



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

April 14, 2017

Mr. John Fisher
Development Manager
Copper River Apartments, LLC
120 West Cataldo Avenue, Suite 100
Spokane, WA 99201

Dear Mr. Fisher:

Re: No Further Action at the following Site:

- **Site Name:** 2911 W Fort George Wright Drive
- **Site Address:** 2911 W Fort George Wright Drive, Spokane, WA
- **Facility/Site No.:** 18251
- **VCP Project No.:** EA0320

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the 2911 W Fort George Wright Drive facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.



Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- Diesel-range petroleum hydrocarbons (DRPH) into the Soil.
- Oil-range petroleum hydrocarbons (ORPH) into the Soil.
- Lead into the Soil.
- Methylene chloride into the Soil.
- Carcinogenic polynuclear aromatic hydrocarbons (cPAHs) into the Soil.

Enclosure A includes a detailed description and diagrams of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Herrera, Preliminary Assessment, George Wright Air Force Base, Spokane, Washington, January 20, 2005.
2. Cascade Earth Sciences, Phase I Environmental Site Assessment, July 29, 2014.
3. Cascade Earth Sciences, Phase II Environmental Site Assessment, May 14, 2015.
4. Earth Solutions NW, LLC, Supplemental Phase II Environmental Site Assessment, March 9, 2016.
5. Earth Solutions NW, LLC, Second Supplemental Phase II Environmental Site Assessment, April 5, 2016.
6. Earth Solutions NW, LLC, Cleanup Action Plan, September 9, 2016.
7. Earth Solutions NW, LLC, Cleanup Summary Report, January 13, 2017.
8. Earth Solutions NW, LLC, Maintenance & Repair Plan, March 7, 2017.

Those documents are kept in the Central Files of the Eastern Regional Office of Ecology (ERO) for review by appointment only. You can make an appointment by calling (509) 329-3400.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. **Characterization of the Site.**

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

- The characterization is sufficient to establish cleanup standards and select a cleanup action for the site because the characterization takes into account contaminants detected at the site at concentrations greater than their MTCA Method A (Method A) unrestricted land use cleanup levels for soil.

2. **Establishment of cleanup standards.**

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

- The cleanup levels proposed in the Cleanup Action Plan (CAP) for site contaminants of concern (COCs) are MTCA Method A unrestricted land use cleanup levels for soil.
- Cleanup levels are based on the following:
 - DRPH and ORPH are based on protection of groundwater.
 - Lead is based on preventing unacceptable blood lead levels.
 - Methylene chloride is based on protection of groundwater. cPAHs are based on the direct contact pathway.
- The point of compliance for soil on the site is the standard point of compliance (15 feet below ground surface [bgs]) and is based on the direct contact pathway.

The cleanup standards meet the substantive requirements of MTCA because they provide for protection of human health and the environment through the direct contact pathway and the protection of groundwater.

3. **Selection of cleanup action.**

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

- The proposed cleanup action as identified in the submitted CAP dated September 9, 2016 includes the following:
 - Removal of DRPH, ORPH, cPAHs, and lead-impacted soil to a depth of up to two feet bgs (or deeper) using a mechanical front-loader in the following areas:
 - Throughout the former outdoor skeet shooting range area;
 - The northern half of the designated "New Landfill" area;
 - The steep plateau ridge area immediately east of the outdoor skeet shooting range; and
 - Areas extending beyond the proposed property boundaries.
 - Removal of surficial clay pigeon debris from the former skeet shooting range area, steep plateau ridge area immediately east of the outdoor skeet shooting range, and "New Landfill" area.

- Removal of methylene chloride impacted soil along the southern end of the “New Landfill” area using a mechanical backhoe.
- Soil will be excavated to a 10-foot diameter around each test pit location containing elevated COC results.
- Waste soil generated during excavation activities will be stockpiled at an approved location at the subject property and covered with a waterproof membrane prior to waste characterization sampling and transportation off-site for disposal at an approved landfill. Representative samples of waste soil generated during excavation activities will be collected for waste characterization purposes.
- Discreet performance soil samples will be collected within the excavation areas during remedial activities to assess project cleanup goals.
- Confirmation soil samples will be collected from the base of the excavations and the sidewalls, or in a designated grid pattern, depending on the location of the excavation.
 - Confirmation soil samples from the former outdoor skeet shooting range, the northern half of the “New Landfill”, the steep plateau ridge area immediately east of the outdoor skeet shooting range, and the areas extending beyond the proposed property boundaries will be analyzed for DRPH, ORPH, cPAHs, and total lead.
 - Confirmation soil samples from the southern end of the “New Landfill” (where methylene chloride was found) will be analyzed for volatile organic compounds.
- If wastewater is generated during impacted soil excavation it will be stored temporarily in labeled 55-gallon drums on the property pending receipt of the analytical results for waste profiling. The wastewater will be removed by a subcontractor and will be transported to a permitted treatment, storage, and disposal facility for proper disposal.

The proposed cleanup action meets the minimum requirements in the Washington Administrative Code (WAC) 173-340-360(2) because it protects human health and the environment in a reasonable time frame by removing soil containing site COCs at concentrations greater than the MTCA Method A unrestricted land use cleanup levels. Confirmation sampling will be used to verify the extents of contamination have been reached.

4. **Cleanup.**

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site. This determination is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

Cleanup at the site generally consisted of excavation and removal of petroleum, lead, cPAH, and methylene chloride contaminated soil, and removal of surficial clay pigeon debris in areas that were not excavated. Most of the contaminated soil excavated from the site was transported to Waste Management’s Graham Road landfill in Spokane, Washington for disposal. Excavation was followed by confirmatory soil sampling. If contaminant concentrations in soil samples were greater than Method A cleanup levels, additional excavation was conducted until confirmation samples were less than Method A cleanup levels.

Some contaminated soil from the site was consolidated on Lot 7 and capped with geotextile fabric and at least 6 feet of clean fill soil. Additional information about the capped contaminated soil can be found at the end of this section and in the Environmental Covenant attached as **Enclosure B**. Specific cleanup activities are described below.

- Former Skeet Shooting Range Area
 - Following removal of pine trees and other site cover, soil impacted with DRPH, ORPH, cPAHs, and lead was excavated throughout the former skeet shooting range area to a depth of at least 2 feet bgs using a mechanical backhoe.
 - Confirmation soil samples were taken at regular intervals along the excavation sidewall and also on the floor of the excavation. Excavation was continued until confirmation soil samples were less than Method A cleanup levels.
 - Surficial clay pigeon debris was removed from areas that were not excavated.
- Ridge Area
 - Four test pits were excavated to remove DRPH, ORPH, cPAH, and lead impacted soil in the skeet ridge area.
 - Test pits were excavated in areas identified as contaminated in the initial site investigations. Test pits were completed with a mechanical backhoe to a depth of at least 2 feet bgs and a diameter of 10 feet around the previously identified contaminated sample location.
 - Confirmation soil samples were taken from the floor of the excavation and from each sidewall. Excavation was continued until confirmation soil samples were less than Method A cleanup levels.
 - Surficial clay pigeon debris was removed from areas that were not excavated.
- New Landfill Area
 - Four test pits were excavated to remove methylene chloride, ORPH, and cPAH impacted soil in the New Landfill area.
 - Test pits were excavated in areas identified as contaminated in the initial site investigations. Test pits were completed with a mechanical backhoe to depths ranging between 5 to 7 feet bgs and a diameter of 10 feet around the previously identified contaminated sample location.
 - Confirmation soil samples were taken from the floor of the excavation and from each sidewall. Excavation was continued until confirmation soil samples were less than Method A cleanup levels.
 - Surficial clay pigeon debris was removed from areas that were not excavated.

During impacted soil removal activities along the southern end of the former skeet shooting range area, heavy concentrations of clay pigeon debris mixed with soil was discovered in a sewer pipeline trench that intersected between the former skeet shooting range and New Landfill area. The depths of the clay pigeon debris appeared to coincide with the depths of the sewer pipeline which ranged between 6 to approximately 20 feet bgs. The soil near the section of pipeline that extended within the planned multi-family redevelopment at the site (referred to as the "Northern Parcel" or "Lot 1") was excavated and the soil debris was consolidated and deposited in the New Landfill area ("Lot 7") using a mechanical backhoe. A layer of geotextile fabric was then placed

over the contaminated soil and covered with a cap of clean fill soil at least 6 feet thick. The geotextile fabric extends about 4 feet beyond the lateral extents of the contaminated soil.

A Maintenance and Repair Plan for the capped soil area is included in **Enclosure C**.

An environmental covenant was recorded for Lot 7 (tax parcel 25113.2107) where the contaminated soil is capped. Surveyed figures showing the extent of the contaminated soil and geotextile can be found in Exhibits C and D of the environmental covenant and Appendix C of the Maintenance and Repair Plan.

Compliance with the site cleanup standards was determined using the following:

- Confirmation soil sampling was conducted for site excavations using a combination of floor and sidewall samples.
- Excavations were extended if necessary until confirmation soil samples were less than Method A cleanup levels.
- For details regarding sampling locations, methods, and protocols, refer to the Earth Solutions NW, LLC Cleanup Summary Report dated January 13, 2017.

The cleanup performed at the site has achieved and will maintain cleanup standards because the majority of the contaminated soil was excavated to clean extents as shown by confirmation soil sampling. Contaminated soil left on site was consolidated and capped with geotextile fabric and clean fill soil, and an environmental covenant was filed for the tax parcel the capped soil resides on.

Post-Cleanup Controls and Monitoring

Post-cleanup controls and monitoring are remedial actions performed after the cleanup to maintain compliance with cleanup standards. This opinion is dependent on the continued performance and effectiveness of the following:

1. Compliance with institutional controls.

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. The following institutional controls are necessary at the Site and are detailed in the Environmental Covenant:

- **Containment of soil/waste materials.** The remedial action for the Property is based on containing contaminated soil and debris under a cap consisting of geotextile fabric and at least 6 feet of soil. The primary purpose of this cap is to prevent direct exposure to hazardous substances under the cap. As such, the following restrictions shall apply within the area of the Property as illustrated in Exhibit C of the Environmental Covenant:

Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report

documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the cap and report within thirty (30) days of the inspection the condition of the cap and any changes to the cap that would impair its performance.

- **Stormwater facilities.** To minimize the potential for mobilization of contaminants remaining in the soil on the Property, no stormwater infiltration facilities or ponds shall be constructed within the area of the Property illustrated in Exhibit C of the Environmental Covenant. Additionally, the area of the Property illustrated in Exhibit C of the Environmental Covenant should be graded in such a way that runoff from neighboring properties does not pond, gather, or infiltrate on the capped area. All stormwater catch basins, conveyance systems, and other appurtenances located within this area shall be of water-tight construction.
- **Other.** Periodic reviews will be conducted on the Property every five (5) years as detailed in WAC 173-340-420.

To implement those controls, an Environmental Covenant has been recorded on the following parcel of real property in Spokane County:

- Tax Parcel 25113.2107

Ecology approved the recorded Covenant. A copy of the Covenant is included in **Enclosure B**.

2. **Operation and maintenance of engineered controls.**

Engineered controls prevent or limit movement of, or exposure to, hazardous substances. The following engineered control is necessary at the Site:

- A cap was constructed over the contaminated soil. The cap was constructed as follows:
 - Geotextile fabric (WINFAB 400N, data sheet included in Appendix A of the Maintenance and Repair Plan) was placed over the contaminated soil. The geotextile extends approximately 4 feet further than the contamination on all sides and is covered by at least 6 feet of clean fill soil. Soil was compacted using the tracks of an excavator after each approximately 2 foot lift was placed. See Exhibits C and D in **Enclosure B** for figures.

Per the Maintenance and Repair Plan dated March 7, 2017 submitted by Earth Solutions NW, LLC, Catholic Housing Services of Eastern Washington (the site owner) will arrange for the cap to be monitored once annually for five years. After five years the monitoring frequency can be re-evaluated and adjusted if Ecology and Catholic Housing Services of Eastern Washington determine it prudent. Results of monitoring events will be included in annual Maintenance and Repair Reports, detailed in the Maintenance and Repair Plan.

Ecology has approved the Maintenance and Repair Plan you submitted for this engineered control. A copy of the plan is included in **Enclosure C**.

Periodic Review of Post-Cleanup Conditions

Ecology will conduct periodic reviews of post-cleanup conditions at the Site to ensure that they remain

protective of human health and the environment. If Ecology determines, based on a periodic review, that further remedial action is necessary at the Site, then Ecology will withdraw this opinion.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#EA0320).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (509) 329-3419 or e-mail at khal461@ecy.wa.gov.

Sincerely,



Katie Larimer
ERO Toxics Cleanup Program

kal:mk

Enclosures (3): A – Description and Diagrams of the Site
 B – Environmental Covenant for Institutional Controls and Subordination
 Agreements for Environmental Covenant
 C – Operation and Maintenance Plan for Engineered Controls

cc: John Fisher, Inland Group
 Ted Sykes, Earth Solutions NW
 Robert J. McCann, Catholic Housing Services of Eastern Washington
 Vicki Cummings, Sisters of the Holy Names
 Matt Alexander, Ecology TCP

Enclosure A

Description and Diagrams of the Site

Site Description

The site is located at 2911 West Fort George Wright Drive in Spokane, Washington and is now listed as Spokane County Parcel Numbers 25116.2101 and 25113.2107. The site is currently owned by Copper River Apartments, LLC (parcel 25116.2101), and Catholic Housing Services of Eastern Washington (parcel 25113.2107), and contains a multi-family housing development. The site was previously owned by the Sisters of the Holy Names and was operated as a convent from 1968 until recently.

The site is part of the Columbia Plateau Physiographic province and is within the West Plains geomorphologic area in Spokane County, Washington. The site is generally underlain by top soil mixed with vegetation debris, gravel, and varying sized rock cobbles at depths ranging from 1.5 to 2.0 feet below ground surface (bgs). Loose-to-slightly-dense silty sand with fine-to-coarse gravel underlies the top soil at depths ranging between 2.0 to 10.0 feet bgs. Groundwater was not encountered during site investigation activities. Groundwater in the site area occurs in an unconfined aquifer composed of unconsolidated sediment and the groundwater flow direction is estimated to be towards the Spokane River. As groundwater is expected to be 75 to 95 feet below ground surface, Earth Solutions NW (ESNW) does not believe groundwater is contaminated as a result of site activities.

Prior to development as a convent the site was part of the George Wright Military Base installation. It remained largely undeveloped during Fort Wright's operations; however, Fort Wright allowed the Spokane Gun Club to operate a skeet shooting range on the property from 1919 to 1949. Additionally, two unlined, undocumented landfills are located on the site which were mostly used for construction and household debris according to investigations conducted on the site.

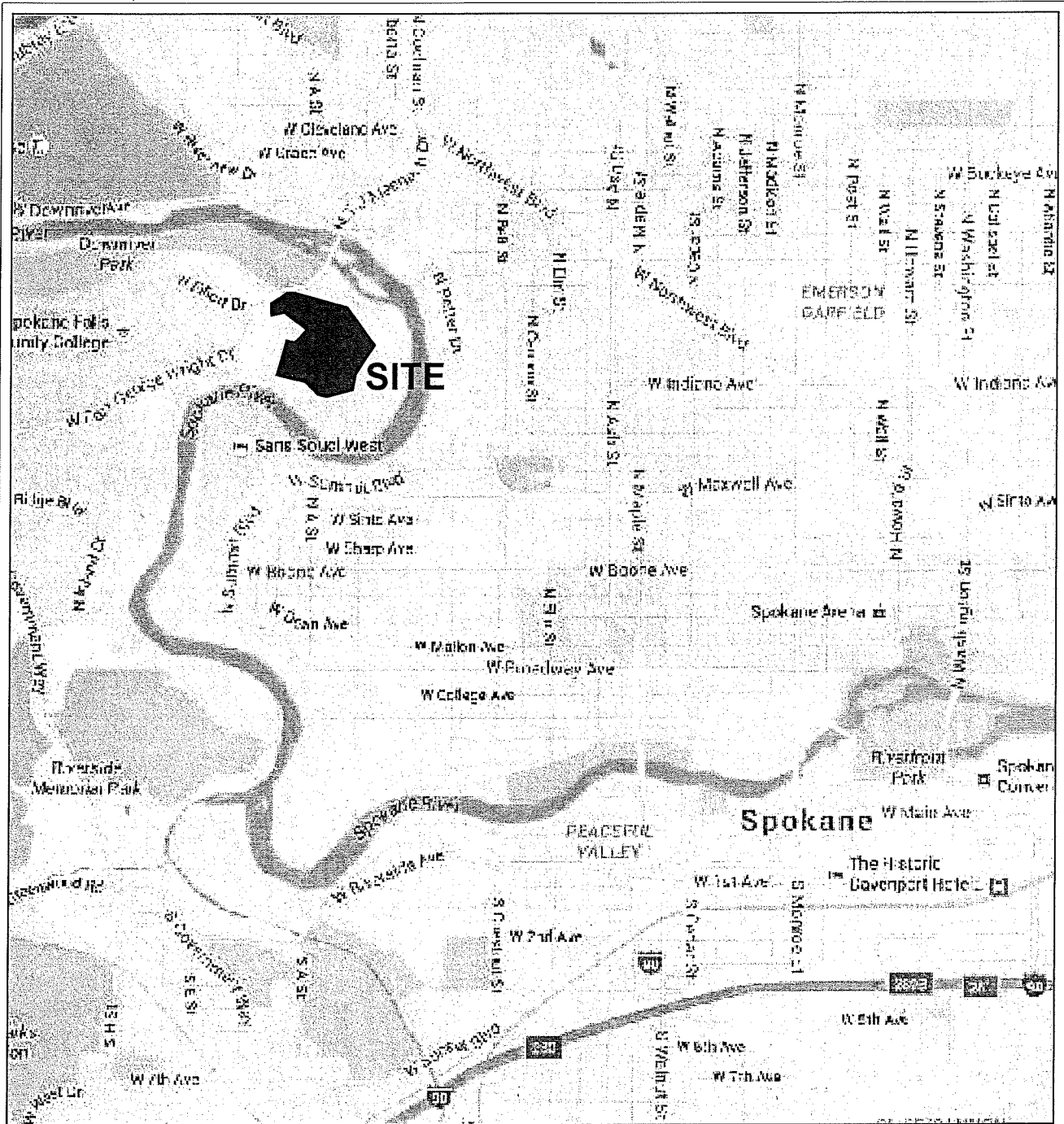
The operation of the skeet shooting range and landfills on the site resulted in soil contamination at concentrations greater than Model Toxics Control Act Method A cleanup levels for unrestricted land use; diesel-range petroleum hydrocarbon (DRPH), oil-range petroleum hydrocarbon (ORPH), lead, and carcinogenic polynuclear aromatic hydrocarbon (cPAH) contamination was found in the skeet shooting range area and nearby hillside, and ORPH and methylene chloride contamination was found in the New Landfill area. Contamination found at the site is fairly shallow as it appears to be from surficial sources.

Prior to site remediation activities, potential exposure pathways for humans and other ecological receptors at the site included inhalation of soil and dust particles, incidental ingestion of soil and/or clay pigeon pieces, and dermal contact with soil and/or clay pigeon pieces.


Cleanup activities at the site were conducted during October and November 2016. Most of the contaminated soil was excavated and removed from the site, and the remaining contaminated soil was capped with geotextile fabric and clean fill soil. An Environmental Covenant was filed for the tax parcel the contaminated soil resides on.

The site description information was compiled from the reports listed in the "Basis for Opinion" section of this letter as well as from Spokane County's SCOUT website and observations made during a site visit with ESNW and the Inland Group on July 11, 2016.

Site Diagrams



Reference:
Spokane, Washington
By Google Maps
Dated 2016



Earth Solutions NW LLC

Medical Engineering Construction Monitoring
and Environmental Sciences

Site Vicinity Map
Sisters of the Holy Names Property
Spokane, Washington

Drwn. MRS	Date 01/13/2017	Proj. No. 4332.01
Checked TWS	Date Jan. 2017	Plate 1

NOTE: This plate may contain areas of color. ESNW cannot be responsible for any subsequent misinterpretation of the information resulting from black & white reproductions of this plate.

Site Overview Map
 Sisters of the Holy Names Property
 2911 West Fort George Wright Drive
 Spokane, Washington

Earth Solutions White
 Technical Engineering Construction
 and Environmental Sciences



Drawn By	GLS
Checked By	TWS
Date	04/13/2016
Proj. No.	4332
Plate	2



Not - To - Scale

Reference
 Spokane, Washington
 By Google Maps
 2016

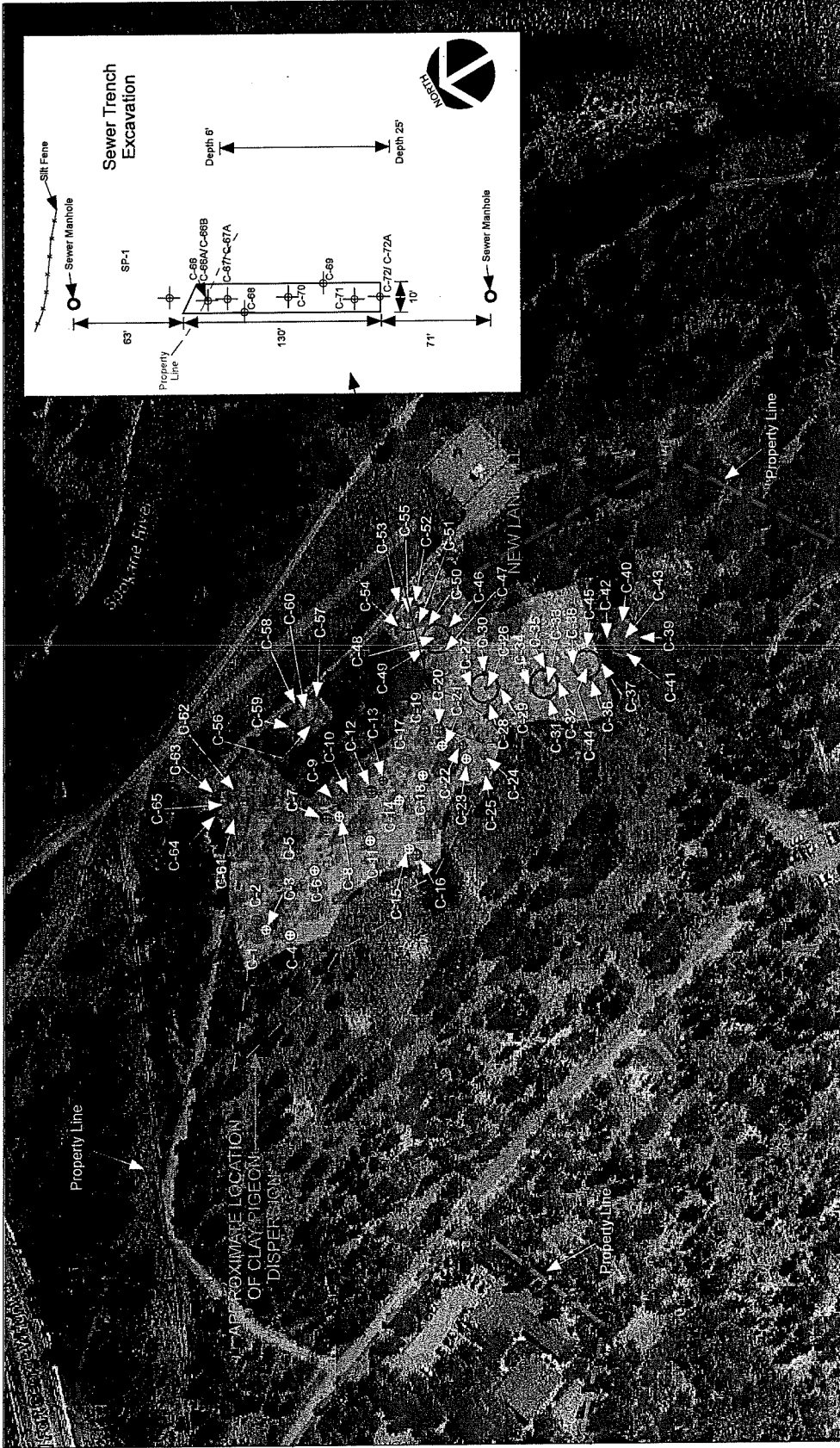
NOTE: This plate may contain areas of color. ESNW cannot be responsible for any subsequent misinterpretation of the information resulting from black & white reproductions of this plate.

Confirmatory Soil Sample Plan
 Sisters of the Holy Names Property
 2911 West Fort George Wright Drive
 Spokane, Washington

Earth Solutions NW LLC
 Engineering Construction Monitoring
 and Environmental Sciences



Drawn By	MRS	TWS
Checked By		
Date	01/04/2017	
Proj. No.	4332.01	
Plate	2	



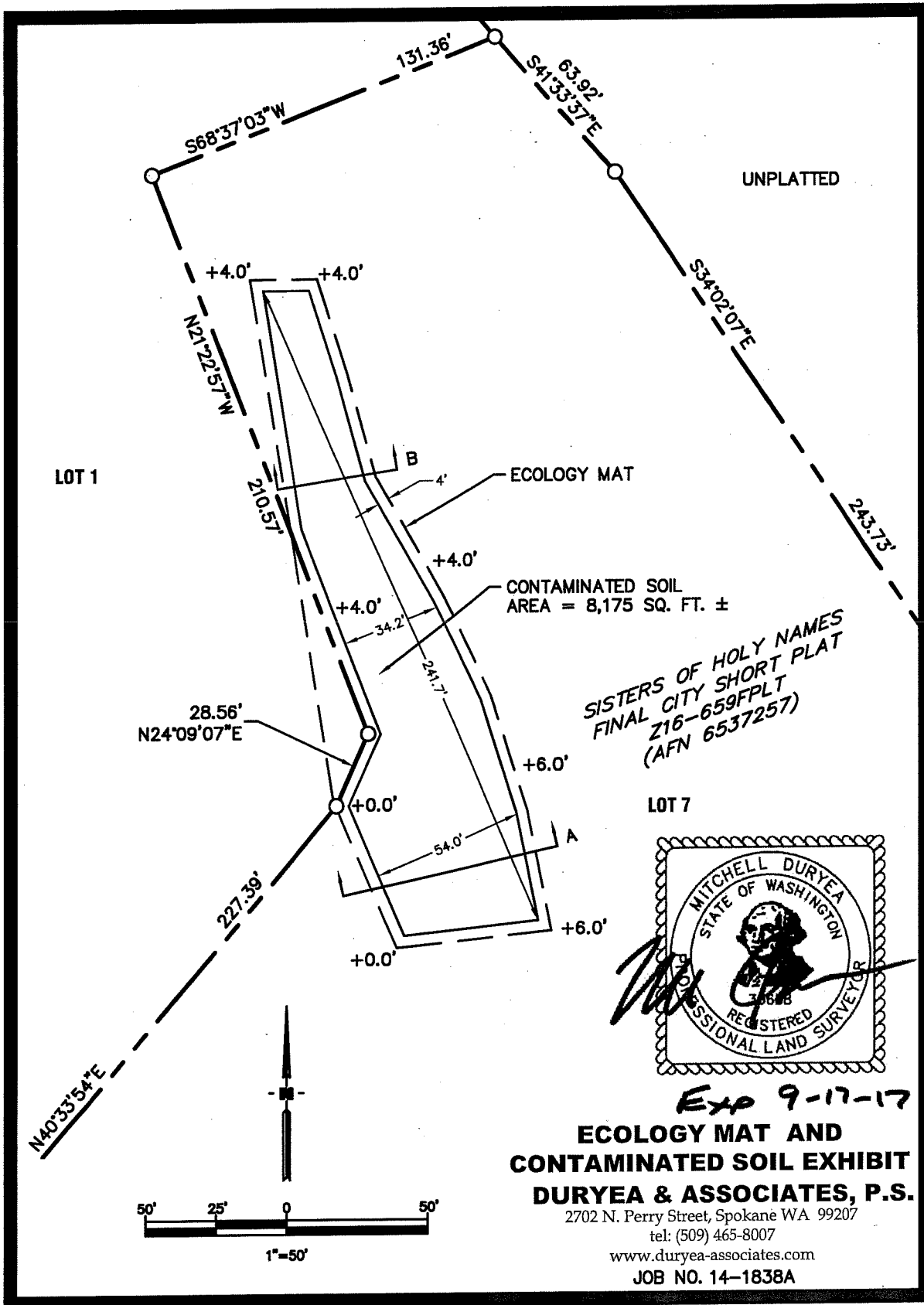
LEGEND

- Floor Samples
- ⊕ Sidewall Samples
- Samples with cPAH Analysis
- Ten Foot Removal Areas
- Approximate Extent of Petroleum and Lead Impacted Soil
- Approximate Extent of Methylene Chloride Impacted Soil

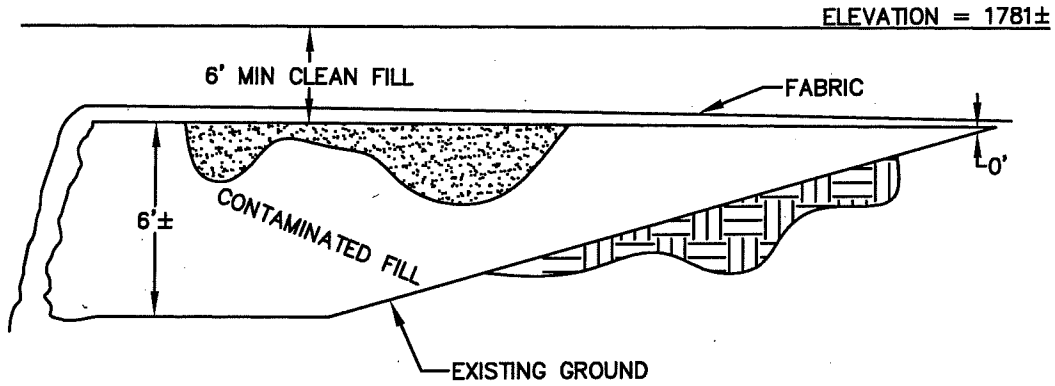
Reference:
 Spokane, Washington
 By Google Maps
 Dated 2016

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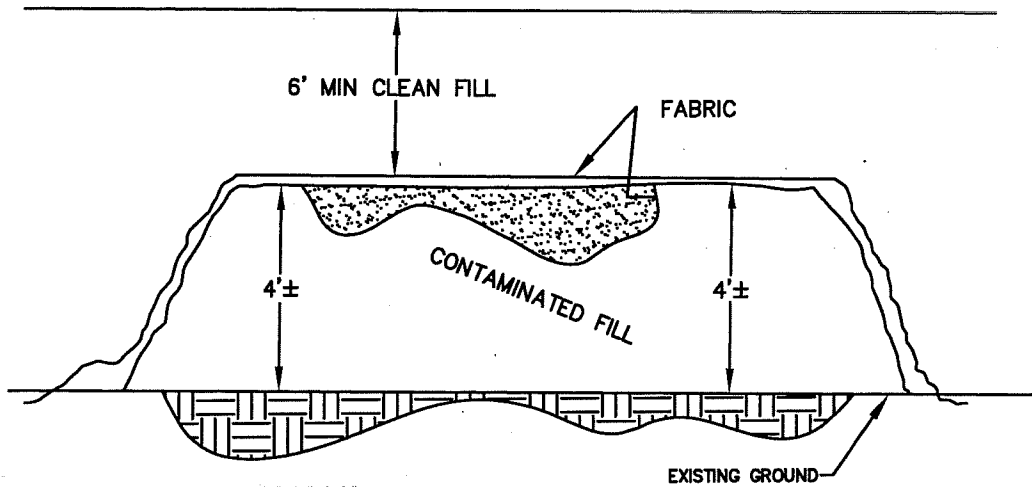
SECTION A-A



LEGEND:

-  NATIVE MATERIAL
-  CONTAMINATED FILL

SECTION B-B



Exp 9-17-17

**CONTAMINATED FILL
APPROXIMATE
CROSS-SECTIONS**

DURYEY & ASSOCIATES, P.S.

2702 N. Perry Street, Spokane WA 99207

tel: (509) 465-8007

www.duryea-associates.com

JOB NO. 14-1838A

Enclosure B

**Environmental Covenant
for Institutional Controls and Subordination
Agreements for Environmental Covenant**



Washington State Department of Ecology

After Recording Return
Original Signed Covenant
to:
Katie Larimer
Toxics Cleanup Program
Department of Ecology
4601 N. Monroe St.
Spokane, WA 99205

Environmental Covenant

Grantor: Catholic Housing Services of Eastern Washington, a Washington non-profit corporation
Grantee: State of Washington, Department of Ecology (hereafter "Ecology")
Brief Legal Description: NE ¼ of SE ¼ of S11 T25N R42E and SW ¼ of S12 T25N R42E
Tax Parcel Nos.: 25113.2107

RECITALS

- a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW, and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.
- b. The Property that is the subject of this Covenant is part of a site commonly known as 2911 W Fort George Wright Dr (Facility Site ID # 18251). The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.
- c. The Property is the subject of remedial action conducted under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principal contaminants remain on the Property:

Medium	Principal Contaminants Present
Soil	Petroleum, Lead, cPAHs

R. E. Excise Tax Exempt
Date 3/20 2017
Spokane County Treas.
By *[Signature]*

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through Ecology. This includes the following documents:

1. Herrera, Preliminary Assessment, George Wright Air Force Base, Spokane, Washington, January 20, 2005.
2. Cascade Earth Sciences, Phase I Environmental Site Assessment, July 29, 2014.
3. Cascade Earth Sciences, Phase II Environmental Site Assessment, May 14, 2015.
4. Earth Solutions NW, LLC, Supplemental Phase II Environmental Site Assessment, March 9, 2016.
5. Earth Solutions NW, LLC, Second Supplemental Phase II Environmental Site Assessment, April 5, 2016.
6. Earth Solutions NW, LLC, Cleanup Action Plan, September 9, 2016.
7. Earth Solutions NW, LLC, Cleanup Summary Report, January 13, 2017.

e. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.* The rights of Ecology as an “agency” under UECA, other than its right as a holder, are not an interest in real property.

COVENANT

Catholic Housing Services of Eastern Washington, as “Grantor” and owner of the Property, hereby grants to Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the Grantor has in the property and run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

- a. **Interference with Remedial Action.** The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.
- b. **Protection of Human Health and the Environment.** The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to,

any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. **Continued Compliance Required.** Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. **Leases.** Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. **Preservation of Reference Monuments.** Grantor shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Grantor shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property:

a. **Containment of soil/waste materials.** The remedial action for the Property is based on containing contaminated soil and debris under a cap consisting of geotextile fabric and at least 6 feet of soil. The geotextile fabric is located on the Property and partially on the adjacent property (Lot 1 of the Sisters of Holy Names Final City Short Plat Z16-659FPLT) as described and illustrated in Exhibit C; however, this Covenant does not (and is not intended to) apply to Lot 1 of the Sisters of Holy Names Final City Short Plat Z16-659FPLT. The primary purpose of this cap is to prevent direct exposure to hazardous substances under the cap. Under the terms of this covenant, the following restrictions shall apply only within the portion of the Property described and illustrated in Exhibit D (the "Restricted Area"):

Any activity on the Restricted Area that will compromise the integrity of the cap, including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the cap and report within thirty (30) days of the inspection the condition of the cap and any changes to the cap that would impair its performance.

b. **Stormwater facilities.** To minimize the potential for mobilization of contaminants remaining in the soil on the Property, no stormwater infiltration facilities or ponds shall be

Washington State Department of Ecology

constructed within the Restricted Area. Additionally, the Restricted Area should be graded in such a way that runoff from neighboring properties does not pond, gather, or infiltrate on the capped area. All stormwater catch basins, conveyance systems, and other appurtenances located within this area shall be of water-tight construction.

c. **Other.** Periodic reviews will be conducted on the Property every five (5) years as detailed in WAC 173-340-420.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. **Conveyance of Any Interest.** The Grantor, when conveying any interest within the Restricted Area, including but not limited to title, easement, leases, and security or other interests, must:

i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON 3/20/17 AND RECORDED WITH THE SPOKANE COUNTY AUDITOR UNDER RECORDING NUMBER 6586965. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. **Reporting Violations.** Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

Washington State Department of Ecology

c. **Emergencies.** For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. **Notification procedure.** Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

Catholic Housing Services of Eastern Washington Attn: Robert J. McCann, President 12 East Fifth Avenue Spokane, Washington 99210 (509) 358-4272 rmccann@ccspokane.org	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000 ToxicsCleanupProgramHQ@ecy.wa.gov
--	---

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site:

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

Washington State Department of Ecology

- b. Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.
- c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.
- d. Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.
- e. This Covenant shall be liberally construed to meet the intent of MTCA and UECA.
- f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.
- g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

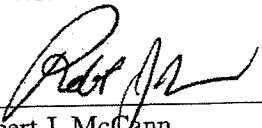
[Signature Pages Follow]

Washington State Department of Ecology

The undersigned Grantor warrants Grantor holds the title to the Property and has authority to execute this Covenant.

EXECUTED this 13 day of MARCH, 2017.

CATHOLIC HOUSING SERVICES OF
EASTERN WASHINGTON

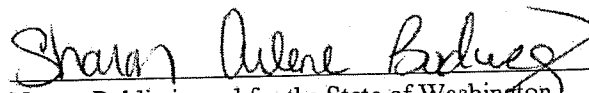
By: 
Robert J. McCann
Title: President

STATE OF WASHINGTON

COUNTY OF SPOKANE

On this 13 day of MARCH, 2017, I certify that Robert J. McCann personally appeared before me, acknowledged that he is the President of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument for said corporation.




Notary Public in and for the State of Washington

Residing at Spokane

My appointment expires 7-27-18

Washington State Department of Ecology

The Department of Ecology, hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Kathleen L. Falconer

By: Kathleen L. Falconer

Title: Section Mgr. TCP

Dated: MARCH 20, 2017

STATE OF Washington

COUNTY OF Spokane

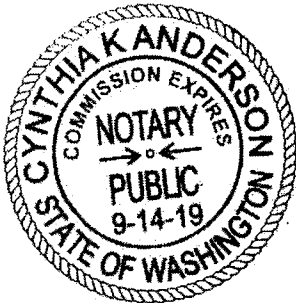
On this 20th day of March, 2017, I certify that Kathleen L. Falconer personally appeared before me, acknowledged that he/she is the Section Manager of TCP of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument for said state agency.

Cynthia K Anderson

Notary Public in and for the State of Washington

Residing at Spokane, WA

My appointment expires Sept 14, 2019



Washington State Department of Ecology

Exhibit A

LEGAL DESCRIPTION OF THE PROPERTY

LOT 7, AS SAID LOT IS SHOWN UPON THAT CERTAIN MAP ENTITLED "SISTERS OF HOLY NAMES FINAL CITY SHORT PLAT Z16-659FPLT" RECORDED ON SEPTEMBER 22, 2016 UNDER AUDITOR'S FILE NO. 6537257, SPOKANE COUNTY RECORDS

SITUATE IN THE CITY OF SPOKANE, COUNTY OF SPOKANE, STATE OF WASHINGTON

APN: 25113.2107

Washington State Department of Ecology

Exhibit C

LEGAL DESCRIPTION AND MAP ILLUSTRATING THE LOCATION OF THE GEOTEXTILE MAT

Please see attached.

January 3, 2017

Job No. 14-1838A

Ecology Mat Legal Description

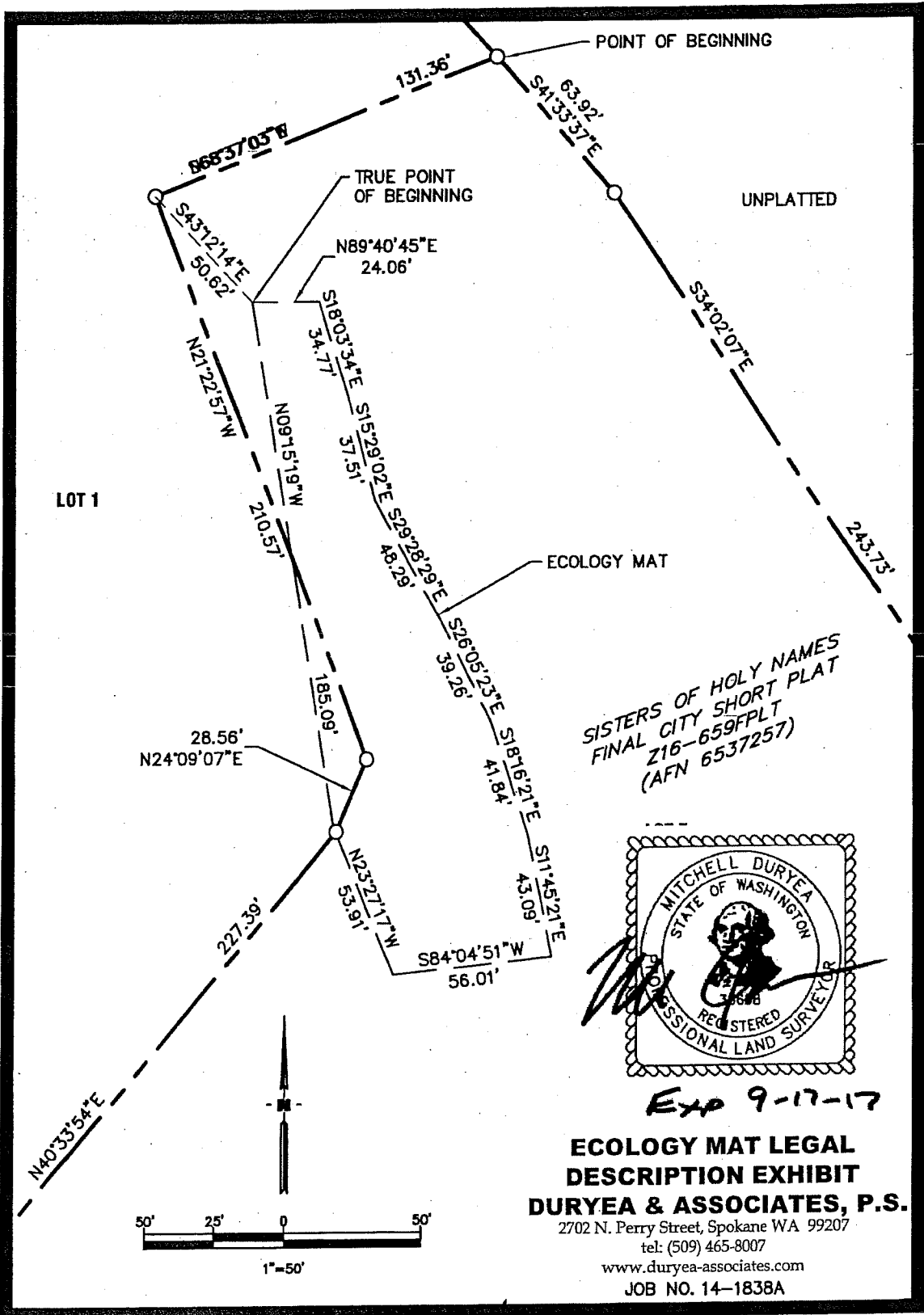
All that certain real property situate in the City of Spokane, County of Spokane, State of Washington being described as follows:

A portion of Lots 1 and 7 of Sisters of Holy Names Final City Short Plat Z16-659FPLT recorded September-22, 2016 under Auditor's File No. 6537257, Spokane County Records, and being more particularly described as follows:

BEGINNING at the North corner of said Lot 7, being hereinbove described; thence along the northwesterly line of said Lot 7 South 68°37'03" West 131.36 feet; thence leaving said northwesterly line of said Lot 7 South 43°12'14" East 50.62 feet to the TRUE POINT OF BEGINNING of this description; thence North 89°40'45" East 24.06 feet; thence South 18°03'34" East 34.77 feet; thence South 15°29'02" East 37.51 feet; thence South 29°28'29" East 48.29 feet; thence South 26°05'23" East 39.26 feet; thence South 18°16'21" East 41.84 feet; thence South 11°45'21" East 43.09 feet; thence South 84°04'51" West 56.01 feet; thence North 23°27'17" West 53.91 feet; thence North 09°15'19" West 185.09 feet to the said true point of beginning of this description, containing 0.257 acres of land, more or less.



Exp 9-17-17



SISTERS OF HOLY NAMES
FINAL CITY SHORT PLAT
Z16-659FPLT
(AFN 6537257)



Exp 9-17-17

ECOLOGY MAT LEGAL DESCRIPTION EXHIBIT
DURYEA & ASSOCIATES, P.S.
2702 N. Perry Street, Spokane WA 99207
tel: (509) 465-8007
www.duryea-associates.com
JOB NO. 14-1838A

Washington State Department of Ecology

Exhibit D

LEGAL DESCRIPTION AND MAPS ILLUSTRATING THE RESTRICTED AREA

Please see attached.

January 3, 2017

Job No. 14-1838A

Contaminated Soil Legal Description

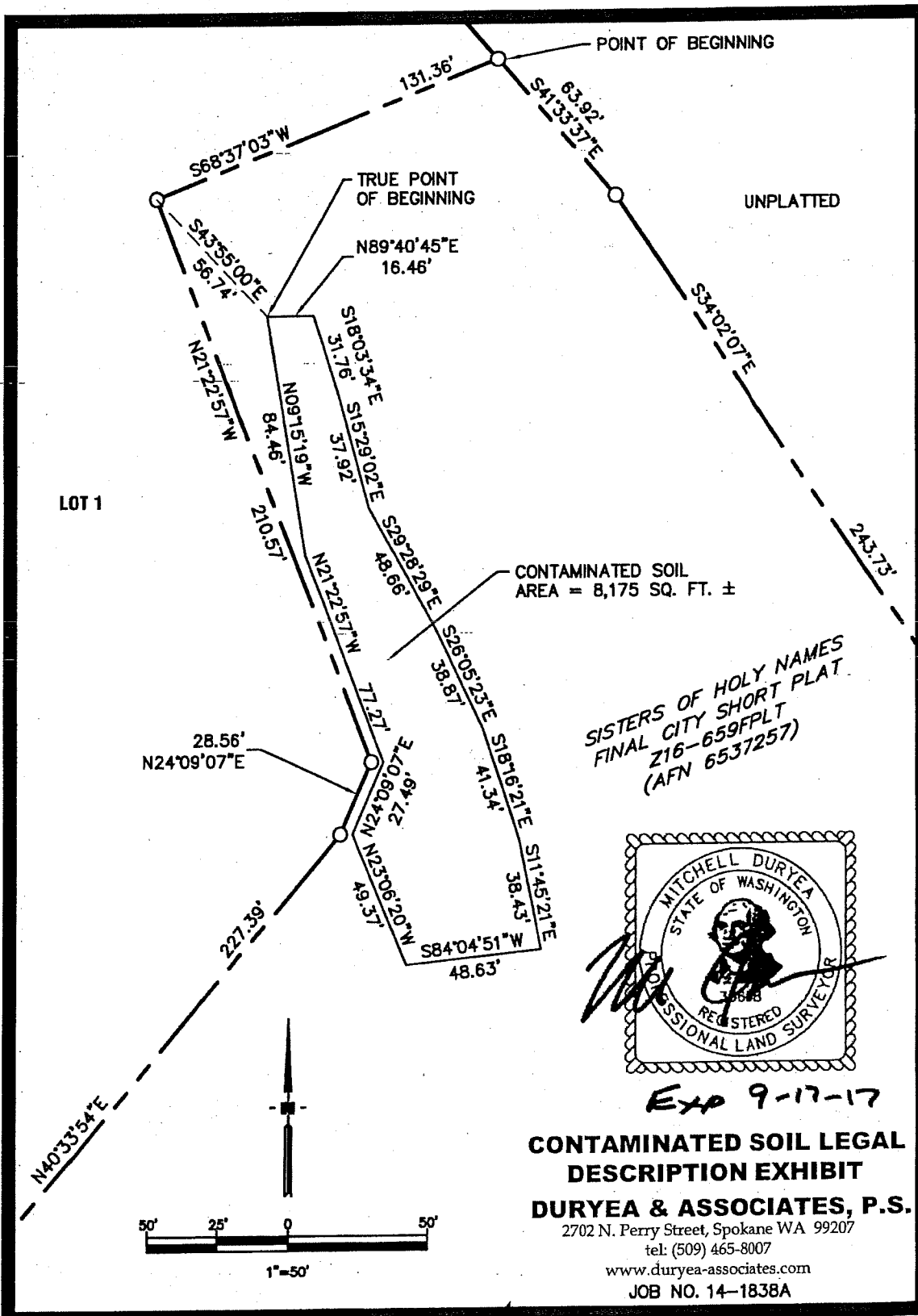
All that certain real property situate in the City of Spokane, County of Spokane, State of Washington being described as follows:

A portion of Lot 7 of Sisters of Holy Names Final City Short Plat Z16-659FPLT recorded September 22, 2016 under Auditor's File No. 6537257, Spokane County Records, and being more particularly described as follows:

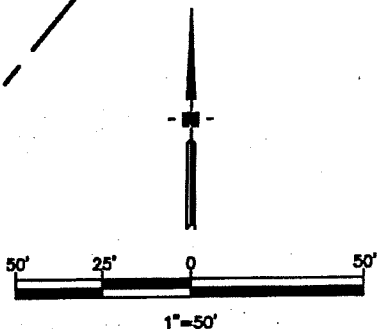
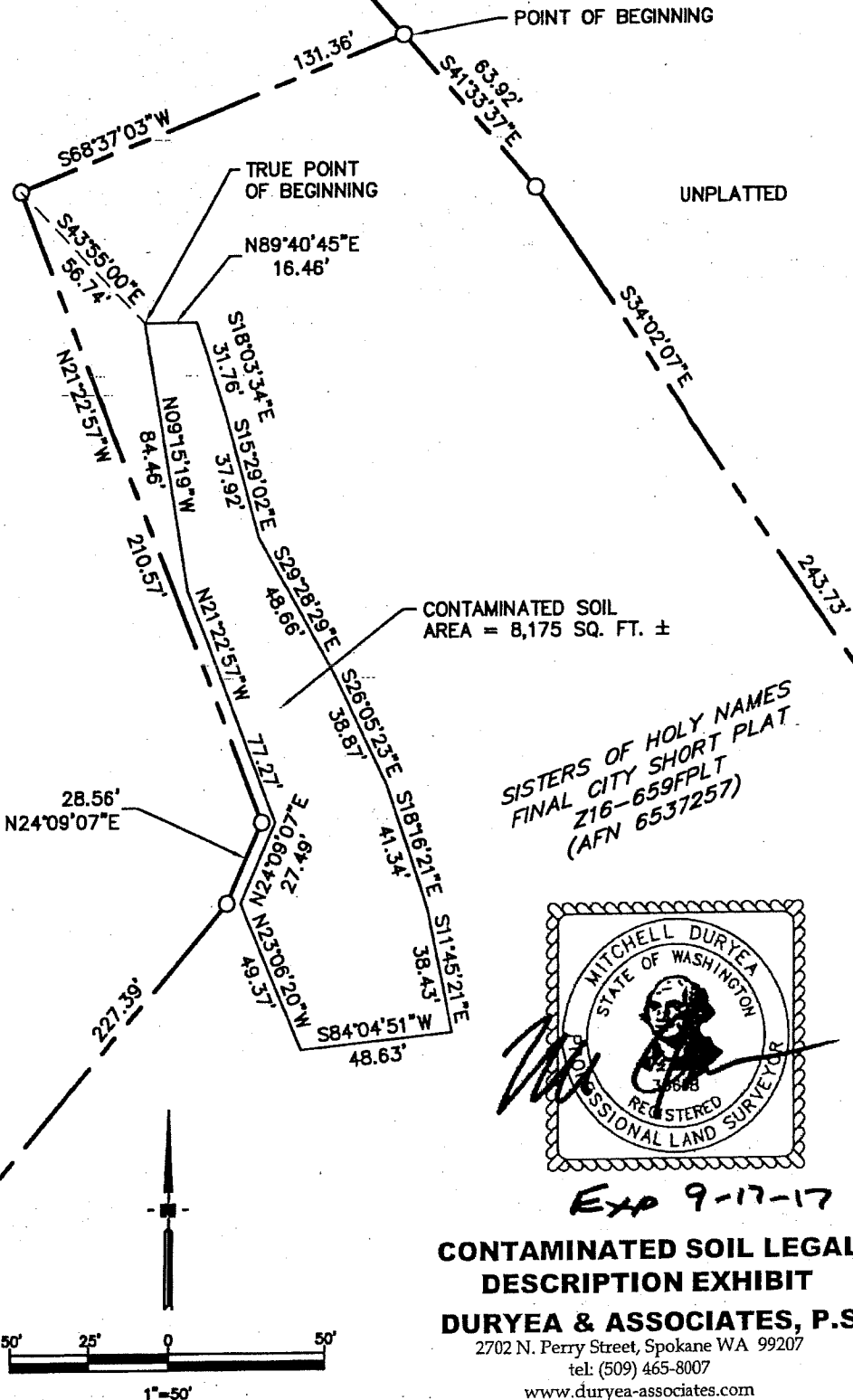
BEGINNING at the North corner of said Lot 7, being hereinabove described; thence along the northwesterly line of said Lot 7 South 68°37'03" West 131.36 feet; thence leaving said northwesterly line of said Lot 7 South 43°55'00" East 56.74 feet to the TRUE POINT OF BEGINNING of this description; thence North 89°40'45" East 16.46 feet; thence South 18°03'34" East 31.76 feet; thence South 15°29'02" East 37.92 feet; thence South 29°28'29" East 48.66 feet; thence South 26°05'23" East 38.87 feet; thence South 18°16'21" East 41.34 feet; thence South 11°45'21" East 38.43 feet; thence South 84°04'51" West 48.63 feet; thence North 23°06'20" West 49.37 feet; thence North 24°09'07" East 27.49 feet; thence North 21°22'57" East 77.27 feet; thence North 09°15'19" West 84.46 feet to the said true point of beginning of this description, containing 0.187 acres of land, more or less.



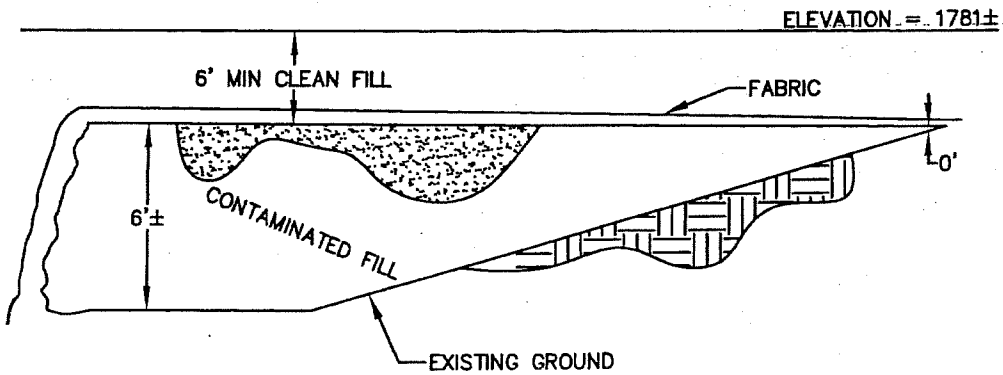
Exp 9-17-17





LOT 1



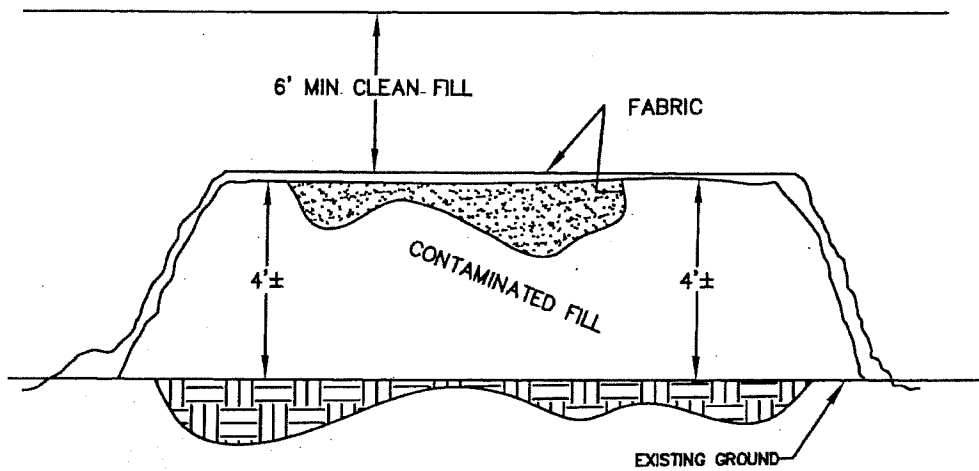
SECTION A-A



LEGEND:

-  NATIVE MATERIAL
-  CONTAMINATED FILL

SECTION B-B



Exp 9-17-17

**CONTAMINATED FILL
APPROXIMATE
CROSS-SECTIONS**

DURYEA & ASSOCIATES, P.S.

2702 N. Perry Street, Spokane WA 99207

tel: (509) 465-8007

www.duryea-associates.com

JOB NO. 14-1838A



RECORDING REQUESTED BY AND,
WHEN RECORDED, RETURN TO:

Katie Larimer
Toxics Cleanup Program
Department of Ecology
4601 North Monroe Street
Spokane, WA 99205

Document Title: Subordination Agreement

Subordinator: Avista Corporation

Recording Nos. of Documents Subordinated: 869942B (BK 800, PG 430), 9005040339 (BK 1109, PG 106), 271189C (BK 883, PG 160), 322765C (BK 893, PG 687), 662517C (BK 143, PG 1815), 7505060165 (BK 225, PG 828) and 9210010257 (BK 1342, PG 1944)

Legal Description: Lot 7, as said Lot is shown upon that certain map entitled "Sisters of Holy Names Final City Short Plat Z16-659FPLT" recorded on September 22, 2016 under Auditor's File No. 6537257, Spokane County Records; City of Spokane, County of Spokane, State of Washington.

Tax Parcel/ Account Number: 25113.2107

SUBORDINATION AGREEMENT

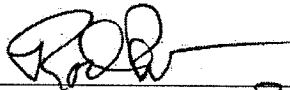
KNOW ALL PERSONS, That AVISTA CORPORATION, a Washington corporation, formerly known as Washington Water Power Company ("Avista"), the owner and holder of certain easements listed below, does hereby agree that said instruments shall be subordinate to the interest of the STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, under the Environmental (restrictive) Covenant dated March 13, 2017, and recorded on March 20, 2017, in Spokane County, Washington under Auditor's File No. 6586965.

Avista agrees that the following easements shall be subordinate to the interest of the State of Washington, Department of Ecology, under the Environmental (restrictive) Covenant described above. Those are: (1) an easement created by instrument dated May 28, 1962, executed by the United States of America, pursuant to powers and authority contained in applicable provisions of the Federal Property and Administrative Services Act of 1949, and recorded in the office of the County Auditor of Spokane County, State of Washington, on

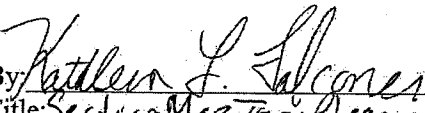
June 29, 1962, under Auditor's Recording No. 869942B (original), and amended by instrument dated May 4, 1990, recorded in the office of the County Auditor of Spokane County, State of Washington, on May 4, 1990, under Auditor's Recording No. 9005040339, Vol. 1109, pg. 106 (amendment); (2) an easement bearing the date of January 26, 1967, executed by Sisters of the Holy Names, landowner, and recorded in the office of the County Auditor of Spokane County, State of Washington, on March 3, 1967, under Auditor's Recording No. 271189C; (3) an easement bearing the date of the September 26, 1967, executed by Sisters of the Holy Names, landowner, and recorded in the office of the County Auditor of Spokane County, State of Washington, on October 5, 1967, under Auditor's Recording No. 322765C; (4) an easement bearing the date of the September 18, 1972, executed by Sisters of the Holy Names, landowner, and recorded in the office of the County Auditor of Spokane County, State of Washington, on November 6, 1972, under Auditor's Recording No. 662517C, Vol. 143, pg. 1815; (5) an easement bearing the date of April 18, 1975, executed by Sisters of the Holy Names, landowner, and recorded in the office of the County Auditor of Spokane County, State of Washington, on May 6, 1975, under Auditor's Recording No. 7505060165, Vol. 225, pg. 828; and (6) an easement bearing the date of June 22, 1992, executed by the Sisters of the Holy Names, Inc., landowner, and recorded in the office of the County Auditor of Spokane County, State of Washington, on October 1, 1992, under Auditor's Recording No. 9210010257, Vol. 1342, pg. 1944.

ORAL AGREEMENTS OR ORAL COMMITMENTS TO LOAN MONEY, EXTEND CREDIT, OR TO FORBEAR FROM ENFORCING REPAYMENT OF A DEBT ARE NOT ENFORCEABLE UNDER WASHINGTON LAW.

AVISTA CORPORATION,
a Washington corporation

By: 
Title: Manager - Real Estate
Date: 3/22/17

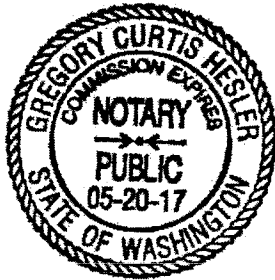
STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY

By: 
Title: Section Mgr, Toxic Cleanup Program
Date: March 29, 2017

STATE OF WASHINGTON)
: ss.
County of SPOKANE)

On this day personally appeared before me ROD PRICE, to me known to be the REAL ESTATE MGR. of AVISTA CORPORATION, the Washington corporation that executed the foregoing instrument, and acknowledged such instrument to be the free and voluntary act and deed of such limited liability company, for the uses and purposes therein mentioned, and on oath stated that he/she was duly authorized to execute such instrument.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this 22ND day of March, 2017.

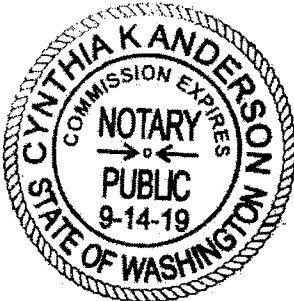


PRINT NAME: GREGORY C HESLER
NOTARY PUBLIC in and for the State of
Washington, residing at SPOKANE
My Commission Expires: 5-20-2017

STATE OF WASHINGTON)
: ss.
County of SPOKANE)

On this day personally appeared before me Kathleen Faulkner, to me known to be the TCP Section Mgr of the STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, a state agency that executed the foregoing instrument, and acknowledged such instrument to be the free and voluntary act and deed of such limited liability company, for the uses and purposes therein mentioned, and on oath stated that he/she was duly authorized to execute such instrument.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this 29th day of March, 2017.



PRINT NAME: Cynthia K. Anderson
NOTARY PUBLIC in and for the State of
Washington, residing at SPOKANE, WA
My Commission Expires: Sept 14 2019



RECORDING REQUESTED BY AND,
WHEN RECORDED, RETURN TO:

Katie Larimer
Toxics Cleanup Program
Department of Ecology
4601 North Monroe Street
Spokane, WA 99205

Document Title: Subordination Agreement
Subordinator: Empire Health Foundation
Recording No. of Document Subordinated: 6538441
Legal Description: Lot 7, as said Lot is shown upon that certain map entitled "Sisters of Holy Names Final City Short Plat Z16-659FPLT" recorded on September 22, 2016 under Auditor's File No. 6537257, Spokane County Records; City of Spokane, County of Spokane, State of Washington.
Tax Parcel/ Account Number: 25113.2107

SUBORDINATION AGREEMENT

KNOW ALL PERSONS, That EMPIRE HEALTH FOUNDATION, a non-profit Washington corporation ("EHF"), is the beneficiary under a Deed of Trust dated September 27, 2016, executed by Catholic Services of Eastern Washington, a Washington non-profit corporation ("Owner"), and recorded in Spokane County, Washington under Auditor's File No. 6538441 to secure the performance of a Promissory Note of even date therewith, by and between EHF and Owner.

EHF does hereby agree that its Deed of Trust shall be subordinate to the interest of the STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, under the Environmental (restrictive) Covenant dated March 13, 2017, and recorded in Spokane County, Washington under Auditor's File No. 6586965.

ORAL AGREEMENTS OR ORAL COMMITMENTS TO LOAN MONEY, EXTEND CREDIT, OR TO FORBEAR FROM ENFORCING REPAYMENT OF A DEBT ARE NOT ENFORCEABLE UNDER WASHINGTON LAW.

EMPIRE HEALTH FOUNDATION,
a Washington non-profit corporation

By: *David E. Luhn*
Title: Chief Financial Officer

Date: March 10, 2017

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY

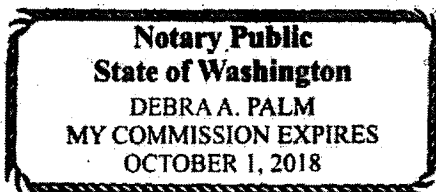
By: *Kathleen L. Salmon*
Title: Section Mgr., Toxic Cleanup Program

Date: MARCH 29, 2017

STATE OF WASHINGTON)
: ss.
County of SPOKANE)

On this day personally appeared before me DAVID E. LUHN, to me known to be the Chief Financial Officer of EMPIRE HEALTH FOUNDATION, the Washington non-profit corporation that executed the foregoing instrument, and acknowledged such instrument to be the free and voluntary act and deed of such limited liability company, for the uses and purposes therein mentioned, and on oath stated that he/she was duly authorized to execute such instrument.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this 10th day of March, 2017.



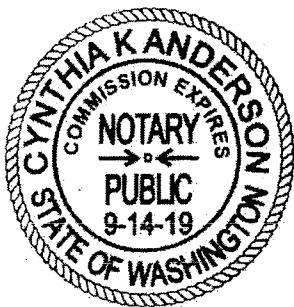
Debra A. Palm
PRINT NAME: DEBRA A. PALM
NOTARY PUBLIC in and for the State of
Washington, residing at Nine Mile Falls
My Commission Expires: 10/1/2018

STATE OF WASHINGTON)

County of Spokane) :SS.

On this day personally appeared before me Kathleen Faulkner, to me known to be the TCP Section Mgr. of the STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, a state agency that executed the foregoing instrument, and acknowledged such instrument to be the free and voluntary act and deed of such limited liability company, for the uses and purposes therein mentioned, and on oath stated that he/she was duly authorized to execute such instrument.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this 29th day of March, 2017.



Cynthia K Anderson
PRINT NAME Cynthia K Anderson
NOTARY PUBLIC in and for the State of
Washington, residing at Spokane, WA
My Commission Expires: Sept 14, 2019

Enclosure C

Maintenance and Repair Plan for Engineered Controls



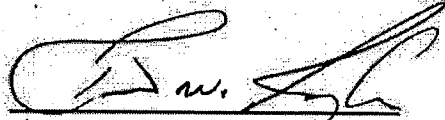
Geotechnical Engineering
Geology
Environmental Scientists
Construction Monitoring

**MAINTENANCE & REPAIR PLAN
LOT 7 OF THE SISTERS OF
THE HOLY NAMES
FINAL SHORT PLAT Z16-659FPLT
2752 WEST ELLIOTT COURT
SPOKANE, WASHINGTON**

ES-4332.01

PREPARED FOR
CATHOLIC HOUSING SERVICES OF EASTERN WASHINGTON

March 3, 2017
Revised March 7, 2017



Ted W. Sykes
Environmental Senior Project Manager



Raymond A. Coglas, P.E.
Principal

MAINTENANCE & REPAIR PLAN
LOT 7 OF THE SISTERS OF
THE HOLY NAMES
FINAL SHORT PLAT Z16-659FPLT
2752 WEST ELLIOTT COURT
SPOKANE, WASHINGTON

ES-4332.01

Earth Solutions NW, LLC
1805 – 136th Place Northeast, Suite 201, Bellevue, Washington 98005
Ph: 425-449-4704 Fax: 425-449-4711
Toll Free: 866-336-8710

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ES-4332.01

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1.2 Site Geology and Hydrogeology	2
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3.0 CAP CONSTRUCTION	4
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5.3.2 Vegetation	9
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6.0 REPORTING	10

PLATES

- 1 Site Vicinity Map
- 2 Lot 7 & Sewer Trench Plan
- 3 Lot 7 Plan Displaying Location of Contaminated Soil
- 4 Cross-Sections of Contaminated Soil
- 5 Contaminated Soil Legal Description
- 6 Geotextile Fabric Cap Legal Description

APPENDICES

- A Geotextile Fabric Data Sheet
- B CAP Inspection Checklist
- C Contaminated Soil and Geotextile Fabric Cap Cross-Sections & Legal Descriptions

1.0 INTRODUCTION AND BACKGROUND

Earth Solutions NW, LLC (ESNW) has prepared this Maintenance & Repair Plan (M&R Plan) on behalf of Catholic Housing Services of Eastern Washington for Lot 7 of the Sisters Of The Holy Names Final City Short Plat z16-659FPLT, located at 2752 West Elliott Court in Spokane, Washington (subject property). The general location of the subject property is illustrated on Plate 1. Lot 7 consists of one irregular shaped tax parcel comprising a total of approximately 2.08-acres of land area. No building structures currently exist on Lot 7. Most recently, Lot 7 was partially used as a vegetation and construction debris waste landfill called the "New Landfill".

Historically, Lot 7 and the surrounding areas were part of the George Wright Military Reservation (Fort Wright) established in 1899. Fort Wright occupied over 1,000 acres, most of which was located north of Lot 7 and is currently developed with the Spokane Falls Community College. Lot 7 and the surrounding areas remained largely undeveloped during Fort Wright's operations; however, Fort Wright allowed the Spokane Gun Club to operate an outdoor shotgun skeet shooting range located immediately north of Lot 7 from 1919 to 1949. Fort Wright was transferred from the U.S. Army to the U.S. Air Force before closure as a military base in 1958. After closure, the Fort Wright property was divided and sold. Lot 7 and the surrounding forested areas were purchased by the Sisters Of The Holy names of Jesus and Mary in 1968.

Subsurface investigations conducted at Lot 7 and the surrounding areas between 2015 and 2016 confirmed that the historical use of Lot 7 as being adjacent to and part of a large outdoor skeet shooting range that impacted shallow soils with elevated levels of diesel and heavy oil range petroleum hydrocarbons, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and lead exceeding Washington Department of Ecology's (Ecology) Model Toxics Cleanup Act (MTCA) Method A unrestricted soil cleanup levels. Additionally, elevated levels of methylene chloride exceeding Ecology's MTCA Method A methylene chloride soil cleanup level was identified in one soil sample collected from Lot 7.

Between October 19, 2016 and November 8, 2016, the removal and off-site disposal of several tons of petroleum, lead, and methylene chloride impacted soil was completed throughout Lot 7 and the adjoining outdoor skeet shooting range north of Lot 7 (see Plate 2). The remediation program also consisted of the excavation and removal of petroleum and lead impacted soil from an existing sewer pipeline trench bisecting the northern skeet shooting range and Lot 7 and depositing the impacted soil at Lot 7 and capping the impacted soil with geotextile fabric and 6-feet of clean soil (referred to as the "CAP"). The location of the sewer pipeline trench is depicted on Plate 2.

This M&R Plan outlines procedures that will be used to monitor, repair, and maintain the long term performance of the CAP presently located on Lot 7.

1.1 Site Location

The subject property is located south of West Fort George Wright Drive and is surrounded on three sides by the Spokane River. Lot 7 consists of one tax parcel comprising a total of approximately 2.08-acres of land area. The address for Lot 7 is currently listed as 2752 West Elliott Court, Spokane, Washington. No building structures currently exist on Lot 7. Most recently, Lot 7 was partially used as a vegetation and construction debris waste landfill called the "New Landfill".

Sewer and water services are provided to the site by the City of Spokane. The surrounding land use consists primarily of land currently being developed for multi-family apartment use, Spokane Falls Community College, a covenant facility currently owned and operated by the Sisters Of The Holy Names of Jesus and Mary, single-family residential homes (located across the Spokane River), and undeveloped forested areas.

1.2 Site Geology and Hydrogeology

Based on our observations during the course of soil remediation activities between October 19, 2016 and November 8, 2016, soil conditions at Lot 7 consisted of silty sand and topsoil mixed with concrete rubble, vegetation debris, gravel, and varying sized rock cobbles at depths ranging between 1 to 15 feet below the ground surface (bgs). Groundwater was not encountered during site excavation and cleanup activities at Lot 7.

According to a March 17, 2016 Geotechnical Evaluation report prepared for Lot 7 and the surrounding Sisters of the Holy Names property by Inland Pacific Engineering Company (IPEC), groundwater is expected to be encountered within the Lot 7 area between 75 feet to about 95 feet bgs. Groundwater in the Lot 7 area occurs in an unconfined aquifer composed of unconsolidated sediment. Fluctuations in this flood gravel water table may occur seasonally in response to surface water recharge and precipitation. The inferred groundwater flow direction at Lot 7 is estimated to be towards the west, east, and south; towards the Spokane River.

2.0 PURPOSE OF MAINTENANCE AND REPAIR PLAN

The purpose of this document is to establish a Maintenance and Repair program to monitor and provide for the long-term performance of the CAP. M&R activities will generally include CAP inspections, documentation, and reporting. CAP inspections will be conducted annually to assess and document the integrity of the CAP.

3.0 CAP CONSTRUCTION

Between October 19, 2016 and November 8, 2016, Peck & Peck Excavating, Inc. (Peck & Peck) removed several tons of petroleum, lead, and methylene chloride impacted soil located throughout Lot 7 and loaded the waste soil into trucks that transported the soil to Waste Management's Graham Road landfill in Spokane, Washington (see Plate 2).

During impacted soil removal activities, heavy concentrations of clay pigeon debris mixed with soil was discovered in a sewer pipeline trench (that intersected between the former skeet shooting range and Lot 7). The depths of the clay pigeon debris appeared to coincide with the depths of the sewer pipeline which ranged between 6 to approximately 20 feet bgs. The section of pipeline that extended within the planned multi-family redevelopment north and west of Lot 7 (referred to as the "Northern Parcel") was excavated between November 1, 2016 and November 8, 2016 and the soil debris were deposited at the former New Landfill area of Lot 7 using a mechanical backhoe. In accordance with Ecology's request, a layer of geotextile fabric was then placed over all of the contaminated soil, followed by 6-foot thick clean soil cap (referred to as the "CAP"). See Appendix A for geotextile fabric specification. Plates 3 through 6 (with original plans included in Appendix C) include the lateral and vertical extent of contaminated soil placed on Lot 7 and the associated CAP that was installed to cover the contaminated soil.

4.0 MAINTENANCE ISSUES

Taking into account the location and construction of the CAP, the following are the anticipated possible maintenance issues:

4.1 Natural

Damage or wear to the CAP can occur from the following natural impacts:

- Wind / Rain Erosion – The surface of the CAP is critical to maintain since it normally suffers the greatest impacts of weathering and the sun. Erosion and degradation can wear down the CAP surface.
- Vegetation – Vegetation is important in maintaining the surface of the CAP and protecting it from erosion. Drought conditions, disease, or animal damage are potential impacts that can damage or degrade the vegetation cover on the CAP. Additionally, vegetation with deep root systems can puncture the geotextile and compromise the integrity of the CAP.
- Burrowing Animals – The primary barrier the CAP provides over the soils is the geotextile layer. Despite the several feet of topsoil and geotextile it is possible that burrowing animals could dig down to the geotextile and breach it.
- Material Wear – If the surface layer is degraded and the underlying materials are exposed, it is possible that they could suffer permanent damage or wear from ultraviolet (UV) exposure (geotextile) and erosion (cover soil layer blown or washed away).
- Settling – subsurface settling can cause areas of ponded water or depressions in the capped area, leading to erosion.
- Earthquake – If an earthquake, slide, or other geotechnical event occurs that significantly moves or damages the CAP by differential movement of the CAP layers or geotextile fabric, and causes a breach or other significant structural damage to the CAP system, repairs will be required.

4.2 Anthropogenic

Damage or wear to the CAP can be caused by people via the following:

- Vandalism – Vandalism to the surface of the CAP can degrade or damage the CAP and require repairs.
- Traffic – foot, bicycle, motorized, or other traffic on the CAP can cause erosion or damage the CAP.
- Geotextile overlaps adjacent property – a portion of the geotextile overlaps onto the adjacent "Northern Parcel" (Tax Parcel 25116.2101). Care must be taken that this portion of the geotextile is not disturbed or damaged as this may damage the integrity of the CAP. If this occurs, repairs to the CAP may be needed.

Catholic Housing Services of Eastern Washington
March 3, 2017
Revised March 7, 2017

ES-4332.01
Page 6

Additional events or interactions at the site may adversely impact the CAP. If the CAP is damaged due to an event or interaction not discussed in the M&R Plan action will be taken to repair the CAP and the damage and repairs will be noted in the annual report submitted to Ecology. See Section 6.0 for further details concerning the annual report to be submitted to Ecology.

5.0 MONITORING AND REPAIR

The following sections provide guidance for the personnel responsible for monitoring and maintaining the CAP. Field personnel will gather and convey information regarding the current site conditions and functionality of the CAP components to engineering staff and management for evaluation. Monitoring tasks include, but may not be limited to:

- Visual observations, with written records logged in field notebooks or on specific forms; and
- Photo-documentation of CAP conditions with a still camera or video recorder.

5.1 Monitoring Plan

The CAP will be monitored once annually for five years. After five years the monitoring frequency can be re-evaluated and adjusted if Ecology and Catholic Housing Services of Eastern Washington determine it prudent. If natural or anthropogenic events that may damage the CAP occur between monitoring events the CAP should be inspected for damage and repairs should be made if necessary.

Results of monitoring events will be recorded on the CAP Inspection Checklist (see Appendix B) and will be included in annual Maintenance and Repair Reports (described in Section 6.0).

Routine monitoring of the CAP surface and surrounding area provides information regarding the overall performance of CAP components. Annual monitoring should be performed after peak stormwater runoff has occurred in the spring. A monitoring event at this time offers a good opportunity to observe vegetation and erosion conditions and to implement repairs, if necessary.

5.2 Site Monitoring Activities

To provide for accurate and thorough site monitoring, copies of the following documents should accompany monitoring personnel during site visits:

- A copy of this document;
- Prior photographs (for site visual comparisons);
- As-built construction plans and final photographs, and;
- Prior field monitoring reports/forms.

CAP monitoring observations are to be recorded on the Cap Inspection Checklist included in Appendix B. Visual monitoring is to be performed in a manner that allows for observation of the entire surface of the CAP. A serpentine walkover pattern, with no greater than 10 feet between passes, across the CAP surface is recommended. Monitoring staff are to look for the following indications that the integrity and function of the CAP may be compromised:

- Poor health of the vegetation, or significant changes (absence or large die-off) in the vegetation coverage;
- Vegetation with deep root systems establishing on the CAP area;
- Subsidence, surface grade (soil tensile) "cracking", or changes to final grading;
- The presence or evidence of standing water or ice on the surface of the CAP;
- Erosion of, or rill development in, topsoil on the CAP;
- Erosion of the surrounding property that affects, or may eventually affect the CAP, and;
- Holes, mounds, or other evidence of burrowing animals.

Growth density of different vegetation varies. Assessment of the general health of the vegetation must be taken into consideration. Excessive or lagging grass growth and/or the presence of new types of plants (i.e., shrubs, vines, trees, brush, etc.) must be reported. In order to make a reasonable comparison with prior visual monitoring events, the monitoring staff shall take, at a minimum, digital photographs of the CAP from all four sides from a distance sufficient to show the entire CAP area. Photographs from previous monitoring events should be used in the field to allow for a uniform comparison of past CAP conditions with the current conditions.

Subsidence is an important issue for the integrity of the CAP; monitoring staff should pay special attention to the condition of the grades, the formation of depressions, and to the presence or evidence of pooled water or ice, which may indicate an area of subsidence. As with the other information gathered during monitoring events, evidence of subsidence is to be documented for inclusion in annual Monitoring and Maintenance Reports. Additionally, timely notification to Ecology is to be made if there is confirmed or suspected subsidence. Visual evidence of subsidence, depression, or rise in the CAP grade shall be documented with digital photographs. The photographs should be taken up close and from a distance (and annotated) in order to show the location of the issue. The approximate dimensions of the subsidence, depression, or rise (length, width, depth) should be measured and recorded in the field.

When monitoring the CAP surface for evidence of erosion, special attention should be given to areas where water may converge or concentrate and at points along slopes where runoff water volume or velocity may increase. Observations of soil erosion should be photo-documented (with location information), and included in the annual report with a written description.

Burrowing animals may cause damage to the CAP by burrowing through the geotextile fabric and cover soil. Burrowing may also initiate surface or subsurface erosion by water or wind. Monitoring staff should be aware of, and able to identify, burrows and signs of burrowing animals. Timely notification to Ecology should be made if evidence of burrowing is observed. If evidence of burrowing animals is observed, proper steps need to be taken to alleviate the presence of these animals.

5.3 Repair Plan

Repairs will be designed and implemented to restore CAP to proper functioning conditions within 30 working days of initial identification, if feasible. Repairs required to address a breach in the geotextile fabric or a physical or safety hazard will be expedited and/or temporary measures will be implemented until a more permanent remedy can be designed and constructed.

5.3.1 Erosion of Protective Barrier

The protective CAP over the contaminated soil will be repaired when erosion or other disturbance penetrates greater than 25 percent of the original CAP thickness (greater than 1.5 feet) or indicate a mass movement of the CAP material. The eroded area will be backfilled to match adjacent undisturbed areas and the original CAP surface.

If the erosion/disturbance has penetrated the full thickness of the clean soil fill over the geotextile barrier and the soil under the geotextile barrier has begun to erode, then sampling and analysis will be performed downgradient of the eroded area to document that contaminated material is removed during repairs and that adjacent portions of the site have not been contaminated by the eroded contaminated soil. The CAP shall be reconstructed to its original specifications.

5.3.2 Vegetation

If inspections indicate the CAP has less than an estimated 75 percent cover or plants with deep root systems are beginning to establish on site, repairs will be conducted. Plants with deep root systems must be removed and damage to the cap, if any, repaired. Bare areas where plants with deep root systems have been removed, or areas of the CAP where vegetation is not establishing (if more than 25 percent of CAP area) will be re-seeded.

5.3.3 Settling/Ponded Water

Areas of settling/ponded water should be noted during CAP inspections. If these areas are persistent or cause erosion/damage to the CAP they should be re-graded to the original CAP surface elevation and graded in such a way that surface water will not pond on the CAP area.

6.0 REPORTING

Reporting requirements for this M&R Plan include an annual report submitted to Ecology. This report is described in this section. Required repair activities must be reported to Ecology as soon as practicable after being noted.

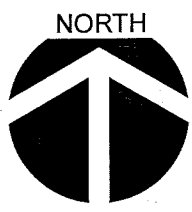
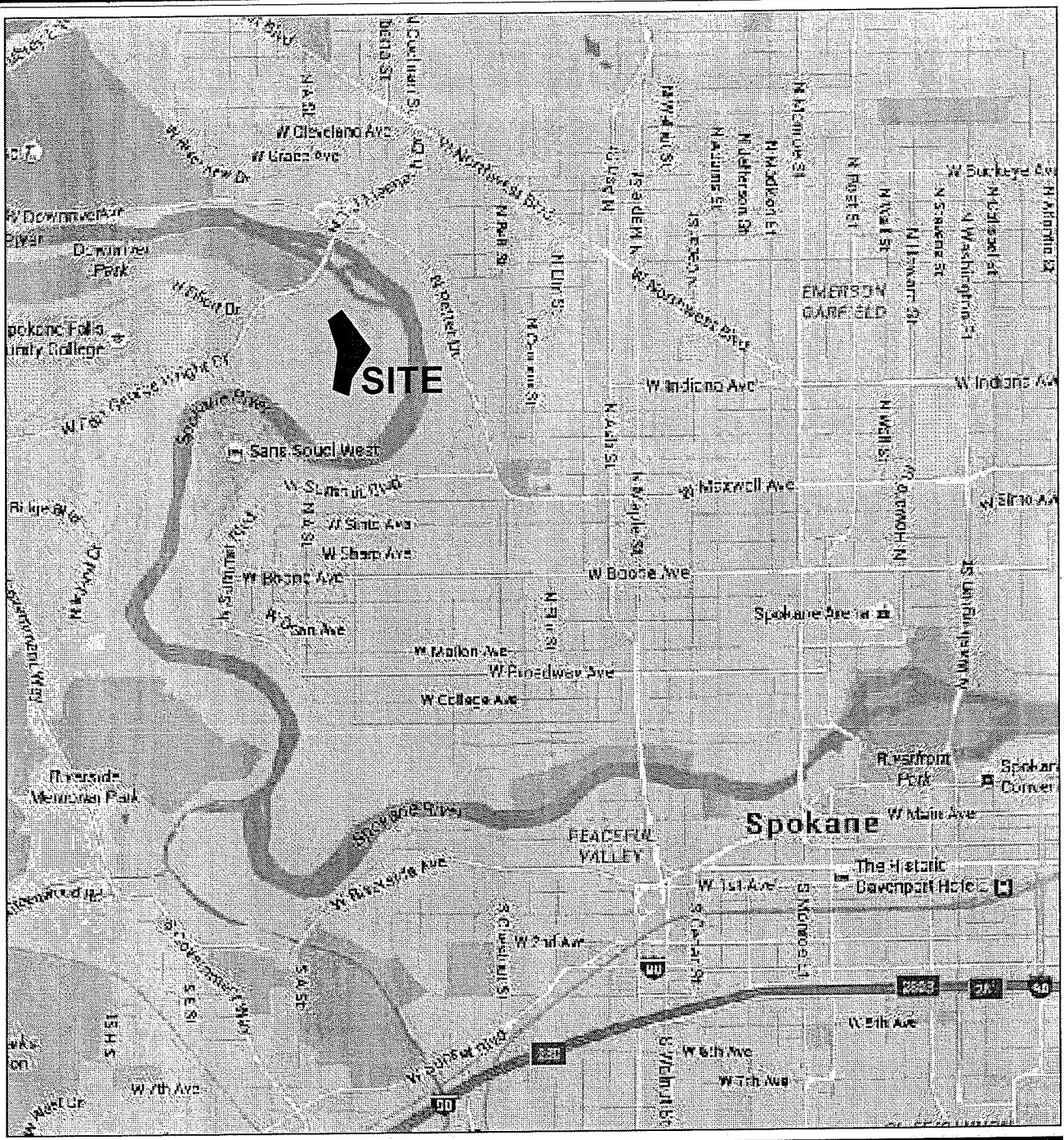
Monitoring event personnel employed or otherwise retained by the current property owner shall complete the CAP Inspections and associated inspection checklist (Appendix B) documenting the results of the monitoring events as prescribed in this plan, and the status of any repairs performed during the reporting period. These should be submitted to Ecology with the annual M&R reports, which should include:

- Completed CAP Inspection Checklist;
- Photographic log of CAP conditions;
- Brief summary of the CAP inspection activities and condition of the CAP; and
- Description of any repairs performed.

The reports shall be submitted to Ecology in early summer on an annual basis.

Plates

ES-4332.01



Reference:
Spokane, Washington
By Google Maps
Dated 2016

Earth Solutions NW LLC
Geotechnical Engineering, Construction Monitoring
and Environmental Sciences

Site Vicinity Map
Lot 7 of Short Plat 216-659FPLT
Spokane, Washington

Drwn. MRS	Date 02/23/2017	Proj. No. 4332.01
Checked TWS	Date Feb. 2017	Plate 1

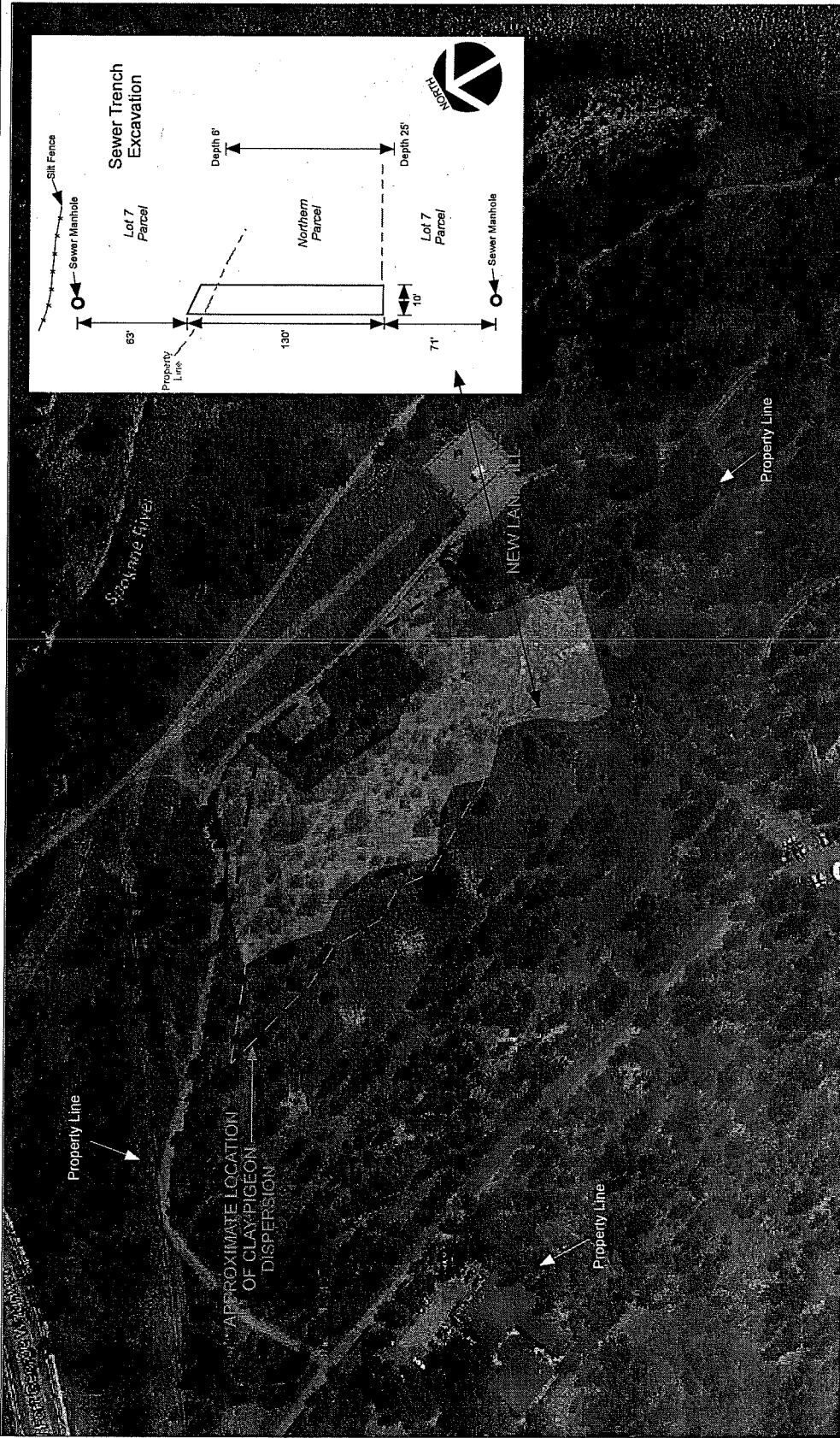
NOTE: This plate may contain areas of color. ESNW cannot be responsible for any subsequent misinterpretation of the information resulting from black & white reproductions of this plate.

LOT 7 & SEWER TRENCH PLAN
 2752 West Elliott Court
 Spokane, Washington

Earth Solutions NW LLC
 Geotechnical Engineering, Construction Monitoring
 and Environmental Sciences



Drawn By	MRS
Checked By	TWS
Date	03/02/2017
Proj. No.	4332.01
Plate	2



Reference:
 Spokane, Washington
 By Google Maps
 Dated 2016
 NOTE: This plate may contain areas of color. ESNW cannot be responsible for any subsequent misinterpretation of the information resulting from black & white reproductions of this plate.



Not - To - Scale

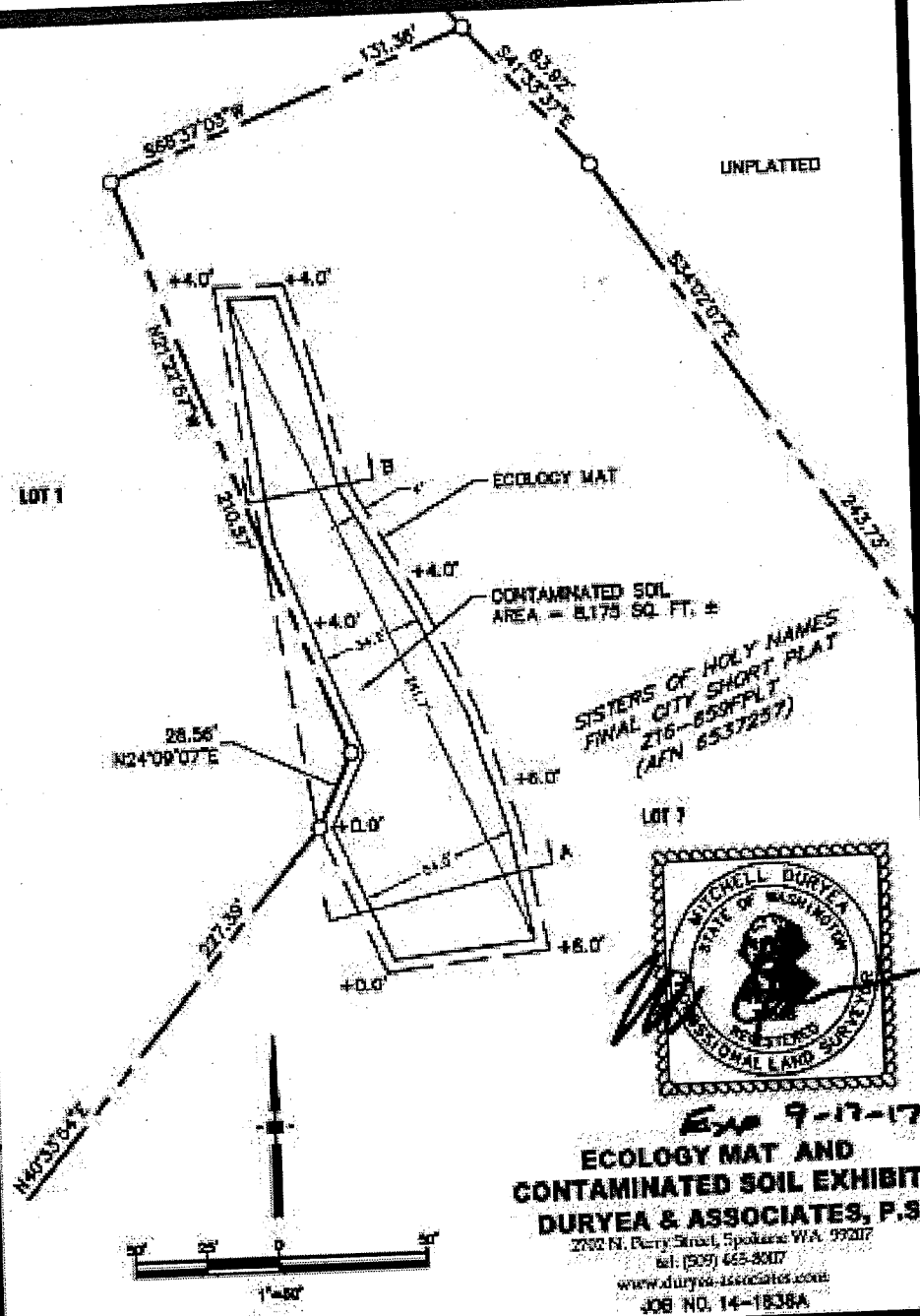
LEGEND

Approximate Extent of
 Petroleum and Lead
 Impacted Soil Remediation



Approximate Extent of
 Methylene Chloride
 Impacted Soil





Exp 9-17-17
**ECOLOGY MAT AND
 CONTAMINATED SOIL EXHIBIT**
DURYEA & ASSOCIATES, P.S.
 2702 N. Perry Street, Spokane, WA 99207
 Tel: (509) 465-8017
 www.duryea-associates.com
 JOB NO. 14-1838A



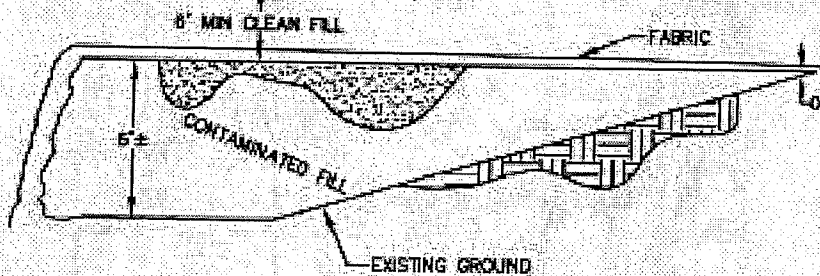
Earth Solutions NW LLC
 Geotechnical Engineering, Construction Monitoring
 and Environmental Sciences

LOT 7 PLAN DISPLAYING
 LOCATION OF CONTAMINATED SOIL
 Lot 7 of Short Plat 216-659FPLT
 Spokane, Washington

Drwn. MRS	Date 02/23/2017	Proj. No. 4332.01
Checked TWS	Date Feb. 2017	Plate 3

SECTION A-A

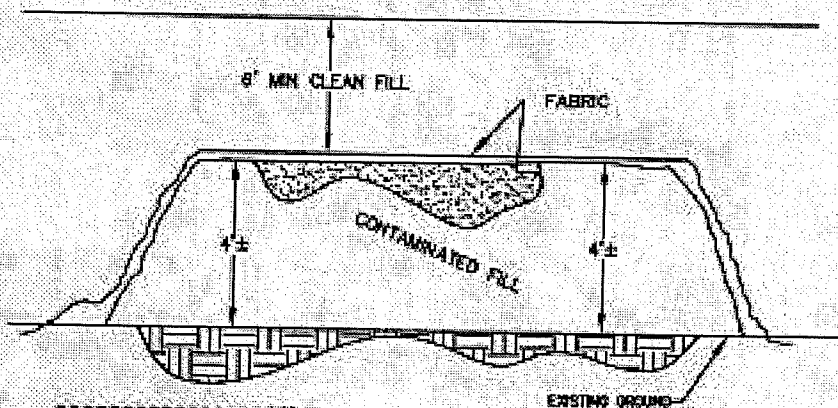
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LEGEND:

-  NATIVE MATERIAL
-  CONTAMINATED FILL

SECTION B-B



Exp 9-17-17

CONTAMINATED FILL
APPROXIMATE
CROSS-SECTIONS

DURYEY & ASSOCIATES, P.S.

2702 N. Perry Street, Spokane WA 99207

tel: (509) 465-5007

www.durysa-associates.com

JCB NO. 14-1838A

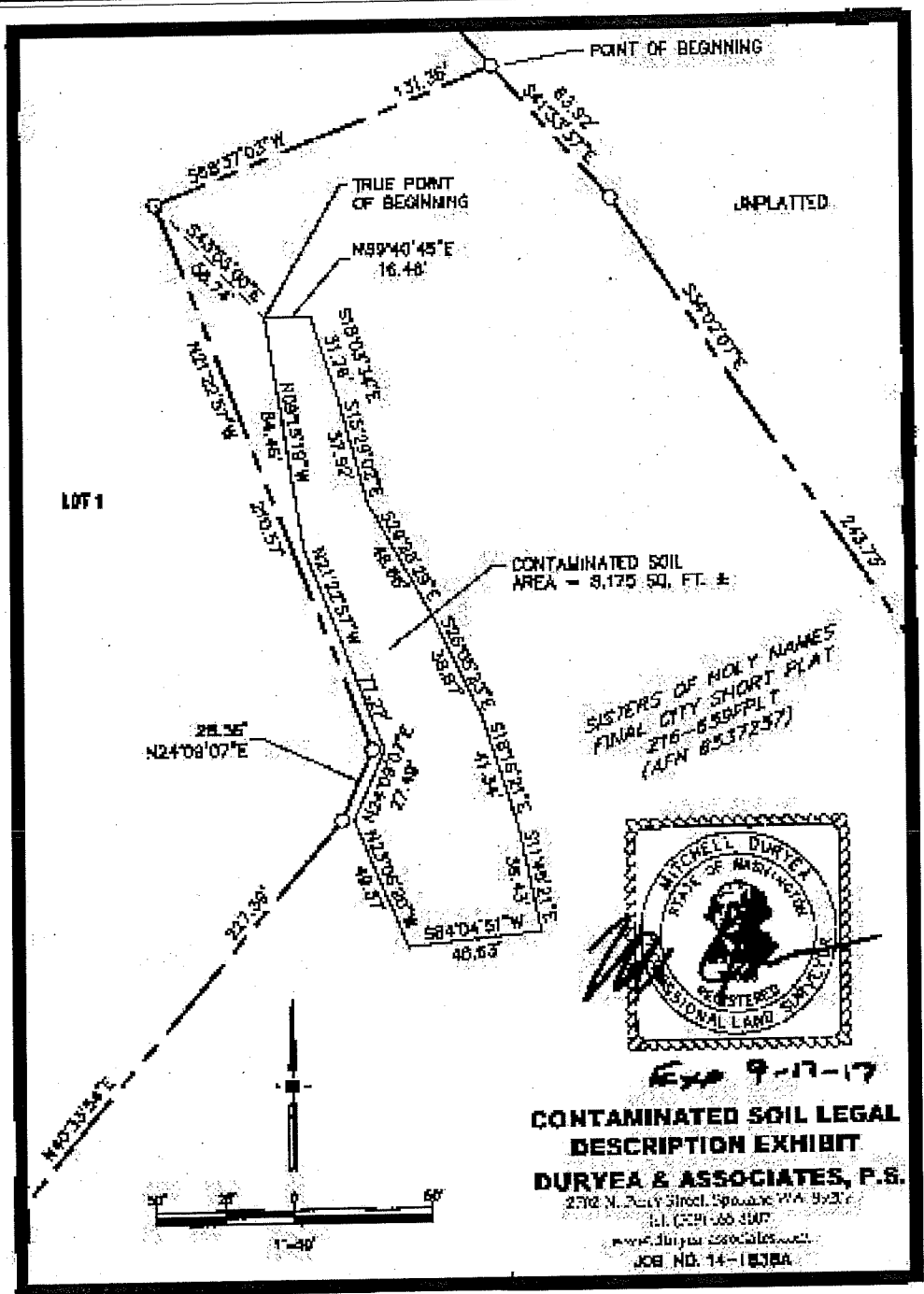


Earth Solutions NW LLC

Geotechnical Engineering, Construction Monitoring
and Environmental Sciences

CROSS-SECTIONS OF CONTAMINATED SOIL
Lot 7 of Short Plat 216-659FPLT
Spokane, Washington

Drwn. MRS	Date 02/23/2017	Proj. No. 4332.01
Checked TWS	Date Feb. 2017	Plate 4



SISTERS OF HOLY NAMES
 FINAL CITY SHORT PLAT
 216-659FPLT
 (AFN 8337257)



Exp 9-17-17

CONTAMINATED SOIL LEGAL DESCRIPTION EXHIBIT

DURYEA & ASSOCIATES, P.S.
 2702 N. Perry Street, Spokane WA 99207
 P.O. Box 3907
 Spokane, WA 99207
 www.duryeaassociates.com
 JOB NO. 14-1838A

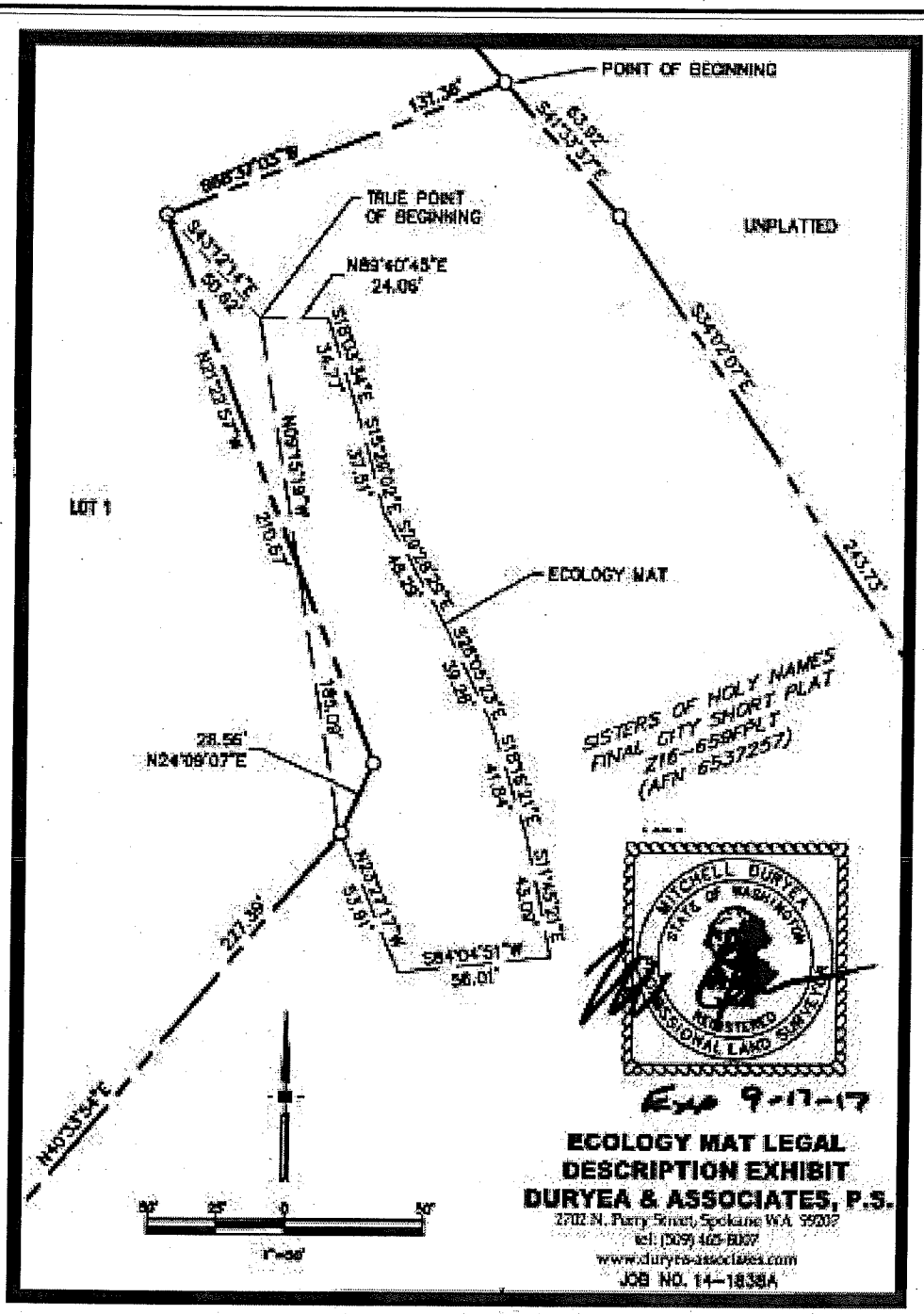


Earth Solutions NW LLC

Geotechnical Engineering, Construction Monitoring
 and Environmental Sciences

CONTAMINATED SOIL LEGAL DESCRIPTION
 Lot 7 of Short Plat 216-659FPLT
 Spokane, Washington

Drwn. MRS	Date 02/23/2017	Proj. No. 4332.01
Checked TWS	Date Feb. 2017	Plate 5



SISTERS OF HOLY NAMES
 FINAL CITY SHORT PLAT
 216-659FPLT
 (AFN 6537257)



Exp 9-17-17

ECOLOGY MAT LEGAL DESCRIPTION EXHIBIT
DURYEA & ASSOCIATES, P.S.
 2702 N. Parry Street, Spokane WA 99207
 tel: (509) 465-8137
 www.duryea-associates.com
 JOB NO. 14-1838A



Earth Solutions NW LLC
 Geotechnical Engineering, Construction Monitoring
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GEOTEXTILE FABRIC CAP LEGAL DESCRIPTION
Lot 7 of Short Plat 216-659FPLT
Spokane, Washington

Drwn. MRS	Date 02/23/2017	Proj. No. 4332.01
Checked TWS	Date Feb. 2017	Plate 6

DURYEA & ASSOCIATES, P.S.
Land Surveying & Mapping

January 3, 2017

Job No. 14-1838A

Contaminated Soil Legal Description

All that certain real property situate in the City of Spokane, County of Spokane, State of Washington being described as follows:

A portion of Lot 7 of Sisters of Holy Names Final City Short Plat Z16-659FPLT recorded September 22, 2016 under Auditor's File No. 6537257, Spokane County Records, and being more particularly described as follows:

BEGINNING at the North corner of said Lot 7, being hereinabove described; thence along the northwesterly line of said Lot 7 South 68°37'03" West 131.36 feet; thence leaving said northwesterly line of said Lot 7 South 43°55'00" East 56.74 feet to the TRUE POINT OF BEGINNING of this description; thence North 89°40'45" East 16.46 feet; thence South 18°03'34" East 31.76 feet; thence South 15°29'02" East 37.92 feet; thence South 29°28'29" East 48.66 feet; thence South 26°05'23" East 38.87 feet; thence South 18°16'21" East 41.34 feet; thence South 11°45'21" East 38.43 feet; thence South 84°04'51" West 48.63 feet; thence North 23°06'20" West 49.37 feet; thence North 24°09'07" East 27.49 feet; thence North 21°22'57" East 77.27 feet; thence North 09°15'19" West 84.46 feet to the said true point of beginning of this description, containing 0.187 acres of land, more or less.



Exp 9-17-17

DURYEA & ASSOCIATES, P.S.
Land Surveying & Mapping

January 3, 2017

Job No. 14-1838A

Ecology Mat Legal Description

All that certain real property situate in the City of Spokane, County of Spokane, State of Washington being described as follows:

A portion of Lots 1 and 7 of Sisters of Holy Names Final City Short Plat Z16-659FPLT recorded September 22, 2016 under Auditor's File No. 6537257, Spokane County Records, and being more particularly described as follows:

BEGINNING at the North corner of said Lot 7, being hereinbove described; thence along the northwesterly line of said Lot 7 South 68°37'03" West 131.36 feet; thence leaving said northwesterly line of said Lot 7 South 43°12'14" East 50.62 feet to the TRUE POINT OF BEGINNING of this description; thence North 89°40'45" East 24.06 feet; thence South 18°03'34" East 34.77 feet; thence South 15°29'02" East 37.51 feet; thence South 29°28'29" East 48.29 feet; thence South 26°05'23" East 39.26 feet; thence South 18°16'21" East 41.84 feet; thence South 11°45'21" East 43.09 feet; thence South 84°04'51" West 56.01 feet; thence North 23°27'17" West 53.91 feet; thence North 09°15'19" West 185.09 feet to the said true point of beginning of this description, containing 0.257 acres of land, more or less.



Exp 9-17-17

Appendix A
Geotextile Fabric Data Sheet
ES-4332.01



PRODUCT DATA SHEET

WINFAB 400N



WINFAB 400N is a needlepunched nonwoven geotextile manufactured using polypropylene fibers that are formed into a dimensionally stable network, which allows the fibers to maintain their relative position. **WINFAB 400N** resists ultraviolet deterioration, rotting, and biological degradation and is inert to commonly encountered soil chemicals.

PROPERTY	TEST METHOD	MARV English	MARV Metric
Tensile Strength (Grab)	ASTM D-4632	100 x 100 lbs	445 x 445 N
Elongation	ASTM D-4632	50%	50%
CBR Puncture	ASTM D-6241	310 lbs	1380 N
Trapezoidal Tear	ASTM D-4533	45 x 45 lbs	200 x 200 N
UV Resistance (500 hrs)	ASTM D-4355	70%	70%
Apparent Opening Size (AOS)*	ASTM D-4751	70 US Std. Sieve	0.212 mm
Permittivity	ASTM D-4491	2.0 sec ⁻¹	2.0 sec ⁻¹
Water Flow Rate	ASTM D-4491	140 gpm/ft ²	5704 lpm/m ²

*Maximum Average Roll Valve

Notes:

- Mullen Burst ASTM D-3786 has been removed. It is not recognized by ASTM D-35 on Geosynthetics.
- Puncture ASTM D-4833 has been removed. It is not recognized by AASHTO M288 and has been replaced with CBR Puncture ASTM D-6241

PROPERTY	Typical English	Typical Metric
Roll Dimensions	12.5 x 360 ft 15 x 360 ft	3.81 x 109.8 m 4.6 x 109.8 m
Roll Area	500 yd ² 600 yd ²	418 m ² 502 m ²

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Willacoochee Industrial Fabrics, Inc.
 PO Box 599 • 769 West Main Street • Willacoochee, GA 31650
 Ph: (912) 534-5757 • Fax: (912) 534-5533



Appendix B
CAP Inspection Checklist
ES-4332.01

Sisters of the Holy Names Site

Cap Inspection Checklist

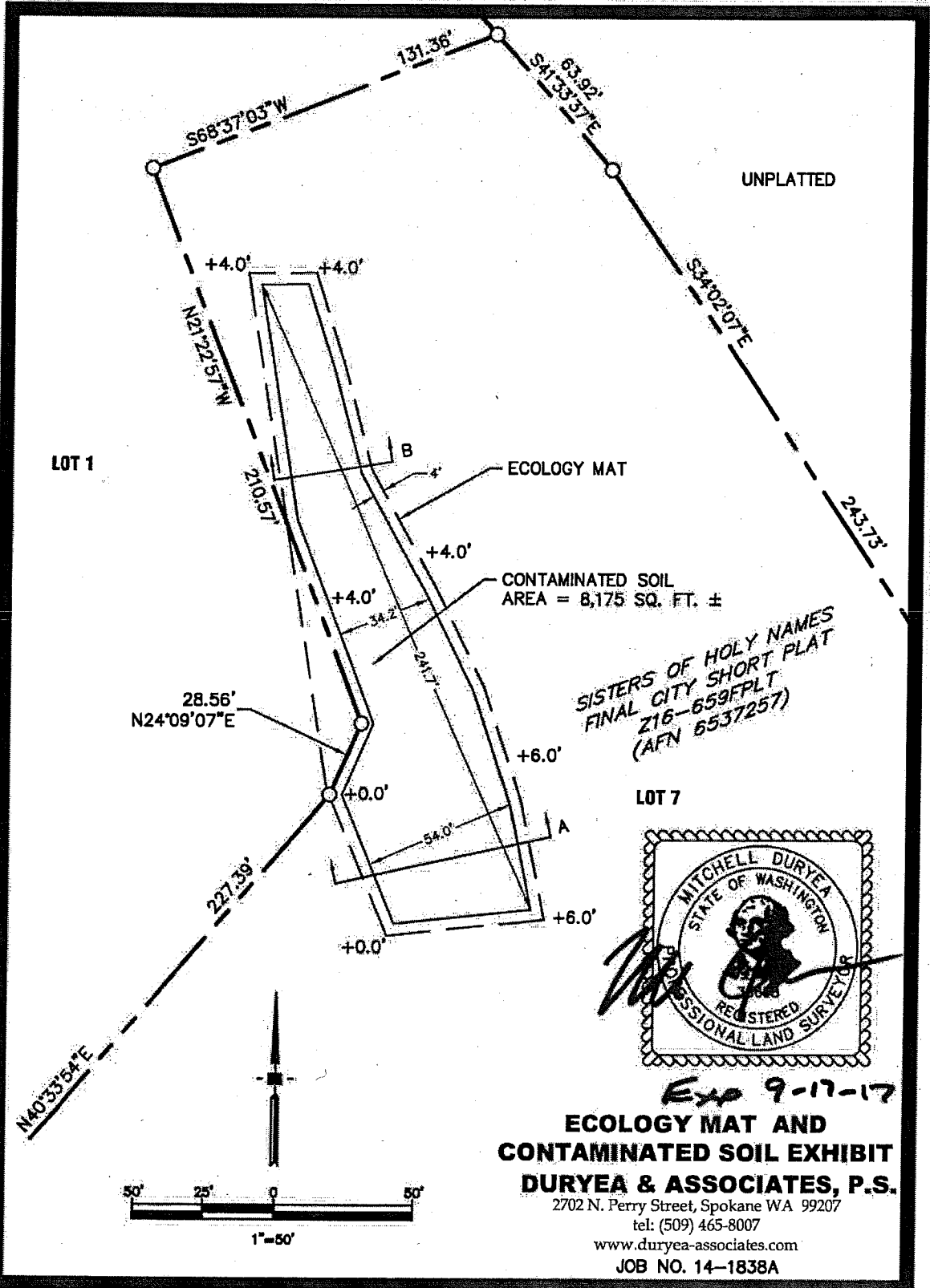
DATE OF INSPECTION:	INSPECTED BY:
TIME ARRIVED AT SITE:	TIME DEPARTED SITE:
CURRENT WEATHER:	TEMPERATURE:

ITEM	YES	NO	REMARKS
Erosion of or damage to cover soil more than two inches deep?			
Definable area lacking vegetation?			
Trees or other plants with deep root systems beginning to root?			
Geotextile exposed?			
Animal burrows in cover soil?			
Ponded water?			
Depressions in ground surface or other indications of settling?			
Other?			
Other?			
Other?			
Describe other site observations or repairs made to cap area in the space below.			

Appendix C

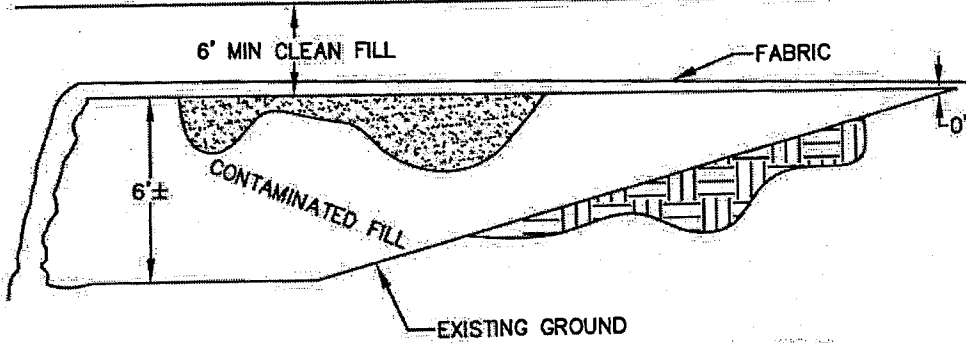
Contaminated Soil and Geotextile Fabric Cap Cross-Sections & Legal Descriptions

ES-4332.01

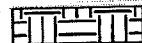



SECTION A-A

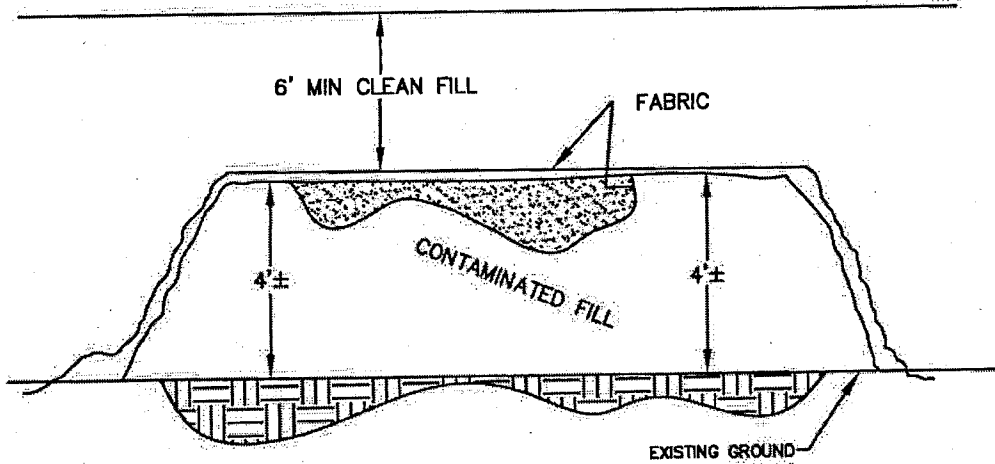
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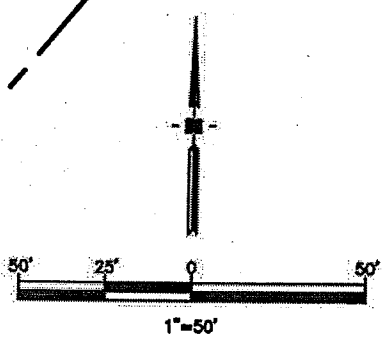
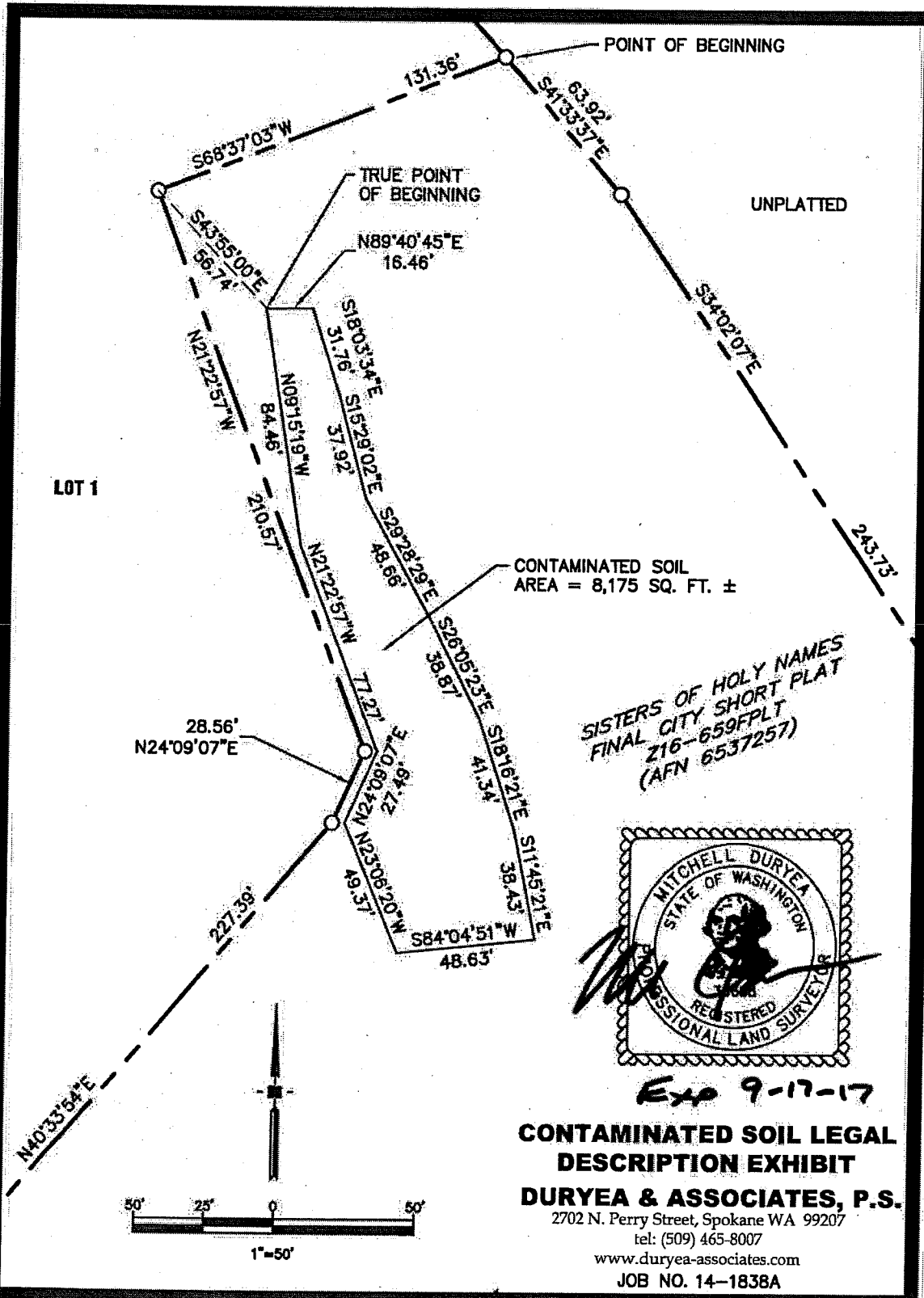
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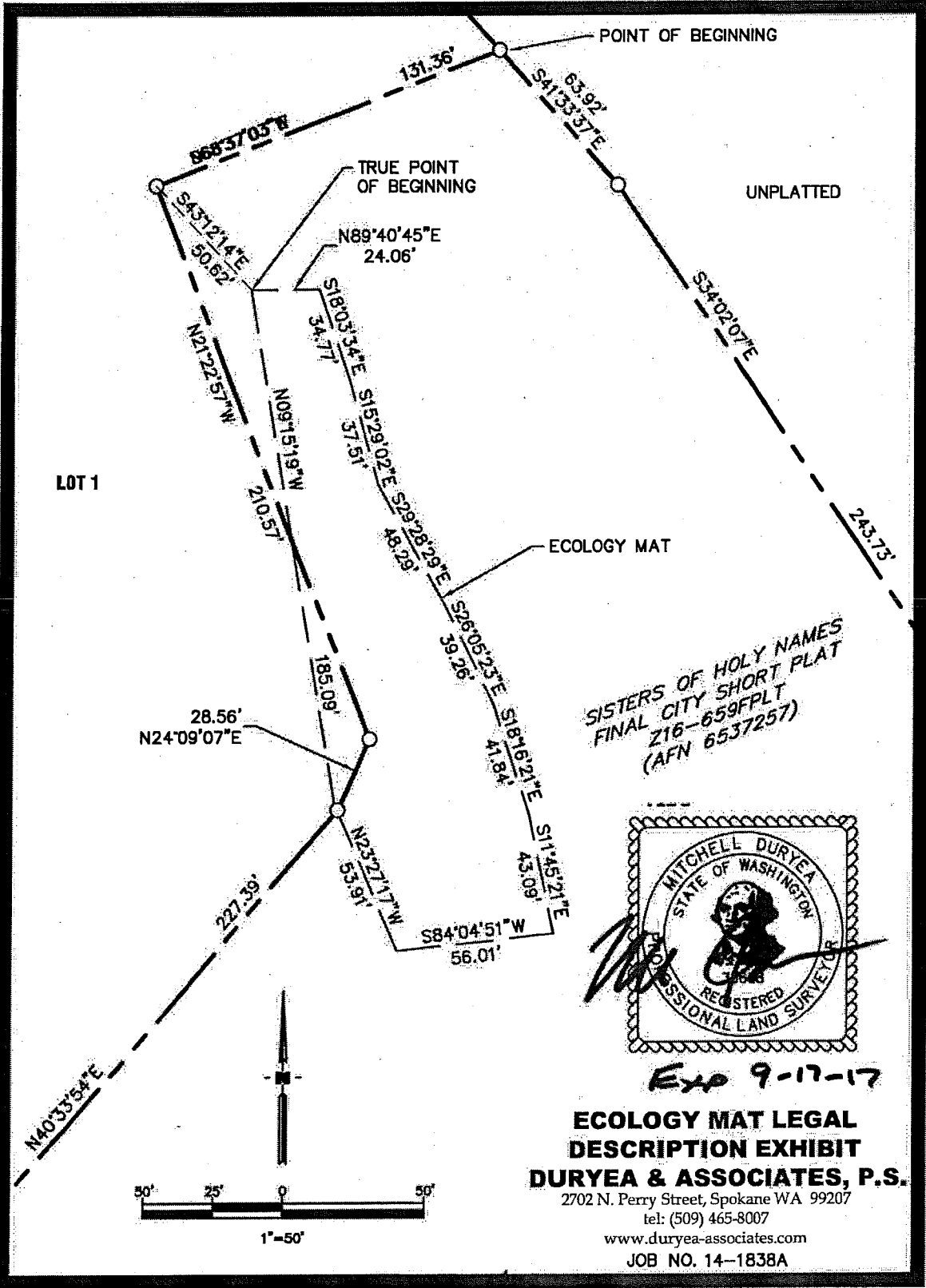
-  NATIVE MATERIAL
-  CONTAMINATED FILL

SECTION B-B



**CONTAMINATED FILL
APPROXIMATE
CROSS-SECTIONS**
DURYEY & ASSOCIATES, P.S.
2702 N. Perry Street, Spokane WA 99207
tel: (509) 465-8007
www.duryea-associates.com
JOB NO. 14-1838A





SISTERS OF HOLY NAMES
 FINAL CITY SHORT PLAT
 Z16-659FFPLT
 (AFN 6537257)



Exp 9-17-17

ECOLOGY MAT LEGAL DESCRIPTION EXHIBIT
DURYEY & ASSOCIATES, P.S.

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 JOB NO. 14-1838A

Distribution

ES-4332.01

EMAIL ONLY

**Catholic Housing Services of Eastern Washington
c/o Copper River Apartments, LLC
120 West Cataldo Avenue, Suite 100
Spokane, Washington 99201**

Attention: Mr. John Fisher