

MEMORANDUM FOR RECORD

August 14, 2014

SUBJECT: DMMP TIER 1 EVALUATION OF THE DUWAMISH GARDENS HABITAT RESTORATION PROJECT (NWS-2011-199).

1. **Introduction.** This memorandum documents the Tier 1 evaluation by the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers, Washington Departments of Ecology and Natural Resources, and the Environmental Protection Agency) of the Duwamish Gardens habitat restoration project (Figure 1). This evaluation resulted in a no-test determination.
2. **Duwamish Gardens Habitat Restoration Project.** The City of Tukwila proposes constructing a habitat restoration project on the right bank of the Duwamish River at river mile 6.75, just west of East Marginal Way South and just south of South 112th Street. The project will create estuarine off-channel fish habitat, as well as riparian and upland terrestrial habitat on a 2.25 acre site (Figure 2). Approximately 26,256 cubic yards of upland material will be excavated to create the off-channel habitat, which will include mudflats and areas of high and low marsh. Figure 3 shows the grading plan and areas/volumes of cut and fill. Excavated material will be hauled to an approved off-site upland disposal area.

A portion of the riverbank will be left in place during site excavation, forming a berm to prevent soil from entering the river and to protect interior areas until the interior grading is complete. The interior will be dewatered of groundwater seepage and pumped into a temporary settling pond or barrel for treatment prior to discharge into the river. Lower-layer excavation will occur outside of the wet season. A silt curtain will be installed during the in-water work window prior to removing the temporary berm. Finish elevations of the final spit will be achieved and as much of the planting as possible completed prior to breaching. The temporary berm will be removed from the landward side and breaching will occur only during the in-water work window and during low tide.

3. **Characterization of Soils.** Soil sampling and testing were conducted by Shannon and Wilson in 2012 and documented in a draft environmental characterization report (Shannon and Wilson, 2012). Based on previous site investigations, the testing focused on carcinogenic polyaromatic hydrocarbons (cPAHs), lead and chromium.

Contamination was found on site, but was restricted to three areas on the periphery of the excavation footprint (Figure 4). Benzo(a)pyrene and/or toxicity equivalency factor (TEF)-modified cPAHs were detected at concentrations exceeding the Model Toxics Control Act (MTCA) Method A criterion for unrestricted land use of 0.1 mg/kg in the 0-2 foot samples from GP-1, GP-17 and GP-19. cPAHs were not detected in the 2-4 foot samples from GP-1 and GP-19. However, the 2-4 foot sample from GP-17 contained TEF-modified cPAHs at 0.104 mg/kg, which is slightly above the MTCA Method A criterion.

Neither lead nor chromium exceeded the MTCA Method A cleanup levels for unrestricted land use of 250 mg/kg for lead and 2,000 mg/kg for chromium. However, the 0-2 foot sample from GP-16 contained lead at 141 mg/kg, which exceeds the Dangerous Waste screening criterion of 100 mg/kg.

This sample was analyzed for leachable metals using the toxicity characteristic leachate procedure (TCLP). Lead was not detected in the TCLP sample (Shannon and Wilson, 2012).

4. **Concerns for Sediment Surface to be Exposed by Excavation.** No in-water placement of excavated material is proposed and excavated material exceeding MTCA Method A criteria will be disposed of properly at a RCRA Subtitle D landfill. Therefore, the primary concern of the DMMP agencies was in regard to the quality of the sediment surface that will be exposed to the aquatic environment following excavation and grading.

The DMMP agencies met with the City of Tukwila and consultants from J.A. Brennan and Shannon & Wilson September 5, 2013 to discuss this issue. Additional information was provided to the agencies:

- The soil surface that will be exposed to the aquatic environment by excavation will be modified through the placement of fish mix or other cover.
 - The top 2 feet of soil in the contaminated areas will be removed and disposed in a RCRA Subtitle D landfill.
 - There were no exceedances of the sediment quality standard (SQS) in the 2-4 foot samples.
 - Material deeper than 4 feet below ground surface is native material.
 - Underground storage tanks associated with the two structures on the site will be removed, as well as any contaminated soil in the vicinity of the tanks.
 - All work (other than breaching the temporary berm) will be done in the dry, so there will be no exposure of contaminated soil to the aquatic environment.
 - The grading plan for the site places the sampling stations with MTCA Method A exceedances above the ordinary high water line, further reducing the possibility for any exposure of contaminated soil to the aquatic environment.
5. **No-Test Determination.** Based on the meeting with the City of Tukwila and the additional information provided, the DMMP agencies' consensus determination was that no additional sampling and testing will be required for the Duwamish Gardens project for evaluation of the surface to be exposed by excavation. The agencies agreed that the risk of exposure of contaminated soil to the aquatic environment is acceptably low.
 6. **References.**

Shannon and Wilson, 2012. *Limited Environmental Characterization Report – Duwamish Gardens – Tukwila, Washington*. Shannon and Wilson, Inc., Seattle. June 28, 2012.

7. Agency Signatures.

Concur:

The signed document is on file in the Dredged Material Management Office.

Date David Fox, P.E. - Seattle District Corps of Engineers

Date Erika Hoffman - Environmental Protection Agency

Date Laura Inouye, Ph.D. - Washington Department of Ecology

Date Celia Barton - Washington Department of Natural Resources

Copies furnished:

DMMP signatories
Lori Lull, CENWS-OD-RG
Ryan Larson, City of Tukwila
Jim Brennan, J.A. Brennan
Cody Johnson, Shannon and Wilson

Figure 1 – vicinity map

Duwamish Gardens



Map
Traffic

Figure 2 – site map



project site

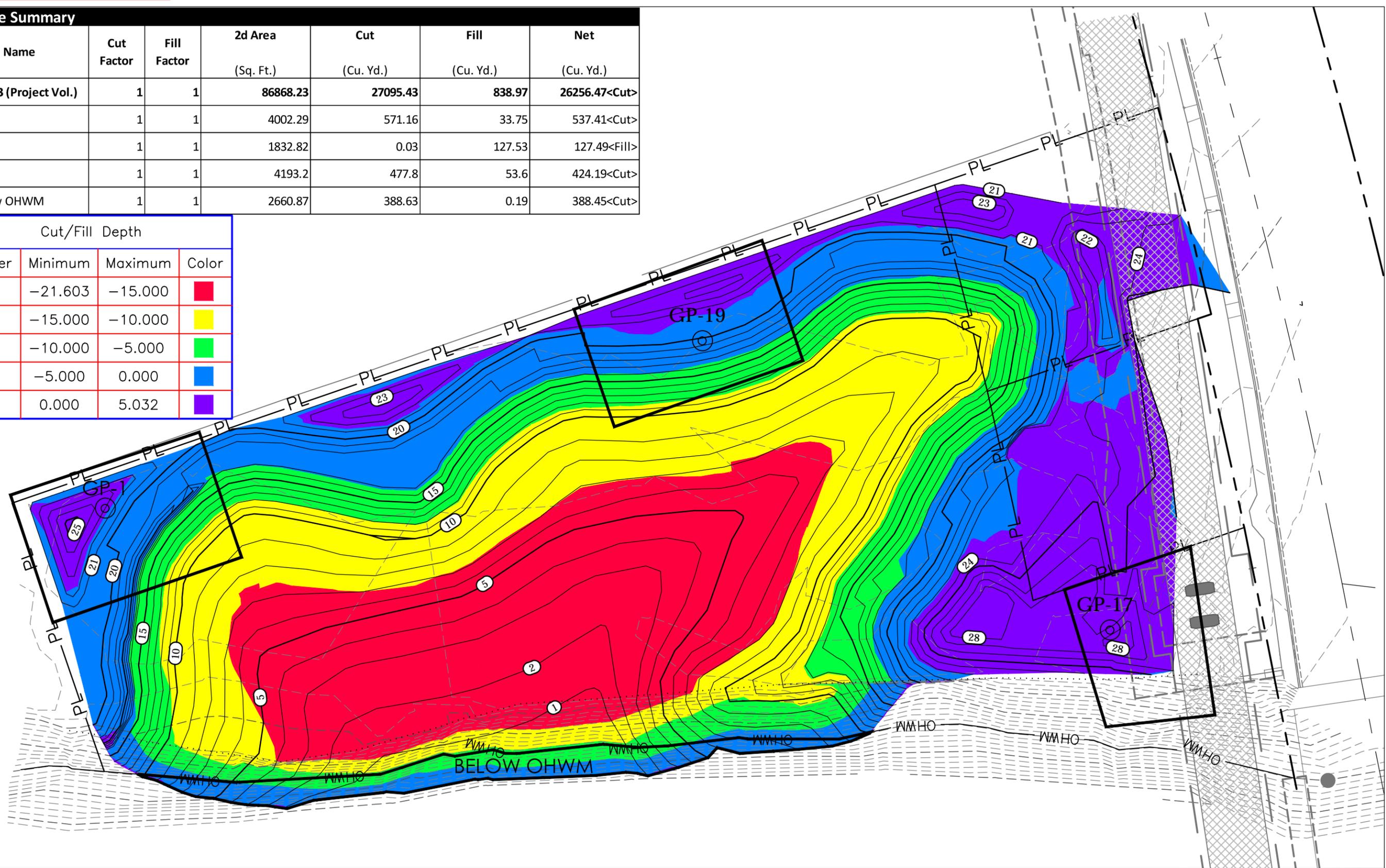
ST Light Rail
ST Light Rail
East Marginal Way S

Figure 3 - grading plan

Note: Set Logo to B&W or Color before plotting

Volume Summary						
Name	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
VOL-DD 3 (Project Vol.)	1	1	86868.23	27095.43	838.97	26256.47<Cut>
GP-1	1	1	4002.29	571.16	33.75	537.41<Cut>
GP-17	1	1	1832.82	0.03	127.53	127.49<Fill>
GP-19	1	1	4193.2	477.8	53.6	424.19<Cut>
Below OHWM	1	1	2660.87	388.63	0.19	388.45<Cut>

Cut/Fill Depth			
Number	Minimum	Maximum	Color
1	-21.603	-15.000	Red
2	-15.000	-10.000	Yellow
3	-10.000	-5.000	Green
4	-5.000	0.000	Blue
5	0.000	5.032	Purple



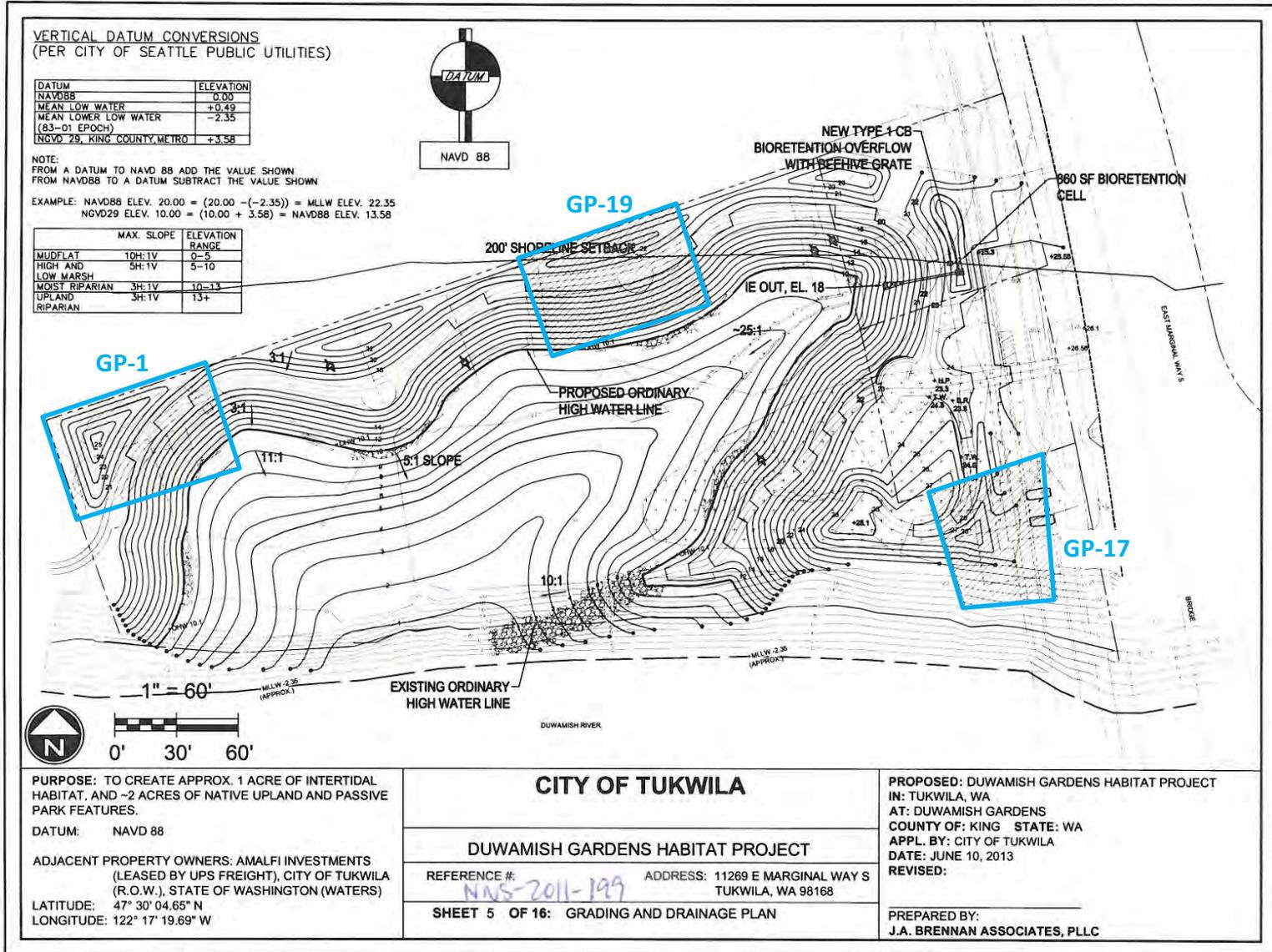
Filepath: G:\00_MFA_Civil 3D_00_PROJECTS\0851.01-Duwamish Gardens\ANALYSIS\VOL-DD3 (2013.06.04).dwg
 Printed by: Jacob Faust
 Date: 6/5/2013 11:38:48 AM

This figure prepared as supplemental visual information only and should not be used for construction purposes. Only plan sheets approved, stamped and signed by a registered professional engineer in the state of governing jurisdiction shall be used for construction. Additionally, only plans approved by the applicable governing jurisdiction(s) shall be used for final construction unless otherwise expressly noted in writing by the engineer of record.



NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

Figure 4 – areas with soil contamination



PURPOSE: TO CREATE APPROX. 1 ACRE OF INTERTIDAL HABITAT, AND ~2 ACRES OF NATIVE UPLAND AND PASSIVE PARK FEATURES.

DATUM: NAVD 88

ADJACENT PROPERTY OWNERS: AMALFI INVESTMENTS (LEASED BY UPS FREIGHT), CITY OF TUKWILA (R.O.W.), STATE OF WASHINGTON (WATERS)

LATITUDE: 47° 30' 04.65" N
LONGITUDE: 122° 17' 19.69" W

CITY OF TUKWILA

DUWAMISH GARDENS HABITAT PROJECT

REFERENCE #: *NNS-2011-199* ADDRESS: 11269 E MARGINAL WAY S TUKWILA, WA 98168

SHEET 5 OF 16: GRADING AND DRAINAGE PLAN

PROPOSED: DUWAMISH GARDENS HABITAT PROJECT
IN: TUKWILA, WA
AT: DUWAMISH GARDENS
COUNTY OF: KING STATE: WA
APPL. BY: CITY OF TUKWILA
DATE: JUNE 10, 2013
REVISED:

PREPARED BY:
J.A. BRENNAN ASSOCIATES, PLLC