Knittel, Janette

From: Long, John <john.long3@woodplc.com>
Sent: Tuesday, November 05, 2019 8:54 AM
To: Knittel, Janette
Subject: Boeing Slip No. 6 Bank improvements
Attachments: NWS-2018-1001-PN (1)--Boeing Developmental Center Slip 6.pdf

Janette:

I did a little research and Boeing is planning on numerous bank stabilization projects along the Duwamish including the northeastern end of Slip No. 6 which is apparently eroding. The attached PDF has some detailed maps showing the planned Slip No. 6 work.

Please let me know if you have any questions.

- John

John D. Long, LG., L.Hg.
Senior Associate Hydrogeologist
600 University Street, Ste 600
Seattle, Washington, 98101

D +1 (206) 342-1779
F +1 (206) 342-1761
M +1 (206) 713-9499
E john.long3@woodplc.com

This message is the property of John Wood Group PLC and/or its subsidiaries and/or affiliates and is intended only for the named recipient(s). Its contents (including any attachments) may be confidential, legally privileged or otherwise protected from disclosure by law. Unauthorized use, copying, distribution or disclosure of any of it may be unlawful and is strictly prohibited. We assume no responsibility to persons other than the intended named recipient(s) and do not accept liability for any errors or omissions which are a result of email transmission. If you have received this message in error, please notify us immediately by reply email to the sender and confirm that the original message and any attachments and copies have been destroyed and deleted from your system.

If you do not wish to receive future unsolicited commercial electronic messages from us, please forward this email to: unsubscribe@woodplc.com and include “Unsubscribe” in the subject line. If applicable, you will continue to receive invoices, project communications and similar factual, non-commercial electronic communications.

Please click http://www.woodplc.com/email-disclaimer for notices and company information in relation to emails

originating in the UK, Italy or France.

As a recipient of an email from a John Wood Group Plc company, your contact information will be on our systems and we may hold other personal data about you such as identification information, CVs, financial information and information contained in correspondence. For more information on our privacy practices and your data protection rights, please see our privacy notice at https://www.woodplc.com/policies/privacy-notice

---

US Army Corps of Engineers
Seattle District

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Joint Public Notice

Application for a Department of the Army Permit and a Washington Department of Ecology Water Quality Certification and/or Coastal Zone Management Consistency Concurrence

US Army Corps of Engineers
Regulatory Branch
Post Office Box 3755
Seattle, WA 98124-3755
Telephone: (206) 316-3360
ATTN: Rory Lee,
Project Manager

WA Department of Ecology
SEA Program
Post Office Box 47600
Olympia, WA 98504-7600
Telephone: (360) 407-6076
ATTN: SEA Program,
Federal Permit Coordinator

Public Notice Date: October 28, 2019
Expiration Date: November 26, 2019

Reference No.: NWS-2018-1001
Name: DC Thompson (Bank Stabilization)

Interested parties are hereby notified that the U.S. Army Corps of Engineers (Corps) and the Washington Department of Ecology (Ecology) have received an application to perform work in waters of the U.S. as described below and shown on the enclosed drawings dated September 27, 2019.

The Corps will review the work in accordance with Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Ecology will review the work pursuant to Section 401 of the CWA, with applicable provisions of State water pollution control laws and the Coastal Zone Management Act.

APPLICANT: The Boeing Company
The Boeing Company, Shared Services Group
ATTN: Martin Probst
P.O. Box 3707, MC 46-208
Seattle, Washington 98124-2207
Telephone: (206) 852-4985

AGENT: Golder Associates Inc.
ATTN: Scott Stoneman
18300 Northeast Union Hill Road, Suite 200
Redmond, Washington 98052
Telephone: (206) 316-5663

LOCATION: In the Duwamish River at 9725 East Marginal Way South (Development Center) and 8701 East Marginal Way South (Thompson Site) at Tukwila, Washington.

WORK: The Boeing Company proposes bank stabilization improvements at their industrial facility. Bank stabilization improvements below the ordinary high water mark (OHWM) include replacement of 340 linear feet of timber pile bulkhead with riprap, installation of anchored logs, repairs to seven timber pile dikes and placement of 900 linear feet of new riprap. Additional work would include removal of two track piers, concrete slab, and repairs to existing outfalls.

PURPOSE: The purpose of this project is to protect Boeing's existing infrastructure.

NWS-2018-1001, DC Thompson (Bank Stabilization)

ADDITIONAL INFORMATION: The proposed project would result in 44,190 square feet of permanent impacts to the Duwamish River. The DC Thompson Bank Stabilization improvements can be divided into four construction segments: Area 1 (Thompson Site), Area 2 (Developmental Center Slip 6), Area 3 (Developmental Center West) and Area 4 (Developmental Center East).

Area 1 (Thompson Site): The Site consists of approximately 340 linear feet of riverbank with fine-grained low-sloping intertidal beach that abuts an eroding and degrading timber pile wall. Work below the OHWM would include removal of the existing timber pile wall, extension of stormwater outfall, re-grading the riverbank at a 2:1 slope and placement of riprap. Riprap would be installed to replace the timber pile wall and keyed into the river bed (approximately for toe of pile wall + 3.0 feet) and extended to the OHWM (+10.9 feet). Log structures and a natural sediment mix would be incorporated into the riprap slope. Additional work above the OHWM would include, installation of a sheet pile wall and maintenance to existing parking area. The proposed construction would result in 3,160 square feet of permanent impacts (620 cubic yards excavation and 310 cubic yards of fill) to the Duwamish River.

Area 2 (Developmental Center Slip 6): The site is at the head of Slip 6, located on the north end of the DC property. A 30-foot long section of bank has eroded and resulted in an over-steepened bank. Work would consist of placement of riprap at a 2:1 slope to the mean lower low water (-2.5 feet), extending to the OHMW (+10.9 feet). Log structures and a natural sediment mix would be incorporated into the riprap slope. Additional work landward of the OHWM would include vegetated coir lifts with incorporated willow stakes. The proposed construction would result in 1,190 square feet of permanent impacts (110 cubic yards of fill) to the Duwamish River.

Area 3 (Developmental Center West): The site is a 900-foot long reach on the right bank of the Lower Duwamish Waterway starting immediately downstream of the Oxbow Bridge. Work below the OHWM would include repairing four timber pile dikes (approximately 17 individual piles), placement of riprap at a 2:1 slope, extension of seven stormwater outfalls and removal of two pile supported range track docks, concrete slabs, and rubble. Piles would be removed and installed by vibratory hammer. Placement of riprap (900 linear feet) would occur from mean lower low water (-2.5 feet), extending to the OHMW (+10.9 feet). Log structures and a natural sediment mix would be incorporated into the riprap slope. Extension of the seven stormwater outfalls would be dependent on the riprap placement. Additional work above the OHWM would include establishment of vegetation strip (between parking area and riprap) and maintenance to the existing parking area. The proposed construction would result in 36,000 square feet of permanent impacts (110 cubic yards of excavation and 6,300 cubic yards of fill) to the Duwamish River.

Area 4 (Developmental Center East): Area 4 is a 210-foot long reach on the right bank of the Lower Duwamish Waterway starting immediately upstream of the Oxbow Bridge to the 102nd Street Bridge. The bank is generally composed of a fine-grained intertidal bench scattered with irregular angular rock and concrete rubble. Work below the OHWM would consist of repairing three timber pile dikes (approximately 11 individual piles), placement of riprap at a 2:1 slope, concrete removal and installation of anchored logs and placement of sediment mix within riprap. Piles would be removed and installed by vibratory hammer. Placement of riprap (210 linear feet) would occur from approximately mean higher high water (MHHW) (+8.6 feet), extending to the OHMW (+10.9 feet). Log structures and a natural sediment mix would be incorporated into the riprap slope. Additional work above the OHWM would include installation of vegetation choirs, planted with willow stakes. The proposed construction would result in 2,940 square feet of permanent impacts (50 cubic yards of excavation and 1,100 cubic yards of fill) to the Duwamish River.

Work would be accomplished from both onshore and from a barge. Onshore construction would include the use of excavators for excavation and placement of material, dump trucks for hauling material on and off site, and front loaders for movement of material from stockpiles to excavators. Stockpiled materials would be located in designated upland areas with appropriate erosion control measures. Barge construction would include the use of a barge mounted clam-shell bucket for excavation and placement of material. Work would be accomplished in the

dry during low tides. If work cannot be accomplished during low tides a turbidity curtain would be deployed around the work areas. All material (e.g., creosote treated piling, rubble, and sediment) would be disposed on in an approved upland disposal facility.

The location of the ordinary high water mark shown on the project drawings have not yet been verified by the U.S. Army Corps of Engineers (Corps). If the Corps determines the boundaries of the wetland/waters are substantially inaccurate a new public notice may be published.

MITIGATION: The applicant has proposed to perform on-site permittee-responsible mitigation.

ENDANGERED SPECIES: The Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the ESA on all actions that may affect a species listed (or proposed for listing) under the ESA as threatened or endangered or any designated critical habitat. After receipt of comments from this public notice, the U.S. Army Corps of Engineers will evaluate the potential impacts to proposed and/or listed species and their designated critical habitat.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The proposed action would impact EFH in the project area.

If the U.S. Army Corps of Engineers (Corps) determines that the proposed action may adversely affect EFH for federally managed fisheries in Washington waters, the Corps will initiate EFH consultation with the NMFS. The Corps' final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

CULTURAL RESOURCES: The Corps invites responses to this public notice from Native American Tribes or Tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns regarding historic properties and sites of religious and cultural significance at or near the project area. After receipt of comments from this public notice, the Corps will evaluate potential impacts and consult with the State Historic Preservation Officer and Native American Tribes in accordance with Section 106 of the National Historic Preservation Act, as appropriate.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

EVALUATION – CORPS: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The Corps is soliciting comments from the public; Native American Nations or Tribal governments; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition

or deny a permit for the work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

The described discharge will be evaluated for compliance with guidelines promulgated by the Environmental Protection Agency under authority of Section 404(b)(1) of the CWA. These guidelines require an alternatives analysis for any proposed discharge of dredged or fill material into waters of the United States.

SOURCE OF FILL MATERIAL: The applicant has not yet identified the source of the fill material. Should a permit be issued, the Corps will evaluate the fill material source prior to the start of construction.

EVALUATION – ECOLOGY: Ecology is soliciting comments from the public; Federal, Native American Nations or Tribal governments, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Ecology will be considering all comments to determine whether to certify or deny certification for the proposed project.

ADDITIONAL EVALUATION: This proposal is the subject of Shorelines Substantial Development Permit No. L19-0103, being processed by the City of Tukwila.

COMMENT AND REVIEW PERIOD: Conventional mail or e-mail comments on this public notice will be accepted and made part of the record and will be considered in determining whether authorizing the work would not be contrary to the public interest. In order to be accepted, e-mail comments must originate from the author's e-mail account and must include on the subject line of the e-mail message the applicant's name and reference number as shown below. Either conventional mail or e-mail comments must include the permit applicant's name and reference number, as shown below, and the commenter's name, address, and phone number. All comments whether conventional mail or e-mail must reach this office, no later than the expiration date of this public notice to ensure consideration.

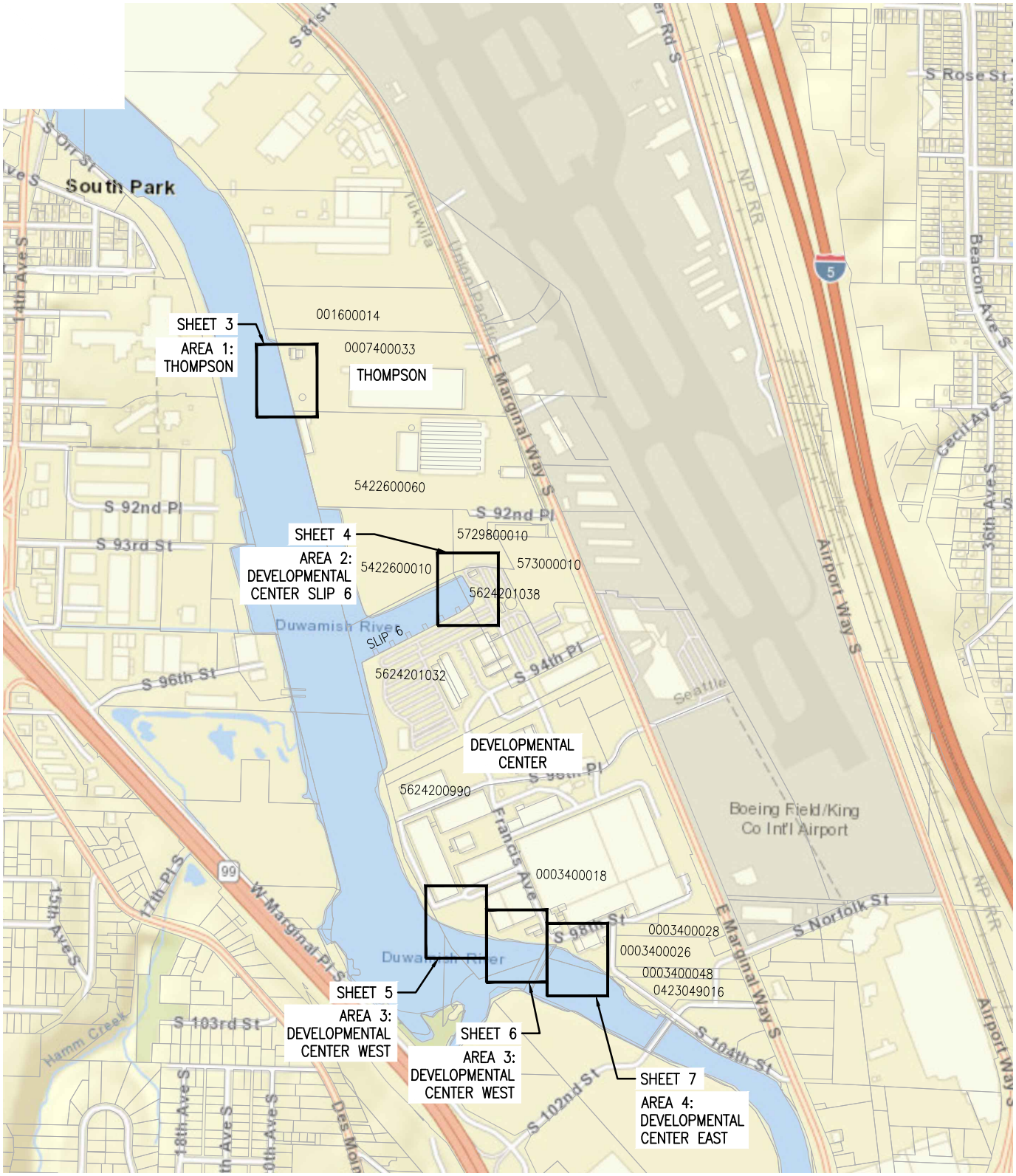
CORPS COMMENTS: Conventional mail comments should be sent to: U.S. Army Corps of Engineers, Regulatory Branch, Attention: Rory Lee, P.O. Box 3755, Seattle, Washington 98124-3755. All comments received will become part of the administrative record and are subject to public release under the Freedom of Information Act including any personally identifiable information such as names, phone numbers, and addresses. All e-mail comments should be sent to: rory.w.lee@usace.army.mil

ECOLOGY COMMENTS: Any person desiring to present views on the project pertaining to a request for water quality certification under Section 401 of the CWA and/or Coastal Zone Management consistency concurrence, may do so by submitting written comments to the following address: Washington State Department of Ecology, Attention: Federal Permit Coordinator, Post Office Box 47600, Olympia, Washington 98504-7600, or e-mail to: ecyrefedpermits@ecy.wa.gov

To ensure proper consideration of all comments, responders must include the following name and reference number in the text of their comments: DC Thompson (Bank Stabilization); NWS-2018-1001

Encl: Figures (10)

VICINITY MAP



1000' 500' 0 1000'

SCALE: 1" = 1000' (FEET)

REFERENCE:

APPLICANT: The Boeing Company

ADJACENT PROPERTY OWNERS:

1. Container Properties / 5422600010 (N of Slip 6)
2. Ins. Auto Auctions / 5422600060 (S of Thompson)
3. Other adjacent parcels are owned by Boeing

LOCATION: E. Marginal Way S.
Tukwila, Washington

LAT/LONG: 47.51 / -122.30

SEC: 4 T: 23N R: 4E

SHEET: 1 OF 10 DATE: 9/27/2019

PROPOSED PROJECT:
Developmental Center and Thompson
Riverbank Refurbishment

IN: Duwamish River
NEAR: Tukwila
COUNTY: King
STATE: Washington

Path: \\redmond.gov\der.gis\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_001.dwg

LEGEND AND NOTES

LEGEND

- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM DRAIN CLEAN-OUT
- EXISTING CATCH BASIN
- EXISTING WATER VALVE
- DHA SURVEY CONTROL
- EXISTING LIGHT POLE
- EXISTING JUNCTION BOX
- EXISTING POWER MANHOLE
- EXISTING MONITOR WELL
- EXISTING FIRE HYDRANT
- EXISTING CONIFER TREE
- EXISTING DECIDUOUS TREE
- PROPOSED TESC INLET PROTECTION
- PROPOSED LARGE WOODY DEBRIS (LWD) / LOGS
- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- BASE FLOOD ELEVATION (100-YR) (BFE)
- ORDINARY HIGH WATER MARK (OHWM)
- SHORELINE BUFFER (100-FT OFFSET FROM OHWM)
- MEAN HIGHER HIGH WATER (MHHW)
- MEAN LOWER LOW WATER (MLLW)
- EXISTING TIMBER PILE DIKE
- EXISTING EDGE OF ASPHALT
- EXISTING GUARDRAIL
- EXISTING FENCE LINE
- PROPOSED FENCE LINE
- EXISTING DITCH
- EXISTING CHILLED WATER LINE
- EXISTING DOMESTIC WATER LINE
- EXISTING FIRE WATER LINE
- EXISTING GAS LINE
- EXISTING STORM DRAIN LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- PROPOSED CLEARING LIMITS
- PROPOSED PROJECT CONSTRUCTION LIMITS OR TEMPORARY FENCE
- PROPOSED SILT FENCE
- PROPOSED TURBIDITY CURTAIN
- PROPOSED PERIMETER PROTECTION
- PROPOSED SAWCUT LINE
- PROPOSED NEW PAVEMENT

SURVEY NOTES:

TOPOGRAPHIC MAPPING:
THE TOPOGRAPHIC SURVEY IS BY DUANE HARTMAN & ASSOCIATES, INC. (DHA) COMPLETED IN JUNE 2017.

HORIZONTAL DATUM:
WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE NAD 83(91)

VERTICAL DATUM: NAVD88, US FEET.

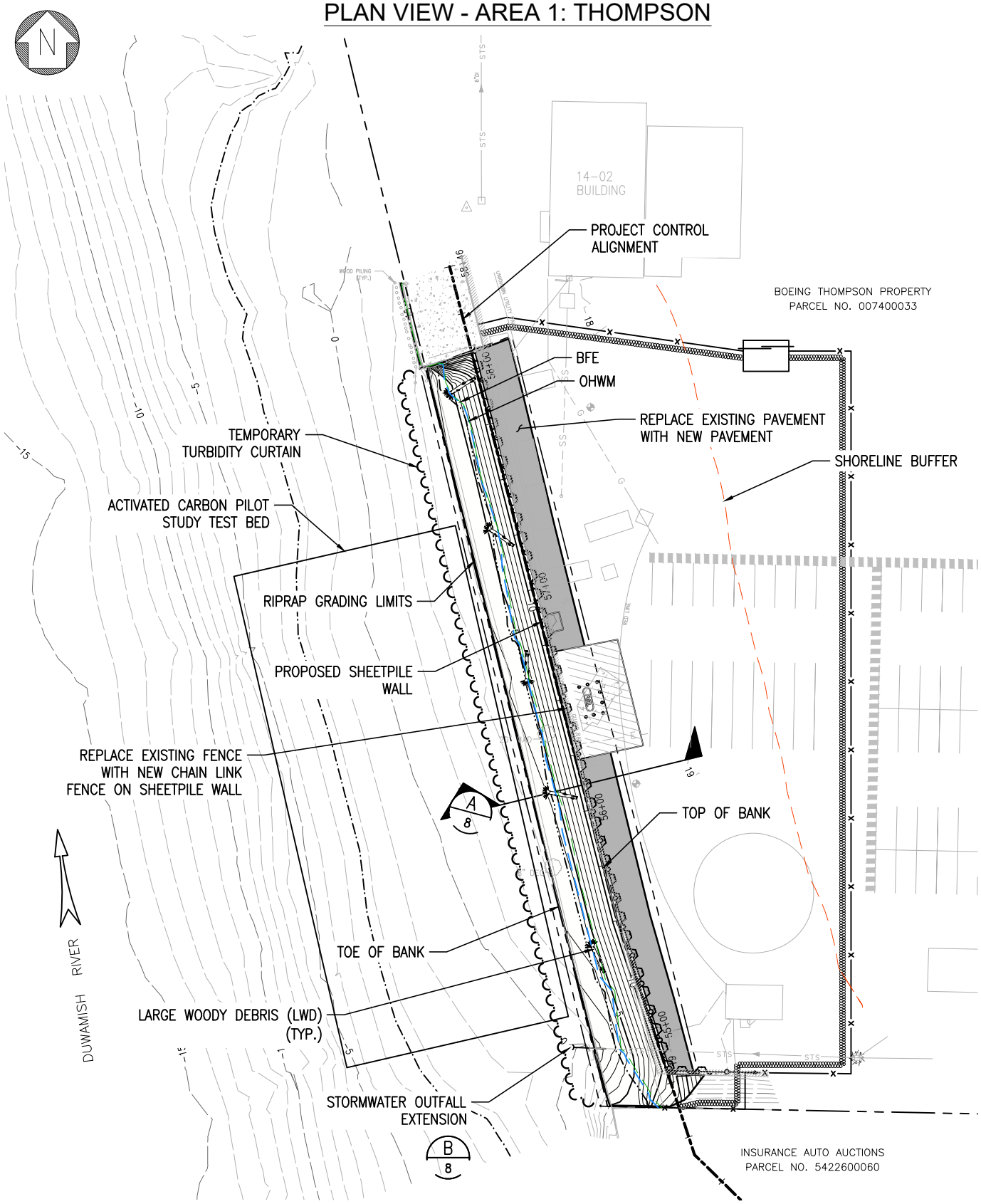
VERTICAL DATUM CONVERSION TABLE
NOAA/NOS 8TH AVENUE BENCHMARK

TIDE PLANE	MLLW	NAVD88	NGVD29
Estimated Highest Water	15.0	12.5	9.0
Base Flood El. (100-YR)	14.8	12.3	8.8
Ordinary High Water Mark (Avg. El.)	14.4	10.9	8.4
Mean Higher High Water	11.1	8.6	5.1
Mean High Water	10.2	7.7	4.2
Mean Tide Level	6.45	3.97	0.44
Mean Low Water	2.7	0.2	-3.3
Mean Lower Low Water	0.00	-2.48	-6.01

REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 2 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_001.dwg

PLAN VIEW - AREA 1: THOMPSON



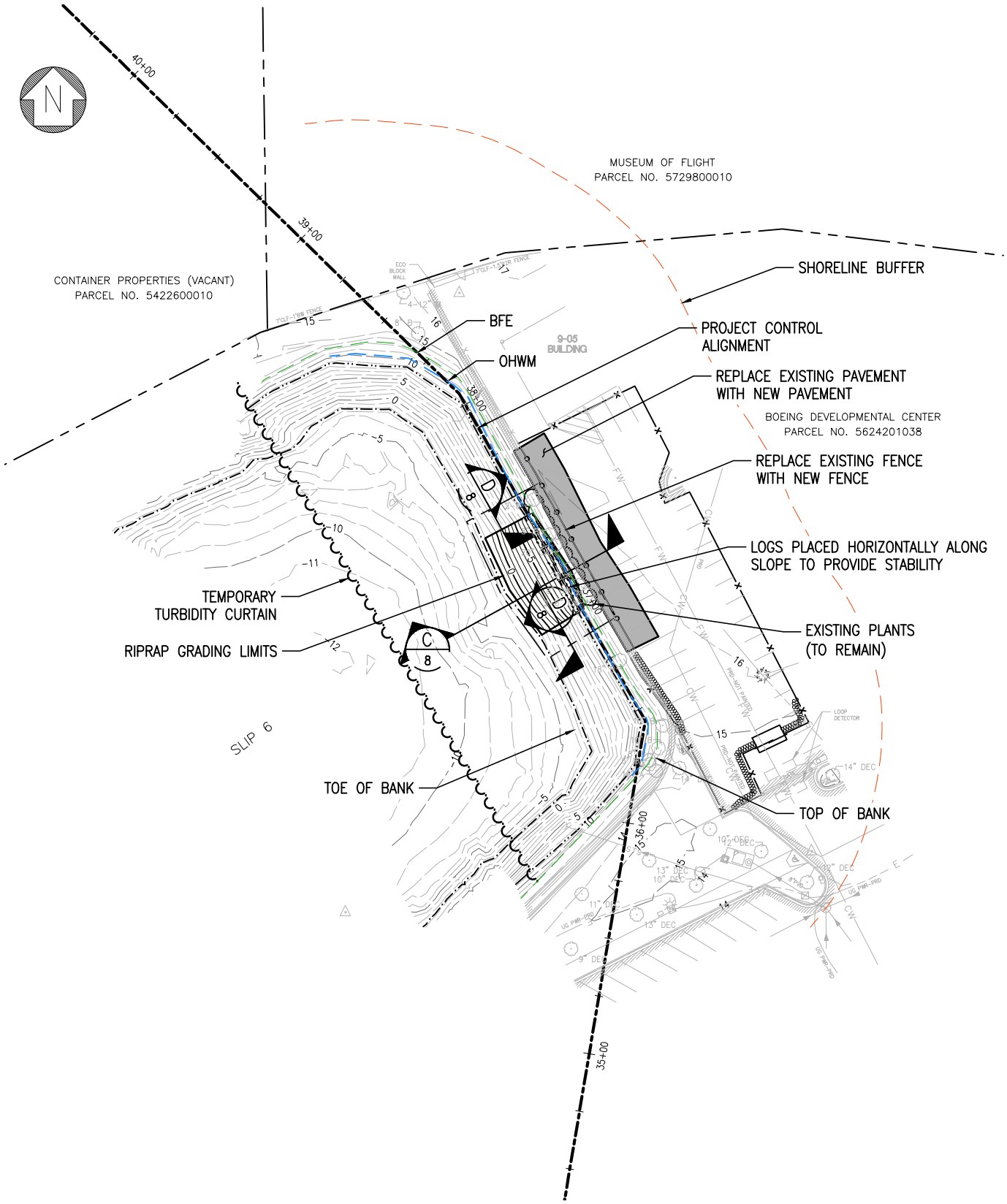
60' 30' 0 60'

SCALE: 1" = 60' (FEET)

REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 3 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_002.dwg

PLAN VIEW - AREA 2: DEVELOPMENTAL CENTER SLIP 6



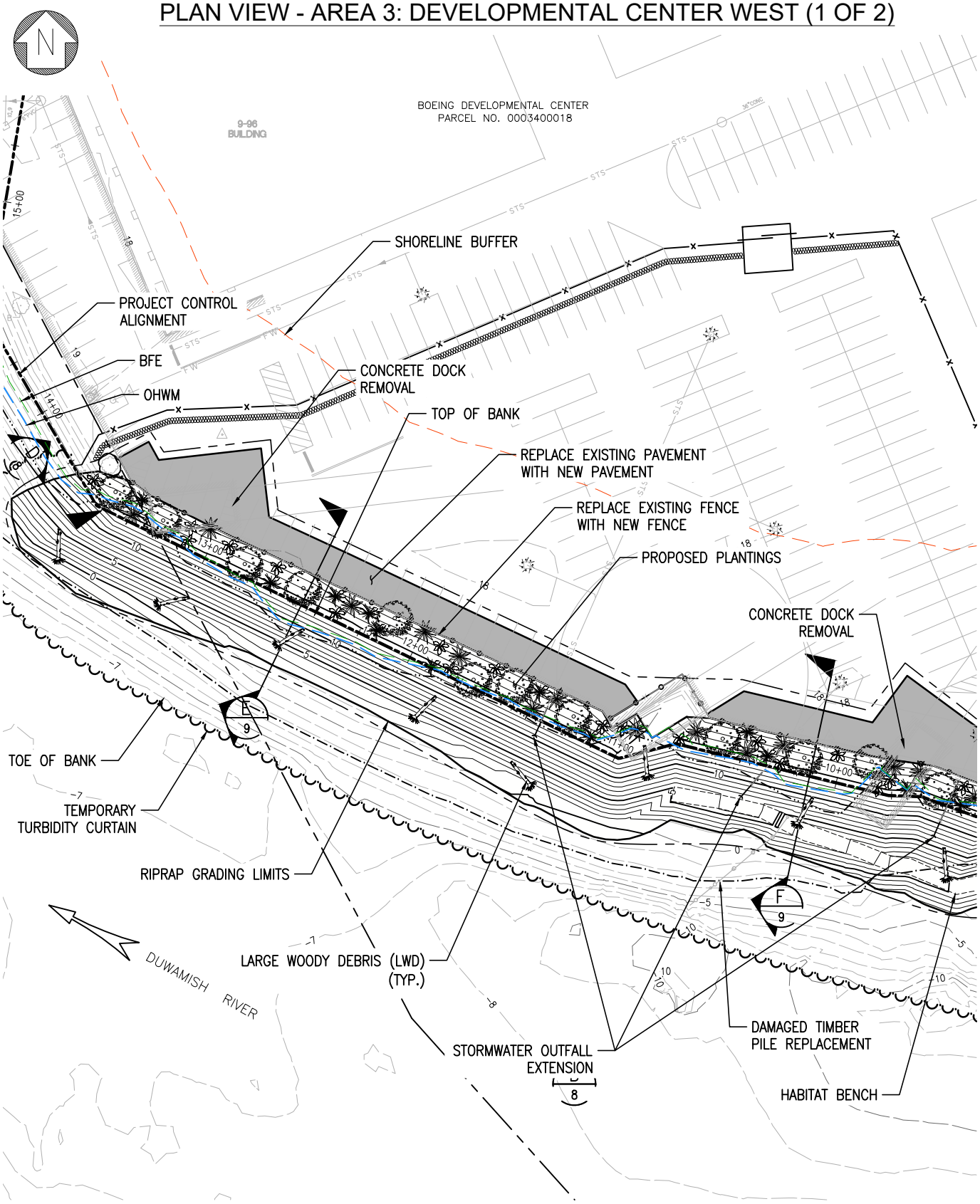
60' 30' 0 60'

SCALE: 1" = 60' (FEET)

REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 4 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_002.dwg

PLAN VIEW - AREA 3: DEVELOPMENTAL CENTER WEST (1 OF 2)



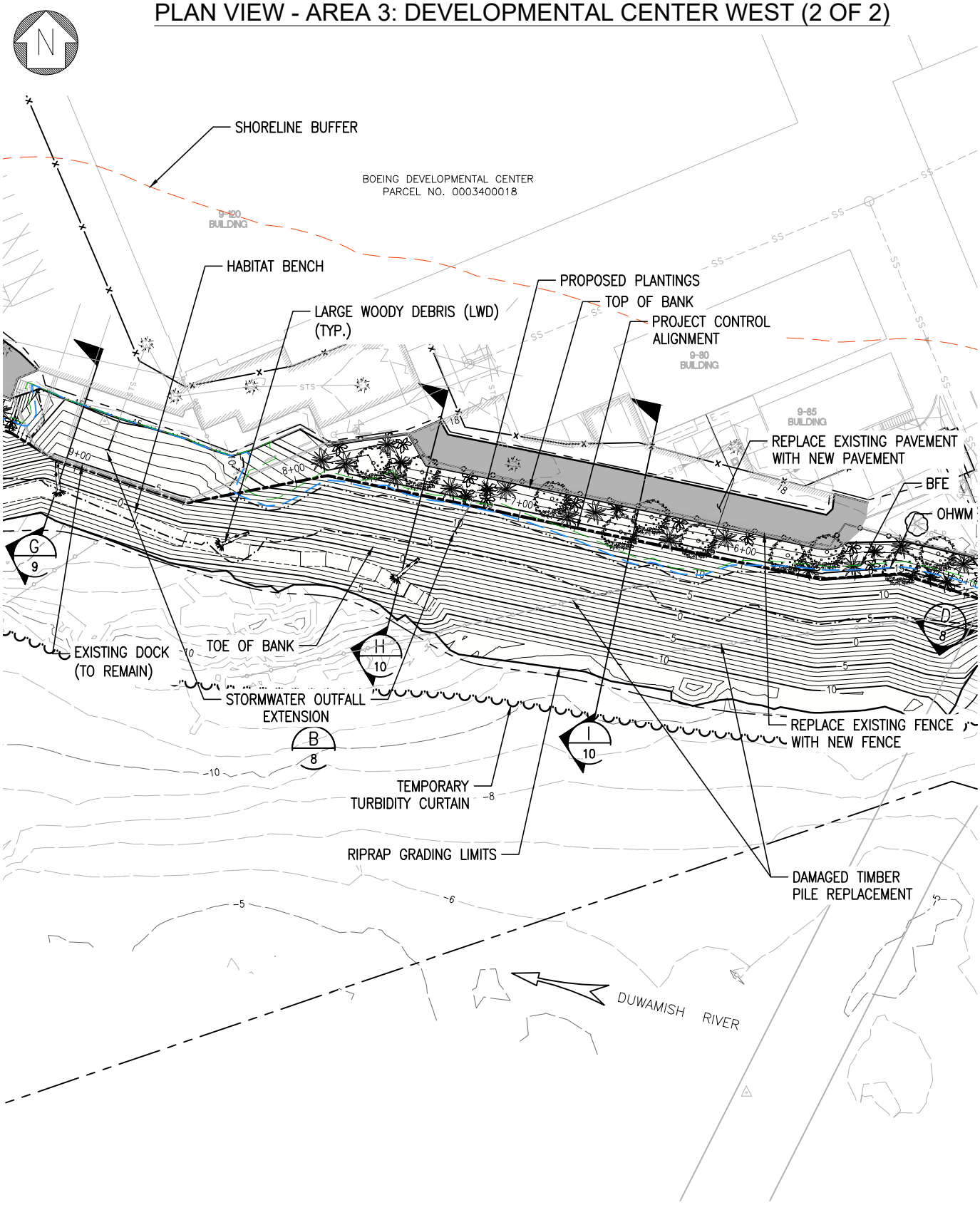
60' 30' 0 60'

SCALE: 1" = 60' (FEET)

REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 5 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_002.dwg

PLAN VIEW - AREA 3: DEVELOPMENTAL CENTER WEST (2 OF 2)



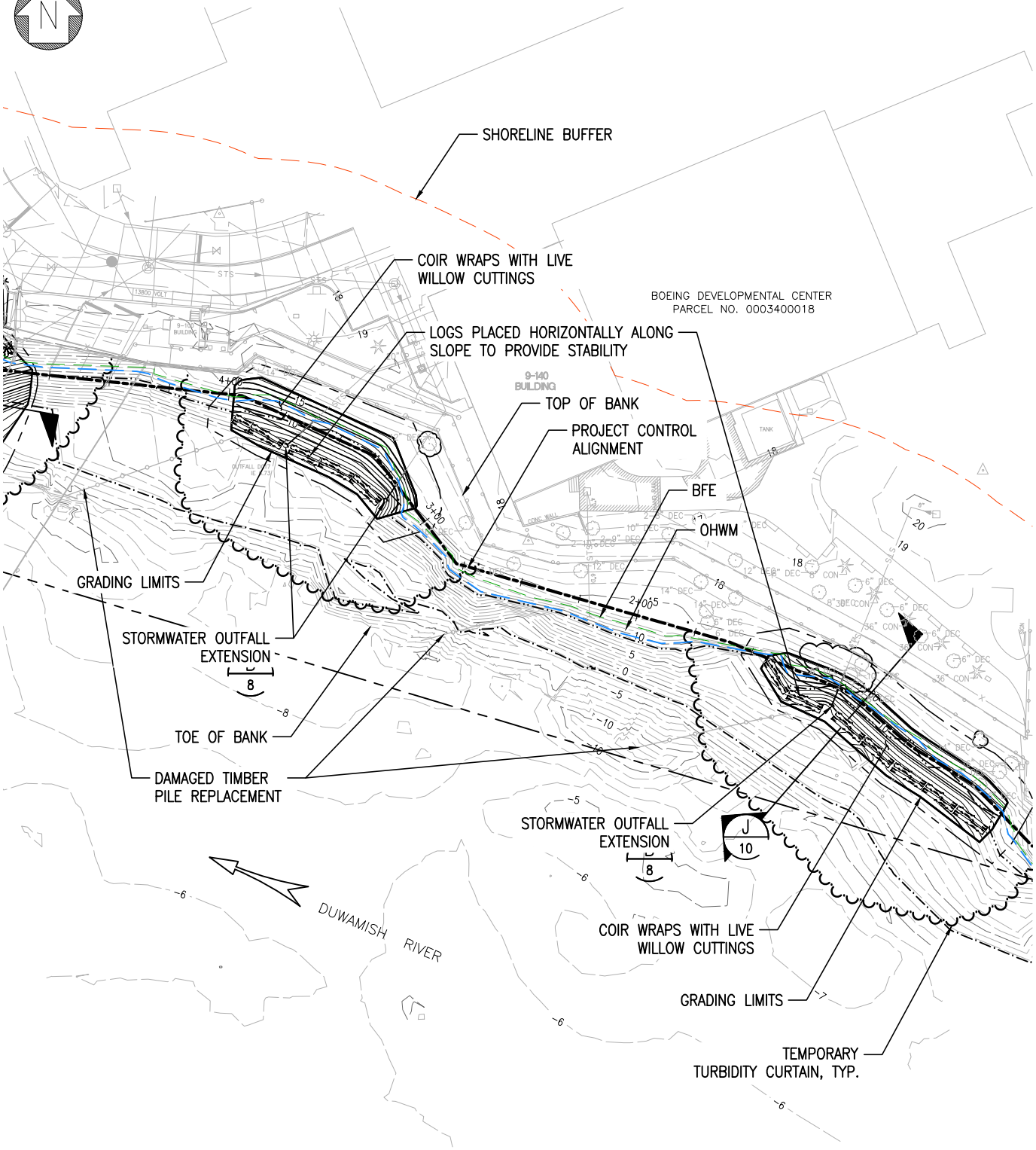
60' 30' 0 60'

SCALE: 1" = 60' (FEET)

REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 6 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_002.dwg

PLAN VIEW - AREA 4: DEVELOPMENTAL CENTER EAST



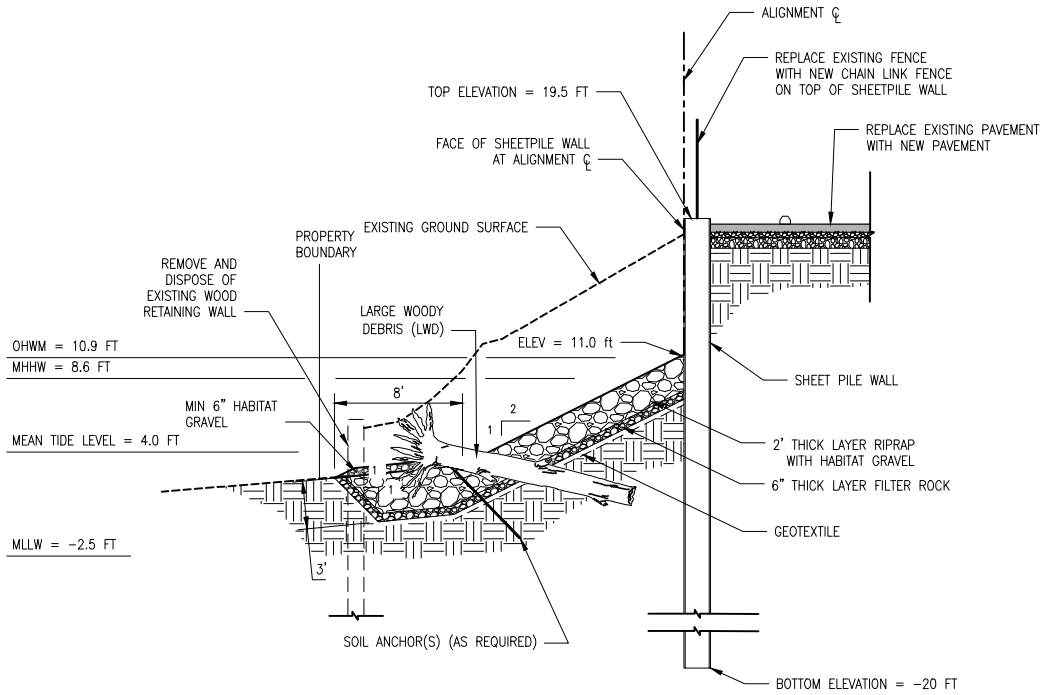
60' 30' 0 60'

SCALE: 1" = 60' (FEET)

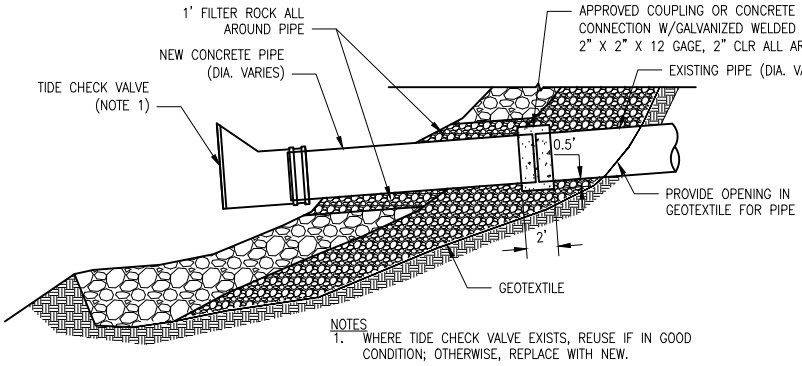
REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 7 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_002.dwg

TYPICAL SECTIONS

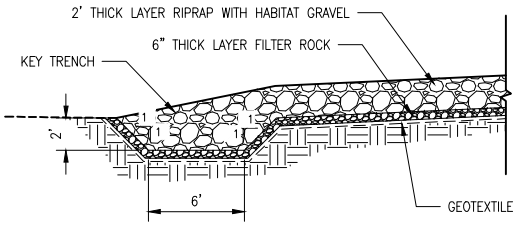


AREA 1 TYPICAL SECTION (STA 56+11) A/3

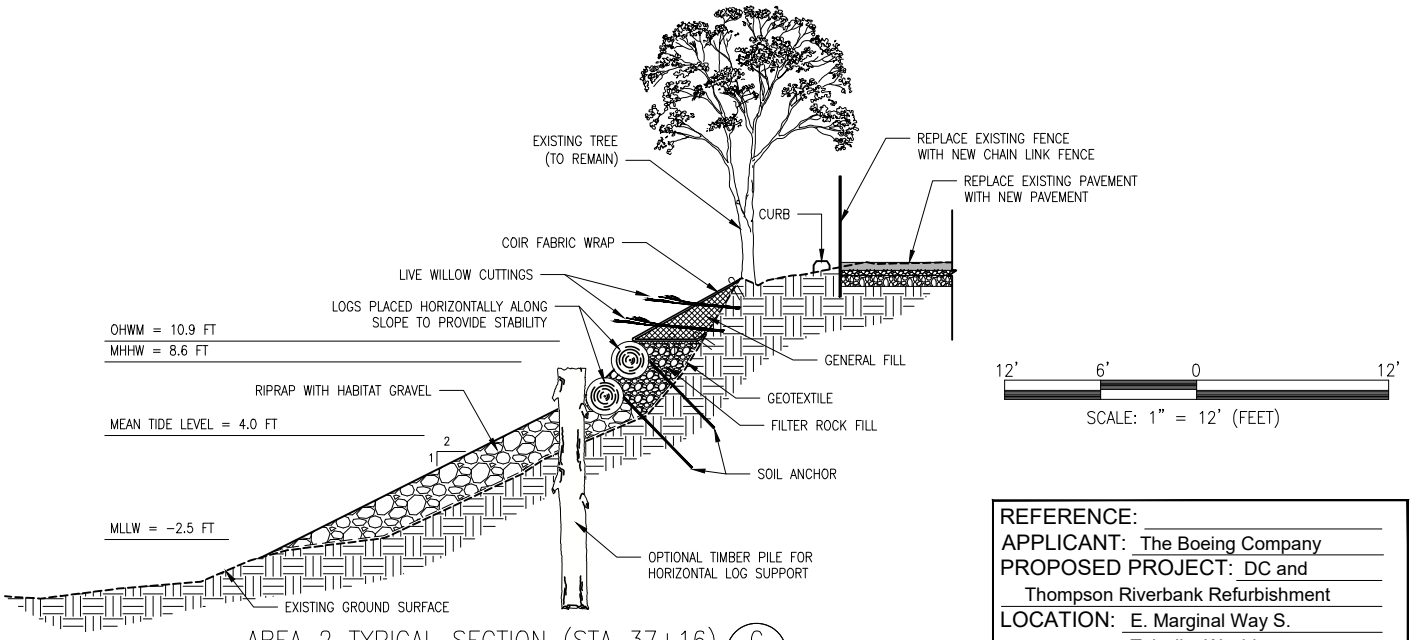


NOTES
1. WHERE TIDE CHECK VALVE EXISTS, REUSE IF IN GOOD CONDITION; OTHERWISE, REPLACE WITH NEW.

TYPICAL SECTION (OUTFALL EXTENSION) B/–



TYPICAL SECTION (END TREATMENT) D/–

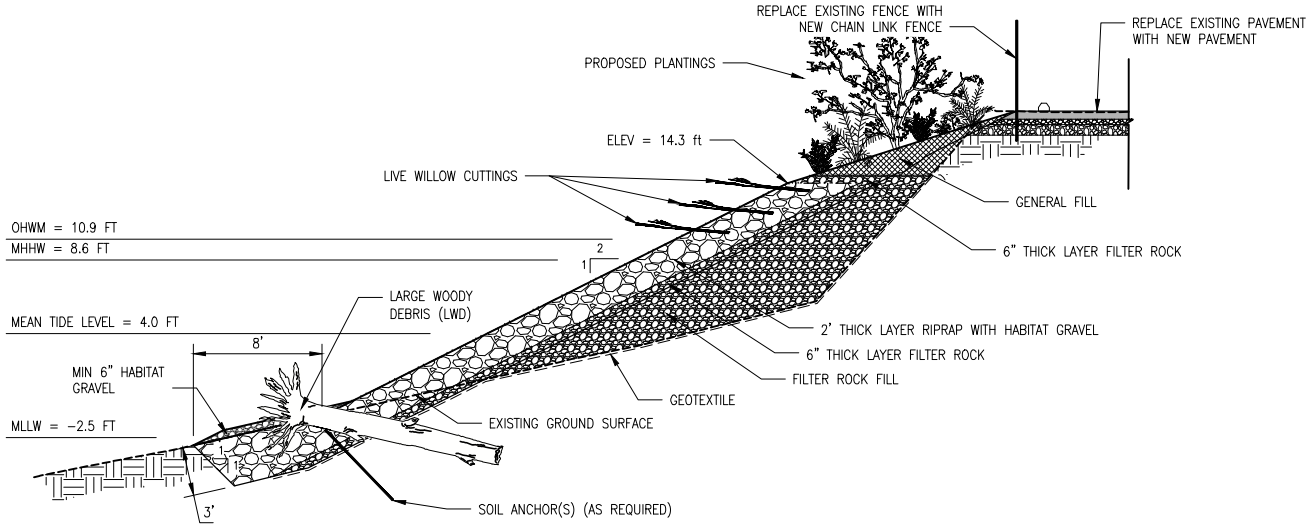


AREA 2 TYPICAL SECTION (STA 37+16) C/4

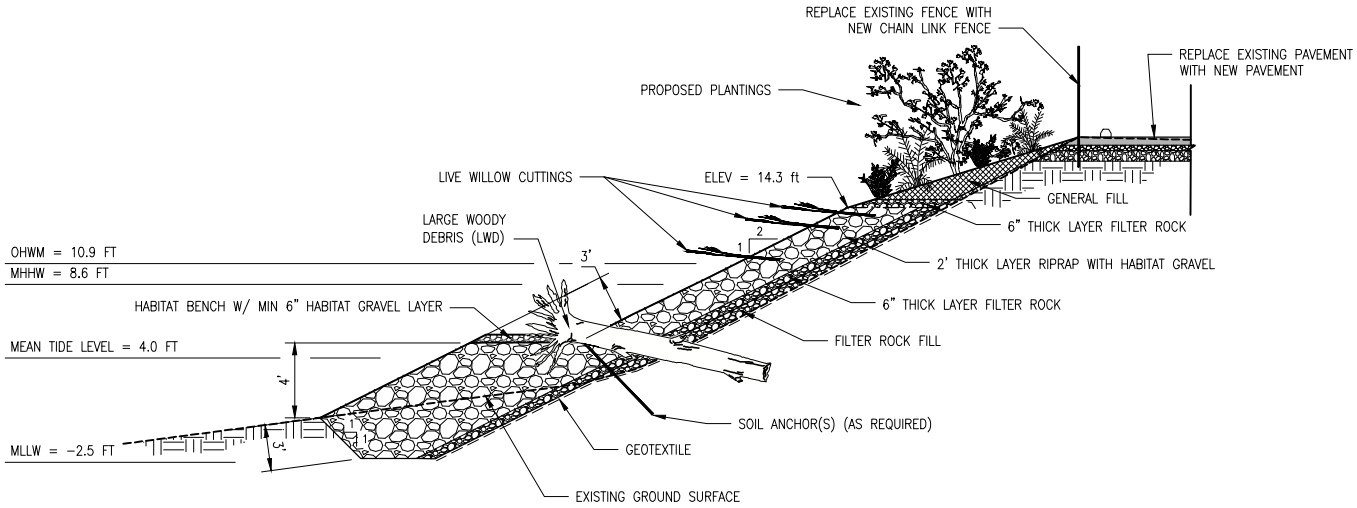
REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 8 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_003.dwg

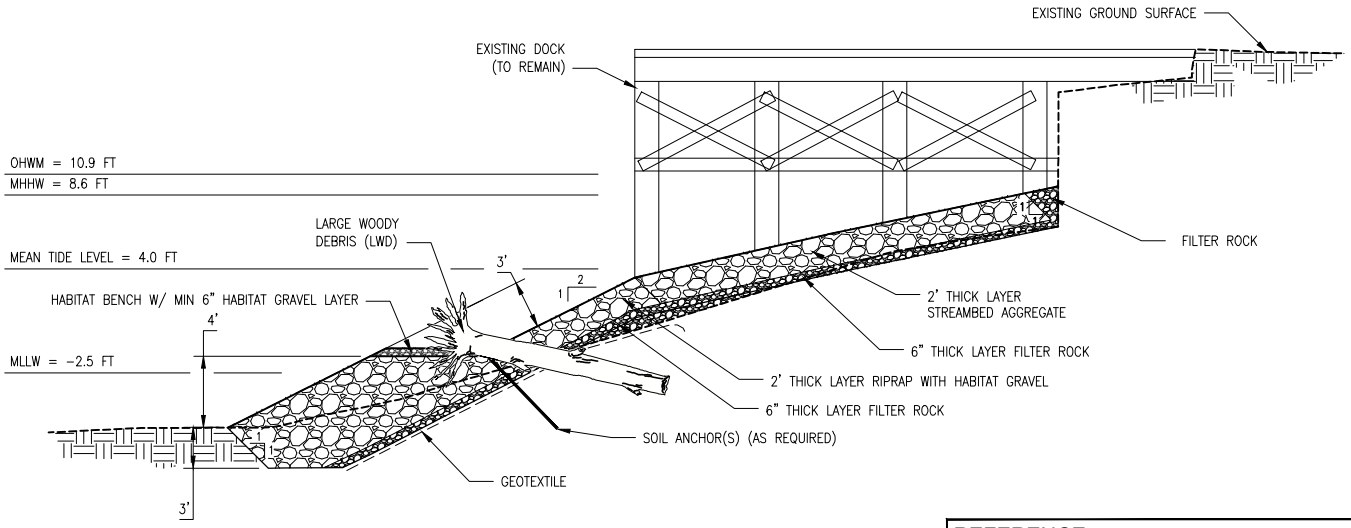
TYPICAL SECTIONS



AREA 3 TYPICAL SECTION (STA 12+53) E/5



AREA 3 TYPICAL SECTION (STA 10+13) F/5



AREA 3 TYPICAL SECTION (STA 9+18) G/6

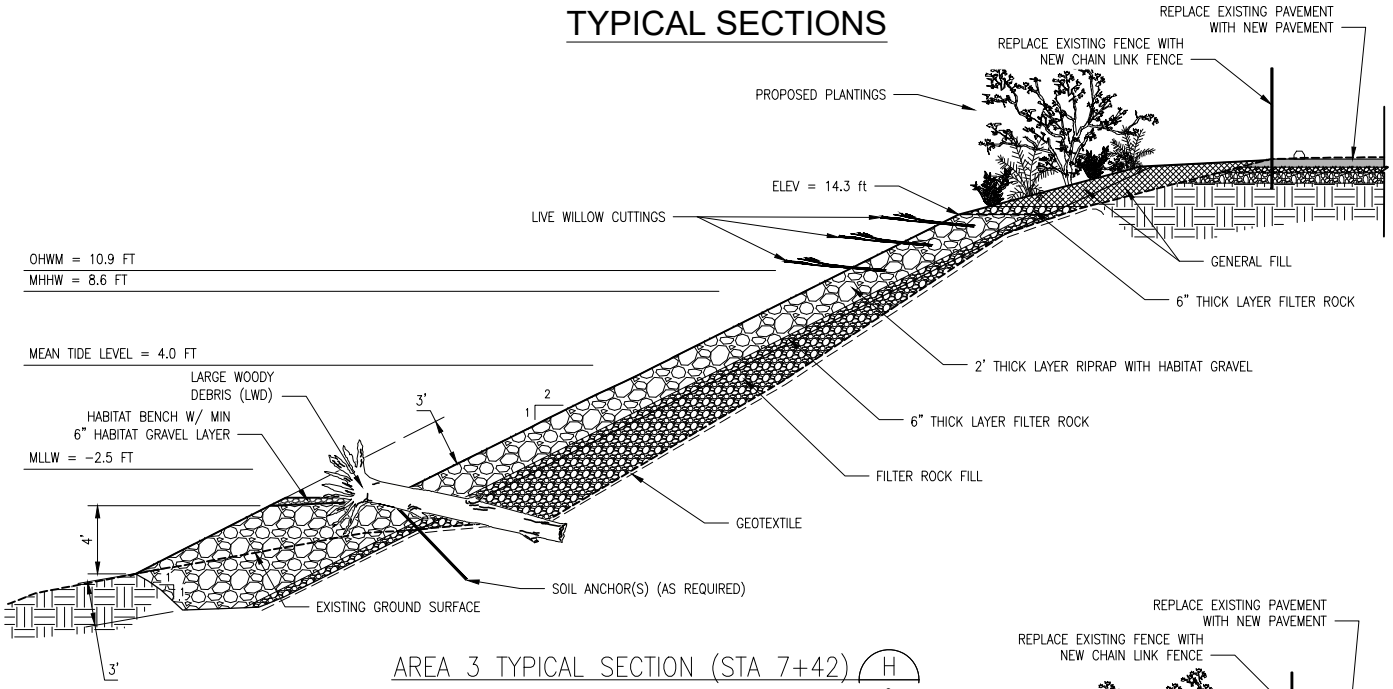
12' 6' 0 12'

SCALE: 1" = 12' (FEET)

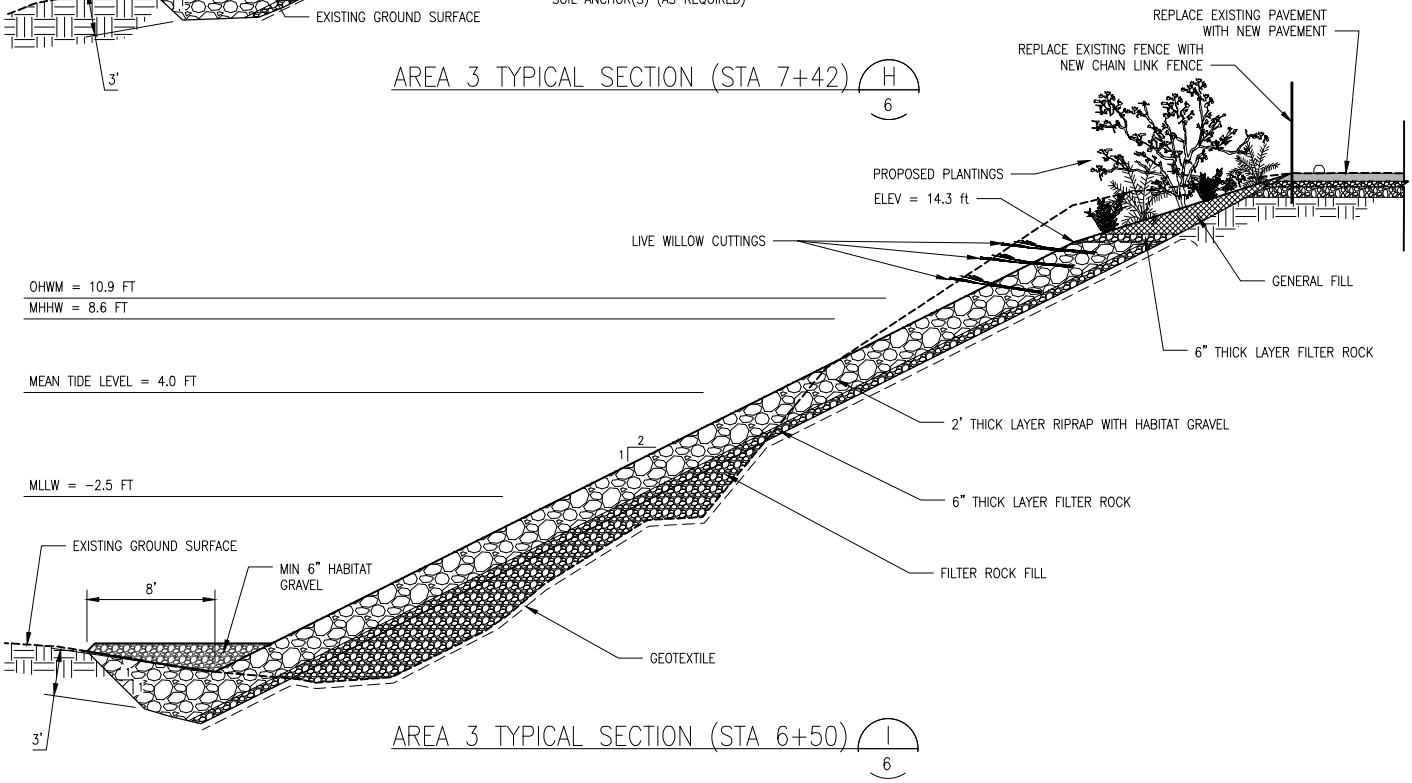
REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 9 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_003.dwg

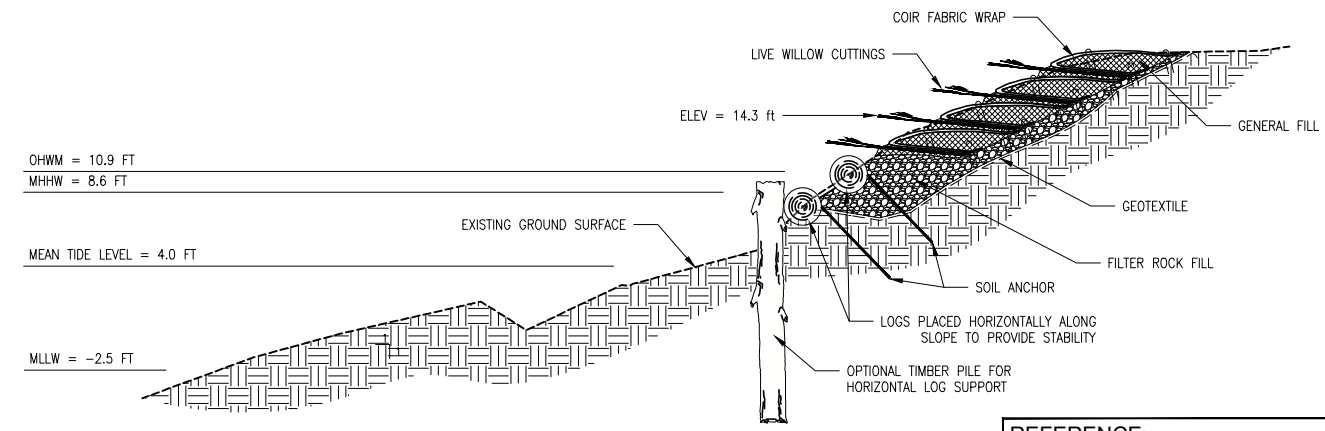
TYPICAL SECTIONS



AREA 3 TYPICAL SECTION (STA 7+42) H 6



AREA 3 TYPICAL SECTION (STA 6+50) I 6



AREA 4 TYPICAL SECTION (STA 0+99) J 7

12' 6' 0 12'

SCALE: 1" = 12' (FEET)

REFERENCE:
APPLICANT: The Boeing Company
PROPOSED PROJECT: DC and Thompson Riverbank Refurbishment
LOCATION: E. Marginal Way S. Tukwila, Washington
SHEET: 10 OF 10 DATE: 9/27/2019

Path: \\redmond.golder.gds\data\geomatics\Boeing\DCThompson\99_PROJECTS\1659111017-1661710017_DCandThompson_Riverbank\02_PRODUCTION\DWG\JARPA\ | File Name: 1659111017_700_003.dwg