)	I
(95-69-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
5-Chloro-o-toluidine	A, A-S, AA, AA-S		0.7	H(WS)	A
(95-79-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3-Chloro-1,1,1-trifluoropropane	A, A-S, AA, AA-S	5		H(WS)	I
(460-35-5)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Chromium	A, A-S, AA, AA-S	50		H(WS)	G
(CAS No. Not Applicable)	GA	50		H(WS)	G
	A, A-S, AA, AA-S, B, C	*		A(C)	
	A, A-S, AA, AA-S, B, C, D	**		A(A)	
Remarks: * (0.86) exp(0.819 [ln (ppm hardness)] + 0.6848)					
** (0.316) exp(0.819 [ln (ppm hardness)] + 3.7256)					
Aquatic Type standards apply to dissolved form and do not include hexavalent chromium.					
Chromium (hexavalent)	GA	50		H(WS)	F
(CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	11*		A(C)	
	A, A-S, AA, AA-S, B, C, D	16*		A(A)	
	SA, SB, SC	54**		A(C)	
	I		50**	A(C)	
	SD	1,200**		A(A)	
Remarks: * Applies to dissolved form.					
** Applies to acid-soluble form.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Chrysene	A, A-S, AA, AA-S		0.002	H(WS)	A
(218-01-9)	GA		0.002	H(WS)	A
Cobalt	A, A-S, AA, AA-S, B, C	5*		A(C)	
(CAS No. Not Applicable)	D		110	A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c). Aquatic Type standards and guidance value apply to acid-soluble form.					
Copper	A, A-S, AA, AA-S	200		H(WS)	H
(CAS No. Not Applicable)	GA	200		H(WS)	H
	A, A-S, AA, AA-S, B, C	*		A(C)	
	A, A-S, AA, AA-S, B, C, D	**		A(A)	
	SA, SB, SC, I	***		A(C)	
	SA, SB, SC, I, SD	****		A(A)	
Remarks: * (0.96) exp(0.8545 [ln (ppm hardness)] - 1.702) ** (0.96) exp(0.9422 [ln (ppm hardness)] - 1.7) *** Standard is 3.4 ug/L except in New York/New Jersey Harbor where it is 5.6 ug/L. **** Standard is 4.8 ug/L except in New York/New Jersey Harbor where it is 7.9 ug/L. Aquatic Type standards apply to dissolved form.					
Cyanide	A, A-S, AA, AA-S	200		H(WS)	H
(CAS No. Not Applicable)	GA	200		H(WS)	H
	A, A-S, AA-S, B, C, D	9,000		H(FC)	B
	SA, SB, SC, I, SD	9,000		H(FC)	B
	A, A-S, AA, AA-S, B, C	5.2*		A(C)	
	A, A-S, AA, AA-S, B, C, D	22*		A(A)	
	SA, SB, SC	1.0*		A(C)	
	I		1.0*	A(C)	
	SD	1.0*		A(A)	
Remark: * As free cyanide: the sum of HCN and CN^- expressed as CN.					
Cyanogen bromide	A, A-S, AA, AA-S		5*	H(WS)	I
(506-68-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Cyanogen chloride	A, A-S, AA, AA-S		5*	H(WS)	I
(506-77-4)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Dalapon	A, A-S, AA, AA-S		50*	H(WS)	Z
(CAS No. Not Applicable)	GA	50*		H(WS)	J
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.					
p,p'-DDD	A, A-S, AA, AA-S	0.3		H(WS)	A
(72-54-8)	GA	0.3		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	8×10^{-5}		H(FC)	A
	SA, SB, SC, I, SD	8×10^{-5}		H(FC)	A
	A, A-S, AA, AA-S, B, C, D	*		W	
	SA, SB, SC, I, SD	*		W	
Remark: * Refer to entry for "p,p'-DDT."					
p,p'-DDE	A, A-S, AA, AA-S	0.2		H(WS)	A
(72-55-9)	GA	0.2		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	7×10^{-6}		H(FC)	A
	SA, SB, SC, I, SD	7×10^{-6}		H(FC)	A
	A, A-S, AA, AA-S, B, C, D	*		W	
	SA, SB, SC, I, SD	*		W	
Remark: * Refer to entry for "p,p'-DDT."					
p,p'-DDT	A, A-S, AA, AA-S	0.2		H(WS)	A
(50-29-3)	GA	0.2		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	1×10^{-5}		H(FC)	A
	SA, SB, SC, I, SD	1×10^{-5}		H(FC)	A
	A, A-S, AA, AA-S, B, C, D	1.1×10^{-5}*		W	
	SA, SB, SC, I, SD	1.1×10^{-5}*		W	
Remark: * Applies to the sum of p,p'-DDD, p,p'-DDE and p,p'-DDT					
Dechlorane Plus	A, A-S, AA, AA-S	5		H(WS)	I
(13560-89-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Demeton	A, A-S, AA, AA-S, B, C	0.1*		A(C)	
(8065-48-3; 298-03-3; 126-75-0)	SA, SB, SC	0.1		A(C)	
	I		0.1	A(C)	
Remark: * Standards and guidance value apply to the sum of these substances. For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Diazinon	GA	0.7		H(WS)	F
(333-41-5)	A, A-S, AA, AA-S, B, C	0.08*		A(C)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,2-Dibromobenzene	A, A-S, AA, AA-S	5		H(WS)	I
(583-53-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,3-Dibromobenzene	A, A-S, AA, AA-S	5		H(WS)	I
(108-36-1)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,4-Dibromobenzene	A, A-S, AA, AA-S	5		H(WS)	I
(106-37-6)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Dibromochloromethane	A, A-S, AA, AA-S		50	H(WS)	Z
(124-48-1)	GA		50	H(WS)	Z
1,2-Dibromo-3-chloropropane	A, A-S, AA, AA-S	0.04		H(WS)	A
(96-12-8)	GA	0.04		H(WS)	A
Dibromodichloromethane	A, A-S, AA, AA-S	5		H(WS)	I
(594-18-3)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Dibromomethane	A, A-S, AA, AA-S		5*	H(WS)	I
(74-95-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,2-Dibromo-3-nitrilopropionamide	A, A-S, AA, AA-S		50*	H(WS)	Z
and Dibromoacetonitrile	GA		50*	H(WS)	Z
(10222-01-2; 3252-43-5)	A, A-S, AA, AA-S, B, C		20	A(C)	
	D		50	A(A)	
Remarks: Values listed apply to the sum of these substances, except as noted below. * Applies to 2,2-dibromo-3-nitrilopropionamide only.					
Di-n-butyl phthalate	A, A-S, AA, AA-S		50	H(WS)	Z
(84-74-2)	GA	50		H(WS)	J
Dicamba	GA	0.44		H(WS)	F
(1918-00-9)					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Dichlorobenzenes	A, A-S, AA, AA-S	3*		H(WS)	A
(95-50-1;541-73-1;106-46-7)	GA	3*		H(WS)	A
	A, A-S, AA, AA-S, B, C	5**		A(C)	
	SA, SB, SC, I		5**	A(C)	
	A, A-S, AA, AA-S	20***/30****		E	U
	D	50**		E	V
	SD		50**	E	V
Remarks: * Applies to each isomer (1,2-,1,3- and 1,4-dichlorobenzene) individually. ** Applies to the sum of 1,2-, 1,3- and 1,4-dichlorobenzene *** Applies to 1,3-dichlorobenzene only. **** Applies to 1,4-dichlorobenzene only. For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
3,3'-Dichlorobenzidine	A, A-S, AA, AA-S		5*	H(WS)	I
(91-94-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3,4-Dichlorobenzotrifluoride	A, A-S, AA, AA-S	5		H(WS)	I
(328-84-7)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
cis-1,4-Dichloro-2-butene	A, A-S, AA, AA-S		5*	H(WS)	I
(1476-11-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
trans-1,4-Dichloro-2-butene	A, A-S, AA, AA-S		5*	H(WS)	I
(110-57-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Dichlorodifluoromethane	A, A-S, AA, AA-S		5*	H(WS)	I
(75-71-8)	GA	**		H(WS)	J
Remark: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,1-Dichloroethane	A, A-S, AA, AA-S	5		H(WS)	I
(75-34-3)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,2-Dichloroethane	A, A-S, AA, AA-S	0.6		H(WS)	A
(107-06-2)	GA	0.6		H(WS)	A
1,1-Dichloroethene	A, A-S, AA, AA-S		0.7	H(WS)	A
(75-35-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
cis-1,2-Dichloroethene	A, A-S, AA, AA-S	5		H(WS)	I
(156-59-2)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
trans-1,2-Dichloroethene	A, A-S, AA, AA-S	5		H(WS)	I
(156-60-5)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Dichlorofluoromethane	A, A-S, AA, AA-S	5		H(WS)	I
(75-43-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4-Dichlorophenol	A, A-S, AA, AA-S		5*****	H(WS)	I
(120-83-2)	GA	****		H(WS)	J
	A, A-S, AA, AA-S	0.3*		E	U
	GA	**		E	
	A, A-S, AA, AA-S, B, C, D	***		E	
Remarks: * Also see entry for "Phenolic compounds (total phenols)."					
** Refer to entry for "Phenolic compounds (total phenols)."					
*** Refer to entry for "Phenols, total chlorinated."					
**** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
***** This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
2,4-Dichlorophenoxyacetic acid	A, A-S, AA, AA-S	50		H(WS)	G
(94-75-7)	GA	50		H(WS)	G
1,1-Dichloropropane	A, A-S, AA, AA-S	5		H(WS)	I
(78-99-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,2-Dichloropropane	A, A-S, AA, AA-S	1		H(WS)	A
(78-87-5)	GA	1		H(WS)	A
1,3-Dichloropropane	A, A-S, AA, AA-S	5		H(WS)	I
(142-28-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,2-Dichloropropane	A, A-S, AA, AA-S	5		H(WS)	I
(594-20-7)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,1-Dichloropropene	A, A-S, AA, AA-S		5*	H(WS)	I
(563-58-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,3-Dichloropropene	A, A-S, AA, AA-S	0.4*		H(WS)	A
(542-75-6)	GA	0.4*		H(WS)	A
Remark: * Applies to the sum of cis- and trans-1,3-dichloropropene, CAS Nos. 10061-01-5 and 10061-02-6, respectively.					
2,3-Dichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(32768-54-0)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4-Dichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(95-73-8)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,5-Dichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(19398-61-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,6-Dichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(118-69-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
3,4-Dichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(95-75-0)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3,5-Dichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(25186-47-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Dieldrin	A, A-S, AA, AA-S	0.004		H(WS)	A
(60-57-1)	GA	0.004		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	6×10^{-7}		H(FC)	A
	SA, SB, SC, I, SD	6×10^{-7}		H(FC)	A
	A, A-S, AA, AA-S, B, C	0.056		A(C)	
	A, A-S, AA, AA-S, B, C, D	0.24		A(A)	
Di(2-ethylhexyl)adipate	A, A-S, AA, AA-S	20		H(WS)	A
(103-23-1)	GA	20		H(WS)	A
Diethyl phthalate	A, A-S, AA, AA-S		50	H(WS)	Z
(84-66-2)	GA		50	H(WS)	Z
1,2-Difluoro-1,1,2,2-	A, A-S, AA, AA-S		5*	H(WS)	I
tetrachloroethane	GA	**		H(WS)	J
(76-12-0)					
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,2-Diisopropylbenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(577-55-9)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,3-Diisopropylbenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(99-62-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,4-Diisopropylbenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(100-18-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
N,N-Dimethylaniline	A, A-S, AA, AA-S	1		H(WS)	A
(121-69-7)	GA	1		H(WS)	A
2,3-Dimethylaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(87-59-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4-Dimethylaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(95-68-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,5-Dimethylaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(95-78-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,6-Dimethylaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(87-62-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3,4-Dimethylaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(95-64-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
3,5-Dimethylaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(108-69-0)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3,3'-Dimethylbenzidine	A, A-S, AA, AA-S		5*	H(WS)	I
(119-93-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4,4'-Dimethylbibenzyl	A, A-S, AA, AA-S		5*	H(WS)	I
(538-39-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4,4'-Dimethyldiphenylmethane	A, A-S, AA, AA-S		5*	H(WS)	I
(4957-14-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Dimethylformamide	A, A-S, AA, AA-S		50	H(WS)	Z
(68-12-2)	GA		50	H(WS)	Z
alpha, alpha-Dimethyl	A, A-S, AA, AA-S		5*	H(WS)	I
phenethylamine	GA	**		H(WS)	J
(122-09-8)					
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4-Dimethylphenol	A, A-S, AA, AA-S		50	H(WS)	Z
(105-67-9)	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C, D	1,000		H(FC)	B
	SA, SB, SC, I, SD	1,000		H(FC)	B
	A, A-S, AA, AA-S	*		E	
	GA	*		E	
	B, C, D	**		E	
Remarks: * Refer to entry for “Phenolic compounds (total phenols).” ** Refer to entry for “Phenols, total unchlorinated.”					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Dimethyl phthalate	A, A-S, AA, AA-S		50	H(WS)	Z
(131-11-3)	GA		50	H(WS)	Z
Dimethyl tetrachloroterephthalate	A, A-S, AA, AA-S		50	H(WS)	Z
(1861-32-1)	GA	50		H(WS)	J
1,3-Dinitrobenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(99-65-0)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4-Dinitrophenol	A, A-S, AA, AA-S		10	H(WS)	B
(51-28-5)	GA		10	H(WS)	B
	A, A-S, AA, AA-S, B, C, D	400		H(FC)	B
	SA, SB, SC, I, SD	400		H(FC)	B
	A, A-S, AA, AA-S	*		E	
	GA	*		E	
	B, C, D	**		E	
Remarks: * Refer to entry for “Phenolic compounds (total phenols).”					
** Refer to entry for “Phenols, total unchlorinated.”					
2,3-Dinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(602-01-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4-Dinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(121-14-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,5-Dinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(619-15-8)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,6-Dinitrotoluene	A, A-S, AA, AA-S		0.07	H(WS)	A
(606-20-2)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
3,4-Dinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(610-39-9)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3,5-Dinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(618-85-9)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Di-n-octyl phthalate	A, A-S, AA, AA-S		50	H(WS)	Z
(117-84-0)	GA		50	H(WS)	Z
Dinoseb	A, A-S, AA, AA-S	*		E	
(88-85-7)	GA	*		E	
	B, C, D	**		E	
Remarks: * Refer to entry for “Phenolic compounds (total phenols).” ** Refer to entry for “Phenols, total unchlorinated.”					
Diphenamid	A, A-S, AA, AA-S		50	H(WS)	Z
(957-51-7)	GA	50		H(WS)	J
Diphenylamine	A, A-S, AA, AA-S		5*	H(WS)	I
(122-39-4)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Diphenylhydrazines	A, A-S, AA, AA-S		0.05*	H(WS)	A
(122-66-7; 530-50-7)	GA	ND**		H(WS)	F
Remarks: * Applies to 1,2-diphenylhydrazine (CAS No. 122-66-7) only. ** Applies to the sum of 1,1- and 1,2-diphenylhydrazine (CAS Nos. 530-50-7 and 122-66-7, respectively).					
Diquat	A, A-S, AA, AA-S	20*		H(WS)	B
(2764-72-9)	GA	20*		H(WS)	B
Remark: * Applies to the concentration of diquat ion whether free or as an undissociated salt.					
Disulfoton	GA	*		H(WS)	
(298-04-4)					
Remark: * Refer to entry for "Phorate and Disulfoton."					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Dodecylguanidine acetate and	A, A-S, AA, AA-S		50*	H(WS)	B
Dodecylguanidine hydrochloride	GA		50*	H(WS)	B
(2439-10-3; 13590-97-1)					
Remark: * Applies to sum of these substances.					
Dyphylline	A, A-S, AA, AA-S	50		H(WS)	B
(479-18-5)	GA		50	H(WS)	B
Endosulfan	A, A-S, AA, AA-S, B, C	0.009		A(C)	
(115-29-7)	D	0.22*		A(A)	
	SA, SB, SC	0.001		A(C)	
	I		0.001	A(C)	
	SD	0.034		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (d).					
Endothall	A, A-S, AA, AA-S		50	H(WS)	Z
(145-73-3)	GA		50	H(WS)	Z
Endrin	A, A-S, AA, AA-S	0.2		H(WS)	G
(72-20-8)	GA	ND		H(WS)	F
	A, A-S, AA, AA-S, B, C, D	0.002		H(FC)	
	SA, SB, SC, SD	0.002		H(FC)	
	I		0.002	H(FC)	
	A, A-S, AA, AA-S, B, C	0.036		A(C)	
	A, A-S, AA, AA-S, B, C, D	0.086		A(A)	
Endrin aldehyde	A, A-S, AA, AA-S		5*	H(WS)	I
(7421-93-4)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Endrin ketone	A, A-S, AA, AA-S		5*	H(WS)	I
(53494-70-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Ethylbenzene	A, A-S, AA, AA-S	5		H(WS)	I
(100-41-4)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C		17	A(C)	
	A, A-S, AA, AA-S, B, C, D		150	A(A)	
	SA, SB, SC, I		4.5	A(C)	
	SA, SB, SC, I, SD		41	A(A)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Ethylene chlorohydrin	A, A-S, AA, AA-S		50	H(WS)	Z
(107-07-3)	GA		50	H(WS)	Z
Ethylene dibromide	A, A-S, AA, AA-S	6×10^{-4}		H(WS)	A
(106-93-4)	GA	6×10^{-4}		H(WS)	A
Ethylene glycol	A, A-S, AA, AA-S		50	H(WS)	Z
(107-21-1)	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C		500,000	A(C)	
	D		1,000,000	A(A)	
Ethylene oxide	A, A-S, AA, AA-S		0.05	H(WS)	A
(75-21-8)	GA		0.05	H(WS)	A
Ethylenethiourea	GA	ND		H(WS)	F
(96-45-7)					
Ferbam	GA	4.2		H(WS)	F
(14484-64-1)					
Fluometuron	A, A-S, AA, AA-S		50	H(WS)	Z
(2164-17-2)	GA	50		H(WS)	J
Fluoranthene	A, A-S, AA, AA-S		50	H(WS)	Z
(206-44-0)	GA		50	H(WS)	Z
Fluorene	A, A-S, AA, AA-S		50	H(WS)	Z
(86-73-7)	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C		0.54	A(C)	
	A, A-S, AA, AA-S, B, C, D		4.8	A(A)	
	SA, SB, SC, I		2.5	A(C)	
	SA, SB, SC, I, SD		23	A(A)	
Fluoride	A, A-S, AA, AA-S	1,500		H(WS)	H
(CAS No. Not Applicable)	GA	1,500		H(WS)	F
	A, A-S, AA, AA-S, B, C	*		A(C)	
	D	**		A(A)	
Remarks: * (0.02) exp(0.907 [ln (ppm hardness)] + 7.394)					
** (0.1) exp(0.907 [ln (ppm hardness)] + 7.394)					
For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Foaming agents	GA	500*		E	U
(CAS No. Not Applicable)					
Remark: * Determined as methylene blue active substances (MBAS) or by other tests as specified by the Commissioner.					
Folpet	GA	50		H(WS)	J
(133-07-3)					
Glyphosate	A, A-S, AA, AA-S		50	H(WS)	Z
(1071-83-6)	GA		50	H(WS)	Z

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Gross alpha radiation	A, A-S, AA, AA-S	*		H(WS)	G
(CAS No. Not Applicable)	GA	*		H(WS)	G
Remark: * 15 picocuries per liter, excluding radon and uranium.					
Gross beta radiation	A, AA	*		H(WS)	H
(CAS No. Not Applicable)	A-S, AA-S		*	H(WS)	H
	GA	*		H(WS)	H
Remark: * 1,000 picocuries per liter, excluding strontium-90 and alpha emitters.					
Guaifenesin	A, A-S, AA, AA-S		50	H(WS)	Z
(93-14-1)	GA		50	H(WS)	Z
Heptachlor	A, A-S, AA, AA-S	0.04		H(WS)	A
(76-44-8)	GA	0.04		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	2×10^{-4}		H(FC)	A
	SA, SB, SC, I, SD	2×10^{-4}		H(FC)	A
Heptachlor epoxide	A, A-S, AA, AA-S	0.03		H(WS)	A
(1024-57-3)	GA	0.03		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	3×10^{-4}		H(FC)	A
	SA, SB, SC, I, SD	3×10^{-4}		H(FC)	A
Hexachlorobenzene	A, A-S, AA, AA-S	0.04		H(WS)	A
(118-74-1)	GA	0.04		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	3×10^{-5}		H(FC)	A
	SA, SB, SC, I, SD	3×10^{-5}		H(FC)	A
Hexachlorobutadiene	A, A-S, AA, AA-S	0.5		H(WS)	B
(87-68-3)	GA	0.5		H(WS)	B
	A, A-S, AA, AA-S, B, C, D	0.01		H(FC)	B
	SA, SB, SC, I, SD	0.01		H(FC)	B
	A, A-S, AA, AA-S, B, C	1.0*		A(C)	
	D	10*		A(A)	
	SA, SB, SC	0.3		A(C)	
	I		0.3	A(C)	
	SD	3.0		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
alpha-Hexachlorocyclohexane	A, A-S, AA, AA-S	0.01		H(WS)	A
(319-84-6)	GA	0.01		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	0.002		H(FC)	A
	SA, SB, SC, I, SD	0.002		H(FC)	A
beta-Hexachlorocyclohexane	A, A-S, AA, AA-S	0.04		H(WS)	A
(319-85-7)	GA	0.04		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	0.007		H(FC)	A
	SA, SB, SC, I, SD	0.007		H(FC)	A

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
delta-Hexachlorocyclohexane (319-86-8)	A, A-S, AA, AA-S	0.04		H(WS)	A
	GA	0.04		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008		H(FC)	A
	SA, SB, SC, I, SD	0.008		H(FC)	A
epsilon-Hexachlorocyclohexane (6108-10-7)	A, A-S, AA, AA-S	0.04		H(WS)	A
	GA	0.04		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008		H(FC)	A
	SA, SB, SC, I, SD	0.008		H(FC)	A
gamma-Hexachlorocyclohexane (58-89-9)	A, A-S, AA, AA-S	0.05		H(WS)	A
	GA	0.05		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008		H(FC)	A
	SA, SB, SC, I, SD	0.008		H(FC)	A
	A, A-S, AA, AA-S, B, C, D	0.95		A(A)	
Hexachlorocyclopentadiene (77-47-4)	A, A-S, AA, AA-S		5***	H(WS)	I
	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C	0.45**		A(C)	
	D	4.5**		A(A)	
	SA, SB, SC	0.07		A(C)	
	I		0.07	A(C)	
	SD	0.7		A(A)	
	A, A-S, AA, AA-S	1.0		E	U

Remarks:
* The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.
** For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).
*** This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.

Hexachloroethane (67-72-1)	A, A-S, AA, AA-S	5		H(WS)	A, I
	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C, D	0.6		H(FC)	A
	SA, SB, SC, I, SD	0.6		H(FC)	A

Remark:
* The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

Hexachlorophene (70-30-4)	A, A-S, AA, AA-S		5****	H(WS)	I
	GA	*		H(WS)	J
	A, A-S, AA, AA-S	**		E	
	GA	**		E	
	B,C,D	***		E	

Remarks:
* The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.
** Refer to entry for “Phenolic compounds (total phenols).”
*** Refer to entry for “Phenols, total chlorinated.”
**** This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Hexachloropropene	A, A-S, AA, AA-S		5*	H(WS)	I
(1888-71-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance..					
2-Hexanone	A, A-S, AA, AA-S		50	H(WS)	Z
(591-78-6)	GA		50	H(WS)	Z
Hexazinone	A, A-S, AA, AA-S		50	H(WS)	Z
(51235-04-2)	GA	50		H(WS)	J
Hydrazine	A, A-S, AA, AA-S, B, C	*		A(C)	
(302-01-2)	D	**		A(A)	
Remarks: * 5 ug/L at less than 50 ppm hardness and 10 ug/L at greater than or equal to 50 ppm hardness.					
** 50 ug/L at less than 50 ppm hardness and 100 ug/L at greater than or equal to 50 ppm hardness. For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Hydrogen sulfide	A, A-S, AA, AA-S, B, C	2.0*		A(C)	
(7783-06-4)	SA, SB, SC	2.0		A(C)	
	I		2.0	A(C)	
	A, A-S, AA, AA-S		**	E	
	GA		**	E	
Remarks: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
** Refer to entry for “Sulfides, total.” Aquatic Type standards and guidance value apply to undissociated form.					
Hydroquinone	A, A-S, AA, AA-S, B, C	2.2**		A(C)	
(123-31-9)	D	4.4**		A(A)	
	A, A-S, AA, AA-S	*		E	
	GA	*		E	
	B, C, D	***		E	
Remarks: * Refer to entry for "Phenolic compounds (total phenols)."					
** For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
*** Refer to entry for “Phenols, total unchlorinated.”					
1-Hydroxyethylidene-	A, A-S, AA, AA-S		50	H(WS)	Z
1,1-diphosphonic acid	GA		50	H(WS)	Z
(2809-21-4)					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
2-(2-Hydroxy-	A, A-S, AA, AA-S		50	H(WS)	Z
3,5-di-tert-pentylphenyl)-	GA		50	H(WS)	Z
benzotriazole	A, A-S, AA, AA-S	*		E	
(25973-55-1)	GA	*		E	
	B, C, D	**		E	
Remarks: * Refer to entry for “Phenolic compounds (total phenols).”					
** Refer to entry for “Phenols, total unchlorinated.”					
Indeno (1,2,3-cd) pyrene	A, A-S, AA, AA-S		0.002	H(WS)	A
(193-39-5)	GA		0.002	H(WS)	A
Iron	A, A-S, AA, AA-S, B, C	300**		A(C)	
(CAS No. Not Applicable)	D	300**		A(A)	
	A, A-S, AA, AA-S	300		E	G
	GA	300*		E	F
Remarks: * Also see standard for "Iron and Manganese."					
** For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Iron and Manganese	GA	500*		E	F
(CAS No. Not Applicable)					
Remark: * Applies to the sum of these substances; also see individual standards for "Iron" and "Manganese."					
Isodecyl diphenyl phosphate	A, A-S, AA, AA-S, B, C	1.7*		A(C)	
(29761-21-5)	D	22*		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Isodrin	A, A-S, AA, AA-S		5*	H(WS)	I
(465-73-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Isophorone	A, A-S, AA, AA-S		50	H(WS)	Z
(78-59-1)	GA		50	H(WS)	Z
Isopropalin	A, A-S, AA, AA-S		5*	H(WS)	I
(33820-53-0)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Isopropylbenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(98-82-8)	GA	**		H(WS)	J
	A, A-S, AA, AA-S, B, C		2.6	A(C)	
	A, A-S, AA, AA-S, B, C, D		23	A(A)	
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2-Isopropyltoluene	A, A-S, AA, AA-S	5		H(WS)	I
(527-84-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3-Isopropyltoluene	A, A-S, AA, AA-S	5		H(WS)	I
(535-77-3)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Isopropyltoluene	A, A-S, AA, AA-S	5		H(WS)	I
(99-87-6)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Isothiazolones, total (isothiazolinones) (includes 5-chloro-2-methyl-4-isothiazolin-3-one & 2-methyl-4-isothiazolin-3-one) (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	1*		A(C)	
	D	10*		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d). Standards apply to the sum of these substances.					
Kepone	GA	ND		H(WS)	F
(143-50-0)					
Lead	A, A-S, AA, AA-S	50		H(WS)	G
(CAS No. Not Applicable)	GA	25		H(WS)	F
	A, A-S, AA, AA-S, B, C	*		A(C)	
	A, A-S, AA, AA-S, B, C, D	**		A(A)	
	SA, SB, SC, I	8		A(C)	
	SA, SB, SC, I, SD	204		A(A)	
Remarks: * {1.46203 - [ln (hardness) (0.145712)]} exp (1.273 [ln (hardness)] - 4.297)					
** {1.46203 - [ln (hardness) (0.145712)]} exp (1.273 [ln (hardness)] - 1.052) Aquatic Type standards apply to dissolved form.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Linear alkyl benzene sulfonates (LAS) (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	40*		A(C)	
Remarks: * LAS with side chains greater than 13 carbons only; applies to the sum of these substances. * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Magnesium	A, A-S, AA, AA-S	35,000		H(WS)	B
(CAS No. Not Applicable)	GA		35,000	H(WS)	B
Malathion	GA	7.0		H(WS)	F
(121-75-5)	A, A-S, AA, AA-S, B, C	0.1*		A(C)	
	SA, SB, SC	0.1		A(C)	
	I		0.1	A(C)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Mancozeb (8018-01-7)	GA	1.8		H(WS)	F
Maneb (12427-38-2)	GA	1.8		H(WS)	F
Manganese	A, A-S, AA, AA-S	300		E	G
(CAS No. Not Applicable)	GA	300*		E	F
Remark: * Also see entry for "Iron and Manganese."					
Mercaptobenzothiazole	A, A-S, AA, AA-S		50	H(WS)	Z
(149-30-4)	GA		50	H(WS)	Z
Mercury	A, A-S, AA, AA-S	0.7		H(WS)	B
(CAS No. Not Applicable)	GA	0.7		H(WS)	B
	A, A-S, AA, AA-S, B, C, D	7×10^{-4}*		H(FC)	B
	SA, SB, SC, I, SD	7×10^{-4}*		H(FC)	B
	A, A-S, AA, AA-S, B, C	0.77*		A(C)	
	A, A-S, AA, AA-S, B, C, D	1.4*		A(A)	
	A, A-S, AA, AA-S, B, C, D	0.0026*		W	
	SA, SB, SC, I, SD	0.0026*		W	
Remark * Applies to dissolved form.					
Methacrylic acid	A, A-S, AA, AA-S		50	H(WS)	Z
(79-41-4)	GA		50	H(WS)	Z
Methacrylonitrile	A, A-S, AA, AA-S		5*	H(WS)	I
(126-98-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Methomyl (16752-77-5)	GA	*		H(WS)	
Remark: * Refer to entry for "Aldicarb and Methomyl."					
Methoxychlor (72-43-5)	A, A-S, AA, AA-S	35		H(WS)	H
	GA	35		H(WS)	F
	A, A-S, AA, AA-S, B, C	0.03*		A(C)	
	SA, SB, SC	0.03		A(C)	
	I		0.03	A(C)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
(1-Methoxyethyl) benzene (4013-34-7)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
(2-Methoxyethyl) benzene (3558-60-9)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
N-Methylaniline (100-61-8)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Methylbenz(a)anthracenes (CAS No. Not Applicable)	A, A-S, AA, AA-S		0.002*	H(WS)	A
	GA		0.002*	H(WS)	A
Remark: * Applies to the sum of these substances.					
Methyl chloride (74-87-3)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2-Methyl-4-chlorophenoxyacetic acid (94-74-6)	GA	0.44		H(WS)	F
4,4'-Methylene-bis-(2-chloroaniline) (101-14-4)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
4,4'-Methylene-bis-(N-methyl)-aniline (1807-55-2)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4,4'-Methylene-bis-(N,N'-dimethyl) aniline (101-61-1)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Methylene bisthiocyanate (6317-18-6)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C	1.0*		A(C)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Methylene chloride (75-09-2)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C, D	200		H(FC)	A
	SA,SB, SC, I, SD	200		H(FC)	A
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-(1-Methylethoxy)-1-butanol (31600-69-8)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
2-Methylethyl-1,3-dioxolane (126-39-6)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
Methyl ethyl ketone (78-93-3)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
Methyl iodide (74-88-4)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Methyl methacrylate (80-62-6)	GA	50		H(WS)	J

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
2-Methylnaphthalene	A, A-S, AA, AA-S, B, C		4.7	A(C)	
(91-57-6)	A, A-S, AA, AA-S, B, C, D		42	A(A)	
	SA, SB, SC, I		4.2	A(C)	
	SA, SB, SC, I, SD		38	A(A)	
Methyl parathion	GA	*		H(WS)	
(298-00-0)	A, A-S, AA, AA-S, B, C	*		A(C)	
Remark: * Refer to entry for "Parathion and Methyl parathion."					
alpha-Methylstyrene	A, A-S, AA, AA-S	5		H(WS)	I
(98-83-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2-Methylstyrene	A, A-S, AA, AA-S	5		H(WS)	I
(611-15-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3-Methylstyrene	A, A-S, AA, AA-S	5		H(WS)	I
(100-80-1)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Methylstyrene	A, A-S, AA, AA-S	5		H(WS)	I
(622-97-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Metribuzin	A, A-S, AA, AA-S		50	H(WS)	Z
(21087-64-9)	GA	50		H(WS)	J
Mirex	A, A-S, AA, AA-S	0.03		H(WS)	A
(2385-85-5)	GA	0.03		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	1×10^{-6}		H(FC)	A
	SA, SB, SC, I, SD	1×10^{-6}		H(FC)	A
	A, A-S, AA, AA-S, B, C	0.001*		A(C)	
	D	0.001*		A(A)	
	SA, SB, SC	0.001		A(C)	
	I		0.001	A(C)	
	SD		0.001	A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Nabam	GA	1.8		H(WS)	F
(142-59-6)					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Naphthalene	A, A-S, AA, AA-S, B, C		13	A(C)	
(91-20-3)	A, A-S, AA, AA-S, B, C, D		110	A(A)	
	SA, SB, SC, I		16	A(C)	
	SA, SB, SC, I, SD		140	A(A)	
	A, A-S, AA, AA-S	10		E	U
	GA		10	E	U
Niacinamide	A, A-S, AA, AA-S	500		H(WS)	B
(98-92-0)	GA		500	H(WS)	B
Nickel	A, A-S, AA, AA-S	100		H(WS)	B
(CAS No. Not Applicable)	GA	100		H(WS)	B
	A, A-S, AA, AA-S, B, C	*		A(C)	
	A, A-S, AA, AA-S, B, C, D	**		A(A)	
	SA, SB, SC, I	8.2		A(C)	
	SA, SB, SC, I, SD	74		A(A)	
Remarks: * (0.997) exp (0.846 [ln (hardness)] + 0.0584)					
** (0.998) exp (0.846 [ln (hardness)] + 2.255)					
Aquatic Type standards apply to dissolved form.					
Nitralin	GA	35		H(WS)	F
(4726-14-1)					
Nitrate (expressed as N)	A, A-S, AA, AA-S	10,000*		H(WS)	G
(CAS No. Not Applicable)	GA	10,000*		H(WS)	G
Remark: * Also see entry for "Nitrate and Nitrite."					
Nitrate and Nitrite	A, A-S, AA, AA-S	10,000*		H(WS)	G
(expressed as N)	GA	10,000*		H(WS)	G
(CAS No. Not Applicable)					
Remark: * Applies to the sum of these substances; also see individual standards for "Nitrate" and "Nitrite."					
Nitrilotriacetic acid	A, A-S, AA, AA-S	3*		H(WS)	A
(CAS No. Not Applicable)	GA	3*		H(WS)	A
	A, A-S, AA, AA-S, B, C	5,000**		A(C)	
Remarks: * Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less.					
** Applies to nitrilotriacetate.					
** For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Nitrite (expressed as N)	A, A-S, AA, AA-S	1,000*		H(WS)	G
(CAS No. Not Applicable)	GA	1,000*		H(WS)	G
	A, A-S, AA, AA-S, B, C	**		A(C)	
Remarks: * Also see entry for "Nitrate and Nitrite."					
** Standard is 100 ug/L for warm water fishery waters and 20 ug/L for cold water fishery waters.					
** For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
2-Nitroaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(88-74-4)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3-Nitroaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(99-09-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Nitroaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(100-01-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Nitrobenzene	A, A-S, AA, AA-S	0.4		H(WS)	A
(98-95-3)	GA	0.4		H(WS)	A
	A, A-S, AA, AA-S	30		E	U
N-Nitrosodiphenylamine	A, A-S, AA, AA-S		50	H(WS)	Z
(86-30-6)	GA		50	H(WS)	Z
2-Nitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(88-72-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3-Nitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(99-08-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
4-Nitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(99-99-0)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
5-Nitro-o-toluidine	A, A-S, AA, AA-S		5*	H(WS)	I
(99-55-8)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Octachlorostyrene	A, A-S, AA, AA-S	0.2		H(WS)	B
(29082-74-4)	GA	0.2		H(WS)	B
	A, A-S, AA, AA-S, B, C, D	6×10^{-6}		H(FC)	B
	SA, SB, SC, I, SD	6×10^{-6}		H(FC)	B
Oxamyl	A, A-S, AA, AA-S		50	H(WS)	Z
(23135-22-0)	GA	50		H(WS)	J
Paraquat	GA	3.0		H(WS)	F
(4685-14-7)					
Parathion	GA	*		H(WS)	
(56-38-2)	A, A-S, AA, AA-S, B, C	*		A(C)	
	A, A-S, AA, AA-S, B, C, D	0.065		A(A)	
Remark: * Refer to entry for "Parathion and Methyl parathion."					
Parathion and Methyl parathion	GA	1.5*		H(WS)	F
(56-38-2; 298-00-0)	A, A-S, AA, AA-S, B, C	0.008**		A(C)	
Remarks: * Applies to the sum of these substances. ** Applies to the sum of these substances. For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Pendimethalin	A, A-S, AA, AA-S		5*	H(WS)	I
(40487-42-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Pentachlorobenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(608-93-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Pentachloroethane	A, A-S, AA, AA-S		5*	H(WS)	I
(76-01-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Pentachloronitrobenzene	GA	ND		H(WS)	F
(82-68-8)					
Pentachlorophenol	A, A-S, AA, AA-S, B, C	*		A(C)	
(87-86-5)	A, A-S, AA, AA-S, B, C, D	**		A(A)	
	A, A-S, AA, AA-S	***		E	
	GA	***		E	
	B, C, D	****		E	
Remarks: * exp [1.005 (pH) - 5.134]					
** exp [1.005 (pH) - 4.869]					
*** Refer to entry for "Phenolic compounds (total phenols)."					
**** Refer to entry for "Phenols, total chlorinated."					
Phenanthrene	A, A-S, AA, AA-S		50	H(WS)	Z
(85-01-8)	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C		5.0	A(C)	
	A, A-S, AA, AA-S, B, C, D		45	A(A)	
	SA, SB, SC, I		1.5	A(C)	
	SA, SB, SC, I, SD		14	A(A)	
Phenol	A, A-S, AA, AA-S	*		E	
(108-95-2)	GA	*		E	
	B, C, D	**		E	
Remarks: * Refer to entry for "Phenolic compounds (total phenols)."					
** Refer to entry for "Phenols, total unchlorinated."					
Phenolic compounds	A, A-S, AA, AA-S	1*		E	U
(total phenols)	GA	1*		E	U
(CAS No. Not Applicable)					
Remark: * Applies to the sum of these substances.					
Phenols, total chlorinated	A, A-S, AA, AA-S	*		E	
(CAS No. Not Applicable)	GA	*		E	
	A, A-S, AA, AA-S, B, C, D	1.0**		E	V
Remarks: * Refer to entry for "Phenolic compounds (total phenols)."					
** Applies to the sum of these substances.					
Phenols, total unchlorinated	A, A-S, AA, AA-S	*		E	
(CAS No. Not Applicable)	GA	*		E	
	A, A-S, AA, AA-S, B, C, D	5.0**		E	V
Remarks: * Refer to entry for "Phenolic compounds (total phenols)."					
** Applies to the sum of these substances.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,2-Phenylenediamine	A, A-S, AA, AA-S		5*	H(WS)	I
(95-54-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,3-Phenylenediamine	A, A-S, AA, AA-S		5*	H(WS)	I
(108-45-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,4-Phenylenediamine	A, A-S, AA, AA-S		5*	H(WS)	I
(106-50-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Phenyl ether	A, A-S, AA, AA-S	10		E	U
(101-84-8)	GA		10	E	U
Phenylhydrazine	A, A-S, AA, AA-S		5*	H(WS)	I
(100-63-0)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Phenylpropanolamine	A, A-S, AA, AA-S		50	H(WS)	Z
(14838-15-4)	GA		50	H(WS)	Z
3-Phenyl-1-propene	A, A-S, AA, AA-S	5		H(WS)	I
(637-50-3)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
cis-1-Phenyl-1-propene	A, A-S, AA, AA-S	5		H(WS)	I
(766-90-5)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
trans-1-Phenyl-1-propene	A, A-S, AA, AA-S	5		H(WS)	I
(873-66-5)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Phorate (298-02-2)	GA	*		H(WS)	
Remark: * Refer to entry for "Phorate and Disulfoton."					
Phorate and Disulfoton (298-02-2; 298-04-4)	GA	ND*		H(WS)	F
Remark: * Applies to sum of these substances.					
Phosphorus (CAS No. Not Applicable)	A, A-S, AA, AA-S, B		20*	**	**
Remarks: * Applies only where the letter "P" (ponds, lakes and reservoirs) appears in the Water Index Number, excluding Lake Champlain. The department is considering site-specific values for Lake Champlain and for Lake Ontario and Lake Erie, both of which do not have the letter "P" designation. ** Based on aesthetic effects for primary and secondary contact recreation.					
Picloram	A, A-S, AA, AA-S		50*	H(WS)	Z
(CAS No. Not Applicable)	GA	50*		H(WS)	J
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.					
Polybrominated biphenyls	A, A-S, AA, AA-S		5*	H(WS)	I
(CAS No. Not Applicable)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. Value applies to each congener individually. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each congener individually.					
Polychlorinated biphenyls	A, A-S, AA, AA-S	0.09*		H(WS)	A
(CAS No. Not Applicable)	GA	0.09*		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	1×10^{-6}*		H(FC)	A
	SA, SB, SC, I, SD	1×10^{-6}*		H(FC)	A
	A, A-S, AA, AA-S, B, C, D	1.2×10^{-4}*		W	
	SA, SB, SC, I, SD	1.2×10^{-4}*		W	
Remark: * Applies to the sum of these substances.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Principal organic contaminant (CAS No. Not Applicable)	GA	5		H(WS)	J
Remarks: This standard applies to any and every individual substance, whether listed in this Table or not, that is in one of the principal organic contaminant classes as defined in 6 NYCRR 700.1 except any substance that has a H(WS) Type standard for class GA waters (other than 5 ug/L with Basis Code J) listed elsewhere in this Table. For the convenience of the reader, the principal organic contaminant standard of 5 ug/L (Basis Code J), is listed in this Table for some (but not all) substances regulated by this standard. A less stringent guidance value for an individual substance may be substituted for this standard if so determined by the Commissioner of the New York State Department of Health.					
Prometon	A, A-S, AA, AA-S		50	H(WS)	Z
(1610-18-0)	GA	50		H(WS)	J
Propachlor (1918-16-7)	GA	35		H(WS)	F
Propanil (709-98-8)	GA	7.0		H(WS)	F
Propazine (139-40-2)	GA	16		H(WS)	F
Propham	A, A-S, AA, AA-S		50	H(WS)	Z
(122-42-9)	GA	50		H(WS)	J
n-Propylbenzene	A, A-S, AA, AA-S	5		H(WS)	I
(103-65-1)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Pyrene	A, A-S, AA, AA-S		50	H(WS)	Z
(129-00-0)	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C		4.6	A(C)	
	A, A-S, AA, AA-S, B, C, D		42	A(A)	
Pyridine	A, A-S, AA, AA-S		50	H(WS)	Z
(110-86-1)	GA		50	H(WS	Z
Quaternary ammonium compounds (including dimethyl benzyl ammonium chloride & dimethyl ethyl benzyl ammonium chloride) (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	10*		A(C)	
Remarks: * Applies to the sum of these substances. * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Radium 226	A, AA	*		H(WS)	H
(CAS No. Not Applicable)	A-S, AA-S		*	H(WS)	H
	GA	*		H(WS)	H
Remark: * 3 picocuries per liter; also see entry for "Radium 226 and Radium 228."					
Radium 226 and Radium 228	A, A-S, AA, AA-S	*		H(WS)	G
(CAS No. Not Applicable)	GA	*		H(WS)	G
Remark: * 5 picocuries per liter; Applies to the sum of these substances.					
Radium 228	A, A-S, AA, AA-S	*		H(WS)	
(CAS No. Not Applicable)	GA	*		H(WS)	
Remark: * Refer to entry for "Radium 226 and Radium 228."					
Selenium	A, A-S, AA, AA-S	10		H(WS)	G
(CAS No. Not Applicable)	GA	10		H(WS)	G
	A, A-S, AA, AA-S, B, C	4.6*		A(C)	
Remark: * Aquatic Type standard applies to dissolved form.					
Silver	A, A-S, AA, AA-S	50		H(WS)	G
(CAS No. Not Applicable)	GA	50		H(WS)	F
	A, A-S, AA, AA-S, B, C	0.1*		A(C)	
	D	**		A(A)	
	SD	2.3		A(A)	
Remarks: * Applies to ionic silver. ** exp (1.72 [ln (ppm hardness)] - 6.52) Standards for D and SD Classes apply to acid-soluble form. For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Simazine	A, A-S, AA, AA-S	0.5		H(WS)	A
(122-34-9)	GA	0.5		H(WS)	A
Sodium	GA	20,000		H(WS)	H
(CAS No. Not Applicable)					
Strontium 90	A, A-S, AA, AA-S	*		H(WS)	G
(CAS No. Not Applicable)					
Remarks: * 8 picocuries per liter. If two or more radionuclides are present, the sum of their doses shall not exceed an annual potential dose of 4 millirems per year.					
Styrene	A, A-S, AA, AA-S		5*	H(WS)	I
(100-42-5)	GA	**		H(WS)	J
	A, A-S, AA, AA-S	50		E	U
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Sulfate	A, A-S, AA, AA-S	250,000		H(WS)	G
(CAS No. Not Applicable)	GA	250,000		H(WS)	F
Sulfides, total	A, A-S, AA, AA-S, B, C	**		A(C)	
(CAS No. Not Applicable)	SA, SB, SC	**		A(C)	
	I		**	A(C)	
	A, A-S, AA, AA-S		50*	E	U
	GA		50*	E	U
Remarks: Values listed apply to sum of these substances. * Expressed as hydrogen sulfide. ** Refer to entry for “Hydrogen Sulfide.”					
Sulfite	A, A-S, AA, AA-S, B, C	200*		A(C)	
(CAS No. Not Applicable)					
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c).					
Tebuthiuron	A, A-S, AA, AA-S		50	H(WS)	Z
(34014-18-1)	GA	50		H(WS)	J
Terbacil	GA	50		H(WS)	J
(5902-51-2)					
Terbufos	A, A-S, AA, AA-S		0.09	H(WS)	B
(13071-79-9)	GA		0.09	H(WS)	B
Tetrachlorobenzenes	A, A-S, AA, AA-S		5***	H(WS)	I
(634-66-2; 634-90-2; 95-94-3;	GA	*		H(WS)	J
12408-10-5)	A, A-S, AA, AA-S	10**		E	U
	GA		10**	E	U
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each isomer (1,2,3,4-, 1,2,3,5-, and 1,2,4,5-tetrachlorobenzene) individually. ** Applies to the sum of 1,2,3,4-, 1,2,3,5- and 1,2,4,5-tetrachlorobenzene. *** This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent specific MCL. Value applies to each isomer individually.					
1,1,1,2-Tetrachloroethane	A, A-S, AA, AA-S	5		H(WS)	I
(630-20-6)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,1,2,2-Tetrachloroethane	A, A-S, AA, AA-S		0.2	H(WS)	A
(79-34-5)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Tetrachloroethene	A, A-S, AA, AA-S		0.7	H(WS)	A
(127-18-4)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C, D		1	H(FC)	
	SA, SB, SC, I, SD		1	H(FC)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Tetrachloroterephthalic acid (2136-79-0)	GA	50		H(WS)	J
alpha, alpha, alpha, 4-Tetrachloro-toluene	A, A-S, AA, AA-S		5*	H(WS)	I
(5216-25-1)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Tetrahydrofuran	A, A-S, AA, AA-S		50	H(WS)	Z
(109-99-9)	GA		50	H(WS)	Z
1,2,3,4-Tetramethylbenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(488-23-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,2,3,5-Tetramethylbenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(527-53-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,2,4,5-Tetramethylbenzene	A, A-S, AA, AA-S		5*	H(WS)	I
(95-93-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance..					
Thallium	A, A-S, AA, AA-S		0.5	H(WS)	B
(CAS No. Not Applicable)	GA		0.5	H(WS)	B
	A, A-S, AA, AA-S, B, C	8*		A(C)	
	D	20		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c). Aquatic Type standards apply to acid-soluble form.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Theophylline	A, A-S, AA, AA-S	40		H(WS)	B
(58-55-9)	GA		40	H(WS)	B
Thiram	GA	1.8		H(WS)	F
(137-26-8)					
Toluene	A, A-S, AA, AA-S	5		H(WS)	I
(108-88-3)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C, D	6,000		H(FC)	B
	SA, SB, SC, I, SD	6,000		H(FC)	B
	A, A-S, AA, AA-S, B, C		100	A(C)	
	A, A-S, AA, AA-S, B, C, D		480	A(A)	
	SA, SB, SC, I		92	A(C)	
	SA, SB, SC, I, SD		430	A(A)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Toluene-2,4-diamine	A, A-S, AA, AA-S		5*	H(WS)	I
(95-80-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Toluene-2,5-diamine	A, A-S, AA, AA-S		5*	H(WS)	I
(95-70-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Toluene-2,6-diamine	A, A-S, AA, AA-S		5*	H(WS)	I
(823-40-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
o-Toluidine	A, A-S, AA, AA-S		0.6	H(WS)	A
(95-53-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Tolyltriazole	A, A-S, AA, AA-S		50	H(WS)	Z
(29385-43-1)	GA		50	H(WS)	Z

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Toxaphene	A, A-S, AA, AA-S	0.06		H(WS)	A
(8001-35-2)	GA	0.06		H(WS)	A
	A, A-S, AA, AA-S, B, C, D	6×10^{-6}		H(FC)	A
	SA, SB, SC, I, SD	6×10^{-6}		H(FC)	A
	A, A-S, AA, AA-S, B, C	0.005		A(C)	
	D	1.6*		A(A)	
	SA, SB, SC	0.005		A(C)	
	I		0.005	A(C)	
	SD		0.07	A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic standard if so determined under 702.15 (d).					
1,2,4-Tribromobenzene	A, A-S, AA, AA-S	5		H(WS)	I
(615-54-3)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Tributyltin oxide	A, A-S, AA, AA-S		50	H(WS)	Z
(56-35-9)	GA		50	H(WS)	Z
2,4,6-Trichloroaniline	A, A-S, AA, AA-S		5*	H(WS)	I
(634-93-5)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Trichlorobenzenes	A, A-S, AA, AA-S		5***	H(WS)	I
(87-61-6; 120-82-1; 108-70-3;	GA	*		H(WS)	J
12002-48-1)	A, A-S, AA, AA-S, B, C	5**		A(C)	
	SA, SB, SC	5**		A(C)	
	I		5**	A(C)	
	A, A-S, AA, AA-S	10**		E	U
	GA		10**	E	U
	D	50**		E	V
	SD	50**		E	V
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each isomer (1,2,3-, 1,2,4- and 1,3,5-trichlorobenzene) individually. ** Applies to the sum of 1,2,3-, 1,2,4- and 1,3,5-trichlorobenzene. For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c). *** This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. Value applies to each isomer individually.					
1,1,1-Trichloroethane	A, A-S, AA, AA-S	5		H(WS)	I
(71-55-6)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,1,2-Trichloroethane	A, A-S, AA, AA-S	1		H(WS)	A
(79-00-5)	GA	1		H(WS)	A
Trichloroethene	A, A-S, AA, AA-S	5		H(WS)	I
(79-01-6)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C, D	40		H(FC)	A
	SA, SB, SC, I, SD	40		H(FC)	A
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Trichlorofluoromethane	A, A-S, AA, AA-S	5		H(WS)	I
(75-69-4)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4,5-Trichlorophenoxyacetic acid (93-76-5)	GA	35		H(WS)	F
2,4,5-Trichlorophenoxypropionic acid	A, A-S, AA, AA-S	10		H(WS)	G
	GA	0.26		H(WS)	F
(93-72-1)					
1,1,2-Trichloropropane	A, A-S, AA, AA-S	5		H(WS)	I
(598-77-6)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,2,3-Trichloropropane	A, A-S, AA, AA-S	0.04		H(WS)	A
(96-18-4)	GA	0.04		H(WS)	A
cis-1,2,3-Trichloropropene	A, A-S, AA, AA-S	5		H(WS)	I
(13116-57-9)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
trans-1,2,3-Trichloropropene	A, A-S, AA, AA-S	5		H(WS)	I
(13116-58-0)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
alpha,2,4-Trichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(94-99-5)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
alpha,2,6-Trichlorotoluene	A, A-S, AA, AA-S	5		H(WS)	I
(2014-83-7)	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
alpha,3,4-Trichlorotoluene (102-47-6)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
alpha,alpha,2-Trichlorotoluene (88-66-4)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
alpha,alpha,4-Trichlorotoluene (13940-94-8)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,3,4-Trichlorotoluene (7359-72-0)	A, A-S, AA, AA-S		0.34	H(WS)	B
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,3,5-Trichlorotoluene (56961-86-5)	A, A-S, AA, AA-S		0.34	H(WS)	B
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,3,6-Trichlorotoluene (2077-46-5)	A, A-S, AA, AA-S		0.34	H(WS)	B
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4,5-Trichlorotoluene (6639-30-1)	A, A-S, AA, AA-S		0.34	H(WS)	B
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4,6-Trichlorotoluene (23749-65-7)	A, A-S, AA, AA-S		0.34	H(WS)	B
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,1,1-Trichloro-2,2,2-trifluoroethane (354-58-5)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Trifluralin (1582-09-8)	GA	35		H(WS)	F
1,2,3-Trimethylbenzene (526-73-8)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,2,4-Trimethylbenzene (95-63-6)	A, A-S, AA, AA-S	5		H(WS)	I
	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C		33	A(C)	
	A, A-S, AA, AA-S, B, C, D		290	A(A)	
	SA, SB, SC, I		19	A(C)	
	SA, SB, SC, I, SD		170	A(A)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
1,3,5-Trimethylbenzene (108-67-8)	A, A-S, AA- AA-S	5		H(WS)	I
	GA	*		H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,3,6-Trimethylpyridine (1462-84-6)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
2,4,6-Trimethylpyridine (108-75-8)	A, A-S, AA, AA-S		50	H(WS)	Z
	GA		50	H(WS)	Z
sym-Trinitrobenzene (99-35-4)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,3,4-Trinitrotoluene (602-29-9)	A, A-S, AA, AA-S		5*	H(WS)	I
	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL. ** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
2,3,6-Trinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(18292-97-2)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4,5-Trinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(610-25-3)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
2,4,6-Trinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(118-96-7)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
3,4,5-Trinitrotoluene	A, A-S, AA, AA-S		5*	H(WS)	I
(603-15-6)	GA	**		H(WS)	J
Remarks: * This substance did not receive a review beyond determining that it is in a principal organic contaminant class and that it does not have a more stringent Specific MCL.					
** The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
Triphenyl phosphate	A, A-S, AA, AA-S		50	H(WS)	Z
(115-86-6)	GA		50	H(WS)	Z
	A, A-S, AA, AA-S, B, C	4*		A(C)	
	D	40*		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d).					
Tritium	A, A-S, AA, AA-S	*		H(WS)	G
(CAS No. Not Applicable)					
Remark: * 20,000 picocuries per liter; if two or more radionuclides are present, the sum of their annual dose equivalent to the total body or any organ shall not exceed 4 millirems per year.					
Uranyl ion	GA	5,000		H(WS)	H
(CAS No. Not Applicable)					
Vanadium	A, A-S, AA, AA-S, B, C	14*		A(C)	
(CAS No. Not Applicable)	D	190*		A(A)	
Remark: * For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702.15 (c) and (d). Aquatic Type standards apply to acid-soluble form.					

Table 1 (Continued)

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

JUNE 1998

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	GUIDANCE VALUE (ug/L)	TYPE	BASIS CODE
Vinyl chloride	A, A-S, AA, AA-S		0.3	H(WS)	A
(75-01-4)	GA	2		H(WS)	G
1,2-Xylene	A, A-S, AA, AA-S	5		H(WS)	I
(95-47-6)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C		**	A(C)	
	A, A-S, AA, AA-S, B, C, D		**	A(A)	
	SA, SB, SC, I		**	A(C)	
	SA, SB, SC, I, SD		**	A(A)	
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
** Refer to entry for "1,4-Xylene."					
1,3-Xylene	A, A-S, AA, AA-S	5		H(WS)	I
(108-38-3)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C		**	A(C)	
	A, A-S, AA, AA-S, B, C, D		**	A(A)	
	SA, SB, SC, I		**	A(C)	
	SA, SB, SC, I, SD		**	A(A)	
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
** Refer to entry for "1,4-Xylene."					
1,4-Xylene	A, A-S, AA, AA-S	5		H(WS)	I
(106-42-3)	GA	*		H(WS)	J
	A, A-S, AA, AA-S, B, C		65**	A(C)	
	A, A-S, AA, AA-S, B, C, D		590**	A(A)	
	SA, SB, SC, I		19**	A(C)	
	SA, SB, SC, I, SD		170**	A(A)	
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.					
** Applies to the sum of 1,2-, 1,3- and 1,4-xylene.					
Zinc	A, A-S, AA, AA-S		2,000	H(WS)	B
(CAS No. Not Applicable)	GA		2,000	H(WS)	B
	A, A-S, AA, AA-S, B, C	*		A(C)	
	A, A-S, AA, AA-S, B, C, D	**		A(A)	
	SA, SB, SC, I	66		A(C)	
	SD	95		A(A)	
	A, A-S, AA, AA-S		5,000	E	U
	GA		5,000	E	U
Remarks: Aquatic Type standards apply to dissolved form.					
* exp(0.85 [ln(ppm hardness)] + 0.50)					
** 0.978 exp(0.8473 [ln(ppm hardness)] + 0.884)					
Zineb (12122-67-7)	GA	1.8		H(WS)	F
Ziram (137-30-4)	GA	4.2		H(WS)	F

TABLE 2

EXPLANATION OF BASIS CODES IN TABLE 1

JUNE 1998

BASIS CODE	BASIS
A	Oncogenic, Human Health
B	Non-oncogenic, Human Health
F	Former Groundwater Regulations, 6 NYCRR 703.5(a)(3), Human Health or Aesthetics
G	Specific MCL, Human Health or Aesthetics
H	Former Use of or Reference to 10 NYCRR Part 170, Human Health or Aesthetics
I	Principal Organic Contaminant Classes, Human Health
J	Former Groundwater Reference to 10 NYCRR Subpart 5-1 General Standards, Human Health
U	Potable Water, Aesthetics
V	Aquatic Life, Aesthetics
Z	General Organic Guidance Value, Human Health

TABLE 3

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Acenaphthylene	208-96-8
Acephate	30560-19-1
Acetone cyanohydrin	75-86-5
Acetonitrile	75-05-8
Acetophenone	98-86-2
2-Acetylaminofluorene	53-96-3
Allyl alcohol	107-18-6
Anisole	100-66-3
Aramite	140-57-8
Benzaldehyde	100-52-7
Benzeneacetic acid	103-82-2
1,2-Benzenedicarboxaldehyde	643-79-8
Benzenepropanoic acid	501-52-0
Benzoic acid	65-85-0
Benzoic acid, ammonium salt	1863-63-4
Benzo(g,h,i)perylene	191-24-2
Benzo(e)pyrene	192-97-2
Benzyl alcohol	100-51-6
Benzyl chloride	100-44-7
Bis(pentabromophenyl)ether	1163-19-5
4-Bromophenylphenylether	101-55-3
Bromophos	2104-96-3

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Bronopol	52-51-7
1-Butanol	71-36-3
tert-Butyl alcohol	75-65-0
Cacodylic acid	75-60-5
Caprolactam	105-60-1
Captafol	2425-06-1
Carbazole	86-74-8
Carbon disulfide	75-15-0
Chloral	75-87-6
Chloroacetic acid	79-11-8
Chlorobenzilate	510-15-6
4-Chlorobenzoic acid	74-11-3
2-Chloroethyl vinyl ether	110-75-8
4-(4-Chloro-2-methylphenoxy) butyric acid	94-81-5
2-(4-Chloro-2-methylphenoxy) propionic acid	93-65-2
4-Chlorophenyl phenyl ether	7005-72-3
Chlorpyrifos	2921-88-2
Cimectacarb	95266-40-3
Clopyralid	1702-17-6
Cyanazine	21725-46-2
Cyclohexane	110-82-7
Cyclohexanol	108-93-0

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Cyclohexanone	108-94-1
Cyclohexanone oxime	100-64-1
Cyclohexene	110-83-8
Cyclohexylamine	108-91-8
Cyclopentanone	120-92-3
Cyclotrimethylenetrinitramine	121-82-4
2,4-DB	94-82-6
Decanal	112-31-2
Demeton	8065-48-3
Diallate	2303-16-4
Dibenz(a,h)anthracene	55-70-3
Dibenzofuran	132-64-9
Dibromoacetonitrile	3252-43-5
Dibutyltin chloride	683-18-1
Dibutyltin dilaurate	77-58-7
Dichloroacetic acid	79-43-6
2,3-Dichloro-1,4-napthoquinone	117-80-6
alpha, alpha -Dichlorotoluene	98-87-3
Dicyclopentadiene	77-73-6
Diethylamine	109-89-7
2-(Diethylamino)ethanol	100-37-8
Diethylene glycol	111-46-6

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Diethylene glycol monoethyl ether	111-90-0
Diethyl formamide	617-84-4
Diethyl maleate	141-05-9
o,o-Diethyl-o-2-pyrazinyl phosphorothioate	297-97-2
Diethyltin dycaprylate	2641-56-7
2,3-Dihydro-1,6-dimethyl-1H-indene	17059-48-2
2,3-Dihydro-1-methyl-1H-indene	767-58-8
Diisopropylamine	108-18-9
Diisopropyl ether	108-20-3
Dimethoate	60-51-5
3,3'-Dimethoxybenzidine	119-90-4
Dimethylamine	124-40-3
4-(Dimethylamino)azobenzene	60-11-7
7,12-Dimethylbenz(a)anthracene	57-97-6
Dimethylbenzylammonium chloride	1875-92-9
trans-1,4-Dimethylcyclohexane	2207-04-7
Dimethyldioxane	25136-55-4
Dimethyldithiocarbamate	79-45-8
Dimethylethylbenzylammonium chloride	5197-80-8
2,5-Dimethylfuran	625-86-5
1,1-Dimethylhydrazine	57-14-7
1,2-Dimethylhydrazine	540-73-8

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Dimethylphenylcarbinol	617-94-7
Dimethylterephthalate	120-61-6
1,4-Dioxane	123-91-1
Dodecanoic acid	143-07-7
Endosulfan I	959-98-8
Endosulfan II	33213-65-9
Endosulfan sulfate	1031-07-8
Epichlorohydrin	106-89-8
Ethion	563-12-2
2-Ethoxyethanol	110-80-5
2-Ethoxyethanol acetate	111-15-9
Ethyl acetate	141-78-6
Ethyl acrylate	140-88-5
Ethyl di-n-propylthiocarbamate (EPTC)	759-96-4
Ethylene cyanohydrin	109-78-4
Ethyl ether	60-29-7
Ethyl methacrylate	97-63-2
Ethyl methane sulfonate	62-50-0
Famphur	52-85-7
Formaldehyde	50-00-0
Formic acid	64-18-6
Furan	110-00-9

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Furazolidone	67-45-8
Furfural	98-01-1
Furium	531-82-8
Glycidaldehyde	765-34-4
n-Heptane	142-82-5
1-Heptanol	111-70-6
2-Heptanol	543-49-7
3-Heptanol	589-82-2
4-Heptanol	589-55-9
Hexamethylene diamine	124-09-4
Hexanate	25056-70-6
n-Hexane	110-54-3
3-Hexanone	589-38-8
Hydrazine	302-01-2
3-Hydroxycarbofuran	16655-82-6
alpha-Hydroxy-alpha-methylbenzeneacetic acid	515-30-0
1,3-Isobenzofurandione	85-44-9
1(3H)-Isobenzofuranone	87-41-2
Isobutyl alcohol	78-83-1
Isodecyl diphenylphosphate	29761-21-5
Isopropyl alcohol	67-63-0
Isopropylamine	75-31-0

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Isopropylbenzene hydroperoxide	80-15-9
Isosafrole	120-58-1
Isothiazolones	NA
Linear alkylbenzenesulfonates	NA
Linuron	330-55-2
2,5-Lutidine	589-93-5
Maleic anhydride	108-31-6
Maleic hydrazide	123-33-1
Malononitrile	109-77-3
Methacrylamide	79-39-0
Methanol	67-56-1
Methapyrilene	91-80-5
2-Methoxyethanol	109-86-4
2-Methoxyethanol acetate	110-49-6
2-Methoxy-5-nitroaniline	99-59-2
Methyl acetate	79-20-9
Methylacrylate	96-33-3
Methylamine	74-89-5
2-Methylanthracene	613-12-7
9-Methylanthracene	779-02-2
2-Methylbenzaldehyde	529-20-4
3-Methylbenzaldehyde	620-23-5

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
4-Methylbenzaldehyde	104-87-0
4-Methylbenzenemethanol	589-18-4
2-Methyl benzene sulfonamide	88-19-7
4-Methyl benzene sulfonamide	70-55-3
2-Methylbenzoic acid	118-90-1
3-Methylbenzoic acid	99-04-7
Methyl tert-butyl ether	1634-04-4
3-Methylcholanthrene	56-49-5
Methylcyclopentane	96-37-7
Methylmethanesulfonate	66-27-3
1-Methyl-4-(1-methylethenyl)cyclohexene	138-86-3
2-Methylnaphthalene	91-57-6
Methylolmethacrylamide	923-02-4
4-Methyl-2-pentanone	108-10-1
Methylphthalate	4376-18-5
Metolachlor	51218-45-2
Molinate	2212-67-1
1,4-Naphthoquinone	130-15-4
1-Napthylamine	134-32-7
2-Napthylamine	91-59-8
Nitrocyclohexane	1122-60-7
Nitrofurantoin	67-20-9

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Nitrofurazone	59-87-0
2-Nitropropane	79-46-9
4-Nitroquinoline-1-oxide	56-57-5
N-Nitrosodi-N-butylamine	924-16-3
N-Nitrosodiethylamine	55-18-5
N-Nitrosodimethylamine	62-75-9
N-Nitrosodipropylamine	621-64-7
N-Nitrosomethylethylamine	10595-95-6
N-Nitroso-N-methyl urea	684-93-5
N-Nitrosomorpholine	59-89-2
N-Nitrosopiperidine	100-75-4
N-Nitrosopyrrolidine	930-55-2
Nonanal	124-19-6
1-Nonanol	143-08-8
Octamethylpyrophosphoramine	152-16-9
Oxalic acid, benzyl ester	35448-14-7
Pebulate	1114-71-2
Pentanate	136-25-4
Phenacetin	62-44-2
alpha-Picoline	109-06-8
Polybutene(1-propene,2-methyl homopolymer)	9003-27-4
Prodiamine	29091-21-2

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
Profluralin	26399-36-0
Pronamide	23950-58-5
1-Propanol	71-23-8
1-Propene	115-07-1
Propionitrile	107-12-0
Propylene glycol	58-55-6
Propylene glycol monoethyl ether	19089-47-5
Propylene glycol monomethyl ether	1589-49-7
Propylene oxide	75-56-9
Quaternary ammonium compounds	NA
Quinoline	91-22-5
1,4-Quinone dioxide	105-11-3
Reserpine	50-55-5
Rhodamine WT	37299-86-8
Ronnel	299-84-3
Rotenone	83-79-4
Safrole	94-59-7
Sodium adipate, disodium salt	7486-38-6
Sodium diethyldithiocarbamate	148-18-5
Strychnine	57-24-9
Tetraethyl dithiopyrophosphate	3689-24-5
Tetraethyl lead	78-00-2
Tetraethyl tin	597-64-8

TABLE 3 (Continued)

PARTIAL LIST OF SUBSTANCES NOT REGULATED BY THE PRINCIPAL ORGANIC CONTAMINANT (POC) GROUNDWATER STANDARD

JUNE 1998

Note: Refer to Text of Part I for Explanation

(No standard or guidance value for groundwater is available for these substances as of the date of this document)

SUBSTANCE	CAS NO.
2-(Thiocyanomethylthio) benzothiazole	21564-17-0
Thiofanox	39196-18-4
Thiourea	62-56-6
Toluene diisocyanate	584-84-9
Triallate	2303-17-5
Trichloroacetic acid	76-03-9
alpha, alpha, alpha-Trichlorotoluene	98-07-7
Triethylamine	121-44-8
o,o,o-Triethylphosphorothioate	126-68-1
3,3,5-Trimethylcyclohexanone	873-94-9
Trimethyl phosphate	512-56-1
Vernolate	1929-77-7
Vinyl acetate	108-05-4
Warfarin	81-81-2
NA = Not Applicable	

TABLE 4

DEFINITION FOR PRINCIPAL ORGANIC CONTAMINANT CLASSES*

(excerpted from 6 NYCRR Section 700.1)

JUNE 1998

Principal organic contaminant classes means the following classes of organic chemicals.

(1) Halogenated alkane: Compound containing carbon (C), hydrogen (H) and halogen (X) where X = fluorine (F), chlorine (Cl), bromine (Br) and/or iodine (I), having the general formula $C_nH_yX_z$, where y + z = 2n + 2; n, y and z are integer variables; n and z are equal to or greater than one and y is equal to or greater than zero. Specifically excluded from this class are chloroform, bromoform, bromodichloromethane and dibromochloromethane.

(2) Halogenated ether: Compound containing carbon (C), hydrogen (H), oxygen (O) and halogen (X) (where X = F, Cl, Br and/or I) having the general formula $C_nH_yX_zO$, where y + z = 2n + 2; the oxygen is bonded to two carbons; n, y and z are integer variables; n is equal to or greater than two, y is equal to or greater than zero and z is equal to or greater than one.

(3) Halobenzenes and substituted halobenzenes: Derivatives of benzene which have at least one halogen atom attached to the ring and which may or may not have straight or branched chain hydrocarbon, nitrogen or oxygen substituents.

(4) Benzene and alkyl- or nitrogen-substituted benzenes: Benzene or a derivative of benzene which has either an alkyl- and/or a nitrogen-substituent.

(5) Substituted, unsaturated hydrocarbons: A straight or branched chain unsaturated hydrocarbon compound containing one of the following: halogen, aldehyde, nitrile, amide.

(6) Halogenated non-aromatic cyclic hydrocarbons: A non-aromatic cyclic compound containing a halogen.

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*Note: Determining the applicability of the POC groundwater standard to a specific substance can be a complex process that should not be undertaken using these definitions alone. Refer to Section III of the Introduction of this TOGS (page 7) for instructions.

PART II GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

The Division of Water (DOW) regulates point source discharges to class GA groundwater primarily through the use of effluent limitations that have been established statewide. These effluent limitations are set at concentrations that should prevent contaminants from exceeding ambient groundwater standards and guidance values, which are applicable in the saturated zone. Class GA groundwaters are all fresh groundwaters. Groundwater effluent limitations are provided in Table 5 and discussed in this Part. (Ambient standards and guidance values that relate to these effluent limitations were provided in Table 1 of this TOGS and described in Part I).

A. DEFINITIONS

This section presents definitions for key terms that are used in the text and tables. The definitions are similar to the ones that appear in regulation, Part 700. Additional explanation is provided where appropriate.

1. "Groundwaters" mean those waters in saturated zones.

2. "Saturated zones" mean any extensive portion of the earth's crust that contains sufficient water to fill all interconnected voids or pore space.

3. "Fresh groundwaters" mean those groundwaters having a chloride concentration equal to or less than 250 mg/L or a total dissolved solids concentration equal to or less than 1,000 mg/L.

4. "Saline groundwaters" mean groundwaters having a chloride concentration of more than 250 mg/L or a total dissolved solids concentration of more than 1,000 mg/L.

5. "Groundwater standards" and "groundwater guidance values" both mean such measures of purity or quality for any groundwaters in relation to their reasonable and necessary use. "Groundwater standards" are established by the Department pursuant to section 17-0301 of the Environmental Conservation Law, which means the values are included in regulation. "Groundwater guidance values" are established by the Department pursuant to section 702.1 of Title 6, which means the specific values are not in regulation.

   Such standards and guidance values are often referred to as <u>ambient</u> values in this document to emphasize that they apply to samples of groundwater and are distinct from <u>effluent</u> limitations, which apply to samples of wastewater at the point of discharge.

6. "Groundwater effluent limitations" mean any restriction on quantities, qualities, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into or allowed to run from an outlet or point source or any other discharge within the meaning of section 17-0501 of the Environmental Conservation Law into groundwater or unsaturated zones. Some groundwater effluent limitations are in regulation (703.6); the remainder are guidance.

B. GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

A groundwater effluent limitation is derived to prevent a contaminant from exceeding the ambient standard or guidance value in the saturated zone. An effluent limitation generally is set at or near the ambient value, partly on the assumption that for many toxic substances, sustained high percent removal in the unsaturated zone cannot be relied upon. The approach used provides a high degree of certainty that the ambient value will not be exceeded and also avoids the need for site-specific evaluations, which would be technically difficult, costly and time consuming.

Groundwater effluent limitations are presented in Table 5, alphabetically by substance. The same substance names as in Table 1 are used. The reader is cautioned that, as for ambient values, groundwater effluent limitations may apply to substances that may be identified only by a group entry, including “Principal organic contaminant.” Guidance in Part I, Sections A and B should be useful to determining whether an effluent limitation exists for a particular substance.

The second column lists the groundwater effluent limitation in ug/L, unless otherwise noted. The third column, entitled “Category,” provides information about the basis for the effluent limitation. (The Category is not the same as the Basis Code in Table 1.) The five Categories are as follows:

Category A Effluent limitations that are in regulation (6 NYCRR 703.6)

Category B Effluent limitations that are numerically equal to ambient guidance values, as provided in 702.16(c)(1).

Category C Effluent limitations that are derived in this document for substances that have an ambient standard, but no corresponding effluent limitation in 703.6. (For organic substances, the effluent limitations have been set equal to the ambient standards. For metals, the effluent limitations have been set at twice the ambient standard.)

Category D Effluent limitations for sodium and ammonia require case-by-case determinations. Significant removal of these substances can occur in the unsaturated zone and will be a function of site-specific factors.

Also, as indicated in Table 5, effluent limitations for radiological parameters will be established through Radiation Control Permits, Part 380.

As listed under "Organic substances, total" in Table 5, an effluent limitation of 100 ug/L for the total of certain organic substances is applicable, as provided in 702.16(c)(4). The substances that can be specified for this limitation are those organic substances that have an ambient groundwater standard or guidance value less than 100 ug/L. This includes all substances covered by the principal organic contaminant (POC) groundwater standard (Table 1) and other applicable "group" entries, whether they are listed individually in this TOGS or not.

C. IMPLEMENTATION OF GROUNDWATER EFFLUENT LIMITATIONS

1. Gross or Net Limitations.

Effluent limitations as listed in Table 5 are defined as gross limitations (i.e., without mathematical subtraction of the amounts present in intake water). These gross effluent limitations, however, may not be appropriate where the concentration of a substance in the receiving aquifer exceeds the effluent limitation. General guidance for these situations is provided in other TOGS documents relating to the preparation of SPDES permits.

2. Modifications of Effluent Limitations

Section 702.19 allows, under certain conditions, modification of a groundwater effluent limitation. This includes those effluent limitations in 703.6 and those derived as numerically equivalent to a H(WS) Type guidance value. The included limitations are thus those designated as Categories A and B in Table 5. Such modifications may be allowed where the applicant demonstrates that a less restrictive effluent limitation will be sufficient to prevent groundwater concentrations from exceeding the ambient value. SPDES applications for such modifications are governed by the Uniform Procedures Act and require public notice of the proposed modification.

3. Exceptions to Effluent Limitations

The water quality regulations, section 702.21, provide exceptions for three activities to the requirement to impose the numerical effluent limitations in Table 5. Effluent limitations for the two point source activities, i.e., certain sewage and land application systems, should be determined on a case-by-case basis to achieve or maintain ambient standards and guidance values.

Table 5

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Acenaphthene (83-32-9)	20	B
Acetone (67-64-1)	50	B
Acrolein (107-02-8)	5	C
Acrylamide (79-06-1)	5	C
Acrylic acid (79-10-7)	50	B
Acrylonitrile (107-13-1)	5	C
Alachlor (15972-60-8)	0.5	A
Aldicarb (116-06-3)	*	
Remark: * See "Aldicarb and Methomyl."		
Aldicarb and Methomyl (116-06-3;16752-77-5)	0.35	A
Aldicarb sulfone (1646-88-4)	2	B
Aldicarb sulfoxide (1646-87-3)	4	B
Aldrin (309-00-2)	ND	A
Alkyl dimethyl benzyl ammonium chloride (68391-01-5)	50	B
Alkyl diphenyl oxide sulfonates (CAS No. Not Applicable)	50*	B
Remark: * Applies to each alkyl diphenyl oxide sulfonate individually.		
Allyl chloride (107-05-1)	5	C
Aluminum (CAS No. Not Applicable)	2,000	A
Ametryn (834-12-8)	50	C
4-Aminobiphenyl (92-67-1)	5	C
Aminocresols (95-84-1; 2835-95-2; 2835-99-6)	*	
Remark: * See "Phenolic compounds (total phenols)."		
Aminomethylene phosphonic acid salts (CAS No. Not Applicable)	50*	B
Remark: * Applies to each aminomethylene phosphonic acid salt individually.		
Aminopyridines (462-08-8; 504-24-5; 504-29-0; 26445-05-6)	1*	B
Remark: * Applies to the sum of these substances.		
3-Aminotoluene (108-44-1)	5	C
4-Aminotoluene (106-49-0)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Ammonia and Ammonium (7664-41-7; CAS No. Not Applicable)	*	D
Remark: * NH_3 + NH_4^+ as N. Case-by-case determination of need and quantity.		
Aniline (62-53-3)	5	C
Anthracene (120-12-7)	50	B
Antimony (CAS No. Not Applicable)	6	A
Arsenic (CAS No. Not Applicable)	50	A
Aryltriazoles (CAS No. Not Applicable)	50*	B
Remark: * Applies to each aryltriazole individually.		
Asbestos (fibers > 10 um) (CAS No. Not Applicable)	14,000,000 fibers/L	A
Atrazine (1912-24-9)	7.5	A
Azinphosmethyl (86-50-0)	4.4	A
Azobenzene (103-33-3)	5	C
Barium (CAS No. Not Applicable)	2,000	A
Benefin (1861-40-1)	35	A
Benz(a)anthracene (56-55-3)	0.002	B
Benzene (71-43-2)	1	A
Benzidine (92-87-5)	5	C
Benzisothiazole (271-61-4)	50	B
Benzo(b)fluoranthene (205-99-2)	0.002	B
Benzo(k)fluoranthene (207-08-9)	0.002	B
Benzo(a)pyrene (50-32-8)	ND	A
Beryllium (CAS No. Not Applicable)	3	B
1,1'-Biphenyl (92-52-4)	5	C
Bis(2-chloroethoxy)methane (111-91-1)	5	C
Bis(2-chloroethyl)ether (111-44-4)	1.0	A
Bis(chloromethyl)ether (542-88-1)	5	C
Bis(2-chloro-1-methylethyl)ether (108-60-1)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Bis(2-ethylhexyl)phthalate (117-81-7)	5	A
Boric acid, Borates & Metaborates (CAS No. Not Applicable)	125*	B
Remark: * Applies as boron equivalents to the sum of these substances.		
Boron (CAS No. Not Applicable)	2,000	C
Bromacil (314-40-9)	4.4	A
Bromide (CAS No. Not Applicable)	2,000	B
Bromobenzene (108-86-1)	5	C
Bromochloromethane (74-97-5)	5	C
Bromodichloromethane (75-27-4)	50	B
Bromoform (75-25-2)	50	B
Bromomethane (74-83-9)	5	C
Butachlor (23184-66-9)	3.5	A
cis-2-Butenal (15798-64-8)	5	C
trans-2-Butenal (123-73-9)	5	C
cis-2-Butenenitrile (1190-76-7)	5	C
trans-2-Butenenitrile (627-26-9)	5	C
Butoxyethoxyethanol (112-34-5)	50	B
Butoxypropanol (5131-66-8)	50	B
Butylate (2008-41-5)	50	C
n-Butylbenzene (104-51-8)	5	C
sec-Butylbenzene (135-98-8)	5	C
tert-Butylbenzene (98-06-6)	5	C
Butyl benzyl phthalate (85-68-7)	50	B
Butyl isopropyl phthalate (CAS No. Not Applicable)	50	B
Cadmium (CAS No. Not Applicable)	10	A
Captan (133-06-2)	18	A
Carbaryl (63-25-2)	29	A

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Carbofuran (1563-66-2)	15	B
Carbon tetrachloride (56-23-5)	5	A
Carboxin (5234-68-4)	50	C
Chloramben (CAS No. Not Applicable)	50*	A
Remark: * Includes related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.		
Chloranil (118-75-2)	5	C
Chlordane (57-74-9)	0.05	A
Chloride (CAS No. Not Applicable)	500,000	A
Chlorinated dibenzo-p-dioxins and Chlorinated dibenzofurans (CAS No. Not Applicable)	7×10^{-7} equivalents of 2,3,7,8-TCDD*	A
Remark: * Value is for the total of the chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans as equivalents of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) as specified by the ambient Class GA H(WS) standard in Table 1 of this document.		
2-Chloroaniline (95-51-2)	5	C
3-Chloroaniline (108-42-9)	5	C
4-Chloroaniline (106-47-8)	5	C
Chlorobenzene (108-90-7)	5	C
4-Chlorobenzotrifluoride (98-56-6)	5	C
1-Chlorobutane (109-69-3)	5	C
Chloroethane (75-00-3)	5	C
Chloroform (67-66-3)	7	A
Chloromethyl methyl ether (107-30-2)	5	C
2-Chloronaphthalene (91-58-7)	10	B
2-Chloronitrobenzene (88-73-3)	5	C
3-Chloronitrobenzene (121-73-3)	5	C
4-Chloronitrobenzene (100-00-5)	5	C
Chloroprene (126-99-8)	5	C
Chlorothalonil (1897-45-6)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
2-Chlorotoluene (95-49-8)	5	C
3-Chlorotoluene (108-41-8)	5	C
4-Chlorotoluene (106-43-4)	5	C
4-Chloro-o-toluidine (95-69-2)	5	C
5-Chloro-o-toluidine (95-79-4)	5	C
3-Chloro-1,1,1-trifluoropropane (460-35-5)	5	C
Chromium (CAS No. Not Applicable)	100	C
Chromium (hexavalent) (CAS No. Not Applicable)	100	A
Chrysene (218-01-9)	0.002	B
Copper (CAS No. Not Applicable)	1,000	A
Cyanide (CAS No. Not Applicable)	400	A
Cyanogen bromide (506-68-3)	5	C
Cyanogen chloride (506-77-4)	5	C
Dalapon (CAS No. Not Applicable)	50*	C
Remark: * Includes related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.		
p,p'-DDD (72-54-8)	0.3	A
p,p'-DDE (72-55-9)	0.2	A
p,p'-DDT (50-29-3)	0.2	A
Dechlorane Plus (13560-89-9)	5	C
Diazinon (333-41-5)	0.7	A
1,2-Dibromobenzene (583-53-9)	5	C
1,3-Dibromobenzene (108-36-1)	5	C
1,4-Dibromobenzene (106-37-6)	5	C
Dibromochloromethane (124-48-1)	50	B
1,2-Dibromo-3-chloropropane (96-12-8)	0.04	A
Dibromodichloromethane (594-18-3)	5	C
Dibromomethane (74-95-3)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
2,2-Dibromo-3-nitrilopropionamide (10222-01-2)	50	B
Di-n-butyl phthalate (84-74-2)	50	A
Dicamba (1918-00-9)	0.44	A
Dichlorobenzenes (95-50-1;541-73-1;106-47-6)	3*	A
Remark: * Applies to each dichlorobenzene individually.		
3,3'-Dichlorobenzidine (91-94-1)	5	C
3,4-Dichlorobenzotrifluoride (328-84-7)	5	C
cis-1,4-Dichloro-2-butene (1476-11-5)	5	C
trans-1,4-Dichloro-2-butene (110-57-6)	5	C
Dichlorodifluoromethane (75-71-8)	5	C
1,1-Dichloroethane (75-34-3)	5	C
1,2-Dichloroethane (107-06-2)	0.6	A
1,1-Dichloroethene (75-35-4)	5	C
cis-1,2-Dichloroethene (156-59-2)	5	C
trans-1,2-Dichloroethene (156-60-5)	5	C
Dichlorofluoromethane (75-43-4)	5	C
2,4-Dichlorophenol (120-83-2)	*	
Remark: * See “Phenolic compounds (total phenols).”		
2,4-Dichlorophenoxyacetic acid (94-75-7)	50	A
1,1-Dichloropropane (78-99-9)	5	C
1,2-Dichloropropane (78-87-5)	1	A
1,3-Dichloropropane (142-28-9)	5	C
2,2-Dichloropropane (594-20-7)	5	C
1,1-Dichloropropene (563-58-6)	5	C
1,3-Dichloropropene (sum of cis- and trans- isomers) (542-75-6)	0.4	A
2,3-Dichlorotoluene (32768-54-0)	5	C
2,4-Dichlorotoluene (95-73-8)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
2,5-Dichlorotoluene (19398-61-9)	5	C
2,6-Dichlorotoluene (118-69-4)	5	C
3,4-Dichlorotoluene (95-75-0)	5	C
3,5-Dichlorotoluene (25186-47-4)	5	C
Dieldrin (60-57-1)	0.004	A
Di(2-ethylhexyl)adipate (103-23-1)	20	A
Diethyl phthalate (84-66-2)	50	B
1,2-Difluoro-1,1,2,2-tetrachloroethane (76-12-0)	5	C
1,2-Diisopropylbenzene (577-55-9)	5	C
1,3-Diisopropylbenzene (99-62-7)	5	C
1,4-Diisopropylbenzene (100-18-5)	5	C
N,N-Dimethylaniline (121-69-7)	1	A
2,3-Dimethylaniline (87-59-2)	5	C
2,4-Dimethylaniline (95-68-1)	5	C
2,5-Dimethylaniline (95-78-3)	5	C
2,6-Dimethylaniline (87-62-7)	5	C
3,4-Dimethylaniline (95-64-7)	5	C
3,5-Dimethylaniline (108-69-0)	5	C
3,3'-Dimethylbenzidine (119-93-7)	5	C
4,4'-Dimethylbibenzyl (538-39-6)	5	C
4,4'-Dimethyldiphenylmethane (4957-14-6)	5	C
Dimethylformamide (68-12-2)	50	B
alpha, alpha-Dimethyl phenethylamine (122-09-8)	5	C
2,4-Dimethylphenol (105-67-9) Remark: * See "Phenolic compounds (total phenols)."	*	
Dimethyl phthalate (131-11-3)	50	B

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
2,4-Dinitrophenol (51-28-5) Remark: * See "Phenolic compounds (total phenols)."	*	
Dimethyl tetrachloroterephthalate (1861-32-1)	50	C
1,3-Dinitrobenzene (99-65-0)	5	C
2,3-Dinitrotoluene (602-01-7)	5	C
2,4-Dinitrotoluene (121-14-2)	5	C
2,5-Dinitrotoluene (619-15-8)	5	C
2,6-Dinitrotoluene (606-20-2)	5	C
3,4-Dinitrotoluene (610-39-9)	5	C
3,5-Dinitrotoluene (618-85-9)	5	C
Di-n-octyl phthalate (117-84-0)	50	B
Dinoseb (88-85-7) Remark: * See "Phenolic compounds (total phenols)."	*	
Diphenamid (957-51-7)	50	C
Diphenylamine (122-39-4)	5	C
1,1-Diphenylhydrazine (530-50-7)	ND	C
1,2-Diphenylhydrazine (122-66-7)	ND	A
Diquat (2764-72-9)	20	A
Dissolved solids, total (CAS No. Not Applicable) Remark: * 1,000 mg/L; applies only in the counties of Nassau and Suffolk.	*	A
Disulfoton (298-04-4) Remark: * See "Phorate and Disulfoton."	*	
Dodecylguanidine acetate and Dodecylguanidine hydrochloride (2439-10-3; 13590-97-1) Remark: * Applies to the sum of these substances.	50*	B
Dyphylline (479-18-5)	50	B
Endothall (145-73-3)	50	B

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Endrin (72-20-8)	ND	A
Endrin aldehyde (7421-93-4)	5	C
Endrin ketone (53494-70-5)	5	C
Ethylbenzene (100-41-4)	5	C
Ethylene chlorohydrin (107-07-3)	50	B
Ethylene dibromide (106-93-4)	6×10^{-4}	A
Ethylene glycol (107-21-1)	50	B
Ethylene oxide (75-21-8)	0.05	B
Ethylenethiourea (96-45-7)	ND	A
Ferbam (14484-64-1)	4.2	A
Fluometuron (2164-17-2)	50	C
Fluoranthene (206-44-0)	50	B
Fluorene (86-73-7)	50	B
Fluoride (CAS No.Not Applicable)	3,000	A
Foaming agents (CAS No. Not Applicable)	1,000*	A
Remark: * Determined as methylene blue active substances (MBAS) or by other tests as specified by the commissioner.		
Folpet (133-07-3)	50	A
Glyphosate (1071-83-6)	50	B
Gross alpha radiation (CAS No. Not Applicable)	*	
Remark: * Established through Radiation Control Permits (Part 380).		
Gross beta radiation (CAS No. Not Applicable)	*	
Remark: * Established through Radiation Control Permits (Part 380).		
Guaifenesin (93-14-1)	50	B
Heptachlor (76-44-8)	0.04	A
Heptachlor epoxide (1024-57-3)	0.03	A
Hexachlorobenzene (118-74-1)	0.04	A
Hexachlorobutadiene (87-68-3)	0.5	A

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
alpha-Hexachlorocyclohexane (319-84-6)	0.01	A
beta-Hexachlorocyclohexane (319-85-7)	0.04	A
delta-Hexachlorocyclohexane (319-86-8)	0.04	A
epsilon-Hexachlorocyclohexane (6108-10-7)	0.04	A
gamma-Hexachlorocyclohexane (58-89-9)	0.05	A
Hexachlorocyclopentadiene (77-47-4)	5	C
Hexachloroethane (67-72-1)	5	C
Hexachlorophene (70-30-4) Remark: * See "Phenolic compounds (total phenols)."	*	
Hexachloropropene (1888-71-7)	5	C
2-Hexanone (591-78-6)	50	B
Hexazinone (51235-04-2)	50	C
Hydrogen sulfide (7783-06-4) Remark: * See "Sulfides, total."	*	
Hydroquinone (123-31-9) Remark: * See "Phenolic compounds (total phenols)."	*	
1-Hydroxyethylidene-1,1-diphosphonic acid (2809-21-4)	50	B
2-(2-Hydroxy-3,5-di-tert-pentylphenyl)-benzotriazole (25973-55-1) Remark: * See "Phenolic compounds (total phenols)."	*	
Indeno (1,2,3-cd) pyrene (193-39-5)	0.002	B
Iron (CAS No. Not Applicable) Remark: * Also see "Iron and Manganese."	600*	A
Iron and Manganese (CAS No. Not Applicable) Remark: * Applies to the sum of these substances.	1,000*	A
Isodrin (465-73-6)	5	C
Isophorone (78-59-1)	50	B
Isopropalin (33820-53-0)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Isopropylbenzene (98-82-8)	5	C
2-Isopropyltoluene (527-84-4)	5	C
3-Isopropyltoluene (535-77-3)	5	C
4-Isopropyltoluene (99-87-6)	5	C
Kepone (143-50-0)	ND	A
Lead (CAS No. Not Applicable)	50	A
Magnesium (CAS No. Not Applicable)	35,000	B
Malathion (121-75-5)	7.0	A
Mancozeb (8018-01-7)	1.8	A
Maneb (12427-38-2)	1.8	A
Manganese (CAS No. Not Applicable) Remark: * Also see "Iron and Manganese."	600*	A
Mercaptobenzothiazole (149-30-4)	50	B
Mercury (CAS No. Not Applicable)	1.4	A
Methacrylic acid (79-41-4)	50	B
Methacrylonitrile (126-98-7)	5	C
Methomyl (16752-77-5) Remark: * See "Aldicarb and Methomyl."	*	
Methoxychlor (72-43-5)	35	A
(1-Methoxyethyl) benzene (4013-34-7)	50	B
(2-Methoxyethyl) benzene (3558-60-9)	50	B
N-Methylaniline (100-61-8)	5	C
Methylbenz(a)anthracenes (CAS No. Not Applicable) Remark: * Applies to the sum of these substances.	0.002*	B
Methyl chloride (74-87-3)	5	C
2-Methyl-4-chlorophenoxyacetic acid (94-74-6)	0.44	A
4,4'-Methylene-bis-(2-chloroaniline) (101-14-4)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
4,4'-Methylene-bis-(N-methyl)aniline (1807-55-2)	5	C
4,4'-Methylene-bis-(N,N'-dimethyl) aniline (101-61-1)	5	C
Methylene bisthiocyanate (6317-18-6)	50	B
Methylene chloride (dichloromethane) (75-09-2)	5	A
4-(1-Methylethoxy)-1-butanol (31600-69-8)	50	B
2-Methylethyl-1,3-dioxolane (126-39-6)	50	B
Methyl ethyl ketone (78-93-3)	50	B
Methyl iodide (74-88-4)	5	C
Methyl methacrylate (80-62-6)	50	A
Methyl parathion (298-00-0)	*	
Remark: * See "Parathion and Methyl parathion."		
alpha-Methylstyrene (98-83-9)	5	C
2-Methylstyrene (611-15-4)	5	C
3-Methylstyrene (100-80-1)	5	C
4-Methylstyrene (622-97-9)	5	C
Metribuzin (21087-64-9)	50	C
Mirex (2385-85-5)	0.03	A
Nabam (142-59-6)	1.8	A
Naphthalene (91-20-3)	10	B
Niacinamide (98-92-0)	500	B
Nickel (CAS No. Not Applicable)	200	A
Nitralin (4726-14-1)	35	A
Nitrate (expressed as N) (CAS No. Not Applicable)	20,000	A
Nitrate and Nitrite (expressed as N) (CAS No. Not Applicable)	20,000	A
Nitrilotriacetic acid (CAS No. Not Applicable)	3*	A
Remark: * Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less."		
Nitrite (expressed as N) (CAS No. Not Applicable)	2,000	A

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
2-Nitroaniline (88-74-4)	5	C
3-Nitroaniline (99-09-2)	5	C
4-Nitroaniline (100-01-6)	5	C
Nitrobenzene (98-95-3)	0.4	A
Nitrogen, total (expressed as N) (CAS No. Not Applicable) Remark: * Applies only in the counties of Nassau and Suffolk.	10,000*	A
N-Nitrosodiphenylamine (86-30-6)	50	B
2-Nitrotoluene (88-72-2)	5	C
3-Nitrotoluene (99-08-1)	5	C
4-Nitrotoluene (99-99-0)	5	C
5-Nitro-o-toluidine (99-55-8)	5	C
Octachlorostyrene (29082-74-4)	0.2	A
Oil and Grease (CAS No. Not Applicable) Remark: * Applies to the sum of oil and grease.	15,000*	A
Organic substances, total (CAS No. Not Applicable) Remark: * This value applies to the total of all organic substances listed in this Table with a groundwater effluent limitation less than 100 ug/L. Included in the total are all organic substances covered by the principal organic contaminant value and those in other “group” entries, whether or not the substances are individually listed in this Table.	100*	
Oxamyl (23135-22-0)	50	C
Paraquat (4685-14-7)	3.0	A
Parathion (56-38-2) Remark: * See “Parathion and Methyl parathion.”	*	
Parathion and Methyl parathion (56-38-2; 298-00-0) Remark: * Applies to the sum of these substances.	1.5*	A
Pendimethalin (40487-42-1)	5	C
Pentachlorobenzene (608-93-5)	5	C
Pentachloroethane (76-01-7)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Pentachloronitrobenzene (82-68-8)	ND	A
Pentachlorophenol (87-86-5)	*	
Remark: * See "Phenolic compounds (total phenols)."		
pH (CAS No. Not Applicable)	*	A
Remark: * pH shall not be lower than 6.5 or the pH of the natural groundwater, whichever is lower, nor shall be greater than 8.5 or the pH of the natural groundwater, whichever is greater.		
Phenanthrene (85-01-8)	50	B
Phenol (108-95-2)	*	
Remark: * See "Phenolic compounds (total phenols)."		
Phenolic compounds (total phenols) (CAS No. Not Applicable)	2*	A
Remark: * Applies to the sum of these substances.		
Phenols, total chlorinated (CAS No. Not Applicable)	*	
Remark: * See "Phenolic compounds (total phenols)."		
Phenols, total unchlorinated (CAS No. Not Applicable)	*	
Remark: * See "Phenolic compounds (total phenols)."		
1,2-Phenylenediamine (95-54-5)	5	C
1,3-Phenylenediamine (108-45-2)	5	C
1,4-Phenylenediamine (106-50-3)	5	C
Phenyl ether (101-84-8)	10	B
Phenylhydrazine (100-63-0)	5	C
Phenylpropanolamine (14838-15-4)	50	B
3-Phenyl-1-propene (637-50-3)	5	C
cis-1-Phenyl-1-propene (766-90-5)	5	C
trans-1-Phenyl-1-propene (873-66-5)	5	C
Phorate (298-02-2)	*	
Remark: * See "Phorate and Disulfoton."		

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Phorate and Disulfoton (298-02-2; 298-04-4)	ND*	A
Remark: * Applies to the sum of these substances.		
Picloram (CAS No. Not Applicable)	50*	C
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.		
Polybrominated biphenyls (CAS No. Not Applicable)	5*	C
Remark: * Applies to each congener individually.		
Polychlorinated biphenyls (CAS No. Not Applicable)	0.09*	A
Remark: * Applies to the sum of these substances.		
Principal organic contaminant (CAS No. Not Applicable)	5*	C
Remark: * Applies to each individual substance to which the principal organic contaminant (POC) class GA ambient groundwater standard applies (whether listed in this TOGS or not) <u>except</u> for those substances with a groundwater effluent limitation other than 5 ug/L listed in this Table. For the convenience of the reader, the groundwater effluent limitations of 5 ug/L for <u>some</u> (but not all) individual POCs are listed in this Table.		
Prometon (1610-18-0)	50	C
Propachlor (1918-16-7)	35	A
Propanil (709-98-8)	7.0	A
Propazine (139-40-2)	16	A
Propham (122-42-9)	50	C
n-Propylbenzene (103-65-1)	5	C
Pyrene (129-00-0)	50	B
Pyridine (110-86-1)	50	B
Radium 226 (CAS No. Not Applicable)	*	
Remark: * Established through Radiation Control Permits, Part 380.		
Radium 226 and Radium 228 (CAS No. Not Applicable)	*	
Remark: * Established through Radiation Control Permits, Part 380.		
Radium 228 (CAS No. Not Applicable)	*	
Remark: * Established through Radiation Control Permits, Part 380.		

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Selenium (CAS No. Not Applicable)	20	A
Silver (CAS No. Not Applicable)	100	A
Simazine (122-34-9)	0.5	A
Sodium (CAS No. Not Applicable)	*	D
Remark: * Case-by-case evaluation.		
Styrene (100-42-5)	930	A
Sulfate (CAS No. Not Applicable)	500,000	A
Sulfide (CAS No. Not Applicable)	1,000	A
Tebuthiuron (34014-18-1)	50	C
Terbacil (5902-51-2)	50	C
Terbufos (13071-79-9)	0.09	B
Tetrachlorobenzenes (634-66-2; 634-90-2; 95-94-3; 12408-10-5)	*	*
Remark: * Value of 5 ug/L, Category C applies to each tetrachlorobenzene individually. Value of 10 ug/L, Category B applies to the sum of these substances.		
1,1,1,2-Tetrachloroethane (630-20-6)	5	C
1,1,2,2-Tetrachloroethane (79-34-5)	5	C
Tetrachloroethene (127-18-4)	5	C
Tetrachloroterephthalic acid (2136-79-0)	50	C
alpha, alpha, alpha, 4-Tetrachlorotoluene (5216-25-1)	5	C
Tetrahydrofuran (109-99-9)	50	B
1,2,3,4-Tetramethylbenzene (488-23-3)	5	C
1,2,3,5-Tetramethylbenzene (527-53-7)	5	C
1,2,4,5-Tetramethylbenzene (95-93-2)	5	C
Thallium (CAS No. Not Applicable)	0.5	B
Theophylline (58-55-9)	40	B
Thiram (137-26-8)	1.8	A
Toluene (108-88-3)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
Toluene-2,4-diamine (95-80-7)	5	C
Toluene-2,5-diamine (95-70-5)	5	C
Toluene-2,6-diamine (823-40-5)	5	C
o-Toluidine (95-53-4)	5	C
Tolyltriazole (29385-43-1)	50	B
Toxaphene (8001-35-2)	0.06	A
1,2,4-Tribromobenzene (615-54-3)	5	C
Tributyltin oxide (56-35-9)	50	B
2,4,6-Trichloroaniline (634-93-5)	5	C
Trichlorobenzenes (87-61-6; 120-82-1; 108-70-3; 12002-48-1)	*	*
Remark: * Value of 5 ug/L, Category C applies to each trichlorobenzene individually. Value of 10 ug/L, Category B applies to the sum of these substances.		
1,1,1-Trichloroethane (71-55-6)	5	C
1,1,2-Trichloroethane (79-00-5)	1	A
Trichloroethene (79-01-6)	5	A
Trichlorofluoromethane (75-69-4)	5	C
2,4,5-Trichlorophenoxyacetic acid (93-76-5)	35	A
2,4,5-Trichlorophenoxypropionic acid (93-72-1)	0.26	A
1,1,2-Trichloropropane (598-77-6)	5	C
1,2,3-Trichloropropane (96-18-4)	0.04	A
cis-1,2,3-Trichloropropene (13116-57-9)	5	C
trans-1,2,3-Trichloropropene (13116-58-0)	5	C
alpha,2,4-Trichlorotoluene (94-99-5)	5	C
alpha,2,6-Trichlorotoluene (2014-83-7)	5	C
alpha,3,4-Trichlorotoluene (102-47-6)	5	C
alpha,alpha,2-Trichlorotoluene (88-66-4)	5	C
alpha,alpha,4-Trichlorotoluene (13940-94-8)	5	C

Table 5 (Continued)

NEW YORK STATE GROUNDWATER EFFLUENT LIMITATIONS (CLASS GA)

JUNE 1998

SUBSTANCE (CAS No.)	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)	CATEGORY
2,3,4-Trichlorotoluene (7359-72-0)	5	C
2,3,5-Trichlorotoluene (56961-86-5)	5	C
2,3,6-Trichlorotoluene (2077-46-5)	5	C
2,4,5-Trichlorotoluene (6639-30-1)	5	C
2,4,6-Trichlorotoluene (23749-65-7)	5	C
1,1,1-Trichloro-2,2,2-trifluoroethane (354-58-5)	5	C
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	5	C
Trifluralin (1582-09-8)	35	A
1,2,3-Trimethylbenzene (526-73-8)	5	C
1,2,4-Trimethylbenzene (95-63-6)	5	C
1,3,5-Trimethylbenzene (108-67-8)	5	C
2,3,6-Trimethylpyridine (1462-84-6)	50	B
2,4,6-Trimethylpyridine (108-75-8)	50	B
sym-Trinitrobenzene (99-35-4)	5	C
2,3,4-Trinitrotoluene (602-29-9)	5	C
2,3,6-Trinitrotoluene (18292-97-2)	5	C
2,4,5-Trinitrotoluene (610-25-3)	5	C
2,4,6-Trinitrotoluene (118-96-7)	5	C
3,4,5-Trinitrotoluene (603-15-6)	5	C
Triphenyl phosphate (115-86-6)	50	B
Uranyl ion (CAS No. Not Applicable)	10,000	C
Vinyl chloride (75-01-4)	2	A
1,2-Xylene (95-47-6)	5	C
1,3-Xylene (108-38-3)	5	C
1,4-Xylene (106-42-3)	5	C
Zinc (CAS No. Not Applicable)	5,000	A
Zineb (12122-67-7)	1.8	A
Ziram (137-30-4)	4.2	A

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER

JUNE 1998

Notes: 1. This index refers to the user to Table 1, 3 or 5 of this TOGS. Entries within each Table are listed alphabetically. As this index indicates, a few entries are listed in both Tables 1 and 3. Substances in Table 1 with an ambient groundwater value also have a groundwater effluent limitation and are thus also listed in Table 5. The user is cautioned that not all substances included in "group" entries are individually listed in this index, and should read the text of Parts I and II of this TOGS.

2. Where an entry includes multiple substances, underlining identifies the specific substances that corresponds to the CAS number listed. Entries having no CAS number are indicated by "NA" (not applicable).

3. CAS numbers that represent groups of substances, including pairs of cis- and trans- isomers, may not be included in this index. The user may need to determine individual substances and CAS numbers.

4. Where entries in this index are separated by a semicolon, the table listings are also so separated and apply to the entry before and after the semicolon, respectively.

CAS Number	Entry	Table
NA	Alkyl diphenyl oxide sulfonates	1,5
NA	Aluminum, ionic; Aluminum	1;5
NA	Aminomethylene phosphonic acid salts	1,5
NA	Ammonia and Ammonium	1,5
NA	Antimony	1,5
NA	Arsenic	1,5
NA	Aryltriazoles	1,5
NA	Asbestos	1,5
NA	Barium	1,5
NA	Beryllium	1,5
NA	Boric acid, Borates and Metaborates	1,5
NA	Boron	1,5
NA	Bromide	1,5
NA	Butyl isopropyl phthalate	1,5
NA	Cadmium	1,5
NA	Chloramben	1,5
NA	Chloride	1,5
NA	Chlorinated dibenzo-p-dioxins and Chlorinated dibenzofurans	1,5

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
NA	Chlorine, Total Residual	1
NA	Chromium	1,5
NA	Chromium (hexavalent)	1,5
NA	Cobalt	1
NA	Copper	1,5
NA	Cyanide	1,5
NA	Dalapon	1,5
NA	Dissolved solids, total	5
NA	Fluoride	1,5
NA	Foaming agents	1,5
NA	Gross alpha radiation	1,5
NA	Gross beta radiation	1,5
NA	Iron; Iron and Manganese	1,5;1,5
NA	Isothiazolones, total; Isothiazolones	1;3
NA	Lead	1,5
NA	Linear alkylbenzene sulfonates (LAS)	1,3
NA	Magnesium	1,5
NA	Manganese; Iron and Manganese	1,5;1,5
NA	Mercury	1,5
NA	Methylbenz(a)anthracenes	1,5
NA	Nickel	1,5
NA	Nitrate (expressed as N); Nitrate and Nitrite (expressed as N)	1,5;1,5
NA	Nitrilotriacetic acid	1,5
NA	Nitrite (expressed as N); Nitrate and Nitrite (expressed as N)	1,5;1,5
NA	Nitrogen, total (expressed as N)	5
NA	Oil and Grease	5
NA	Organic substances, total	5
NA	pH	5
NA	Phenolic compounds (total phenols)	1,5

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
NA	Phenols, total chlorinated	1,5
NA	Phenols, total unchlorinated	1,5
NA	Phosphorus	1
NA	Picloram	1,5
NA	Polybrominated biphenyls	1,5
NA	Polychlorinated biphenyls	1,5
NA	Principal organic contaminant	1,5
NA	Quaternary ammonium compounds	1,3
NA	Radium 226; Radium 226 and Radium 228	1,5;1,5
NA	Radium 228; Radium 226 and Radium 228	1,5;1,5
NA	Selenium	1,5
NA	Silver	1,5
NA	Sodium	1,5
NA	Strontium 90	1
NA	Sulfate	1,5
NA	Sulfides, total; Sulfide	1;5
NA	Sulfite	1
NA	Thallium	1,5
NA	Tritium	1
NA	Uranyl ion	1,5
NA	Vanadium	1
NA	Zinc	1,5
50-00-0	Formaldehyde	3
50-29-3	p,p'-DDT	1,5
50-32-8	Benzo(a)pyrene	1,5
50-55-5	Reserpine	3
51-28-5	2,4-Dinitrophenol	1,5
52-51-7	Bronopol	3
52-85-7	Famphur	3

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
53-96-3	2-Acetylaminofluorene	3
55-18-5	N-Nitrosodiethylamine	3
55-70-3	Dibenz(a,h)anthracene	3
56-23-5	Carbon tetrachloride	1,5
56-35-9	Tributyltin oxide	1,5
56-38-2	Parathion; Parathion & Methyl parathion	1;1,5
56-49-5	3-Methylcholanthrene	3
56-55-3	Benz(a)anthracene	1,5
56-57-5	4-Nitroquinoline-1-oxide	3
57-14-7	1,1-Dimethylhydrazine	3
57-24-9	Strychnine	3
57-74-9	Chlordane	1,5
57-97-6	7, 12-Dimethylbenz(a)anthracene	3
58-55-6	Propylene glycol	3
58-55-9	Theophylline	1,5
58-89-9	gamma-Hexachlorocyclohexane	1,5
59-87-0	Nitrofurazone	3
59-89-2	N-Nitrosomorpholine	3
60-11-7	4-(Dimethylamino)azobenzene	3
60-29-7	Ethyl ether	3
60-51-5	Dimethoate	3
60-57-1	Aldrin and Dieldrin; Dieldrin	1;1,5
62-44-2	Phenacetin	3
62-50-0	Ethyl methane sulfonate	3
62-53-3	Aniline	1,5
62-56-6	Thiourea	3
62-75-9	N-Nitrosodimethylamine	3
63-25-2	Carbaryl	1,5
64-18-6	Formic acid	3

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
65-85-0	Benzoic acid	3
66-27-3	Methylmethanesulfonate	3
67-20-9	Nitrofurantoin	3
67-45-8	Furazolidone	3
67-56-1	Methanol	3
67-63-0	Isopropyl alcohol	3
67-64-1	Acetone	1,5
67-66-3	Chloroform	1,5
67-72-1	Hexachloroethane	1,5
68-12-2	Dimethylformamide	1,5
70-30-4	Hexachlorophene	1,5
70-55-3	4-Methyl benzene sulfonamide	3
71-23-8	1-Propanol	3
71-36-3	1-Butanol	3
71-43-2	Benzene	1,5
71-55-6	1,1,1-Trichloroethane	1,5
72-20-8	Endrin	1,5
72-43-5	Methoxychlor	1,5
72-54-8	p,p'-DDD	1,5
72-55-9	p,p'-DDE	1,5
74-11-3	4-Chlorobenzoic acid	3
74-83-9	Bromomethane	1,5
74-87-3	Methyl chloride	1,5
74-88-4	Methyl iodide	1,5
74-89-5	Methylamine	3
74-95-3	Dibromomethane	1,5
74-97-5	Bromochloromethane	1,5
75-00-3	Chloroethane	1,5
75-01-4	Vinyl chloride	1,5

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
75-05-8	Acetonitrile	3
75-09-2	Methylene chloride	1,5
75-15-0	Carbon disulfide	3
75-21-8	Ethylene oxide	1,5
75-25-2	Bromoform	1,5
75-27-4	Bromodichloromethane	1,5
75-31-0	Isopropylamine	3
75-34-3	1,1-Dichloroethane	1,5
75-35-4	1,1-Dichloroethene	1,5
75-43-4	Dichlorofluoromethane	1,5
75-56-9	Propylene oxide	3
75-60-5	Cacodylic acid	3
75-65-0	tert-Butyl alcohol	3
75-69-4	Trichlorofluoromethane	1,5
75-71-8	Dichlorodifluoromethane	1,5
75-86-5	Acetone cyanohydrin	3
75-87-6	Chloral	3
76-01-7	Pentachloroethane	1,5
76-03-9	Trichloroacetic acid	3
76-12-0	1,2-Difluoro-1,1,2,2-tetrachloroethane	1,5
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1,5
76-44-8	Heptachlor	1,5
77-47-4	Hexachlorocyclopentadiene	1,5
77-58-7	Dibutyltin dilaurate	3
77-73-6	Dicyclopentadiene	3
78-00-2	Tetraethyl lead	3
78-59-1	Isophorone	1,5
78-83-1	Isobutyl alcohol	3
78-87-5	1,2-Dichloropropane	1,5

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
78-93-3	Methyl ethyl ketone	1,5
78-99-9	1,1-Dichloropropane	1,5
79-00-5	1,1,2-Trichloroethane	1,5
79-01-6	Trichloroethene	1,5
79-06-1	Acrylamide	1,5
79-10-7	Acrylic acid	1,5
79-11-8	Chloroacetic acid	3
79-20-9	Methyl acetate	3
79-34-5	1,1,2,2-Tetrachloroethane	1,5
79-39-0	Methacrylamide	3
79-41-4	Methacrylic acid	1,5
79-43-6	Dichloroacetic acid	3
79-45-8	Dimethyldithiocarbamate	3
79-46-9	2-Nitropropane	3
80-15-9	Isopropylbenzene hydroperoxide	3
80-62-6	Methyl methacrylate	1,5
81-81-2	Warfarin	3
82-68-8	Pentachloronitrobenzene	1,5
83-32-9	Acenaphthene	1,5
83-79-4	Rotenone	3
84-66-2	Diethyl phthalate	1,5
84-74-2	Di-n-butylphthalate	1,5
85-00-7	See 2764-72-9	
85-01-8	Phenanthrene	1,5
85-44-9	1,3-Isobenzofurandione	3
85-68-7	Butyl benzyl phthalate	1,5
86-30-6	N-Nitrosodiphenylamine	1,5
86-50-0	Azinphosmethyl	1,5
86-73-7	Fluorene	1,5

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
86-74-8	Carbazole	3
87-41-2	1(3H)-Isobenzofuranone	3
87-59-2	2,3-Dimethylaniline	1,5
87-61-6	Trichlorobenzenes (1,2,3-)	1,5
87-62-7	2,6-Dimethylaniline	1,5
87-68-3	Hexachlorobutadiene	1,5
87-86-5	Pentachlorophenol	1,5
88-19-7	2-Methyl benzene sulfonamide	3
88-66-4	alpha, alpha,2-Trichlorotoluene	1,5
88-72-2	2-Nitrotoluene	1,5
88-73-3	2-Chloronitrobenzene	1,5
88-74-4	2-Nitroaniline	1,5
88-85-7	Dinoseb	1,5
91-20-3	Naphthalene	1,5
91-22-5	Quinoline	3
91-57-6	2-Methylnaphthalene	1,3
91-58-7	2-Chloronaphthalene	1,5
91-59-8	2-Napthylamine	3
91-80-5	Methapyrilene	3
91-94-1	3,3'-Dichlorobenzidine	1,5
92-52-4	1,1'-Biphenyl	1,5
92-67-1	4-Aminobiphenyl	1,5
92-87-5	Benzidine	1,5
93-14-1	Guaifenesin	1,5
93-65-2	2-(4-Chloro-2-methylphenoxy)propionic acid	3
93-72-1	2,4,5-Trichlorophenoxypropionic acid	1,5
93-76-5	2,4,5-Trichlorophenoxyacetic acid	1,5
94-59-7	Safrole	3
94-74-6	2-Methyl-4-chlorophenoxyacetic acid	1,5

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CAS Number	Entry	Table
94-75-7	2,4-Dichlorophenoxyacetic acid	1,5
94-81-5	4-(4-Chloro-2-methylphenoxy)butyric acid	3
94-82-6	2,4-DB	3
94-99-5	alpha,2,4-Trichlorotoluene	1,5
95-47-6	1,2-Xylene	1,5
95-49-8	2-Chlorotoluene	1,5
95-50-1	Dichlorobenzenes (1,2-)	1,5
95-51-2	2-Chloroaniline	1,5
95-53-4	o-Toluidine	1,5
95-54-5	1,2-Phenylenediamine	1,5
95-63-6	1,2,4-Trimethylbenzene	1,5
95-64-7	3,4-Dimethylaniline	1,5
95-68-1	2,4-Dimethylaniline	1,5
95-69-2	4-Chloro-o-toluidine	1,5
95-70-5	Toluene-2,5-diamine	1,5
95-73-8	2,4-Dichlorotoluene	1,5
95-75-0	3,4-Dichlorotoluene	1,5
95-78-3	2,5-Dimethylaniline	1,5
95-79-4	5-Chloro-o-toluidine	1,5
95-80-7	Toluene-2,4-diamine	1,5
95-84-1	Aminocresols (2-Amino-para-cresol)	1,5
95-93-2	1,2,4,5-Tetramethylbenzene	1,5
95-94-3	Tetrachlorobenzenes (1,2,4,5-)	1,5
96-12-8	1,2-Dibromo-3-chloropropane	1,5
96-18-4	1,2,3-Trichloropropane	1,5
96-19-5	See 13116-57-9 and 13116-58-0	
96-33-3	Methylacrylate	3
96-37-7	Methylcyclopentane	3
96-45-7	Ethylenethiourea	1,5

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CAS Number	Entry	Table
97-63-2	Ethyl methacrylate	3
98-01-1	Furfural	3
98-06-6	tert-Butylbenzene	1,5
98-07-7	alpha, alpha, alpha-Trichlorotoluene	3
98-56-6	4-Chlorobenzotrifluoride	1,5
98-82-8	Isopropylbenzene	1,5
98-83-9	alpha-Methylstyrene	1,5
98-86-2	Acetophenone	3
98-87-3	alpha, alpha-Dichlorotoluene	3
98-92-0	Niacinamide	1,5
98-95-3	Nitrobenzene	1,5
99-04-7	3-Methylbenzoic acid	3
99-08-1	3-Nitrotoluene	1,5
99-09-2	3-Nitroaniline	1,5
99-35-4	sym-Trinitrobenzene	1,5
99-55-8	5-Nitro-o-toluidine	1,5
99-59-2	2-Methoxy-5-nitroaniline	3
99-62-7	1,3-Diisopropylbenzene	1,5
99-65-0	1,3-Dinitrobenzene	1,5
99-87-6	4-Isopropyltoluene	1,5
99-99-0	4-Nitrotoluene	1,5
100-00-5	4-Chloronitrobenzene	1,5
100-01-6	4-Nitroaniline	1,5
100-18-5	1,4-Diisopropylbenzene	1,5
100-37-8	2-(Diethylamino)ethanol	3
100-41-4	Ethylbenzene	1,5
100-42-5	Styrene	1,5
100-44-7	Benzyl chloride	3
100-51-6	Benzyl alcohol	3

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CAS Number	Entry	Table
100-52-7	Benzaldehyde	3
100-61-8	N-Methylaniline	1,5
100-63-0	Phenylhydrazine	1,5
100-64-1	Cyclohexanone oxime	3
100-66-3	Anisole	3
100-75-4	N-Nitrosopiperidine	3
100-80-1	3-Methylstyrene	1,5
101-14-4	4,4'-Methylene-bis-(2-chloroaniline)	1,5
101-55-3	4-Bromophenylphenylether	3
101-61-1	4,4'-Methylene-bis-(N,N'-dimethyl)aniline	1,5
101-84-8	Phenyl ether	1,5
102-47-6	alpha, 3,4-Trichlorotoluene	1,5
103-23-1	Di(2-ethylhexyl)adipate	1,5
103-33-3	Azobenzene	1,5
103-65-1	n-Propylbenzene	1,5
103-82-2	Benzeneacetic acid	3
104-51-8	n-Butylbenzene	1,5
104-87-0	4-Methylbenzaldehyde	3
105-11-3	1,4-Quinone dioxide	3
105-60-1	Caprolactam	3
105-67-9	2,4-Dimethylphenol	1,5
106-37-6	1,4-Dibromobenzene	1,5
106-42-3	1,4-Xylene	1,5
106-43-4	4-Chlorotoluene	1,5
106-46-7	Dichlorobenzenes (1,4-)	1,5
106-47-8	4-Chloroaniline	1,5
106-49-0	4-Aminotoluene	1,5
106-50-3	1,4-Phenylenediamine	1,5
106-89-8	Epichlorohydrin	3

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CAS Number	Entry	Table
106-93-4	Ethylene dibromide	1,5
107-02-8	Acrolein	1,5
107-05-1	Allyl chloride	1,5
107-06-2	1,2-Dichloroethane	1,5
107-07-3	Ethylene chlorohydrin	1,5
107-12-0	Propionitrile	3
107-13-1	Acrylonitrile	1,5
107-18-6	Allyl alcohol	3
107-21-1	Ethylene glycol	1,5
107-30-2	Chloromethyl methyl ether	1,5
108-05-4	Vinyl acetate	3
108-10-1	4-Methyl-2-pentanone	3
108-18-9	Diisopropylamine	3
108-20-3	Diisopropyl ether	3
108-31-6	Maleic anhydride	3
108-36-1	1,3-Dibromobenzene	1,5
108-38-3	1,3-Xylene	1,5
108-41-8	3-Chlorotoluene	1,5
108-42-9	3-Chloroaniline	1,5
108-44-1	3-Aminotoluene	1,5
108-45-2	1,3-Phenylenediamine	1,5
108-60-1	Bis(2-chloro-1-methylethyl)ether	1,5
108-67-8	1,3,5-Trimethylbenzene	1,5
108-69-0	3,5-Dimethylaniline	1,5
108-70-3	Trichlorobenzenes (1,3,5-)	1,5
108-75-8	2,4,6-Trimethylpyridine	1,5
108-86-1	Bromobenzene	1,5
108-88-3	Toluene	1,5
108-90-7	Chlorobenzene	1,5

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CAS Number	Entry	Table
108-91-8	Cyclohexylamine	3
108-93-0	Cyclohexanol	3
108-94-1	Cyclohexanone	3
108-95-2	Phenol	1,5
109-06-8	alpha-Picoline	3
109-69-3	1-Chlorobutane	1,5
109-77-3	Malononitrile	3
109-78-4	Ethylene cyanohydrin	3
109-86-4	2-Methoxyethanol	3
109-89-7	Diethylamine	3
109-99-9	Tetrahydrofuran	1,5
110-00-9	Furan	3
110-49-6	2-Methoxyethanol acetate	3
110-54-3	n-Hexane	3
110-57-6	trans-1,4-Dichloro-2-butene	1,5
110-75-8	2-Chloroethyl vinyl ether	3
110-80-5	2-Ethoxyethanol	3
110-82-7	Cyclohexane	3
110-83-8	Cyclohexene	3
110-86-1	Pyridine	1,5
111-15-9	2-Ethoxyethanol acetate	3
111-44-4	Bis(2-chloroethyl)ether	1,5
111-46-6	Diethylene glycol	3
111-70-6	1-Heptanol	3
111-90-0	Diethylene glycol monoethyl ether	3
111-91-1	Bis(2-chloroethoxy)methane	1,5
112-31-2	Decanal	3
112-34-5	Butoxyethoxyethanol	1,5
115-07-1	1-Propene	3

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CAS Number	Entry	Table
115-29-7	Endosulfan	1,3
115-86-6	Triphenyl phosphate	1,5
116-06-3	Aldicarb; Aldicarb and Methomyl	1,5
117-80-6	2,3-Dichloro-1,4-napthoquinone	3
117-81-7	Bis(2-ethylhexyl)phthalate	1,5
117-84-0	Di-n-octyl phthalate	1,5
118-69-4	2,6-Dichlorotoluene	1,5
118-74-1	Hexachlorobenzene	1,5
118-75-2	Chloranil	1,5
118-90-1	2-Methylbenzoic acid	3
118-96-7	2,4,6-Trinitrotoluene	1,5
119-90-4	3,3'-Dimethoxybenzidine	3
119-93-7	3,3'-Dimethylbenzidine	1,5
120-12-7	Anthracene	1,5
120-58-1	Isosafrole	3
120-61-6	Dimethylterephthalate	3
120-82-1	Trichlorobenzenes (1,2,4-)	1,5
120-83-2	2,4-Dichlorophenol	1,5
120-92-3	Cyclopentanone	3
121-14-2	2,4-Dinitrotoluene	1,5
121-44-8	Triethylamine	3
121-69-7	N,N-Dimethylaniline	1,5
121-73-3	3-Chloronitrobenzene	1,5
121-75-5	Malathion	1,5
121-82-4	Cyclotrimethylenetrinitramine	3
122-09-8	alpha, alpha-Dimethyl phenethylamine	1,5
122-34-9	Simazine	1,5
122-39-4	Diphenylamine	1,5
122-42-9	Propham	1,5

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CAS Number	Entry	Table
122-66-7	Diphenylhydrazines (1,2-); 1,2-Diphenylhydrazine	1;5
123-31-9	Hydroquinone	1,5
123-33-1	Maleic hydrazide	3
123-73-9	trans-2-Butenal	1,5
123-91-1	1,4-Dioxane	3
124-09-4	Hexamethylene diamine	3
124-19-6	Nonanal	3
124-40-3	Dimethylamine	3
124-48-1	Dibromochloromethane	1,5
126-39-6	2-Methylethyl-1,3-dioxolane	1,5
126-68-1	o,o,o-Triethylphosphorothioate	3
126-75-0	Demeton (-S)	1
126-98-7	Methacrylonitrile	1,5
126-99-8	Chloroprene	1,5
127-18-4	Tetrachloroethene	1,5
129-00-0	Pyrene	1,5
130-15-4	1,4-Naphthoquinone	3
131-11-3	Dimethyl phthalate	1,5
132-64-9	Dibenzofuran	3
133-06-2	Captan	1,5
133-07-3	Folpet	1,5
134-32-7	1-Napthylamine	3
135-98-8	sec-Butylbenzene	1,5
136-25-4	Pentanate	3
137-26-8	Thiram	1,5
137-30-4	Ziram	1,5
138-86-3	1-Methyl-4-(1-methylethenyl)cyclohexene	3
139-40-2	Propazine	1,5
140-57-8	Aramite	3

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CAS Number	Entry	Table
140-88-5	Ethyl acrylate	3
141-05-9	Diethyl maleate	3
141-78-6	Ethyl acetate	3
142-28-9	1,3-Dichloropropane	1,5
142-59-6	Nabam	1,5
142-82-5	n-Heptane	3
143-07-7	Dodecanoic acid	3
143-08-8	1-Nonanol	3
143-50-0	Kepone	1,5
145-73-3	Endothall	1,5
148-18-5	Sodium diethyldithiocarbamate	3
149-30-4	Mercaptobenzothiazole	1,5
152-16-9	Octamethylpyrophosphoramine	3
156-59-2	cis-1,2-Dichloroethene	1,5
156-60-5	trans-1,2-Dichloroethene	1,5
191-24-2	Benzo(g,h,i)perylene	3
192-97-2	Benzo(e)pyrene	3
193-39-5	Indeno (1,2,3-cd)pyrene	1,5
205-99-2	Benzo(b)fluoranthene	1,5
206-44-0	Fluoranthene	1,5
207-08-9	Benzo(k)fluoranthene	1,5
208-96-8	Acenaphthylene	3
218-01-9	Chrysene	1,5
271-61-4	Benzisothiazole	1,5
297-97-2	o,o-Diethyl-o-2-pyrazinyl phosphorothioate	3
298-00-0	Parathion & Methyl parathion	1,5
298-02-2	Phorate & Disulfoton	1,5
298-03-3	Demeton (-o)	1
298-04-4	Phorate & Disulfoton	1,5

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CAS Number	Entry	Table
299-84-3	Ronnel	3
302-01-2	Hydrazine	1,3
309-00-2	Aldrin; Aldrin & Dieldrin	1,5;1
314-40-9	Bromacil	1,5
319-84-6	alpha-Hexachlorocyclohexane	1,5
319-85-7	beta-Hexachlorocyclohexane	1,5
319-86-8	delta-Hexachlorocyclohexane	1,5
328-84-7	3,4-Dichlorobenzotrifluoride	1,5
330-55-2	Linuron	3
333-41-5	Diazinon	1,5
354-58-5	1,1,1-Trichloro-2,2,2-trifluoroethane	1,5
460-35-5	3-Chloro-1,1,1-trifluoropropane	1,5
462-08-8	Aminopyridines (3-)	1,5
465-73-6	Isodrin	1,5
479-18-5	Dyphylline	1,5
488-23-3	1,2,3,4-Tetramethylbenzene	1,5
501-52-0	Benzenepropanoic acid	3
504-24-5	Aminopyridines (4-)	1,5
504-29-0	Aminopyridines (2-)	1,5
506-68-3	Cyanogen bromide	1,5
506-77-4	Cyanogen chloride	1,5
510-15-6	Chlorobenzilate	3
512-56-1	Trimethyl phosphate	3
515-30-0	alpha-Hydroxy-alpha-methylbenzeneacetic acid	3
526-73-8	1,2,3-Trimethylbenzene	1,5
527-53-7	1,2,3,5-Tetramethylbenzene	1,5
527-84-4	2-Isopropyltoluene	1,5
529-20-4	2-Methylbenzaldehyde	3

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CAS Number	Entry	Table
530-50-7	Diphenylhydrazines (1,1-); 1,1-Diphenylhydrazine	1;5
531-82-8	Furium	3
535-77-3	3-Isopropyltoluene	1,5
538-39-6	4,4'-Dimethylbibenzyl	1,5
540-73-8	1,2-Dimethylhydrazine	3
541-73-1	Dichlorobenzenes (1,3-)	1,5
542-75-6	1,3-Dichloropropene (sum of cis- and trans-)	1,5
542-88-1	Bis(chloromethyl)ether	1,5
543-49-7	2-Heptanol	3
563-12-2	Ethion	3
563-58-6	1,1-Dichloropropene	1,5
577-55-9	1,2-Diisopropylbenzene	1,5
583-53-9	1,2-Dibromobenzene	1,5
584-84-9	Toluene diisocyanate	3
589-18-4	4-Methylbenzenemethanol	3
589-38-8	3-Hexanone	3
589-55-9	4-Heptanol	3
589-82-2	3-Heptanol	3
589-93-5	2,5-Lutidine	3
591-78-6	2-Hexanone	1,5
594-18-3	Dibromodichloromethane	1,5
594-20-7	2,2-Dichloropropane	1,5
597-64-8	Tetraethyl tin	3
598-77-6	1,1,2-Trichloropropane	1,5
602-01-7	2,3-Dinitrotoluene	1,5
602-29-9	2,3,4-Trinitrotoluene	1,5
603-15-6	3,4,5-Trinitrotoluene	1,5
606-20-2	2,6-Dinitrotoluene	1,5
608-73-1	See 58-89-9; 319-84-6; 319-85-7; 319-86-8; and 6108-10-7	

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CAS Number	Entry	Table
608-93-5	Pentachlorobenzene	1,5
610-25-3	2,4,5-Trinitrotoluene	1,5
610-39-9	3,4-Dinitrotoluene	1,5
611-15-4	2-Methylstyrene	1,5
613-12-7	2-Methylanthracene	3
615-54-3	1,2,4-Tribromobenzene	1,5
617-84-4	Diethyl formamide	3
617-94-7	Dimethylphenylcarbinol	3
618-85-9	3,5-Dinitrotoluene	1,5
619-15-8	2,5-Dinitrotoluene	1,5
620-23-5	3-Methylbenzaldehyde	3
621-64-7	N-Nitrosodipropylamine	3
622-97-9	4-Methylstyrene	1,5
625-86-5	2,5-Dimethylfuran	3
627-26-9	trans-2-Butenenitrile	1,5
630-20-6	1,1,1,2-Tetrachloroethane	1,5
634-66-2	Tetrachlorobenzenes (1,2,3,4-)	1,5
634-90-2	Tetrachlorobenzenes (1,2,3,5-)	1,5
634-93-5	2,4,6-Trichloroaniline	1,5
637-50-3	3-Phenyl-1-propene	1,5
643-79-8	1,2-Benzenedicarboxaldehyde	3
683-18-1	Dibutyltin chloride	3
684-93-5	N-Nitroso-N-methyl urea	3
709-98-8	Propanil	1,5
759-96-4	Ethyl di-n-propylthiocarbamate (EPTC)	3
764-41-0	See 1476-11-5 and 110-57-6	
765-34-4	Glycidaldehyde	3
766-90-5	cis-1-Phenyl-1-propene	1,5
767-58-8	2,3-Dihydro-1-methyl-1H-indene	3

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CAS Number	Entry	Table
823-40-5	Toluene-2,6-diamine	1,5
834-12-8	Ametryn	1,5
873-66-5	trans-1-Phenyl-1-propene	1,5
873-94-9	3,3,5-Trimethylcyclohexanone	3
923-02-4	Methylolmethacrylamide	3
924-16-3	N-Nitrosodi-N-butylamine	3
930-55-2	N-Nitrosopyrrolidine	3
957-51-7	Diphenamid	1,5
959-98-8	Endosulfan I	3
1024-57-3	Heptachlor epoxide	1,5
1031-07-8	Endosulfan sulfate	3
1071-83-6	Glyphosate	1,5
1114-71-2	Pebulate	3
1122-60-7	Nitrocyclohexane	3
1163-19-5	Bis(pentabromophenyl)ether	3
1190-76-7	cis-2-Butenenitrile	1,5
1321-12-6	See 88-72-2; 99-08-1 and 99-99-0	
1330-20-7	See 95-47-6; 106-42-3 and 108-38-3	
1462-84-6	2,3,6-Trimethylpyridine	1,5
1476-11-5	cis-1,4-Dichloro-2-butene	1,5
1563-66-2	Carbofuran	1,5
1582-09-8	Trifluralin	1,5
1589-49-7	Propylene glycol monomethyl ether	3
1610-18-0	Prometon	1,5
1634-04-4	Methyl tert-butyl ether	3
1646-87-3	Aldicarb sulfoxide	1,5
1646-88-4	Aldicarb sulfone	1,5
1702-17-6	Clopyralid	3
1807-55-2	4,4'-Methylene-bis-(N-methyl)aniline	1,5

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CAS Number	Entry	Table
1861-32-1	Dimethyl tetrachloroterephthalate	1,5
1861-40-1	Benefin	1,5
1863-63-4	Benzoic acid, ammonium salt	3
1875-92-9	Dimethylbenzylammonium chloride	3
1888-71-7	Hexachloropropene	1,5
1897-45-6	Chlorothalonil	1,5
1912-24-9	Atrazine	1,5
1918-00-9	Dicamba	1,5
1918-16-7	Propachlor	1,5
1929-77-7	Vernolate	3
2008-41-5	Butylate	1,5
2014-83-7	alpha, 2,6-Trichlorotoluene	1,5
2077-46-5	2,3,6-Trichlorotoluene	1,5
2104-96-3	Bromophos	3
2136-79-0	Tetrachloroterephthalic acid	1,5
2164-17-2	Fluometuron	1,5
2207-04-7	trans-1,4-Dimethyl cyclohexane	3
2212-67-1	Molinate	3
2303-16-4	Diallate	3
2303-17-5	Triallate	3
2385-85-5	Mirex	1,5
2425-06-1	Captafol	3
2439-10-3	Dodecylguanidine acetate and Dodecyguanidine hydrochloride	1,5
2641-56-7	Diethyltin dycaprylate	3
2764-72-9	Diquat	1,5
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	1,5
2835-95-2	Aminocresols (5-Amino-ortho-cresol)	1,5
2835-99-6	Aminocresols (4-Amino-meta-cresol)	1,5
2921-88-2	Chlorpyrifos	3

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
3252-43-5	2,2-Dibromo-3-nitrilopropionamide & Dibromoacetonitrile; Dibromoacetonitrile	1;3
3558-60-9	(2-Methoxyethyl)benzene	1,5
3689-24-5	Tetraethyl dithiopyrophosphate	3
4013-34-7	(1-Methoxyethyl)benzene	1,5
4170-30-3	See 123-73-9 and 15798-64-8	
4376-18-5	Methylphthalate	3
4685-14-7	Paraquat	1,5
4726-14-1	Nitralin	1,5
4786-20-3	See 1190-76-7 and 627-26-9	
4957-14-6	4,4'-Dimethyldiphenylmethane	1,5
5131-66-8	Butoxypropanol	1,5
5197-80-8	Dimethylethylbenzylammonium chloride	3
5216-25-1	alpha, alpha, alpha, 4-Tetrachlorotoluene	1,5
5234-68-4	Carboxin	1,5
5902-51-2	Terbacil	1,5
6108-10-7	epsilon-Hexachlorocyclohexane	1,5
6317-18-6	Methylene bisthiocyanate	1,5
6639-30-1	2,4,5-Trichlorotoluene	1,5
7005-72-3	4-Chlorophenyl phenyl ether	3
7359-72-0	2,3,4-Trichlorotoluene	1,5
7421-93-4	Endrin aldehyde	1,5
7486-38-6	Sodium adipate, disodium salt	3
7664-41-7	Ammonia and Ammonium	1,5
7783-06-4	Hydrogen sulfide	1,5
8001-35-2	Toxaphene	1,5
8018-01-7	Mancozeb	1,5
8065-48-3	Demeton	1,3
9003-27-4	Polybutene(1-propene, 2-methyl homopolymer)	3
10061-01-5	see 542-75-6	

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
10061-02-6	see 542-75-6	
10222-01-2	2,2-Dibromo-3-nitrilopropionamide & Dibromoacetonitrile	1,5
10595-95-6	N-Nitrosomethylethylamine	3
12002-48-1	Trichlorobenzenes	1,5
12122-67-7	Zineb	1,5
12408-10-5	Tetrachlorobenzenes	1,5
12427-38-2	Maneb	1,5
13071-79-9	Terbufos	1,5
13116-57-9	cis-1,2,3-Trichloropropene	1,5
13116-58-0	trans-1,2,3-Trichloropropene	1,5
13560-89-9	Dechlorane Plus	1,5
13590-97-1	Dodecylguanidine acetate and Dodecylguanidine hydrochloride	1,5
13940-94-8	alpha, alpha, 4-Trichlorotoluene	1,5
14484-64-1	Ferbam	1,5
14838-15-4	Phenylpropanolamine	1,5
15798-64-8	cis-2-Butenal	1,5
15972-60-8	Alachlor	1,5
16655-82-6	3-Hydroxycarbofuran	3
16752-77-5	Aldicarb & Methomyl	1,5
17059-48-2	2,3-Dihydro-1,6-dimethyl-1H-indene	3
18292-97-2	2,3,6-Trinitrotoluene	1,5
19089-47-5	Propylene glycol monoethyl ether	3
19398-61-9	2,5-Dichlorotoluene	1,5
21087-64-9	Metribuzin	1,5
21564-17-0	2-(Thiocyanomethylthio)benzothiazole	3
21725-46-2	Cyanazine	3
23135-22-0	Oxamyl	1,5
23184-66-9	Butachlor	1,5
23749-65-7	2,4,6-Trichlorotoluene	1,5

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
23950-58-5	Pronamide	3
25056-70-6	Hexanate	3
25136-55-4	Dimethyldioxane	3
25154-54-5*	See 99-65-0	
25167-93-5	See 88-73-3; 100-00-5 and 121-73-3	
25168-05-2	See 95-49-8; 106-43-4 and 108-41-8	
25186-47-4	3,5-Dichlorotoluene	1,5
25265-76-3	See 95-54-5; 106-50-3 and 108-45-2	
25321-09-9	See 99-62-7; 100-18-5 and 577-55-9	
25321-14-6	See 121-14-2; 602-01-7; 606-20-2; 610-39-9; 618-85-9 and 619-15-8	
25321-22-6	See 95-50-1; 106-46-7 and 541-73-1	
25551-13-7	See 95-63-6; 108-67-8 and 526-73-8	
25973-55-1	2-(2-Hydroxy-3,5-di-tert-pentylphenyl)benzotriazole	1,5
26399-36-0	Profluralin	3
26445-05-6	Aminopyridines	1,5
26523-64-8	See 76-13-1 and 354-58-5	
27134-26-5	See 95-51-2; 106-47-8 and 108-42-9	
29082-74-4	Octachlorostyrene	1,5
29091-21-2	Prodiamine	3
29385-43-1	Tolyltriazole	1,5
29611-84-5*	See 108-75-8 and 1462-84-6	
29761-21-5	Isodecyl diphenyl phosphate	1,3
29797-40-8	See 95-73-8; 95-75-0; 118-69-4; 19398-61-9; 25186-47-4 and 32768-54-0	
30560-19-1	Acephate	3
31600-69-8	4-(1-Methylethoxy)-1-butanol	1,5
32768-54-0	2,3-Dichlorotoluene	1,5
33213-65-9	Endosulfan II	3
33820-53-0	Isopropalin	1,5
34014-18-1	Tebuthiuron	1,5

INDEX OF TOGS 1.1.1 TABLE 1, 3 AND 5 ENTRIES BY CHEMICAL ABSTRACTS SERVICE REGISTRY (CAS) NUMBER JUNE 1998 (Continued)

CAS Number	Entry	Table
35448-14-7	Oxalic acid, benzyl ester	3
37299-86-8	Rhodamine WT	3
39196-18-4	Thiofanox	3
40487-42-1	Pendimethalin	1,5
51218-45-2	Metolachlor	3
51235-04-2	Hexazinone	1,5
53494-70-5	Endrin ketone	1,5
56961-86-5	2,3,5-Trichlorotoluene	1,5
68391-01-5	Alkyl dimethyl benzyl ammonium chloride	1,5
95266-40-3	Cimectacarb	3

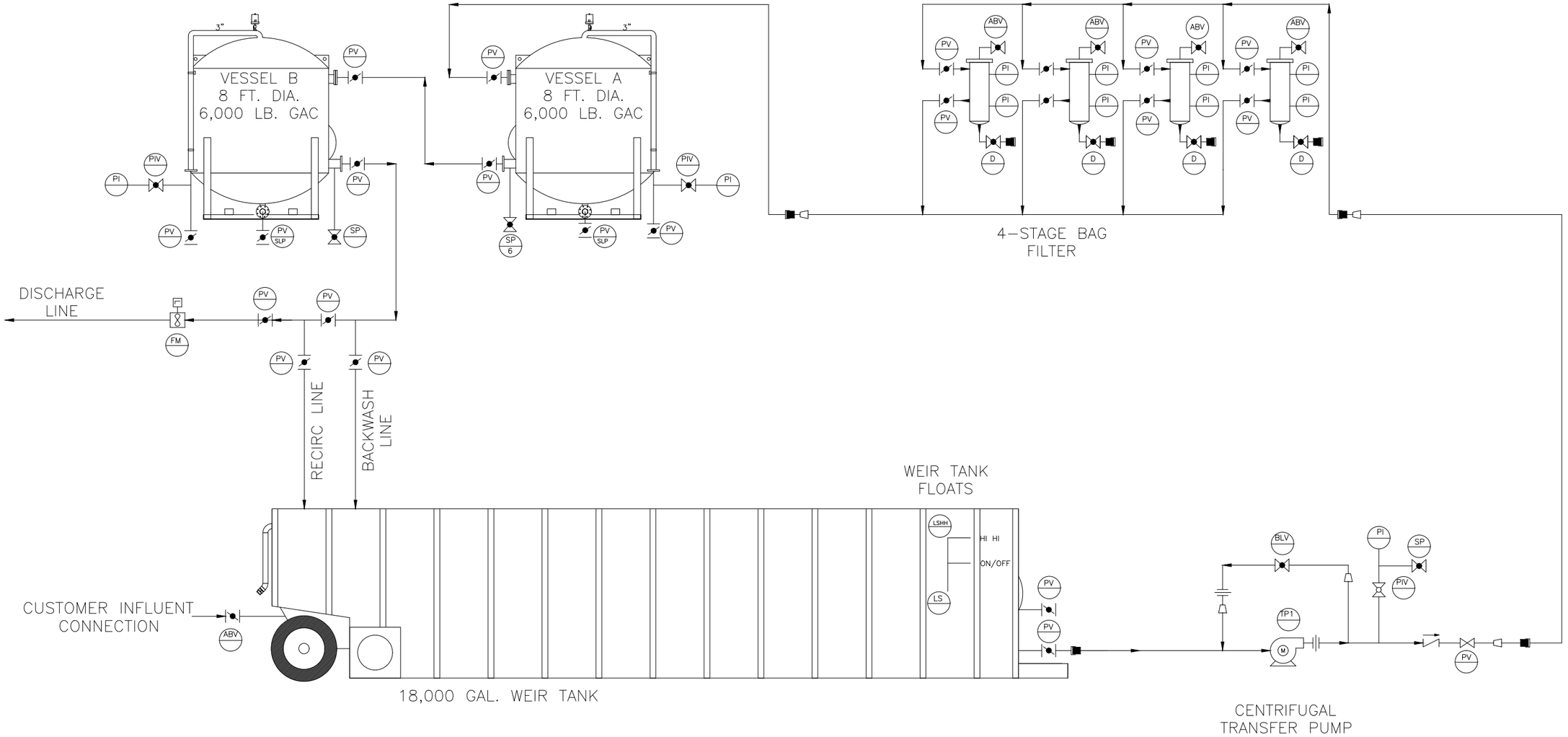
* This non-individual CAS number also refers to one or more individual substances that are not specifically listed in the table. These individual substances, however, may be encompassed by a group entry in Table 1 (for example, Principal Organic Comtaminant or Phenolic Compounds). Refer to the text of Part I of this document for an explanation of group entries.

s/s (6/17/98)
N.G. Kaul, P.E.
Director
Division of Water

APPENDIX C - Health and Safety Plan (Place Holder)

APPENDIX D
WATER TREATMENT SYSTEM DIAGRAM
(TYPICAL)

ITEM	QTY	DESCRIPTION	MANUFACTURER	MANF NO



REV	DATE	DESCRIPTION	DRW	APPR

DRAWING NO.	SIZE B	SCALE NTS	REV	JOB NO.	
CUSTOMER	MATERIAL				
DRAWN BY REN WILLIS	DATE 12/4/2015	SHEET 1		UNIT NO.	

ProAct SERVICES CORPORATION

PROCESS & INSTRUMENTATION DIAGRAM
200 GPM WATER TREATMENT SYSTEM
(WITH ALT. 400 GPM MAXIMUM GPM)

APPENDIX F
CONCEPTUAL SITE MODEL (TABULAR FORM)

Conceptual Site Model
for
186-200 Westchester Avenue, White Plains, New York
Site No. C360148

Please note: The CSM is intended to be refined and updated as new information becomes available.

1.0 Site Description

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Site Location (Address and Tax Parcel ID)	186-200 Westchester Avenue White Plains, NY 10601 Tax ID: 126.61-5-3 and 126.61-5-4	Lots will be combined into one Property for development	Westchester County GIS
Site Description (Acreage, Layout, current buildings, undeveloped areas, parking facilities/paved areas, etc)	186 Westchester Ave – 0.15 acres; current BP Gas Station; asphalt pavement; 2 pump islands with canopy and 1 convenience store. 200 Westchester Avenue – 1 building former Seaberg Frozen Foods; asphalt pavement Building footprint and parking/asphalt pavement covers entire lot	200 Westchester Ave. currently vacant.	Site visit
Current Zoning and future zoning	R1-12.5 (Residential one-family)		

***Existence of infrastructure (i.e., sewer, water, roads* etc.)**	South Yonkers Sewer District City of White Plain Water District Land Use: 186 Westchester – Commercial & Retail 200 Westchester – Manufacturing, Industrial, Warehousing		

2.0 Site Developer and Development Plan

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Developer/Applicant Name and Address	Rimawi Inc. 186 Westchester Ave. White Plains, NY 10601		
Current Owner Name and Address (if different from 2.1)	Nabiel Rimawi (186 Westchester) and Bonnie Realty Corp (200 Westchester)		
Proposed future use and development plan	Gasoline Station with convenience store		
Project start date and completion date (Project Schedule)	Summer 2016 -		
Consultant Name and Address	VHB 50 Main Street. Suite 360 White Plains, NY		Site Plan attached in RAWP

3.0 Site Regulatory/Operational/Investigation History

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Operational History and known or potential use of chemicals or hazardous substances	Garage, auto wrecking facility and filling station, retail (frozen foods)		
	Gasoline, fuel oil, solvents, refrigeration compressor		
Regulatory History	Registered Bulk Storage Facility; Former small quantity generator and large quantity generator; numerous spills related to petroleum releases;		
	Brownfield Cleanup Program - 2016		
Investigation History	Subsurface Site Assessment, Exxon S/S #3-1356, 186 Westchester Avenue, White Plains, New York, IT Environmental Services, March 22, 1989	FOIL requests have also been submitted for Tank Closure Site Assessment Reports	Desktop Review Letter, Langan, January 23, 2014
	Subsurface Assessment and Remedial Plan, Exxon S/S #3-1356, 186 Westchester Avenue, White Plains, New York, IT Environmental Services, July 27, 1989		
	Groundwater and Soil Investigation Report, Mobil Service Station #N5B, White Plains, New York, Groundwater Technology, Inc., April 27, 1990		

	Remedial Investigation/Feasibility Study, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., April 3, 2007		
	Remedial Feasibility Summary Report, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., April 23, 2010		
	Remedial Action Plan, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., February 10, 2011		
	Quarterly Monitoring Report & Requests, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., July 19, 2013 and October 16, 2015		
	Draft Limited Phase II Environmental Site Investigation Report, Langan, March 10, 2014		

4.0 Potential Contaminants and Source Areas

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Known Release Areas on Site	Petroleum release affecting entire site; original release reported based on free product observed in utility vault (186 Westchester Ave.)		

Potential Source areas /areas of contamination on Site	Former petroleum underground storage tanks (USTs) affecting soil and groundwater; USTs currently registered and in use		
	Former refrigeration units and compressor on 200 Parcel		

5.0 Adjacent Properties and Release Sites

SECTIONS	**DESCRIPTION**	**COMMENTS**	**REFERENCE USED**
Adjacent site land uses(past & present)	Carwash, junkyard, gas station, public works garage, retail		
Known or potential contaminant sources on adjacent sites.	Splash Car Wash (Former Kensico Wrecking/Junkyard); DPW Garage-140 South Kensico Ave (Former Junkyard); Exxon Mobil Service Station-174 Westchester Ave.		

6.0 Geologic and Hydrogeologic Setting

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Regional Geology	Poorly sorted glacial till;	Determined from former consultant's (GES) work	
Site Geology	Medium fine sand and gravel	Determined from former consultant's (GES) work	Draft Limited Phase II Environmental Site Investigation Report, Langan, March 10, 2014
Site Hydrogeology	The unconsolidated soil encountered at depths ranging from two to five feet below grade (fbg) is a moderately permeable fill material consisting of sands and gravel. The fill overlies a moderate to highly permeable sand and gravel unit which is underlain by a low permeability till material consisting of fine sands and silt.	Determined from former consultant's (GES) work	Quarterly Monitoring Report & Requests, 186 Westchester Avenue, White Plains, New York, Groundwater & Environmental Services, Inc., July 19, 2013

7.0 Surface and Subsurface Soil

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Potential Contamination areas and contaminants (include concentration ranges, if known) for surface soil	Refrigeration equipment on 200 Parcel		
Potential Receptors	Plants, animals		
Potential Contamination areas and contaminants (include concentration ranges, if known) for sub-surface soil	VOC, SVOC in soil		
Potential Receptors	Utility workers, site development/civil workers; plants, animals		

8.0 Groundwater

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Background contamination	VOC and SVOC		
Distance to Nearest drinking water source	>3.5 miles - Kensico Reservoir		
Predominant use of groundwater in the area and Site	Not a source of potable water		
Depth & direction of groundwater flow of the uppermost aquifer	Variable as reported	Will be defined by comprehensive survey of all site wells	
Deeper aquifer and impermeable layers (depth, thickness and flow direction			
Distance to Water Resource Protection Area			
Potential Contaminants (include concentration ranges, if known)	VOC, SVOCs in excess of Ambient Water Quality Standards		
Potential Receptor(s)	Private wells, community wells, water bodies	Nearest water body is Mamaroneck River, a stream of Silver Lake	

9.0 Surface Water

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Nearest surface water body (include distance from site)	Mamaroneck River, stream located apx. 748 feet east of Site		
Site Surface drainage direction	Topographically to the southwest		
Usage of surface water at the area and Site	NA		
Potential Contaminants (include concentration ranges, if known)			
Receptors			
Offsite source of Contamination			
Groundwater to surface water loading			

10.0 Sediment

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Background contamination			
Site related contaminants	SVOC, VOC		
Potential Receptor(s)	Benthic macroinvertebrates	Of site impacts have not been documented	

11.0 Air (Vapor Intrusion)

SECTIONS	DESCRIPTION	COMMENTS	REFERENCE USED
Contaminant with Vapor Intrusion Potential	VOC		
Current & Potential buildings within 100 feet and type of building	Onsite convenience store and vacant retail store		
Preferential Pathway	UST below grade piping; utilities		

12.0 Ecological Concern

Are any of the following ecologically sensitive areas (ECSA) present on or adjacent to the site?

Criteria	YES or NO	DESCRIPTION	COMMENTS	REFERENCE USED
ESCA on or adjacent to site	No			Westchester County GIS
Critical Habitat for endangered or threaten species	No			
Parks, wildlife refuge	No			
Coastal Barriers	No			
Spawning, migration and feeding areas	No			
Water way (stream, lake etc.)	No			
Wetland	No			
Site Within 2,000 feet of an ECSA	Yes	Mamaroneck River located apx. 748 feet east of site.		Westchester County GIS Map
Connected to a ECSA via open-space, wooded area, ag land, perennial water body or other natural corridor?	No			
Storm runoff from the site discharges via a pipe or drainage swale directly to the ECSA?	No			
Evidence of soil erosion from the site such as gulleys, washout features	No			
The site supports fauna with a shelter or food source	No			
Evidence of stressed veg., barren soil, dead animals, fish kills or other ecological detriments?	No			

13.0 Other Federal/State/ Local Agency Involvement

(Identify the agencies, issues and contacts related to this site. Fill in only the items that apply)

Agencies	Issues/Involvements	Contact	Comments
NYSDEC PBS	underground storage tanks	845-255-3072	
Brownfield Program	Current cleanup program	518-402-9657	
City of White Plains, Bureau of Wastewater	Future discharge permit	914- 422-1220	

14.0 Site Conceptual Model (Table)

Known and Potential Sources	Impacted Media	Contaminants of Concern	Exposure Route	Receptors		Comments
				Current	Future	
UST/petroleum Release/LNAPL	Soil	VOC and SVOC	Dust – during site development		Utility workers	Site will be capped by new development
	Groundwater	VOC and SVOC			Deep aquifer, stream	Groundwater not used as source of potable water
	Soil vapor	VOC	Vapor intrusion		Area resident	

Notes:

Sources: historic fill, spill areas, USTs, hotspots (arsenic, lead, NAPL), etc

Impacted Media: Soil, Groundwater, Sediment, Surface water, Soil vapor, etc

Contaminant of Concern: dominant contaminants that will drive the risk, etc

Exposure routes: inhalation of vapors, dust, dermal, ingestion, fish consumption, etc.

Receptors: area resident, future construction worker, recreational user, office worker, trespasser, gardener, fish and other ecological receptors, etc.