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August 23, 2005

Brownfield Cleanup Program
Remedial Action Work Plan

Former Canadian Pacific Rail Yard Site (BCP Site #C510022)
Dock Street
City of Plattsburgh
Clinton County, New York

Prepared for:

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REMEDIAL ACTION WORK PLAN
FORMER CANADIAN PACIFIC RAIL YARD
CITY OF PLATTSBURGH
CLINTON COUNTY, NEW YORK

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1.0 INTRODUCTION & PURPOSE

1.1 Program Modification

The City of Plattsburgh Office of Community Development (City) submitted an application to the New York State Department of Environmental Conservation (NYSDEC) for participation in the New York State Voluntary Cleanup Program (VCP) in 2003 and subsequently executed a Voluntary Cleanup Agreement with NYSDEC on August 13, 2003 to investigate and remediate the project site known as the Former Canadian Pacific (CP) Rail Yard Site.

Due to unplanned circumstances, the City recognized the benefits to leaving the VCP and jointly applied for eligibility in the Brownfield Cleanup Program (BCP) with Valcour Island, LLC (Valcour), the developer of the site. The City and Valcour were approved by NYSDEC to participate in the BCP on August 4, 2005.

As this document was originally prepared as a function of the VCP there is reference to the VCP throughout this document and attachments. As the BCP is the successor to the VCP, the technical requirements for this document have not changed and therefore the references herein to VCP were not edited to BCP. It should be noted that the work completed under the VCP was referenced under the VCP site number V-00637-5 and the work to be completed under the BCP will be referenced under the site number C510022.

1.2 Site Description

The site, which is the subject of New York State Voluntary Cleanup Program (VCP) activities, consists of approximately 12 acres and is located north of Dock Street in the City of Plattsburgh, Clinton County, New York. The site number, as established by New York State Department of Environmental Conservation (NYSDEC) under the VCP, is V-00637-5.

The site is generally defined as the area between Bridge and Dock Streets, the Plattsburgh Water Pollution Facility and Lake Champlain's Cumberland Bay. A site location map prepared with a New York State Department of Transportation 7.5-minute series quadrangle, depicts the site and surrounding areas, and is provided as Figure 1.

A Site Plan and Topographic Survey prepared by R.W. Sutherland, P.C. of Plattsburgh, New York, dated March 19, 2002 is provided as Figure 2. Figure 2 depicts the existing conditions of the subject site.

The City of Plattsburgh currently owns the subject site. The site will be developed in 2005. The site development will include a hotel conference center, paved parking and a park. Figure 3 depicts the planned site development in a Preliminary Layout Plan prepared by QPK Design of Syracuse, New York, dated September 7, 2004.

1.3 Site History

The Plattsburgh and Montreal Railroad originally developed the site as a rail yard in 1852. The site has been operated as a rail yard since 1852 and most recently has been operated by Canadian Pacific Railway (a.k.a. Delaware and Hudson Railway Company). The main building at the site was formerly used as a railway machine and repair shop. A roundhouse and turntable previously existed to the east of the main building. The roundhouse was reportedly used for servicing locomotive engines until 1979. A fire reportedly destroyed the roundhouse in 1992 at which time it was being used for record storage. A portion of the site, including the main site building, was reportedly leased to Barrett Trucking for salt storage. A more detailed description of the site history is provided in a Phase 1A Literature Review and Archeological Sensitivity Assessment and Phase 1B Archeological Field Reconnaissance (April 2002 Draft Copy) prepared by Hartgen Archeological Associates, Inc. (Hartgen). Hartgen's report was provided as Exhibit 2 of the VCP Site Investigation Work Plan prepared by C.T. Male Associates, P.C.

The project site was purchased by the City of Plattsburgh in 2004, and currently remains an inactive rail yard. The City has not disturbed or altered the site with the exception of investigation activities completed as part of the VCP. Remnants of the rail yard use (steel rails, wood ties, equipment, etc.) remain on-site and are pending removal by Canadian Pacific Railway.

1.4 Previous Investigations

Several environmental investigations have been performed at the property since 2002 by various consultants. C.T. Male completed a VCP site investigation of the subject site

in accordance with a NYSDEC and New York State Department of Health (NYSDOH) approved VCP Site Investigation Work Plan dated February 4, 2004.

C.T. Male also completed a June 28, 2002 Phase I Environmental Site Assessment (ESA) of the site for the City of Plattsburgh Community Development Office. In general, the ESA determined the subject site was used as a rail yard and roundhouse before the turn of the 20th Century.

Based on the findings and conclusions of the June 28, 2002 Phase I ESA, a Phase II ESA of the site was completed to address the issues identified in the Phase I ESA report. The Phase II ESA (September 19, 2002) included the completion of ten test borings / monitoring wells, the collection of soil and groundwater samples, and the analysis of select soil and groundwater samples for volatile and semi volatile organic compounds and the eight RCRA metals. The Phase II ESA investigation identified low level metal and volatile / semi-volatile organic concentrations in the soil and groundwater at select boring and monitoring well locations, some of which exceeded their NYSDEC regulatory standard and / or guidance values.

Other consultants have completed investigative activities and reports prior to the City's involvement with the VCP. The findings of previous investigations were reviewed and considered in the preparation of the Site Investigation Report and this RAWP. These investigation reports include the following:

- September 2001 Phase I ESA by Griffin International
- November 2001 Phase I ESA by Malcolm Pirnie, Inc.
- April 2002 Phase 1A Literature Review and Archeological Sensitivity Assessment and Phase 1B Archeological Field Reconnaissance by Hartgen Archeological Associates, Inc.
- November 2002 Focused Phase II Site Assessment by Malcolm Pirnie, Inc.

The findings of these past site investigations were presented and discussed within C.T. Male's February 2005 VCP Site Investigation Report, and were the basis for the preparation of this Remedial Action Work Plan (RAWP).

1.5 Summary of Environmental Conditions

Based on site specific sampling and analysis of surface soil/fill and subsurface soil/fill throughout the site, contaminants of concern (COCs) have been identified as semi-volatile organic compounds and metals in soil/fill at concentrations exceeding NYSDEC standards, criteria and guidance (SCGs). There were no volatile organic compounds, pesticides or PCBs detected in surface soil/fill or subsurface soil/fill at concentrations exceeding SCGs.

Semi-volatile organic compounds and metals are likely present within site surface and subsurface soil/fill as a result of historical site use. These uses have included a rail car maintenance facility, a coal yard/coal elevator, on site placement of cinders and ash from coal fired locomotives and building furnaces, placement of off site materials to expand the northern portions of the site, and to a lesser extent due to the use/storage of petroleum products.

Based on the findings of the site investigation, select semi-volatile organic compounds and metals were identified as COCs within surface soil/fill. The semi volatile organic compounds identified as COCs are: benzo(a)anthracene (13 of 20), benzo(a)pyrene (20 of 20), benzo(b)fluoranthene (10 of 20), benzo(k)fluoranthene (3 of 20), chrysene (13 of 20), dibenzo(a,h)anthracene (14 of 20), and indeno(1,2,3-cd)pyrene (1 of 20). The numbers in parentheses represent the number of samples where the COC was detected within the group of samples analyzed. These compounds were detected sporadically across the site, and not all of the samples contained each of the listed COCs. The metal COCs in surface soil/fill are: arsenic (3 of 20), beryllium (2 of 20), cadmium (2 of 20), copper (15 of 20), iron (10 of 20) mercury (1 of 20), nickel (3 of 20), selenium (3 of 20) and zinc (13 of 20). The numbers in parentheses represent the number of samples where the COC was detected within the group of samples analyzed.

Based on the findings of the site investigation, the semi-volatile organic compounds identified as COCs in the subsurface soil/fill are similar to those detected in surface soil/fill and include: 2-methylnaphthalene (1 of 28), benzo(a)anthracene (11 of 28), benzo(a)pyrene (14 of 20), benzo(b)fluoranthene (8 of 28), benzo(k)fluoranthene (7 of 28), chrysene (14 of 28), dibenzo(a,h)anthracene (9 of 28), dibenzofuran (1 of 28), fluoranthene (1 of 28), fluorene (1 of 28), indeno(1,2,3-cd)pyrene (1 of 28), naphthtalene (2 of 28), phenanthrene (1 of 28) and pyrene (2 of 28). The numbers in parentheses

represent the number of samples where the COC was detected within the group of samples analyzed. The majority of elevated semi-volatile organic compounds were found within the central portion of the site near the site building, roundhouse and oil cistern. The perimeter areas of the site show little to no semi-volatile organic compounds in subsurface soil/fill at concentrations above SCGs. The metal COCs in subsurface soil/fill are: arsenic (6 of 28), barium (1 of 28), beryllium (17 of 28), calcium (1 of 28), copper (17 of 28), iron (28 of 28), lead (1 of 28) mercury (5 of 28), nickel (14 of 28), selenium (15 of 28) and zinc (18 of 28). The numbers in parentheses represent the number of samples where the COC was detected within the group of samples analyzed.

Groundwater samples were collected as part of the VCP site investigation from existing site monitoring wells installed in 2002 and from new site monitoring wells installed in 2004. The laboratory results for the groundwater samples indicate volatile and semi-volatile organic compounds, pesticides, and PCBs were not detected above SCGs. Several metals were detected in groundwater above their respective SCGs. These metals are: antimony (3 of 14), cobalt (2 of 14), iron (14 of 14), lead (2 of 14), magnesium (2 of 14), manganese (8 of 14), sodium (12 of 14) and thallium (4 of 14). The numbers in parentheses represent the number of samples where the COC was detected above SCGs within the group of samples analyzed.

Soil gas samples were collected from locations within the footprint of proposed buildings. The analytical results detected several volatile organic compounds at relatively low to moderate concentrations. Currently, there are no promulgated regulatory values for comparison.

1.6 Summary of Selected Remedy

The selected remedy for this site has four main components. The site investigation has identified localized areas of known or suspected petroleum impacted soils, semi-volatile organic compounds and metals site wide in fill soils both at the surface and to a lesser degree below grade, metals in groundwater samples and low level volatile and semi-volatile organic compounds in soil gas. The subsections below describe the various remedial actions that will be undertaken to mitigate impacts to human health and the environment from the COCs.

1.6.1 Remedial Measure Areas

The Remedial Measure Areas have been identified by visual and analytical data obtained from soil borings, test pits and groundwater monitoring wells. Figure 4 provides the approximate location of Remedial Measure (RM) Areas to be subjected to further investigation and, as necessary, remediation. The nature and extent of contamination in the RM Areas consists primarily of petroleum contamination (volatile and semi-volatile organic compounds).

The Remedial Measure Areas will be remediated by excavating and disposing petroleum impacted soils at a disposal facility permitted to accept this type of waste. At the time of implementation, field instrumentation and subjective methods will be used to determine the difference between impacted and non-impacted soils and to investigate the extent of petroleum impacts. Upon satisfactory completion of the soil removal and post-remediation verification sampling as defined in Section 3.3, the remedial areas will be backfilled with excess site soils or imported fill.

1.6.2 Surface and Subsurface Soils

Surface soils and subsurface soils have been identified as containing COCs above SCGs. The surface soils and subsurface soils (after completion of the RM Areas described in Section 1.5.1) will be managed on-site by coverage with an acceptable cover material. The concentrations of COCs vary across the site and therefore, the entire site will be included in the remedy. The remedy is summarized as follows and is in accordance with the remedial action objectives and site specific Soil Management Plan (SMP) provided in Appendix A.

- Impacted surface and subsurface soils with COCs greater than SCGs will require remediation in the form of capping in-place with an acceptable cover material. If excess soil is generated during development activities that can't be placed on-site under an acceptable surface cover, those impacted surface and subsurface soils with COCs greater than SCGs will be disposed off-site at a facility approved to accept that type of waste.

1.6.3 Groundwater

Analytical testing of groundwater samples from the site investigation detected select metals, with only a few above SCGs. Results of groundwater sampling indicate that the contaminants detected within surface and subsurface soils (i.e. volatile and semi-volatile organic compounds) do not significantly impact groundwater quality, with the possible exception of metals. The site is currently serviced by municipal public water supply and new facilities at the site will be serviced by municipal public water. Therefore, groundwater treatment is not warranted, but site deed restrictions should be considered to control or limit use of site groundwater for any purposes.

1.6.4 Soil Gas

Analytical testing of soil gas samples from the site investigation detected some volatile organic compounds. Currently, there are no New York State Department of Health mandated SCGs for soil gas. Regardless of the concentration of contaminants an active mitigation system will be designed and installed beneath any site structure to mitigate the potential for soil gas vapors to enter the occupied buildings.

1.7 Contemplated Use and Institutional/Engineering Controls

The contemplated use of the subject site under the VCP is restricted residential. Restricted residential is defined as "residential uses such as homes, apartments, mobile home parks, dormitories, schools, and day-care facilities are allowed but require engineering and / or institutional controls for the use to be protective".

Institutional controls (IC) and engineering controls (EC) for the site's contemplated use will be established in deed restrictions for the property. Deed restrictions are applicable to successors and / or assigns of the property. Proposed restrictions are listed within the VCA (Exhibit "E"), which generally include the following and will be filed with the City Clerk's Office and the Clinton County Clerk's Office. The Final Declaration of Covenants and Restrictions, as recorded with the County Clerk, should be reviewed for exact listing of the restrictions for the property. A boundary survey map and a metes and bounds description will be made part of the Final Declaration of Covenants and Restrictions.

- There shall be no construction, use or occupancy of the Property that results in the disturbance or excavation of the property which threatens the integrity of the soil cap, or which results in unacceptable human exposure to contaminated soils unless prior written approval is provided by the Relevant Agency or shall the Relevant Agency no longer exist.

- The owner of the Property shall maintain the cap covering the Property by maintaining its acceptable surface cover or, after obtaining the written approval of the Relevant Agency, by capping the Property with another material.

- The owner of the property shall prohibit the Property from ever being used for purposes other than Restricted Residential without the express written waiver of such prohibition by the Relevant Agency.

- The owner of the property shall prohibit the use of groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Relevant Agency.

- The property owner shall continue in full force and effect any institutional and engineering controls required under the Agreement and maintain such controls unless the owner first obtains permission to discontinue such controls from the Relevant Agency.

- The Declaration of Covenants and Restrictions shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner and its successors and assigns consent to enforcement by the Relevant Agency or the prohibitions and restrictions that Paragraph X of the Agreement to be recorded, and hereby covenant not to contest the authority of the Relevant Agency to seek enforcement.

- Any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to the Declaration of Covenants and Restrictions.

2.0 REMEDIAL ACTION SELECTION (RAS)

2.1 Remedial Action Objectives (RAO's)

The goal of the remedy selection process in the VCP is to remediate the site to a level that is protective of public health and the environment under the conditions of the site's contemplated use, in this case, restricted residential. Specifically, it is planned to redevelop the site with a hotel conference center, paved parking, and a public park. The remedial action is determined on the basis of media-specific objectives. The contaminants identified through the site investigation as exceeding applicable SCGs and the environmental media impacted by those contaminants are summarized in Table 2.1-1. The focus of the remedy is to remove identified petroleum impacts, and reduce and/or eliminate exposure to the contaminants above SCGs. The exposures result from site contaminants are primarily dermal contact and ingestion from soil, groundwater, surface water and sediment (from stormwater runoff), inhalation and ingestion of dust from wind, and soil gas vapors.

Table 2.1-1
Contaminates Exceeding SCGs in Each Media

	Soil	Groundwater	Surface Water (1)	Sediment (1)	Soil Gas
VOCs	None	None	NA	NA	(2)
SVOCs	Yes (3)	None	NA	NA	None
Pesticides	None	None	NA	NA	None
PCBs	None	None	NA	NA	None
Metals	Yes (3)	Yes (3)	NA	NA	None

Notes:

(1) Not Applicable - Surface water and sediment were not media of concern for the site investigation.

(2) There are no current promulgated regulatory values for soil gas for comparison.

(3) Refer to Section 1.4 of this report for the specific compounds and analytes and their frequency above SCGs.

2.1.1 RAO's for Soil

The RAO's for public health protection of impacted soil are to prevent ingestion and direct contact with this soil, and to prevent inhalation of dust generated from handling impacted soil. The RAO's for environmental protection are to prevent migration of contaminants and prevent impacts to biota from ingestion and direct contact with impacted soil. The RAO's will be accomplished by removal of known or suspected petroleum impacted soil, effective placement of acceptable cover material over remaining impacted soil, and implementing engineering and institutional controls based on the future site use.

The known or suspected petroleum impacted soils will be addressed in select localized Remedial Measure (RM) Areas of the site as shown on Figure 4. The objective of the remedial measures will be to excavate petroleum impacted soils until soils containing COCs are below SCGs, dispose impacted soil at a permitted disposal facility, remove any structures that may contain petroleum product, and backfill the excavations with clean soil. These areas, once remediated would be ultimately covered with an acceptable cover material.

2.1.2 RAO's for Groundwater

The RAO's for public health protection of impacted groundwater are to prevent ingestion of groundwater exceeding drinking water standards, and to prevent dermal contact with impacted groundwater. The RAO's for environmental protection are to remove the petroleum related groundwater impacts. The RAO's will be accomplished by soil removal and groundwater removal/treatment during the implementation of the Remedial Measures, and subsequently implementing engineering and institutional controls on the basis of future use.

2.1.3 RAO's for Surface Water and Sediment

There are no RAO's for surface water and sediment as these media were not identified with the subject site.

2.1.4 RAO's for Soil Gas

The RAO's for public health protection of potentially impacted soil with petroleum vapors are to prevent inhalation of volatile organic vapors in occupied structures. The RAO's will be accomplished by intercepting vapors before they enter occupied structures through the design and construction of a vapor intrusion barrier beneath all habitable site structures.

2.2 Engineering Evaluation of Remedy

As per the May 2002 Draft VCP Guide, it is not necessary to prepare a feasibility study to support a proposed remedy in the VCP. In the VCP, the Volunteer must submit a report that demonstrates through an engineering analysis that the remedy can achieve the cleanup goals for the site. This is demonstrated in the following subsections for the evaluation criteria given in 6 NYCRR 375-1.10(c). It is not necessary to evaluate cost effectiveness or community acceptance in this evaluation per VCP guidance documents. The Department typically evaluates community acceptance of the proposed remedy.

2.2.1 Overall Protection of Public Health and the Environment

Contaminant exposure to human health and the environment would be mitigated upon completion of the selected remedy because a barrier to contact with the contaminated soils would be created, areas of known and suspected petroleum impacted soils would be excavated and properly disposed off-site, use of groundwater would be restricted with engineering and institutional controls, and vapor migration into new structures would be inhibited through the use of sub slab vapor barrier systems. There would be some residual public health risks remaining after the remediation, mainly if the barrier to contact was breached or the soils were exposed / disturbed by invasive activities such as construction. There would also be some residual environmental risks for the same reason. However, the residual public health risks are mitigated through conformance with the contemplated use of the site and engineering / institutional controls, which includes implementing and maintaining a NYSDEC approved Soil Management Plan (SMP). A copy of the SMP is provided in Appendix A.

2.2.2 Compliance with Standards, Criteria and Guidance (SCGs)

The SCGs for soil are established as the NYSDEC TAGM 4046 recommended soil cleanup objective values. The selected remedy would involve excavation and off-site disposal of petroleum impacted subsurface soils which would achieve compliance with SCGs. It would also involve on-site management of soils with COCs above SCGs, therefore compliance with SCGs will not be formally achieved. To adequately address soils with COCs above SCGs, the remedy will involve coverage of those soils with a barrier to direct contact, thereby mitigating the potential for exposure to soils with COCs above SCGs.

The SCGs for groundwater are established as NYSDEC Ambient Water Quality Standards. The analytical results for groundwater detected a few metals generally above SCGs. The remedy for groundwater will not include treatment, but rather institutional controls to mitigate the potential for contact with groundwater.

Currently, there are no promulgated SCGs for soil gas. To address the detections of vapors within the soil, regardless of their concentration, vapor barriers will be installed beneath occupied structures to be constructed on-site. Placement of the vapor barriers beneath the buildings will informally achieve compliance with SCGs.

2.2.3 Short Term Effectiveness

The effectiveness of the selected remedy will be realized upon completion of petroleum impacted soil excavation, establishment of the barriers to contact, institutional controls relative to groundwater use, and placement of vapor barriers beneath occupied buildings. Impacts to the community and workers will be mitigated during the remedial action/site development by establishing a work zone excluding unauthorized individuals, implementing work zone perimeter particulate and organic vapor air monitoring in accordance with a New York State Department of Health Generic Community Air Monitoring Plan, and by implementing engineering/institutional controls during construction to minimize the generation of airborne particles and organic vapors that may be contaminated. The engineering controls (i.e., dust control measures, erosion control, etc.) are effective and reliable controls that are commonly employed at construction sites. No significant environmental impacts are anticipated as a result of implementing this alternative.

2.2.4 Long Term Effectiveness and Permanence

Implementation of the selected remedy will be a long term and permanently effective means of managing soils, groundwater and soil gas at the site. There will be some residual risks remaining upon completion of the selected remedy contingent upon the effectiveness of the engineering and institutional controls, as detailed in the following paragraphs. The select remedy is considered an adequate and reliable means of reducing if not eliminated the potential for impacts to human health and the environment.

The presence of metals remaining in site soils will not pose a significant risk to the community and the environment after the selected remedy is implemented as the primary exposure pathway of dermal contact is prevented with the placement of a barrier to contact (clean soil landscaping, asphalt parking and driveways, or concrete building slabs and sidewalks). Annual inspections and reporting will be required as part of the select remedy whereby breakdown of the barrier to contact will be monitored and repaired, as needed, to maintain protection of human health and the environment.

The presence of semi-volatile organic compounds (SVOCs) in soil after implementation of the selected remedy will not pose a significant risk to the community and the environment after the selected remedy is implemented as the primary exposure pathway of dermal contact is prevented with the placement of a barrier to contact (clean soil landscaping, asphalt parking and driveways, or concrete building slabs and sidewalks). Annual inspections and reporting will be required as part of the select remedy whereby breakdown of the barrier to contact will be monitored and repaired, as needed, to maintain protection of human health and the environment. The selected remedy also includes construction of a vapor barrier beneath future habitable structures on-site to prevent any potential soil gas vapors from entering the building. For these reasons, the risk to the community and the environment is considered to be low.

The presence of petroleum impacts in soil after the selected remedy is implemented is not expected and therefore, the risk associated with petroleum in soil is considered to be low. If petroleum impacted soils are discovered during construction activities or other site soil disturbing activity, they will be removed from the site for off-site disposal, or managed on-site in accordance with the Soil Management Plan.

2.2.5 Reduction of Toxicity, Mobility or Volume with Treatment

Implementing the selected remedy will reduce the toxicity and volume of the contaminated soil in the Remedial Measure areas. The remaining areas of the site will be covered with acceptable surface cover and therefore, the toxicity and volume of contaminated soils will not be reduced. The mobility of COCs in soil and groundwater will be eliminated in areas of soil removal and otherwise reduced or eliminated in remaining areas of the site as infiltration of water (precipitation) through the barriers (soil cover, asphalt pavement, and vapor barriers/concrete slabs beneath buildings) is reduced/eliminated. Mobility in air will also be reduced by minimizing the potential for contaminated particles to become airborne or erode as the result of being capped by an acceptable surface cover (soil, pavement, or buildings). This remediation alternative is reversible (except for the soil removal activities), in that the soils could be excavated and made subject to other remedial actions in the future.

2.2.6 Implementability

Site conditions are highly suitable for implementing the selected remedy. Affected surface soils are readily accessible and only those soils with organic content, which disqualifies their reuse under roads and buildings for construction purposes, must be removed prior to site development. Remedial Measure Areas are also readily accessible due to the vacant nature of the site. With added training and proper soil management techniques, a contractor can implement the remedy through commonly employed construction techniques and standard heavy equipment. Contractors qualified to do the work are readily available. Effective project planning will be required to overcome any coordination issues with regulatory agencies as a result of the applicable institutional controls and requirements of the approved SMP.

3.0 PROJECT PLANS AND SPECIFICATIONS

3.1 General

This remedial action plan has been prepared to describe remedial actions that are necessary at the site to achieve the remedial action objectives. The remedial activities may be performed prior to site development or in phases in conjunction with site development and with the appropriate engineering/institutional controls. Figure 3 depicts the proposed development for the site, which identifies the landscape areas, pavement areas and building footprints that will qualify as acceptable surface cover. Figure 4 depicts the general location of the Remedial Measure Areas that require remedial action (soil removal and off-site disposal). The main components of the remedial action are presented in the following section.

3.1.1 Remedial Measure Areas

The site investigation has identified area(s) of the site where petroleum impacts exist or are suspected to exist based on analytical testing and visual observations during exploratory test pits and test borings. Figure 4 provides the approximate location of Remedial Measure (RM) Areas to be subjected to further investigation and, as necessary, remediation. These areas will be remediated through excavation, transportation and disposal of petroleum impacted soil off-site at a facility permitted to accept this type of waste. These efforts will also likely require soil dewatering. This activity will include treatment of the water prior to discharge to the municipal sanitary sewer. Proposed RM areas include the following:

RM Area #1: Test pits VCP-TP23 and VCP-TP23A were advanced in the approximate location of the former oil cistern for the roundhouse. During the completion of these test pits petroleum odors were observed in portions of the recovered soil above the water table. A manmade concrete structure was also encountered at VCP-TP23A, but was not opened. It is assumed that the structure is the former oil cistern for the roundhouse that is no longer used. Based on the analysis of the soil sample with a petroleum odor from the area of the oil cistern, SVOCs are present above NYSDEC SCGs. Since this structure, if it is the oil cistern or other potential oil storage/handling structure, could be

contributing to soil and groundwater impacts in this area it will be evaluated and removed. The RM will include accessing, cleaning and removing this structure; removal of associated petroleum impacted soils and staging for subsequent off-site disposal, if any; and proper off-site disposal of the structure.

RM Area #2: An above grade concrete structure was observed north of the existing maintenance building. This structure is completely enclosed in concrete and is estimated to be 8 feet wide, 15 feet long and 6 feet tall. The use of this former structure is unclear although it is believed to contain multiple horizontal steel piping runs. None of the steel piping appears to exit this structure above grade. The RM will involve the completion of a trench around the perimeter of this structure to determine if piping exits this structure below grade. If piping is found, it will be traced back to its origin to determine its purpose and environmental significance. If the piping extends to currently unknown tanks, pits or other buried structures they will be assessed at the time of discovery and removed as necessary.

RM Area #3: Linear trenches are present within the roundhouse concrete slab structure that was once used in conjunction with rail car maintenance. The roundhouse structure, based on site development plans, is not expected to remain on-site. Previous studies (prior to the VCP site investigation) included completion of a soil probe within one of these trenches. Elevated PID readings on the order of greater than 1,000 ppm were detected. Analysis of a soil sample from this interval (2-3.6 feet below the top of the roundhouse slab) detected toluene and trimethylbenzene above NYSDEC SCGs. The RM will include removal of soil from the roundhouse trenches and staging for subsequent off-site disposal. After the soil is removed, the interior of the trenches will be pressure washed and the fluids will be collected for proper disposal.

RM Area #4: In the area of test pit VCP-TP9, low level benzene, toluene, ethylbenzene and xylenes were detected in soils above laboratory method detection limits, but below NYSDEC SCGS. Furthermore, spent oil filters were observed below grade at this location. This is the

only location within the trench where these compounds were detected; therefore, additional excavation will be performed in this area to further investigate the significance of the findings. If investigative tasks in this area identify soils with elevated PID readings, these soils will be excavated.

RM Area #5: During the installation of monitoring well MW-8, beads of petroleum product were observed in the soil samples collected from the 6 to 10 feet below grade interval. Groundwater testing from MW-8 in July 2002 did not detect beads of product. A test pit trench (VCP-TP21) was advanced in this area (May 2004) and petroleum odor (±78 ppm of vapor) was detected in soils samples from 5 to 6 feet below grade. Therefore, soil exhibiting elevated PID readings and free-phase petroleum product will be excavated and staged.

RM Area #6: During the installation of monitoring well MW-7, elevated PID readings were detected in soil samples collected from the 4 to 8 feet below grade interval during its installation in July 2002. Analysis of a soil sample from this location detected 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene at concentrations above their respective NYSDEC SCGs. Analysis of groundwater samples from this location did not detect these two compounds in groundwater. Therefore, soil exhibiting elevated PID readings and/or free-phase petroleum product will be excavated.

The focus of the remediation of the RM Areas is to remove and stage petroleum impacted soils on the basis of field screening for evidence of petroleum impacts. Certain RM Areas are expected to encounter petroleum impacted soils, where others will include exploratory digging to determine if they exist. If and when petroleum impacted soil is encountered, it will be excavated, placed on plastic, and covered with plastic for subsequent off-site disposal.

After buried structures and impacted soils, if encountered, are removed from the Remedial Measure Areas, post-remediation verification samples will be collected (per Section 3.3) to document adequate impacted soil removal and to determine the environmental quality of the soils remaining in-place.

If groundwater is present at depths that impede the removal of petroleum impacted soils in the RM Areas, soil dewatering will be implemented. Groundwater will be pumped from the excavation to temporary holding tanks, treated on-site, and ultimately discharged to the municipal sanitary sewer system.

3.1.2 Surface and Subsurface Soils

The distribution of COCs vary across the site and based on the sampling completed to date, defining boundaries for localized placement of acceptable surface cover is not practical. Therefore, the entire site will be included in the remedy for the site's surface soils even within areas of the site which may already meet SCGs.

- Remediation will consist of capping the entire site with an acceptable cover material. If excess soil is generated from the site that can't be placed on-site under an acceptable surface cover, those impacted surface and subsurface soils with COCs greater than SCGs will be disposed off-site at a facility approved to accept that type of waste. Acceptable cover materials include soils with COCs less than SCGs, asphalt, concrete or other approved materials, as described in the SMP (Appendix A).

- Organic material (trees, stumps, etc.) that requires removal for site redevelopment will be scraped or shaken free of bulk soil deposits. The soil will be handled in accordance with the requirements of the approved SMP. The organic material will be properly disposed off-site at a permitted disposal facility.

3.2 Contaminated Soil and Fill Material Excavation

3.2.1 General Site Requirements

Surface soils from areas of planned site development (i.e., foundations, pavement subgrade, etc.) may not be able to be placed back in their original location. The excess surface soils will be relocated to another area of the site and placed under acceptable surface cover or properly disposed off-site. The excess surface soil may be temporarily placed on existing grades until relocation or disposal. However, if excess surface soils require temporary placement on areas of the site where acceptable surface cover has already been placed, a layer of plastic sheeting must be placed to determine and

maintain the difference between existing soils and acceptable surface cover. The soil pile must also be covered with plastic sheeting as detailed within the SMP.

Soil excavation and handling equipment will be decontaminated prior to removal from the site to prevent tracking or carrying site soils off-site.

3.2.2 Remedial Measure Areas Requirements

Contaminated soil and fill materials may be excavated or relocated using a bulldozer, rubber tire backhoe, and/or track excavator with the understanding that the level of disturbance to the site must be controlled so as not to re-contaminate the area or cross-contaminate other areas. Horizontal and vertical control before, during and after contaminated soil excavation will be performed to document the quantity, depth and location of contaminated soil removal.

Petroleum impacted soil excavated from the Remedial Measure Areas will be temporarily staged on-site in piles (on plastic and covered with plastic) or immediately removed from the site for proper disposal. Solid waste and bulk organic material will be loaded into trucks for transportation and disposal off-site.

At the completion of soil excavation in the Remedial Measure Areas and when necessary between work tasks that will require equipment to be removed from the site the equipment that comes into contact with petroleum impacted soils will be decontaminated. The decontamination procedure will include hot water/high pressure wash whereby the wash and rinse water is captured within a manmade containment area. Decontamination wash and rinse water will be treated on-site by the water treatment system for the soil dewatering activities or characterized and properly disposed off-site. Consideration must also be given to prevent tracking or carrying site soils off site.

3.3 Post-remediation Verification Samples

Verification sampling will be required for the Remedial Measure Areas upon satisfactory completion of the soil removal and prior to placement of backfill. Verification soil samples will be collected from the excavation floor and walls at frequencies and locations consistent with Section 5.4, Remedial Action Performance Compliance of NYSDEC Draft DER-10, dated December 2002. The verification samples

will be analyzed for the NYSDEC STARS Memo No. 1 list of volatile organic compounds and semi-volatile organic compounds (base-neutral) by EPA Methods 8021 and 8270, respectively. The main purpose of the verification sampling is to document the effectiveness of the soil removal remedial action. If groundwater infiltration is significant a groundwater sample from the open excavation may replace excavation floor samples. The following sampling guidelines will be followed:

- For excavations less than 20 feet in perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.
- For excavations 20 to 300 feet in perimeter, one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
- For excavations larger than 300 feet in perimeter, the sampling frequency will be reduced based on consultation with NYSDEC.

Post-remediation verification soil sampling is not anticipated for remediation of surface soils. Verification sampling is not necessary provided the surface soils are covered with an acceptable surface cover in accordance with the remedial action work plan and SMP requirements.

Analytical sampling will be required for any on-site soil planned for off-site disposal. The frequency and parameters of the sampling will be dictated by the disposal facility accepting the material. On-site soil will only be allowed off-site if the disposal location is reviewed and approved by NYSDEC or other jurisdictional agency. The disposal facility must retain the appropriate permits to accept the soil.

If remedial activities at the site reveal unforeseen or unexpected conditions such as drums or unusually discolored soil, supplemental analytical testing (i.e., TCLP testing) may be required. If these conditions are encountered, NYSDEC will be consulted as to the frequency and parameters of supplemental analytical requirements.

3.4 Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) will be followed during ground intrusive remedial activities (i.e., excavation and handling of site soils). The intent of CAMP is to

provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The CAMP is not intended for use in establishing action levels for worker respiratory protection. The CAMP will monitor the air for dust (particulate air monitoring, see Section 3.4.1) and volatile organic compound vapors (VOC air monitoring, see Section 3.4.2) at the downwind perimeter of each designated work area. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown.

3.4.1 Particulate Air Monitoring

C.T. Male will utilize two real-time particulate monitors capable of continuously measuring concentrations of particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less). The instruments will be placed at temporary monitoring stations based on the prevailing wind direction each day, one upwind and one downwind of the work area. The particulate monitoring instruments will be capable of displaying the short term exposure limit (STEL) or 15 minute averaging period, which will be field checked and recorded for comparison to the NYSDOH Generic Community Air Monitoring Plan action levels for VOCs, as listed below. The particulate readings will be manually monitored, but the instruments are programmed to alarm at preset action levels. Instantaneous readings will be recorded periodically throughout the work day. At the end of each day, the readings for each instrument will be downloaded to a PC and retained for future reference and reporting.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

In the event of poor weather such as heavy snow or rain, particulate monitoring will not be performed for protection of instrumentation. These weather conditions would limit the effectiveness of the sensitive monitoring equipment and likely suppress particulate generation. Work activities will be halted if fugitive dust migration is visually observed for a sustained period of time.

3.4.2 VOC Air Monitoring

The COCs for the subject site include petroleum products, which are volatile and semi-volatile organic compounds that have the potential to be released to the environment when disturbed. Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area on a periodic basis. Upwind concentrations will also be measured at the start of the work day and periodically thereafter to evaluate the site's background conditions. A MiniRAE 2000 handheld VOC monitor or equal will used to perform the VOCs monitoring. This unit is capable of displaying the STEL (15 minute averaging period) which will be field checked and recorded for comparison to the NYSDOH Generic Community Air Monitoring Plan action levels for VOCs, as listed below. The VOC readings (STEL) will be manually recorded for future reference and reporting. Instantaneous readings will be recorded periodically throughout the work day.

- 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 for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown. Work activities will then be evaluated to determine the source and engineering controls required to reduce/eliminate organic vapors.

3.5 Dust Control

Dust suppression techniques will be employed as necessary to control fugitive dust to the extent practical during remediation. Such techniques must be employed, at a minimum, if the community air monitoring results indicate that particulate levels are above action levels. All reasonable attempts will be made to inhibit visible and/or fugitive dusts. Techniques to be utilized may include one or more of the following:

- Applying water to haul roads.
- Wetting equipment and excavation faces.
- Spraying water on buckets during excavation and dumping.
- Hauling materials in properly tarped containers or vehicles.
- Restricting vehicle speeds on-site.
- Covering excavated areas and materials after excavation immediately after activity ceases.

3.6 Stormwater and Erosion Control

All erosion & sediment control measures and pollution prevention measures employed in this project must be in compliance with the "New York Guidelines for Urban Erosion and Sediment Control" and the "New York State Stormwater Management Design Manual". Complying with these documents requires obtaining the necessary permits that are based on the size of the disturbance areas.

3.7 Backfill and Compaction

Backfill and compaction requirements will be a function of the planned redevelopment (i.e., pavement, building pad, etc.). Considering the type soil being removed (fill soils of cinders, slag and ash), these soils may not be suitable for reuse as structural backfill material beneath building foundations, but may be suitable for use under parking lots, roadways and sidewalks. Upon completion of contaminated soil excavation activities, backfill will be placed and compacted in accordance with project redevelopment

specifications. It is anticipated that an imported material may be required and laboratory testing (i.e., gradation analysis, proctor compaction tests, etc.) must be performed on that material to show conformance to the project requirements. In addition, compaction inspection by a qualified testing agency may be required to assure quality control / quality assurance of the backfill placement.

3.8 Acceptable Surface Cover Requirements

The purpose of the surface cover is to mitigate the potential for human contact with impacted soils, reduce and / or eliminate infiltration of precipitation through fill soils to groundwater and to eliminate the potential for contaminated runoff from the property. The acceptable surface cover will consist of one of the following types of material.

- Soil: Twelve inches of vegetated soil cover. The soil must be below the site SCGs or Eastern USA Background on a total basis. A demarcation layer will underlie the soil as an indicator of surface cover breakdown. A demarcation layer will consist of a material or materials, which upon observation or excavation, readily demarcate the acceptable surface cover from underlying existing soils.

- Asphalt: a minimum of six inches of material (asphalt and subbase) in areas that will become roads, sidewalks, and parking lots.

- Concrete: a minimum of six inches of material (concrete and subbase) in areas that will become structures (slab on grade or with basements) or for roads, sidewalks, and parking lots in lieu of asphalt. For slab-on-grade habitable structures, a vapor barrier will be designed and constructed beneath the concrete slab to prevent vapors from entering site structures.

3.9 Sub-slab Vapor Barrier System

The purpose of the mitigation systems is to minimize and possibly eliminate the infiltration of subsurface organic vapors into habitable site buildings. A mitigation system will be designed and constructed by the developer as part of site development plans. The developer is required to submit engineering drawings and specifications to NYSDEC for review and approval by the appropriate regulatory agency(s) prior to start of building construction.

4.0 INSTITUTIONAL CONTROLS

Institutional controls, consisting of deed restrictions or covenants, are required by the decision document for the site to restrict activities on the site. The institutional controls will be implemented after completion of remedial activities. The information on the institutional controls should consist of the following:

- map showing the area of control,
- description of the controls, and
- property owner's agreement to establish and maintain the institutional controls, which are expressly made enforceable by the State, set out in such form as to be recordable pursuant to Real Property Law section 291.

The VCP requires that adjacent property owners, state/local health departments and clerks of the governing bodies of each municipality in which the institutional control area is to be located are notified.

Institutional controls during completion of the remedy will be reasonably securing the construction site from unauthorized entry and trespassers.

5.0 HEALTH AND SAFETY PLANS

It will be the requirement of the remedial contractor to prepare a site specific Health and Safety Plan (HASP) as part of or immediately following the bidding process. A remedial contractor is defined as contractors that are involved with the handling of site soils. The contractor's employees will be required to have read and understood their HASP prior to completing the work.

Health and safety procedures to be followed by C.T. Male personnel will be in accordance with the existing NYSDEC approved site specific HASP (Appendix A of February 3, 2004). The existing site specific HASP may be amended for those specific remedial tasks that are not already addressed within that plan prior to implementation of field work.

A copy of the health and safety plans will be made available at the site during the performance of remedial activities to which they are applicable.

6.0 QA/QC PROCEDURES

Quality control and quality assurance procedures will include horizontal and vertical control through surveying techniques, field measurements and full time construction observation. These procedures will be implemented to record and document what areas of the site will be and were excavated as part of the remedial actions employed as well as documentation of the thickness of acceptable surface cover.

If analytical sampling is required as part of the remedial activities. It is expected that a New York State Department of Health (NYSDOH) ELAP certified analytical laboratory would perform the analysis. The analysis should be performed in accordance with NYSDEC ASP Category B protocols. The data deliverables will be subjected to third party data validation in accordance with NYSDEC Data Usability Summary Reports (DUSR) to document the data is valid and usable.

Waste characterization samples will be necessary for off-site disposal of wastes generated from the remedial activities. Analysis of characterization samples will not require NYSDEC ASP Category B data deliverables, nor will the analytical results be subjected to third party DUSR data validation.

7.0 SCHEDULE AND REPORTING

Upon completion of the remedial activities and receipt of the analytical laboratory data, if any, a draft Remedial Action Report will be prepared and submitted to NYSDEC in a timely manner. The draft report will be prepared in general conformance with the VCP agreement and commonly employed engineering practices. The Final Remedial Action Report will be submitted to NYSDEC within ninety (90) days after completion of remediation or within thirty (30) days after receiving formal written comments from NYSDEC.

The primary objective of the Remedial Action Report is to summarize and discuss the remedial activities completed and any non-conformance to the approved Remedial Action work plan. The report will present the measures employed at the subject site, analytical results of samples collected and analyzed (if any), dust monitoring results, and documentation of areas of the site excavated and/or filled. The report will also provide "as built" drawings, as necessary.

The Remedial Action Report, drawings and certification will be prepared, signed, and sealed by a professional engineer. The certification will include a statement indicating "I certify that the Remedial Action Work Plan was implemented and that construction activities were completed substantially in accordance with the Department-approved Remedial Action Work Plan and were personally witnessed by me or by a person under my direct supervision".

FIGURE 1

SITE LOCATION MAP

MAP REFERENCE :
NYSDOT C52 7.5 MINUTE SERIES QUADRANGLE

Date	RECORD OF WORK	Appr.

Drafter: JAM	Checker: KM
Appr. by:	Proj. No. 02.8112

FIGURE 1 – SITE LOCATION MAP
VCP INVESTIGATION WORK PLAN
FORMER CANADIAN PACIFIC RAIL
DOCK STREET

CITY OF PLATTSBURGH	CLINTON COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: NOT TO SCALE	DATE: APRIL 23, 2004

NO XREFS

DWG. NO. 03-320

CAD DWG. FILE NAME: AERIAL SITE MAP.DWG

FIGURE 2

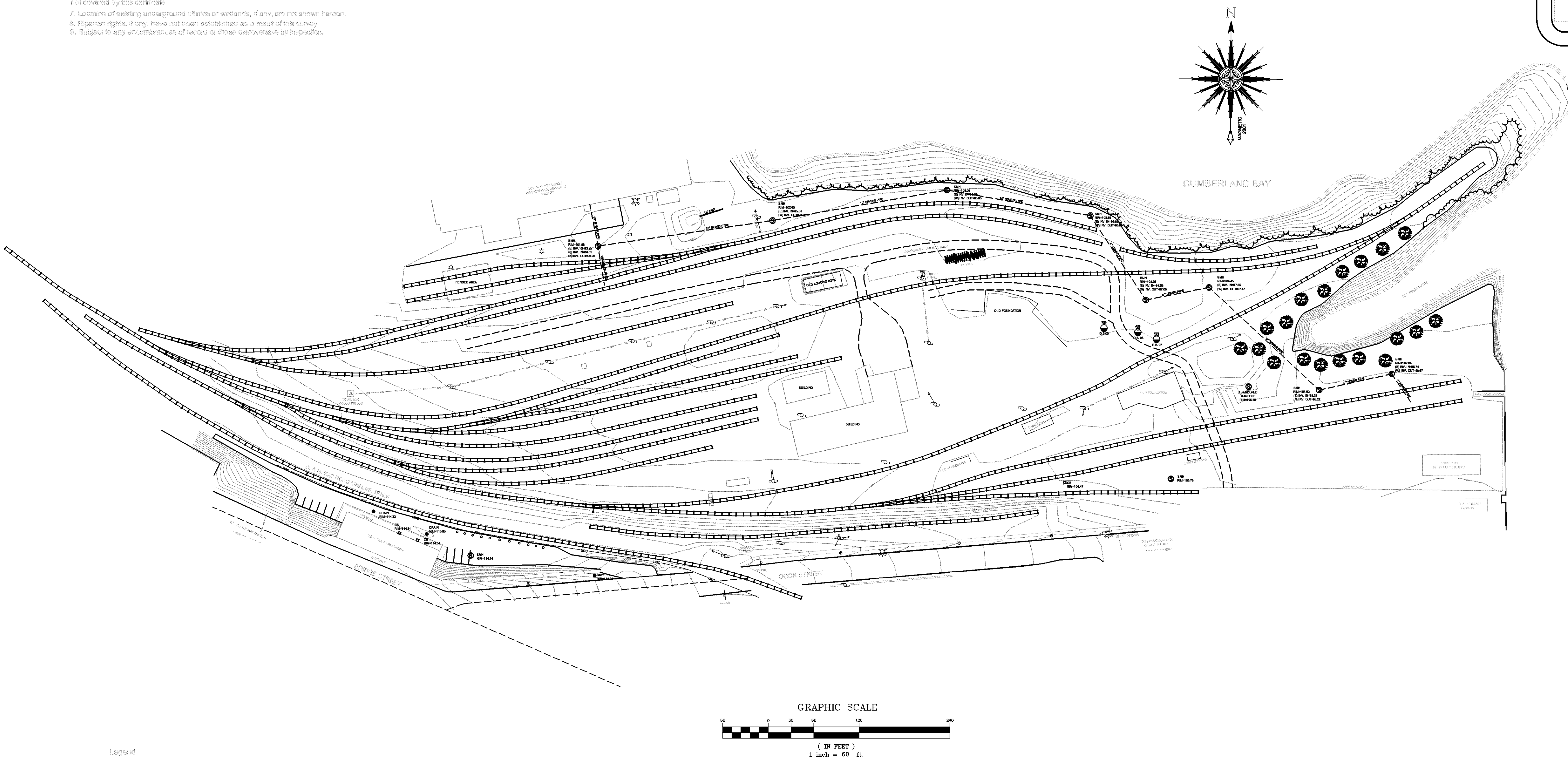
SITE PLAN AND TOPOGRAPHIC SURVEY PREPARED BY R.W. SUTHERLAND, P.C. OF PLATTSBURGH, NEW YORK

Map Notes:

1. Copyright 2002, Robert M. Sutherland, P.C. All rights reserved.
2 Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of Section 7209, Subdivision 2 of the New York State Education Law.
3. Only boundary survey maps with the surveyor's embossed seal, with an original signature, are genuine true and correct copies of the surveyor's original work and opinion (mylar prints shall be stamped with the surveyor's ink seal with an original signature).
4. The certification listed hereon is limited to the persons for whom the boundary survey map is prepared, the title company, the governmental agency, and to the lending institution listed on this boundary survey map.
5. The certifications hereon are not transferable.
6. The location of underground improvements or encroachments are not always known and often must be estimated. If any underground improvements or encroachments exist or are shown, the improvements or encroachments are not covered by this certificate.
7. Location of existing underground utilities or wetlands, if any, are not shown hereon.
8. Riparian rights, if any, have not been established as a result of this survey.
9. Subject to any encumbrances of record or those discoverable by inspection.

General Location Map
NTS

C:\DeLorme Docs\Print\02047.bmp



Legend

◎	Iron pin set (5/8"rebar with aluminum cap)
O	Iron rod found
▢	Computed corner
——— — — ———	Boundary line
——— ohu ———	Overhead utility line
	Utility pole
---- ---- ----	Building setback line
⌒⌒⌒⌒⌒⌒	Edge of woods
——— 418 ———	Existing contours
——— W ———	Existing Water Line
N/F	Now or Formerly

General Notes

No.	Revision/Issue	Date

R. M. SUTHERLAND, P.C.
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PLATTSBURGH, NEW YORK 12901
TEL: 518-561-6145 FAX: 518-561-2496
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Project Name & Address

SITE PLAN AND TOPOGRAPHIC SURVEY FOR

THE CITY OF PLATTSBURGH, N.Y.

FORMER C.P. RAIL SWITCHYARD SITE

DOCK STREET

CLINTON COUNTY
STATE OF NEW YORK

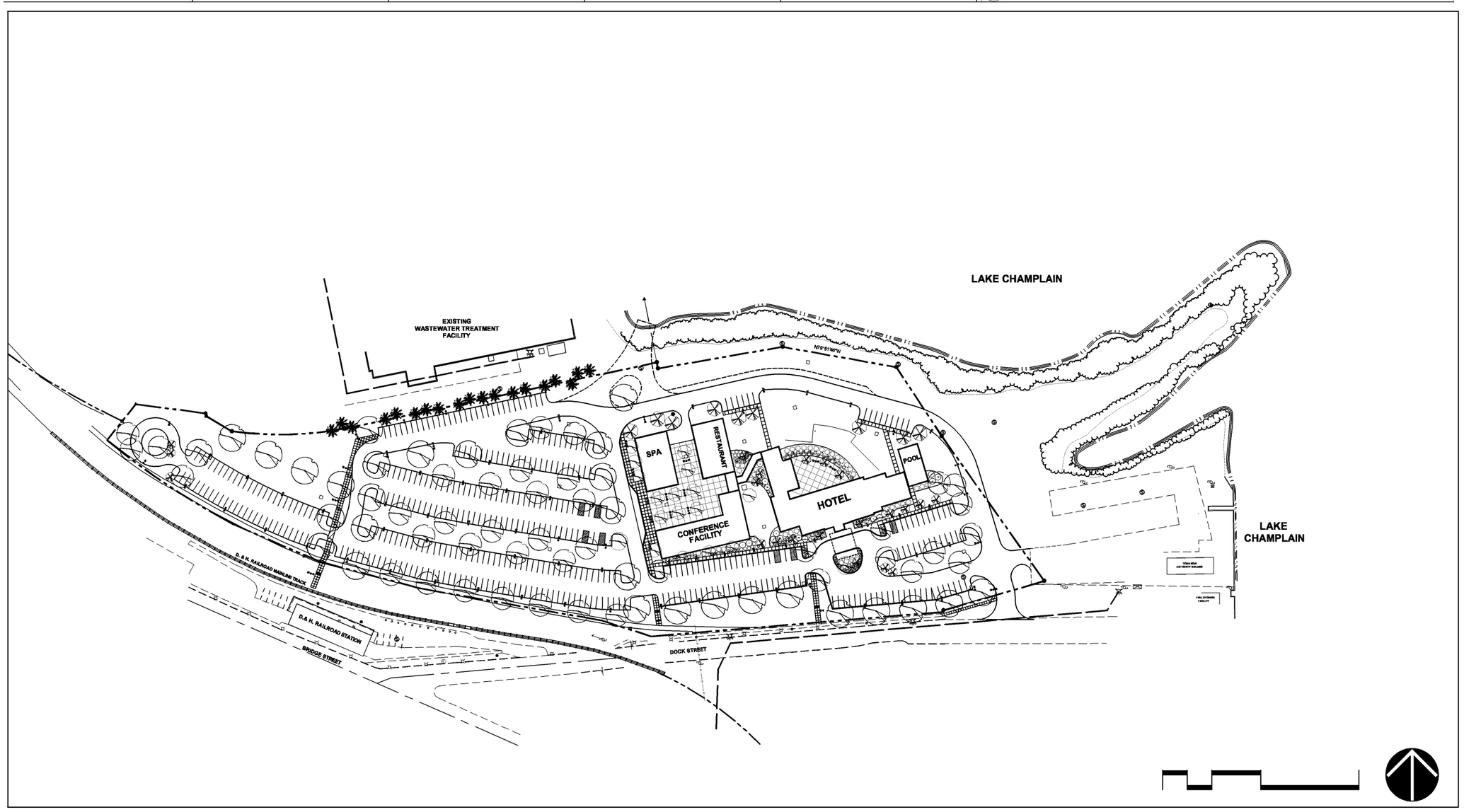
Project # 02047	Sheet
Date 03-19-02	SITE S-1
Scale 1" = 60'	
Drawn AAL	

Robert M. Sutherland, LLS #49062

FIGURE 3

PRELIMINARY LAYOUT PLAN PREPARED BY QPK DESIGNOF SYRACUSE, NEW YORK

DESCRIPTION	EXISTING	NEW	DESCRIPTION	EXISTING	NEW



QPK
DESIGN
ARCHITECTURE
ENGINEERING
SITE & PLANNING

450 SO. SALINA STREET
SYRACUSE, NEW YORK
TEL 315.472.7806

P.O. BOX 29
13201-0029
FAX 315.472.7806

PLATTSBURGH HOTEL

DOCK STREET
CITY OF PLATTSBURGH, NEW YORK

204268.00

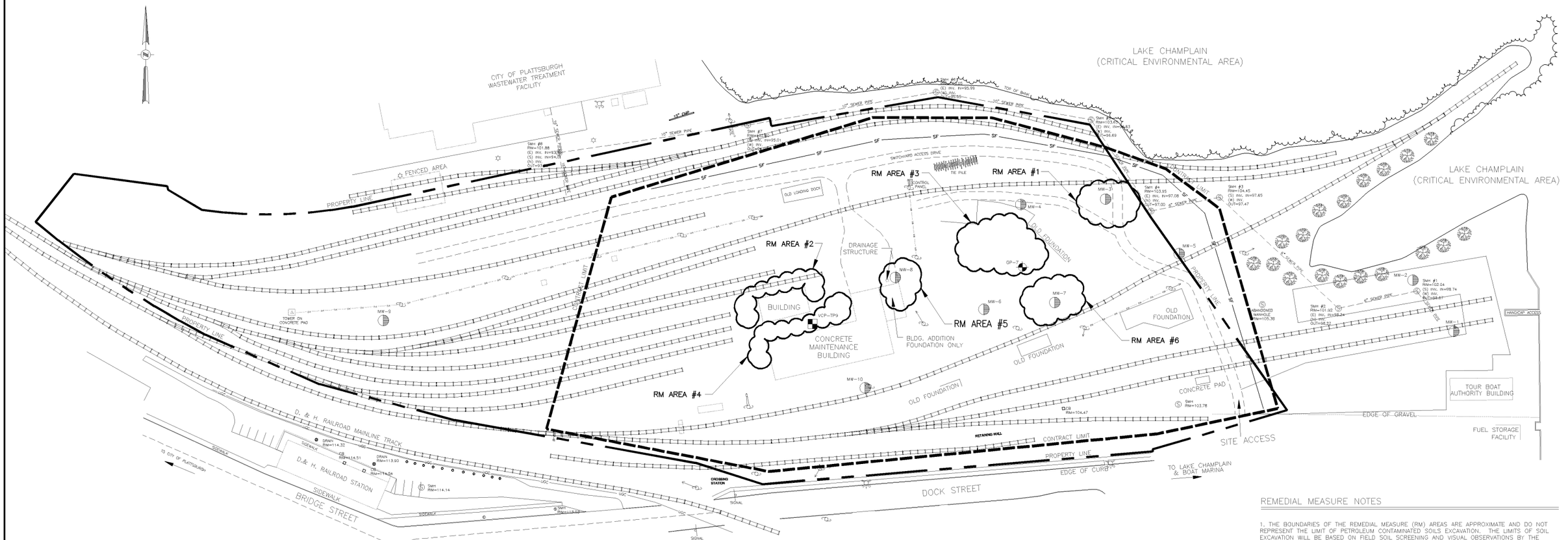
SEPTEMBER 7, 2004

PRELIMINARY
LAYOUT PLAN

L-1

FIGURE 4

APPROXIMATE LOCATION OF REMEDIAL MEASURES AREAS



LEGEND

MW-1	APPROXIMATE LOCATION AND ID OF 1.25-INCH DIAMETER MONITORING WELL.
VCP-TP9	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT LOCATION.
GP-7	APPROXIMATE LOCATION OF EXPLORATORY TEST BORING (NO WELL) LOCATION.
SF	APPROXIMATE LOCATION OF SILT FENCE TO BE INSTALLED BY THE CONTRACTOR.
CONTRACT LIMIT	APPROXIMATE LOCATION OF CONTRACT LIMITS.

REMEDIAL MEASURE NOTES

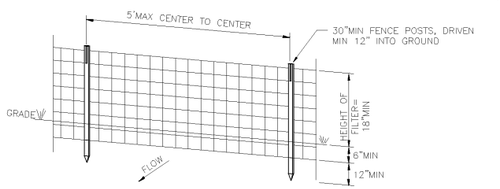
1. THE BOUNDARIES OF THE REMEDIAL MEASURE (RM) AREAS ARE APPROXIMATE AND DO NOT REPRESENT THE LIMIT OF PETROLEUM CONTAMINATED SOILS EXCAVATION. THE LIMITS OF SOIL EXCAVATION WILL BE BASED ON FIELD SOIL SCREENING AND VISUAL OBSERVATIONS BY THE ENGINEER AND THE ACTUAL LIMITS OF EXCAVATION (HORIZONTALLY AND VERTICALLY) WILL BE DETERMINED BY THE ENGINEER.

2. INSTALL SILT FENCE ACCORDANCE WITH DETAIL 1/ENV1. MAINTAIN SILT FENCE AND STORMWATER CONTROLS THROUGHOUT THE DURATION OF THE PROJECT.

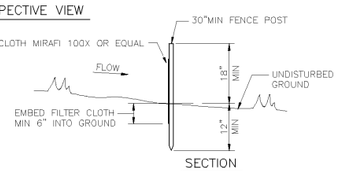
3. PROTECT ALL MONITORING WELLS FROM DAMAGE. CONTRACTOR WILL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH REPLACEMENT OF DAMAGED MONITORING WELLS.

4. REPAIR SITE ACCESS ROAD TO ORIGINAL CONDITION IMMEDIATELY UPON COMPLETION OF REMEDIAL MEASURES.

5. BACKFILL EXCAVATIONS AT THE END OF EACH WORK DAY OR PROTECT THE OPEN EXCAVATION WITH ORANGE CONSTRUCTION FENCE.



PERSPECTIVE VIEW



SECTION

SILT FENCE DETAIL NOTES:

1. FILTER CLOTH TO BE FASTENED SECURELY TO WOODEN STAKES
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIALS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1 / ENV1 **SILT FENCE DETAIL**
SCALE: NONE
CROSS REFERENCE: NONE

GENERAL NOTES:
1.) THE LOCATIONS AND FEATURES DEPICTED ON THIS MAP ARE APPROXIMATE AND DO NOT REPRESENT AN ACTUAL FIELD SURVEY.

MAP REFERENCE:
1.) DRAWING NAMES 02047.DWG AND 02047SITE_A.DWG, PREPARED BY R.M. SUTHERLAND, P.C. OF PLATTSBURGH, NEW YORK, DATED 3-19-02.

2.) PRELIMINARY LAYOUT PLAN, SHEET L-1, PLATTSBURGH HOTEL, PREPARED BY OPK DESIGN OF SYRACUSE, NEW YORK, DATED SEPTEMBER 7, 2004.

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

	DATE	REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
		1			
		2			
		3			
		4			
		5			
		6			
		7			
		8			
		9			

DESIGNED :
DRAFTED : J.MARX
CHECKED : KM
PROJ. NO: 02.8112
SCALE : ±1"=60'
DATE : JAN. 6, 2005

APPROXIMATE LOCATION OF REMEDIAL MEASURE AREAS

CANADIAN PACIFIC RAIL YARD SITE
NYS VOLUNTARY CLEANUP PROGRAM PROJECT

CITY OF PLATTSBURGH — CLINTON COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 • FAX 518.786.7299
ARCHITECTURE & BUILDING SYSTEMS ENGINEERING • CIVIL ENGINEERING
ENVIRONMENTAL SERVICES • SURVEY & LAND INFORMATION SERVICES

ENV1
SHEET 1 OF 1
DWG. NO: 05-0191

CAD DWG. FILE NAME: RM PLANLOWG

APPENDIX A

SOIL MANAGEMENT PLAN