DECISION DOCUMENT

Cornerstone Enterprises Inc.
Brownfield Cleanup Program
Pawling, Dutchess County
Site No. C314116
September 2012

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Cornerstone Enterprises Inc.
Brownfield Cleanup Program
Pawling, Dutchess County
Site No. C314116
September 2012

Statement of Purpose and Basis

This document presents the remedy for the Cornerstone Enterprises Inc. site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Cornerstone Enterprises Inc. site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. A site cover to allow for restricted residential use of the site. The cover will consist either of structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required, it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer with the upper six inches of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

2. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

(a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3);

(b) allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;

(c) restricts the use of groundwater as a source of potable or process water, without necessary

water quality treatment as determined by the NYSDOH or County DOH; and

(d) requires compliance with the Department approved Site Management Plan.

3. A Site Management Plan is required, which includes the following:

(a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed above.

Engineering Controls: The soil cover discussed above.

This plan includes, but may not be limited to:

(i) an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

(ii) descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;

(iii) a provision for evaluation of the potential for soil vapor intrusion should the on-site building become occupied and for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

(iv) provisions for the management and inspection of the identified engineering controls;

(v) maintaining site access controls and Department notification; and

(vi) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

(i) monitoring for vapor intrusion for any buildings occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in item a above.

4. Green remediation principals and techniques will be implemented to the extent feasible in the site management of the remedy as per DER-31. The major green remediation components are as follows:

(a) Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;

(b) Reducing direct and indirect greenhouse gas and other emissions;

(c) Increasing energy efficiency and minimizing use of non-renewable energy;

(d) Conserving and efficiently managing resources and materials;

(e) Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

9/28/12
Date

Michael Ryan, Director
Remedial Bureau C

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Cornerstone Enterprises Inc.
Pawling, Dutchess County
Site No. C314116
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SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

Pawling Free Library
Attn: Scott Jarzombek
11 Broad Street
Pawling, NY 12564
Phone: 845-855-3444

NYSDEC Region 3
Attn: Please Call for Appointment
21 S. Putt Corners Road
New Paltz, NY 12561

Phone: 845-256-3154

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Cornerstone Enterprises site is located at 33 East Main Street in a suburban area of the Village of Pawling.

Site Features: The 0.23 acre property, situated on the south side of East Main Street, includes a 10,000 square foot building and a parking lot in the northern and eastern portions of the property. A tributary to the East Branch of the Croton River borders the eastern property boundary, and flows to the south.

Current Use/Zoning: The site is currently inactive, and has been for over 25 years. The site is zoned for commercial use. St. John's Catholic Church rectory and meeting center are located next to the site. Dutchess Auto Body is across the street from the site. Other properties in the immediate vicinity of the site are used for commercial and residential purposes.

Historic Use: The property was operated as an automotive maintenance facility and retail gasoline sales station until 1985 (Riley's Garage).

Site Geology/Hydrogeology: The groundwater at the site flows in a southerly direction. The depth of groundwater is approximately 8 feet below grade. With the exception of soil used to backfill the excavation of underground storage tanks (USTs), the native soil consists of brown coarse to fine sand. Soil used for the excavation backfill consists of brown gravel or a mixture of clayey silt, sand and gravel, which was placed to depths ranging from 8 to 13 feet below grade. Bedrock was not encountered during investigations conducted at the site.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an alternative that restricts the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) was evaluated in addition to

an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- sediment

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of

concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

BENZENE	LEAD
1,2,4-TRIMETHYLBENZENE	MERCURY
XYLENE (MIXED)	NAPHTHALENE
ETHYLBENZENE	1,3,5-Trimethylbenzene

The contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM has been completed at this site based on conditions observed during the RI.

IRM - Tank Removal and Soil Excavation

In June 2007 the contents of two known underground storage tanks (USTs) were removed. Approximately 475 gallons of liquid waste were removed at that time.

An IRM was conducted during April and May 2008 in four areas of the site that included the excavation and removal of four USTs, petroleum-contaminated soil, and lead-contaminated surface soil. One excavation was performed in the northeastern portion of the site and involved the three gasoline USTs and a former fuel dispenser island. The second excavation was performed in the northwestern corner of the property and involved the former waste oil UST. Approximately 820 tons of soil were removed from the two UST excavation areas. Soil was also excavated from an area surrounding a floor drain outfall at the rear of the former service station. Approximately 70 tons of soil were removed from this excavation. The final excavation was conducted in the eastern portion of the site in the area of the former ramp.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Based upon investigations conducted to date, the primary contaminants of concern at the site are the volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) associated with petroleum contamination, which have been detected in subsurface soil and groundwater. Metals have also been detected above applicable standards, criteria or guidance values.

Soil: The interim remedial measure (IRM) performed in 2008 removed the areas of heaviest soil contamination: however contamination remains at the site. Soil samples collected at the edge of the soil excavation exceeded unrestricted soil cleanup objectives (SCOs) for several VOCs, including ethylbenzene (34.1 parts per million (ppm)), xylenes (559 ppm) and 1,2,4-trimethylbenzene (169 ppm); and several SVOCs, including benzo(a)anthracene (2.32 ppm), chrysene (3.32 ppm) and benzo(a)pyrene (2.52 ppm). Several metals, including lead (512 ppm), were also detected in post-excavation soil samples above restricted-residential SCOs.

Groundwater: Following the IRM, groundwater samples detected VOCs (ethylbenzene (250 parts per billion (ppb)), xylene (540 ppb), isopropylbenzene (24 ppb), n-propylbenzene (62 ppb), 1,3,5-trimethylbenzene (110 ppb) and 1,2,4-trimethylbenzene (480 ppb)) and metals (lead 29 ppb) above their respective groundwater standards. However, the highest concentration of VOCs and lead were found in well GW-10, which is located on the western property boundary of the site, which is side gradient to the underground storage tank (UST) excavation area. This well is downgradient of an adjacent property that is a former service station with a history of petroleum releases. The adjacent property is subject to oversight by the Department's Spill Response Program and appears to have limited impact on the Cornerstone site due to attenuation of the groundwater contaminants. Data from monitoring wells located within and downgradient of the UST excavation and in other areas of the Cornerstone site do not show impacts by VOCs or lead.

Sediment: No concentrations of VOCs, PCBs or cyanides were detected above applicable standards in sediment samples collected in the adjacent stream. Concentrations of one SVOC (benzo(a)anthracene) exceeded standards in sediment samples at a maximum concentration of 0.44 ppm, however, this compound is commonly found in materials used to construct paved surfaces as roads and parking lots and is not considered to be related to the site. Concentrations of two pesticides (chlordane and Heptachlor) were detected above standards (0.743 ppm and 0.0235 ppm, respectively) in the upstream sediment sampling locations, which indicates they are unrelated to the site. Two metals (iron and nickel) were also detected above standards in the sediment samples, however, these compounds are naturally occurring.

There are no off-site impacts to soil, groundwater or sediment.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

The site is completely fenced, which restricts public access. However, persons who enter the site could come in contact with contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. People are not drinking the contaminated groundwater because the area is served by a public water supply. Volatile organic compounds in the groundwater or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for inhalation of site contaminants via soil vapor intrusion if the on-site building is reoccupied or if redevelopment occurs.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Soil Cover with Institutional Controls remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. A site cover to allow for restricted residential use of the site. The cover will consist either of structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required, it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer with the upper six inches of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

2. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

(a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3);

(b) allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;

(c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and

(d) requires compliance with the Department approved Site Management Plan.

3. A Site Management Plan is required, which includes the following:

(a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed above.

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This plan includes, but may not be limited to:

(i) an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

(ii) descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;

(iii) a provision for evaluation of the potential for soil vapor intrusion should the on-site building become occupied and for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

(iv) provisions for the management and inspection of the identified engineering controls;

(v) maintaining site access controls and Department notification; and

(vi) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

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4. Green remediation principals and techniques will be implemented to the extent feasible in the site management of the remedy as per DER-31. The major green remediation components are as follows:

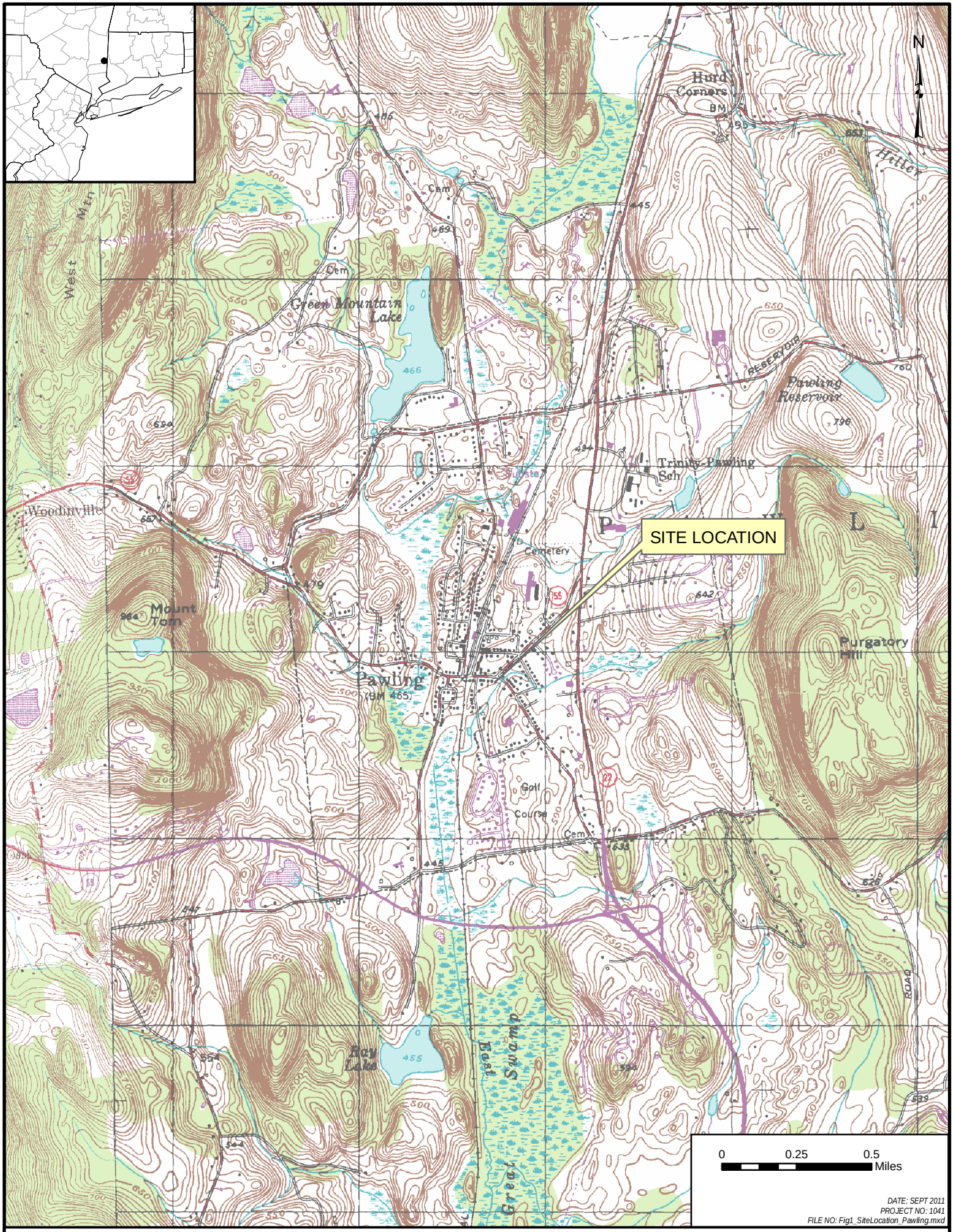
(a) Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;

(b) Reducing direct and indirect greenhouse gas and other emissions;

(c) Increasing energy efficiency and minimizing use of non-renewable energy;

(d) Conserving and efficiently managing resources and materials;

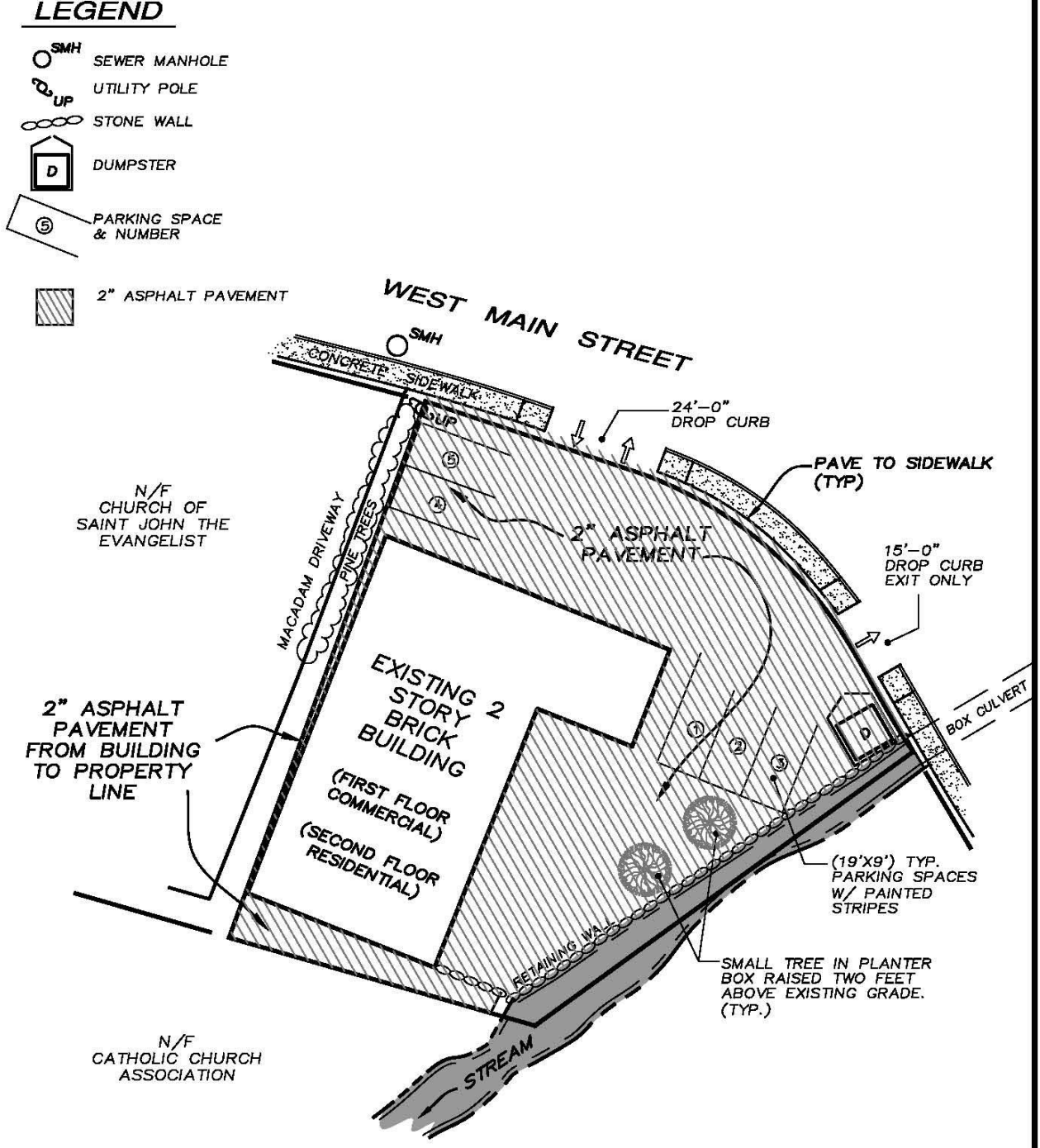
(e) Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste.



GREENSTAR
Environmental Solutions, LLC

CORNERSTONE ENTERPRISES
PAWLING, NEW YORK

FIGURE 1
SITE LOCATION



SITE PLAN

CORNERSTONE ENTERPRISES
TOWN OF PAWLING, DUTCHESS COUNTY, NEW YORK

SCALE: 1'=30'	APPROVED BY: JZ	DESIGN BY:	DRAWN BY:
DATE: 9/17/12	PROJECT NO. 2005.071		

NORTH

ZARECKI & ASSOCIATES, L.L.C.
Consulting Engineers - Land Surveyors - Architects
11 West Main St. Pawling, NY 12564
845.855.3771
845.855.3772 (Fax)
Ridgefield, CT 06877
203.438.7094

Figure 2