Phase II Environmental Site Assessment

Rufus 2.0 Development
Blocks 14, 19 and 20, Denny Triangle
Seattle, Washington 98101

for
Acorn Development, LLC

June 7, 2012

GeoEngineers
Earth Science + Technology

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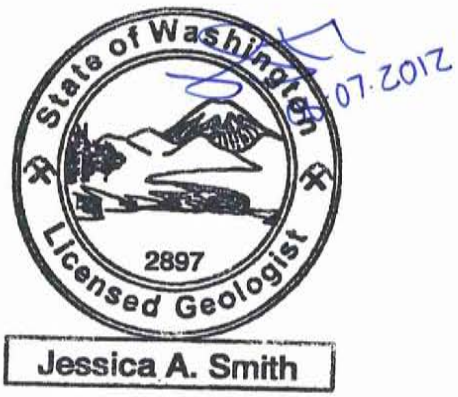

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EXECUTIVE SUMMARY

The objectives of the Phase II Environmental Site Assessment (ESA) services completed at Blocks 14, 19 and 20 in the Denny Triangle neighborhood of Seattle, Washington were to: 1) evaluate the potential vertical and lateral extent of soil contamination associated with the current or past sources of contamination; 2) evaluate impacts to fill soil from an unknown source; and 3) evaluate groundwater conditions in both the deep regional aquifer located at approximately elevation 20 (approximately 65-85 feet below the ground surface) and the shallow perched groundwater that was present at discontinuous shallow locations throughout the project area (10 to 20 feet bgs). Several current and historic potential sources of contamination were identified on and adjacent to the Subject Properties, including current and former auto repair facilities, former gasoline service stations, dry cleaners and undocumented, imported fill soil. In addition to the historic sources of potential contamination, confirmed petroleum contaminated soil and groundwater was identified in studies by others at the location of the former Budget Rent-A-Car facility formerly located in the southeast corner of Block 14.

Eighteen (18) hollow-stem auger borings and thirty-two (32) direct-push borings were completed at the Subject Properties and monitoring wells were installed in 10 of the borings. Soil and groundwater samples were obtained from the borings/monitoring wells for chemical analysis. Based on the geologic information and chemical analytical results obtained during this study we conclude the following regarding the Subject Properties:

- FILL SOIL - Historic research and geologic description of soil samples from our explorations indicates that in the early 1900s, soil was moved from, and onto, the Subject Properties from what was formerly Denny Hill during the Denny Hill Cut and Regrade activities. We estimate that during the regrade activities a significant portion of soil was removed ("cut") from the eastern flank of former Denny Hill which occupied the west portion of Block 19 and northwest quadrant of Block 14. Based on our review of historic maps and topography, some of the soil removed from Denny Hill likely was placed on east portions of Blocks 14 and 19 and on Block 20. It is also possible that additional, undocumented, imported fill was placed on Block 20 to meet current grades. The thickest volume of fill soil (approximately 30 feet which appears to be undocumented import fill) was placed on Block 20. The historic use and undocumented nature of the fill where it has been found to be thickest appears to have a direct relationship to the presence of low levels of contaminants of concern which, although not a regulatory issue, will require special handling and end use management procedures during redevelopment. Figure 12 of this report shows the relationship between fill thickness and soil chemical analytical results.
- CONTAMINATED SOIL – Petroleum, metals and/or PAH-contaminated soil exceeding MTCA cleanup levels is present in the Southeast corner of Block 14 and on the western half of Block 20. Figure 13 of this report shows the areal location of soil with contaminants that exceed MTCA cleanup levels, areas where soil is impacted by chemicals greater than natural background and areas where no contaminants of concern were detected. The findings of this study show that contaminated soil is located in areas where historic sources of contamination and/or imported fill exists.

- **GROUNDWATER** – Contaminants of concern were not detected in any of the groundwater samples obtained from the deep aquifer. Dissolved arsenic was detected in the deep regional aquifer in one monitoring well (MW14-1) on Block 14 at concentrations greater than the MTCA Method A cleanup level. Although the detected concentration is greater than the MTCA Method A cleanup level, it is most likely less than the construction dewatering thresholds and is unlikely to require special handling or treatment during construction activities. Arsenic commonly is detected at concentrations exceeding MTCA cleanup levels in aquifers in the Puget Sound area. In our opinion, this one detection does not represent a threat to human health and/or the environment and should be considered *de minimis*, thus not warranting further action.

This Executive Summary should be used only in the context of the full report for which it is intended.

1.0 INTRODUCTION

This report presents the results of our Phase II Environmental Site Assessment (ESA) completed during 2012 for Blocks 14, 19 and 20 in the Denny Triangle Neighborhood in downtown Seattle, Washington.

- Block 14 is comprised of four adjoining tax parcels (065900-0755, 0860, 0870 and 0880) and is bounded by Lenora Street to the North, 7th Avenue to the East, Virginia Street to the South and 6th Avenue to the West.
- Block 19 is comprised of six adjoining tax parcels (066000-0165, 0176, 0195, 0205, 0215 and 0220) and is bounded by Blanchard Street to the North, 7th Avenue to the East, Lenora Street to the South and 6th Avenue to the West.
- Block 20 is comprised of four adjoining tax parcels (06000-0270, 0275, 0280 and 0320) and is bounded by Blanchard Street to the North, 8th Avenue to the East, Lenora Street to the South and 7th Avenue to the West.

These blocks are referred to herein as the "Subject Properties." The Subject Properties are shown relative to surrounding physical features on the Vicinity Map, Figure 1. The site layout, including site structures, boring locations and cross-section lines are shown on the Site Plan, Figure 2.

In addition to the Phase II ESA, hazardous building materials studies were also completed by our partner, Pacific Rim Environmental (PRE) to provide information about the location and quantity of suspect regulated building materials (asbestos, lead-based paint and universal waste) in the current on site structures on Blocks 14, 19 and 20. The hazardous building materials (HBM) surveys were conducted by an AHERA accredited building inspector. The results of this study are described briefly below and are presented in detail in Appendix A.

Our Phase II ESA services on the Subject Properties were completed in conjunction with our geotechnical engineering services. The results of our geotechnical studies are summarized under separate cover.

2.0 BACKGROUND AND SUMMARY OF PREVIOUS STUDIES

2.1. Previous Environmental Studies and Current or Historic Potential Sources of Contamination

Several environmental studies have been completed on the Subject Properties. Most recently, GeoEngineers completed a Phase I ESA for the Subject Properties. The results of our Phase I ESA study are summarized in our report titled, "Phase I Environmental Site Assessment, Rufus 2.0, Denny Triangle, Blocks 14, 19, 20, 18 and 21, Seattle, Washington," dated June 7, 2012. For a comprehensive description of the current and historic uses of the Subject Properties, as well as a complete list and review of previous studies completed on the Subject Properties please refer to our Phase I ESA report. A brief summary of key environmental findings from the Phase I ESA are described below.

Several current and historic potential sources of contamination were identified on and adjacent to the Subject Properties, including current and former auto repair facilities, former gasoline service stations, dry cleaners and fill soil. These historic uses are shown on Figure 3. We understand based on historic research that in the early 1900s, soil was moved from, and onto, the Subject Properties from what was formerly Denny Hill during the Denny Hill Cut and Regrade activities and that it is likely that imported soil from an unknown source was also placed on portions of Block 14 and Block 20.

In addition to the historic sources of potential contamination, confirmed soil and groundwater contamination has been identified at the location of the former Budget Rent-A-Car facility that was located in the southeast corner of Block 14. Three petroleum underground storage tanks (USTs) were closed in place (pumped, cleaned and filled with a slurry material) in 1993. During the closure activities, gasoline contaminated soil was encountered surrounding three underground storage tanks (USTs). Based on a report prepared by Environmental Associates, Inc. on June 28, 1993 titled, "Preliminary Subsurface Assessment, Budget Rent-A-Car Site, 2001 Westlake Avenue, Seattle, Washington," a remedial excavation was conducted to remove accessible contaminated soil from the vicinity of the USTs, but due to the presence of utilities and the USTs themselves, contaminated soil remained in place following the remedial excavation activities. Based on a study conducted by Terra Associates in 2004-2005, the USTs, contaminated soil and contaminated groundwater is likely still present in a localized area around the USTs. In addition to the three USTs that were closed in place, a fourth UST was installed east of the three closed-in-place USTs in, or around, 1992 and was removed in 2005. The three closed-in-place USTs were still present at the time of the 2005 removal of the fourth UST. Gasoline and benzene, toluene, ethylbenzene and xylenes were not detected in soil samples obtained from the limits of the 2005 removal of the fourth UST.

Our research indicates that there are three USTs located on the eastern portion of Block 20 (at the location of the current Toyota auto sales and service center). We understand that one of the USTs on Block 20 has been removed, but the other two are likely still in place.

The potential contaminants of concern (based on current and historic site use, the presence of unknown fill, and our review of previous environmental reports) for the Subject Properties include the following:

- Gasoline-, diesel- and heavy oil-range petroleum hydrocarbons;
- Metals;
- Polycyclic aromatic hydrocarbons (PAHs); and,
- Volatile organic compounds (VOCs).

The historic sources of potential contamination are shown graphically on Figure 3.

3.0 SCOPE OF SERVICES

The general objectives of the Phase II ESA services described in this report were to 1) evaluate the potential vertical and lateral extent of soil contamination associated with the identified sources of contamination; 2) evaluate fill soil from an unknown source; and 3) evaluate groundwater conditions in both the deep regional aquifer located at approximately elevation 20 (approximately 65-85 feet below the ground surface) and the shallow perched groundwater that was present at discontinuous locations throughout the project area. Our specific scope of services is presented in our proposals dated February 8, 2012 and April 3, 2012. Our general environmental scope of services was as follows:

- Prepared a site-specific health and safety plan for use by GeoEngineers' employees working at the site.
- Prepared Work Plans prior to a two-step exploration program. The first step entailed widely spaced explorations and wells installed into the deep, regional aquifer. The second step entailed explorations located in areas to refine our understanding of the lateral and vertical extent of contamination and to evaluate the shallow perched aquifer.
- Arranged for a utility locate (private and one-call) prior to each of the exploration programs and attended site walks with representatives from Seneca Group, the current property owner (Clise Properties), the subcontracted drilling company and the subcontracted private utility locate company to identify boring locations and coordinate access.
- Observed the completion of a total of 40 borings (18 by hollow-stem auger and 32 by direct-push drilling methods) to depths ranging from approximately 16 to 85 feet below the ground surface (bgs). Ten of the borings were completed as monitoring wells.
- Obtained soil samples at approximately 2.5-foot or 5-foot intervals for field screening and possible chemical analysis. Performed field screening of soil samples for evidence of petroleum and/or VOC-related contamination using visual, water sheen and headspace vapor screening methods using a photoionization detector (PID). Visually classified the soil samples in general accordance with the American Society for Testing and Materials (ASTM) D 2488-00.
- Submitted at least one or two soil samples from each boring for chemical analysis or one or more of the following:
    - Gasoline-range petroleum hydrocarbons using Northwest Method NWTPH-Gx;
    - Diesel- and heavy oil-range petroleum hydrocarbons using Northwest Method NWTPH-Dx;
    - Polychlorinated biphenyls (PCBs) using EPA Method 8082;
    - Resource Conservation and Recovery Act (RCRA) 8 Metals using EPA Methods 6000/7000 Series;
    - Polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270D; and,
    - Volatile organic compounds (VOCs) using EPA Method 8260B.

  Soil samples were submitted for Fremont Analytical (Fremont) in Seattle, Washington. Turnaround times of the soil samples varied based on the drilling and project schedule. In borings where contaminants of concern were detected at concentrations greater than the

MTCA Method A cleanup levels, additional soil samples were submitted to evaluate the vertical extent of soil contamination.

- Measured the depth to water in each of the monitoring wells using an electronic water level indicator. Additionally, four of the five deep wells (MW14-1 and MW20-1 through MW20-3) were installed with AquiStar® PT2X Smart Sensors to provide continuous groundwater measurements over time.
- Obtained groundwater samples from three of the five shallow (MW14-2, MW14-3 and MW20-5) and four of the five deep (MW14-1 and MW20-1 through MW20-3) monitoring wells that contained groundwater at the time of sampling. Groundwater samples were collected using low-flow purging and sampling methods. Groundwater samples were not obtained from two of the five shallow (MW20-4 and MW20-6) and one of the five deep (MW19-1) monitoring wells because they did not contain sufficient water volumes at the time of sampling.
- Submitted each of the groundwater samples for chemical analysis of the following:
  - Gasoline-range petroleum hydrocarbons using Northwest Method NWTPH-Gx;
  - Diesel- and heavy oil-range petroleum hydrocarbons using Northwest Method NWTPH-Dx;
  - Resource Conservation and Recovery Act (RCRA) 8 Metals using EPA Methods 6000/7000 Series;
  - Polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270D; and,
  - Volatile organic compounds (VOCs) using EPA Method 8260B.
- Coordinated and subcontracted hazardous building material studies to provide information about the location and quantity of suspect regulated building materials (asbestos, lead-based paint and universal waste) in the current on site structures on Blocks 14, 19 and 20. Pacific Rim Environmental was subcontracted.
- Evaluated the field and laboratory results relative to MTCA cleanup levels.

4.0 SOIL SAMPLING AND CHEMICAL ANALYTICAL RESULTS

4.1. General

The environmental sampling and testing explorations were completed in two steps:

- Step 1: Soil and groundwater samples were obtained from 18 borings (six on each block) using hollow-stem auger drilling equipment owned and operated by Geologic Drill of Spokane, Washington. These borings were completed between February 20 and 29, 2012. These borings were widely spaced, but were located in order to provide information for geotechnical engineering purposes as well as in areas of known recognized environmental conditions.
- Step 2: The second phase of exploration was completed exclusively to refine our understanding of the environmental condition of the Subject Properties. Soil and groundwater samples were obtained from 32 soil borings using direct-push drill equipment owned and operated by Cascade Drilling of Woodinville, Washington and ESN of Olympia, Washington. These borings were completed between April 9 and 19, 2012.

Discrete soil samples were obtained from the borings at approximately 2.5-foot intervals for field screening and possible chemical analytical testing of one or more of the analytes listed in Section 3.0. Soil samples were selected for chemical analysis based on field screening indications of contamination, the depth and location of the soil sample relative to historic or current sources of contamination, the location of the sample relative to groundwater, and the presence of fill soil from an unknown source. Field screening consisted of visual, headspace and water sheen screening methods. The approximate exploration locations are shown in the attached Site Plan, Figure 2.

4.2. Subsurface Conditions

The subsurface conditions at the Subject Properties are described in detail in our geotechnical report titled, "Geotechnical Master Use Permit Report, Rufus 2.0 Development, Seattle, Washington," dated May 11, 2012.

4.2.1. Subsurface Soil Conditions

Soil encountered at the Subject Properties consists of relatively shallow fill (up to approximately 25 feet) overlying recent deposits and competent glacially consolidated soils.

- The fill generally consists of loose to dense/soft to very stiff silty sand and silt with variable gravel and cobble content and occasional brick, charcoal or wood debris. The thickness of fill encountered in the explorations completed ranged up to approximately 30 feet, with the fill increasing from about 2 feet along the Block 14 and 19 boundaries with 6th Avenue to about 20-30 feet along the Block 14 and 20 boundaries with Westlake and 8th Avenue.
- The recent deposits typically consist of stiff to very stiff silt and clay with occasional sand interbeds and variable gravel content or medium dense to dense sand with variable silt and gravel content. The recent deposits were typically observed below the fill in some of the borings along the eastern portion of Blocks 19 and 14 (7th Avenue boundary) and in the borings completed at Block 20. Where observed, the recent deposits typically ranged in thickness from 4 to 14 feet. Recent deposits were not observed in borings completed along the western portion of Blocks 19 and 14 (6th Avenue boundary).
- The glacially consolidated soils were encountered below the fill and recent deposits, where present. Three glacially consolidated units were encountered in the explorations: cohesive silt and clay, cohesionless sand and gravel, and till-like deposits. Additionally, while not encountered during our drilling activities, occasional cobbles and boulders have been observed in glacially consolidated soils in nearby excavations and may be present at this site.

Interpreted subsurface conditions are presented in the cross-sections shown in Appendix B. These cross-sections were included in our geotechnical report referenced above and the purpose of these cross-sections is to show the detailed interpreted subsurface conditions across the Subject Properties. The additional cross-sections presented in this report (Figures 5 through 11) show just the fill/native contact and the chemical analytical results. The purpose of Figures 5 through 11 is to show the contact between fill and native soils and the chemical analytical results of soil samples tested from these horizons.

4.2.2. Subsurface Groundwater Conditions

Instrumentation Northwest, Inc. (INW) AquiStar® PT2X Smart Sensors were installed in each of the deep monitoring wells completed during our February 2012 hollow-stem auger borings, with the exception of MW19-1. The AquiStar® PT2X Smart Sensors were used to obtain regular measurements of the top of the regional groundwater table in order to evaluate the variability in groundwater levels seasonally and following significant rainfall events. Because of the discontinuous nature of the perched shallow aquifer, no automatic dataloggers were placed in those five wells. Based on the monitoring well data, conditions observed during drilling, and data from monitoring wells in the vicinity, we anticipate that the regional groundwater table is between approximate Elevations 15 and 21 feet. Additionally, based on our explorations, perched groundwater appears to be present at discontinuous locations throughout the project area. The Specification Sheet for the AquiStar® PT2X Smart Sensors is presented in Appendix C.

Exploration field procedures (including field screening methods and boring logs) are described in Appendix C.

4.3. Step 1 Explorations – February 2012 Hollow-Stem Auger Borings and Deep Wells

4.3.1. Purpose and Boring Locations

The purpose of the borings completed in February was to obtain information for geotechnical engineering, preliminary environmental evaluation and to explore deeper, regional, groundwater conditions through the installation of groundwater monitoring wells to depths of approximately 75 to 85 feet below ground surface. Eighteen hollow-stem auger borings were completed to depths ranging between approximately 65 and 85 feet bgs. Five of the borings were completed as deep monitoring wells (generally screened between approximately 65 and 85 feet bgs) to evaluate the potential for contaminants in the regional groundwater aquifer located at approximately Elevation 20. The locations of the borings are shown in the Site Plan, Figure 2 and a graphical depiction of soil samples with concentrations of contaminants is shown in Figure 4. The borings and monitoring wells were generally positioned across each of the blocks, but were targeted to evaluate potential historic sources of contamination based on our review of previous environmental reports and the results of our Phase I ESA.

4.3.2. Soil Chemical Analytical Results

- Block 14 (5 borings and 1 well; 0 locations impacted): Contaminants of concern either were not detected or were detected at concentrations that were similar to the state background metals concentrations[1] in the step 1 borings completed on Block 14. However, although not observed in the one monitoring well boring that we completed at the former Budget Rent-a-Car location, petroleum hydrocarbons at concentrations exceeding MTCA Method A cleanup levels remains in the vicinity of USTs on this block (based on soil sampling/testing by others related to UST assessment activities). This remaining issue warranted follow-up explorations in the southeast portion of this block.

[1] Published in Ecology Publication No. 94-115, "Natural Background Soil Metals Concentrations in Washington State," dated October 1994.

- **Block 19 (5 borings and 1 well; 0 locations impacted):** Contaminants of concern were not detected and/or were similar to the state background metals concentrations[2] in each of the soil samples submitted for chemical analysis from fill and native soil samples obtained on Block 19.
- **Block 20 (3 borings and 3 wells; 3 locations impacted)**: Heavy oil-range petroleum hydrocarbons, lead and carcinogenic PAHs were detected both at concentrations greater than and less than the corresponding MTCA Method A cleanup levels in soil samples obtained from borings MW20-1 (in fill soil from ground surface to approximately 5 feet bgs), B20-3 (in fill and native soil between approximately ground surface and 22.5 feet bgs) and MW20-3 (in fill soil between ground surface and approximately 5 feet bgs). Additionally, gasoline- and diesel-range petroleum hydrocarbons, VOCs and non-carcinogenic PAHs were detected in the same borings at the same depth intervals at concentrations less than the MTCA Method A cleanup levels. Because of the significant amount of fill on this block and the identified contamination in soil, follow-up explorations were warranted across this block.

Fill of varying thickness (between less than 2 feet and approximately 17 feet thick [later revised to 30 feet thick]) was observed in borings completed across the Subject Properties. Imported, undocumented fill soil commonly contains contaminants. Further study was warranted to better understand the fill origin, type, location and thickness across the Subject Properties. Additional evaluation of the fill through historic research and follow-up (Step 2) explorations was completed.

Chemical analytical results are summarized in Tables 1 and 2 and are presented graphically on Figure 4. Laboratory reports are included in Appendix D. Additionally, cross-sections showing the chemical analytical results of discrete soil samples are presented in Figures 5 through 11. Note that these geologic cross sections were simplified to only represent the contact between fill and underlying native soil. Detailed geologic cross sections from our geotechnical report referenced in Section 5.2 above are presented in Appendix B.

4.4. Step 2 Explorations –April 2012 Direct-Push Borings and Shallow Wells

4.4.1. Purpose and Boring Locations

The purpose of the April explorations was to obtain a better understanding of the lateral and vertical extent of contaminants of concern that were identified during the February study and to obtain shallow groundwater samples from perched groundwater that was present at discontinuous locations throughout the project area. Therefore, 32 additional borings using direct-push drilling methods were completed on the Subject Properties in April 2012. Each of the borings was completed to depths ranging between approximately 12 and 25 feet bgs. Five of the borings were completed as shallow monitoring wells (generally screened between approximately 5 and 15-20 feet bgs) to evaluate the potential for contaminants in the perched groundwater that was present at discontinuous locations throughout the project area. The locations of the borings and monitoring wells are shown in the Site Plan, Figure 2 and a graphical depiction of soil samples with concentrations of contaminants is shown in Figure 4.

The locations of the April 2012 borings were chosen based on the current and historic sources of potential contamination on the Subject Properties, the presence of fill, and/or the presence of contaminants identified during the February 2012 drilling activities. Specifically, the rationale for completing additional borings and the locations of the additional boring completed on each block is described in the following bullets.

- **Block 14:** Soil and groundwater contamination (petroleum hydrocarbons, metals and VOCs) was identified at the location of the former Budget Rent-A-Car located in the southeast corner of Block 14 during previous studies. Additionally, further exploration was warranted because up to four USTs (three which were closed-in-place) are still present in this location and there is evidence of a historic laundry located at the southeast corner of this block. Eight borings were completed to depths of approximately 12-20 feet below ground surface (bgs) and two of the borings were completed as shallow monitoring wells to evaluate the potential presence of contaminants in shallow perched groundwater in this location.
- **Block 19:** Fill of varying thickness (between approximately 2 and 17 feet thick) is present across Block 19 and fill soil commonly contains contaminants. Although only metals were detected in fill soil on this block at concentrations around natural background levels, additional exploration was warranted so that conclusions could be made relative to the possible end use of the fill soil that will be excavated during redevelopment on this block. Six borings were completed to depths of approximately 10-20 feet bgs on Block 19 to the approximate fill/native contact to further characterize fill soil.
- **Block 20, Eastern Half:** Contaminant impacted soil (petroleum hydrocarbons, metals, PAHs and VOCs) was identified during the February 2012 borings in the vicinity of the current Toyota Auto Sales and Service Center. Additionally, three current or former USTs are/were located in the vicinity of the current Toyota facility. Eight borings were completed to depths of approximately 20-30 feet on the eastern half of Block 20 and three of the borings were completed as monitoring wells. Additionally, five borings were completed to depths of approximately 16 feet bgs in the 8th Avenue and Blanchard Street rights-of-way to evaluate the potential for off-site contaminant migration.
- **Block 20, Western Half:** Fill of varying thickness (between approximately 5 and 15 feet thick) is present across Block 20. The source(s) of the fill on the Subject Properties are unknown. Five borings were completed to depths of approximately 20 feet bgs on the western half of Block 20 to the fill/native contact to further characterize fill soil.

4.4.2. Soil Chemical Analytical Results

- **Block 14 (8 borings, 2 became wells; 2 locations impacted):** Gasoline-, diesel- and/or heavy oil-range petroleum hydrocarbons were detected at concentrations less than the MTCA Method A cleanup level in B14-8-10 (obtained from fill soil at approximately 10 feet bgs), B14-8-20 (obtained from native soil at approximately 20 feet bgs), B14-10-2.5 (obtained from fill soil at approximately 2.5 feet bgs), and MW14-3-5.0 (obtained from fill soil at approximately 5 feet bgs). VOCs, less than MTCA cleanup levels, also were detected in soil samples from B14-8-10 and -20 and B14-10-2.5.

- **Block 19 (6 borings; 0 locations impacted):** Contaminants of concern (metals, PAHs, VOCs and petroleum hydrocarbons) were not detected and/or were similar to the state background metals concentrations in each of the soil samples submitted for chemical analysis from fill and native soil samples obtained on Block 19.
- **Block 20 (18 borings, 3 became wells; 8 locations impacted):** Lead was detected at a concentration greater than the MTCA Method A cleanup level in B20-13-7.5 (obtained in fill soil at approximately 7.5 feet bgs). Carcinogenic PAHs were detected at concentrations greater than the MTCA Method A cleanup level in MW20-5.0 (obtained in fill soil at approximately 5 feet bgs), and in boring B20-8 (in fill soil between ground surface and approximately 15 feet bgs). Additionally, diesel- and heavy-oil range hydrocarbons and/or PAHs were detected at concentrations less than the MTCA Method A cleanup levels in soil samples obtained from fill soil in MW20-1, MW20-4, MW20-5, B20-4, B20-6, B20-8 and B20-13.

Chemical analytical results from the February and April 2012 subsurface explorations are summarized in Tables 1 and 2 and are presented graphically on Figure 4. Laboratory reports are included in Appendix D. Additionally, cross-sections showing the chemical analytical results of discrete soil samples are presented in Figures 5 through 11.

5.0 GROUNDWATER SAMPLING AND CHEMICAL ANALYTICAL RESULTS

- **February 2012 Findings (Deep, Regional Groundwater Wells):** Monitoring wells completed in February 2012 were completed to monitor the regional groundwater located at approximately elevation 20 (approximately 65-85 feet below the Subject Properties). Contaminants of concern (metals, PAHs, PCBs, VOCs and petroleum hydrocarbons) were not detected in groundwater samples obtained for chemical analysis from the deep groundwater monitoring wells on Blocks 14 and 20 during the February 2012 sampling event, with one exception. Arsenic was detected at a concentration greater than the MTCA Method A cleanup level in monitoring well MW14-1 located on Block 14. A groundwater sample was not obtained from the deep well on Block 19 because the monitoring well did not contain water at the time of sampling.
- **April 2012 Findings (Shallow, Perched Groundwater Wells):** Each of the monitoring wells completed during the April 2012 study were shallow wells set in the perched groundwater zone (upper 20 feet of the soil column) to evaluate the potential presence of perched groundwater and the potential presence of contaminant impacts to the perched groundwater. Five shallow monitoring wells were completed on Blocks 14 and 20 (MW14-2, MW14-3, MW20-4, MW20-5 and MW20-6) and groundwater was present in MW14-2, MW14-3 and MW20-5. Perched groundwater was not observed on Block 19 and no contaminants of concern were identified on Block 19, therefore shallow perched monitoring wells were not warranted on this Block. Petroleum hydrocarbons were not detected in the shallow groundwater monitoring wells. PAHs and VOCs were not detected in the groundwater monitoring wells located on Block 20, but were detected at concentrations less than the MTCA cleanup levels in wells, MW14-2 and MW14-3, located on Block 14. As is common in the Puget Sound region where shallow wells are installed to test perched groundwater, metals were detected at concentrations less than the MTCA Method A cleanup level in each of the groundwater samples obtained and tested from Blocks 14 and 20.

Chemical analytical results from the February and April 2012 subsurface explorations are summarized in Table 3. Laboratory reports are included in Appendix D.

6.0 HAZARDOUS BUILDING MATERIALS SURVEYS

Hazardous building materials surveys were conducted by GeoEngineers subconsultant, Pacific Rim Environmental (PRE) on each of the buildings on Blocks 14, 19 and 20.

- Block 14 is currently occupied by the 6th Avenue Inn and parking lot (2000 6th Avenue). The 6th Avenue Inn is an approximately 68,000 square-foot 5-story reinforced concrete motel and restaurant that was constructed in 1958.
- Block 19 is currently occupied two buildings: 1) the King Cat Theater and parking lot (2130 6th Avenue), which is an approximately 14,400 square-feet 2-story reinforced concrete theater that was constructed in 1973; and 2) a 1-story commercial office building that is approximately 10,980 square-feet and was constructed in 1951.
- Block 20 is currently occupied by three buildings, all associated with Toyota of Seattle car dealership. Building 1 (2112 8th Avenue) is the approximately 15,570 square-foot 1-story Toyota of Seattle sales building that was constructed in 1962. Building 2 (2101 8th Avenue) is the approximately 3,600 square-foot 1-story service center that was constructed in 1966. Building 3 (2100 7th Avenue) is the approximately 224 square-foot 1-story attendant building.

Hazardous building materials requiring abatement were identified in all of the buildings on Blocks 14, 19 and 20. PRE's Regulated Building Materials Survey Reports for each building on Blocks 14, 19 and 20 are included in Appendix A.

7.0 SUMMARY OF FINDINGS

Based on the historical research, geologic and hydrogeologic evaluation and chemical analytical testing that we completed for the Subject Properties, our report conclusions can be divided into three issues: 1) fill soil (focused primarily on unknowns related to undocumented, imported fill); 2) soil with contaminants that exceeds MTCA cleanup levels; and 3) groundwater (both discontinuous, shallow perched water and the deeper, regional aquifer). Fill soil has been shown to have been impacted at concentrations greater then natural background. Contaminated soil exceeding MTCA cleanup levels exists at two locations (the former Budget Rent-A-Car location in the southeast corner of Block 14 and on the east half of Block 20 [the Toyota block]). Groundwater (perched and deep) has not been impacted at concentrations warranting any further action. Details of each of these issues is presented below:

7.1. Fill Soil

We understand based on historic research that in the early 1900s, soil was moved from, and onto, the Subject Properties from what was formerly Denny Hill during the Denny Hill Cut and Regrade activities. Fill soil is present on each of the Subject Properties at depths ranging from 2 to approximately 30 feet below the ground surface. Figure 12 shows the estimated fill thicknesses across the Subject Properties (based on the February and April 2012 subsurface explorations) in relation to the current elevations and chemical analytical results of soil samples tested from fill

soil. Based on the information presented in Figure 12, we estimate that during the regrade activities a significant portion of soil was removed ("cut") from the eastern flank of former Denny Hill which occupied the west portion of Block 19 and northwest quadrant of Block 14. Based on our review of historic maps and topography, some of the soil removed from Denny Hill likely was placed on east portions of Blocks 14 and 19 and on Block 20. It also appears likely that additional, undocumented, imported fill was placed on Block 20 to meet current grades. The explorations and geologic analysis that we completed indicate that between 10 to 30 feet of fill soil was placed on the majority of Block 14, approximately the eastern half of Block 19 and all of Block 20. The thickest volume of fill soil (approximately 30 feet) was placed on Block 20. As shown in Figure 12, contaminants of concern are present where: (a) historic sources of contamination existed (for example Budget Rent-A-Car USTs and historic and existing auto service activities at Toyota) and (b) at locations where undocumented, imported fill was placed (primarily Block 20). These data and information are significant related to our interpretation of fill history and the presence, if any, of contaminants of concern and how to manage soil excavation and end use during property redevelopment.

Based on this study and these objectives, GeoEngineers divided the Subject Properties into three groups. The three groups are shown graphically on Figure 13 and are listed below in order of decreasing effort and cost for soil end use:

1. **Blue Areas**: Areas with identified, or previously known, contaminated soil that exceeds the Model Toxics Control Act (MTCA) cleanup levels; this category requires remedial action, regulatory involvement and reporting (see Section 8.2 for more detail on "contaminated soil";
2. **Yellow Areas:** Fill with contaminants of concern detected less than MTCA cleanup levels and/or above natural background levels, generally contains some brick, concrete and/or wood debris and, based on our historical research, most likely consists of undocumented, imported fill. This fill may pose an environmental risk during development from the perspective of end use and/or disposition of this fill; this category is a construction management and disposal issue but does not require regulatory involvement or reporting; and,
3. **Green Areas:** Fill with contaminants of concern not detected and similar to background levels, does not contain brick, concrete and/or wood debris and was most likely placed during the Denny Hill Regrade (does not consist of undocumented, imported fill). This fill likely will not pose an environmental risk during development from the perspective of end use and/or disposition of this fill; this category is assumed to represent soil that can be managed under routine construction methods for an uncontaminated development project. However, caution should be used to assure that recipients of this soil will accept it based on their review of existing chemical analytical results. We also note that it is possible that isolated location of undocumented, imported fill exists in these areas in locations of utility trenches or other construction that has taken place since the Denny Hill Regrade activities.

7.2. Contaminated Soil

Petroleum, metals and/or PAH-contaminated soil exceeding MTCA cleanup levels is present in the Southeast corner of Block 14 (former Budget Rent-A-Car) and on the western half of Block 20 (Toyota). Figure 13 of this report shows the areal location of soil with contaminants that exceed MTCA cleanup levels. The findings of this study show that contaminated soil is located in areas where historic sources of contamination and/or imported fill exist. Contaminated soil exceeding MTCA cleanup levels was not found in areas where Denny Hill used to be located, nor was contaminated soil found in areas extending to the borings that we completed off-property to the east and north of Block 20.

7.3. Groundwater

Contaminants of concern were not detected in any of the groundwater samples obtained from the deep aquifer. Dissolved arsenic was detected in the deep regional aquifer in one monitoring well (MW14-1) on Block 14 at concentrations greater than the MTCA Method A cleanup level. Although the detected concentration is greater than the MTCA Method A cleanup level, it is most likely less than the construction dewatering thresholds and is unlikely to require special handling or treatment during construction activities. Arsenic commonly is detected at concentrations exceeding MTCA cleanup levels in aquifers in the Puget Sound area. In our opinion, this one detection does not represent a threat to human health and/or the environment and should be considered *de minimis*, thus not warranting further action.

8.0 LIMITATIONS

We have prepared this report for the exclusive use of the Acorn Development, LLC and their authorized agents. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to Appendix E, titled "Report Limitations and Guidelines for Use," for additional information pertaining to use of this report.

TABLES

GeoEngineers

Table 1

Soil Field Screening and Chemical Analytical Data (Petroleum Hydrocarbons, PCBs and Metals)

Project Rufus 2.0

Blocks 14, 19 and 20, Denny Triangle, Seattle, Washington

GeoEngineers File No. 20434-001-02

Exploration Location[1]	Sample ID	Depth (feet bgs)	Location of Sample Relative to Fill/Native Soil and Groundwater	Field Screening[2]		Petroleum Hydrocarbons (mg/kg)			PCBs (mg/kg)	RCRA 8 Metals[6] (mg/kg)							
				Sheen	Headspace (ppm)	Gasoline Range[3]	Diesel Range[4]	Heavy Oil Range[4]		Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
Block 14																	
Hollow-Stem Auger Borings Completed February 20 through 29, 2012																	
MW14-1	MW14-1-7.5	7.5	Fill	ns	<1	<4.35	<17.9	<44.8	<0.103	**2.17**	**56.5**	<0.154	**27.8**	**2.61**	<0.385	<0.0769	<0.250
	MW14-1-70	70	Native - Adjacent to Groundwater	ns	<1	<4.45	<18.2	<45.6	--	--	--	--	--	--	--	--	--
B14-1	B14-1-7.5	7.5	Native	ns	<1	<6.99	<23.5	<58.7	--	**3.79**	**197**	**0.228**	**58.7**	**7.36**	<0.513	<0.103	<0.322
	B14-1-15.0	15	Native	ns	<1	<7.60	<23.5	<58.7	--	**5.04**	**185**	**0.349**	**58.3**	**7.56**	<0.505	<0.101	<0.318
	B14-1-75.0	75	Native - Adjacent to Groundwater	ns	<1	<5.73	<20.9	<52.4	--	--	--	--	--	--	--	--	--
B14-2	B14-2-7.5	7.5	Fill	ns	<1	<5.85	<19.7	<49.4	--	**17**	**79.2**	<0.172	**27.1**	**6.42**	<0.430	<0.0860	<0.268
	B14-2-17.5	17.5	Native	ns	<1	<7.00	<23.7	<59.3	--	**3.44**	**143**	**0.203**	**51.3**	**5.57**	<0.485	<0.0969	<0.0327
B14-3	B14-3-7.5	7.5	Native	ns	<1	<8.36	<24.7	<61.7	--	**5.7**	**181**	**0.341**	**88**	**7.39**	<0.557	<0.111	<0.302
	B14-3-15.0	15	Native	ns	<1	<5.83	<23.7	<59.3	--	**5.3**	**170**	**0.336**	**77.1**	**6.48**	<0.492	<0.0984	<0.296
B14-4	B14-4-7.5	7.5	Fill	ns	<1	<4.92	<20.3	<50.9	<0.112	**6.54**	**105**	<0.181	**34.3**	**2.9**	<0.453	<0.0906	<0.228
	B14-4-17.5	17.5	Native	ns	<1	<6.11	<23.0	<57.6	--	**4.01**	**131**	<0.214	**46**	**13.7**	<0.535	<0.107	<0.257
B14-5	B14-5-7.5	7.5	Native	ns	<1	<6.44	<20.9	<52.1	--	**4.59**	**89.5**	**0.209**	**37.3**	**3.56**	<0.445	<0.0889	<0.278
	B14-5-15.0	15	Native	ns	<1	<7.04	<23.8	<59.6	--	**4.84**	**204**	**0.234**	**63.1**	**8.32**	<.469	<0.0937	<0.307
Direct-Push Borings Completed April 9 through 19, 2012																	
MW14-2	MW14-2-5.0	5	Fill	ns	<1	<4.81	<20.5	<51.4	--	**5.8**	**131**	<0.180	**82.6**	**5.7**	<0.450	<0.0900	<0.242
MW14-3	MW-14-3-5.0	5	Fill	ns	<1	<5.52	<23.8	**164**	--	**4.76**	**136**	**0.461**	**47.5**	**128**	<0.438	**0.0997**	<0.277
B14-6	B14-6-7.5	7.5	Fill	ss	<1	<5.93	<25.4	**98.7**	--	**6.68**	**179**	**0.651**	**60**	**186**	<0.544	**0.18**	<0.280
B14-7	B14-7-5.0	5	Fill	ns	<1	<4.76	<20.2	<50.4	--	**6**	**142**	<0.178	**60.7**	**4.77**	<0.445	<0.0889	<0.244
B14-8	B14-8-7.5	7.5	Fill	ss	<1	<4.27	<20.9	<52.3	--	**6.32**	**93.4**	**0.185**	**39.2**	**4.01**	<0.434	<0.0869	<0.246
	B14-8-10	10	Fill	hs	840	**170**	**141**	<57.1	--	**4.96**	**76.9**	<0.181	**42.2**	**4.17**	<0.454	<0.0907	<0.269
	B14-8-20.0	20	Native	ns	<1	**18**	<22.6	<56.4	--	**5.38**	**155**	**0.263**	**83**	**7.57**	<0.479	<0.0958	<0.313
B14-9	B14-9-7.5	7.5	Fill	ns	<1	<4.73	<21.2	<53.0	--	**7.87**	**91.6**	<0.178	**43**	**4.06**	<0.445	<0.0889	<0.286
B14-10	B14-10-2.5	2.5	Fill	ss	<1	**48.7**	**42.2**	**103**	--	**7.17**	**167**	**0.338**	**55.6**	**47.8**	<0.458	**0.144**	**0.601**
	B14-10-5.0	5	Fill	NS	<1	<5.84	<23.1	<57.7	--	**5.42**	**212**	<0.199	**86.8**	**6.22**	<0.499	<0.0997	<0.257
B14-11	B14-11-2.5	2.5	Fill	ss	<1	<5.27	<22.9	<57.2	--	**9.73**	**157**	**0.548**	**55.6**	**101**	<0.495	**0.126**	<0.242

Exploration Location[1]	Sample ID	Depth (feet bgs)	Location of Sample Relative to Fill/Native Soil and Groundwater	Field Screening[2]		Petroleum Hydrocarbons (mg/kg)			PCBs (mg/kg)	RCRA 8 Metals[6] (mg/kg)							
				Sheen	Headspace (ppm)	Gasoline Range[3]	Diesel Range[4]	Heavy Oil Range[4]		Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
Block 19																	
Hollow-Stem Auger Borings Completed February 20 through 29, 2012																	
MW19-1	MW19-1-7.5	7.5	Native	ns	<1	<6.25	<23.5	<58.8	--	**6.76**	**196**	**0.321**	**108** [9]	**8.37**	<0.497	**0.107**	<0.297
	MW19-1-15.0	15	Native	ns	<1	<6.74	<24.0	<60.1	--	**6.28**	**163**	**0.399**	**91.5**	**7.02**	<5.03	<0.101	<0.290
B19-1	B19-1-5.0	5.0	Fill	ns	<1	<6.16	<22.3	<55.8	<0.111	**5.27**	**139**	<0.184	**40.2**	**5.79**	<0.461	<0.0921	<0.259
	B19-1-15.0	15	Fill	ns	<1	<5.59	<20.8	<52.1	<0.106	**6.72**	**113**	<0.194	**36.9**	**4.41**	<0.486	<0.0972	<0.279
B19-2	B19-2-7.5	7.5	Native	ns	<1	<6.85	<23.4	<58.6	<0.0112	**3.96**	**143**	**0.337**	**49.5**	**5.70**	<0.522	<0.104	<0.286
	B19-2-15.0	15	Native	ns	<1	<6.61	<22.0	<55.0	--	**4.78**	**167**	**0.304**	**58.7**	**7.46**	<0.494	<0.0988	<0.316
B19-3	B19-3-7.5	7.5	Native	ns	<1	<6.09	<22.6	<56.5	<0.107	**4.07**	**95.8**	**0.218**	**42.1**	**4.29**	<0.491	<0.0981	<0.275
	B19-3-15.0	15	Native	ns	<1	<5.90	<22.3	<55.7	--	**4.36**	**153**	**0.240**	**51.7**	**6.35**	<0.518	<0.104	<0.311
B19-4	B19-4-7.5	7.5	Native	ns	<1	<5.40	<20.8	<52.0	--	**7.49**	**89.7**	**0.333**	**64.2**	**4.47**	<0.435	<0.0869	<0.268
	B19-4-15.0	15	Native	ns	<1	<6.38	<22.2	<55.6	--	**4.46**	**168**	**0.422**	**101**	**7.67**	<0.438	**0.0931**	<0.294
B19-5	B19-5-7.5	7.5	Native	ns	<1	<6.48	<22.4	<55.9	--	**4.56**	**132**	**0.288**	**60.6**	**5.37**	<0.490	<0.0979	<0.319
	B19-5-15.0	15	Native	ns	<1	<5.89	<23.1	<57.8	--	**4.05**	**132**	**0.343**	**70.3**	**5.66**	<0.464	<0.0927	<0.300
	B19-5-70	70	Native - Adjacent to Groundwater	ns	<1	<4.64	<19.1	<47.8	--	--	--	--	--	--	--	--	--
Direct-Push Borings Completed April 9 through 19, 2012																	
B19-6	B19-6-5.0	5	Fill	ns	<1	<6.50	<17.7	<44.3	--	**4.01**	**155**	**0.267**	**71.8**	**5.58**	<0.536	<0.107	<0.309
B19-7	B19-7-10.0	10	Fill	ns	<1	<6.46	<21.0	<52.4	--	**7.29**	**166**	**0.250**	**100**	**7.09**	<0.485	<0.0969	<0.311
B19-8	B19-8-7.5	7.5	Fill	ns	<1	<4.77	<16.8	<42.1	--	**5.73**	**93.5**	**0.190**	**46.7**	**3.27**	<0.376	<0.0752	<0.262
B19-9	B19-9-5.0	5	Fill	ns	<1	<6.99	<23.5	<58.9	--	**5.19**	**184**	**0.286**	**86.2**	**7.44**	<0.528	<0.106	<0.304
B19-10	B19-10-7.5	7.5	Fill	ns	<1	<6.57	<21.6	<54.0	--	**4.97**	**171**	**0.302**	**74.4**	**6.14**	<0.492	<0.0984	<0.261
B19-11	B19-11-2.5	2.5	Fill	ns	<1	<5.99	<18.5	<46.3	--	**3.96**	**75.6**	**0.285**	**46.6**	**7.4**	<0.444	<0.0888	<0.263

Exploration Location[1]	Sample ID	Depth (feet bgs)	Location of Sample Relative to Fill/Native Soil and Groundwater	Field Screening[2]		Petroleum Hydrocarbons (mg/kg)			PCBs (mg/kg)	RCRA 8 Metals[6] (mg/kg)							
				Sheen	Headspace (ppm)	Gasoline Range[3]	Diesel Range[4]	Heavy Oil Range[4]		Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
Block 20																	
Hollow-Stem Auger Borings Completed February 20 through 29, 2012																	
MW20-1	MW20-1-2.5	2.5	Fill	ns	<1	<4.23	<17.9	**130**	<0.102	**4.28**	**231**	**0.377**	**25.5**	**49.7**	<0.421	**0.0998**	<0.268
	MW20-1-5.0	5	Fill	ns	<1	--	<18.9	<47.2	--	**--**	**--**	**--**	**--**	**--**	--	**--**	--
	MW20-1-12.5	12.5	Fill	ns	<1	<4.47	<18.6	<46.5	--	**2.06**	**45.7**	<0.163	**25.8**	**2.26**	<0.408	<0.0815	<0.250
	MW20-1-70.0	70	Native - Adjacent to Groundwater	ns	<1	<5.27	<18.7	<46.8	--	--	--	--	--	--	--	--	--
MW20-2	MW20-2-5.0	5	Fill	ns	<1	<6.33	<26.5	66.3	--	**6.57**	**218**	<0.192	**67.4**	**9.63**	<0.480	<0.0959	<0.272
	MW20-2-15.0	15	Native	ns	<1	<6.85	<23.4	<58.5	--	**4.06**	**134**	**0.238**	**51**	**5.89**	<0.485	<0.0970	<0.272
MW20-3	MW20-3-2.5	2.5	Fill	ns	<1	--	<19.5	**74.5**	--	--	--	--	--	--	--	--	--
	MW20-3-5.0	5	Fill	ns	<1	<3.86	<17.7	**346**	<0.107	**3.74**	**70**	**0.22**	**23.8**	**27.9**	<0.385	<0.0769	<0.225
	MW20-3-7.5	7.5	Fill	ns	<1	--	<18.5	<46.2	--	**--**	**--**	**--**	**--**	**--**	--	--	--
	MW20-3-15.0	15	Native	ns	<1	<6.17	<18.1	<45.4	<0.100	**1.49**	**56.7**	<0.164	**22.5**	**1.69**	<0.410	<0.0819	<0.233
B20-1	B20-1-5.0	5	Fill	ss	<1	<4.38	<21.4	<53.4	--	**2.26**	**57.5**	<0.517	**23.2**	**3.82**	<0.392	<0.0784	<0.256
	B20-1-12.5	12.5	Fill	ns	<1	<4.84	<21.9	<54.8	--	**4.37**	**68.4**	<0.173	**28.3**	**3.1**	<0.433	<0.0865	<0.258
B20-2	B20-2-2.5	2.5	Fill	ns	<1	<4.59	<18.9	<45.9	<0.108	**5.28**	**103**	**0.337**	**31.3**	**113**	<0.386	**0.126**	<0.252
	B20-2-40.0	40	Native - Adjacent to Groundwater	ns	<1	<4.76	<20.2	<50.6	--	--	--	--	--	--	--	--	--
B20-3	B20-3-7.5	7.5	Fill	ns	<1	--	<21.1	**1,570**	--	--	--	--	--	--	--	--	--
	B20-3-10.0	10	Fill	ms	<1	**28.9**	<21.7	**266**	<0.111	**5.79**	**207**	**2.04**	**33.3**	**471**	<0.433	**0.115**	<0.242
	B20-3-12.5	12.5	Fill	ss	<1	**--**	**39.5**	**305**	--	**--**	**--**	**--**	**--**	**--**	--	**--**	--
	B20-3-15.0	15	Fill	ns	<1	**--**	<23.8	**1,610**	--	**--**	**--**	**--**	**--**	**--**	--	**--**	--
	B20-3-20.0	20	Native	ss	<1	**46.2**	**74.4**	**2,780**	<0.102	**2.67**	**59.2**	**0.181**	**23.7**	**6.01**	<0.452	<0.0904	<0.281
	B20-3-22.5	22.5	Native	ss	<1	**--**	<20.2	**85.4**	--	**--**	**--**	**--**	**--**	**--**	--	--	--
	B20-3-25.0	25	Native	ns	<1	**--**	<17.9	<44.8	--	**--**	**--**	**--**	**--**	**--**	--	--	--
	B20-3-50.0	50	Native - Adjacent to Groundwater	ns	<1	<5.00	<19.7	<49.1	--	--	--	--	--	--	--	--	--
Direct-Push Borings Completed April 9 through 19, 2012																	
MW20-4	MW20-4-7.5	7.5	Fill	ss	<1	<4.18	<20.1	**127**	--	**2.44**	**49.2**	<0.179	**23.6**	**34.6**	<0.447	<0.0893	<0.230
	MW20-4-12.5	12.5	Fill	ss	<1	<3.64	<21.5	<53.8	--	--	--	--	--	--	--	--	--
	MW20-4-17.5	17.5	Fill	ns	<1	<4.83	<22.7	<56.9	--	**5.85**	**114**	<0.204	**49.1**	**4.33**	<0.510	<0.102	<0.297
	MW20-4-22.5	22.5	Fill	ms	<1	<5.45	<21.7	**196**	--	--	--	--	--	--	--	--	--
MW20-5	MW20-5-5.0	5	Fill	ns	<1	<6.57	**75.5**	<52.2	--	**9.28**	**469**	**1.01**	**35.1**	**524**	<0.487	**0.492**	**1.65**
	MW20-5-15.0	15	Fill	ns	<1	<5.20	<20.9	<52.2	--	--	--	--	--	--	--	--	--
MW20-6	MW20-6-5.0	5	Fill	ns	<1	<4.55	<18.2	<45.5	--	**2.34**	**49.4**	**0.159**	**19.1**	**10.8**	<0.349	**0.246**	<0.243
B20-4	B20-4-5.0	5	Fill	ns	<1	<4.66	<18.6	<46.4	--	**2.39**	**70.9**	**0.172**	**32.6**	**3.11**	<0.410	<0.0819	<0.230
	B20-4-12.5	12.5	Fill	ns	<1	<4.89	<13.7	**103**	--	**4.06**	**114**	**0.303**	**39.3**	**73.3**	<0.406	**0.0917**	<0.273

Exploration Location[1]	Sample ID	Depth (feet bgs)	Location of Sample Relative to Fill/Native Soil and Groundwater	Field Screening[2]		Petroleum Hydrocarbons (mg/kg)			PCBs (mg/kg)	RCRA 8 Metals[6] (mg/kg)							
				Sheen	Headspace (ppm)	Gasoline Range[3]	Diesel Range[4]	Heavy Oil Range[4]		Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
B20-5	B20-5-10.0	10	Fill	ns	<1	<4.37	<19.3	<48.2	--	**4.49**	**108**	**0.251**	**48.5**	**18.4**	<0.375	<0.0751	<0.226
	B20-5-20.0	20	Native	ns	<1	<5.65	<18.6	<46.4	--	--	--	--	--	--	--	--	--
B20-6	B20-6-10.0	10	Fill	ns	<1	<6.95	<23.0	<57.5	--	**8.50**	**291**	**0.359**	**94.5**	**191**	<0.527	<0.105	**1.86**
	B20-6-20.0	20	Native	ns	<1	<5.22	<14.6	<36.5	--	--	--	--	--	--	--	--	--
B20-7	B20-7-7.5	7.5	Fill	ns	<1	<6.19	<21.4	<53.6	--	**6.32**	**122**	**0.201**	**54.9**	**4.48**	<0.465	<0.0931	<0.248
	B20-7-15.0	15	Fill	ns	<1	<5.16	<15.2	<38.1	--	**2.78**	**64.5**	<0.161	**44.1**	**2.31**	<0.402	<0.0805	<0.207
B20-8	B20-8-5.0	5	Fill	ss	<1	<4.25	<15.1	<37.9	--	**3.08**	**70.0**	**0.285**	**28.0**	**83.3**	<0.377	<0.0755	<0.204
	B20-8-15.0	15	Fill	ns	<1	<4.59	<15.8	**771**	--	**3.88**	**51.5**	**0.191**	**19.5**	**29.4**	<0.424	<0.0848	<0.259
B20-9	B20-9-5.0	5	Fill	ns	<1	<4.49	<18.9	<47.2	--	**2.66**	**53.4**	**0.154**	**22.1**	**4.76**	<0.349	<0.0698	<0.234
B20-10	B20-10-7.5	7.5	Fill	ns	<1	<5.19	<22.1	<55.1	--	**13**	**147**	**0.209**	**38.4**	**4.99**	<4.34	<0.0868	<0.242
B20-11	B20-11-5.0	5	Fill	ns	<1	<5.00	<22.3	<55.7	--	**7.74**	**129**	**0.454**	**29.2**	**46.8**	<0.373	<0.0746	<0.211
B20-12	B20-12-7.5	7.5	Fill	ns	<1	<4.50	<21.4	<53.6	--	**4.03**	**76.1**	**0.262**	**22.7**	**21.9**	<0.418	<0.0837	<0.206
B20-13	B20-13-7.5	7.5	Fill	ns	<1	<5.28	<18.8	**195**	--	**5.84**	**294**	**1.22**	**31.1**	**421**	<0.401	**0.161**	**0.355**
B20-14	B20-14-7.5	7.5	Fill	ns	<1	<6.14	<23.4	<58.5	--	**4.2**	**83.1**	<0.165	**36**	**4.35**	<0.413	<0.0826	<0.282
	B20-14-12.5	12.5	Fill	ns	<1	<4.65	<22.2	<55.4	--	**1.34**	**53**	<0.165	**26.6**	**2.02**	<0.413	<0.0826	<0.275
B20-15	B20-15-5.0	5	Fill	ns	<1	<4.83	<22.0	<55.0	--	**3.47**	**83.4**	<0.162	**32.4**	**3.11**	<0.404	<0.0808	<0.281
	B20-15-15.0	15	Fill	ns	<1	<4.55	<21.2	<53.0	--	**2.84**	**66.9**	**0.171**	**38.8**	**10.9**	<0.419	<0.0839	<0.210
B20-16	B20-16-10.0	10	Fill	ns	<1	<5.93	<24.4	<61.0	--	**4.87**	**157**	**0.273**	**50.7**	**6.62**	<0.518	<0.104	<0.0298
	B20-16-15.0	15	Fill	ns	<1	<6.90	<22.7	<56.7	--	**6.19**	**95.2**	<0.179	**38.3**	**3.6**	<0.447	<0.0894	<0.305
B20-17	B20-17-10.0	10	Fill	ns	<1	<6.22	<20.8	<51.9	--	**4.08**	**95**	<0.180	**37**	**6.74**	<0.451	<0.0901	<0.232
	B20-17-15.0	15	Native	ns	<1	<5.72	<22.3	<55.8	--	**4.73**	**121**	<0.177	**51.5**	**5.57**	<0.442	<0.0883	<0.288
B20-18	B20-18-7.5	7.5	Fill	ns	<1	<7.11	<24.5	<61.2	--	**6.68**	**159**	**0.238**	**50.7**	**8.85**	<0.470	<0.0941	<0.278
	B20-18-15.0	15	Fill	ns	<1	<6.26	<23.4	<58.5	--	**8**	**185**	<0.185	**64.9**	**8.51**	<0.463	<0.0927	<0.288
MTCA Method A or B Cleanup Level for Unrestricted Land Use						30/100[7]	2,000	2,000	1	20	16,000	2	2,000[8]	250	400	400	2
Natural Bacground Soil Metals Concentrations in the Puget Sound						--	--	--	--	7	ne	1	48	24	ns	ne	0.07

Notes:

[1]Approximate exploration locations shown on the attached figure. Chemical analytical testing by Fremont Analytical in Seattle, Washington. Samples were obtained between February 20 and 29, 2012.

[2]Field screening methods are described in Appendix B.

[3]Gasoline-range hydrocarbons analyzed by petroleum hydrocarbon identification using Northwest Method NWTPH-HCID.

[4]Diesel- and heavy oil-range hydrocarbons analyzed by Northwest Method NWTPH-Dx Extended with a silica gel cleanup or petroleum hydrocarbon identification using Northwest Method NWTPH-HCID.

[5]Volatile organic compounds (VOCs) and benzene (B), ethylbenzene (E), toluene (T) and total xylenes (X) analyzed by EPA Method 8260B. For VOCs, only detected compounds are presented in the table. See the laboratory report for the full list of compounds analyzed and detection limits.

[6]Total metals analyzed by EPA 6010B/7471A.

[7]When benzene is present, the gasoline range cleanup level is 30 mg/kg. When benzene is not present the gasoline range cleanup level is 100 mg/kg.

[8]Cleanup level for Chromium III. Chromium in sample MW19-1-7.5 was speciated and determined to not be hexavalent chromium (chromium VI). The published Background Soil Metals Concentration for Chromium is 42 mg/kg.

[9]The chromium detected in this sample was also submitted for Chromium Speciation using EPA Method 7196. Hexavalent Chromium (Chromium VI) was not detected (less than 0.680 mg/kg) in this soil sample.

mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
ns = no sheen, ss = slight sheen, ms = moderate sheen
Bolding indicates analyte was detected.

bgs = below ground surface
-- = not tested
ne = not established

sp/2043400102/Block14,19and20Tables.xlsx

Table 2

Chemical Analytical Data (PAHs and VOCs)

Project Rufus 2.0

Blocks 14, 19 and 20, Denny Triangle, Seattle, Washington

GeoEngineers File No. 20434-001-02

Exploration Location[1]	Sample ID	Depth (feet bgs)	Non-Carcinogenic PAHs[3] (µg/kg)											Total cPAHs[4] (µg/kg)	VOCs (mg/kg)											
			Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(g,h,i)perylene	TEQ	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	n-Porpylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	4-Isopropyltoluene	n-Butylbenzene	1,2-Dichlorobenzene	1,2,4-Trimethylbenzene	Naphthalene
Block 14																										
Hollow-Stem Auger Borings Completed February 20 through 29, 2012																										
MW14-1	MW14-1-7.5	7.5	<53.2	<53.2	<53.2	<53.2	<53.2	<53.2	<53.2	<53.2	<53.2	<53.2	<53.2	nd	<0.0190	<0.0284	<0.0190	<0.0190	0.0709	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0284
	MW14-1-70	70	--	--	--	--	--	--	--	--	--	--	--	--	<0.0166	<0.0249	<0.0166	<0.0166	<0.0166	<0.0166	<0.0166	<0.0166	<0.0136	<0.0136	<0.0166	<0.0204
MW14-2	MW14-2-5.0	5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0190	<0.0285	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0285
MW14-3	MW14-3-5.0	5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0173	<0.0260	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<0.0260
B14-1	B14-1-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	B14-1-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	B14-1-75.0	75	--	--	--	--	--	--	--	--	--	--	--	--	<0.0212	<0.0318	<0.0212	<0.0212	<0.0212	<0.0212	<0.0212	<0.0212	<0.0212	<0.0212	<0.0212	<0.0318
B14-2	B14-2-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	B14-2-17.5	17.5	<68.5	<68.5	<68.5	<68.5	<68.5	<68.5	<68.5	<68.5	<68.5	<68.5	<68.5	nd	<0.0246	<0.0269	<0.0246	<0.0246	<0.0246	<0.0246	<0.0246	<0.0246	<0.0264	<0.0264	<0.0246	<0.0396
B14-3	B14-3-7.5	7.5	<73.2	<73.2	<73.2	<73.2	<73.2	<73.2	<73.2	<73.2	<73.2	<73.2	<73.2	nd	<0.0353	<0.0530	<0.0353	<0.0353	<0.0353	<0.0353	<0.0353	<0.0353	<0.0353	<0.0353	<0.0353	<0.0530
	B14-3-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B14-4	B14-4-7.5	7.5	<57.4	<57.4	<57.4	<57.4	<57.4	<57.4	<57.4	<57.4	<57.4	<57.4	<57.4	nd	<0.0196	<0.0294	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0294
	B14-4-17.5	17.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B14-5	B14-5-7.5	7.5	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	nd	<0.0228	<0.0342	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0206	<0.0206	<0.0228	<0.0309
	B14-5-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Direct-Push Borings Completed April 9 through 19, 2012																										
B14-6	B14-6-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0235	<0.0352	<0.0235	<0.0235	<0.0235	<0.0235	<0.0235	<0.0235	<0.0235	<0.0235	<0.0235	<0.0352
B14-7	B14-7-5.0	5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0154	<0.0231	<0.0154	<0.0154	<0.0154	<0.0154	<0.0154	<0.0154	<0.0154	<0.0154	<0.0154	<0.0231
B14-8	B14-8-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0155	<0.0233	<0.0155	<0.0155	<0.0155	<0.0155	<0.0155	<0.0155	<0.0155	<0.0155	<0.0155	<0.0233
	B14-8-10.0	10	--	--	--	--	--	--	--	--	--	--	--	--	<0.178	**0.519**	**1.76**	**0.256**	**0.778**	**1.71**	**0.209**	<0.178	<0.178	<0.178	<0.268	**0.769**
	B14-8-20.0	20	--	--	--	--	--	--	--	--	--	--	--	--	<0.0202	**0.132**	**0.441**	**0.0988**	<0.0202	**0.051**	<0.202	<0.0202	<0.0202	<0.0202	**0.228**	<0.0303
B14-9	B14-9-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0203	<0.0304	<0.0203	<0.0203	<0.0203	<0.0203	<0.0203	<0.0203	<0.0203	<0.0203	<0.0203	<0.0304
B14-10	B14-10-2.5	2.5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0196	**0.230**	**0.337**	**0.0416**	**0.208**	**0.199**	<0.0196	<0.0196	<0.0196	<0.0196	**1.34**	**0.15**
	B14-10-5.0	5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0223	<0.0335	<0.0223	<0.0223	<0.0223	<0.0223	<0.0223	<0.0223	<0.0223	<0.0223	<0.0223	<0.0335
B14-11	B14-11-2.5	2.5	--	--	--	--	--	--	--	--	--	--	--	--	<0.0157	<0.0235	<0.0157	<0.0157	<0.0157	<0.0157	<0.0157	<0.0157	<0.0157	<0.0157	<0.0157	<0.0235
Block 19																										
Hollow-Stem Auger Borings Completed February 20 through 29, 2012																										
MW19-1	MW19-1-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW19-1-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B19-1	B19-1-5.0	5.0	<60.7	<60.7	<60.7	<60.7	<60.7	<60.7	<60.7	<60.7	<60.7	<60.7	<60.7	nd	<0.0230	<0.0344	<0.0230	<0.0230	<0.0230	<0.0230	<0.0230	<0.0230	<0.0230	<0.0230	<0.0230	<0.0344
	B19-1-15.0	15	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	nd	<0.0224	<0.0336	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0336
B19-2	B19-2-7.5	7.5	<62.7	<62.7	<62.7	<62.7	<62.7	<62.7	<62.7	<62.7	<62.7	<62.7	<62.7	nd	<0.0236	<0.0354	<0.0236	<0.0236	<0.0236	<0.0236	<0.0236	<0.0236	<0.0236	<0.0236	<0.0236	<0.0354
	B19-2-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B19-3	B19-3-7.5	7.5	<62.0	<62.0	<62.0	<62.0	<62.0	<62.0	<62.0	<62.0	<62.0	<62.0	<62.0	nd	<0.0208	<0.0312	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<0.0312
	B19-3-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B19-4	B19-4-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	B19-4-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Exploration Location[1]	Sample ID	Depth (feet bgs)	Non-Carcinogenic PAHs[3] (µg/kg)											Total cPAHs[4] (µg/kg)	VOCs (mg/kg)											
			Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(g,h,i)perylene	TEQ	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	n-Porpylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	4-Isopropyltoluene	n-Butylbenzene	1,2-Dichlorobenzene	1,2,4-Trimethylbenzene	Naphthalene
B19-5	B19-5-7.5	7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	B19-5-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	B19-5-70	70	--	--	--	--	--	--	--	--	--	--	--	--	<0.0187	<0.0281	<0.0187	<0.0187	<0.0187	<0.0187	<0.0187	<0.0187	<0.0187	<0.0187	<0.0187	<0.0281
Direct-Push Borings Completed April 9 through 19, 2012																										
B19-6	B19-6-5.0	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B19-7	B19-7-10.0	10	<66.5	<66.5	<66.5	<66.5	<66.5	<66.5	<66.5	<66.5	<66.5	<66.5	<66.5	nd	--	--	--	--	--	--	--	--	--	--	--	--
B19-8	B19-8-7.5	7.5	<56.0	<56.0	<56.0	<56.0	<56.0	<56.0	<56.0	<56.0	<56.0	<56.0	<56.0	nd	--	--	--	--	--	--	--	--	--	--	--	--
B19-9	B19-9-5.0	5	<71.0	<71.0	<71.0	<71.0	<71.0	<71.0	<71.0	<71.0	<71.0	<71.0	<71.0	nd	--	--	--	--	--	--	--	--	--	--	--	--
B19-10	B19-10-7.5	7.5	<64.6	<64.6	<64.6	<64.6	<64.6	<64.6	<64.6	<64.6	<64.6	<64.6	<64.6	nd	--	--	--	--	--	--	--	--	--	--	--	--
B19-11	B19-11-2.5	2.5	<62.2	<62.2	<62.2	<62.2	<62.2	<62.2	<62.2	<62.2	<62.2	<62.2	<62.2	nd	--	--	--	--	--	--	--	--	--	--	--	--
Block 20																										
Hollow-Stem Auger Borings Completed February 20 through 29, 2012																										
MW20-1	MW20-1-2.5	2.5	<52.7	<52.7	<52.7	<52.7	<52.7	<52.7	**265**	<52.7	**195**	**258**	**57.8**	**120.17**	<0.0173	<0.0259	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<0.0168	<0.0168	<0.0173	<0.0252
	MW20-1-5.0	5	<52.4	<52.4	<52.4	<52.4	<52.4	<52.4	<52.4	<52.4	<52.4	<52.4	<52.4	nd	--	--	--	--	--	--	--	--	--	--	--	--
	MW20-1-12.5	12.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW20-1-70.0	70	--	--	--	--	--	--	--	--	--	--	--	--	<0.0188	<0.0282	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0282
MW20-2	MW20-2-5.0	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW20-2-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW20-3	MW20-3-5.0	5	<54.5	<54.5	<54.5	<54.5	<54.5	<54.5	<54.5	<54.5	<54.5	**76**	<54.5	nd	<0.0162	<0.0242	<0.0162	<0.0162	<0.0162	<0.0162	<0.0162	<0.0162	<0.0162	<0.0162	<0.0162	<0.0243
	MW20-3-15.0	15	<52.3	<52.3	<52.3	<52.3	<52.3	<52.3	<52.3	<52.3	<52.3	<52.3	<52.3	nd	<0.0202	<0.0303	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0303
B20-1	B20-1-5.0	5	<51.5	<51.5	<51.5	<51.5	<51.5	<51.5	<51.5	<51.5	<51.5	<51.5	<51.5	nd	<0.0183	<0.0275	<0.0183	<0.0183	<0.0183	<0.0183	<0.0183	<0.0183	<0.0183	<0.0183	<0.0183	<0.0275
	B20-1-12.5	12.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B20-2	B20-2-2.5	2.5	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	nd	<0.0192	<0.0288	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0282	<0.0282	<0.0192	<0.0423
	B20-2-40.0	40	--	--	--	--	--	--	--	--	--	--	--	--	<0.0194	<0.0291	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0291
B20-3	B20-3-10.0	10	**1620**	**1710**	**809**	<63.3	<63.3	<63.3	**214**	<63.3	**296**	**360**	**195**	**217.65**	**0.0308**	**0.0631**	**1.13**	**0.16**	**0.183**	**0.603**	**0.0351**	**0.038**	**0.442**	**0.0688**	**2.8**	**0.34**
	B20-3-20.0	20	**704**	**1830**	**1280**	<63.8	**534**	<63.8	**111**	<63.8	**129**	**191**	**214**	**205.62**	<0.0204	<0.0306	**0.025**	**0.0505**	**0.172**	**0.187**	**0.0867**	**0.0291**	**0.728**	**0.0673**	**1.61**	**0.864**
	B20-3-22.5	22.5	<65.3	<65.3	<65.3	<65.3	<65.3	<65.3	<65.3	<65.3	<65.3	<65.3	<65.3	nd	--	--	--	--	--	--	--	--	--	--	--	--
	B20-3-25.0	25	<60.1	<60.1	<60.1	<60.1	<60.1	<60.1	<60.1	<60.1	<60.1	<60.1	<60.1	nd	--	--	--	--	--	--	--	--	--	--	--	--
	B20-3-50.0	50	--	--	--	--	--	--	--	--	--	--	--	--	<0.0158	<0.0237	<0.0158	<0.0158	<0.0158	<0.0158	<0.0158	<0.0158	<0.0158	<0.0151	<0.0158	<0.0226
Direct-Push Borings Completed April 9 through 19, 2012																										
MW20-4	MW20-4-7.5	7.5	<53.4	<53.4	<53.4	<53.4	<53.4	<53.4	**80.2**	<53.4	**146**	**159**	**61.6**	**91.99**	<0.0172	0.0258	<0.0172	<0.0172	<0.0172	<0.0172	<0.0172	<0.0172	<0.0172	<0.0172	<0.0172	<0.0258
	MW20-4-22.5	22.5	<64.4	<64.4	<64.4	<64.4	<64.4	<64.4	<64.4	<64.4	<64.4	<64.4	<64.4	nd	<0.0217	<0.0326	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0326
MW20-5	MW20-5-5.0	5	223	141	125	114	390	325	4,250	908	4,550	5,050	1,350	**2,843.7**	--	--	--	--	--	--	--	--	--	--	--	--
	MW20-5-15.0	15	--	--	--	--	--	--	--	--	--	--	--	--	<0.0211	<0.0316	<0.0211	<0.0211	<0.0211	<0.0211	<0.0211	<0.0211	<0.0211	<0.0211	<0.0211	<0.0316
MW20-6	MW20-6-5.0	5	<53.9	<53.9	<53.9	<53.9	<53.9	<53.9	<53.9	<53.9	<53.9	57.7	<53.9	nd	--	--	--	--	--	--	--	--	--	--	--	--
B20-4	B20-4-5.0	5	<54.1	<54.1	<54.1	<54.1	<54.1	<54.1	<54.1	<54.1	<54.1	<54.1	**62.5**	**88.7**	--	--	--	--	--	--	--	--	--	--	--	--
	B20-4-12.5	12.5	<58.4	<58.4	<58.4	<58.4	<58.4	<58.4	**78.0**	<58.4	**60.8**	**59.3**	<58.4	nd	--	--	--	--	--	--	--	--	--	--	--	--
B20-5	B20-5-10.0	10	<54.6	<54.6	<54.6	<54.6	<54.6	<54.6	<54.6	<54.6	<54.6	<54.6	<54.6	nd	--	--	--	--	--	--	--	--	--	--	--	--
	B20-5-20.0	20	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	<58.8	nd	--	--	--	--	--	--	--	--	--	--	--	--
B20-6	B20-6-10.0	10	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	**91.2**	<75.0	**111**	**111**	<75.0	nd	--	--	--	--	--	--	--	--	--	--	--	--
	B20-6-20.0	20	<58.2	<58.2	<58.2	<58.2	<58.2	<58.2	<58.2	<58.2	<58.2	<58.2	<58.2	nd	--	--	--	--	--	--	--	--	--	--	--	--
B20-7	B20-7-7.5	7.5	<60.4	<60.4	<60.4	<60.4	<60.4	<60.4	<60.4	<60.4	<60.4	<60.4	<60.4	nd	--	--	--	--	--	--	--	--	--	--	--	--
	B20-7-15.0	15	<57.3	<57.3	<57.3	<57.3	<57.3	<57.3	<57.3	<57.3	<57.3	<57.3	<57.3	nd	--	--	--	--	--	--	--	--	--	--	--	--

Exploration Location[1]	Sample ID	Depth (feet bgs)	Non-Carcinogenic PAHs[3] (µg/kg)											Total cPAHs[4] (µg/kg)	VOCs (mg/kg)											
			Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(g,h,i)perylene	TEQ	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	n-Porpylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	4-Isopropyltoluene	n-Butylbenzene	1,2-Dichlorobenzene	1,2,4-Trimethylbenzene	Naphthalene
B20-8	B20-8-5.0	5	<52.5	<52.5	<52.5	<52.5	<52.5	<52.5	**140**	<52.5	**210**	**238**	**121**	**151.51**	–	–	–	–	–	–	–	–	–	–	–	–
	B20-8-15.0	15	<55.3	<55.3	<55.3	<55.3	<55.3	<55.3	**69.7**	<55.3	**82.5**	**119**	**196**	**179.48**	<0.0222	<0.0332	<0.0222	<0.0222	<0.0222	<0.0222	<0.0222	<0.0222	<0.0222	<0.0222	<0.0222	<0.0222	<0.0332
B20-9	B20-9-5.0	5	<53.6	<53.6	<53.6	<53.6	<53.6	<53.6	<53.6	<53.6	<53.6	<53.6	<53.6	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-10	B20-10-7.5	7.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-11	B20-11-5.0	5	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	<57.9	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-12	B20-12-7.5	7.5	<55.9	<55.9	<55.9	<55.9	<55.9	<55.9	<55.9	<55.9	<55.9	<55.9	<55.9	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-13	B20-13-7.5	7.5	<60.1	<60.1	<60.1	<60.1	<60.1	<60.1	**118**	<60.1	**163**	**187**	**111**	**49.62**	–	–	–	–	–	–	–	–	–	–	–	–
B20-14	B20-14-7.5	7.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	<57.5	nd	–	–	–	–	–	–	–	–	–	–	–	–
	B20-14-12.5	12.5	<55.4	<55.4	<55.4	<55.4	<55.4	<55.4	<55.4	<55.4	<55.4	<55.4	<55.4	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-15	B20-15-5.0	5	<55.3	<55.3	<55.3	<55.3	<55.3	<55.3	<55.3	<55.3	<55.3	<55.3	<55.3	nd	–	–	–	–	–	–	–	–	–	–	–	–
	B20-15-15.0	15	<53.4	<53.4	<53.4	<53.4	<53.4	<53.4	<53.4	<53.4	<53.4	<53.4	<53.4	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-16	B20-16-10.0	10	<65.7	<65.7	<65.7	<65.7	<65.7	<65.7	<65.7	<65.7	<65.7	<65.7	<65.7	nd	–	–	–	–	–	–	–	–	–	–	–	–
	B20-16-15.0	15	<58.6	<58.6	<58.6	<58.6	<58.6	<58.6	<58.6	<58.6	<58.6	<58.6	<58.6	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-17	B20-17-10.0	10	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	<57.0	nd	–	–	–	–	–	–	–	–	–	–	–	–
	B20-17-15.0	15	<64.1	<64.1	<64.1	<64.1	<64.1	<64.1	<64.1	<64.1	<64.1	<64.1	<64.1	nd	–	–	–	–	–	–	–	–	–	–	–	–
B20-18	B20-18-7.5	7.5	<64.3	<64.3	<64.3	<64.3	<64.3	<64.3	<64.3	<64.3	<64.3	<64.3	<64.3	nd	–	–	–	–	–	–	–	–	–	–	–	–
	B20-18-15.0	15	<64.7	<64.7	<64.7	<64.7	<64.7	<64.7	<64.7	<64.7	<64.7	<64.7	<64.7	nd	–	–	–	–	–	–	–	–	–	–	–	–
MTCA Method A or B Cleanup Level for Unrestricted Land Use			5,000			ne	ne	ne	ne	ne	ne	ne		100	6	7	9		ne	ne	ne	ne	ne	ne	ne	ne	5

Notes:

[1]Approximate exploration locations shown on the attached figure. Chemical analytical testing by Fremont Analytical in Seattle, Washington. Samples were obtained between February 20 and February 29, 2012.

[2]Field screening methods are described in Appendix B.

[3]Polycyclic aromatic hydrocarbons (PAHs) analyzed by EPA Method 8270D/SIM. See the laboratory report for the full list of compounds analyzed.

[4]Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) analyzed by EPA Method 8270D/SIM. Total cPAHs calculated using the toxicity equivalency (TEQ) methodology specified in WAC 173-340-780(8). cPAHs that were not detected were assigned half the value of the detection limit for these calculations.

µg/kg = micrograms per kilogram

– = Not Tested

bgs = below ground surface

ne = not established

NS = no sheen

U = not detect; detection limit listed.

Bolding indicates analyte was detected. Shading indicates analyte was detected at a concentration greater than the MTCA Method A cleanup level.

sp/2043400102/Block14,19and20Tables.xlsx

Table 3

Groundwater Chemical Analytical Data (Petroleum Hydrocarbons, PCBs and Metals)

Project Rufus 2.0

Blocks 14, 19 and 20, Denny Triangle, Seattle, Washington

GeoEngineers File No. 20434-001-02

Monitoring Well and Sample ID[1]	Sample Date	Well Screen Depth (feet bgs)	Petroleum Hydrocarbons (µg/L)			PAHs[4] (µg/L)			VOCs[5] (µg/L)		RCRA 8 Metals[6] (µg/L)							
			Gasoline Range[2]	Diesel Range[3]	Heavy Oil Range[3]	2-Methylnaphthalene	1-Methylnaphthalene	Phenanthrene	Methyl tert-butyl ether (MTBE)	1,1-Dichloroethene	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
Block 14																		
MW14-1	3/5/2012	64.5 - 84.5	<50.0	<50.0	<100	<0.100	<0.100	<0.100	<1.00	<1.00	**10.1**	**131**	<0.200	**9.59**	<1.00	**3.5**	<0.200	<0.100
MW14-2	4/19/2012	4.75 - 14.75	<50.0	<50.0	<100	<0.100	<0.100	<0.100	**1.26**	<1.00	**1.95**	**86.6**	<0.200	**7.42**	<1.00	**1.48**	<0.200	<0.100
MW14-3	4/19/2012	4.75 - 14.75	<50.0	<50.0	<100	**0.263**	**0.197**	**0.16**	**1.55**	**1.52**	<1.00	**184**	<0.200	**11.7**	<1.00	<1.00	<0.200	<0.100
Block 20																		
MW20-1	3/5/2012	64.5 - 84.5	<50.0	<50.0	<100	<0.100	<0.100	<0.100	<1.00	<1.00	**2.66**	**58.9**	**0.204**	**7.27**	<1.00	**3.44**	**2.4**	<0.100
MW20-2	3/5/2012	64.5 - 84.5	<50.0	<50.0	<100	<0.100	<0.100	<0.100	<1.00	<1.00	**3.8**	**140**	**0.252**	**13.6**	<1.00	**9.47**	**0.482**	<0.100
MW20-3	3/5/2012	64.5 - 84.5	<50.0	<50.0	<100	<0.100	<0.100	<0.100	<1.00	<1.00	**2.25**	**132**	**0.223**	**9.22**	<1.00	**3.31**	**0.244**	<0.100
MW20-5	4/19/2012	4.75 - 19.75	<50.0	<50.0	<100	<0.100	<0.100	<0.100	<0.100	<0.100	<1.00	**80.3**	<0.200	**6.62**	<1.00	<1.00	<0.200	**0.238**
MTCA Method A or B Cleanup Level for Unrestricted Land Use			800/1000[7]	500	500	ne	ne	ne	2	ne	5	3,200	5	50	15	80	80	2

Notes:

[1]Approximate exploration locations shown on the attached figures. Chemical analytical testing by Fremont Analytical in Seattle, Washington.

[2]Gasoline-range hydrocarbons analyzed by petroleum hydrocarbon identification using Northwest Method NWTPH-HCID.

[3]Diesel- and heavy oil-range hydrocarbons analyzed by Northwest Method NWTPH-Dx Extended with a silica gel cleanup or petroleum hydrocarbon identification using Northwest Method NWTPH-HCID.

[4]Polycyclic aromatic hydrocarbons (PAHs) analyzed by EPA Method 8270D/SIM. For PAHs, only detected compounds are presented in the table. See the laboratory report for the full list of compounds analyzed and detection limits.

[5]Volatile organic compounds (VOCs) and benzene (B), ethylbenzene (E), toluene (T) and total xylenes (X) analyzed by EPA Method 8260B. For VOCs, only detected compounds are presented in the table. See the laboratory report for the full list of compounds analyzed and detection limits.

[6]Total metals analyzed by EPA 6010B/7471A.

[7]When benzene is present, the gasoline range cleanup level is 800 µg/kg. When benzene is not present the gasoline range cleanup level is 1000 µg/kg.

bgs = below ground surface

µg/L = micrograms per liter

ne = not established

Bolding indicates analyte was detected. Shading indicates analyte was detected at a concentraion greater than the MTCA cleanup level.

FIGURES

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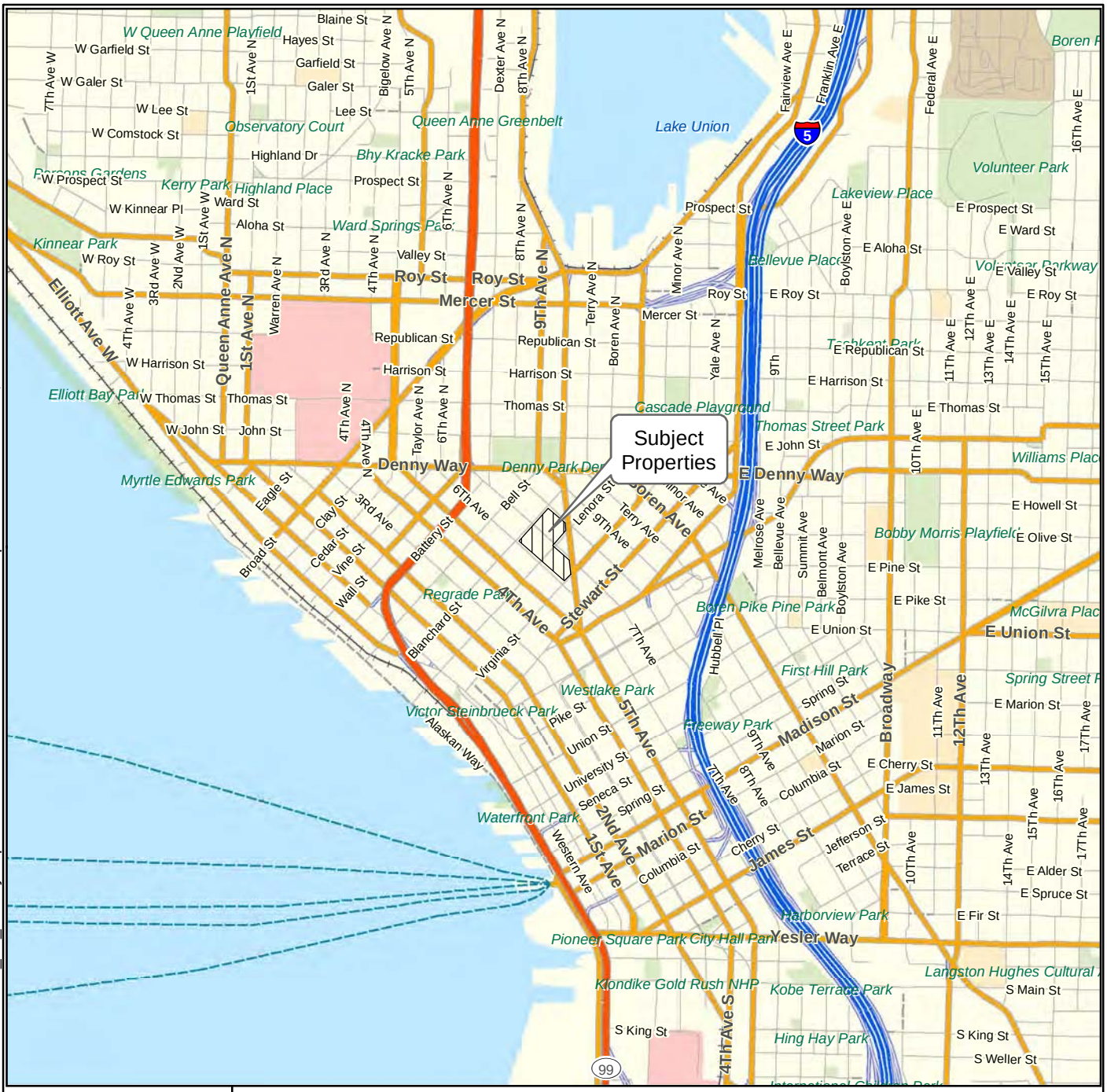

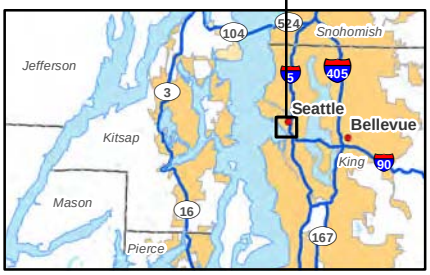

2,000 0 2,000

Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
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Data Sources: ESRI Data & Maps, Street Maps 2005

Transverse Mercator, Zone 10 N North, North American Datum 1983
North arrow oriented to grid north

Vicinity Map
Blocks 14, 19 and 20

Rufus 2.0
Seattle, Washington

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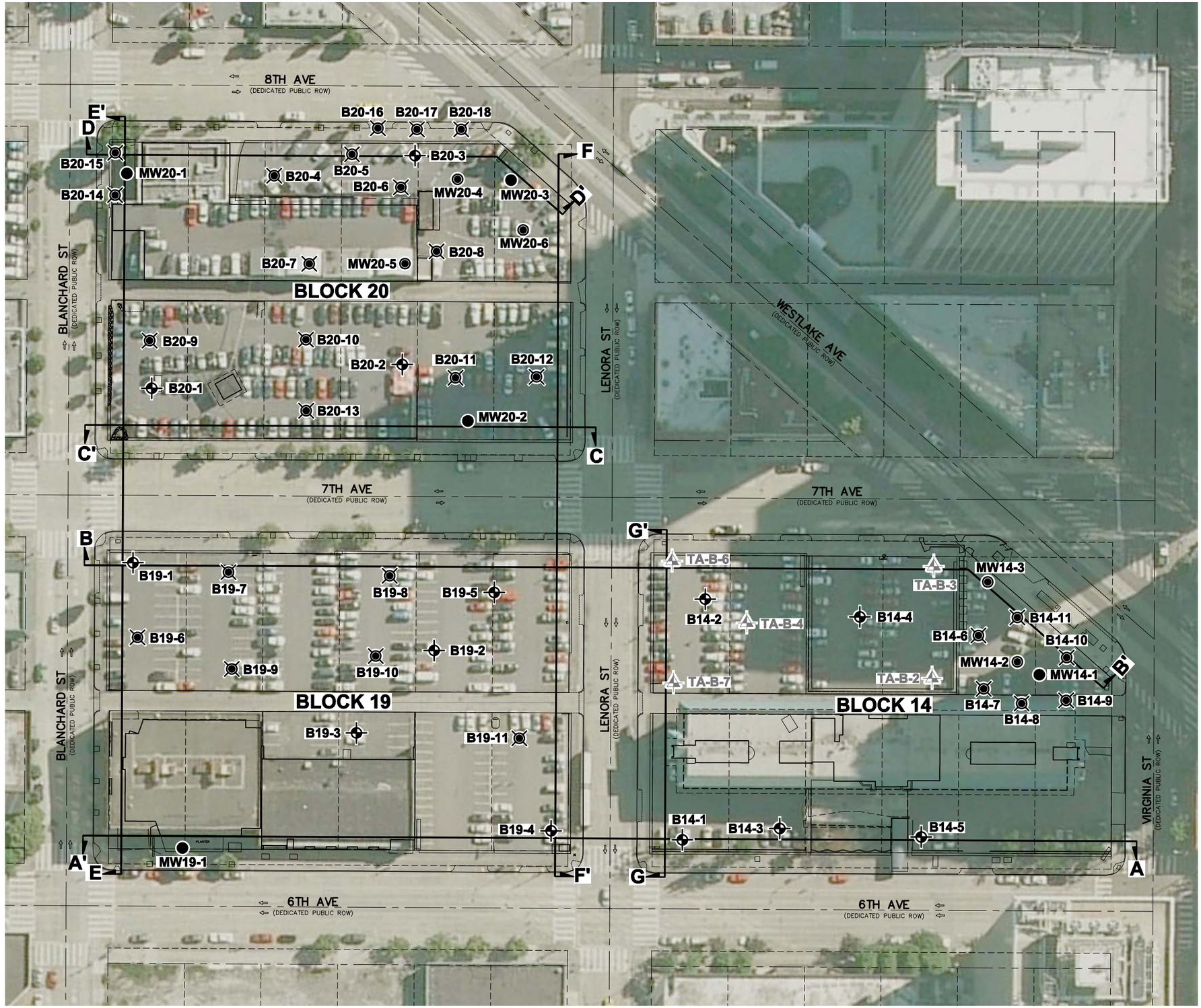
Figure 1

Office: Redmond Path: \red\projects\20\20341001\GIS\203400102_F1_VicinityMap.mxd Map Revised: March 15, 2012 EL



Legend

- MW14-3 — Shallow Monitoring Wells Completed in April 2012
- B14-6 — Direct-Push Borings Completed in April 2012
- B14-1 — Hollow-stem Auger Borings Completed in February 2012
- MW19-1 — Monitoring Well Completed in February 2012
- TA-B-2 — Boring/Monitoring Completed by Others
- A — A' Cross-Section Location

80 0 80
FEET

Notes

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012. Aerial photo from Aerial Express, 2009.

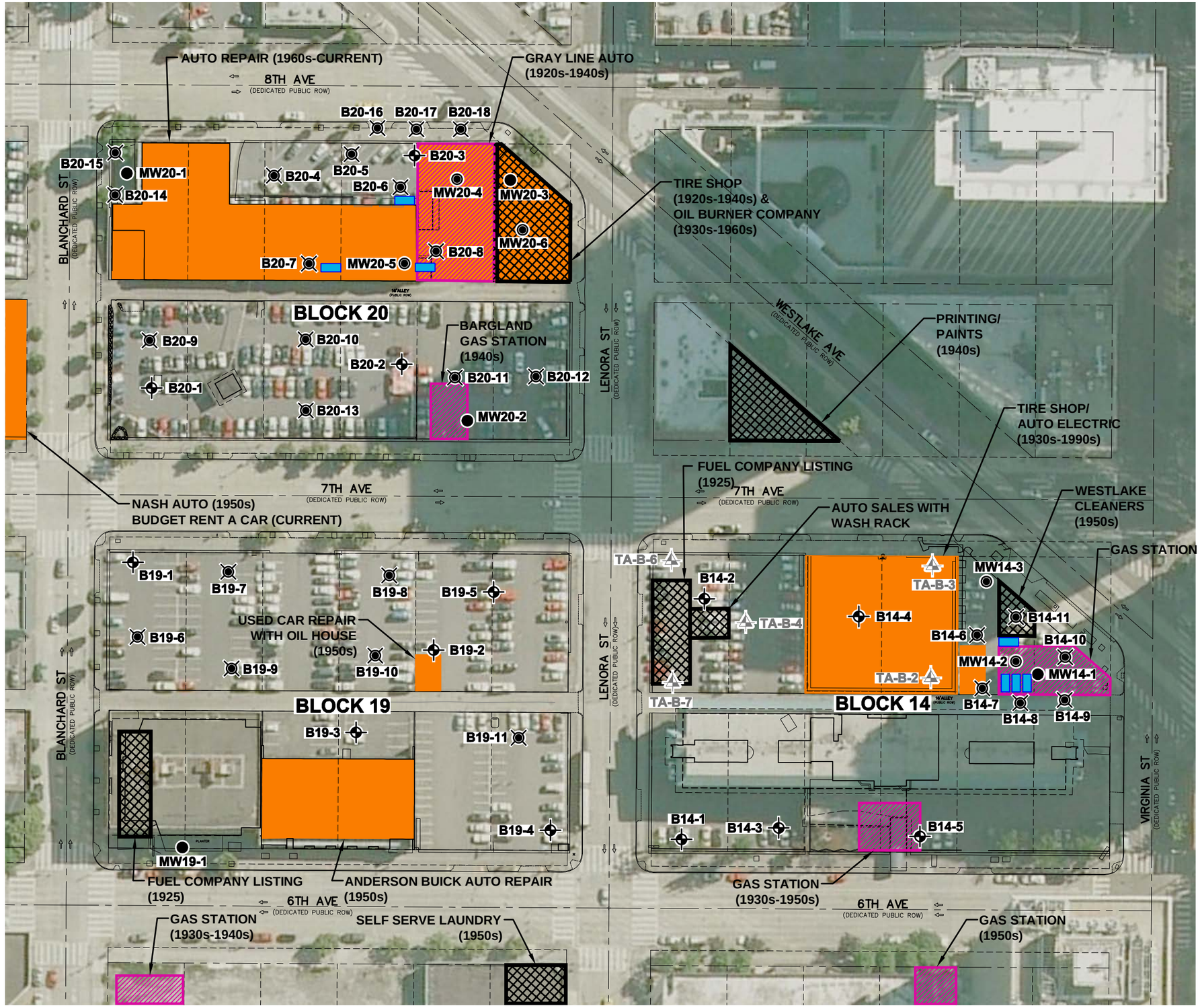
Overview Site Plan

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 2

P:\20\20434001\CAD\Environmental April 2012 Report\20434001-02 T100 Environmental Fig 2.dwg\TAB:Fig 2 modified by TMichaud on Apr 26, 2012 - 9:58



Legend

- MW14-3 — Shallow Monitoring Wells Completed in April 2012
- B14-6 — Direct-Push Borings Completed in April 2012
- B14-1 — Hollow-stem Auger Borings Completed in February 2012
- MW19-1 — Monitoring Well Completed in February 2012
- TA-B-2 — Boring/Monitoring Completed by Others
- Historical Auto Repair Building Footprint
- Former Gas Station General Location
- Possible or Known Former UST Area
- Other Use of Potential Concern as Indicated

80 0 80
FEET

Notes

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012. Aerial photo from Aerial Express, 2009.

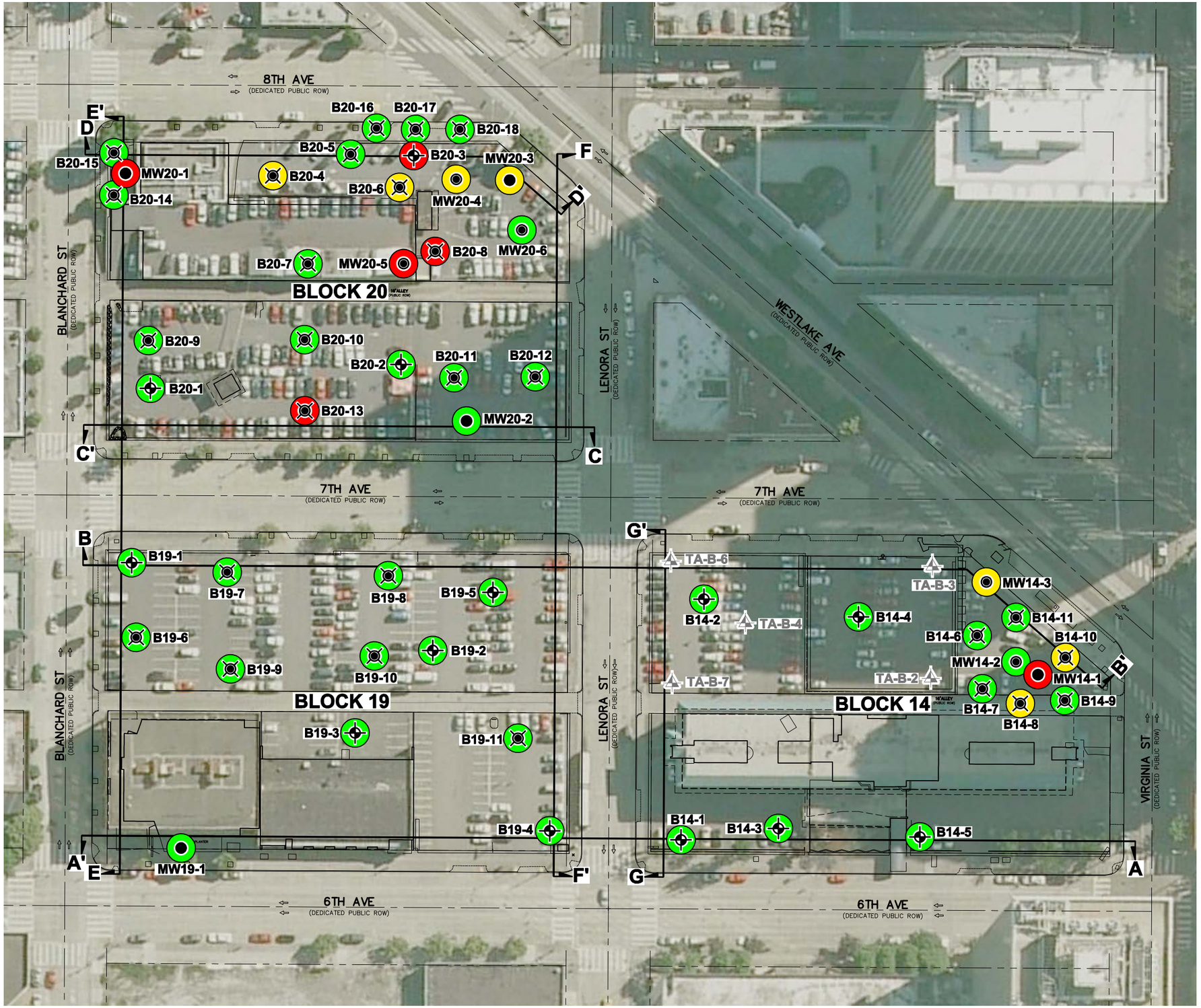
Historic Sources of Potential Contamination

Rufus 2.0 Development
Seattle, Washington

GeoEngineers | Figure 3

P:\20\20434001\CAD\Environmental April 2012 Report\20434001-02 T100 Environmental Fig 3.dwg\TAB:Fig 2 modified by tmichaud on Apr 26, 2012 - 10:00

P:\20\20434001\CAD\Environmental April 2012 Report\20434001-02 T100 Environmental Fig 4.dwg\TAB:Fig 4 modified by TMichaud on Apr 30, 2012 - 13:24



Legend

- **MW14-3** — Shallow Monitoring Wells Completed in April 2012
- **B14-6** — Direct-Push Borings Completed in April 2012
- **B14-1** — Hollow-stem Auger Borings Completed in February 2012
- **MW19-1** — Monitoring Well Completed in February 2012
- **TA-B-2** — Boring/Monitoring Completed by Others
- Contaminants of concern detected at concentrations greater than the corresponding MTCA Method A cleanup levels in one or more soil samples obtained from the boring. See cross-sections for chemical analytical results of discrete soil samples. For MW14-1 previous results indicate exceedances of MTCA in this vicinity.
- Contaminants of concern detected at concentrations less than the corresponding MTCA Method A cleanup levels. See cross-sections for chemical analytical results of discrete soil samples.
- Contaminants of concern were not detected. Metals were detected at concentrations similar to natural background concentrations.
- **A — A'** Cross-Section Location

80 0 80
FEET

Notes

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Soil Contamination Identified during 2012 Subsurface Exploration

Rufus 2.0 Development
Seattle, Washington

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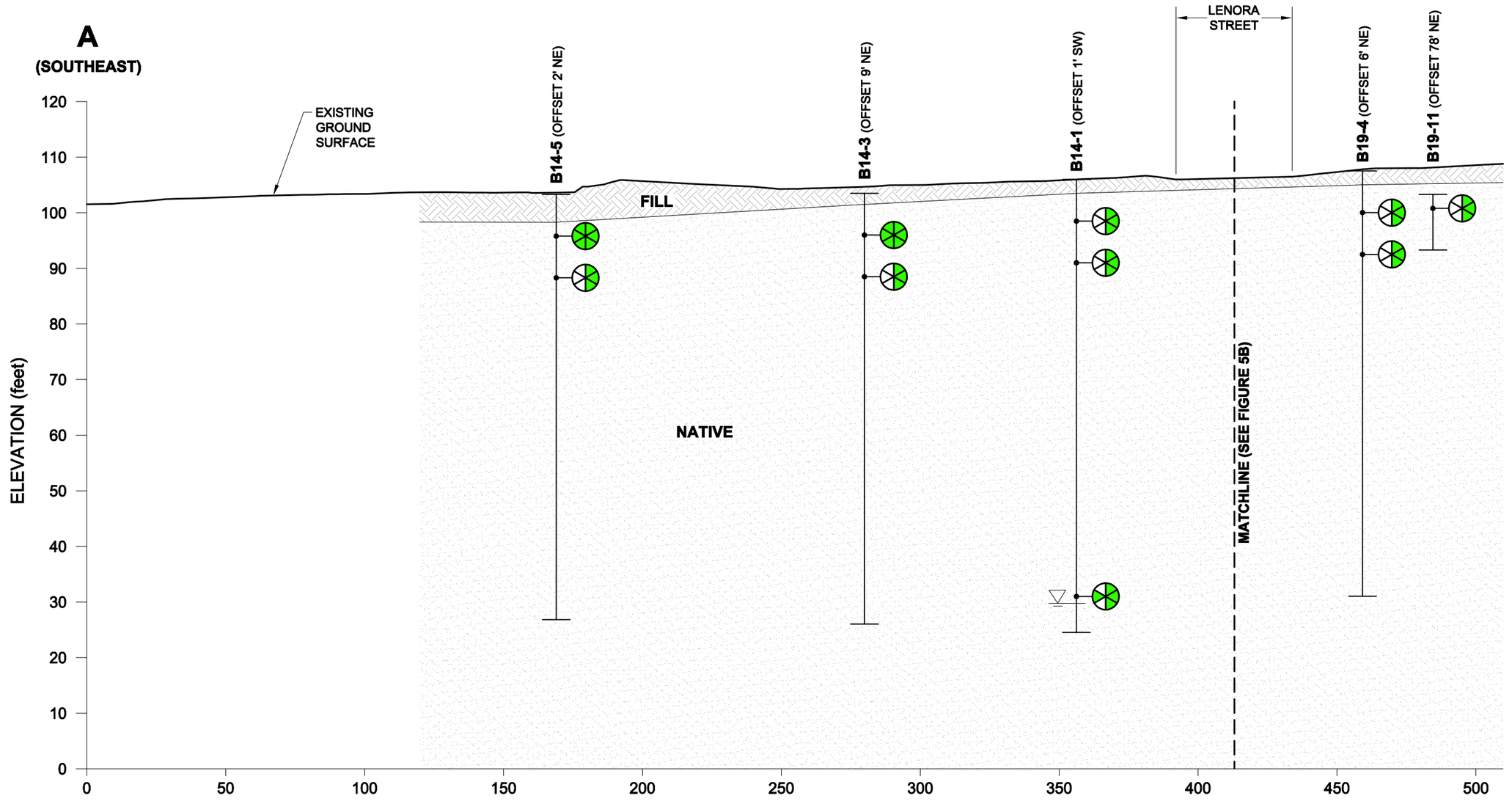
Figure 4

A
(SOUTHEAST)



Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs
VOCs
cPAHs

Diesel-Range Petroleum Hydrocarbons
Gasoline-Range Petroleum Hydrocarbons
Heavy Oil-Range Petroleum Hydrocarbons

Detected at a concentration greater than the MTCA Method A cleanup level.

Detected at a concentration less than the MTCA Method A cleanup level.

Not Detected

Not Analyzed

B14-5 — Boring Id

Inferred Soil Contact

Analytical Sample Location

Perched Groundwater Observed During Drilling

Groundwater Level Observed During Drilling

Groundwater Level Observed in Piezometer

Well Screen Interval

40 0 40
Horizontal Scale in Feet

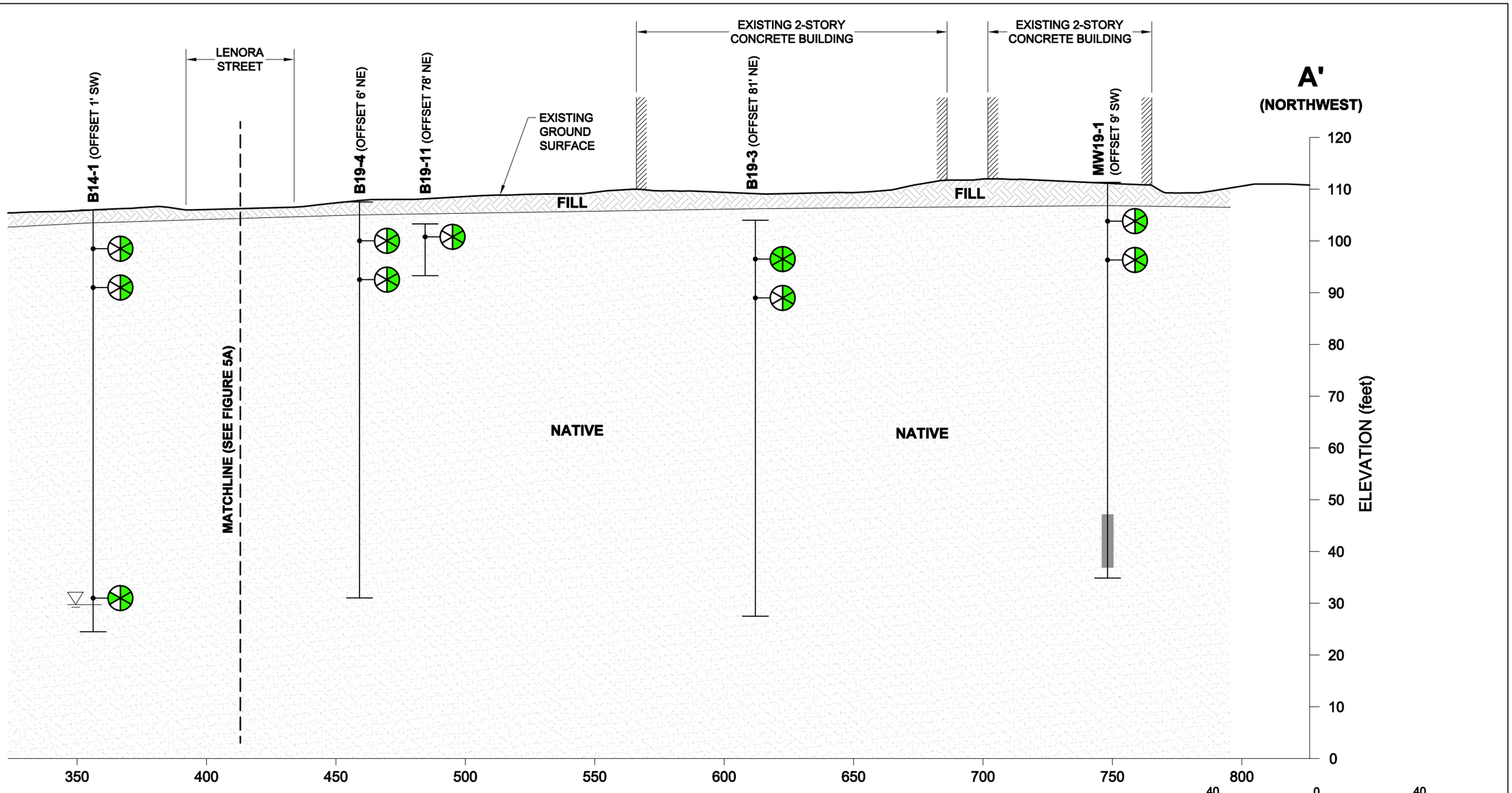
20 0 20
Vertical Scale in Feet
Vertical Exaggeration: 2X

Cross-Section A-A'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 5A



Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs
VOCs
cPAHs

- Diesel-Range Petroleum Hydrocarbons
- Gasoline-Range Petroleum Hydrocarbons
- Heavy Oil-Range Petroleum Hydrocarbons
- Detected at a concentration greater than the MTCA Method A cleanup level.
- Detected at a concentration less than the MTCA Method A cleanup level.
- Not Detected
- Not Analyzed

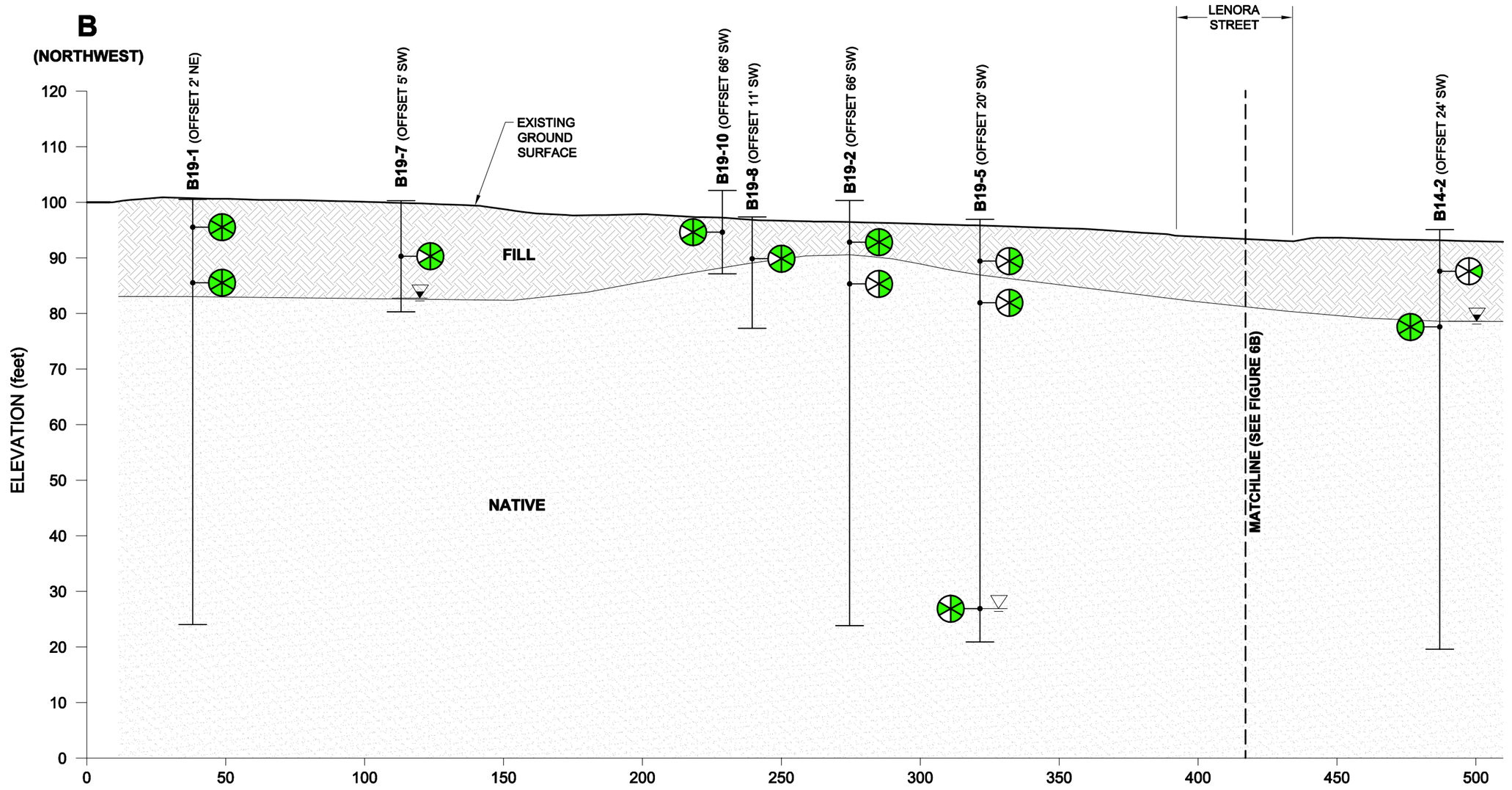
B14-5 — Boring Id

- Inferred Soil Contact
- Analytical Sample Location
- Perched Groundwater Observed During Drilling
- Groundwater Level Observed During Drilling
- Groundwater Level Observed in Piezometer
- Well Screen Interval

Cross-Section A-A'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers | **Figure 5B**



Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs — Diesel-Range Petroleum Hydrocarbons
VOCs — Gasoline-Range Petroleum Hydrocarbons
cPAHs — Heavy Oil-Range Petroleum Hydrocarbons

- Detected at a concentration greater than the MTCA Method A cleanup level.
- Detected at a concentration less than the MTCA Method A cleanup level.
- Not Detected
- Not Analyzed

B14-5 — Boring Id

- Inferred Soil Contact
- Analytical Sample Location
- Perched Groundwater Observed During Drilling
- Groundwater Level Observed During Drilling
- Groundwater Level Observed in Piezometer
- Well Screen Interval

40 0 40
Horizontal Scale in Feet
20 0 20
Vertical Scale in Feet
Vertical Exaggeration: 2X

Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

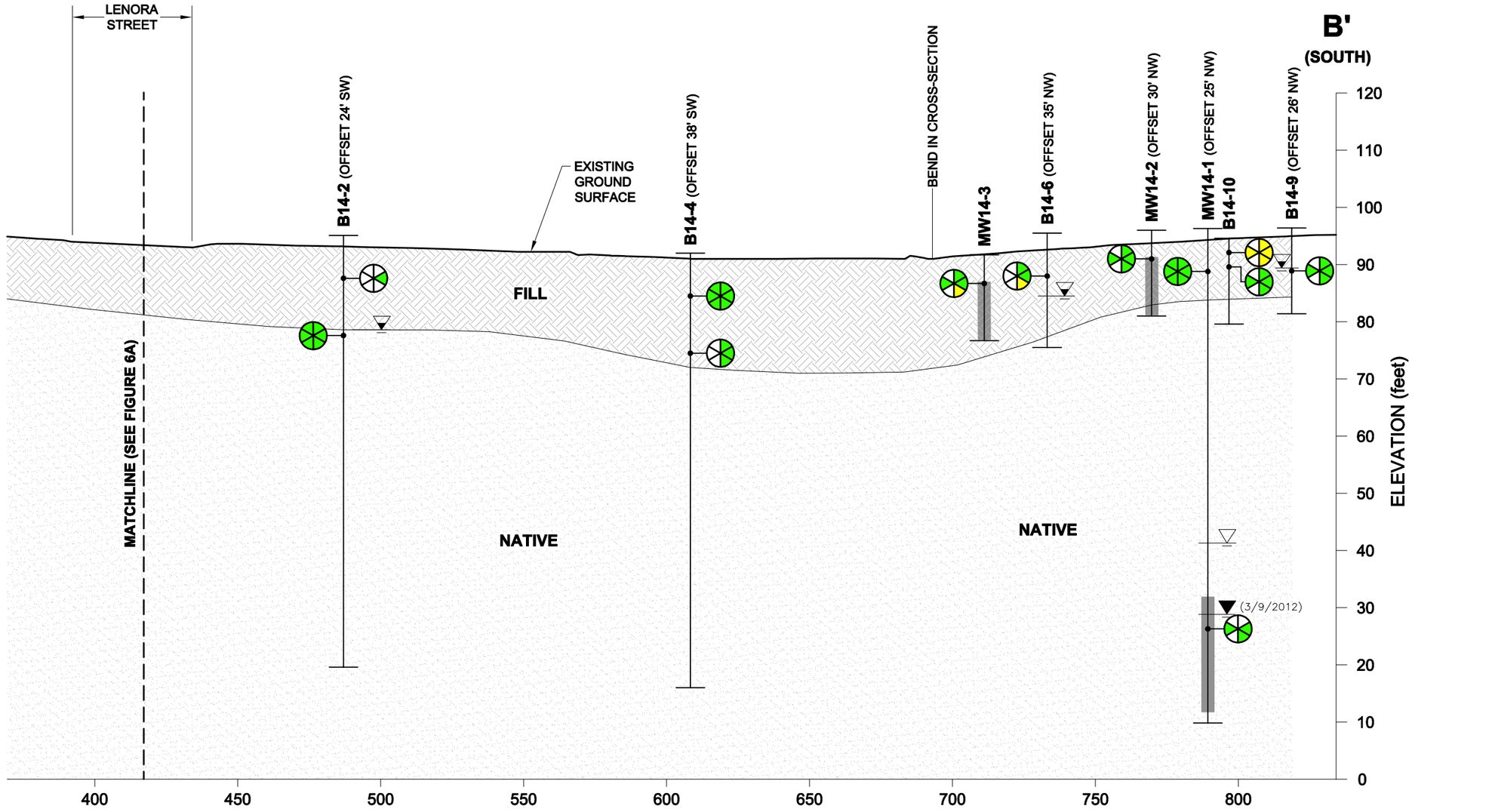
Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Cross-Section B-B'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 6A



Notes

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs — Diesel-Range Petroleum Hydrocarbons
VOCs — Gasoline-Range Petroleum Hydrocarbons
cPAHs — Heavy Oil-Range Petroleum Hydrocarbons

- Detected at a concentration greater than the MTCA Method A cleanup level.
- Detected at a concentration less than the MTCA Method A cleanup level.
- Not Detected
- Not Analyzed

B14-5 — Boring Id

- Inferred Soil Contact
- Analytical Sample Location
- Perched Groundwater Observed During Drilling
- Groundwater Level Observed During Drilling
- Groundwater Level Observed in Piezometer
- Well Screen Interval

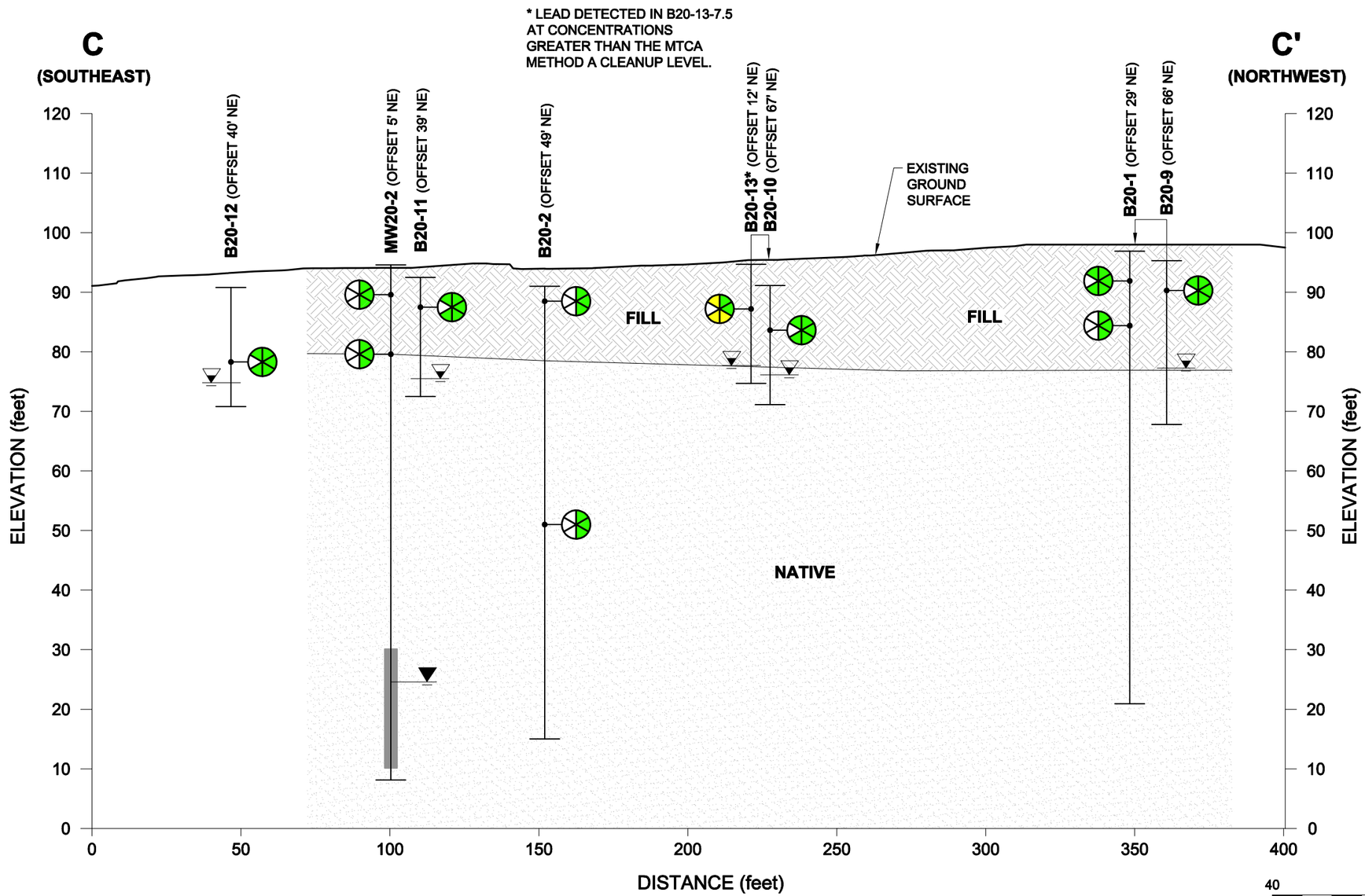
40 0 40
Horizontal Scale in Feet
20 0 20
Vertical Scale in Feet
Vertical Exaggeration: 2X

Cross-Section B-B'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 6B



Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs
VOCs
cPAHs

Diesel-Range Petroleum Hydrocarbons
Gasoline-Range Petroleum Hydrocarbons
Heavy Oil-Range Petroleum Hydrocarbons

Detected at a concentration greater than the MTCA Method A cleanup level.
Detected at a concentration less than the MTCA Method A cleanup level.
Not Detected
Not Analyzed

B14-5 — Boring Id
Inferred Soil Contact
Analytical Sample Location
Perched Groundwater Observed During Drilling
Groundwater Level Observed During Drilling
Groundwater Level Observed in Piezometer
Well Screen Interval

40 0 40
Horizontal Scale in Feet
20 0 20
Vertical Scale in Feet
Vertical Exaggeration: 2X

Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

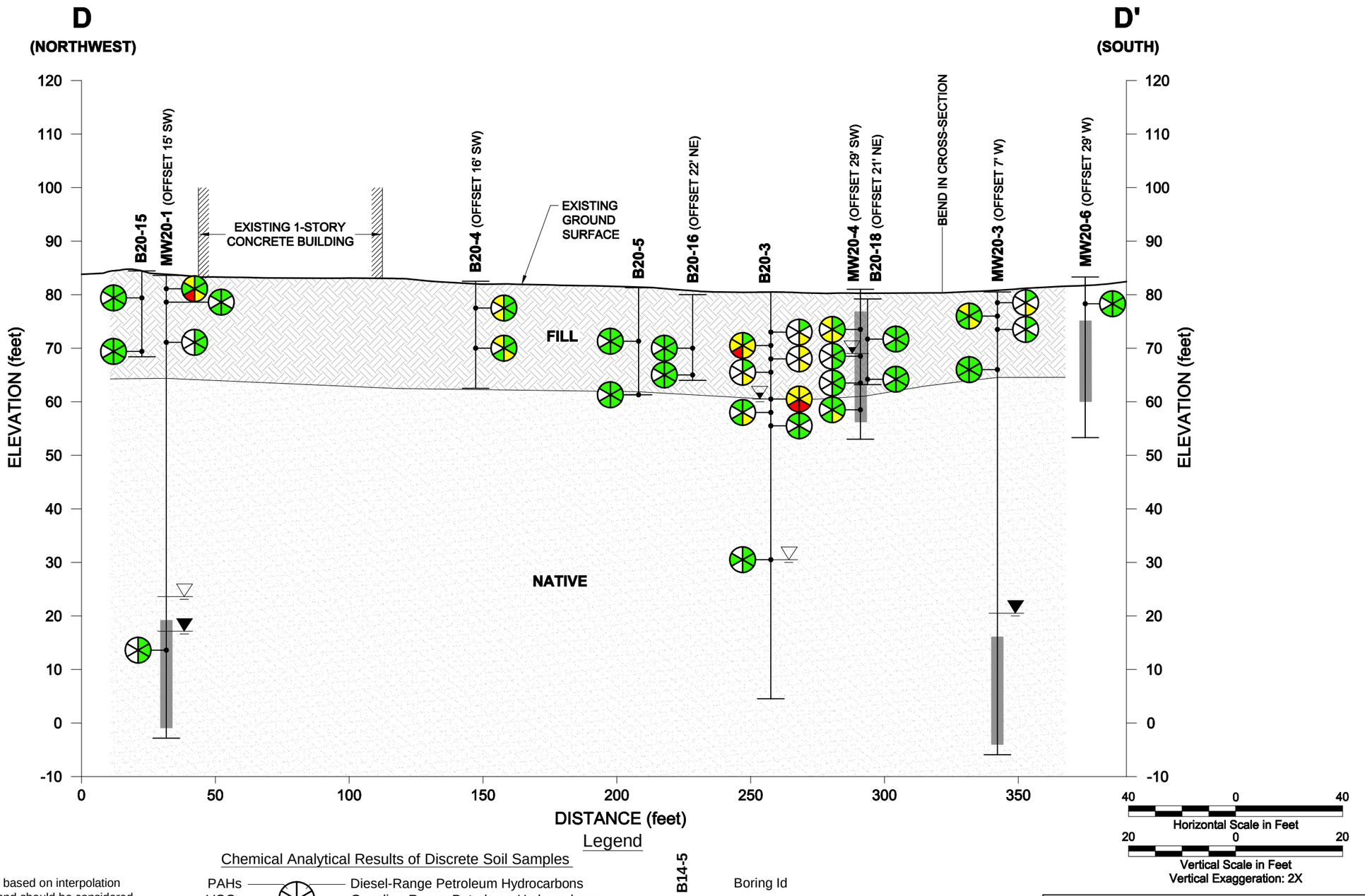
Cross-Section C-C'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 7

P:\20\20434001\CAD\ENVIRONMENTAL APRIL 2012 REPORT\20434001-02 T100 ENVIRONMENTAL FIG 5-II.DWG\TAB:CC MODIFIED BY TMICHAUD ON APR 30, 2012 - 15:27



Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs
VOCs
cPAHs

- Diesel-Range Petroleum Hydrocarbons
- Gasoline-Range Petroleum Hydrocarbons
- Heavy Oil-Range Petroleum Hydrocarbons

- Detected at a concentration greater than the MTCA Method A cleanup level.
- Detected at a concentration less than the MTCA Method A cleanup level.
- Not Detected
- Not Analyzed

B14-5 — Boring Id

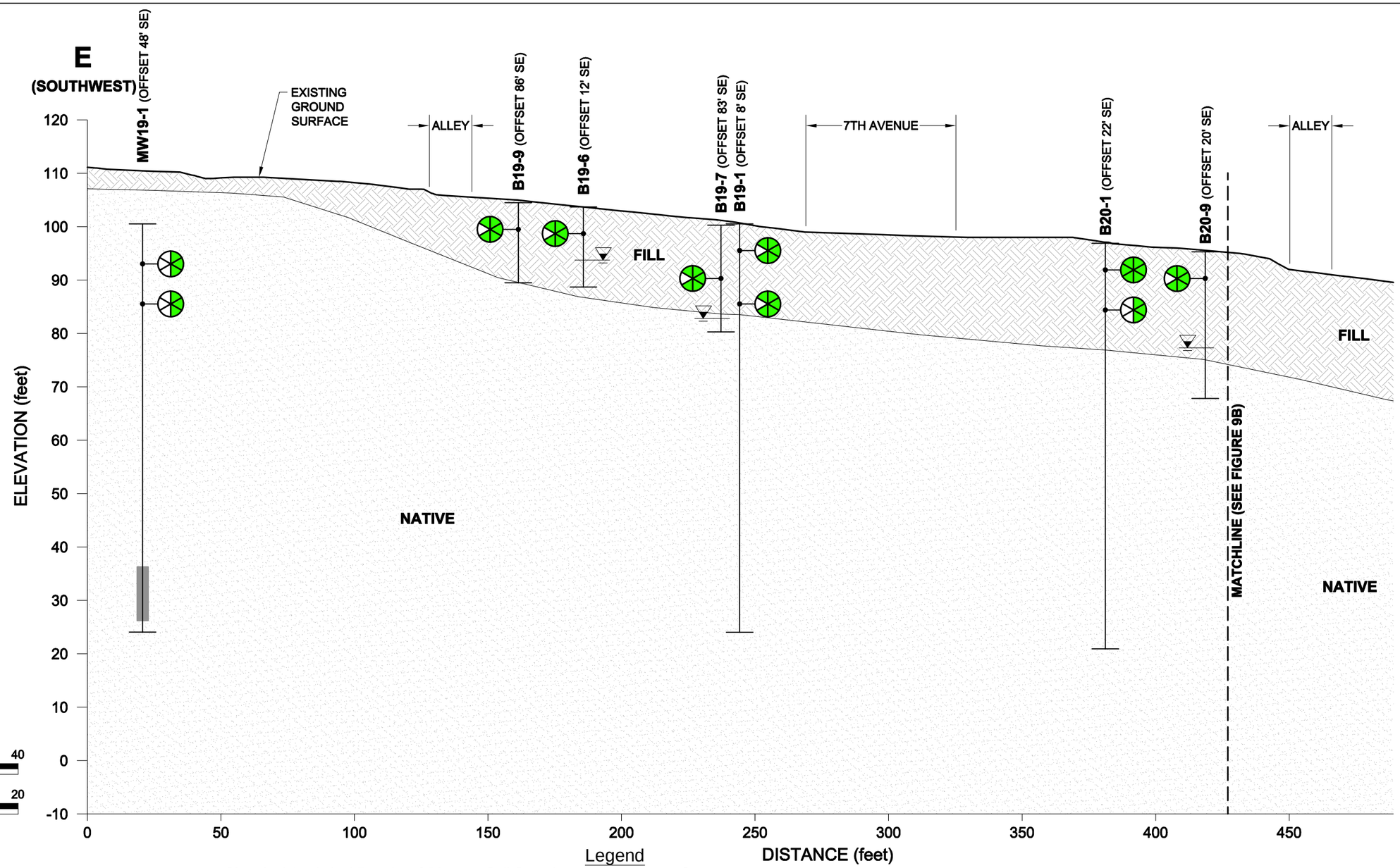
- Inferred Soil Contact
- Analytical Sample Location
- Perched Groundwater Observed During Drilling
- Groundwater Level Observed During Drilling
- Groundwater Level Observed in Piezometer
- Well Screen Interval

Cross-Section D-D'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 8



Notes

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Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs — Diesel-Range Petroleum Hydrocarbons
VOCs — Gasoline-Range Petroleum Hydrocarbons
cPAHs — Heavy Oil-Range Petroleum Hydrocarbons

- Detected at a concentration greater than the MTCA Method A cleanup level.
- Detected at a concentration less than the MTCA Method A cleanup level.
- Not Detected
- Not Analyzed

B14-5 — Boring Id

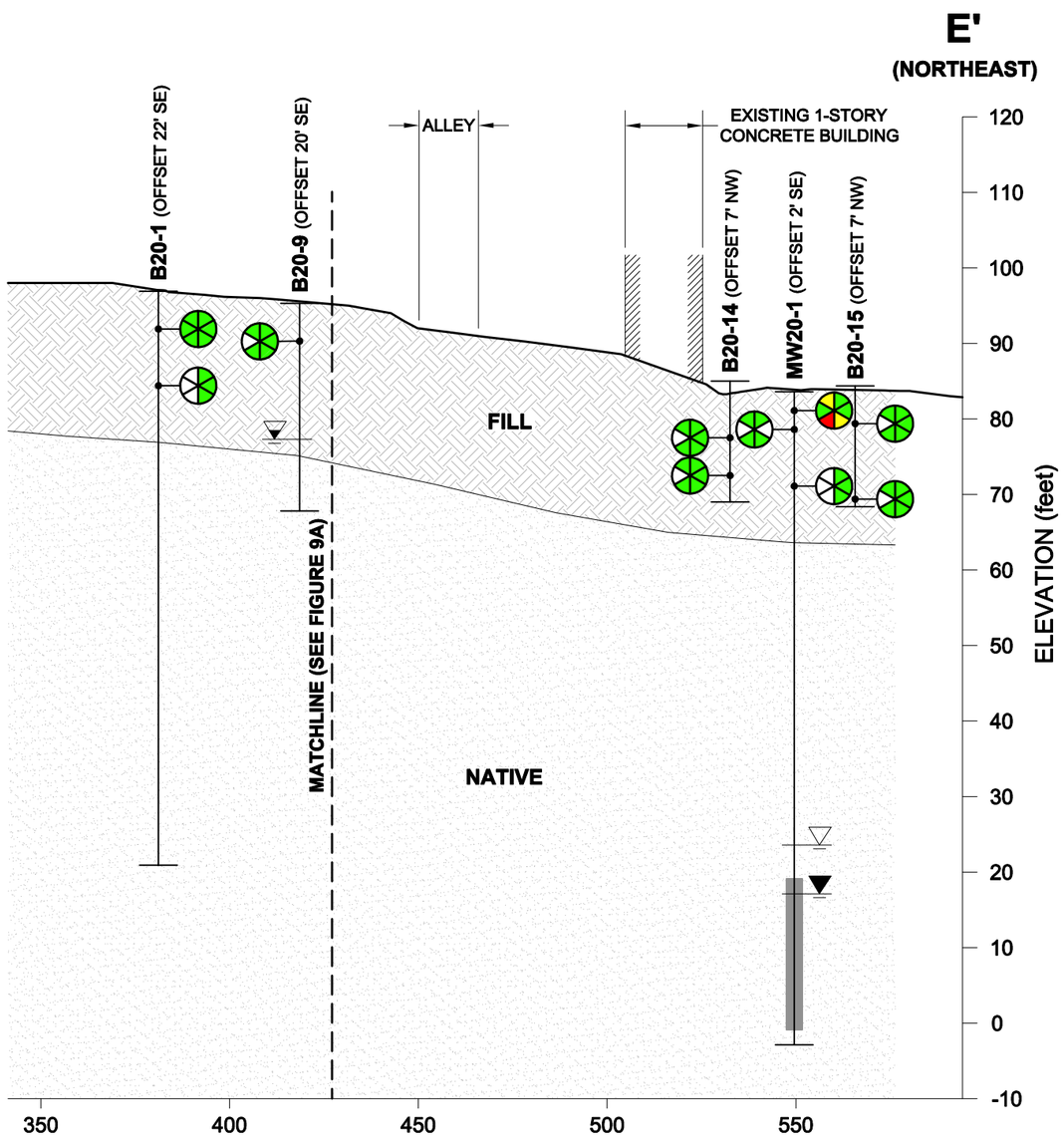
- Inferred Soil Contact
- Analytical Sample Location
- Perched Groundwater Observed During Drilling
- Groundwater Level Observed During Drilling
- Groundwater Level Observed in Piezometer
- Well Screen Interval

Cross-Section E-E'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 9A



Notes

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Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs — Diesel-Range Petroleum Hydrocarbons
VOCs — Gasoline-Range Petroleum Hydrocarbons
cPAHs — Heavy Oil-Range Petroleum Hydrocarbons

- Detected at a concentration greater than the MTCA Method A cleanup level.
- Detected at a concentration less than the MTCA Method A cleanup level.
- Not Detected
- Not Analyzed

B14-5 — Boring Id

- Inferred Soil Contact
- Analytical Sample Location
- Perched Groundwater Observed During Drilling
- Groundwater Level Observed During Drilling
- Groundwater Level Observed in Piezometer
- Well Screen Interval

40 0 40
Horizontal Scale in Feet
20 0 20
Vertical Scale in Feet
Vertical Exaggeration: 2X

Cross-Section E-E'

Rufus 2.0 Development
Seattle, Washington

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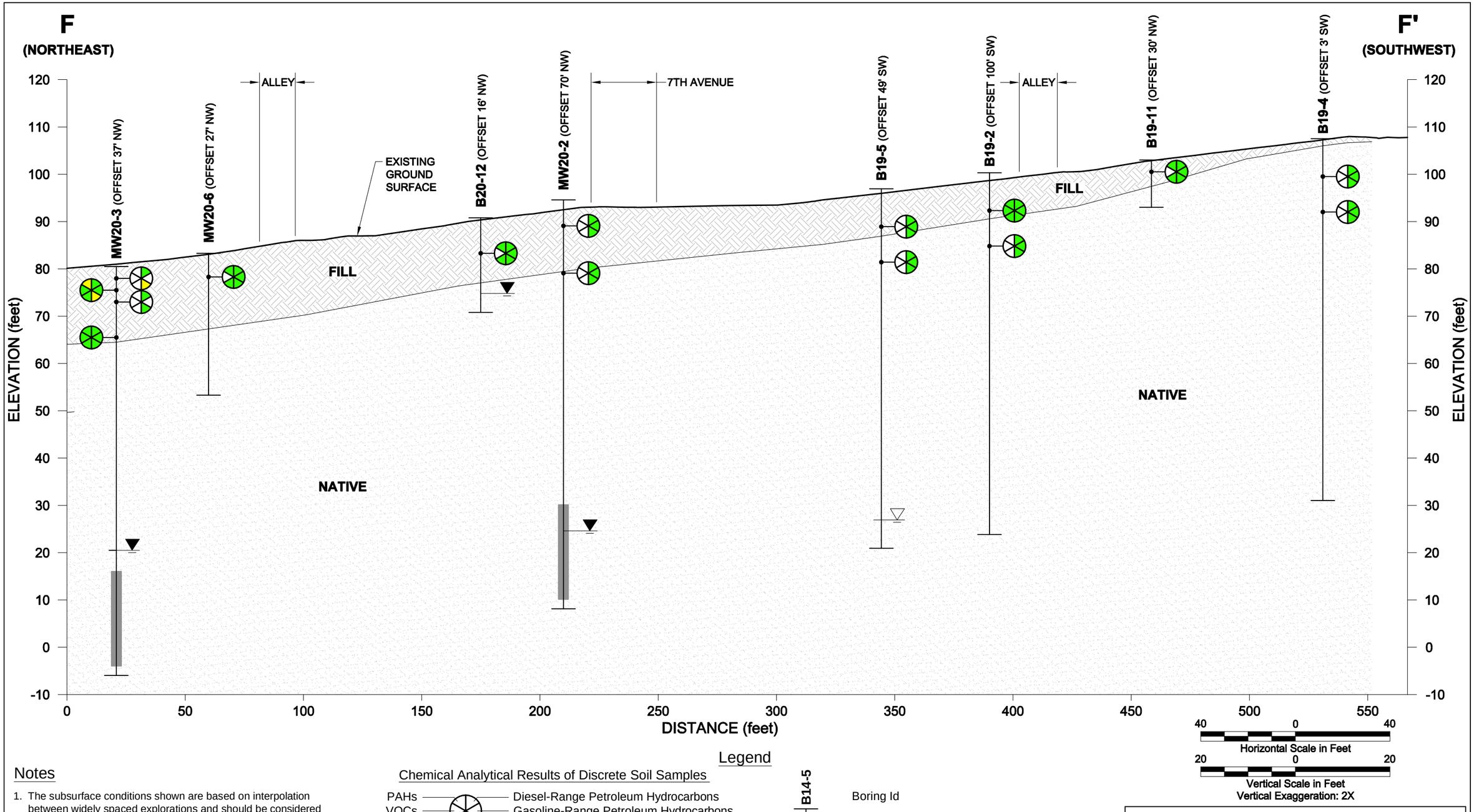
Figure 9B



Notes

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Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs
VOCs
cPAHs

- Diesel-Range Petroleum Hydrocarbons
- Gasoline-Range Petroleum Hydrocarbons
- Heavy Oil-Range Petroleum Hydrocarbons

- Detected at a concentration greater than the MTCA Method A cleanup level.
- Detected at a concentration less than the MTCA Method A cleanup level.
- Not Detected
- Not Analyzed

B14-5 — Boring Id

- Inferred Soil Contact
- Analytical Sample Location
- Perched Groundwater Observed During Drilling
- Groundwater Level Observed During Drilling
- Groundwater Level Observed in Piezometer
- Well Screen Interval

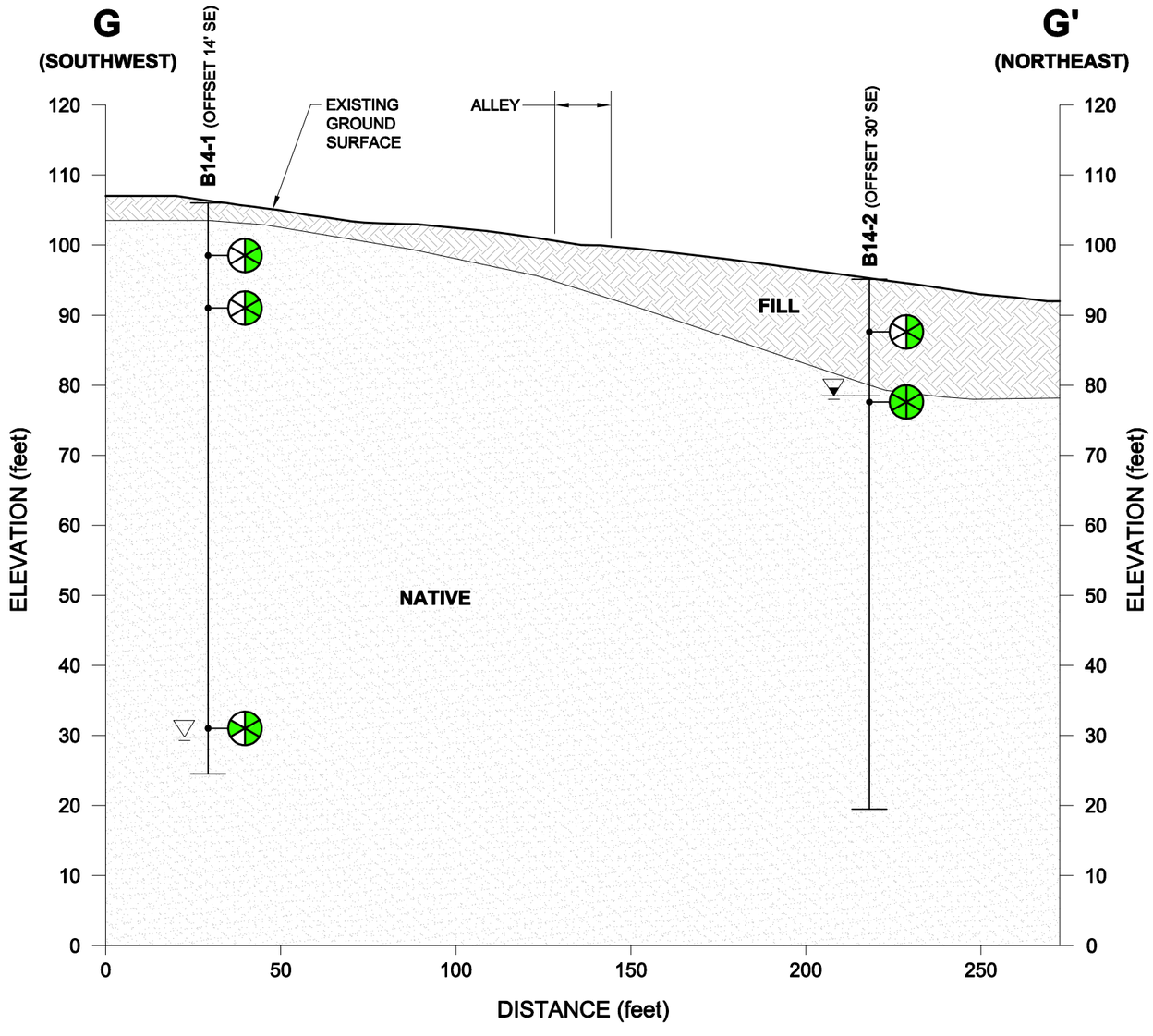
Cross-Section F-F'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 10

P:\20\20434001\CAD\Environmental April 2012 Report\20434001-02 T100 Environmental Fig 5-11.dwg\TAB:FF modified by tmichaud on Apr 26, 2012 - 11:46



Notes

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012.

Legend

Chemical Analytical Results of Discrete Soil Samples

PAHs
VOCs
cPAHs

Diesel-Range Petroleum Hydrocarbons
Gasoline-Range Petroleum Hydrocarbons
Heavy Oil-Range Petroleum Hydrocarbons

Detected at a concentration greater than the MTCA Method A cleanup level.
Detected at a concentration less than the MTCA Method A cleanup level.
Not Detected
Not Analyzed

B14-5 — Boring Id

Inferred Soil Contact
Analytical Sample Location
Perched Groundwater Observed During Drilling
Groundwater Level Observed During Drilling
Groundwater Level Observed in Piezometer
Well Screen Interval

40 0 40
Horizontal Scale in Feet
20 0 20
Vertical Scale in Feet
Vertical Exaggeration: 2X

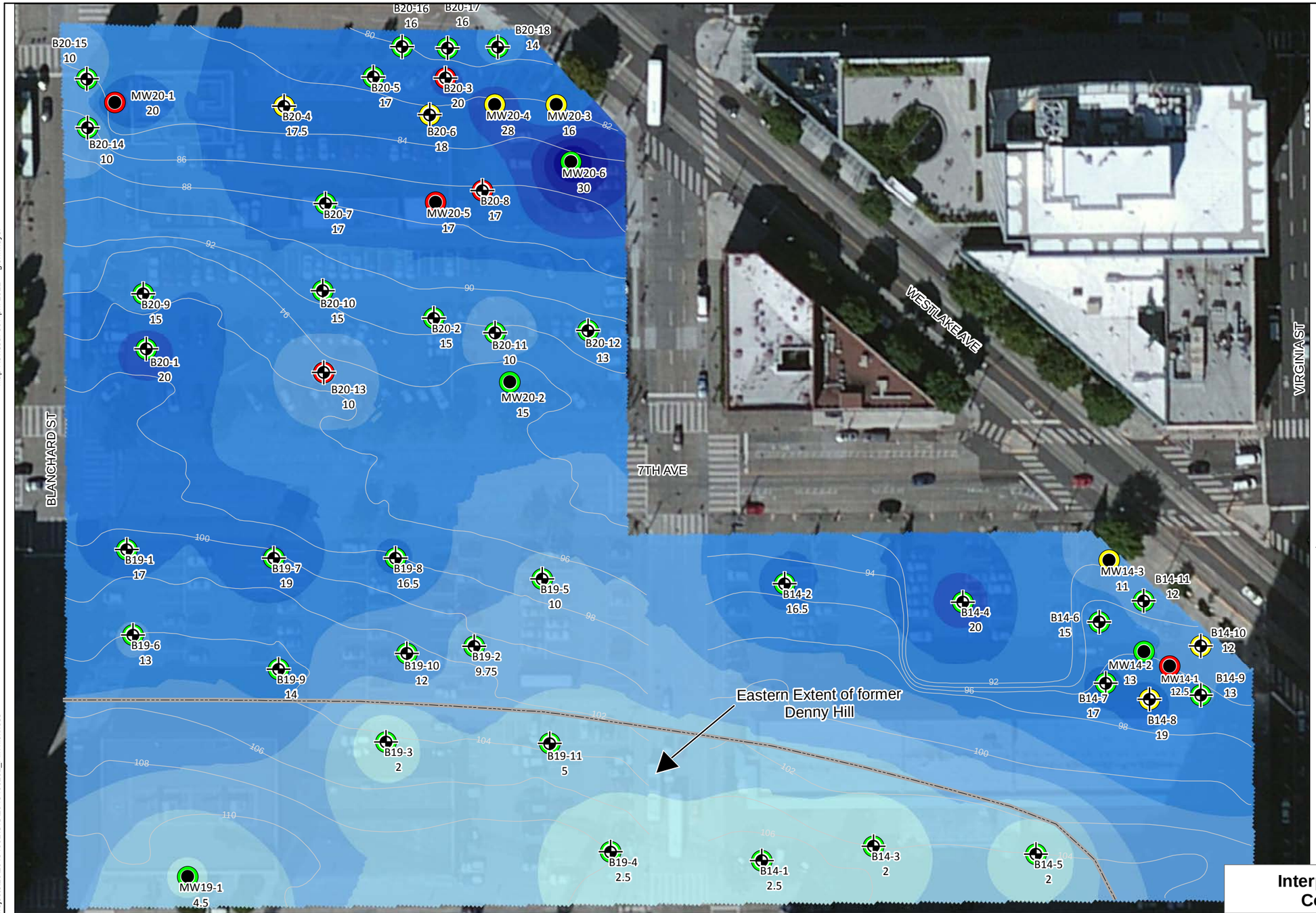
Cross-Section G-G'

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 11

P:\20\20434001\CAD\Environmental April 2012 Report\20434001-02 T100 Environmental Fig 5-11.dwg\TAB:GG Modified by TMichaud on Apr 26, 2012 - 11:47



B14-1 2.5 — Boring — ID / Fill Thickness

MW14-1 12.5 — Monitoring Well — ID / Fill Thickness

Contaminants of Concern

Contaminants of concern detected at concentrations greater than the corresponding MTCA Method A cleanup levels in one or more soil samples obtained from the boring. See cross-section A-A' (Figure 6) for chemical analytical results of discrete soil samples. For MW14-1 previous results indicate exceedances of MTCA

Contaminants of concern detected at concentrations less than the corresponding MTCA Method A cleanup levels. See cross-section A-A' (Figure 6) for chemical analytical results of discrete soil samples.

Contaminants of concern were not detected. Metals were detected at concentrations similar to natural background concentrations.

Fill Thickness

(Feet)

2
10
20
30

Current Site Elevation

Eastern Extent of former Denny Hill

Note - The remainder of the Subject Properties were filled as part of the Denny Regrade

N E S W

0 70

Feet

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet
Current site elevation contours generated from LiDAR provided by King County (2003)

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Interpolated Fill Thickness and Contaminants of Concern

Rufus 2.0
Seattle, Washington

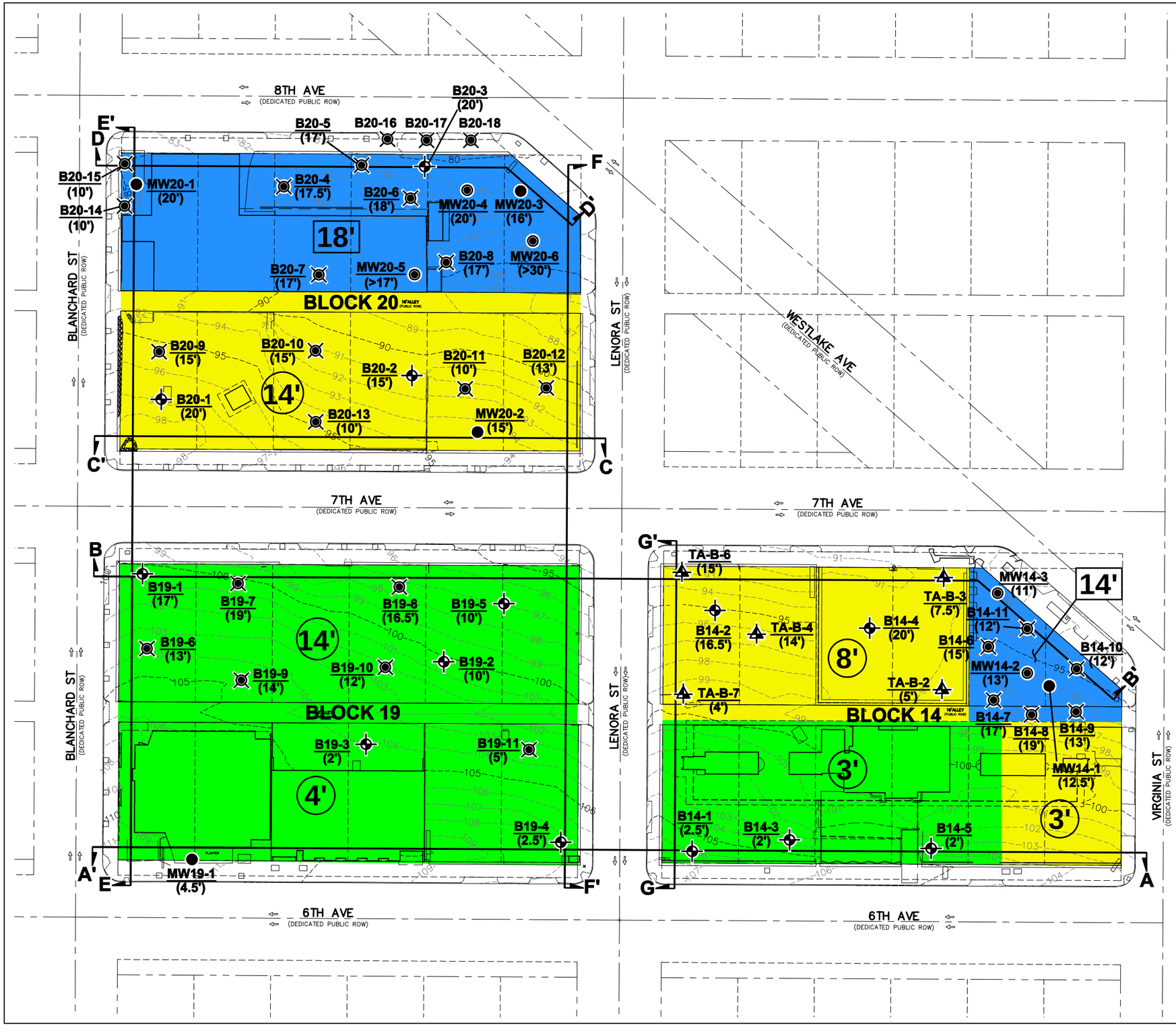
GeoEngineers

Figure 12

Map Revised: 30 April 2012 glohrmeyer

Path: \\sea\projects\20\20434001\GIS\20434000102_FillThickness

Office: SEA



Legend

- MW14-3 — Shallow Monitoring Wells Completed in April 2012
- B14-6 — Direct-Push Borings Completed in April 2012
- B14-1 — Hollow-stem Auger Borings Completed in February 2012
- MW19-1 — Monitoring Well Completed in February 2012
- TA-B-2 — Boring/Monitoring Completed by Others
- (2') — Approximate Fill Thickness Observed in the Boring
- A — A' — Cross-Section Location
- Contaminants of concern detected at concentrations greater than the MTCA cleanup levels. Soil excavated from these locations will be transported to either Waste Management or Allied Waste for permitted disposal.
- Contaminants of concern detected at concentrations less than the MTCA cleanup levels. Fill soil excavated from these locations will be transported to CEMEX for permitted disposal as a Class II soil.
- Contaminants of concern either not detected or detected similar to natural background concentrations in fill soil. Soil excavated from these locations may be disposed of as "clean" soil, at the discretion of the owner.
- 4' — Average Fill Thickness (feet) Estimated to Calculate Soil Disposal Costs
- 18' — Average Soil Contamination Thickness (feet) Estimated to Calculate Soil Disposal Costs

80 0 80
FEET

Notes

1. The locations of all features shown are approximate.
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Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings , Inc., dated March 2012. Aerial photo from Aerial Express, 2009.

Soil Management Categories

Rufus 2.0 Development
Seattle, Washington

GeoEngineers

Figure 13

P:\20\20434001\CAD\ENVIRONMENTAL APRIL 2012 REPORT\20434001-02 T100 ENVIRONMENTAL FIG 13.DWG\TAB:FIG 10 MODIFIED BY TMICHAUD ON MAY 10, 2012 - 11:46