PROPOSED RECORD OF DECISION AMENDMENT
TRACT II SITE

City of Niagara Falls / Niagara County / Site No. 932136 February 2012

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

SECTION 1: PURPOSE AND SUMMARY OF THE PROPOSED RECORD OF DECISION AMENDMENT

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing an amendment to the Record of Decision (ROD) for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the modification to the remedy identified by this Proposed ROD Amendment. The disposal of hazardous wastes at this site, as more fully described in the original ROD and Section 6 of this document, has contaminated various environmental media. The proposed amendment is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This amendment identifies the new information which has lead to this proposed amendment and discusses the reasons for the preferred remedy.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

On March 12, 2003, the New York State Department of Environmental Conservation (Department) signed an Environmental Restoration Program Record of Decision (ROD) which selected a remedy to clean up the Tract II Site. The March 2003 ROD required the excavation and off-site disposal of the upper 2 feet of soils and waste fill within the eastern portion of the site, along with the demolition and removal of the remaining site buildings. Upon issuance of the 2003 ROD, the City elected not to proceed with ROD implementation under the ERP. Since the site was determined to pose a significant threat due to the potential for direct human contact with site contaminants, especially metals contaminated surface soils by trespassing youths; the site was listed on the Registry as Site No. 932136 and classified as a Class 2 site in 2008.

In 2008/09, as part of the remedial design process, the Department conducted extensive pre-design sampling of the waste and fill materials present at the site. This sampling indicated that the waste materials on the eastern portion of the site contain lead concentrations in excess of hazardous waste criteria. Furthermore, in the eastern portion of the site, the waste exhibits hazardous waste characteristics (for lead) throughout its full depth (up to 9 feet below grade). Based on the new data, the Department proposed to amend the 2003 ROD in an August 2010 ROD amendment which proposed excavating and treating all soil and fill materials that have contamination levels above soil cleanup objectives for residential use; disposing treated waste and fill materials at an appropriate off-

site disposal facility; backfilling and grading the excavation areas with available clean concrete, brick building debris, and clean soil; and restoring the site surface with grass. Implementing this 2010 proposed ROD Amendment was estimated to cost approximately $12.8 million.

Honeywell provided comments on the 2010 ROD Amendment and requested, as a potential responsible party, to investigate other remedial alternatives for the site. Based on Honeywell's request, the Department and Honeywell entered into an Order dated October 18, 2011 whereby Honeywell agreed to perform the remedial design and remedial action required on the site. The Order also includes provision for additional investigation of the site and further evaluation/analysis of treatment/stabilization technologies. Based on these further engineering evaluations including pre-design sampling and waste treatability studies conducted by Honeywell, an alternate remedial alternative is being proposed by the Department which consists of excavation of contaminated waste and fill materials from the eastern portion of the site and on-site treatment, via solidification/stabilization, of excavated waste and fill materials which exceed characteristic hazardous waste criteria. Treated soils would be consolidated on site and covered beneath a 1 foot soil cover. Soils that are too highly contaminated to allow for on-site treatment/disposal will be shipped off-site for disposal. This proposed, alternative remedy is estimated to cost $6,051,000 to implement.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on this proposed amendment. This is an opportunity for public participation in the remedy selection process. The information here is a summary of what can be found in greater detail in reports that have been placed in the Administrative Record for the site. The public is encouraged to review the reports and documents, which are available at the following repositories:

Doris Jones Family Resource Center
3001 9th Street
Niagara Falls, NY 14305
(716) 285-5374

NYSDEC Region 9 Offices
Contact: Mr. Tim Dieffenbach, Project Manager
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220
Hours: Mon. - Fri. 8:30am - 4:45pm

A public comment period has been set for February 15, 2012 to March 15, 2012 to provide an opportunity for you to comment on these proposed changes. A public meeting is scheduled for March 1, 2012 at Doris Jones Family Resource Center beginning at 6:30 PM.

At the meeting, a description of the original ROD and the circumstances that have led to proposed changes in the ROD will be presented. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the proposal. We encourage you to review this summary and attend the meeting.

Written comments may also be sent to:

Tim Dieffenbach, Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220

Comments will be summarized and responses provided in a Responsiveness Summary.

The Department may modify the proposed amendment or select another of the alternatives presented based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed amendment identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

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

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Tract II Site is a 20 acre parcel located on the northeast corner of Highland and Beech Avenues in the City of Niagara Falls.

Site Features: The site is bordered on the north by a large dilapidated building formerly used as a battery manufacturing facility (the Power City Warehouse Site #932131). Highland Avenue, which has a mix of commercial and residential properties, runs along the west side of the site. Beech Avenue, with mostly residential properties (and a park), runs along the south side of the site. Residential properties and a church border the site to the east. A strip of land owned by the National Grid bisects the Tract II site into the eastern and western portions. The site is also located in the Highland Avenue Brownfield Opportunity Area (BOA).

Current Zoning/Use(s): Current zoning is for industrial use; however, zoning may be changed with the remediation and redevelopment of the site to commercial use to be in conformance with the City's Master Plan.

Historic Use(s): The western portion of the Tract II site was once home to a series of business form manufacturing companies (from 1903-1971). The eastern portion of the Tract II site is believed to have been either directly or indirectly associated with the former manufacturing activities at the adjacent Power City Warehouse. The City currently owns both the Tract II and Power City Warehouse (aka Tract I) sites through tax foreclosures.

The eastern portions of the site have up to 9 feet of waste and fill materials over the native soils. These waste and fill materials include building demolition debris such as brick, concrete, sand, wood, etc. However, also present on the eastern portion of the Tract II site are wastes that were likely associated with the manufacturing activities at the adjacent Power City Warehouse site. These wastes include plastic battery casings and other granular fill materials. In addition, there has been significant illegal dumping of household items along the north-east portion of the site. These wastes include numerous TVs and other items which may have contributed to the contaminants detected in surface soils in this part of the site.

A site investigation was completed by the City under the Environmental Restoration Program (ERP site #B00022) in 2000, and a Record of Decision was issued by the Department in March 2003. The primary site contaminants identified in the ROD were metals and PAHs in site soils. Upon issuance of the 2003 ROD, the City elected not to implement the ROD remedial requirements under the ERP.

The site was determined to pose a significant threat due to the potential for direct human contact with site contaminants, especially metals contaminated surface soils by trespassing youths. The site was therefore listed on the Registry as Site No. 932136 and classified as a Class 2 site in 2008.

A Supplemental Remedial Investigation was completed in October 2009 by DEC. In November 2009 the EPA fenced the site buildings (the remainder of the site is not fenced) to help reduce trespassing. The EPA also removed and cleaned PCB sludge and water from a sump within the underground parking garage as part of an Emergency Removal action that was conducted in 2009 on the adjacent Power City Warehouse property. , The garage is located in the western portion of the site and was part of the Moore Business Forms Building,

Site Geology/Hydrogeology: Underlying the waste and fill materials (at depths starting from 1-9 feet below the surface) is a native reddish silty clay soil which extends to the top of bedrock (which occurs at depths from 12-24 feet). With the exception of some very limited areas of perched groundwater, there is no overburden groundwater present at the site.

A Record of Decision was issued previously for OU 01 in March 2003.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use as described in

Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for restricted use of the site.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The Department and Honeywell Corporation entered into a Consent Order in October 2011. This Order obligates Honeywell to implement a RD/RA for OU1.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

While the majority of the investigation work was completed by the City of Niagara Falls under the Environmental Restoration Program (ERP) Grant, subsequent sampling was conducted by the Department and Honeywell Corporation in order to further define the extent and characteristics of the contamination on the site.

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

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

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

6.1.2: RI Information

The analytical data collected on this site includes data for:

- groundwater
- surface water
- soil
- sediment

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in the March 2003 ROD. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified for this Operable Unit at this site is/are:

- lead
- polycyclic aromatic hydrocarbons (PAHs)

As illustrated in the original 2003 ROD for OU 1 of this site, the contaminant(s) of concern exceed the applicable SCGs for:

- soil

Since the issuance of the FS and ROD, new information about the site has been obtained. The most significant finding is the presence of levels of lead in site soils for leachability that exceed regulatory limits in the eastern portion of the site.

6.3: Summary of Human Exposure Pathways

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

The site is partially fenced, which along with heavy overgrowth, limits public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. Groundwater is not present at the site and the area is served by a public water supply that is not affected by the contamination.

6.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

The Fish and Wildlife Resources Impact Analysis (FWRIA) for OU 01, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors. Given the highly urbanized area in the vicinity of the Tract II Site, wildlife resources are limited.

Site groundwater has not been impacted and there is little overburden groundwater present due to the low permeability native soils.

SECTION 7: SUMMARY OF ORIGINAL REMEDY AND PROPOSED AMENDMENT

7.1: Original Remedy

Based on the results of the August 2000 RI/FS for the site, the March 2003 ROD for the site included the following major elements:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation, maintenance, and/or monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved during the design process;

2. Excavation and off-site disposal of contaminated soils from the east area of the site including six inch deep surface soils (estimated at 5,250 cubic yards) and shallow subsurface soils up to a depth of 2 feet (estimated at 7,875 cubic yards), and replacement with clean soil fill (estimated at 13,125 cubic yards);

3. Excavation and off-site disposal of contaminated soil (partially burned cardboard waste) from an area on the western portion of the site and replacement with clean soil fill (estimated at 7.5 cubic yards);

4. Removal and off-site disposal of sediments and water (estimated at 5 cubic feet) from the parking garage sump;

5. Removal and off-site disposal of asbestos containing materials (estimated at 210 tons) from the parking garage and dilapidated warehouse building;

6. Demolition of the parking garage and the dilapidated (northeastern) building;

7. Removal and disposal of general refuse deposited on the surface of the site;

8. Site restoration to include grading, topsoil placement and seeding of excavated and/or filled areas;

9. Development of a soils management plan; and

10. Imposition of a deed restriction, if warranted, due to residual soil contaminants remaining after remedial actions are completed.

7.2: New Information

The remedy in the 2003 ROD was based upon limited soil, waste and fill sampling in which no hazardous levels of lead were identified at the site. That sampling suggested that lead and PAH contaminants were limited to the upper 2 feet of the site surface.

The October 2009 Supplemental Investigation Report (SRI) documented the presence of characteristic hazardous waste (lead) in the waste and fill materials at depths up to 9 feet below grade in the eastern portion of the site. An estimated 45,000 cubic yards (91,000 tons) of waste and fill materials contain lead in concentrations greater than Part 375 commercial use soil cleanup objectives. Based on this additional data the Department proposed to excavate the contaminated soil and ship it off-site for disposal at a properly permitted facility in the 2010 proposed ROD Amendment. This proposed alternative was based on the assumption that the site would remain undeveloped, unmaintained and unsecured with no established future use since there was no viable and financially capable responsible party to provide long term site management of residual on-site contaminated soils. Honeywell provided comments on the 2010 ROD Amendment and requested, as a potential responsible party, to investigate other remedial alternatives for the site. Based on Honeywell's request, the Department and Honeywell entered into an Order dated October 18, 2011 whereby Honeywell agreed to perform the remedial design and remedial action required on the site including long term Site Management. The Order also includes provision for additional investigation of the site and further evaluation/analysis of treatment/stabilization technologies.

7.3: Proposed Changes

Based on further engineering evaluations, including pre-design sampling and waste treatability studies conducted by Honeywell, an alternate remedial alternative is being proposed by the Department.

Proposed changes to the major remedy elements from the 2003 ROD and 2010 proposed ROD Amendment are described in the following:

The 2003 ROD called for excavation and off-site disposal of contaminated soils from the upper two feet of the eastern portion of the site (estimated at 13,125 cubic yards) and replacement with clean soil fill. Based on the results of 2009 pre-design investigations, the August 2010 proposed ROD Amendment called for more extensive soil excavation with on-site treatment prior to off-site disposal of waste and fill materials from the eastern portion of the site containing contaminant concentrations above characteristic hazardous waste criteria. The proposed change would still include the excavation of soil demonstrating characteristic hazardous wastes levels of lead (exceeding the TCLP standard) and on-site soil treatment; but would provide for the, consolidation of treated soil on site. Excavated materials would be screened to separate soil and debris. Soils exceeding the TCLP standard would be treated via the stabilization/solidification technology then consolidated onto designated areas on-site. Excavated soils that exceed the applicable SCOs, but not the TCLP standard, would not be treated but would also be consolidated on-site. Soils exhibiting concentrations of lead too high and cannot be stabilized to meet the required leachability criteria will be disposed of off-site at an approved disposal facility. Debris that is sorted from the soil would be characterized and sent off site to an appropriate facility for disposal. The estimated

costs assume that 5,000 tons of soil would be disposed of off-site. Excess material that exceeds the capacity of the site grades will be disposed off-site at an appropriately permitted facility. Upon completing the on-site treatment and consolidation, a 1 foot soil cover system would be constructed over the consolidated material including a demarcation layer to mitigate potential future exposure to the treated soil in areas designated for commercial development. A 2 foot soil cover system would be required for areas designated for recreational use. Clean utility corridors would also be constructed through the consolidated material in order to accommodate any future development construction.

- Development of a site management plan; and imposition of an environmental easement, due to residual soil contaminants remaining after remedial actions are completed.

The 2003 ROD called for a Soil excavation plan but this ROD provides for the development of a site management plan (SMP) and imposition of an environmental easement will be required at the site. The SMP will include an Operation and Maintenance Plan for the site to insure continued maintenance and repair to the cover system and insure that proper controls and site restrictions are in place during the redevelopment of the site. This is a more comprehensive plan for the long term operation and oversight of the site.

SECTION 8: EVALUATION OF PROPOSED CHANGES

8.1: Remedial Goals

Goals for the cleanup of the site were established in the original ROD. The goals selected for this site are:

- Reduce, control, or eliminate to the extent practicable the contamination present within the soils and fill on site, and thereby eliminate the significant threat posed by the presence of hazardous wastes at the site.

- Eliminate the potential for direct human or animal contact with the contaminated soils or groundwater on site.

- Eliminate the threat to surface waters and sediments by eliminating surface run-off and subsurface releases of fill from the site.

- Prevent, to the extent possible, migration of contaminants at the site to groundwater and surface water.

Further, the remediation goals for the site include attaining to the extent practicable:

- Provide for attainment of SCGs for groundwater quality at the limits of the site.

8.2: Evaluation Criteria

The criteria used to compare the remedial alternatives are defined in the regulation that directs the

remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided. A detailed discussion of the evaluation criteria and comparative analysis is contained in the original Feasibility Study.

The first two evaluation criteria are called threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. **Protection of Human Health and the Environment.** This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

   The proposed amended remedy will remove and treat (as necessary) the hazardous waste and contaminated fill materials. Solidification/stabilization treatment will occur on-site. After the necessary treatment, the fill materials will be placed back on site and covered with soil. Excess material that exceeds the capacity of the site grades will be disposed off-site at an appropriately permitted facility. This will ensure protection of human health and the environment. The original remedy would not have been as protective of human health and the environment, as large quantities of fill and waste with high concentrations of lead would have remained at the site, and future protection would have been dependent upon long term maintenance of a clean soil cover system and institutional controls.

2. **Compliance with New York State Standards, Criteria, and Guidance (SCGs).** Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

   In 2003, the original ROD used NYSDEC Division of Environmental Remediation TAGM-4046- "Determination of Soil Cleanup Objectives and Cleanup Levels" for the soil cleanup objectives. These cleanup objectives were superseded in December 2006 by the soil cleanup objectives contained in 6NYCRR Part 375.

   The proposed amended remedy will satisfy all SCGs. Part 375 commercial SCOs will be met on the western portion of the site, and the waste and fill materials will be treated (as necessary) to eliminate their hazardous condition prior to being replaced on site and capped.

   The original remedy would not have satisfied all SCGs since it would not have treated or removed the majority of the extremely contaminated fill and waste present at the site. Lead would remain in concentrations above even restricted industrial SCOs. It is important to note that the Department was not aware of the extremely contaminated fill and waste present at the site that is found at depths greater than two feet below ground surface in the eastern portion of the site at the time the Department selected remedy in 2003.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. **Short-term Effectiveness.** The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

The proposed amended remedy will result in some short term impacts on nearby homeowners and on site workers. These impacts (truck traffic, dust, noise, vibrations, etc.) will be mitigated by proper controls and construction techniques. The remedy is estimated to take 6-12 months (one to two construction seasons) to complete.

The original remedy would have had many similar short term impacts, but the duration of the impacts would have been shorter. It was estimated that the original remedy could have been completed in 6-8 months; however, this is due to a significantly smaller volume of soil removal or treatment.

4. **Long-term Effectiveness and Permanence.** This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: (1) the magnitude of the remaining risks, (2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and (3) the reliability of these controls.

   The proposed amended remedy will offer greater long-term effectiveness and permanence since it will treat waste and fill materials on the eastern portion of the site with lead concentrations in excess of TCLP characteristic hazardous waste criteria to reduce the concentrations of leachable lead and protect long term groundwater quality. Installation of a soil cap, along with long-term site maintenance provisions, will ensure that residual contamination remaining on site will offer no future route of exposure through the institutional controls placed on the property.

   The original remedy would also rely on the long term maintenance of a cover system and institutional controls to be effective and permanent.

5. **Reduction of Toxicity, Mobility or Volume.** Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

   The original remedy would have left a large volume of waste and fill material with extremely high lead concentrations at the site; therefore, it would not have resulted in as great a reduction in the toxicity or volume of the site contaminants as the proposed amended remedy. Treatment of fill materials and capping will provide adequate reduction of the toxicity and mobility by stabilizing the lead contaminants and greatly reducing leachability of the fill. Excess soil that cannot be placed under the cap within the final grade elevations will be removed from the site for proper off-site disposal.

6. **Implementability.** The technical feasibility and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

   The proposed amended remedy is implementable since the equipment, materials, and facilities are readily available. Excavation, on-site treatment methods, transportation, and disposal facilities for this type of contaminated wastes and fill materials are readily available. No significant technical or administrative difficulties have been identified. A treatability study has also been

conducted that confirms the effectiveness and treatment parameters of this stabilization alternative.

The original remedy was also readily implementable.

7. **Cost-Effectiveness.** Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

   The estimated present worth cost to carry out the proposed amended remedy is $6,051,000, including annual costs for 30 years. The estimated present worth to complete the original remedy was $3,040,000, including annual costs for 30 years.

   The costs are different between the original remedy and amended remedy because the new information obtained during the design and subsequent work has been used to update the cost estimate from the original Feasibility Study. The major changes in cost include updated pricing, additional scope items identified during the design process which provided for the stabilization of the soil before capping.

8. **Land Use.** When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

   The proposed amended remedy will be consistent with future land uses identified in the Highland Avenue Brownfield Opportunity Area (BOA). The western portion of the site is intended for future commercial use, and the eastern portion of the site is intended for passive recreational uses and/or commercial redevelopment.

This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.

9. **Community Acceptance.** Concerns of the community regarding the proposed changes are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the final remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

SECTION 9: PROPOSED CHANGES

The Department is proposing to amend the Record of Decision (ROD) for the Tract II Site. The proposed changes is warranted in light of the supplemental investigation sampling which revealed the presence of approximately 45,000 cubic yards of waste and fill materials with contaminants significantly above Part 375 residential SCOs. It is estimated that approximately 50% of this waste and fill material contains characteristic hazardous waste concentrations of lead. This is significant,

new information compared to the site data available when the Department issued the original remedy in 2003.

The Department is therefore proposing the amended remedy for the site consisting of the excavation and treatment and on-site disposal of the eastern contaminated waste and fill materials above residential SCOs. This amended remedy would be protective of human health and the environment, achieve the soil cleanup objectives, and do so within a reasonable time frame. It would also be effective in the short and long term and result in the permanent reduction in toxicity, mobility, and volume of soil contaminants.

The estimated present worth cost to carry out the amended remedy is $6,051,000. The costs projected for the original 2003 remedy were approximately $3,040,000 and the full excavation/off-site disposal remedy presented in the proposed 2010 ROD Amendment was $12,800,000.

The elements of the proposed amended remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction of the remedial program. To maximize the net environmental benefit, Green remediation and sustainability efforts are considered in the design and implementation of the remedy to the extent practicable, including;

    - using renewable energy sources;
    - reducing green house gas emissions;
    - encouraging low carbon technologies;
    - foster green and healthy communities;
    - conserve natural resources;
    - increase recycling and reuse of clean materials;
    - preserve open space and working landscapes;
    - utilize native species and discourage invasive species establishment during restoration;
    - promote recreational use of natural resources;

2. Excavation and off-site disposal of contaminated waste and fill materials from the western portion of the site that exceed Part 375 commercial use SCOs;

3. Contaminated wastes, soil and debris will be excavated and characterized prior to relocation and/or placement of the cover system. Excavated material that is below the hazardous waste leachability criteria for lead of 5.0 mg/l would be consolidated above the water table and covered with a soil cover. Excavated material that exceeds the hazardous waste leachability criteria for lead of 5.0 mg/l would be either sent off-site for disposal or treated by a stabilization technique. Prior to treatment excavated materials would be screened to separate soil and debris. Treated material that has been rendered non-hazardous and meets the land disposal criteria will be consolidated above the water table and covered with a soil cover. Soils exhibiting concentrations of lead that is too high and cannot be stabilized to meet the required leachability criteria will be disposed of off-site at an approved disposal facility. Debris that is sorted from the soil will be

characterized and sent off site to an appropriate facility for disposal. Excess treated soil, that exceeds the fill capacity of the excavation and/or final site grades, will be removed off-site for disposal. Treatment on site will meet the basic requirements of Parts 373 & 374 for handling and treating hazardous waste;

4. An ex-situ solidification/stabilization process that uses a solidifying or stabilizing agent to bind the excavated soil into a low permeability mass will be used to treat the characteristic lead contamination. Under this process the contaminated soil will be excavated and mixed in a temporary mixing facility (i.e., pug mill, mixer, etc.) with solidifying or stabilizing agents (typically portland cement) or other binding agents. The soil and agent are mixed to a concrete like slurry that is placed in the subsurface on-site resulting in a solidified monolith of low permeable material. The solidified mass will then be covered with a soil cover as described below, to prevent direct exposure to the solidified mass. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination.

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

6. Creation of clean utility corridors through the consolidated material in order to accommodate future re-development;

7. Backfill and grading of the western excavation areas with available clean concrete and brick building debris, supplemented as needed with clean backfill soils. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d);;

8. In-place demolition of the underground parking garage on the western portion of the site;

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

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

   (b) land use is subject to local zoning laws, the remedy allows the use and development of the controlled property for commercial and industrial uses;

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

   (d) prohibits agricultural or vegetable gardens on the controlled property; and

(e) requires compliance with the Department approved Site Management Plan;

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

(a) an Institutional Control Plan that identifies all use restrictions for the site and details the steps and media-specific requirements necessary to assure the institutional controls remain in place and effective. This plan includes, but may not be limited to:

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

(ii) descriptions of the provisions of the environmental easement for the western portion of the site including any land use restrictions;

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

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

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

(i) monitoring groundwater quality and elevation to assess the performance and effectiveness of the remedy;

(ii) soil cover system inspection and maintenance, as necessary, to ensure its function is not impaired by erosion or activities at the site;

(iii) a schedule of monitoring and frequency of submittals to the Department;

SECTION 10. NEXT STEPS

As described above, there will be a public meeting and comment period on the proposed changes to the selected remedy. At the close of the comment period, the Department will evaluate the comments received and prepare a Responsiveness Summary, which will be made available to the public. A notice describing the Department's final decision will be sent to all persons on the site mailing list.

If you have questions or need additional information, you may contact any of the following:

General Site Related Questions, Contact:

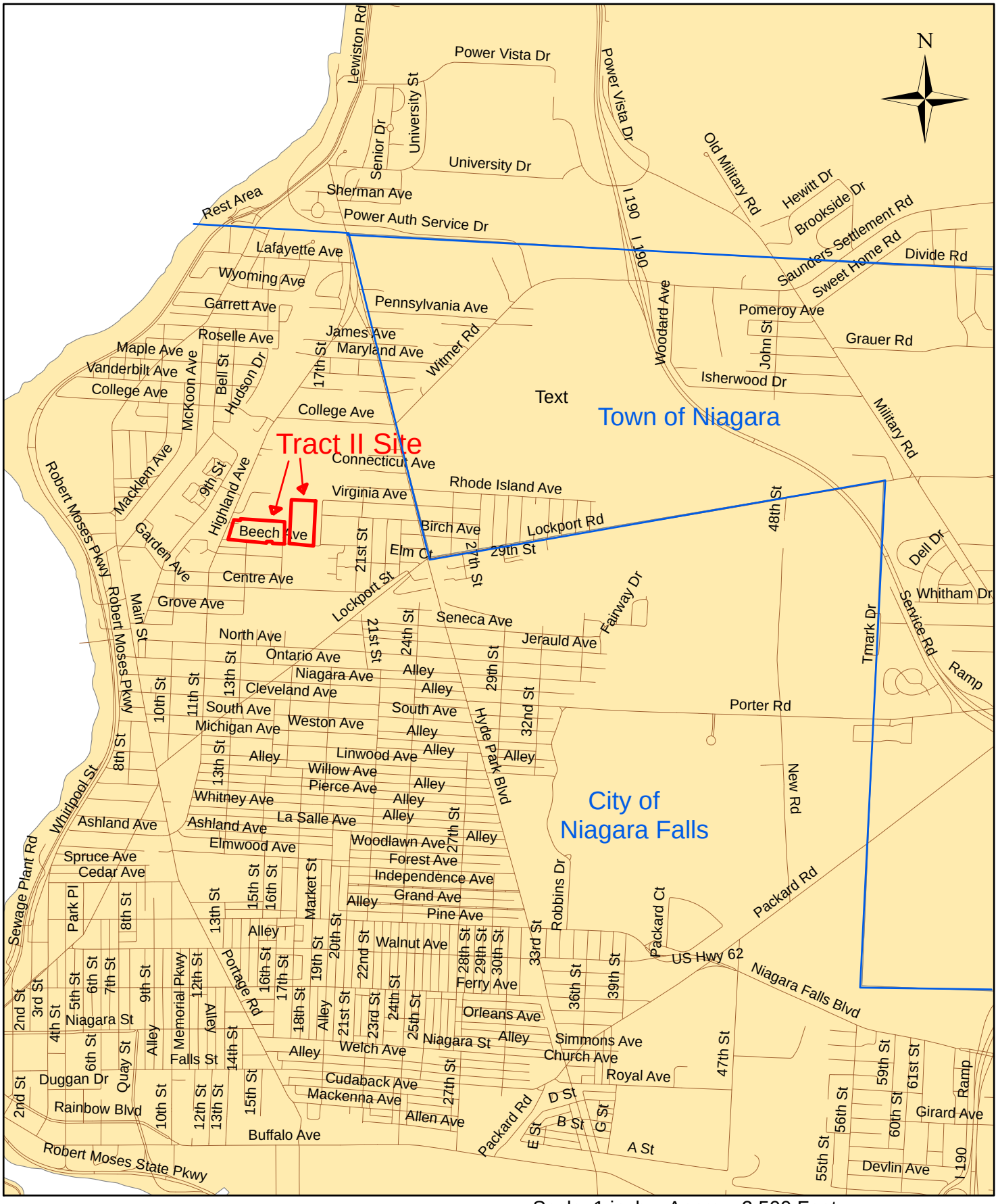
Tim Dieffenbach
Project Manager
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220

Megan Gollwitzer
Citizen Participation Specialist
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7201
Region9@gw.dec.state.ny.us

For Health Related Questions, Contact:

Matt Forcucci
Public Health Specialist III
NYSDOH
584 Delaware Avenue
Buffalo, NY 14202
(716) 847-4501
BEEI@health.State.ny.us

Figure 1 - Tract II Site Location

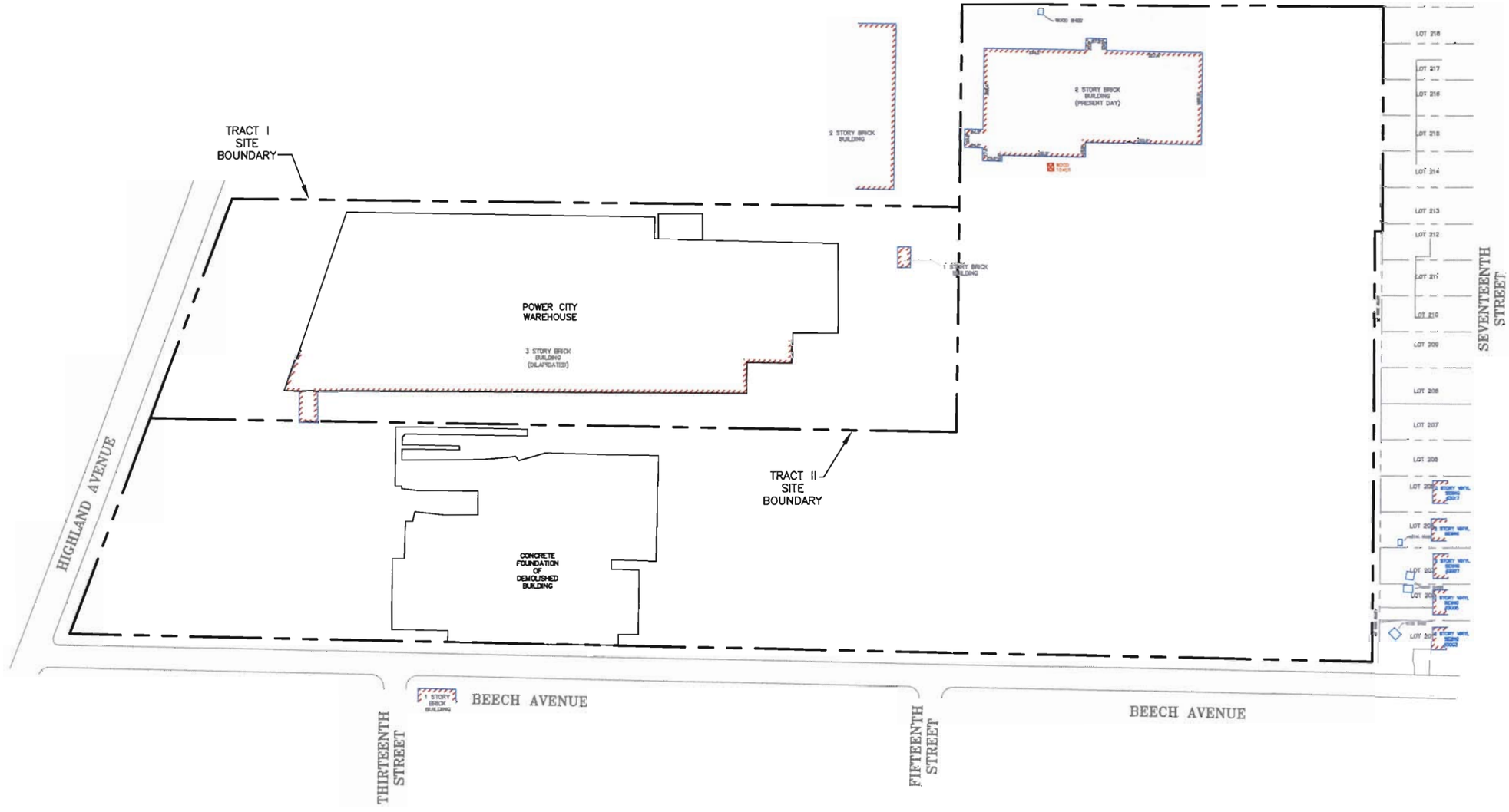


Scale: 1 inch = Approx. 2,500 Feet

Figure 2 - Tract II Site Location

Scale: 1 inch = Approx. 800 Feet

DRAWN BY: NEL 1-4-2011 APPROVED BY: ESW 5-19-2011



150 0 150
SCALE: 1"=150'

HONEYWELL INTERNATIONAL, INC.
NIAGARA FALLS, NEW YORK

Project No.: 3410100775

MACTEC
Engineering & Consulting Inc.
800 North Bell Avenue, Suite 200
Pittsburgh, PA 15106

TRACT I AND TRACT II
SITE PLAN

FIGURE: 3

P:\PROJECTS\Honeywell\Niagara Falls\3410100775\CADD\FINAL\Pre-Design Work Plan Figures\Figure 2 - Site Plan.dwg Wed, 25 May 2011 - 10:21am esweiler

Focused Feasibility Study

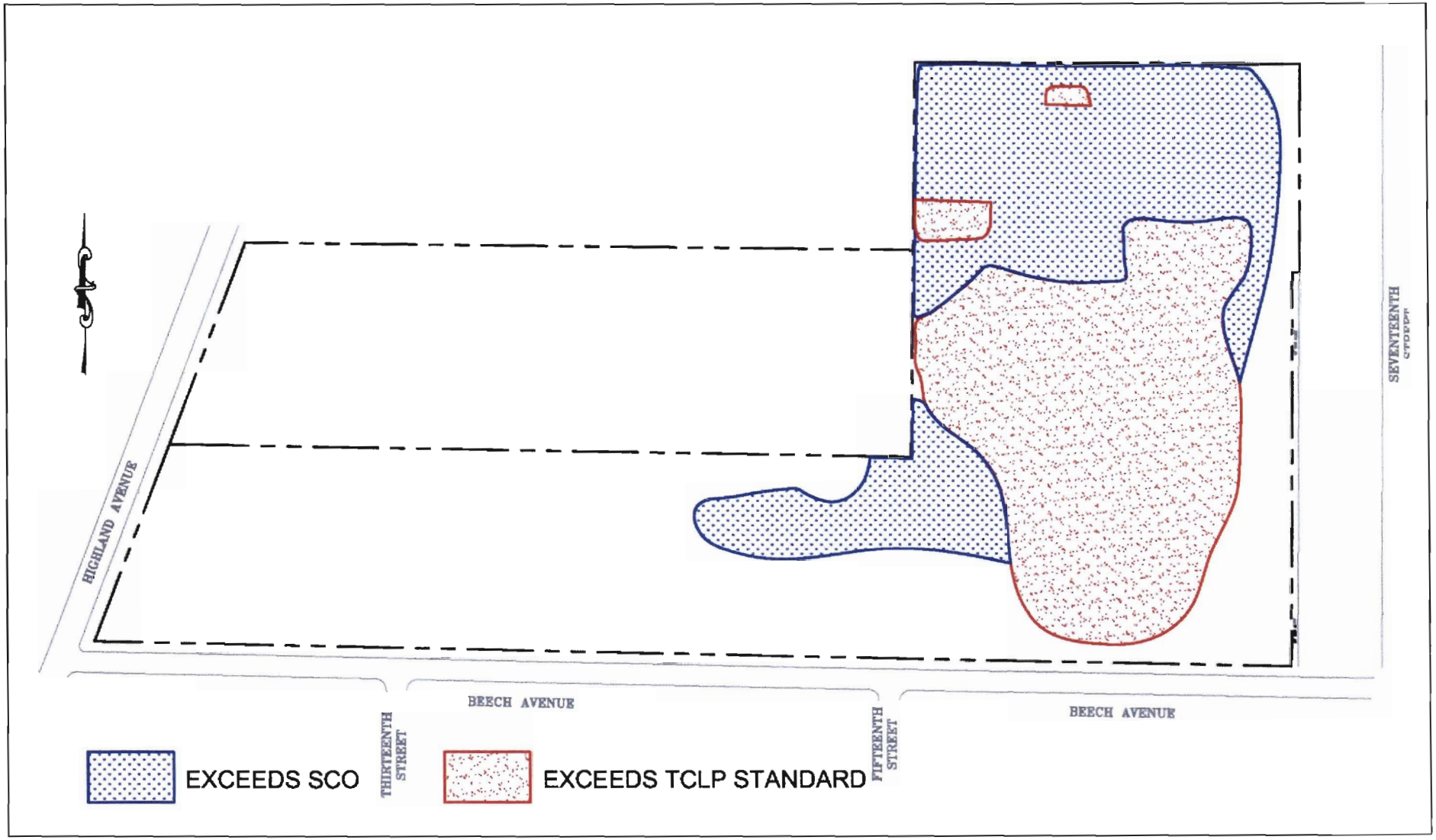
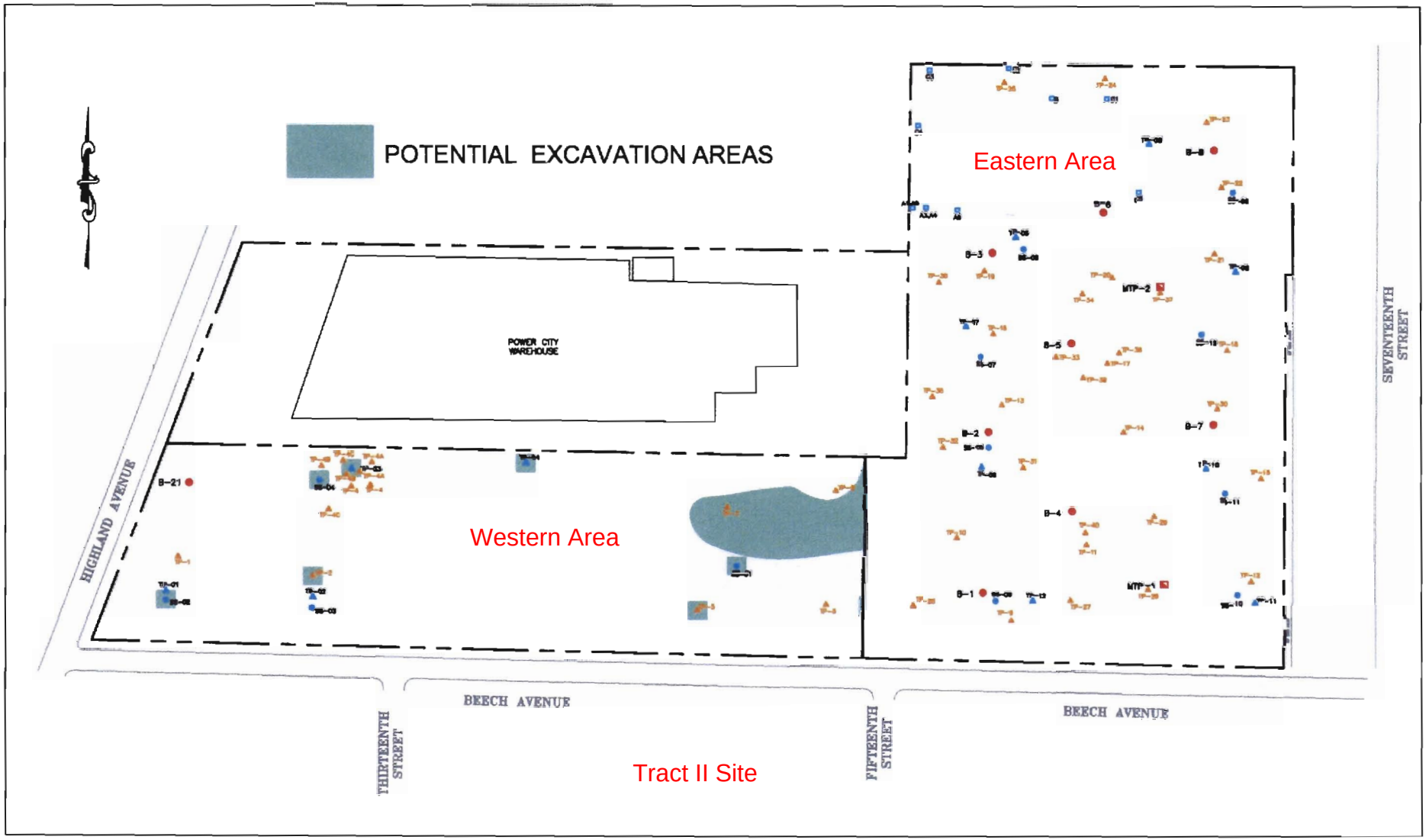


Figure 4

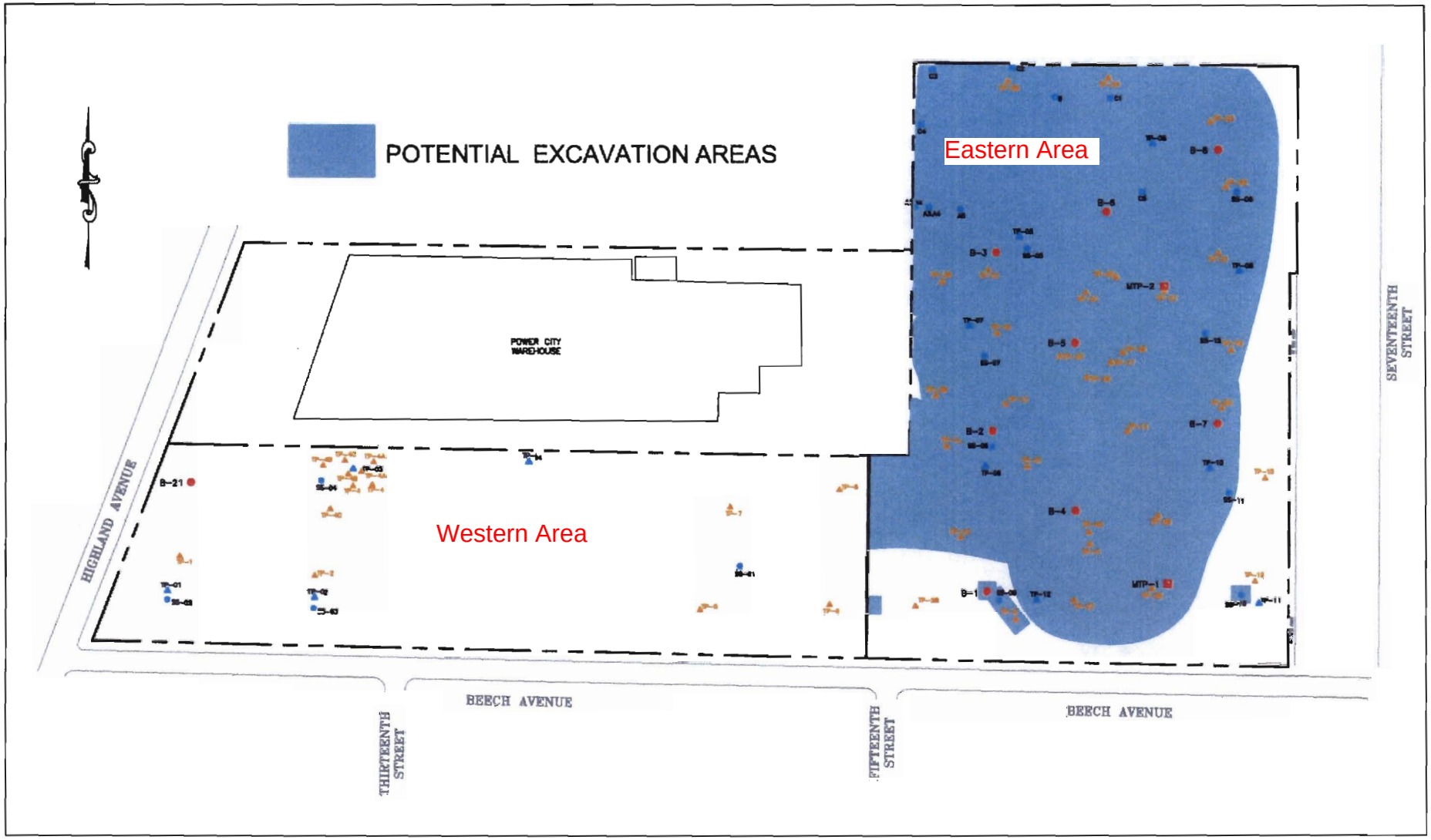
Focused Feasibility Study



Western Area Proposed Excavation Areas

Figure 5

Focused Feasibility Study



Eastern Area Proposed Excavation Areas

Figure 6

PRELIMINARY DEVELOPMENT PLAN:
CONCEPT 1
NOVEMBER 29,2011

0 60 120
Scale in feet