FILL MANAGEMENT PLAN

Former Route 44 Sand & Gravel Property
Carver, Massachusetts
REVISED FINAL – June 23, 2016

Prepared for: Route 44 Development, LLC
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1.1 Introduction

This document is the Fill Management Plan (Plan) for proposed soil acceptance activities at the former Route 44 Sand and Gravel Site located off Montello Street and Park Avenue in Carver, Massachusetts (the Site). This Plan has been prepared for Route 44 Development LLC (Site Owner) by Langdon Environmental LLC (Langdon) to describe and summarize the procedures to be utilized to accept soil fill materials at the former sand and gravel pit operation to raise existing grades in preparation for future commercial development at the Site. This Plan was developed to fulfill the requirements for fill management plans outlined in the “Interim Policy on the Re-Use of Soil for Large Reclamation Projects (Policy #COMM-15-01)” as issued by the Massachusetts Department of Environmental Protection (MassDEP) on August 28, 2015. A Locus Plan for the Site is provided in Figure 1-1.

All of the soils accepted under this Plan will be placed within the limits of the Site as shown on the attached locus plan and the design plans attached to this Plan. Soils are proposed to be received to support the long-term commercial development of the Site. Concurrently with the placement of soils as outlined in this Plan, the Site Owner will be conducting additional site improvement and remediation activities. The acceptance of soils and associated activities will be completed in two phases:

- Phase I: Initial Site Preparation. This phase includes the acceptance of up to 82,000 cubic yards (cy) of soils to either surcharge an existing peat area¹ or up to 60,000 cy of soils to begin site grading. The initial phase has been approved by the Town of Carver Planning Board as a Special Permit (copy attached in Appendix A). The plans for the initial phase of work for each option including the proposed stormwater controls and design criteria are attached in Appendix B. Other work completed outside of the scope of this Plan during this phase includes the clean-up of numerous debris piles located throughout the Site; importing and processing of asphalt, brick and concrete (ABC) materials; and improvements to Park Avenue. All of the work completed during the initial phase will be outside of the buffer zones to wetland resource areas at the Site as approved by the Carver Conservation Commission. It is anticipated that the initial phase will take six active months to complete.

- Phase II: Completion of Site Preparation. During the second and final phase, the Site Owner proposes to import up to an additional 650,000 cy (672,000 cy based on the selection of the Phase I approach) of appropriate soils to prepare the Site for development. The placement of the additional soils will be completed throughout the Site including areas within the wetland buffer zones. This phase will also include remediation of the existing stump dump; completing clean-up of the remaining debris piles located within the buffer zones; continued acceptance and processing of ABC materials; and general long-term site improvements to move towards future development.

¹ At this time, Phase I does not include the potential surcharging of the peat area.
Phase II will be the subject of a second Special Permit Application to be submitted to the Carver Planning Board that will serve as the local approval required by the Interim Policy. It is anticipated that the completion of the second phase of site preparation activities will take between an additional 18 to 24 months.

The Site Owner intends on importing up to 732,000 cy of soils from off-site sources (Source Sites) to prepare the Site for future development. This Plan will describe the procedures that will be utilized during both Phase I and II to evaluate potential Source Sites; monitor and place soils as they are received; conduct inspections of the ongoing operations; and stabilize the Site after soils are received and before the long-term development plans are implemented.

MassDEP’s COMM-15-01 policy utilizes Administrative Consent Orders (ACO) with potential-reclamation site owners and operators as the interim implementation method for large reclamation projects (greater than 100,000 cubic yards of imported soils) at sand pits, gravel pits and quarries. The ACO will reference the procedures and design documents incorporated into this Plan. Once it is finalized, the ACO between MassDEP and the Site Owner will be included into Appendix C.

The detailed procedures for the acceptance and management of the soils to be accepted at the Site in accordance with the Plan is included in Section 2. In general, the Site Owner will accept soils from Source Sites that are either listed under MassDEP’s Massachusetts Contingency Plan (MCP, 310 CMR 40.0000) regulations or non-MCP listed properties. The same standards and procedures a described herein will be utilized for both types of Source Sites.

1.2 Site Background and Investigations to Date
The portion of the former Route 44 Sand and Gravel property located in the Town of Carver and owned by Route 44 Development LLC covers approximately 127 acres as shown as Lot 2 on Map Number 20 of the Town of Carver’s Assessor’s maps. The majority of the Site has been actively mined for sand over several decades and currently has numerous piles of soil, debris, wood and miscellaneous items. Grades at the Site are variable and uneven and the previously excavated areas have sparse vegetation with limited organic soils on the surface.

An existing metal building and operations associated with a local contractor who until recently leased the building is located on the southern portion of the Site. The building will be utilized to support the proposed site reclamation activities.

The stump dump is located in the center of the Site along with a large stockpile of stumps and logs located adjacent to the metal building and the manmade pond located along the southern property line. Route 44 is immediately to the south of the Site and the active Middleborough Landfill is located to the northeast.

1.2.1 Topographic Survey
A topographic survey of the Site was prepared by Dana Perkins, Inc. and is dated February 2014. Prior to the start of site preparation activities, there was not any significant activity at the Site since the completion of the survey and it forms the base plan for the design plans developed for the Plan.
1.2.2 Wetland Delineation
The Site Owner has completed the delineation of the wetland resource areas on the Site and filed an Abbreviated Notice of Resource Area Delineation (ANRAD) with the Carver Conservation Commission. The Commission issued an approval of the ANRAD, a copy of which is included in Appendix D. The final edge of wetland resource as approved by the Carver Conservation Commission will be incorporated onto the final design plans for Phase I included in Appendix B.

1.2.3 Site Setting and Potential Receptors
Based on a review of MassGIS on-line database, the Site does not contain any mapped Federal Emergency Management Agency (FEMA) floodplains; public water supply areas; suspected or confirmed vernal pools, or identified habitat of endangered or protected species. The entire Site and Town is mapped as part of the Town’s Water Resource Protection Overlay District. The Site is also located in a high yield aquifer (i.e. potentially productive aquifer). The homes along Montello Street in Carver are all currently served by private wells and there are mapped water supply wells along Montello Street and Heather’s Path. Based on these assessments, the Soil Reporting Category, RCS-1 as defined in the MCP (310 CMR 40.0361) has been determined to be appropriate for the Site.

1.3 Concurrent Site Activities
This Plan outlines the specific requirements related to the acceptance of soils to prepare the Site in accordance with MassDEP’s COMM-15-01 Interim Policy. There are other activities required at the Site as initial site preparation activities and will be coordinated with the activities discussed in this document. These activities include:

• During Phase I, the Site Owner has also received a Special Permit from the Carver Planning Board to conduct general site preparation including upgrading the access road (Park Avenue) and improvements to Montello Street; clean-up existing debris piles and other items outside of the 200-foot buffer to the delineated wetland resource areas; and import and on-site processing of asphalt, brick and concrete (ABC) materials and potentially process them on-site.

• During Phase II, the operations outlined in Phase I will continue including activities within the wetland resource area buffer zones as well as corrective actions at the existing stump dump and clean-up of the existing extensive wood pile. This phase may also include upgrades to utilities to the Site and activities associated with the existing structures.

All of the activities will include the implementation of appropriate stormwater and erosion controls as described herein. A copy of the Stormwater Pollution Prevention Plan (SWPPP) as required by the MassDEP’s COMM-15-01 Interim Policy and the National Pollution Discharge Elimination System (NPDES) regulations overseen by the USEPA is included in Appendix D.
1.4 Other Required Permits and Regulatory Approvals

The following other permits and approvals will be required to complete Phase I and II of the site preparation tasks as outlined herein:

- **Wetland-Related Approvals.** To complete the filling operations for Phase I, the Site Owner has obtained an ANRAD from the Carver Conservation Commission under MassDEP’s Wetlands Regulations and the Carver Wetlands Protection By-Law. Phase II will require the filing of a Notice of Intent (NOI) with the Commission under the same regulations.

- **Planning Board Approvals – Phase II.** Phase II will require a new Special Permit Application approval from the Carver Planning Board as will the future development.

- **MassDEP Solid Waste Management Regulations (310 CMR 19.000).** The corrective actions at the stump dump to be conducted in Phase II will require approval of a Corrective Action Design (CAD) permit application from MassDEP. There may also be an approval required for the processing of ABC materials for on-site re-use of the materials.

- **Site Assignment for Solid Waste Facilities Regulations (310 CMR 16.00).** Most of the Site was Site Assigned in 1986 for a stump dump by the Carver Board of Health. Assuming that the site preparation tasks can be completed and approved, the Site Owner intends on requesting to rescind the Site Assignment from both MassDEP and the Board of Health.

- **Massachusetts Environmental Protection Act (MEPA, 301 CMR 11.00).** The long-term development of the Site will require mandatory filing of an Environmental Notification Form (ENF) and Environmental Impact Report (EIR) under the MEPA regulations. The Site Owner has discussed permitting the initial site preparation project with the MEPA office to move forward. An ENF for the development project will be submitted in July 2016.

1.4.1 MCP Status

A review of MassDEP records in the vicinity of the Site identified the following Release Tracking Numbers (RTNs) associated with the MCP:

- 4-19098 - 44 Gravel and Sand - methyl ethyl ketone [MEK] and acetone in groundwater (on property MCP Phase 2)
- 4-18160 - 44 Gravel and Sand - elevated background thallium in soil (on property-closed)
- 4-0911 - Simeone Asphalt Plant/Aggregate Industries (upgradient source)
- 4-19784 - Simeone Asphalt Plant/Aggregate Industries (upgradient source)
- 4-18745 - Simeone Asphalt Plant/Aggregate Industries (upgradient source)
- 4-15951 - Off Montello Street IRA (upgradient source related to 4-0911)
- 4-0950 - Ravenbrook Polymer Concrete Site (former upgradient source-closed)
- 4-16222 - Ravenbrook IRA (former upgradient source related to 4-0950-closed)
The Site Owner is a potentially responsible party for release designated by RTN 4-19098, a release of MEK and acetone to groundwater discovered on the property in 2005. Except for the closed RTN 4-18160, the rest of the RTNs are related to either the Ravenbrook Polymer Concrete Site or the Simeone Asphalt/Aggregate Industries site. The Ravenbrook and Aggregate releases occurred upgradient of the Route 44 Development LLC property, south of Route 44, and affected groundwater flowing to the Route 44 Development LLC property.

The Site Owner has retained a Licensed Site Professional (LSP) for the various active MCP sites and will coordinate all site activities including the extension, replacement or abandonment of any groundwater monitoring wells or in-situ treatment systems as appropriate.

1.4.2 Proposed Groundwater Monitoring Program
As required by MassDEP, the Site Owner will implement a groundwater monitoring network at the Site.

Groundwater at the Site generally flows from the south to the northwest. The proposed monitoring network will consist of six monitoring well locations, three upgradient (MWs-1,2,3) and three downgradient (MWs-4,5,6). The upgradient wells will be water table wells only and the downgradient locations would be couplets, each with a shallow water table well with a ten-foot screen and also a deeper well set with a screen 10 to 20 ft. below the water table. The deeper well is designed to intercept groundwater migrating from the most upgradient extent of the fill area. The approximate locations of the proposed monitoring wells are provided on Figure 1-2.

The groundwater samples collected from the monitoring wells will be analyzed for Polychlorinated biphenyls (PCBs), Semi-Volatile Organic Compounds (SVOCs), Total MCP-14 metals (antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, thallium, vanadium and zinc), Volatile Organic Compounds (VOCs), herbicides, pesticides, and extractable petroleum hydrocarbons (EPH).

A final round of groundwater sampling and analysis will be conducted two years after the completion of the site reclamation activities.

1.5 Contact Information
The Site Owner and operator is Route 44 Development, LLC, 500 Harrison Avenue, Boston, Massachusetts 02118.

The Site LSP/QEP is Bruce W. Haskell, P.E. of Langdon with an office at Two Summer Street, Natick, Massachusetts 01760 (617) 875-3693.
Proposed Location of Groundwater Monitoring Wells

Route 44 Development LLC
Fill Management Plan

Figure 1-2
Proposed Location of Groundwater Monitoring Wells

July 2016
Not to Scale
Section 2
Operational Procedures

2.1 Operating Procedures

The operational procedures proposed below have proven to be effective in mitigating potential impacts from activities involving the receipt and placement of soils at inactive sand pits and quarries and similar operations. The procedures are focused on the requirements for the proposed Site activities so that operations can proceed in an appropriate manner and allow the Site to be returned to a beneficial use. These procedures are intended to demonstrate compliance with MassDEP’s COMM-15-01 policy.

The following are the general site operations protocols proposed for both the initial and final phase of Site preparation activities:

- **Hours of Operations.** During Phase I, the Site shall operate between the hours of 7:00 am and 5:00 pm from Monday through Friday. During Phase I, soils will be accepted at the Site between the hours of 8:00 am and 4:00 pm. During Phase II, hours for accepting soils will be revised to 7:00 am to 5:00 pm. Note that on-Site activities may continue until 7:00 pm as needed to comply with the requirements outlined herein. There will be no work during evenings or on weekends (Saturday or Sunday) or holidays except as needed to comply with the requirements of regulatory approvals (e.g. prepare the Site in prior to a major rain event). Note that the hours of operations may be modified as approved by the Town of Carver Planning Board as part of the Special Permit process.

- **Site Access.** The Site shall be accessed through the existing Route 44 Sand and Gravel driveway (Park Avenue) off Montello Street from Routes 44 and 58. No trucks shall be allowed on Montello Street north of the Park Avenue driveway. Trucks shall enter and exit only via this route. The Site Owner will implement a program to monitor compliance with the truck route. Drivers who violate the designated truck routes will be initially suspended from making deliveries for a period of time. Subsequent violations of the truck route by a specific driver or company will result in them being banned from making deliveries to the Site.

- **Inspections.** A monthly randomly-scheduled, unannounced inspection of the operations shall be completed by Site Owner’s Third Party Inspector as defined in the ACO with MassDEP. A summary report of each inspection will be submitted to the Town’s Director of Planning and Development and MassDEP. The detailed requirements for these inspections are outlined both below and within the ACO. The Town’s Director of Planning and Development will be invited to attend the site inspection. The site inspection report shall include all of the information required in the attached ACO and the Special Permit issued by the Planning Board.

- **Confirmatory Testing.** All incoming soil loads will be inspected for any odors, consistency with soils from same Source Site and excessive debris. Any load that appears to have an odor, debris
including solid waste materials, or is visibly different than prior loads from the same Source Site, will be set aside and investigated.

As required by the attached ACO with MassDEP, the Third Party Inspector shall collect a confirmatory sample each month during the inspection (assuming soils are being delivered) and submit the sample to a MassDEP-certified analytical laboratory for analysis of all the parameters included in Table 2-1.

- **Dust Control.** Applying water to surfaces where dust may be generated will be conducted to control dust at the Site. A water truck or similar equipment will be available as needed during operations to apply water and control dust. The use of a water truck may be suspended during the winter months to avoid creating safety issues at the Site. Alternative dust control measures such as calcium may be used as needed. If needed, the Site Owner will make arrangements to sweep the public roads used for site access.

- **Stormwater.** The approach to stormwater controls around the operating areas are summarized in the Stormwater Pollution Prevention Plan (SWPPP) as required by the National Pollution Discharge Elimination System (NPDES) permit process that is included in Appendix D to this document.

- **Erosion Control.** Straw bales and silt fences will be installed at the locations shown on the attached plans. Proper maintenance of the unpaved roads will also be conducted to minimize erosion and siltation from Site activities.

  All areas where soils have been placed to final proposed grades will be stabilized using a temporary layer of organic soils and seeded as appropriate to minimize erosion. Slopes steeper than 4 horizontal to 1 vertical shall have erosion control fabric or other appropriate erosion control method installed at the base of the slope.

- **Noise.** Typical noise sources from this project will include construction vehicles and other construction-related activities including the processing of ABC materials. Site personnel and incoming truck traffic will be directed to limit noise to the greatest extent practical. Particularly, drivers will be instructed to minimize noise associated with tailgates closing and use of transmission brakes. The existing buffer areas and distance between the proposed work area and residential properties will mitigate the audibility of construction activities.

  Trucks will be required by OSHA regulations to have operational back-up alarms.

- **Odors.** It is not anticipated that soil acceptance operations will create detectable odors off-Site. Materials received that are odorous and potentially create an off-Site odor condition will be rejected and further deliveries terminated until the generator at the Source Site can demonstrate that any odor issues have been adequately addressed. Note that the operator may
incorporate approaches such as immediately covering loads with inert soils to mitigate any potential odor issue.

- Site Security. Access to the Site will be restricted by the existing entrance gate at the access point to the Site. A “No Trespassing” sign will be posted at the gate. There is no other Site security currently planned. If unauthorized access becomes an issue, the Site Owner will install appropriate security measures to further limit access by vehicles and trespassers.

- Staffing and Equipment. Appropriate equipment to complete the ongoing activities shall be on-Site whenever specific activities are occurring. Equipment operators will be licensed to operate all of the equipment provided at the Site. An adequate number of equipment operators will be provided to operate the required equipment.

One employee will be designated to monitor incoming loads, collect and process the necessary transportation and material tracking forms from drivers, track all incoming and outgoing vehicles, inspect trucks prior to exiting the Site, and control access to the Site. Additional employees to inspect loads or any of the other requirements for the operations at the Site will be provided as necessary.

Portable toilet facilities and potable water supply will be provided at the Site for use by all personnel.

- Unloading and Placement of Materials. All material unloading will be under the direct supervision of a representative of the Site Owner. They will grade the soils after they are unloaded. The material will be placed utilizing appropriate construction equipment.

Appropriate signage will be placed or verbal direction via an on-Site CB radio with a dedicated channel shall be given to direct delivery vehicles to the active work area. These signs will be mobile and will be moved as appropriate.

The on-Site representative will observe any materials or soils as they are unloaded from the delivery trucks. This individual may direct materials to be unloaded in a separate area if they visibly appear to be different than the approved materials or prior deliveries from a specific Source Site; contain solid waste; or exhibit an odor or have free-draining liquids. Separated materials and soils may either be sampled to confirm similarity to the approved Source Site; or re-loaded and removed from the Site.

All acceptable soils received shall be spread and compacted using the on-site equipment after it is unloaded in close proximity to the area where it will be placed. Temporary barricades such as barrels and signage will be used as needed to delineate the unloading and active work areas.

- Accident Prevention and Employee Health and Safety. All personnel at the Site will be appropriately trained in the principles of first aid and safety and the specific operational requirements to prevent accidents in their respective jobs. First aid kits will be provided at the
Site for use by employees. The emergency phone numbers at the Site for Ambulance, Fire Department and Police is 911.

2.2 Source Site Review and Acceptance Procedures
The soils proposed to be accepted and placed at the Site will originate from Source Site construction projects where the soils have either been pre-characterized during the engineering phase of the development or characterized from stockpile(s). All soils shall be pre-characterized by the generator using appropriate characterization guidelines as outlined below.

During Phase I, imported soils will include soils accepted to begin development of the necessary Site reuse grades. The grading shown on the attached plans shows approximately 60,000 cy of imported soils to be placed to raise the elevations in the middle of the Site. During Phase II, up to an additional 672,000 cy of soils will be accepted at the Site to prepare it for future commercial development. The following is a summary of the general procedures to be implemented during both Phase I and II and the specific soil acceptance criteria.

2.2.1 General Procedures
The following general procedures for review and acceptance of soils will be implemented during both the reclamation and site preparation project.

2.2.1.1 Overview of Testing and Acceptance Criteria
Soils proposed for re-use at the Site will be tested as outlined below to demonstrate that all parameters meet the Acceptance Criteria as outlined herein. Soils that do not meet the Acceptance Criteria will not be re-used at the Site.

2.2.1.2 Screening Criteria
Candidate soils from a specific Source Site must be evaluated by a Licensed Site Professional (LSP) or Qualified Environmental Professional (QEP) retained by the Source Site owner for acceptance at the Site.

The following initial screening criteria to be incorporated into a Source Site Submittal Package that will be reviewed by Site Owner’s LSP/QEP for completeness and compliance with the Site’s acceptance criteria. Proposed soils to be accepted during the initial phase of work shall not exceed the following field screening and visual criteria at any point during the in-situ pre-characterization effort, stockpile characterization, excavation or load out phase at the Source Site:

- Soils shall not contain solid waste. No wood, metal, wire, plastic, ceramic, ash, tires, pipe, potential asbestos containing material, or other debris shall be accepted.

- Visually, the soil must not exhibit any staining or other discoloration indicating releases of oil and/or hazardous materials.

- Soils shall not contain any free-draining liquids that cannot be managed within the operating area where they are being placed. Soils may contain naturally deposited silts and clay with
minor amounts of naturally occurring organic material and moisture since natural drying of the soil can occur while it is being worked and spread.

- Soils mixed with bentonite or other slurry materials may be accepted on a case-by-case basis. A description of the process and materials generating soil with slurry must be provided. The Material Safety Data Sheet (MSDS) for all slurry and any other additive products must be submitted to Site Owner’s LSP/QEP for review. Soils that contain de minimis amounts (based on visual observations) of mixed-in slurry may be accepted for re-use based on review and approval by the Site Owner’s LSP/QEP. Soils with more than de minimis amounts of mixed-in slurry will require MassDEP approval.

- Materials received that are odorous and potentially create an off-Site odor condition will be rejected and further deliveries terminated until the generator at the Source Site can demonstrate that any odor issues have been adequately addressed. Soils with strong natural organic or hydrogen sulfide odors that cannot be managed in a manner to minimize potential off-Site odor impacts will not be accepted at the Site.

### 2.2.1.3 Contents of Soil Packages for Each Source Site

Prior to transporting any materials to the Site, the Source Site generator must submit the following information to the Site Owner for review and approval:

- Location of the Source Site and contact information for the Source Site owner, the generator and their LSP/QEP.

- Brief description of Source Site history, including current and past uses and a description/source of any release(s) that may have impacted the proposed soil, including the Release Tracking Number(s) (RTNs) associated with the release(s) at the Source Site.

- Checklist stating that the Source Site’s LSP/QEP has evaluated the proposed soils for each of the Screening Criteria Outlined in Section 2.2.2.1.

- Boring logs, test pit logs, or physical description of the material (e.g. sand, silt, clay).

- Table with analytical results compared to the projects acceptance criteria.

- Site map or sketch showing the location from which the soil/fill will be removed or is stockpiled as well as the location of samples.

- A completed signed Material Shipping Record (MSR) or Bill of Lading (BOL) on forms provided by the MassDEP.
Section 2
Proposed Site Activities

- Any investigative reports deemed necessary by either the Source Site LSP/QEP or Site Owner’s LSP/QEP to characterize the soils proposed for the Site.

- Soils must be analyzed for the parameters and frequencies outlined in Section 2.3. Samples presented for approval shall be a composite representative of the proposed soils. At a minimum, all concentrations of potential contaminants in the soils shall meet the Acceptance Criteria set forth in this plan and the equivalent frequency of testing requirements is appropriate to demonstrate that the samples represent the proposed soils.

2.2.1.4 Soil Source Site Approval
A request for approval of a Source Site shall be provided in a letter format with attachments to the Site Owner who will provide initial review of the potential acceptance of the proposed Source Site soils. After the initial review by the Site Owner is completed, the package will be sent to the Site’s LSP/QEP for review. The Submittal Packages from each Source Site will be reviewed by the Site Owner’s LSP/QEP to confirm that the proposed soil meets the acceptance criteria. The Site’s LSP/QEP shall then prepare an acknowledgement and approval letter addressed to Site Owner’s confirming the acceptability of the soils. The letter shall specify the approved quantity, the quantity to be shipped, restrictions (if any), and other pertinent items. The letter will be forwarded by the Site Owner to the Source Site owner.

2.2.1.5 Soil Tracking Procedures
All of the soils from a specific Source Site will be tracked by an on-Site representative using the truck weigh scale installed at the end of Park Avenue. Records of all soils accepted will be maintained on-Site. These records will include information on the source of the material, date of receipt at the Site, and weight.

For each approved Source Site, the Site Owner will track the received volume based on the weight measured at the scale and an assumed density against the quantity approved by the Site Owner’s LSP/QEP in response to the Submittal Package described previously. Additional source testing shall be required if the quantity delivered to the Site exceeds the quantity approved based on the sampling frequencies outlined above.

The transportation of all soils to the Site shall be conducted in accordance with the MassDEP’s MSR or BOL requirements as outlined in the appropriate regulations or guidance documents.

The quantity of soils received from each approved Source Site will be incorporated into the quarterly inspection reports to be submitted to the Town of Carver Planning Director and MassDEP.

2.2.1.6 Source Site Confirmatory Testing
Soils shall be screened per MassDEP Policy #WSC-94-400 at the Source Site at a frequency of 1 field screening test per 50 cubic yards of soil regardless of the olfactory and visual screening results. Soils that exhibit a reading of total organic vapor (TOV) in the jar headspace exceeding of 5 ppm by volume due to volatile constituents shall not be used at the Site. If soils appear to differ olfactory or visually from the original characterization information, that soil will either be rejected or set aside and analyzed to determine if it meets the acceptance criteria.
2.3 Acceptance Testing Requirements and Standards

The soils proposed in Phases I and II shall comply with the acceptance testing outlined in this section. The Phase I acceptance testing and acceptance criteria as approved by the Planning Board will be modified to comply with MassDEP requirements as outlined herein. These criteria and testing requirements will be incorporated into the Phase II Special Permit Application.

For all Source Sites where laboratory analytical testing is required, the samples presented shall be representative of the soils to be delivered to the Site. The sampling frequency shall be a minimum of one sample per every 500 cy to be delivered for fill soils and one for every 1,000 cy for natural soils. More frequent samples may be required if determined by the Source Site’s LSP/QEP or the Site Owner’s LSP/QEP.

The testing procedures to be utilized as part of both Phases are summarized on Table 2-1.

Table 2-1
Required Testing Parameters for Reclamation Soils
Route 44 Sand & Gravel Reclamation Project

<table>
<thead>
<tr>
<th>Constituent (See Note 4)</th>
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<tr>
<td>Semi-Volatile Organic Compounds (SVOCs) – see note 5</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOCs) – see note 6</td>
</tr>
<tr>
<td>Polychlorinated Biphenyls (PCBs)</td>
</tr>
<tr>
<td>MCP-14 Metals (see note 2)</td>
</tr>
<tr>
<td>Total Petroleum Hydrocarbons or EPH Fractions</td>
</tr>
<tr>
<td>pH, Ignitability, Reactive Sulfide, Reactive Cyanide</td>
</tr>
</tbody>
</table>

Notes:
1. Current EPA/MassDEP or other approved methods for laboratory testing. MassDEP Compendium of Analytical Methods (CAM) methods and levels must be utilized where applicable.
2. Detection limits for laboratory tests must be appropriate and adequate for comparison to acceptance criteria.
3. RCRA-8 metals will be considered through August 28, 2016 if characterization testing was completed prior to August 28, 2015.
4. Other constituents may be required based on review of source site history.
5. For SVOCs EPA method 8270 shall be used with the full list of SVOCs analyzed.
6. For VOCs, EPA Method 8260 shall be used with low-level detection limits.

A summary of the proposed acceptance standards for the soils to be accepted at the Site during both Phase I and II is presented in Table 2-2.
Table 2-2
Summary of Acceptance Criteria
Route 44 Development Site Reclamation Project

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Acceptance Criteria (mg/kg) and Basis</th>
<th>Source Site Approved by</th>
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<td><strong>Semi-Volatile Organic Compounds (SVOCs)</strong></td>
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<td></td>
</tr>
<tr>
<td>BENZO(b)FLUORANTHENE</td>
<td>&lt;7</td>
<td></td>
</tr>
<tr>
<td>BENZO(g,h,i)PERYlene</td>
<td>&lt;1000</td>
<td></td>
</tr>
<tr>
<td>BENZO(k)FLUORANTHENE</td>
<td>&lt;70</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>CHRYSENE</td>
<td>&lt;70</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>DIBENZO(a,h)ANTHRACENE</td>
<td>&lt;0.7</td>
<td></td>
</tr>
<tr>
<td>FLUORANTHENE</td>
<td>&lt;1000</td>
<td></td>
</tr>
<tr>
<td>FLUORENE</td>
<td>&lt;1000</td>
<td></td>
</tr>
<tr>
<td>INDENO(1,2,3-cd) PYRENE</td>
<td>&lt;7</td>
<td></td>
</tr>
<tr>
<td>METHYLNAPHTHALENE, 2-</td>
<td>&lt;0.7</td>
<td></td>
</tr>
<tr>
<td>NAPHTHALENE</td>
<td>&lt;4</td>
<td></td>
</tr>
<tr>
<td>PHENANTHRENE</td>
<td>&lt;10</td>
<td></td>
</tr>
<tr>
<td>PYRENE</td>
<td>&lt;1000</td>
<td></td>
</tr>
<tr>
<td>Other SVOCs with Category RCS-1 Reportable Concentrations</td>
<td>Not Detected or Detected at &lt;10% of Category RCS-1 Reportable Concentration in any sample proposed for acceptance.</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>SVOCs with no Listed Category RCS-1 Reportable Concentrations</td>
<td>Not detected in any sample proposed for acceptance.</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>SVOCs with no Listed Category RCS-1 Reportable Concentrations</td>
<td>Detected in a sample proposed for acceptance.</td>
<td>Site’s QEP/LSP and MassDEP</td>
</tr>
<tr>
<td><strong>Volatile Organic Compounds (VOCs)</strong></td>
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<td></td>
</tr>
<tr>
<td>VOCs with Listed Category RCS-1 Reportable Concentrations</td>
<td>Not Detected or Detected at &lt;10% of Category RCS-1 Reportable Concentration</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>VOCs with no Listed Category RCS-1 Reportable Concentration</td>
<td>Not Detected in any sample proposed for acceptance.</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>VOCs with no Listed Category RCS-1 Reportable Concentrations</td>
<td>Detected in a sample proposed for acceptance.</td>
<td>Site’s QEP/LSP and MassDEP</td>
</tr>
<tr>
<td><strong>Polychlorinated Biphenyls (PCBs)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total PCBs</td>
<td>Not Detected</td>
<td>Detection Limit at or below 10% of Category RCS-1 Reportable Concentration (&lt;0.1 mg/kg)</td>
</tr>
</tbody>
</table>
## Table 2-2, continued
### Summary of Acceptance Criteria
#### Route 44 Development Site Reclamation Project

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Acceptance Criteria (mg/kg)</th>
<th>Basis of Standard</th>
<th>Approved by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANTIMONY</td>
<td>&lt;20</td>
<td>RCS-1 Reportable Concentration for MCP-14 Metals (See Note 5)</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>ARSENIC</td>
<td>&lt;20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BARIUM</td>
<td>&lt;1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BERYLLIUM</td>
<td>&lt;100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CADMIUM</td>
<td>&lt;2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHROMIUM (TOTAL)</td>
<td>&lt;100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHROMIUM VI</td>
<td>&lt;100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHROMIUM III</td>
<td>&lt;225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEAD</td>
<td>&lt;200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MERCURY</td>
<td>&lt;20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NICKEL</td>
<td>&lt;600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SELENIUM</td>
<td>&lt;400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SILVER</td>
<td>&lt;100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THALLIUM</td>
<td>&lt;8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VANADIUM</td>
<td>&lt;400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZINC</td>
<td>&lt;1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Metals with Category RCS-1 Reportable Concentration</td>
<td>Not Detected or Detected at &lt;10% of Category RCS-1 Reportable Concentration in any sample proposed for acceptance.</td>
<td>Site’s QEP/LSP</td>
<td></td>
</tr>
<tr>
<td>Toxicity Characteristic Leaching Procedure (TCLP) Testing</td>
<td>Detected Concentrations of Metals Exceed “20-times rule” and require TCLP analysis</td>
<td>Site’s QEP/LSP</td>
<td></td>
</tr>
<tr>
<td>Other Metals with Category RCS-1 Reportable Concentration</td>
<td>Detected at concentration ≥10% of Category RCS-1 Reportable Concentration in any sample proposed for acceptance.</td>
<td>Site’s QEP/LSP and MassDEP</td>
<td></td>
</tr>
<tr>
<td><strong>Petroleum Hydrocarbons</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL PETROLEUM HYDROCARBONS (TPH)</td>
<td>&lt;500</td>
<td>Category RCS-1 Reportable Concentration</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C9-C18 ALIPHATIC FRACTION – EPH</td>
<td>Sum of EPH Fractions &lt;500</td>
<td>Category RCS-1 Reportable Concentration</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>C19-C36 ALIPHATIC FRACTION – EPH</td>
<td></td>
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<td></td>
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<tr>
<td>C11-C22 AROMATIC FRACTION – EPH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C5-C8 ALIPHATIC – VPH</td>
<td>&lt;10</td>
<td>&lt;10% Category RCS-1 Reportable Concentration</td>
<td></td>
</tr>
<tr>
<td>C9-C12 ALIPHATIC – VPH</td>
<td>&lt;100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C9-C10 AROMATIC - VPH</td>
<td>&lt;10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2-2, Continued
Summary of Acceptance Criteria
Route 44 Development Site Reclamation Project

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Acceptance Criteria (mg/kg)</th>
<th>Basis of Standard</th>
<th>Approved by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristic Parameters and Other Criterion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pesticides and Herbicides</td>
<td>If analyzed, pesticides and herbicides below CAM detection limits may be accepted (see Note 1)</td>
<td>Site’s QEP/LSP</td>
<td></td>
</tr>
<tr>
<td>(If the Source Site LSP/QEP cannot demonstrate that pesticides/herbicides were utilized at the source site)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH of soils</td>
<td>5 to 9</td>
<td>None</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>Soils mixed with slurry or bentonite</td>
<td>Visual</td>
<td>De minimis volumes of mixed-in slurry materials may be accepted.</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td><strong>Ignitability</strong></td>
<td>Not capable under standard temperature and pressure of catching fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.</td>
<td>Site’s QEP/LSP</td>
<td></td>
</tr>
<tr>
<td>Reactive Sulfide</td>
<td>&lt;500</td>
<td>Standard</td>
<td>Site’s QEP/LSP</td>
</tr>
<tr>
<td>Reactive Cyanide</td>
<td>&lt;250</td>
<td>Standard</td>
<td>Site’s QEP/LSP</td>
</tr>
</tbody>
</table>

Notes
1. Current EPA/MassDEP or other approved methods for laboratory testing. MassDEP CAM utilized where appropriate.
2. Detection limits for laboratory tests must be appropriate and adequate for comparison to acceptance criteria.
3. Averaging of concentrations is not allowed. All constituents must be below their corresponding Acceptance Criteria for acceptance of soil.
4. RCRA-8 metals will be considered through August 28, 2016 if characterization testing was completed prior to August 28, 2015.
Appendix A
Carver Planning Board – Phase I Special Permit
September 29, 2015

Ms. Lynn Doyle, Town Clerk
Town of Carver
108 Main St.
Carver, MA 02330

Dear Ms. Doyle,

Re: Decision — Route 44 Development LLC - Special Permit — Section 4300

Applicant: Route 44 Development LLC
Applicant Address: 500 Harrison Avenue Suite 4R, Boston MA 02118
Location: 3-4 Park Avenue Carver MA 02330
Zoning District: Green Business Park
Title Reference: Book: 43733 Page: 3
Land Owner: Route 44 Development LLC

In accordance to MGL Ch. 40A, Sections 9 and 11, and Carver Zoning By Law Sections 4300 and 5300, a public hearing, duly posted and advertised was held and closed on September 22, 2015 on the application of Route 44 Development LLC, 3-4 Park Avenue Carver MA 02330, for a Special Permit for site preparation under the Water Resource Protection Section 4300, at 3-4 Park Avenue shown on Assessors Map 20 Lot 2 in the GBP Zoning District. On September 22, 2015 the Planning Board voted 4-0 to approve the Special Permit for Route 44 Development LLC as follows:

The Board finds the following facts:

1. Special Permit per Section 4300 Site preparation in a GBP District
   a.) Is in accordance with the provisions of Section 4360 -The Planning Board finds that the proposal meets the Design and Operation Standards of the Town of Carver and that proper safeguards have been implemented in this decision to protect the water quality; ground water; and soils of the site and the surrounding area.

Special Permit - Route 44 Development LLC decision September 22, 2015
b.) Is in harmony with the purpose and intent of this bylaw - The Planning Board finds that through the series of conditions as outlined in this decision the intent of the By Law has been satisfied.

c.) Is appropriate to the natural topography, soils and other characteristics of the site to be developed – The Planning Board finds that due to the nature of the existing conditions of this site, the proposal will effectively improve the conditions of the site with clean soils; quality water management and the licensed cleanup of contaminated areas.

d.) Will not, during construction or thereafter, have an adverse environmental impact on the aquifer or recharge area (i.e., quality, or quantity of groundwater) - The Planning Board finds that no adverse effect will occur during the construction of this site and that all proper measures have been taken to protect the quality of the groundwater.

e.) Will not adversely affect an existing or potential water resource - No existing or potential water resource have been identified on or near this site.

2. Section 5300 Special Permit

a.) Social, economic, or community needs which are served by the proposal - The Planning Board finds that the social, economic, and community needs have been met. The property has been zoned Industrial; Highway Commercial; and now Green Business Park for many years and has been identified as the number one priority development site in the Town of Carver in its 2001 Master Plan. It was also designated by the Planning Board; Board of Selectman and Town Meeting as a Priority Development Site (PDS) in its designation as an Expedited Permit Site.

b.) Traffic flow and safety, including parking and loading - The Planning Board finds that all traffic and safety concerns have been met. The proposed improvements to both Park Avenue and Montello Street satisfy the Planning Boards concern over truck traffic generated from this site and any conflicts that may occur.

c.) Adequacy of utilities and other public services - The Planning Board finds that all proposed utilities and other public services are sufficient for this proposal. No utilities are necessary at this time.

d.) Neighborhood character and social structures - The Planning Board finds that the proposed development will have minimal detrimental impact on the neighborhood character or social structure. As stated previously this site has long been identified as a priority development site.

e.) Impacts on the natural environment - The Planning Board find that there will be no negative impact on the natural environment with this proposal. The project involves a positive change to the natural environment. In fact, this phase of the project is just one phase of many that will properly remedy many cited contaminations on the site and rectify the site into a marketable usable condition.

f.) Potential fiscal impact, including impact on town services, tax base, and employment - The Planning Board finds that there will be no negative impact on town services, tax
base or employment with this proposal. Eventual development of this site will substantially increase the town’s tax base and potentially provide numerous employment opportunities.

The Planning Board at their regularly scheduled meeting on September 22, 2015 voted 4 in favor (Maki; Sinclair; Robinson and Cavicchi) and 0 against to grant a Special Permit to allow site preparations on the application by Route 44 Development 44 LLC for 3-4 Park Avenue, Carver.

The granting of this petition is subject to the following conditions:

1. The project shall be substantially completed no later than two (2) years from the date of expiration of the appeal period from this decision, assuming no appeal is taken therefrom.

2. The Planning Board and its Staff shall have access to the project site to ensure that these conditions are complied with.

3. Any plan revisions shall be submitted to and approved by the Planning Board and construction shall conform to those final plans so approved. The Planning Board reserves the right to approve, without the need for a new noticed public hearing, any minor modifications.

4. Prior to the commencement of operations, a true photocopy of the Planning Board’s decision as registered at the “Plymouth County Registry of Deeds” shall be submitted to the Carver Planning Department.

5. The Town of Carver or its representative shall conduct periodic site inspections to verify compliance with the approved plans and to determine whether additional erosion and sedimentation controls are required to protect adjacent properties or drainage systems. Dust control is required during construction.

6. The developer is responsible for the proper operation and maintenance of the construction site and shall inspect, repair, replace, and supplement controls as needed to minimize soil erosion and sedimentation.

7. Any revisions to plans will require approval from the Town of Carver Planning Board as a modification to the Special Permit and Site Plan Review.

Special Permit- Route 44 Development LLC decision September 22, 2015
8. Any outstanding balance in the Review and Inspection deposit shall be paid prior to Certificate of Occupancy.

9. Public roadways servicing the site shall be swept as needed during construction.

10. Construction waste shall be controlled and disposed of offsite in conformance with applicable state and/or federal laws.

11. All future phases of this development shall come before the Planning Board as a Special Permit.

12. ABC processing shall be limited to 7AM to 5PM Monday through Friday and shall adhere to MASSDEP’s Noise Policy as well as to the Town of Carver Zoning by Laws Section 3600 regarding noise.

13. Trucks shall be inspected to insure they are not tracking soil on to Park and Montello Streets during rainy days. A water truck with a pressure washer will be available on-site at all times to wash trucks when necessary.

14. If operations create unanticipated odors on-site, the operator will take immediate action to mitigate odors and insure they do not leave the site.

15. There shall be a designated truck route and at no times will trucks be allowed to exit left on to Montello Street going north.

16. Prior to the commencement of operations, the applicant shall place a surety with the Planning Board for $50,000 to cover costs in the event the operation is abandoned. The form of surety shall be subject to the mutual approval of the Planning Board, Town Treasurer and Applicant.

17. The operation shall be subject to unannounced site inspections by the Town’s License Site Professional. These inspections shall not exceed (1) one inspection per month on average over a (6) six month period. The applicant shall be responsible for all costs accrued for these services not to exceed $4,500.

18. Applicant shall be subject to a review of all soil packages by the Town’s License Site Professional at the expense of the applicant not to exceed $1,500.

Special Permit- Route 44 Development LLC decision September 22, 2015
19. Montello Street culvert will be inspected by the Applicant's engineer every three (3) months with a report submitted to the Planning Board and DPW Superintendent.

20. Trucks will be limited to Monday through Friday from 8AM to 4PM and not on Holidays.

21. Prior to the commencement of activities a schedule of improvements to both Park Avenue and Montello Street and its intersections, including pavement markings, signage, vegetation removal and road widening (where necessary) shall be approved by the Director of Planning and Development and the DPW Superintendent. It is noted that ABC materials as defined in the Application will be imported and processed on-site as necessary to improve Park Avenue to a condition suitable for the proposed site improvements.

22. Proper security for the site shall be installed, including but not limited to Security Cameras and Gates for the site.

23. 6 months after the commencement of operations, the Applicant shall meet with the Director of Planning and Community Development to discuss progress of the site and any violations or issues regarding this decision. It will be at the discretion of the Director of Planning and Community Development whether any issues or violations will be brought to the Planning Board's attention.
If substantial use and construction permitted by this Special Permit is not commenced within two (2) years from the date on which a copy of this Decision is filed with the Carver Town Clerk, excluding the amount of time required for the appeal period to expire or the amount of time required to pursue and await the determination of any such appeal, then this Special Permit shall expire.

This Decision shall not take effect until a copy of this Decision, certified by the Town Clerk that twenty (20) days have elapsed since the Decision was filed with the Town Clerk without any appeal having been filed therefrom, or that any such appeal has been finally determined, has been filed at the Plymouth County Registry of Deeds, and a certified copy indicating such Registry recording has been filed with the Carver Planning Board.

Any appeal of this decision must be filed pursuant to MGL, Chapter 40A, Section 17, and shall be filed within 20 days of the filing of this decision with the Town Clerk.

Carver Planning Board

[Signatures]

Bruce Maki, Chair
Kevin Robinson
Will Sheldon
Chad Cavicchi

October 6, 2015
DATE
Appendix B
Phase I Design Plans
Appendix C
Final Administrative Consent Order with MassDEP (TO BE ADDED)
Appendix D
Stormwater Pollution Prevention Plan – Phase I
STORMWATER POLLUTION PREVENTION PLAN

Phase I Site Reclamation
Former Route 44 Sand & Gravel Operation
Carver, Massachusetts
February 2016
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Appendix C – Special Permit Application Permit Issued by Carver Planning Board
Appendix D - Standard BMP’s
Appendix E - Stormwater Analysis – Existing and Proposed Conditions
SECTION 1 - SITE DESCRIPTION AND RESPONSIBLE PARTIES

1.1 SITE INFORMATION
This document presents the Storm Water Pollution Prevention Plan (SWPPP) for the initial phase of reclamation activities at the former Route 44 Sand & Gravel Site (Site) located off Park Avenue and Montello Street in Carver, Massachusetts.

The current site owners, Route 44 Development LLC, has received approval from the Town of Carver Planning Board for a Special Permit Application to conduct the initial phase of work as outlined below. Charter Contracting Corporation, LLC (Charter) is implementing these initial site reclamation tasks. Langdon Environmental LLC (Langdon) is the Massachusetts Professional Engineer under agreement to oversee the construction activities at the Site.

This SWPPP summarizes the stormwater related controls and procedures that will be implemented during the initial phase of reclamation activities. It also fulfills the requirements for a Detailed Stormwater Management Plan as required by the “Interim Policy on the Re-Use of Soil for Large Reclamation Projects (COMM-15-01)” issued by the Massachusetts Department of Environmental Protection (MassDEP).

This SWPPP is intended for use by Charter and any other site operations contractors to provide consistent and effective management of storm water runoff and erosion mitigation.

The Site is not located on Indian country lands, nor located on a property of religious or cultural significance to an Indian tribe. Several residential properties border the Site to the east and north, Route 44 to the south and active cranberry bogs to the east. A locus plan is provided as Figure 1.

1.2 PROJECT SITE AND CONTACT INFORMATION

1.2.1 Project Site Information

Project Name and Address
Project/Site Name: Former Route 44 Sand & Gravel Site
Project Street/Location: Off Park Avenue and Montello Street
City: Carver
State: Massachusetts
ZIP Code: 02330
County or Similar Subdivison: Plymouth County
Figure 1-1
Locus Plan

Route 44 Development LLC

Figure 1-1
Locus Plan

February 2016
Not to Scale

Prepared by:
Langdon Environmental LLC

Approximate Limits of Phase I Project
Approximate Limits of property
Project Latitude/Longitude
Latitude: 41° 55' 32.3" N
Longitude: 70° 49' 17.2" W
Method for determining latitude/longitude: Google Earth
USGS topographic map (scale: 1:25,000): See Figure 1

1.2.2 Owner, Operator and Subcontractor Information
The following list of individuals are those who will be engaged in construction activities at the site. All subcontractors will be notified of the stormwater requirements applicable to their work.

Owner
Route 44 Development, LLC
c/o Charter Contracting LLC
500 Harrison Avenue
Boston, Massachusetts 02118

Operator
Charter Contracting LLC
Chris Ryan, Project Manager
500 Harrison Avenue
Boston, Massachusetts 02118
(857) 246-6800

Engineer
Langdon Environmental LLC
Bruce W. Haskell, P.E.
241 Boston Post Road West
Marlborough, Massachusetts 10753
(508) 630-0351

Emergency 24-Hour Contact
Charter Environmental, Inc.
Contact Name: To be determined
Contact Phone Number: To be determined

1.2.3 Stormwater Team
The individuals listed above comprise the project’s stormwater team. These are individuals responsible for overseeing the development of the SWPPP, any later modifications to it, and for compliance with the requirements in it.

1.3 Discharge Information
Surface water bodies at the Site include a pond associated stream located near the southern edge of the Site. In general, surface water from portions of the Site discharges to these two features but most precipitation infiltrates due to the highly disturbed condition of the Site. Groundwater flow is to the northeast away from the wetland ponds.
1.4 **NATURE OF THE CONSTRUCTION ACTIVITY**

The proposed reclamation activities will be conducted in two phases. At this time, only the initial phase has been approved and includes the activities described in the Special Permit Application approved by the Carver Planning Board.

Activities will also include installation of a weigh scale, wheel wash, site trailer, and improvements to the existing stormwater system.

Plans for the construction activities have been developed by Langdon on behalf of the site owners. These plans have been submitted to Planning Board as part of the Special Permit Application. Reduced size copies of these plans are included in Appendix A to the SWPPP. A full size set of plans shall be maintained at the Site.

The work described during the initial phase is not subject to the Massachusetts Wetlands Protection Act (WPA). The Carver Conservation Commission has issued an Order of Resource Area Delineation in January 2016 that approved the wetland delineation. All activities during Phase I will be outside of the delineated wetland resource areas. A copy of the Order issued by the Commission is included in Appendix B to this SWPPP.

1.5 **SEQUENCE AND ESTIMATED DATES OF CONSTRUCTION ACTIVITIES**

The proposed schedule includes acceptance of grading and shaping materials starting on March 1, 2016 and continuing until the approved quantity of materials has been received. The site owners anticipate starting the approval for the final phase of Site reclamation after May 1, 2016. The final schedule will be determined based on the availability of appropriate materials.

1.6 **ALLOWABLE NON-STORMWATER DISCHARGES**

Anticipated non-storm water discharges associated with the Glenview Landfill site include:

- Water to control dust

These discharges will be handled in the proposed stormwater system described herein or infiltrate into the ground locally.

1.7 **SITE MAPS AND PLANS**

The design plans for the initial phase of activities are provided in Appendix A to this SWPPP.
SECTION 2 - COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS AND
POTENTIAL SOURCE IDENTIFICATION

2.1 COMPLIANCE WITH OTHER FEDERAL REGULATORY REQUIREMENTS

2.1.1 Endangered Species Protection
There are no mapped areas within the Site that are mapped as either Mapped or Potential Habitats for Rare or State-Protected Species by the Natural Heritage and Endangered Species Program (NHESP). There are no vernal pools within mapped by NHESP within the Site.

2.1.2 Historic Preservation
Although ground-disturbing stormwater controls are proposed at the Site, there are no known registered historic properties that will be impacted by these construction activities. The Site was previously utilized for historic sand and gravel operation as well as other material processing and disposal operations. Based on a search of the Massachusetts Cultural Resource Information System database there are no properties, structures, and areas of historical significance in the vicinity of the Site.

2.1.3 Federal Emergency Management Agency (FEMA)
The Federal Emergency Management Agency (FEMA) updated their mapping of the floodplain at the Site as shown on a map dated July 17, 2012 (Map Number 25023C0337J). There are no mapped floodplains within the active areas during the initial phase.

2.2 POTENTIAL SOURCE IDENTIFICATION
This section identifies existing and proposed activities at the Site which have the potential to adversely impact the quality of the surrounding surface water bodies. These activities are used as the basis for the SWPPP mitigation procedures discussed elsewhere in this document. The potential for Total Suspended Solids (TSS) discharged into the wetlands from the initial phase of reclamation activities prior to it being stabilization is a specific focus of this SWPPP.

2.2.1 Current Site Activities
The Site is currently inactive with an exposed bottom surface of the historic sand and gravel removal operations and numerous debris piles including an inactive woodwaste landfill. There are no current stormwater collection and treatment systems at the Site. Drainage largely infiltrates into several depressions located throughout the Site. Groundwater flows to the northeast through the Site.
Section 2 - Compliance with Other Federal Requirements and 
Potential Source Identification

2.2.2 Proposed Operations
The initial phase of Site reclamation activities covered by the SWPPP includes the following work items:

- General Site Preparation. The owners are requesting to complete the proposed steps as required to prepare the property for the other activities including access road improvements; construction of stormwater controls; and installation of erosion controls. Based on the approval from the Planning Board of the Special Permit Application, this work includes minor local repairs to Montello Street and Park Avenue including patching potholes, limited vegetation removal, sign repair and replacement, and re-striping the intersection of Montello Street and Route 58. None of these repairs will impact stormwater run-off.

The Site owners have also installed an office trailer and truck-weighing scale on their property near the end of Park Avenue that enters the Site.

- Clean-up Debris and Other Items. There are numerous piles of concrete, asphalt, solid waste and other items located throughout the property. The owners propose to either remove these piles from the property or process them for on-Site re-use.

- Initial Site Stabilization. The Site is currently poorly graded and largely covered with sandy soils and scrubby vegetation. Route 44 Development proposes to conduct preliminary grading with imported soils to restore the Site with either appropriately tested soils or asphalt, brick and concrete (ABC) materials from off-Site sources. The Site owners propose to perform the soil filling operations escribed as part of this initial Special Permit application.

The development of the large buildings and parking areas required for the proposed final use of the Site will require significant quantities of structural fill and gravel materials. Route 44 Development proposes to either create some of these necessary materials by processing both the on-Site piles of concrete and debris and importing ABC materials that have no painting, coating or are impregnated with any substance; or receiving and stockpiling ABC materials that were processed off-Site.

2.2.3 Summary of Potential Source Identification
Potential sources of impacts to the surrounding wetland resources around the Site are particulates running off of the placed soils and processed ABC materials.

During construction, potential sources also include trucking and construction machinery including lubricants and fuel. Every reasonable precaution to prevent contamination by leaking of these materials will be employed during work activities.

2.2.4 General Mitigation Requirements
Based on the anticipated construction activities, stormwater related mitigation activities have been formulated to control sediment and erosion. The particulate sizes associated with the imported soils will vary widely based on their source. Coarser particles will easily be mitigated using conventional
Section 2 - Compliance with Other Federal Requirements and Potential Source Identification

stormwater and erosion control measures such as silt fence and straw bales. The finer particles will not be easily settled by typical control measures and will require treatment within the proposed stormwater detention basin(s).

Erosion control measures as shown on the attached plans will be established and maintained for both for the short- and long-term conditions, especially before final vegetation is established.

Management controls for the mitigation requirements are discussed in Section 3.
SECTION 3 – STORMWATER MANAGEMENT, EROSION AND SEDIMENT CONTROLS

3.1 INTRODUCTION
A stormwater Best Management Practice (BMP) is defined as any program, technology, process, siting criteria, operating method, measure, or device that controls, removes, or reduces pollution. Appropriate BMPs are selected based on an assessment of the operations and potential storm water impacts. Areas of actual or potential pollutant contact are evaluated and applicable BMPs are implemented to eliminate or minimize the release and transport of pollutants.

3.2 NATURAL BUFFERS OR EQUIVALENT SEDIMENT CONTROLS
For the initial phase, a 200-foot undisturbed natural buffer will be maintained from the edge of wetland resource areas as approved by the Carver Conservation Commission. This buffer will be established by the placement of erosion and sediment controls.

All stormwater run-off will be directed to the stormwater basin(s) as shown on the design plans in Appendix B. Note that the basin(s) shown on the plans will be constructed in phases as construction progresses.

3.3 BEST MANAGEMENT PRACTICES IMPLEMENTATION PROGRAM
To minimize the effects of the activities on the surrounding wetlands and surface water, site preparation will include the implementation of several BMPs. A portion of the BMPs indicated below will be implemented during various stages of material stockpiling. A discussion of the specific BMPs to be used at this site is provided in the sections below. Information on general BMPs that may be applicable to Site operations is provided in Appendix D.

3.3.1 Sedimentation and Stabilization Control BMPs
The anticipated Sedimentation and Stabilization Control BMPs to be implemented during stockpiling of shaping and grading materials will include, but are not necessarily limited to, the following:

- Dust Controls;
- Infiltration Basin(s);
- Construction Road Stabilization;
- Diversion Berms;
- Drainage Swales; and
- Installation of Erosion Controls.

Sediment controls will be established prior to delivery of any soils or initial site preparation activities. These controls will be augmented and improved as discussed below for the completion of the initial phase of the Site reclamation project. The following is a summary of the Site mitigation measures:
Section 3 – Stormwater Management, Erosion and Sediment Controls

- New stormwater infiltration basin(s) will be constructed to receive the stormwater from the operational portions of the Site as shown on the plans. This basin has been designed to handle the run-off from the operating areas in accordance with the design standards established by the Carver Planning Board. The design of the basin(s) has been reviewed and approved by the Board’s professional engineer. Copies of the approved stormwater calculations are provided in Appendix E.

- Temporary stormwater drainage diversion swales will be constructed as required to direct flow to the basin(s).

- Sediment controls must be cleaned on a regular basis. At a minimum, control devices, such as temporary sedimentation basins, will be cleaned when their design capacity has been reduced by 50 percent.

- Disturbance of soils will be minimized by limiting activity within the operations area and where stormwater controls need to be reestablished, and will proceed in a manner to reduce erosion and sedimentation. All work will be conducted in a manner that reduces the unlikely potential for sedimentation to be discharged into the adjacent wetlands. All temporarily inactive areas will be temporarily stabilized using methods suitable for protecting against erosion.

- The site will be periodically inspected for any actual or potential erosion causing situations will be corrected. Charter will be responsible for adequately protecting the work to minimize or eliminate potential harm to on-site resource areas.

- The ongoing work will be protected from erosion and may use temporary stabilization measures in that effort. Surface roughening may be used, in concert with other temporary erosion control measures if necessary, as a velocity dissipation measure to temporary control erosion. Surface roughening reduces speed of runoff, increases infiltration, and traps sediment before discharge to the sedimentation basin or straw bale barrier.

- Existing ground cover will be maintained to the maximum extent practicable during construction.

- General controls will be installed at the edge of the operating area(s) and downgradient of the stormwater basin(s) to ensure minimal disturbance to downgradient resources. These erosion controls will be appropriately anchored into the ground and placed in a continuous row. The erosion control barriers will be inspected regularly and those showing signs of deterioration will be replaced immediately. Material collected behind the barriers will be removed as needed.

- Surface drainage from operating areas will be intercepted and diverted towards the stormwater basin. Repair of existing drainage swales will be performed in order to maintain stormwater within the Site and the active operating areas. Active areas will be drained by diversion of runoff to the basin(s) as shown on the stockpile plan.
Section 3 – Stormwater Management, Erosion and Sediment Controls

- Suspended particles will be removed from the surface water towards runoff stream using the basin(s). Check dams that lead to open drainage channels and natural swales will be installed as necessary to diffuse overland flows and prevent erosion. All swales and sedimentation basins shall be checked regularly and repaired and cleaned as necessary to ensure that they operate as intended.

- In no case will construction equipment, delivery vehicles, or construction personnel vehicles approach the site by routes through wetland resources.

- All earthwork, grading, movement of equipment, and other operations likely to cause siltation and tracking of sediments, shall be planned and performed in a sequence as to avoid or minimize the potential for pollution to discharge into the adjacent wetlands.

- Slope stabilization measures will be initiated in areas where soil has been disturbed as follows:
  
  1. Charter will ultimately be responsible for the protection of the work and the protection of on-site resource areas.
  2. An on-site monitor will inspect the work and ensure that adequate erosion controls are being implemented.
  3. Charter will repair any and all damage to the on-site resource areas that is caused by, related to, or in any way pertaining to the work.

Procedures will be put in-place to remove any excess mud, dirt or rock originating from the Site. Water spray equipment shall be used to reduce dust.

3.4 STORMWATER MANAGEMENT

For the initial phase, Charter will construct the infiltrations basin(s) along the westerns perimeter of the operating areas as shown on the attached plans. These structures were previously designed for TSS removal and stormwater retention in accordance with MassDEP policies and regulations. The basin(s) will be constructed in phases in conjunction with the completion of the initial phase of work.

During the project covered by this SWPPP, stormwater control devices and basins will be utilized to control stormwater and TSS leaving the Site. The size of the basin has been designed so that the combined peak flow from the basin during the 100-year frequency design storm does not exceed the peak discharge rate for the Site under existing conditions. In addition, the discharge rate allows for adequate detention time for sediment removal.

The proposed detention basin system will remove 80 percent of the TSS in the stormwater flows during the 2 and 10 year, 24-hour frequency storm events. The stormwater design memorandum including supporting calculations as approved by the Planning Board is included in Appendix E.
3.5 **Other Controls**

Portable sanitary units will be provided for use by all workers during the project at the office trailer/scale house location. A licensed sanitary waste management contractor will regularly collect all sanitary waste from the portable units.

Any trash and construction debris generated from the site will be disposed of off-site in accordance with MassDEP’s Solid Waste Management Regulations (310 CMR 19.000). All personnel will receive instruction regarding the correct procedure for waste disposal. Employee waste and other loose materials will be collected so as to prevent the release of floatables during runoff events.
SECTION 4 - POLLUTION PREVENTION STANDARDS

4.1 POTENTIAL SOURCES OF POLLUTION
During the work, potential sources of pollution include trucking and grading machinery lubricants and fuel. Every reasonable precaution to prevent contamination by leaking of these materials will be employed during the work activities.

The long access road to the Site will minimize off-Site tracking of soils. Potentially generated pollutants include: detergents, oil and fuel, suspended solids, grease, and antifreeze. These materials, and other materials used during construction with the potential to impact stormwater, will be stored, managed, used, and disposed of in a manner that minimizes the potential for releases to the environment and especially into stormwater.

A water source will be available as needed to wash construction trucks and minimize off-Site tracking of soils and dust generation.

BMPs will be implemented in accordance with EPA's Vehicle Maintenance and Washing Areas BMP Fact Sheet when possible.

4.2 SPILL PREVENTION AND RESPONSE
Potential pollutants will be stored and used in a manner consistent with the manufacturer's instructions in a secure location. Materials disposal will be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations. Materials no longer required for construction will be removed from the Site as soon as practicable.

Garbage, construction waste, and sanitary waste handling and disposal facilities will be provided to the extent necessary to keep the Site clear of obstruction and BMPs clear and functional.

The following agencies should be contacted in the event of a spill:

- Carver Fire Department: (508) 866-3440
- Chelmsford Health Department: (508) 866-3420
- Chelmsford Police Department: (508) 866-2000
- MassDEP Southeast Regional Office: (508) 946-2700

4.3 TRAINING
On-Site training to personnel responsible for compliance with the SWPPP will be provided. Training shall include the location of all stormwater controls on-Site and how they are to be maintained; procedures to follow with respect to pollution prevention; and how and when to conduct inspections, record applicable findings and take corrective actions. Charter's superintendent and project manager will be familiarized with the major elements of the plan. Others working on-Site will be given appropriate training information at the conclusion of Site safety meetings or on an as-needed basis.
SECTION 5 - INSPECTION AND CORRECTIVE ACTION

5.1 INSPECTIONS
Langdon will assist Charter to monitor the activities at the Site with respect to sedimentation, erosion, and storm water controls. Langdon personnel will be responsible for performing a Site inspection on a monthly basis concurrent with the inspection required as part of the Special Permit Application process. In addition, Langdon personnel will inspect all controls after all significant storm events experienced at the Site. A significant storm event will be defined as greater than 0.5 inches of rain falling within a 24-hour period. A locally available weather station for the Carver area (available through a web Site services such as the Weatherunderground.com) will be used to monitor measurable local rain events. Finally, reports will be prepared during all inspection activities and submitted to the Town of Carver. The reports will include summaries of sedimentation, erosion and stormwater control effectiveness as well as noting other conditions, activities or modifications.

Inspections will be performed of the following items and locations:

- Erosion control barriers for evidence of breaching or deterioration;
- Sedimentation barriers for excess siltation or clogging of stone dikes;
- Structural control measures for damage or clogging; and
- Access and egress points from the Site.

Disturbed areas in the vicinity of the initial phase of operations that are exposed to precipitation shall be inspected for evidence of, or the potential for, excess sediments entering the drainage system. Sediment and erosion control measures identified in this SWPPP shall be observed to ensure proper operations. Where discharge locations or points are accessible, inspection shall be conducted to ascertain whether effective erosion control is being maintained. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles exit the Site shall be inspected for evidence of offsite sediment tracking.

Based on the results of these inspections, the SWPPP may be modified as necessary to include specific BMPs designed to correct any problems identified. If existing BMPs need to be modified or additional BMPs are necessary, implementation shall be completed as soon as is practicable. Revisions to the SWPPP shall be completed within seven calendar days following the inspection.

5.2 CORRECTIVE ACTIONS
Upon identification of BMPs in need of corrective action, Langdon will communicate with Charter the nature and extent of corrective action necessary. Charter will implement additional BMPs, as necessary until the previously identified deficiency has been remedied.