

APPENDIX L
CASE 10-T-0139
SOIL AND MATERIALS
MANAGEMENT PLAN [EMCP B(14)]

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1.0 INTRODUCTION

1.1 OBJECTIVE

This Soils and Materials Management Plan (SMMP) has been generated as an Appendix to the Environmental Management and Construction Plan (EM&CP) which was developed by the Certificate Holders for the Champlain Hudson Power Express (CHPE) Project (“Project”). Section 1.0 of the EM&CP summarizes the EM&CP’s purpose and intent. The objective of this Soil and Materials Management Plan is to set guidelines for the management of excavated soil and other materials generated by construction associated activities as a result of construction related to Segment 6 -Package 4A of the CHPE Project of the CHPE Project.

1.2 OVERVIEW OF THE SMMP AND EXCESS SOIL MATERIAL GENERATION (SPOILS GENERATION)

During construction of the CHPE Project, excess material will be generated by the excavation of the trench, splice locations, horizontal direction drill (HDD) entry and exit pits, and other land disturbance activities, this material is referred to as “spoils.” Generated material will be temporarily stockpiled or sidecast at the point of generation, such as within railroad rights of way (ROWs), around the HDD entry and exit pits, and splice box areas. The following narrative discusses the best management practices and regulatory requirements to manage this excess soil material depending on its location, characteristics, and volume.

- Sections 2 and 3 discuss the general procedure to classify the soil for beneficial reuse or disposal (including onsite and offsite reuse of fill material, off-site beneficial reuse of material as General Fill, Restricted-Use Fill, and Limited-Use Fill, or disposal of soil at an approved location by a qualified contractor. Beneficial reuse can occur on-site at the point of generation or within the railroad right-of-way (ROW) or New York State Department of Transportation (NYSDOT) ROW or may occur offsite at a ROW owner upland location.
- Section 4 describes the regulatory procedures required for handling, classifying and disposal of contaminated materials.
- Section 5 describes specific disposal locations based on classification of the material and where the material originated.
- Section 6 discusses the regulatory requirements related to transporting waste materials off-site.

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- Section 7 contains some specific information for work within Canadian Pacific railroad ROW to meet the railroad owner's requirements for spoils management.
 - Section 8 describes the regulatory requirements and best management practices required for waste materials other than spoils that may be generated during construction.

As a general rule for the CHPE Project, all excess material not used as backfill or spread within the limit of work to create a level surface, or—in the case of the Canadian Pacific (CP) Rail ROW—reused within the limit of work consistent with one of the Preferred Reuse Methods listed in Section 7.1.3, will be placed in a dump truck at the point of generation, transported, and beneficially reused or disposed of in accordance with this SMMP as well as the Project Erosion and Sediment Control Plan (ESCP) (Appendix C of the EM&CP).

1.3 GLOSSARY OF TERMS USED WITHIN SMMP

Qualified Soil Monitor: All excavations will be monitored by a qualified person designated by the Environmental Inspector (EI) (See Section 3.1.2 of the EM&CP for EI responsibilities and qualifications) that has been trained to identify the visual and odor indicators for contamination. Canadian Pacific has additional requirements for this soil monitor. These additional requirements are further described in Section 7.0.

Unrestricted fill: For the purposes of this Soil and Materials Management Plan, unrestricted fill refers to soil that has been excavated and can be reused in any upland location within the project site without restrictions. Should the material be transported off-site for beneficial reuse, then the General Fill criteria for beneficial reuse must be demonstrated. See Table 3.1.

Package or Segment Specific Requirements vs. Project Wide Requirements: See Section 7.0. Work activities within the CP Rail ROW will require the deployment of additional monitoring and spoils management steps. These activities will be complementary to the project wide construction activities that are based on the Article VII Certificate Conditions (CCs) and regulatory requirements. For all work within CP Rail properties, procedures in Section 7.0 will be followed as well as the general project procedures described in the remaining Sections. In areas where there are no specific ROW owner agreements or requirements, Section 7 will not apply.

2.0 CLASSIFYING SPOILS GENERATED BY THE PROJECT

According to Title 6 of the New York Codes, Rules, and Regulations (NYCRR) 360.2(107) fill material is soil and similar material excavated for the purpose of construction or maintenance. This material will be generated from excavation of trenches and other earthwork construction activities associated with the Project as described in Section 1.2. For Segment 6 -Package 4 A, since the material is originally from outside the New York City (NYC) Boundary, the spoils cease to be waste as long as there is no evidence of historical impacts such as reported spill events, or visual or other indication (odors, etc.) of chemical or physical contamination as identified in section 360.12(c)(1)(ii) of 6 NYCRR. As such, this material, which is referred to herein as “unrestricted fill” can be reused on-site without testing. As a function of the construction progress, soil/fill observations will be documented by the Environmental Inspector (EI) or their designee (meeting the requirements of a Qualified Soil Monitor in Section 1.3) who will maintain a record of observations. This record will be submitted to New York State Department of Public Service (NYSDPS) Staff upon request or as needed.

The observations by the EI or Qualified Soil Monitor during excavation will result in the following classifications of spoils

1. Unrestricted fill (see Section 1.3 for definition of term).
2. Spoils for offsite beneficial reuse (See Section 3.0 for regulatory requirements associated with beneficial reuse).
3. Spoils for offsite disposal location listed in Table 5.1 in Section 5.1. These may be spoils that are generated in excess of available capacity for onsite use as unrestricted fill or that otherwise require disposal offsite.
4. Spoils that exhibit contamination based on odor or visual assessments and any additional screening requirements described in Section 7.0. These materials will require segregation and laboratory analysis in accordance with the procedures described below.

The identification, handling, storage, testing and disposal of excess materials will be conducted in accordance with the procedures outlined in this Appendix of the EM&CP as well as applicable local, state, and federal safety and environmental regulations, requirements, and guidelines. If supplemental field screening or laboratory analysis of excess material not already identified in this SMMP is required or necessary due to a change in field conditions, the Contractor will submit a proposal for sampling needs to the Certificate Holders. Any changes to the procedures described in this SMMP would require going through the EM&CP change notice process.

3.0 REGULATORY REQUIREMENTS FOR THE BENEFICIAL REUSE OF SPOILS

This section discusses the onsite and offsite reuse of spoils. Table 3-1 and Figure 3.1 provide a summary of NYSDEC regulations regarding the off-site beneficial reuse of fill material classified as General Fill, Restricted-Use Fill, and Limited-Use Fill.

- General Fill is material consisting solely of soil, sand, gravel, or rock (no non-soil constituents).
- Restricted-Use Fill means fill material that is up to 40 percent by volume inert, non-putrescible non-soil constituents.
- Limited-Use Fill has no volume limit for inert, non-putrescible non-soil constituents.

Non-putrescible refers to material that may readily degrade or produce odors. Inert, non-putrescible material excludes plastic, gypsum wallboard, wood, paper, or other material that may readily degrade or produce odors. Regulatory requirements that outline which laboratory analysis is required and the maximum concentration levels are included as citations in Table 3.1.

Table 3-1 NYSDEC Acceptable Fill Material Uses (6 NYCRR 360.13(f))

Fill Material Type	Fill Material End Use	Physical Criteria	Maximum Concentration Levels
General Fill	Any setting where the fill material meets the engineering criteria for use, except: <ol style="list-style-type: none">1. Undeveloped land.2. Agricultural crop land.	Only soil, sand, gravel, or rock; no non-soil constituents.	Lower of Protection of Public Health-Residential Land Use and Protection of Groundwater in section 375-6.8(b) of Title 6.
Restricted-Use Fill	Engineered use for <ol style="list-style-type: none">1. embankments2. subgrade in transportation corridors,3. on sites where in-situ materials exceed Restricted-Use Fill or Limited-Use Fill criteria. Must be placed above the seasonal high-water table.	Up to 40 percent by volume inert, non-putrescible non-soil constituents.	General Fill criteria except that up to 3 mg/kg (dry weight) total benzo(a)pyrene (BAP) equivalent. No detectable asbestos. Polycyclic aromatic hydrocarbons must not exceed Protection of Groundwater Soil Cleanup Objectives in section 375-6.8(b) of this Title.
Limited-Use Fill	Engineered use for under foundations and pavements above the seasonal high-water table.	No volume limit for inert, non-putrescible non-soil constituents.	General Fill criteria, except up to Protection of Public Health-Commercial SCOs for metals; up to 3 mg/kg (dry weight) benzo(a)pyrene equivalent is allowed. No detectable asbestos.

For Maximum Concentration Levels for each Fill Material Type see 6 NYCRR 360.13(f).

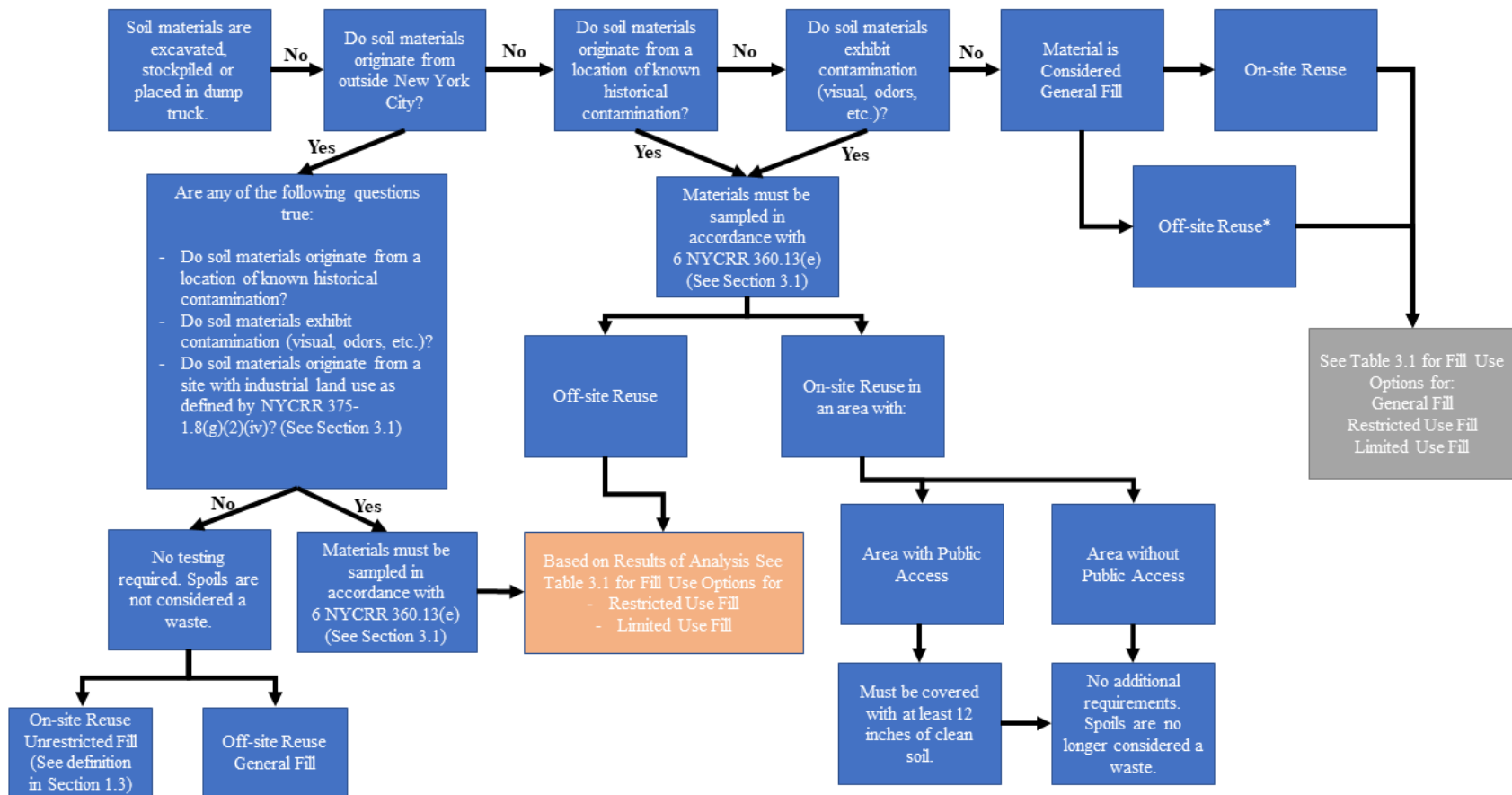


Figure 3.1 – Beneficial Reuse Decision Tree

3.1 SAMPLING AND ANALYSIS REQUIREMENTS FOR FILL MATERIAL

The requirements of this section are taken from 6 NYCRR Section 360.13(e).

1. Sample method and frequency. Samples must be representative of the fill material. The sampling program must be designed and implemented by or under the direction of a qualified environmental professional (QEP) as defined by 6 NYCRR Section 360.2(b)(213), using the table below as a minimum sampling frequency. Written documentation of the sampling program with certification from the QEP that samples were representative of the fill material must be retained for three years after the sampling occurs and must be provided to the department upon request.

Table. 3.1 Minimum Analysis Frequency for Fill Material		
Fill Material Quantity (cubic yards)	Minimum Number of Analyses for Volatile Organic Compounds, if Required	Minimum Number of Analyses for all other parameters
0-300	2	1
301-1000	4	2
1001-10,000	6	3
10,001+	Two for every additional 10,000 cubic yards or fraction thereof	One per every additional 10,000 cubic yards or fraction thereof

2. Analytical parameters. Fill material samples must be analyzed for:
 - (i) the Metals, PCBs/Pesticides, and Semivolatile organic compounds listed in 6 NYCRR Section 375-6.8(b)
 - (ii) asbestos if demolition of structures has occurred on the site;
 - (iii) volume of physical contaminants, if present, based on visual observation; and
 - (iv) volatile organic compounds listed in 6 NYCRR Section 375-6.8(b), if their presence is possible based on site events such as an historic petroleum spill, odors, photoionization detector meter or other field instrument readings.
3. Laboratory and analytical requirements. Laboratory analyses must be performed by a laboratory currently certified by the New York State Department of Health's Environmental Laboratory Approval Program (ELAP).

3.2 REQUIRED NOTIFICATIONS

Per Section 360.13(g)(3) of 6 NYCRR, for Restricted-Use Fill and Limited-Use Fill material, the NYSDEC must be notified at least 5 days before off-site delivery of greater than 10 cubic yards of

Restricted-Use Fill or Limited-Use Fill materials. Notification must be made on forms or in a manner acceptable to the NYSDEC and must include any analytical data required by 6 NYCRR Section 360.13(e). The NYSDEC may request to inspect the offsite location receiving fill material.

4.0 MANAGEMENT OF SUSPECTED CONTAMINATED SOILS AND CONTAMINATED SOILS

During various site walks and related soils sampling with respect to geotechnical explorations during the CHPE Project design development phase there was no evidence of contaminated soils. The Project staff also have recently performed several site walkthrough and high-rail tours prior to the commencement of construction and no evidence of contamination was observed within the Segments 6 – Package 4A corridor. Additionally, the NYSDEC Remediation database was reviewed in April 2023 and no remediation sites or releases of on-going concern were identified near Segments 6 – Package 4A. If contaminated soils are discovered as a function of anticipated construction, the Certificate Holders will follow the procedures for unanticipated encounters with contaminated soils as listed in Section 5.9 of the EM&CP and the procedures outlined in the following paragraphs.

4.1 EVALUATION OF EXTENT OF CONTAMINATED SOILS:

If contaminated soils are suspected based on visual or olfactory methods and/or known contaminated sites are encountered during the construction phase of Segments 6 – Package 4A , the following procedures will be followed:

- a) Field screening for extent of contamination such as the presence for volatile organic compounds will be performed using a photoionization detector (PID) on any soils excavated within 500 feet of known contamination sites or the originating locations of spoils excavated that exhibit visual or odor indications of contamination.
 - Spoils exhibiting PID readings below 25 ppm will be considered non-contaminated and can be stockpiled and used as backfill for excavation where needed.
 - Spoils exhibiting PID readings of 25 ppm or greater will be segregated from non-contaminated soil and managed in accordance with Sections 4.2, 4.3, and 4.4.
- b) Air particulate monitoring will also be performed within 500 feet of all known contamination sites in accordance with DER-10 (See Section 8.5).
- c) As per Certificate Condition (CC) 64, the Environmental Inspector and/or the Certificate Holders and/or Railroad ROW Owners will report a Reportable Event to the landowner, and to the NYSDEC via the NYSDEC Oil and Hazardous Materials Spills Hotline (800/518-457-7362) (CC64). In addition, as per the Best Management Practices (BMP) document, the Certificate Holders have established points of contact with the NYSDEC and NYSDPS Staff who will also be notified in the event contamination is discovered.

These contacts are:

- Matthew Smith with DPS ((518) 402-5141) and
- Karen Gaidasz, with DEC ((518) 402-9167)

4.2 SOIL SAMPLING PROCEDURES

Surficial soil sampling is generally conducted in potentially contaminated areas of concern, whether relating to former or current uses of the site, to determine whether contaminants are present above applicable standards. These procedures will also be followed if contamination is suspected based on visual or olfactory evidence. Sample locations will be biased to suspected areas of greatest contamination including stressed vegetation, soil discoloration, odor, etc. Sample locations are also chosen based on area specific requirements. This includes sampling in locations that includes past or present usage of hazardous substances or wastes, discharge points of past or present processes, and former and current containers that may contain or previously contained hazardous substances or waste. The depth of soil sampling will be determined by the onsite Environmental Inspector or Qualified Soil Monitor. If evidence of contamination (staining, odors, etc.) persists, additional sampling at deeper depths will be performed. For sampling performed on soil material originating in railroad ballast that may contain gravel, to the greatest extent possible the gravel will be removed from the sample.

Surficial soil sampling will generally be in accordance with the following procedures.

1. Use a shovel to clear surface debris from the sampling location, including grasses or other vegetation.
2. If appropriate to the investigation, screen the soil with a Photo Ionization Detection (PID) and record the results on a Field Log.
3. Sampling Procedure: Discrete Sample Collection:
 - a. Collect the sample from the depth specified by the Environmental Inspector or Qualified Soil Monitor. In instances where soil is collected for Volatile Organic Compounds (VOC) analysis as well as other non-VOC parameters, the soil for VOC analysis must be collected first to minimize volatilization and biodegradation.
 - b. When analyzing for VOCs, the soil sample must be collected directly from the soil sample location into the sample container without disturbing the matrix structure.
 - c. Once VOC soil sampling is complete, the remaining soil to be analyzed for non-VOC parameters such as Semivolatile Organic Compounds (SVOC), pesticides,

Polychlorinated Biphenyls (PCB), metals, or cyanide will be homogenized to create a representative sample. Prior to homogenization, twigs, roots, leaves, rocks, and miscellaneous debris will be removed from the sample using the decontaminated stainless-steel spoon or spatula. The soil will be mixed, quartered (divided into 4), and mixed again until a consistent physical appearance over the homogenized soil has been obtained. The soil will be transferred into the appropriate sample container using a decontaminated stainless-steel spoon or spatula.

Composite Sampling (for off-site disposal characterization):

- a. For Composite Sampling (applicable to non-VOC's only) where several discrete samples (of equal volume) are mixed together, collect the sample from depth specified by the Environmental Inspector or Qualified Soil Monitor from the first composite point. Cover the stainless-steel bowl with aluminum foil and proceed to the next sampling point. Repeat between locations. If VOC samples are also being collected at each discrete point, the stainless-steel spoon/trowel will be decontaminated between locations (Refer to Step 7). Once equal volumes of soil have been collected from each point which will make up the composite sample, the soil will be homogenized to create a representative sample. Prior to homogenization, twigs, roots, leaves, rocks, and miscellaneous debris will be removed from the sample using the stainless-steel spoon or spatula. The soil will be mixed, quartered (divided into 4), and mixed again until a consistent physical appearance over the homogenized soil has been obtained. The soil will be transferred into the appropriate sample container using a stainless-steel spoon or spatula.
4. Label the sample bottles (if the bottles are not pre-printed) with the sample location name, collection time, project name, analysis to be performed, and other field required information on the label.
5. Place the properly labeled sample bottles in a cooler with ice and maintain them at 4°C for the duration of the sampling and transportation period. Do not allow samples to freeze. Describe and record the following properties of the sample: basic soil type (e.g., sand, gravel, and clay), structure, texture, sorting, grain size and shape, degree of saturation, color, odor, staining, and presence of foreign material.
6. After sampling is completed, the sampling location will be marked by a wooden stake and flagging and/or wire flag. The station number and date of sampling will be written on the stake using a permanent marker or other waterproof ink. A properly calibrated GPS

unit will be used to mark the sample location.

7. Decontaminate the sampling equipment using a biodegradable detergent or other detergent as approved by the Environmental Inspector or Qualified Soil Monitor and move to the next sampling location. Repeat steps 1 through 7 for subsequent sampling locations.
8. Soil samples will be packed and shipped to the laboratory with Chain of Custody Documentation for analyses.

4.3 CONTAMINATED SPOILS LABORATORY CHARACTERIZATION

For Segment 6 -Package 4 A, if soil exhibits evidence of contamination, the soil will be analyzed as follows to assist in the evaluation of potential onsite or offsite disposal options including beneficial reuse as General Fill, Restricted-Use Fill, Limited-Use Fill, or offsite disposal at an approved disposal facility:

1. The Metals, PCBs/Pesticides, and Semi volatile organic compounds listed in section 375-6.8(b) of 6 NYCRR.
2. Asbestos if demolition of structures has occurred on the site or if buried asbestos is discovered and will be managed in accordance with section 56-2.1(w)(iii) of 12 NYCRR.
3. Volatile organic compounds listed in section 375-6.8(b) of 6 NYCRR, if their presence is possible based on site events such as historic petroleum spill, odors, photoionization detector meter or other field instruments readings.

In addition, the soil will be visually inspected to assess the volume of physical contaminants, if any. Laboratory analysis will be performed by a laboratory currently certified by the New York State Department of Health's Environmental Laboratory Approval Program. The minimum number of analyses for volatile organic compounds (if required) and other parameters is determined by the quantity of spoils material and can be found in Section 360.13(e)(1) of 6 NYCRR.

If the spoils do not meet the regulatory requirements for General Fill, Restricted-Use, or Limited-Use Fill, then they must be disposed of in an off-site approved disposal location as described in Section 5.1. If spoils exhibit evidence of contamination, the Environmental Inspector and/or Certificate Holders will evaluate the situation and determine whether it constitutes a "Reportable Event" in accordance with Certificate Condition 64 and NYSDEC's spill reporting regulations. Any incident determined to be a Reportable Event will be reported to the New York State

Department of Environmental Conservation (NYSDEC) Oil and Hazardous Materials Spill Hotline (800/457-7362).

4.4 DISPOSAL OF CONTAMINATED SOILS AND SUSPECTED CONTAMINATED SOILS

In the event that field evidence of contamination is identified, potentially contaminated soils will be segregated and stockpiled on polyethylene sheeting and covered at a pre-determined staging area. The potentially impacted, stockpiled soils will then be sampled as described in Section 4.1. If the testing confirms that the soil is contaminated, it will then be properly characterized and disposed of at an off-site NYSDEC permitted facility. The excavation will then be backfilled with clean unrestricted fill or approved imported fill (including flowable thermal backfill where applicable). If the testing of the segregated soil indicates that the soil is *not* contaminated, it may be beneficially reused on-site or off-site consistent with the criteria specified in Section 3.0 above.

4.5 MANAGEMENT OF CONTAMINATED WATER AND SUSPECTED CONTAMINATED WATER

If water from the construction site (i.e., trench water) exhibits visual or olfactory evidence of contamination, it will be sampled and stored in a frac tank or similar container, removed off-site in accordance with applicable environmental regulations, and disposed of in an approved NYSDEC locations.

4.6 MANAGEMENT OF RELEASES OR SPILLS OCCURRING DURING CONSTRUCTION

If evidence of a release or spill is found in the soil during construction as a result of the Project's activities, construction activities will be immediately halted in the area, and the Environmental Inspector will be notified. Field screening of soil and water and air particulate monitoring will be performed in accordance with applicable environmental regulations including the NYSDEC Division of Environmental Remediation DER-10 Technical Guidance for Site Investigation and Remediation and the NYSDOH Generic Community Air Monitoring Plan (CAMP) (CC64). Results from field screening will be documented by the Environmental Inspector, in coordination with NYSDEC and NYSDPS Staff. Necessary laboratory analysis will be performed by a laboratory with all applicable and required certifications.

4.7 CONSULTATIONS AND NOTIFICATIONS; RESUMPTION OF CONSTRUCTION

If any excavated soils are found to exhibit visual or olfactory evidence of impact or contamination, construction activities in the vicinity will be temporarily halted while the Environmental Inspector is notified to guide the installation team through the assessment and classification process. The procedures that will be followed in the event of a release or spill are described in the EM&CP Spill Prevention Control Plan in Appendix K. Excavated soils that are found to contain hazardous substances will be analyzed and disposed of in accordance with the applicable solid waste and environmental regulations. These may include but are not limited to 6 NYCRR 360.13(d), (e), and (f). Contaminated soil removed from the Project area may not be used as unrestricted fill.

The Environmental Inspector or designee (meeting the qualifications of Qualified Soil Monitor in Section 1.3) will report the unanticipated encounter of contaminants to the Certificate Holders, who will notify the NYSDEC, NYSDPS Staff, and applicable landowners including the Railroad ROW owner. Construction activities will be managed around the area(s) of concern in concert with NYSDPS/NYSDEC oversight and approvals. Future construction activities at the referenced area of concern will be conducted in accordance with applicable environmental regulations and procedures of this EM&CP as well as technical specifications provided on the Plan and Profile Drawings in Appendix C.

In the event that contamination in the ground is detected during overland construction and such contamination is of the kind that will lead to volatilization or off-gassing of such contamination/chemical constituents, the Certificate Holders will contact the landowner(s), the New York State Department of Health (NYSDOH) and NYSDPS Staff prior to further disturbance (CC64).

4.8 COMMUNITY AIR MONITORING PLAN (CAMP)

As stated above all field screening of soil and water and air particulate monitoring will be performed in accordance with applicable environmental regulations including the NYSDEC Division of Environmental Remediation DER-10 Technical Guidance for Site Investigation and Remediation and the NYSDOH Generic Community Air Monitoring Plan (CAMP) (CC64). If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background fifteen 15-minute levels, work

activities must be temporarily stopped. If the total organic vapor level decreases below 5 ppm over background levels, work can resume with continued monitoring. Per CC64, if contamination in the ground is detected during overland construction and such contamination is of the kind that will lead to volatilization or off-gassing of such contamination or chemical constituents thereof, the Certificate Holders with the assistance of the Environmental Inspector or Qualified Soil Monitor will implement a Generic CAMP if applicable. Procedures and practices included in the DER-10 Technical Guidance for Site Investigation and Remediation Appendix 1A: NYSDOH Generic Community Air Monitoring Plan will be followed (CC64).

5.0 CONSTRUCTION DERIVED SPOILS AND WASTE MATERIALS DISPOSAL OFF-SITE AT APPROVED DISPOSAL FACILITY

Disposal locations for spoils, HDD drilling fluids, and cleared vegetation are still being identified and confirmed with landowners. For materials that are not managed as “beneficial reuse” fill, disposal locations will be selected from the list of NYSDEC approved disposal locations.

Excess excavated soil that is not beneficially reused either on-site or off-site will be disposed of in accordance with all local, state, and federal regulations. This includes the applicable sections of 6 NYCRR Part 360. Actual disposal quantities and associated documentation will be reported as required by 6 NYCRR Part 360. This documentation may include waste profiles, test results, facility acceptance letters, manifests/bills of lading and facility receipts/weight tickets. At minimum 6 NYCRR Part 360 Series Waste Tracking Documents for Construction and Demolition Debris will be completed and submitted to the Railroad ROW owner, the appropriate NYSDEC department, and NYSDPS Staff.

5.1 DISPOSAL OF WASTE MATERIALS LOCATIONS – BY TYPE

The following is a disposal location plan that will be utilized for the Project. Revisions to these locations during construction will be provided to NYSDPS Staff and NYSDEC through the EM&CP change notice process.

Table 5-1 Acceptable Spoils Disposal Locations

Segment	Disposal Location
6	Clean Earth Fort Edward Facility – 304 Towpath Lane Fort Edward NY 12828 https://www.cleanearthinc.com/locations/fort-edward-new-york
6	Waste Management Green Ridge – 424 Peters Road, Gansevoort, NY 12831 https://www.wmsolutions.com/locations/details/id/895
6	Jenkinsville Sand & Gravel (residential use fill) 402 Jenkinsville Road, Queensbury, NY 12804
6	Eagan Pit 1 Rt-22 Putnam Station, NY 12861
6	James Brown 69 Dresden Road, Whitehall NY 12887
6	Washington County DPW (asphalt millings) 12296 NY-22, Whitehall, NY 12887

6	Town of Putnam Highway Dept. (asphalt millings) 17047 NY-22, Putnam Station, NY 12861
6	Peckham Industries (asphalt millings) 438 Vaughn Road, Hudson Falls, NY 12839
6	Safety Kleen – Cohoes 17 Green Mountain Dr Cohoes, NY 12047
6	https://www.dec.ny.gov/docs/materials_minerals_pdf/listregcdprocess.pdf

Table 5-2 Acceptable Disposal Locations – Vegetation

Segment	Disposal Location
6	Biomass Recycling - 9831 NYS Route 23, Davenport NY, 13820
6	Seward Valley Farm - 145 Park Drive, Fultonville NY, 12072

6.0 REQUIREMENTS FOR THE MANAGEMENT AND TRANSPORTATION OF SOIL AND CONSTRUCTION DERIVED MATERIALS

As described in Section 2.0, in general, excess material not used as backfill near the points of generation such as the HDD entry and exit pits, may be placed into dump trucks at the point of generation, transported, and disposed of in accordance with this SMMP as well as the Project's ESCP (Appendix C of the EM&CP). Some excavated soil from points of generation such as the HDD entry and exit pits, and the splice box locations, which meets the criteria for beneficial reuse as defined in Section 3.0, will be used as backfill or spread around upland areas (either on or off-site) to create a level surface. If excavated soil exhibits evidence of contamination as described in Section 2.0, it will be sampled as described in Section 3.0 and 4.0.

Materials that cannot be beneficially reused on-site may be shipped off-site for beneficial reuse. The criteria for beneficial reuse of fill material are described in Section 3.0. If beneficial reuse is not feasible, off-site disposal locations will be identified for each type of potential construction derived waste (soil, vegetation, asbestos, spill cleanup, etc.) These locations will be identified for each Segment of the Project and will be submitted to NYSDPS for approval prior to construction and updated as needed during the regular construction progress meetings. Erosion and sediment controls for temporary stockpiles are described in the Stormwater Pollution Prevention Plan (SWPPP) (Appendix G of the EM&CP) and the Erosion and Sediment Control Plans (Appendix C of the EM&CP).

Transport of excess excavated soil will be performed by licensed haulers in accordance with appropriate local, state, and federal regulations. Haulers/transporters will be appropriately licensed and loaded vehicles leaving the active work area will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with local, state, and federal requirements (and all other applicable transportation requirements). If the material is determined to be Restricted-Use or Limited-Use Fill, the fill transporter must complete "Notification of Fill Material Transport" form.

Trucks transporting excess and excavated soil will be secured with tight fitting covers when needed to prevent excess debris and dust around and near the active work area and along the route to the designated disposal location.

While no known contaminated sites have been identified within Segment 6 - Package 4 A, if contaminated soil is encountered during any construction activities, every effort will be made to keep trucks from coming into contact with contaminated or potentially contaminated soils. If needed, a truck wash/decontamination pad will be operated at the appropriate work/excavation area.

7.0 REQUIREMENTS FOR MATERIAL MANAGEMENT IN RAILROAD RIGHTS OF WAY

The purpose of this section is to provide guidelines for the management of materials in the CP Rail ROW. Work in packages that will take place on railroad property will meet railroad-specific requirements in addition to the requirements of the Article VII Certificate Conditions.

7.1 CANADIAN PACIFIC RAILWAY

Segment 6-Package 4A includes worksites within CP Rail ROW. In these areas, work will meet CP Rail requirements as described in this section.

7.1.1 Personnel and Monitoring Equipment for Monitoring Spoils During Excavation

The trained personnel monitoring the spoils during excavation within the CP Rail ROW, will be 40-hour HAZWOPER certified and trained to use a Photo Ionization Detector (PID) in accordance with the PID Manufacturer's instructions. Before use, the PID will be calibrated as per the manufacturer's requirements and documented in field logs. Qualifications of the personnel performing the spoils monitoring will be provided to CP Rail.

A PID uses an ultraviolet light source to ionize chemicals, which are measured by a detector. The detector converts the charge into a signal which reports out on the display of the PID as ppm isobutylene gas (or whatever gas is used to calibrate the meter).

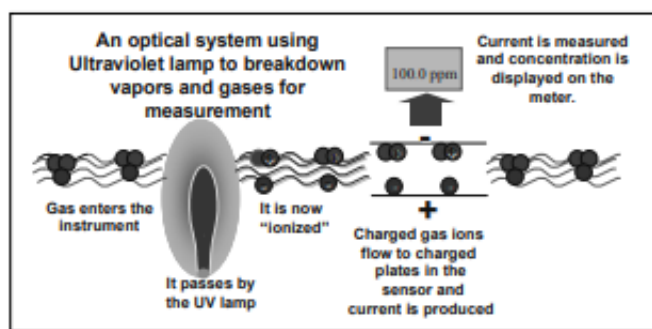


Figure 7.1 – Simple diagram for how a PID measures concentrations of gases³

3 (JMTes) AP-211 PIDS for Continuous Monitoring of VOCs

The PID can detect a variety of organic gases (off-gassing from soils). The PID will provide an estimate of total VOC gases detected above a baseline value in units of isobutylene equivalents, without identifying which individual constituents are present. If high incremental PID readings are detected, additional analysis can be performed to determine the specific contaminants present.

7.1.2 CP Rail Specific Method for Screening Sidecast and Stockpiles of Spoils with Field Instrumentation

7.1.2.1 Frequency of Soil Screening

During excavation of the trench within the CP Rail ROW, the Qualified Soil Monitor will record baseline measurements to establish the existing pre-excavation condition within the area of work. To establish the cable trench, the operator of the excavator will sidecast the spoils or place them in a stockpile if space is not available for side casting. Excavated sidecast piles and stockpiles will be inspected for staining or discoloration and will be field screened for the presence of contamination with a PID (via incremental measurements above baseline) by the Environmental Inspector or designated Qualified Soil Monitor. Screening of sidecast and stockpiled materials with the PID will be performed at the following intervals:

- At each splice box location within railroad ROW
- At each HDD entry and exit pit within railroad ROW
- Every 500 feet along the trench installation
- As needed if evidence of contamination is detected in excavated soil within railroad ROW.

Screening of common stockpile materials will occur prior to mixing with materials already within the stockpile.

7.1.2.2 Method to Determine Whether Spoils Exhibit Evidence of Contamination

Soil with no visual, olfactory, or photoionic evidence of contamination shall be considered non-contaminated and can be stockpiled as unrestricted fill material and used as described in the Section 7.1.3. The procedures used to determine whether there is evidence of contamination by visual, olfactory, or photoionic means is as follows:

1. Visual contamination will be identified by the Qualified Soil Monitor working within each excavation crew by collecting a representative sample from the spoils pile. The spoils will be inspected for stains or coloration that is different from the native soils in the

area.

2. Olfactory contamination will be detected by the Qualified Soil Monitor by identifying any chemical smells such as gasoline or solvents from a safe distance from the spoils material (as determined by the EI and Safety Inspector or Qualified Soil Monitor).
3. A description of the PID operation is in section 7.1.1 and 7.1.2.2. As described in Section 7.1.1, the PID Meter provides incremental estimate above baseline of total VOC gases detected in units of isobutylene equivalents, without identifying which individual constituents are present. Actions related to spoils with incremental PID readings above 25 ppm are described in Section 7.1.2.3. Actions related to spoils with incremental PID reading at or below 25 ppm are described Section 7.1.3.

7.1.2.3 Soils with Incremental PID Readings above CP Rail ROW Action Level

If spoils exhibiting incremental PID readings above the 25-ppm action level is recorded during excavation, the Qualified Soil Monitor working with the construction crew will notify the EI, who will investigate the work location and provide direction for the crew on securing the work site and identifying a temporary location for the safe placement of the excavated material. Following consultation with the Certificate Holders, CP Rail and the NYSDEC and NYSDPS, the potentially contaminated materials will be properly stockpiled in an area away from the primary work activities by a contractor mutually designated by the Certificate Holder and CP Rail, and then sampled for disposal in accordance with Section 4.0 of this report. The temporary stockpiling location and site preparation requirements will conform to all applicable regulations. Upon further analysis, if the spoils are confirmed to be contaminated, the Certificate Holders will employ the services of an approved contractor to transport the material to a New York State and CP Rail approved off-site disposal location. If the spoils are determined not to be contaminated, they may be beneficially reused on-site or off-site in accordance with all applicable regulations or shipped - offsite for disposal depending on the availability of viable reuse locations within the alignment ROW. Spoils are considered contaminated if they equal or exceed the industrial use soil cleanup objectives contained in 6 NYCRR section 375-6.8(b).

7.1.3 CP Rail ROW Beneficial Reuse Methods

Within the CP Rail ROW, several conditions (narrow ROW, proximity to wetlands and existing waterbodies e.g., Champlain Canal) limit the opportunities for reuse of eligible soil. For this segment of the project, the potential to reuse excavated spoils are further limited by the following design and/or physical requirements. Soil cannot be placed:

- Where it would be used to establish the base for planned parallel access roads since such locations require a firm gravel surface,
- Where it would cover the proposed cable trench to a depth that would interfere with the installation's thermal dissipation characteristics,
- Outside of the CP Rail ROW,
- On existing steep slopes that would require benching to accommodate additional soil,
- Where it would interfere with existing drainage patterns and/or alter the general topography, or
- Where it would otherwise affect CP Rail operations.

In light of these limitations, the options for the feasible reuse of excavated spoils with the CP Rail ROW are classified into three categories: a Baseline Reuse Plan and two (2) Supplementary Reuse Plans.

7.1.3.1 Baseline Reuse Plan

The Baseline Reuse Plan for the excavated spoils within the CP Rail alignment has two components:

- 1) In trench sections, for the width of the trench, place unrestricted fill to a standard depth (approximately 8 inches) to top off the flowable thermal backfill.
- 2) Outside of the width of the trench, for all disturbed areas that have suitable topography and are not within the footprint of access roads or wetlands, spoils will spread on the surface as part of restoration. Such deployment will be accomplished without adverse affecting the existing drainage grade.

See Figure 7.2 for a typical section of the Baseline Reuse Plan.

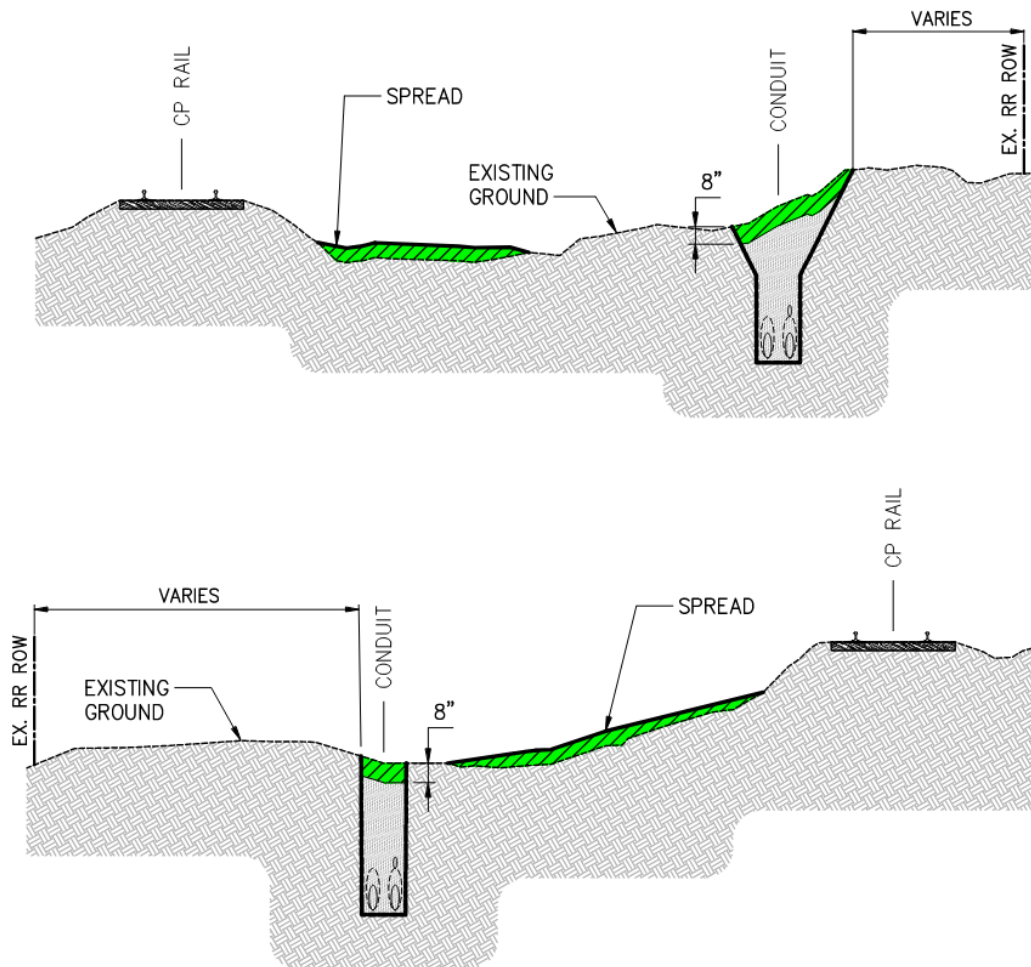


Figure 7.2 – Baseline Reuse Plan

7.1.3.2 Supplementary Reuse Plan

In addition to the excavated spoils being reused as part of the baseline use process, ideal locations within the CP Rail ROW will be pre-identified as part of the construction planning process to accommodate the spreading of the remaining unrestricted fill via two distinct methods identified below. In the normal course of completing the design package for each CP Rail Segment, ideal locations for implementation of the plan will be identified and submitted to CP Rail and the State for review and approval.

1) Permanent Stabilized Pad

Excess excavated soil would be transported within the ROW to one or more pre-identified and CP Rail pre-approved large upland parcels within the CP Rail ROW. The eligible parcels would be partially cleared and grubbed to receive excavated spoils that will be distributed over the identified large footprint (> 1 acre). The spoils will be spread and compacted within the space to form a stable established pad of varying heights not to exceed 6 feet. The spoils managed via this method would be built-up and graded in accordance with a parcel-specific grading and drainage plan and would be constructed to promote natural re-establishment of trees and shrubs.

See Figure 7.3 for a generalized overview plan for Permanent Stabilized Pad.

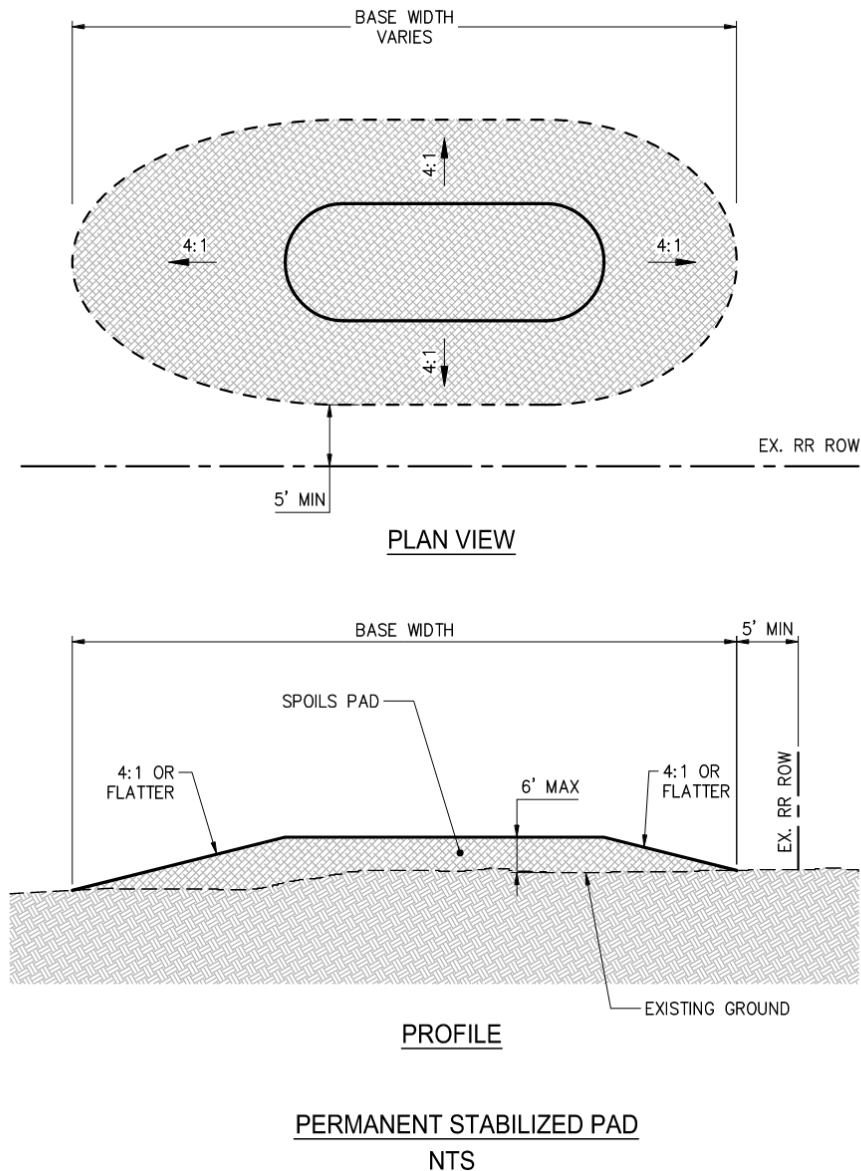


Figure 7.3 – Permanent Stabilized Pad

2) Longitudinal Berms

Should a Permanent Stabilized Pad not be implementable, or if there are excess spoils above the quantity that can be reasonably accommodated within a Permanent Stabilized Pad footprint, excavated soil would be placed in Longitudinal Berms along pre-identified locations within the CP Rail ROW. The size and shape of the berms, including their base width, top width, depth (height), and side slopes, may vary from location to location in the CP Rail ROW based on the available CP Rail ROW width and other geophysical

factors. In general, the berms would not be placed continuously, so as not to disrupt natural drainage patterns, lateral access roads, or to provide needed gaps.

See Figure 7.4 for a typical section of a Longitudinal Berm.

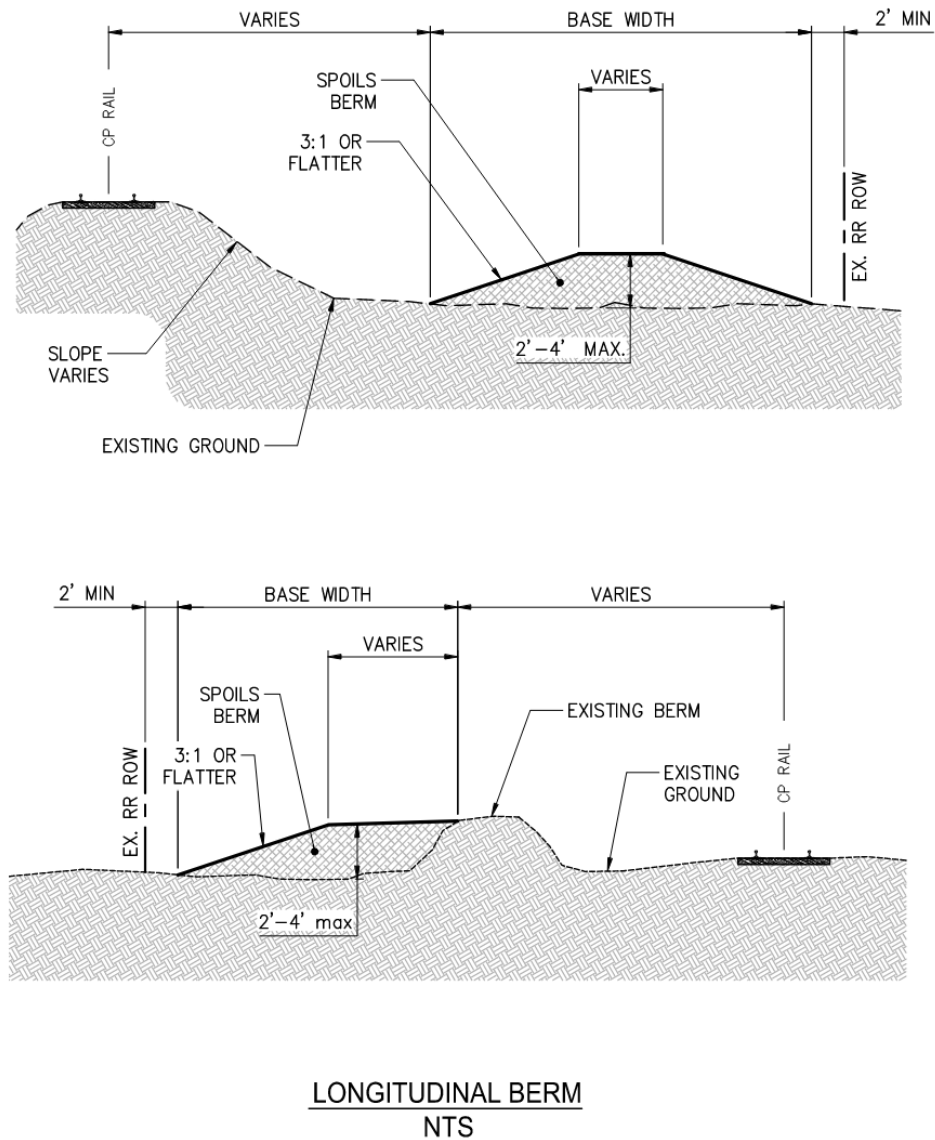


Figure 7.4 – Longitudinal Berm

7.1.3.3 Excess Spoils

Any remaining spoils that cannot be re-used via a combination of the Base Reuse Plan and the installation of the Permanent Stabilized Pad and/or or Longitudinal Berms for each segment with the CP Rail ROW will be transported from the CP Rail ROW to an approved location, as per Section 5.0.

8.0 DISPOSAL OF WASTE MATERIALS OTHER THAN SOIL

Numerous types of materials may be included in the soil material excavated along the project route including asphalt, concrete, rock, rail ballast, etc. In general, non-soil material that is not going to be reused will be disposed of at approved disposal locations in accordance with NYSDEC rules and regulations. For non-soil excavated material being considered for reuse, the following restrictions and regulations apply.

8.1 RU-CARBS

For material excavated from work areas consisting of recognizable, uncontaminated concrete and concrete products, asphalt pavement, rock, brick, and soil (“RU-CARBS”), sampling/testing is not required under 6 NYCRR Part 360. Per 6 NYCRR Section 363.2.1(h), mixed RU-CARBS can be used in highway ROWs with no volume limitations. RU-CARBS may not be used in railroad ROWs without the owner’s consent. Additionally, up to 5,000 cubic yards of Mixed RU-CARBS can be used in residential developments and under pavement. For material excavated from work areas consisting of mixed soil and unrecognizable excavated material including concrete, asphalt, ash, slag, etc., sampling/testing is required in accordance with Section 360.13(e)(3) of 6 NYCRR. If analysis indicates the mixed soil and unrecognizable excavated material meets the limited-use fill criteria as described in Table 4.1, this material can be used under pavement.

8.2 SOLID WASTE STREAMS

Common solid waste streams include:

- General trash
- Wood scrap
- Scrap metal.

Other non-hazardous solid wastes requiring special attention include:

- Used oil
- Used antifreeze
- Used oil filters
- Oily rags
- Oil/water mixture
- Concrete sealer/form oil/ water mixture

-
- Spill debris (sorbent pads, contaminated soil, PPE, etc.) (See the EM&CP Spill Prevention, Control and Countermeasures Plan (SPCC) (Section 3.6 of Appendix K of the EM&CP).

These waste streams will be managed as indicated below.

General Trash. This stream includes construction waste and office trash. Trash cans, hoppers and roll-off boxes will be located throughout the site for collecting general trash. Trash cans must have a lid. General trash containers must be labeled “TRASH.” Trash containers will be dumped regularly and will not be overfilled. Trash will be disposed of at a landfill that has been reviewed and approved by the NYSDPS and NYSDEC.

Wood Scrap. Wood pallets, wire spools, concrete forms and other wood scraps will be collected separately in designated roll-off boxes. Wood scrap containers will be labeled “WOOD SCRAP.” Wood scrap will be recycled if practical and cost effective to do so. Otherwise, it will be land filled at a NYSDPS and NYSDEC approved facility.

Scrap Metal. Metal scrap will be collected in hoppers and roll-off boxes and recycled. Scrap metal containers will be labeled “SCRAP METAL.”

Used Oil. Used oil may not be mixed with other chemicals and must be recycled. Drip pans will be emptied into a sealed container by the end of each shift. Used oil must be stored in drums, totes, or tanks. These containers must be closed tightly when not in use and must be clearly labeled “USED OIL.” Used oil will be transported off site within 90 days of initial accumulation for recycling at NYSDEC approved facility.

Used Antifreeze. Used antifreeze may not be mixed with other chemicals and must be recycled. Drip pans will be emptied into a sealed container by the end of each shift. Used antifreeze will be stored in 55-gallon drums. These drums must be closed tightly when not in use and must be clearly labeled.

Used Oil Filters. Used oil filters must be gravity drained for 24 hours before they can be disposed of. Oil filters will be collected in drums or other specified containers and recycled by an approved vendor. Containers of oil filters must be labeled and closed at all times.

Oily Rags. Rags soaked with oil, gasoline, diesel, or solvent will be collected in covered

containers for disposal by an approved vendor. Containers will be labeled and closed at all times.

Water/Oil Mixtures & Water/Concrete Sealer/Form Oil Mixtures. If water is allowed to collect in secondary containment, it may become contaminated with spillage from products such as oil, form oil or concrete sealer. Drums must be sealed and labeled at all times and transported off-site for disposal at a NYSDPS and NYSDEC approved facility as soon as practicable.

8.3 ASBESTOS

Asbestos is made up of natural fibers of hydrated silicate minerals and was sometimes used in buildings because of its thermal and electrical insulation properties. Asbestos may be found in cement, plaster, floor tiles, insulation, and spray materials (used on ducts, beams, etc.). If encountered, asbestos will be disposed of at a NYSDPS and NYSDEC approved facility and managed in accordance with 12 NYCRR Section 56 56-2.1(w)(iii). While no asbestos is anticipated to be encountered during the construction of the Project, relevant health and safety protocols will be followed as described in the Construction and Safety Policies and Procedures (Appendix H of the EM&CP) which follows the standards set forth in OSHA 1926 Subpart C-General Safety and Health Provisions.

8.4 POLYCHLORINATED BIPHENYLS (PCBS)

Capacitors and light ballasts must be handled as PCB unless labels indicate there are no PCBs. Non-PCB equipment will normally be stamped or labeled with the words “non-PCB” or “does not contain PCBs.”

8.5 LEAD PAINT

Residential, commercial, and industrial buildings constructed prior to 1978 are likely to contain lead-based paint (LBP). While no building removal or disturbance of LBP is anticipated, the Certificate Holders will ensure that applicable project staff will be trained in lead-safe work practices if work involving the disturbance of LBP is performed on pre-1978 structures (such as bridges). The United States Environmental Protection Agency (USEPA) requires that if you disturb more than six (6) square feet of interior surface or twenty (200) square feet of exterior service, the construction team must be certified under the 2008 Renovation, Repair, and Painting

(RRP) Rule. If encountered, LBP and materials containing LBP will be disposed of at a NYSDPS and NYSDEC approved facility and managed in accordance with the USEPA's RRP Rule.

8.6 DE-WATERING FLUIDS

Management of contaminated dewatering fluids is discussed in Section 4.5. Uncontaminated fluids are managed in accordance with the SWPPP (See Section 6.1.4 in SWPPP (Appendix G of the EM&CP), Section 4.4.6 in the EM&CP and Drawing 602 Detail 4).

8.7 HORIZONTAL DIRECTIONAL DRILLING (HDD) FLUIDS

As described in the BMP document and Inadvertent Release Contingency Plan (Appendix J of the EM&CP), drilling fluid (typically bentonite and water based with selected polymers/additives) will be National Sanitation Foundation (NSF) certified and recycling and reuse regulations will be followed where applicable. The drilling fluid management system and subsequent disposal is the responsibility of the subcontractor performing HDD work. The drilling fluid management system and subsequent disposal will adhere to the following requirements:

- Used drilling fluid will be processed through an initial cleaning that separates the solid materials from the fluid if a reclaiming unit is being used.
- Heavy solids will be sifted out by a screening apparatus/system and the solids deposited into a dump truck and periodically transported off-site and disposed of at an approved disposal facility determined by the HDD construction subcontractor.
- All drilling fluid that is deemed unacceptable to be reused during construction or left over at the end of drilling will be collected and transferred into a tanker truck for disposal at an approved disposal facility determined by the HDD construction subcontractor.
- All drilling fluid accidentally spilled during construction and operation of drilling rigs will be contained following the mitigation measures described in the SPCC and disposed of at an approved disposal facility as determined by the HDD construction subcontractor. Disposal locations will be submitted to Kiewit, NYSDPS Staff and NYSDEC prior to construction.
- A supply of spill containment equipment and measures will be maintained and readily available around drill rigs, drilling fluid mixing system, entry and exit pits and drilling fluid recycling system, if used, to prevent spills into the surrounding environment. Pumps, vacuum trucks, and/or storage of sufficient size will be in place to contain excess drilling fluid.
- Under no circumstances will drilling fluid that has escaped containment be reused in the

drilling system.

- An overview of the drilling fluid system will be submitted to the Environmental Inspector for approval once determined and prior to HDD installation activities.
- Drilling fluid may be solidified by the HDD subcontractor using solidification agents for the purposes of complying with landfill requirements and aiding with disposal.

8.8 UNEXPECTED MATERIAL

If unknown/unexpected materials are encountered that are suspected as being hazardous, toxic, contaminated, radioactive, harmful, etc., immediately:

- Stop work in the affected area, as needed.
- Secure and make the area safe for Company personnel, the public and the environment.
- Report the conditions to the Environmental Inspector.
- Report the condition in writing and verbally to the Certificate Holders, NYSDEC and NYSDPS Staff.
- Determine the type of waste and dispose of it at a NYSDPS and NYSDEC approved disposal facility.