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Earth and Environmental Technologies

Specifications for Remedial Action Soil Capping, Precipitate Management, and Drainage Improvements

The Hudson Street Site Seattle, Washington

Prepared by
Hart Crowser, Inc.

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EXPIRES 11/19/ 97

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SPECIFICATIONS FOR REMEDIAL ACTION
SOIL CAPPING, PRECIPITATE MANAGEMENT, AND DRAINAGE IMPROVEMENTS
THE HUDSON STREET SITE
SEATTLE, WASHINGTON

1.0 INFORMATION AND CONDITIONS

1.1 Introduction

Hart Crowser, Inc., under contract with the Joint Defense Team, requires the services of an independent Contractor to perform site preparation, limited cement kiln dust (CKD) excavation and relocation, soil capping, revegetation, and other supporting construction activities for the Hudson Street site. The requirements of this work is described in these specifications and attached construction plan sheets (Sheets 1 through 8). Hart Crowser, Inc., is currently negotiating a contract with the Joint Defense Team for environmental remediation services at the Hudson Street site. As part of the work to be performed, an independent Contractor will be needed to perform site preparation, limited cement kiln dust (CKD) excavation and relocation, soil capping, revegetation, and other supporting construction activities for the Hudson Street site. The requirements of this work is described in these specifications and attached construction sheet plans (Sheets 1 through 8). The award of a subcontract to the preferred bidder will be contingent upon Hart Crowser successfully entering into a contract with the Joint Defense Team for the environmental remediation services described above.

The project Site consists of two separate CKD fill areas (or lobes) which extend directly off of 16th Avenue SW, within the densely vegetated greenbelt of West Seattle, just off of West Marginal Way. The location of the site is shown on Plan Sheet 1. The two lobes of fill, identified as the McFarland and Puget Park lobes (see Plan Sheet 2) have footprint sizes of approximately 0.7 and 2.3 acres, respectively. The top surfaces of each lobe are relatively flat and contain light to dense grass and brush cover. The slopes of the lobes are covered with small to medium size alders and dense brush, with varying grades ranging from 20 to 40 degrees.

Both CKD fill areas consist of up to 20-foot-thick layers of CKD, extending west from the roadway (16th Avenue SW), following the natural slope of the area. Large portions of the CKD fill areas are covered with a compacted soil fill material, generally consisting of a gravels and sandy silt. Both CKD fill areas were also observed to contain small quantities of debris, including crushed concrete and brick, wood, plastic material, and discarded house and auto goods.

1.2 Definitions

A. The Site is referred to as the Hudson Street site, located just off of West Marginal Way within the City of Seattle, Washington. The Site is currently undeveloped and unrestricted, and part of a densely vegetated greenbelt of West Seattle. The Site consists of two lobes of CKD fill (known as the Puget Park lobe - owner is the City of Seattle; and the McFarland lobe - owner is Mr. John McFarland), four CKD precipitate areas, and associated surface water drainages.

B. The Joint Defense Team, who will be funding the Hudson Street remediation project, consists of Holnam, Inc., The City of Seattle, and Mr. John McFarland.

C. Hart Crowser, Inc. is the environmental and geotechnical engineering consultant for all portions of the site work described within these specifications and attached plans. Hart Crowser will be directing activities associated with site remediation and review Work performed by the Contractor to determine if it is in general accordance with these Specifications and the attached Plans.

D. The Contractor will be the successful bidder who is awarded the contract for this project. The Contractor is responsible for providing all equipment, labor, materials, and other resources necessary to complete the scope of this work.

E. The Contract shall consist of these Specifications and attached Plans (Sheet 1 through 8), Bid Form, and the Subcontract Agreement for Remediation Services which the Contractor shall be required to sign, agree to, and execute. Modifications or additions to this Contract (e.g. including AGC or AIA standard forms or agreements) may be made at the time of award of contract. Any changes to this Contract shall be agreed to in writing by both Hart Crowser and the Contractor at the time of award of contract.

F. The Work to be performed under this Contract is summarized in Section 2.1, Summary of Work, and fully detailed within these Contract documents. As deemed necessary and agreed upon during the execution of this Work, Hart Crowser, the Joint Defense Team, and the Contractor reserves the right to make changes to or modify requirements of this Work without any changes to the Contract price.

1.3 Period of Service and Schedule

- Pre-bid walk-through of project Site — 1:00 p.m., Tuesday, July 8, 1997
- Bids due (2 original copies) — 12:00 p.m., Thursday, July 17, 1997
- Award of Contract — Tuesday, July 22, 1997
  (note: tentative date, may be extended by Hart Crowser)
- Approximate Start of Work — Wednesday, July 23, 1997
- Complete Planned Work — Friday, August 29, 1997
  (note: revegetation activities may be extended through October 1997)

The Contractor may submit with its bid package any proposed revisions to the above schedule. Dates will be extended day-to-day for events outside of the Contractor's control, such as acts of God and severe weather conditions (including heavy rain) without additional compensation.

The Contractor must attend the pre-bid site walk to be considered for this project. Submit all questions concerning any discrepancies in plans or work procedures or any difficulties in work requirements or schedule in writing to Hart Crowser, attention Roy Kuroiwa, P.E., no later than Monday, July 14, 1997. Questions will be answered in writing and sent to all bidders as an addendum. Verbal responses by Hart Crowser will be considered non-binding information. All bids will be opened privately.

1.4 Insurance

The Contractor shall maintain insurance in accordance with paragraph 8.0 of the attached Subcontractor Agreement for Remediation Services. The Contractor shall provide copies of the insurance policies and all endorsements to Hart Crowser prior to start of work.

1.5 Performance and Payment Bond

The Contractor shall provide and maintain a performance and payment bond for the duration of the project in accordance with paragraph 7.0 of the attached Subcontractor Agreement for Remediation Services.

1.6 Taxes

The contract price will include all applicable federal, state, and local taxes in accordance with the attached Subcontractor Agreement for Remediation Services.

1.7 Compliance with Laws, Regulations, Permitting, and Licensing Requirements

The Contractor warrants that it shall comply with all laws, regulations, codes, and ordinances that are applicable to Contractor's work to be performed and products to be delivered under this Contract. The Contractor shall procure and maintain at its own expense, all permits and licenses, required by law, to perform the services authorized under this Contract. Contractor shall provide evidence of meeting the permitting and licensing requirements to Hart Crowser prior to starting work. All correspondence with the Department of Ecology, the City of Seattle, or any other public agency shall be made with prior approval by Hart Crowser only.

1.8 Bid Form

The enclosed Bid Form is part of this Contract.

1.9 Award Decision

Hart Crowser reserves the right to reject any or all bids and to select a Contractor which best meets Hart Crowser's requirements based on price, qualifications, and experience.

1.10 Industrial Insurance Waiver

By submitting a bid, Contractor expressly waives immunity as to Hart Crowser and its agents or employees under the Industrial Insurance Act, Title 51 RCW and confirms such waiver was negotiated.

2.0 GENERAL REQUIREMENTS

2.1 Summary of Work

The remedial approach for exposed CKD in the fill areas at the Hudson Street site shall be the installation of an enhanced soil cover, revegetation of the disturbed areas, and drainage control of the surface waters and perched groundwater seeps. Construction of the remedial alternative shall be carried out by the Contractor to minimize disturbances and impacts to the existing 25 years of natural growth cover. Only areas of CKD which are exposed (i.e., little to no soil cover) will be cleared of existing vegetation, covered with a soil-geoweb or soil-only cover, and revegetated with hydroseed and select plants. Plan Sheets 3 and 7 outlines those areas of exposed CKD which will receive the geoweb, soil, and vegetative cover.

2.2 Project Coordination and Meetings

The Contractor shall attend a pre-construction meeting held within 7 days after award of the Contract. The construction schedule shall be provided prior to or at this meeting and shall be reviewed in detail at this meeting.

Weekly project meetings will be held on site each Friday morning at 9:00 a.m. to discuss and update schedules, planned activities, and other issues.

The Contractor shall provide a written, daily report to Hart Crowser (no later than 10:00 a.m. the following work day) which shall include as a minimum: work performed, as related to the construction schedule; work inspected or tested and results thereof; materials and equipment delivered; major work problems or issues, such as delays; and other Contract issues.

Construction Schedule. The Contractor shall prepare and submit a construction schedule detailing the major elements of this Work. These major elements include as a minimum: submittals; procurement of materials and supplies; site preparation activities (Best Management Practices); soil-geoweb and soil-only cover installation; precipitate excavation; drainage improvements; revegetation; contract closeout; etc. The schedule shall be revised as required by the conditions of the Work. Hart Crowser will review the construction schedule and the Contractor shall revise the schedule as requested.

The Contractor shall start work as soon as Award of Contract is given and carry the Work to completion as quickly as reasonably possible, within the time frame established in Section 1.3.

The Contractor shall coordinate scheduling, submittals, subcontractors, and other Work associated with these Specifications to assure efficient and orderly sequence of installation of interdependent construction elements.

2.3 Submittals

The Contractor shall transmit the required submittals to Hart Crowser by the deadline specified for each submittal. The Contractor shall not commence work on any task or transport any material or supply onto the site for which the submittal is required until an approval by Hart Crowser has been issued. All specified submittals shall be submitted to Hart Crowser for review and approval at least 3 days prior to delivery to site. At a minimum, the Contractor shall submit for review by Hart Crowser the following:

- Site Health and Safety Plan;
- Earthwork Materials;
- Geoweb, anchors, stakes, and tendons;
- Geotextiles;
- Construction Schedule; and
- Hydroseed Mix.

2.4 Change Orders

Hart Crowser and the Contractor shall execute appropriate Change Orders (or Written Amendments) covering changes in the Work or changes in the Contract price or schedule. Without invalidating the Contract and without notice to any surety, Hart Crowser may, at any time or from time to time, order additions, deletions, or revisions in the Work, which may either be authorized in advance by a written Change Order or directed by Hart Crowser with the understanding that the Contractor shall be entitled to an equitable adjustment. Upon receipt of such Change Order, the Contractor shall promptly proceed with the Work involved, performed under the applicable conditions of this Contract. Change Orders shall be based on a written scope of work and the unit prices provided herein or otherwise agreed upon price.

2.5 Quality Control and Quality Assurance

All work shall be done in accordance with this Contract.

All materials supplied by the Contractor for this project shall be of new manufacture, conforming to the standards set forth in these Specifications, free from defects in workmanship or material, and intended by the manufacturer for the planned use. The Contractor shall follow these Specifications and manufacturer's instructions for product use and installation.

Hart Crowser will observe workmanship and material furnished and delivered and is empowered to reject and refuse all labor, materials, methods of application, or any part thereof, which does not comply in kind or quality with these Specifications and the Plans. The Contractor's work and material may be inspected by Hart Crowser at any time. Material that in any way becomes unfit shall not be used in the work even if they were previously approved.

2.6 Site Health and Safety

The Contractor shall be responsible for all matters relating to the health and safety of its personnel and equipment in performance of the Work for main training security at the Project Site during the work. This Work shall be performed in compliance with OSHA 29 CFR 1910.120 and WISHA 296-62 Part P regulations and a site-specific Health and Safety Plan. This includes recognition of the potential health and safety hazards associated with the Work and includes compliance with the minimum requirements of the Contractor's Health and Safety Plan and other health and safety plans in force for the work.

Without limiting Contractor's responsibilities above, Contractor warrants that all its employees who engage in operations that could expose them to potentially hazardous substances, situations, or other health hazards, have obtained the necessary health and safety training specified in 29 CFR 1910.120 and WAC 296-62-300 Part P. Contractor shall provide Hart Crowser with evidence of the necessary certifications for each of its employees before beginning work on the project Site.

Failure to comply with either general safety practices or health and safety practices as described above may result in temporary shut-down or termination at the expense of the Contractor. The safety requirements of the work as described above apply without regard to time, place, or presence of a Hart Crowser representative.

Potential Chemical Hazards. The project site consists of two cement kiln dust fill areas. Cement kiln dust (CKD) is a cement processing by-product with elevated alkalinity and trace metals, such as arsenic and lead. Infiltrating rainwater dissolves carbonate materials from the CKD and transports them to areas of seepage, where they are deposited, forming the site's precipitate areas. Cement kiln dust is considered a Special Waste in Washington. Certain regulatory requirements apply under WAC 303-073, and a Material Safety Data Sheet (MSDS) is enclosed in this package. The Contractor shall follow the minimum requirements provided in the MSDS.

2.7 Construction Facilities and Temporary Utilities

The Contractor shall supply his own on-site office and sanitary facilities. The Contractor's office and sanitary facilities shall be located in the area indicated on Plan Sheet 3. At a minimum, the Contractor shall provide one portable toilet facility for use by the Contractor, Hart Crowser, the Joint Defense Team representatives, and other authorized representatives. The Contractor shall supply his own electrical, water, and other utilities necessary to complete the work. The Contractor shall arrange and pay fees for any permits or hookups to utilities.

The Contractor shall accept all responsibility for loss or damage to equipment or materials left at the Project Site.

2.8 Utilities

The Contractor shall be responsible for exercising care when operating equipment in the vicinity of utilities, whether overhead, at ground level, or buried. Contractor shall take all steps necessary to locate utilities prior to excavations including compliance with the requirements of Chapter 19.122 RCW. Such steps shall at least include obtaining available drawings showing public utilities and making arrangements with utility companies and locator services to locate public or private underground utilities immediately before excavation. Contractor shall be fully responsible for repairing any damaged utilities at the Contractor's sole expense, where such utilities could have been located by taking all reasonable steps.

2.9 Environmental Protection

Dust Control. The Contractor shall maintain continuous dust control during all activities associated with the work described in the Specifications. No visible air-borne dust shall be generated by site activities. If in the opinion of Hart Crowser visible dust is present or being generated, the Contractor may be instructed to cease these operations until visible dust has been controlled. Contractor shall pay for all costs associated with dust control and ceasing or revising operations associated with dust control; the project schedule shall not be extended as a result.

Soil Erosion Control. The Contractor shall control soil erosion from precipitation runoff or run-on to or from excavations, stockpiles, graded areas, or other soil areas exposed or disturbed during Contractor activities. The Contractor shall use, at a minimum, soil berms, surface water diversion and control, straw bales, temporary visqueen covers, silt fences, or other means approved by Hart Crowser. Under any circumstances, the Contractor shall prevent CKD from contacting the Puget Creek, the stream which runs along the boundary of the project site.

Control of Spills from Contractor. The Contractor is responsible for control and cleanup of soil, water, or other materials resulting from spills, accidents, or other events during this work that are not associated with existing site conditions. All work associated with the above shall be at the Contractor's expense.

2.10 Site Security

The Contractor shall be responsible for providing site security during all construction activities, during working hours and non-working hours, throughout the entire duration of the project. The intent of the site security measures is to prevent damage, loss, or theft of the Contractor's equipment and materials, and to restrict public access to the equipment, materials, and Project Site.

Any damage or loss as a result of the Contractor's failure to provide adequate site security shall be the responsibility of the Contractor.

2.11 Contract Closeout

The Contractor shall notify Hart Crowser in writing at the end of the project that Work has been performed in accordance with these Specifications and the attached Plans and is ready for Hart Crowser's review and inspection.

All final cleaning must be completed prior to final inspection. Contractor shall clean all areas used or effected by the Contractor's operative and sweep paved areas maintaining dust control objectives. Sweepings and Contractor solid waste and other materials shall be hauled off site at the Contractor's expense.

The Contractor shall provide to Hart Crowser originals (or copies if originals unavailable) of all landfill trip tickets, material weight tickets, and other receipts and certifications associated with this Work.

The Contractor shall perform a final survey of the extent of completed activities, including limits of geoweb-soil cover, soil-only cover, precipitate gravel chambers, and drainage improvements. The as-builts survey shall be provided as an overlay with the Plans (to be provided to the Contractor as an electronic ACADD file). The Contractor shall utilize W&H Pacific to perform the final survey.

3.0 SITE WORK

3.1 Site Preparation

The Contractor shall prepare and maintain haul routes from excavation and construction locations to stockpile locations. The haul routes are shown on Plan Sheet 3 and will be field located and verified by Hart Crowser and the Contractor.

Erosion and sedimentation controls (soil berms, hay bales, silt fences, and stabilized construction entrances, as shown on Plan Sheets 3 and 8) shall be constructed prior to commencing any work in the adjoining area. Soil berms shall be constructed of existing on-site soils as shown on the Plans.

Measure and stake limits of CKD cover locations placement prior to removing existing vegetation. The Contractor shall confirm the limits with Hart Crowser prior to proceeding with work.

Remove all brush, tall grass, and other vegetation in the areas to receive soil cover, and fall all unmarked trees in these areas. Prior to the Contractor beginning site preparation, Hart Crowser will mark the trees to remain, using spray paint or survey tape or other method. Approximately 25 percent (one-quarter) of the existing trees shall be marked to remain. The trees to remain will generally include those that are largest and/or healthiest, in Hart Crowser's judgment.

Trees shall be cut at or below the level of existing ground. The entire felled tree shall be dragged to one of the designated temporary stockpile areas. The tree limbs shall be removed and the trunks of the cut down trees shall be bucked (cut up) into 8-foot-long lengths (to a 3-inch-diameter top). The bucked logs shall be stacked in an area designated by Hart Crowser. The logs shall be stacked in a row not taller than 4 feet. All remaining tree parts (i.e., trunks < 3 inches in diameter, limbs, branches, and leaves) shall be shredded and retained as mulch for on-site placement.

3.2 Erosion Control and Decontamination

All construction equipment and vehicles entering and exiting the site shall pass through a stabilized construction entrance. The Contractor shall provide sufficient equipment and pressurized water to perform equipment and vehicle decontamination at the ingress/egress locations.

3.3 Earthwork Materials

All earthwork materials brought onto the site shall be stockpiled in the areas identified on the Plans. Prior to placing the material, visqueen sheeting (sufficient to withstand handling and strong wind action for the duration of this project) shall be laid down on the ground surface at the location of the pile, covering an area at least 3 feet beyond the pile footprint, in all directions. All stockpiles that

are left in place overnight or longer shall be covered with sheets of visqueen that are secured against wind and damage, as shown on the Plans.

The following lists the products required for this project. Any substitutions or modifications to the products used shall be in writing and authorized by Hart Crowser.

Placement of all earthwork materials shall be in accordance with these specifications.

3.3.1 Surface Fill

Surface Fill shall be imported granular soil that is essentially free of organics and other deleterious material, with no rocks or lumps greater than 6 inches in any dimension, and which can be readily placed, graded, and lightly compacted in the Geoweb cells and all other areas requiring surface fill. Surface Fill shall be tested for gradation and moisture content by Hart Crowser, and approved by Hart Crowser prior to use.

3.3.2 Drainage Gravel for Precipitate Excavation Areas

Drainage Gravel shall be Type 21, 1-1/2-inch Crushed Gravel in accordance with Sections 9-03.11 and 9-03.16 of the City of Seattle Standard Specifications. However, the percent by weight passing the No. 200 sieve shall not be greater than 2.0 percent, based on that portion passing the 3/4-inch sieve.

3.3.3 Quarry Spalls

Quarry Spalls shall meet the following requirements for grading:

Sieve Size	**Percent Passing**
8"	100
3"	40 max
3/4"	10 max

3.3.4 Light Loose Riprap

Light Loose Riprap shall meet the gradation given in Section 9-13.2(3) of the City of Seattle 1989 Standard Specifications.

3.3.5 Controlled Density Fill

The Controlled Density Fill (CDF) shall be composed of Portland cement, aggregate, fly ash, and water, and shall conform to the following requirements:

1. Portland Cement: ASTM C150, Types I or II.

2. Aggregate: Sand with or without fine gravel, maximum size 1 inch. Aggregate shall be free of foreign material or organics and shall have less than 20 percent finer than the No. 200 sieve.
3. Water: Potable.
4. Fly ash: Class F, ASTM C618, unless otherwise approved.
5. Admixtures: All admixtures shall be specified in the approved mix design.

Contractor shall determine the materials and proportions used to meet the requirements for these specifications. At least 3 days before placing CDF, the Contractor shall submit to the Engineer a mix design for CDF. No CDF shall be placed until the Engineer has approved the mix design.

CDF shall be proportioned to be a flowable, nonsegregating, self-consolidating, low shrink slurry with an unconfined compressive strength at 28 days of 100 psi (± 50 psi) and a maximum density of 130 pcf. Use no more than 50 lb. of Portland cement per cubic yard. The mix shall be proportioned so that the material is still hand excavatable after long-term strength gain.

3.3.6 Class B Asphalt

Aggregate shall be Type Class B, 1/2-inch maximum medium grading, conforming to Section 9-03.8 of the Seattle Standard Specifications. Asphalt binder shall be paving asphalt, Grade AR-4000W, and shall comply with Section 9-02.1 of the Seattle Standard Specifications. Asphalt concrete mixing and proportioning shall comply with Section 9-03.8 of the Seattle Standard Specifications. Asphalt concrete shall be composed of asphalt and concrete which shall be mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

3.3.7 Top Course

Top Course material shall be Mineral Aggregate Type 1 in accordance with Section 9-03.16 of the Seattle Standard Specifications.

3.3.8 Base Course

Base Course material shall be Mineral Aggregate Type 2 in accordance with Section 9-03.16 of the Seattle Standard Specifications.

3.3.9 Geotextiles

Use Geotextile fabric types as shown on the project plans, or their equivalents, as approved by Hart Crowser. Alternative fabric types shall be submitted to Hart Crowser for approval. Equivalency of geotextiles shall be based on thickness, tensile strength, seam strength, and apparent opening size.

3.4 Soil-Geoweb Cover Preparation

3.4.1 Materials

The Geoweb cellular confinement system shall consist of black polyethylene with 8-inch cell depth, perforated, and with textured surface, as manufactured by the Presto products company, or an equivalent cellular confinement structure that is approved by Hart Crowser. The Geoweb shall meet the following specifications.

Product Code:	GW-A8-30 (or approved equivalent)
Material:	Polyethylene
Sheet Thickness:	1.25 mm ± 5%
Color:	Black
Cell Dimensions:	Standard Cell (8-inch length x 9.6-inch width when expanded)
Cell Depth:	8 inches
Surface Treatment:	Perforated and Textured Surface
Tendons:	TPC-71 or equivalent; 1600 lb. nominal breaking strength
Stake Anchors:	Galvanized reinforcing steel, "J"-shaped rods, 3/4-inch-diameter, 44 inches long. Galvanizing shall be per AASHTO M-218.
Anchoring Pipe:	6-inch-diameter

Short-Term Seam Peel-Strength shall be tested using the U.S. Army Corps of Engineers Technical Report GL-86-19, Appendix A. Minimum short-term seam peel strength shall be 450 lb.

Long-Term Seam Hang-Strength. A 4-inch-wide seam sample shall support a 160 lb. load for 7 days minimum in a temperature-controlled environment undergoing change on a 1-hour cycle from ambient room temperature (74 degrees F ± 6 degrees) to 130 degrees F.

The Geoweb sections shall be provided with a series of aligned holes through the cell walls for the insertion of tendons in the expanded direction of the section. Hole diameter shall be 0.375 inch and positioned 3 inches below the top of the Geoweb section. Holes shall pass through the cell quarter-point and not through the seam.

Contractor shall allow a three-week lead time for procurement and delivery of the Geoweb to the site.

3.4.2 Geoweb Installation

In cooperation with Hart Crowser, the Contractor shall identify all solid waste subject to off-site disposal, as described below.

Remove pieces of debris in excess of 12 inches in length in any direction (tires, concrete or asphalt chunks, disposed appliances, large items of trash, etc.) from all areas to receive Geoweb and from

the area of the existing drainage ravine that is to receive riprap. Remove, by shaking, all loose and clinging soil from the debris. If the loose and clinging soil is CKD, then shake the debris only over areas that are to receive a soil cover. The removed debris shall be transported to and disposed of at a licensed solid waste landfill (as approved by Hart Crowser), at the Contractor's expense.

Prepare soil surfaces to receive Geoweb. The surface shall be graded or smoothed as necessary to allow installation of the Geoweb in accordance with the manufacturer's recommendations. This may require placing surface fill and/or removing existing soils to achieve a smooth surface. Method of preparing sloped surfaces shall be limited to hand work, or other method with prior discussion and approval by Hart Crowser.

Prepare the crest anchorage by excavating a trench to a depth of 4.5 feet for placement of the anchoring pipe, at the locations shown on the Plans. No section of trench shall be left open for more than 48 consecutive hours. Stockpile excavated soils on the side of the trench, away from the slope crest. The soils shall be piled no higher than 5 feet. If any stockpiles are to remain in-place overnight or through a rain event, the stockpiled soil shall be covered with visqueen sheeting to protect it from precipitation, wind, and/or erosion.

Lay the Geoweb sections, unexpanded, end-to-end along the crest of the slope that will receive the Geoweb. Insert the ends of the tendons through the aligned holes in the Geoweb (ten tendons per standard Geoweb section). Place the anchoring pipe in the trench and tie the tendons around the pipe. Lay adjacent pipe sections flush end-to-end in the trench. Make sure that the tendons are pulled taut from the pipe, and then backfill the anchorage trench with the materials that were excavated. Backfill the trench in loose lifts no thicker than eight inches, and compact each lift to a dense and non-yielding condition.

Once the Geoweb system is anchored at the top of the slope, it shall be extended downslope. The Geoweb shall be expanded so that the cells are uniform in shape and size, with dimensions of 8.0 inches tall by 9.6 inches wide, with an allowable tolerance of 0.1 inch in either direction. Anchor the Geoweb to the slope once it has been extended, using a system of steel stakes and tendons as shown on the Plans. Attach restraining clips ("Atra clips" or equivalent) at the prescribed intervals along each tendon, to achieve the necessary load transfer. At each prescribed stake location, drive the stake into the ground until the top of the J-pin stake is flush with the top of the Geoweb section.

Cut Geoweb as necessary to pass it around the trees that remain on the slope. Rejoin cut sections of Geoweb and adjacent Geoweb sections using the seaming techniques shown on the Plans. Following reseaming, the Geoweb shall fit snugly against the existing tree trunks.

Interleaf or overlap all adjacent Geoweb sections and ensure that the adjoining cells are fully stapled.

Place Surface Fill in the Geoweb cells, working from the top of the slope downward. No construction equipment will be permitted on the Geoweb-covered slope during or after its

installation. Limit drop height of fill over exposed Geoweb to a maximum of 3 feet. The Geoweb shall be filled so that each individual cell is filled completely with soil and the Geoweb structure is not visible after the fill has been placed. The final surface of the fill shall everywhere be within 2 inches of the top of the Geoweb. Lightly tamp or roll the fill surface following fill placement.

3.5 Soil-Only Cover

Prepare surfaces to receive soil-only cover by removing vegetation and unmarked trees as described in Section 3.2. Remove pieces of debris in excess of 12 inches in length in any direction (tires, concrete or asphalt chunks, disposed appliances, large items of trash, etc.) from all areas to receive a soil-only cover. Remove, by shaking, all loose and clinging soil from the debris. If the loose and clinging soil is CKD, then shake the debris only over areas that are to receive a soil cover. The removed debris shall be transported to and disposed of at a licensed solid waste landfill facility, at the Contractor's expense.

Place Surface Fill on the area to a depth of at least 12 inches. Compact the Surface Fill in soil-only cover areas to a dense and non-yielding condition. The final surface of the fill shall have no irregularities, pits, or bumps greater than 6 inches in height or depth.

3.6 Precipitate Excavation Areas

The Contractor shall not perform excavation in the identified precipitate excavation areas without a Hart Crowser representative present to assist the Contractor in determining depths and lateral extents of the excavations.

The approximate extents of the precipitate excavation areas are shown on Plan Sheet 3. The excavation areas shown are based on limited site observations and explorations by Hart Crowser. Hart Crowser may order excavation activities to terminate before the limits are achieved, or may order additional excavation beyond the limits. An increase in the excavation limits may occur if areas of substantial precipitate or cemented soil are seen to extend beyond the limits shown on the Plans.

The maximum depth of excavation is one foot. The actual excavation depth shall extend no less than 6 inches below the bottom of substantial precipitate or cemented soils. In some areas the required depth of excavation could be greater than one foot.

Contractor shall minimize disturbance to the excavated surface by keeping excavation equipment out of the excavation, and by beginning excavations at the downslope edge and excavating in an upslope direction.

Materials excavated from the precipitate areas shall be moved to the identified placement areas. The Contractor may elect to temporarily stockpile excavated materials near the excavation before

transporting the material to the placement area. In this case, the material shall be stockpiled on a layer of visqueen sheeting and covered.

Excavated material placed in the identified placement areas shall be placed in horizontal lifts no thicker that 12 inches. Each lift shall be compacted to a dense and non-yielding condition. The excavated material shall be moisture-conditioned as necessary to facilitate compaction. The material shall be placed to form slopes of 4 to 5 horizontal to 1 vertical at the two placement areas, as shown on the plans. If the volume of excavated material exceeds the amount needed to create these slopes, it will be necessary to create a slope that is flatter than 3:1, to accommodate a greater volume of excavated material.

Following excavation of precipitate areas, place geotextile on the bottom of the excavation. During placement of the drainage gravel, the underlying geotextile shall not be damaged. Drainage gravel shall be placed in horizontal layers not to exceed six inches in loose thickness, and each lift shall be compacted to a dense condition by the use of vibratory or mechanical compactors. Following placement of the drainage gravel, place geotextile over the top of the drainage gravel. Unroll the geotextile loosely across the excavated subgrade or drainage gravel in a manner than will allow the geotextile to conform to surface irregularities. Do not use geotextiles that are torn or are otherwise damaged. Adjacent geotextile sections shall be overlapped a minimum of 2 feet. Place geotextile panels so that an uphill panel will overlap an adjacent downhill panel. The Contractor shall not allow equipment or vehicles directly on installed fabric.

3.7 Site Drainage Improvements

3.7.1 Drainage Ravine Stabilization

The existing swale leading from the outlet of the existing 8-inch steel culvert pipe to the top of the ravine shall be stabilized by lining with at least 6 inches of quarry spalls. The swale measures 4 feet wide and 1 foot deep at its center, and shall slope toward the south so that flow exiting the 8-inch steel culvert pipe is routed to the ravine.

Existing debris shall be removed from the existing drainage ravine, and Geoweb placed on the McFarland Lobe western slope, prior to placing light loose riprap in the ravine.

Light loose riprap shall be placed on the existing ground surface of the ravine, from the bottom of the ravine to the top, in a layer at least 1 foot thick, across the ravine in a band measuring at least 8 feet wide. Provide at least 3 feet of overlap (measured horizontally) onto and over the Geoweb on the adjacent eastern (McFarland) slope. Place light loose riprap with the largest rocks against the fill slope, with the remainder of the rocks placed in progressively smaller sizes such that the smaller rocks will key into the larger rocks to form a tight protective blanket against erosion and movement.

Construction equipment shall not be permitted on the existing ravine slopes while placing light loose riprap.

3.7.2 New Culvert Pipe

The new culvert pipe shall consist of 12-inch internal diameter ductile iron piping.

Culvert installation, including excavation through the existing asphalt, placement of the pipe, and replacement of asphalt, shall be conducted in accordance with Section 7-02 of the 1989 City of Seattle Standard Specifications. The entire process of culvert excavation and construction shall be completed within no more than two days. The culvert trench shall be open along no more than one-half of its length at any time, so that roadway traffic and emergency equipment always has room to pass. Trenches shall not be left open overnight. Provide traffic control, barricades, and warning devices as needed.

Excavate at the inlet and outlet of the new culvert pipe as necessary to form the flow separation structure and flow junction structures as shown on the Plans. Lay geotextile over the subgrade in a uniform layer to the extents shown on the Plans. Quarry spalls shall be placed in the flow separation and flow junction structures without damaging the underlying geotextile, to the extents and thicknesses shown on the plans.

Excavate the trench through the existing roadway shoulder and asphalt to a depth sufficient to provide at least six inches of bedding below the bottom of the pipe. Controlled density fill (CDF) shall be placed in the trench to serve as bedding. CDF shall be poured into the trench uniformly in one lift to the elevation of the pipe invert. Place the pipe in the CDF such that it is uniformly supported across its length and such that it is at the specified elevation and remains in a straight alignment between the specified inlet and outlet invert elevations. After the pipe is placed, place CDF around and above the pipe in one uniformly poured lift, until the top surface of the CDF is nine inches below the final roadway surface.

3.7.3 Asphalt Pavement Replacement

Place a 4-inch-thick layer of base course, a 2-inch-thick layer of top course, and a minimum 3-inch-thick layer of asphalt. The final top of asphalt shall match the existing roadway asphalt. In areas of roadway shoulder, use a 3-inch-thick layer of compacted surface fill in place of the upper asphalt layer. Excavated trench soils may be used for this layer if they are granular in nature and are approved by Hart Crowser. Excess, unused excavated soils shall be placed in soil-only cover areas.

Placement of aggregate top course and base course shall comply with Section 4-04 of the Seattle Standard Specifications. Placement of asphalt pavement shall comply with Section 5-04 of the Seattle Standard Specifications. The final asphalt surface shall neatly match the adjacent, existing pavement surface. Do not allow vehicular traffic on asphalt paving until it has cooled and hardened and is capable of supporting vehicular traffic.

3.8 Revegetation

3.8.1 Quality

All plants, and planting and seeding activities shall conform to normal landscape industry standards. Provide only sound, healthy, vigorous plants, free of defects, diseases, and all forms of infestation. Hart Crowser will observe plant materials to verify conformance to the plant schedule and to plant characteristics, and reserves the right to require replacement or substitution of plants that are deemed unsuitable.

3.8.2 Handling

Dig, pack, transport, and handle all plants with care to ensure protection from injury. Store plants in the manner necessary to accommodate their horticultural requirements. Keep plants moist and shaded until the actual time of installation. Do not let them sit in the sun or dry out.

3.8.3 Timing

Hydroseeding should occur as soon as practical following soil placement. Planting should occur during the rainy season (generally October through April), and as recommended by the local landscapers.

3.8.4 Hydroseed

All areas with exposed soil as shown on Plan Sheet 7 shall be covered with a standard slope erosion control hydroseed mixture. The hydroseed mixture shall be adapted to conditions typical of the Puget Sound area. Prior to placing hydroseed mixture on the Stabilized Construction Entrances, place a 4- to 6-inch-thick layer of Surface Fill on top of the quarry spalls.

3.8.5 Trees

All nursery grown trees shall be balled and burlapped (B&B) unless otherwise specified. All existing trees to be retained will be clearly marked with flagging by Hart Crowser. All other existing unmarked trees in the treatment area shall be cut down by the contractor.

Provide at least 1-inch caliper bigleaf maple (*Acer macrophyllum*) trees to be planted in the areas specified on Plan Sheet 7 according to the minimum spacing specified.

3.8.6 Shrubs

All nursery grown shrubs shall be containerized unless otherwise specified. Provide 2-gallon (minimum size) salal (*Gautheria shallon*), Oregon grape (*Mahonia* sp.), and hazelnut (*Corylus*

cornuta) containers. Shrubs shall be planted in the areas shown on Plan Sheet 7 according to the minimum spacing specified.

3.8.7 Stakes and Guys

Provide stakes and deadmen of sound new hardwood (salvaged on-site material okay for use), treated softwood, or redwood, free of knotholes and other defects. Provide wire ties and guys of 2-strand, twisted, pliable galvanized iron wire, not lighter than 12 gage with zinc-coated turnbuckles. Provide not less than 1/2-inch-diameter hose or plastic hose, cut to required lengths to protect tree trunks from damage by wires.

Stakes placed in the Geoweb-covered slopes shall not damage or otherwise interfere with the Geoweb, its tendons, or its steel stakes.

3.8.8 Mulch

Provide organic mulch free from deleterious materials and suitable for top dressing of trees and shrubs, that consists of ground or shredded on-site or off-site plant material.

3.8.9 Planting Trees and Shrubs

Excavate a hole (pit) in the soil whose diameter is approximately 1.5 times larger than the tree or shrub (stock) being planted. The walls of the pit should be vertical and the bottom of the pit should be flat and level. The depth of the pit shall be deep enough to completely cover all of the roots, potting soil, or B&B root ball with soil level with the root collar. On Geoweb covered slopes, sever the Geoweb as necessary to facilitate pit excavation.

For potted stock, remove the plastic container prior to setting the rootstock. For B&B stock, remove or fold back the burlap from the tops and sides of balls (retain on the bottom) prior to setting.

Set the stock plumb and in the center of the pit. When set, place backfill around the base and sides of the rootstock hole and work each layer to settle backfill and eliminate voids and air pockets. The soil should completely cover the rootstock to the collar of the stock.

Provide not less than 2 inches of mulch on top of the excavated pit, work into the backfill, and finish level with adjacent grades. Guy and stake trees immediately after planting, as indicated. Reconnect all severed Geoweb seams around the newly planted stock.

462801/HudsonSpecs.doc
Attachment:
Subcontractor Agreement for Remediation Services
Enclosures:
Bid Form
Plan Sheets 1 of 8 through 8 of 8

SUBCONTRACTOR AGREEMENT FOR REMEDIATION SERVICES

This is an Agreement made by and between:

HART CROWSER, INC.
1910 Fairview Avenue East
Seattle, WA 98102-3699

hereinafter called "Hart Crowser" and

_____
_____
_____

hereinafter called "Subcontractor."

Hart Crowser has entered into an agreement originally dated _____, with:

_____
_____
_____

hereinafter called "Client" which is herein referred to as the "Prime Agreement" and provides for Hart Crowser's furnishing of professional services related to Environmental Remediation Services at the Hudson Street Site. The purpose of this Agreement is to engage Subcontractor to assist Hart Crowser in performing some of those services in accordance with the terms and conditions set forth in the following sections and attachments referenced herein which, together with the acceptance, shall constitute the entire Agreement superseding any and all previous correspondence and arrangements.

1.0 Relationship of the Parties

The relationship between the parties shall be limited to the performance of services as set forth in this Agreement and shall not constitute a joint venture nor a partnership nor an employee/employer relationship. Neither party may obligate the other to any expense or liability outside of this Agreement except upon written consent of the other.

2.0 Confidentiality

(a) Hart Crowser may, from time to time, identify confidential data that Client may furnish to Hart Crowser or Subcontractor or that Hart Crowser or Subcontractor is expected to generate. The Subcontractor shall not disclose any confidential information obtained in the performance of this Subcontract. Any disclosure, dissemination, or presentation of any information, including but not limited to statistical or analytical material or reports obtained during the performance of the Work under this Subcontract by the Subcontractor shall be subject to review by Hart Crowser and/or Client before disclosure, dissemination, or presentation in order to determine whether safeguards of confidentiality have been observed.

(b) The Work is to be undertaken as part of confidential, privileged, attorney-client communications; its work product constitutes attorney work-product. In order to protect, as privileged, the communications and materials related to the Work, Subcontractor shall take the following measures:

(1) Subcontractor shall act in all matters pursuant to guidelines and general directions established by Counsel for the Client.

(2) All documents generated by Subcontractor or furnished to Subcontractor by Hart Crowser or the Client shall be considered (unless specifically marked otherwise) confidential and subject to attorney-client, work product, joint defense, and/or other privileges; document generated by Subcontractor shall be clearly marked "PRIVILEGED AND CONFIDENTIAL."

(3) All documents generated by Subcontractor or furnished to Subcontractor by Hart Crowser or the Client or any employee of Client shall be kept in separate files clearly marked "PRIVILEGED AND CONFIDENTIAL."

(4) All documents, correspondence and oral or written reports concerning the work performed under this Subcontract shall be submitted to the designated points of contact for Hart Crowser and Subcontractor.

(5) All of Subcontractor's written reports shall be submitted to Hart Crowser in draft form and shall be approved by Hart Crowser and the Client before submission in final form. Reports shall be clearly marked "PRIVILEGED AND CONFIDENTIAL - DRAFT FOR DISCUSSION PURPOSES ONLY."

(6) Upon termination of this Agreement or at such earlier time as Hart Crowser requests, Subcontractor shall collect and deliver to Hart Crowser any and all notes, documents and other materials received or generated in the performance of this Agreement, including word processing or other electronic data processing media which contain information concerning the Services. Subcontractor may retain one copy of each of the foregoing materials, which shall be kept in a separate locked file marked, "PRIVILEGED AND CONFIDENTIAL." The information in such file shall be subject to all the confidentiality and proprietary protections set forth in this Agreement, and access to such file shall be limited strictly to that necessary by Subcontractor in connection with its obligations under this Agreement. This subsection shall survive the termination of this Agreement.

(7) Subcontractor agrees to obtain the same assurances as to confidentiality and non-disclosure set forth in this Section by written agreement from all persons or entities which may be called upon to assist Subcontractor in performing the Work, including but not limited to lower-tier subcontractors working under Subcontractor's direction. Upon request, a copy of such confidentiality agreement shall be provided to Hart Crowser, prior to the person or entity undertaking any activities or providing any

services pursuant to this Agreement or within thirty days of execution of this Agreement.

(8) Any and all information developed by Subcontractor pursuant to this Agreement, including without limitation any and all reports submitted hereunder, are the sole and exclusive property of the Client. The Client retains the unilateral and unrestricted right to use or distribute such information and reports, or excerpts therefrom, in any and all ways which the Client, or its Counsel on behalf of the Client, may deem appropriate, provided, however, that use by the Client or its Counsel developed by Subcontractor for purposes beyond the scope of this Agreement shall be at the Client or its Counsel's risk. Nothing in this Agreement shall restrict Subcontractor's right to use materials and/or information that are within the public domain at the time Subcontractor acquires such information.

3.0 Period of Service

Subcontractor shall begin work on _____, and all services shall be completed by _____. The established completion time shall not be extended because of any delays attributable to Subcontractor, but may be extended by Hart Crowser, in the event of a delay attributable to Hart Crowser, or because of unavoidable delays beyond the control of the Subcontractor.

4.0 Scope of Work

Subcontractor agrees to perform for Hart Crowser services in accordance with the requirements outlined in this Agreement and the Specifications and Plans. The work to be performed is described the Specifications and Plans in Exhibit A which is herein incorporated and made a part of this Agreement. Subcontractor shall supply all labor, materials, and services necessary to meet the requirements of Exhibit A.

5.0 Payment

Hart Crowser shall pay the Subcontractor the total amount of _____ in accordance with the bid. Payment

will be made based on monthly billings to be submitted to Hart Crowser no later than the 25th of each month. Hart Crowser will review such invoices and, upon approval, process for payment. **Payment to the Subcontractor will be made within two weeks (fourteen days) after receipt of payment to Hart Crowser from the Client. Subcontractor understands and agrees that payment to Subcontractor shall be contingent upon Hart Crowser's receipt of payment from Client for Subcontractor's services.**

6.0 Warranty

Subcontractor warrants that all materials and services are free from defect or material workmanship and conform strictly to the specifications of Exhibit A, drawings, or samples specified or furnished.

7.0 Performance and Payment Bonds

Within 10 days after receipt of the award the proposer to whom the award is made shall furnish two bonds; 1) a performance bond and 2) and payment bond. The performance bond shall be for an amount equal to 100 percent of the subcontract price. The payment bond shall be equal to 50 percent of the contract price. The Surety selected by the Subcontractor must be approved in writing by Hart Crowser.

8.0 Insurance

Subcontractor agrees to obtain at its own expense, to have in force before commencing any work, and to maintain at all times while work is being performed under this subcontract, the following Insurance:

(1) Worker's Compensation insurance as required by state law;

(2) Comprehensive General Liability insurance covering operations, vehicles and equipment, owned or otherwise, with bodily injury limits of $1,000,000 any one person, S1,000,000 any one occurrence, and $1,000,000 annual aggregate; property damage coverage limits of $1,000,000 any one person, and $1,000,000 any one occurrence;

(3) Automobile Liability Coverage with limits of not less than $1,000,000 each person, and $1,000,000 each occurrence; and

(4) Pollution Liability Insurance that provides coverage for personal injuries, property damages, and regulatory cleanup costs arising out of or related to the presence, release, or threatened release of hazardous substances or pollutants in amounts not less than $1,000,000 per occurrence.

(5) Contractual Liability coverage sufficiently broad to insure any indemnities agreed to herein.

All insurance coverage shall be through a company or companies acceptable to Hart Crowser and shall be endorsed to include Hart Crowser and Client as additional insureds with respect to work to be performed for Hart Crowser under this subcontract. Insurance policies, including all endorsements, evidencing the above coverage shall be provided to Hart Crowser prior to commencement of work and shall specify that Hart Crowser must be given, in writing, ten days notice of cancellation, termination, or alteration of the policies evidenced by the certificate. Insurance similar to the above will be required from any and all lower tier Subcontractors that may perform in Subcontractor's behalf.

9.0 Liens and Claims

To the extent allowed by law, Subcontractor shall indemnify and save harmless Hart Crowser from all liens, claims, demands, or suits of whatever nature brought by Subcontractor's laborers, subcontractors, materialmen, or other creditors to enforce a right of any kind made upon or against the work or the real property where the work is performed. As a Condition precedent to final payment to Subcontractor, Hart Crowser will require complete waivers and releases of any and all liens of any person, firm, or corporation.

10.0 Compliance with Laws, Regulations, Permitting, and Licensing Requirements

The Subcontractor warrants that it shall comply with all laws, regulations, codes and ordinances that are applicable to Subcontractor's work to be performed and products to be delivered under this AGREEMENT. The Subcontractor shall procure and maintain at its own expense, all permits and licenses, required by law, to perform the services authorized under this AGREEMENT, including without limitation and if applicable, permits and licenses to transport and handle regulated wastes. Subcontractor shall provide evidence of meeting the permitting and licensing requirements to Hart Crowser prior to starting work.

11.0 Utilities and Other Structures

11.1 - Utilities

Subcontractor shall be responsible for considering location of utilities and of exercising care in drilling or excavating activities around utilities.

Subcontractor shall exercise care when operating equipment in the vicinity of utilities, whether overhead, at ground level, or buried. Subcontractor shall be fully responsible for personal injury, property damage, and repairs caused by damage to subterranean structures and utilities identified or accurately located and for utilities that could have been avoided by careful consideration of the available site information and site conditions or by otherwise taking all reasonable steps.

11.2 - Other Structures

Subcontractor shall exercise care to minimize damage from the use of equipment in paved, lawn or landscaped areas. During mobilization, demobilization, loading, unloading, and when operating equipment in the vicinity of the work, Subcontractor shall be responsible for damages, including but not limited to, any damage to bridges, structures, and landscaping that could have been avoided by careful consideration of the available

site information and site conditions or by otherwise taking all reasonable steps. Subcontractor is responsible for complying with all weight and height limitations, whether posted or not, in moving the equipment across bridges and roadways, near utilities, or on public or private property.

12.0 Indemnity

Subcontractor agrees to indemnify, defend, and hold Hart Crowser harmless from and against any and all claims, losses, expenses, and liabilities of every kind including court costs and reasonable attorneys' fees arising out of or related to Subcontractor's performance or the performance of Subcontractor's agents or employees under this Agreement Provided that Subcontractor shall not indemnify Hart Crowser against liabilities for damages to the **extent** caused by the negligence of Hart Crowser, its agents or employees.

13.0 Taxes

Except as may be otherwise provided in individual purchase orders, the contract price will include all applicable federal, state, or local taxes.

14.0 Supplementary Information

Any specifications, drawings, notes, instructions, engineering notes, or technical data referred to in this subcontract or attached hereto, shall be deemed to be incorporated herein by referenced as if fully set forth. In case of any discrepancies or questions, Subcontractor shall immediately contact Hart Crowser for decision, interpretation, and instructions.

15.0 Title to Drawings and Specifications

Hart Crowser shall at all times have title to all drawings and specifications furnished by Hart Crowser to Subcontractor and intended for use in connection with this subcontract. Subcontractor shall use such drawings and specifications only in connection with this subcontract, and shall not disclose such drawings and specifications to any person, firm, or corporation other than Hart Crowser's or Subcontractor's employees. Subcontractor shall, upon Hart

Crowser's request or upon completion of this subcontract, promptly return all drawings and specifications to Hart Crowser.

16.0 Termination

(a) Hart Crowser may terminate this Agreement, by providing ten days written notice, (1) for convenience, or (2) if Hart Crowser is terminated for any reason by Client. In the event of such termination, Subcontractor will be paid an equitable amount in proportion to the amount of work completed and will not be entitled to profits expected on services not performed.

(b) Hart Crowser has the right to terminate this Agreement for default if the Subcontractor, during performance of the work:

1. Becomes insolvent or makes a general assignment for the benefit of its creditors; files or has filed against Subcontractor a petition in bankruptcy or an attachment or execution levied upon any of Subcontractor's property used hereunder; or has appointed a receiver for Subcontractor's business;

2. Has any legal proceeding commenced against Subcontractor that, in the opinion of Hart Crowser, interferes with the performance and satisfactory completion of the Scope of Work;

3. Fails to perform or refuses to proceed with the work in a prompt, safe, and diligent manner, or fails to supply adequate equipment or properly skilled employees;

4. Fails to pay promptly all monies due Lower Tier Subcontractor for services, labor, or materials used in connection with this work;

5. Fails or refuses to proceed in full compliance with all provisions of this Subcontractor Agreement.

Hart Crowser may, without prejudice to any other rights or remedy it may have, give Subcontractor notice in writing setting forth the particulars of such default. Unless such

default is corrected within ten days from date of said letter, Cart Crowser, at its option, may terminate this Subcontractor Agreement. If Hart Crowser is forced to obtain supplies or services, similar to those terminated, elsewhere, Subcontractor agrees to pay any and all excess costs or expenses incurred by Hart Crowser in connection with reprocurement.

17.0 Governing Law

This Agreement is to be governed by the laws of the state of Washington.

18.0 Severability and Survival

If any element of this AGREEMENT is held to violate a law, then the element shall be deemed void, and all remaining provisions shall continue in force. However, Subcontractor and Hart Crowser will in good faith attempt to replace any invalid or unenforceable provision with one that is valid and enforceable, and which comes as close as possible to expressing the intent of the original provision. All terms and conditions of this AGREEMENT allocating liability between Subcontractor and Hart Crowser shall survive the completion of the services hereunder and the termination of this AGREEMENT.

19.0 Force Majeure

Neither party to this Agreement will be liable to the other party for inability to perform or delays in performing the services, nor for the direct or indirect cost resulting from such inability to perform or delays, that may result from labor strikes, riots, war, acts of governmental authorities, extraordinary weather conditions or other natural catastrophe, or any other cause beyond the reasonable control or contemplation of either party.

The parties have read the foregoing, understand completely the terms and conditions, and willingly enter into this Agreement.

HART CROWSER, INC.	SUBCONTRACTOR
By: _____	By: _____
Position: _____	Position: _____
Date: _____	Date: _____
	Contractor License No.: _____
	Haz. Waste Transporter License No.: _____

BID FORM

Date: _____

To: Hart Crowser
Attn: Roy Kuroiwa
1910 Fairview Avenue East
Seattle, Washington 98102
(206) 324-9530

From: _____
_____
_____
(Contractor's Name and Address)

Contractor License No.: _____

The undersigned, having visited the Site and having familiarized themselves with the local conditions affecting the implementation and the cost of the Scope of Work and with all the requirements of the contract documents and applicable laws and regulations, proposes to furnish all labor, materials, and equipment to complete the referenced project.

The bid prices provided by the Contractor shall be applicable through December 31, 1997, or until completion of the work, whichever comes later.

Base Bid

The Base Bid includes all work specified in these Specifications. This includes Sections 1, 2, and 3, and any written addendum prior to bid opening.

The Base Bid does not include any additional work items and costs listed as Additional Work later in this Bid Form. The Base Bid shall consist of the lump sum price provided below.

$_____

_____
(Write out lump sum price)

As a requirement for submittal of this bid, the Contractor shall also provide in the table below the estimated quantities used in determining the base bid, for each item listed below.

Item	**Quantity Used to Determine Base Bid**
Soil-Geoweb Cover (footprint/fill)	_____ square feet/cubic yards
Soil-Only Cover (footprint/fill)	_____ square feet/cubic yards
Debris Collection and Off-Site Disposal	_____ tons
Area of Excavated Precipitate Area	_____ square feet
Hydroseeding	_____ square feet

At the time of Award of Contract, sufficient backfill soil shall be made available at the Site by the City of Seattle to the Contractor for constructing the 8- to 12-inch-thick soil-geoweb and soil-only covers (does not include material for precipitate management, erosion and sediment control features, and drainage improvement activities). The backfill soil will consist of a silty sandy material originating from a previous West Seattle hill slide event. In order to be considered responsive, the bidders must provide a lump sum price below should this backfill soil not be available on site, which will then be added to the Base Bid in order for the Contractor to procure this material.

$_____

_____

(Write out total deduction from Base Bid)

Unit Prices for Additional Work

The unit prices for Additional Work items listed below will be applied for work which exceeds **(or reduces)** the Base Bid quantities. These unit prices shall be applicable through the completion of the project. All prices include the necessary labor, materials, and equipment to complete the referenced work. These unit prices are subject to credits to Hart Crowser for a reduction in the Scope of Work described in the Base Bid.

1. Removal and off-site disposal of debris to complete construction in accordance with these Specifications, from areas other than the soil-geoweb cover area, the existing drainage ravine, and the soil-only cover area. Debris includes tires, concrete or asphalt chunks, disposed appliances, large items of trash, and the like.

Price $_____per ton.

2. Installation of additional soil-geoweb cover, in excess of the areas identified on Sheet 3 of the Plans, including partial clearing of trees, removal of brush, preparation of the soil surface, and installation of the Geoweb, its stakes, tendons, and crest anchorage, placement of soil infill within the Geoweb, and hydroseeding.

Price $_____per 80 square feet.

3. Installation of additional soil-only cover, in excess of the areas identified on Sheet 3 of the Plans, including partial clearing of trees, removal of brush, preparation of the soil surface, placement of the soil-only cover, and hydroseeding.

Price $_____ per 100 square feet.

4. Excavation of additional precipitate area and construction of additional precipitate gravel chamber and soil cap, outside the limits of precipitate excavation shown on Sheet 3 of the Plans.

Price $_____per cubic yard excavated.

5. Placement of base course, top course, and asphalt pavement outside the limits of the new culvert pipe trench and along the roadway, as indicated on Sheet 6 of the Plans.

Price $_____per square yard.

6. Hydroseeding of areas outside of the limits shown on Sheet 7 of the Plans.

Price $_____per square yard.

Bid submitted by: _____(name)

I certify that I am authorized to submit this bid and that the price(s) noted herein are binding on the Contractor named above.

Date:_____

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Seattle Department of Construction and Land Use

Land Use Information Service

Weekly Bulletin Announcing Land Use Applications, Decisions, Hearings, and Appeals

This document is available, free of charge, on the City of Seattle's Public Access Network (PAN). From terminals in Seattle or King County Library branches, PAN is a main menu choice. The internet address is **http://www.pan.ci.seattle.wa.us.** To access the Land Use Information Service select the Government option from the main menu, then the Licenses and Permits choice, then DCLU.

****

* NOTICE OF APPLICATION *

****

Please see "Other Land Use Actions" for notice of Design Review Pre-Design Applications. Seattle's Department of Construction and Land Use is currently reviewing the Master Use Permit applications described below. Your written COMMENTS ARE ENCOURAGED AND MAY BE SUBMITTED TO:

Department of Construction and Land Use
710 2nd Avenue, Suite 200
Seattle, Washington 98104-1703
FAX 233-7901

For projects other than those requiring Shoreline approvals, the comment period may be extended an additional fourteen (14) days. A written request to extend the comment period must be received by this Department within the initial 14-day comment period as published in this bulletin. Any comments filed after the end of the official comment period may be considered if material to review yet to be conducted. The project file, environmental documentation and other additional information related to the project can be found at the Master Use Information and Notification Center, 710 Second Avenue, Suite 200 (684-8467). Please call prior to coming in to be certain the file and plans are available. The Information and Notification Center is open 8:00 a.m. to 5:00 p.m. on Monday, Wednesday, Thursday, Friday and 10:00 a.m. to 5:00 p.m. on Tuesday.

To the extent known by the Director, in addition to the project permits included in each of the land use applications described below, other government approvals or permits that may be necessary, that are not included in the applications, will also be listed. When a building permit is listed as being necessary, this may include associated electrical, plumbing, mechanical, elevator, and other similar permits.

Please note that "SEPA" refers to the State Environmental Policy Act. Numbers used in project descriptions are approximations. The final approved plans will control.

Interpretations

A formal decision as to the meaning, application or intent of any development regulation in Title 23 (Land Use Code) or Chapter 25.09 (Regulations for Environmentally Critical Areas) is known as an "interpretation". Examples include questions of how structure height or setback are properly measured, or how a proposed use should be categorized. An interpretation may be requested by any party during the comment period as determined above. The request must be in writing, and accompanied by a $660.00 fee payable to the City of Seattle. Interpretations on some issues may also be requested later, during the appeal period, if the project approval is appealed. Failure to request an interpretation can preclude raising the issue on appeal. Questions regarding the interpretation process may be asked by phone by calling 684-8467. Requests for interpretation may be submitted to the Department of Construction and Land Use, Code Interpretation and Implementation Group, 720 Second Avenue, Suite 200, Seattle, WA 98104.

Northeast

10809 Lake City Wy NE **Zone C1 40'** **Project #9703236**

Date of Application: June 4, 1997
Date Application Deemed Complete: June 12, 1997

Applicant Contact: Greg Anderson - **Phone:** 451-0441
DCLU Land Use Planner: Denni Shefrin - **Phone:** 233-7223

Master Use Permit to establish use for future installation of a minor communication utility (Western Wireless) consisting of six panel antennas on the roof of an existing commercial building. Equipment cabinet to be located on the fourth floor of the building.
The following approvals are required:

Administrative Conditional Use to allow minor communication utility on a C1 zone abutting SF7200 to exceed maximum height limit in C1 40'.

Written comments may be submitted through **July 23, 1997.**

Other permits that may be needed which are not included in this application:
Building Permit

3005 S Court St **Zone SF5000** **Project #9703803**

Date of Application: June 26, 1997
Date Application Deemed Complete: June 27, 1997

Applicant Contact: Harold Duncanson - **Phone:** 244-4141
DCLU Land Use Planner: Tom Slade - **Phone:** 233-7193

Master Use Permit to subdivide one parcel into five parcels of land. Proposed parcel sizes are: A) 8,645 sq. ft., B) 7,204 sq. ft., C) 5,778 sq. ft., D) 5,778 sq. ft.; and E) 5,778 sq. ft. Existing shed is to be removed.
The following approvals are required:

SEPA Environmental Determination
Short Subdivision to subdivide one parcel into five parcels of land.

Written comments may be submitted through **July 23, 1997.**

Other permits that may be needed which are not included in this application:
Water Availability Certificate

West Seattle

4751 16th Av SW **Zone SF7200** **Project #9703556**

Date of Application: June 17, 1997
Date Application Deemed Complete: June 30, 1997

Applicant Contact: Roy Kuroiwa - **Phone:** 324-9530
DCLU Land Use Planner: Mark Johnson - **Phone:** 233-3856

Master Use Permit to provide a soil and vegetative cap over cement kiln dust covering approximately 1-1/2 acres. Project includes grading of approximately 940 cu. yds. in Puget Park and 1,550 cu. yds. at 4750 16th Avenue S. W. Environmental Review by Seattle Department of Parks and Recreation.
The following approvals are required:

SEPA to approve, condition or deny pursuant to 25.05.660 SMC.

Written comments may be submitted through **July 23, 1997.**

Other permits that may be needed which are not included in this application:
N/A

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* NOTICE OF DECISION *

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The Director of the Department of Construction and Land Use has reviewed the Master Use Permit application(s) below and issued the following decisions. Interested parties may appeal these decisions.

Hearing Examiner Appeals

To appeal to the City's Hearing Examiner, the appeal MUST be in writing, and be delivered to the Office of the Hearing Examiner, Room 1320, Alaska Building, 618 Second Avenue, Seattle, Washington 98104. Appeals must be received prior to 5:00 P.M. of the appeal deadline indicated below and be accompanied by a $50.00 filing fee in a check payable to the City of Seattle. (The Hearing Examiner may waive the appeal fee if payment would cause financial hardship.) The appeal must identify all the specific Master Use Permit component(s) being appealed, specify exceptions or objections to the decision, and the relief sought. Appeals to the Hearing Examiner must conform in content and form to the Hearing Examiner's rules governing appeals. (The Hearing Examiner's Office has a form that can be used for land use appeals.) A copy of the Hearing Examiner Rules is available for $1.00 from DCLU. The Hearing Examiner's Office also provides a "Citizen Guide to the Office of the Hearing Examiner". To be assured of a right to have your views heard, you must be party to an appeal. Do not assume that you will have an opportunity to be heard if someone else has filed an appeal from the decision. You may contact the Hearing Examiner to request intervenor status on a particular appeal. The Office of Hearing Examiner provides barrier free access.

Interpretations

Issues concerning the proper application of any development regulation in the Land Use and Zoning Code (Title 23) or regulations for Environmentally Critical Areas (Chapter 25.09) cannot be raised as part of this appeal. These issues can be considered in an interpretation, which may be appealed to the Hearing Examiner. Interpretations may be requested by any interested person. Requests for interpretations must be filed in writing prior to 5:00 P.M. on the appeal deadline indicated below and be accompanied by a $880.00 fee payable to the City of Seattle. Requests must be submitted to the Department of Construction and Land Use, Code Interpretation and Implementation Section, 720 Second Avenue. Questions regarding how to apply for a formal interpretation may be asked by phone by calling 684-8467.

Shoreline Decisions

An appeal from a shoreline decision is made to the State Shorelines Hearing Board. It is NOT made to the City Hearing Examiner. The appeal must be in writing and filed within 21 days of the date the DCLU decision is received by the State Department of Ecology (DOE). The DCLU decision will be sent to DOE by the close of business on the Friday of this week. If the Shoreline decision involves a shoreline variance or shoreline conditional use, the appeal must be filed within 21 days after DOE has made their decision. The information necessary for DOE to make their decision will be sent to them by the close of business on the Friday of this week. The beginning of the appeal period may also be provided to you by calling 684-8467. The minimum requirements for the content of a shoreline appeal and all the parties who must be served within the appeal period cannot be summarized here but written instructions are available at the Department of