US Army Corps of Engineers
Seattle District

Joint Public Notice
Of In-lieu Fee Program Addendum

WASHINGTON STATE DEPARTMENT OF ECOLOGY

US Army Corps of Engineers
Regulatory Branch
Post Office Box 3755
Seattle, Washington 98124-3755
Telephone (206) 764-6903
Email: gail.m.terzi@usace.army.mil
Attention: Ms. Gail Terzi

WA Department of Ecology
Shorelands and Environmental Assistance Program
Post Office Box 47600
Lacey, Washington 98504-7600
Telephone: (360) 407-6861
Email: bmur461@ecy.wa.gov
Attention: Mr. Brad Murphy

Public Notice Date: November 18, 2013
Expiration Date: December 18, 2013

Reference No.: NWS-2009-495
Name: King County Mitigation Reserves Program In Lieu Fee

Interested parties are hereby notified that the U.S. Army Corps of Engineers (Corps) and the Washington State Department of Ecology (Ecology) are soliciting comments and information necessary to evaluate any impacts on the public interest from the proposed inclusion of a portion of the McElhoe-Pearson Restoration Project (Mitigation Plan) as a restoration site that has been selected for funding through King County's In Lieu Fee (ILF) Program. The sponsor for the program is King County. The King County ILF Program Instrument was authorized on March 12, 2012.

King County is proposing to modify their ILF Program Instrument by adding the Mitigation Plan to the Program Instrument, also known as the King County Mitigation Reserves Program (MRP). The Mitigation Plan has been developed in accordance with 33 CFR Parts 325 and 332.2 and describes project elements, performance measures, and maintenance and monitoring plans for implementation and long-term management of the McElhoe-Pearson Restoration project on the Snoqualmie River (See enclosed color drawings).

WATERWAY AND LOCATION OF PROPOSED PROJECT: The proposed ILF Mitigation Project site is located on approximately two acres adjacent to the Snoqualmie River near RM 23, in WRIA 7, north of the City of Carnation in unincorporated King County.

PROPOSED WORK AND PURPOSE: The ILF Mitigation Project referred to as the McElhoe-Pearson Restoration Project (Mitigation Project) is for impacts associated with a Washington State Department of Transportation (WSDOT) Project on Tokul Creek. The Mitigation Project will create additional rearing and refuge habitat for salmonid species in the Snoqualmie River. Major project elements include:

- Creation of new side channel
- Breaching a levee to create a connection from side channel to existing riverine wetlands
- Wetland restoration and enhancement

The ecological goals of the project include:

- Restore rearing and refuge habitat
- Restore the connection between channel and floodplain
- Maximize habitat value while protecting private property and public infrastructure
- Reduce flood hazards and flood facility maintenance

The total restoration of the area attributable to the mitigation for the WSDOT impact at Tokul Creek includes:

- New connection to Snoqualmie River (at OHWM) of 41,426sf (0.95ac) of previously disconnected wetland area, resulting from the excavation of a new side channel and breach of a levee
- Excavation and grading of 9,191sf (0.21ac) of side channel and levee breach to connect existing backwater channel to previously disconnected wetland area.
- Enhancement of 16,960sf (0.39ac) of existing wetland and riparian areas. Actions include weed control and native planting.
- Installation of nine (9) large wood root wad structures along the backwater channel near the mouth of the backwater.

Tokul Creek Impacts for which mitigation is being implemented:

Table 1. Summary of Tokul Creek Project Stream and Buffer Impacts

King County classification	**Permanent Impacts (ft^2/Acre)**		**Temporary Impacts (ft^2/Acre)**	
	Stream	**Buffer**	**Stream**	**Buffer**
Shoreline	15,580/0.36	7,344/0.17	7,269/0.17	8,396/0.19

A draft Mitigation plan is available upon request from:

Michael Murphy, Mitigation Reserves Program Manager
King County Department of Natural Resources and Parks
Michael.murphy@kingcounty.gov
206-477-4781

BACKGROUND: King County (KC) and WSDOT reached an agreement to use KC's ILF Program, to meet an outstanding WSDOT mitigation need related to 2010 emergency repairs of a State Route 202 bridge resulting in impacts to Tokul Creek (Corps Reference NWS-2010-800), a tributary to the Snoqualmie River in Watershed Resource Inventory Area 7.

The regulatory agencies requiring compensatory mitigation for the emergency action for the WSDOT repair project are the Washington Department of Fish and Wildlife (WDFW) and the King County Department of Permitting and Environmental Review (KCDPER). Both WDFW and KCDPER agreed to WSDOT's use of the ILF. The Tokul Creek project and associated permanent and temporary impacts is not subject to this public notice.

KC has designated the McElhoe-Pearson restoration site on the Snoqualmie River as the Mitigation Site that will meet the WSDOT mitigation obligation. By paying a mitigation fee, WSDOT irrevocably transferred to KC all obligations related to implementation, maintenance, monitoring, reporting, etc. of the McElhoe-Pearson Restoration Project. KC implemented the McElhoe-Pearson Restoration Project in the fall of 2012, and completed planting in February 2013. KC will monitor and maintain the mitigation project according to the terms of the Mitigation Plan, which will be appended to the ILF Program Instrument. The Corps issued Nationwide Permit's (NWP) 3 and 27 for construction of the Mitigation Project on June 22, 2012 (Corps Reference NWS-2012-201). Ecology issued an individual 401 water quality certification on June 28, 2012.

The mitigation project is located at a site that received Salmon Recovery Funds but the funds received from the grant were not sufficient to complete the project. With WSDOT purchasing credits from the King County ILF Program, in combination with the Salmon Recovery Funds, King County is able to implement the entire project. The King County ILF Program Instrument contains the following language that addresses this situation (Appendix D, Section 3.6):

"Mitigation credit shall not be available from other County, State or Federal restoration projects in existence outside the MRP. In cases where mitigation sites are adjacent to or near to existing or proposed restoration sites, the Mitigation Plan (see Appendix K) will clearly show areas of restoration (where no credit is available) and where mitigation credit can be generated.

The MRP will not derive credit from any project(s) already funded with Salmon Recovery Fund money or any projects already planned and funded or completed to meet a permit condition.

However, there may be cases when MRP mitigation fees can be used to implement a salmon recovery project or other restoration project. For this to occur, all of the following must apply:

- The project is not funded;
- There is not a restriction related to the funding used to acquire a site where the project will occur; and
- The project is not a requirement associated with a permit (e.g., a mitigation project).

The federal rule, [332.3(j)(2)] states:

> Except for projects undertaken by federal agencies, or where federal funding is specifically authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or conservation projects undertaken for purposes other than compensatory mitigation, such as the Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program activities, cannot be used for the purpose of generating compensatory mitigation credits for activities authorized by DA permits. However, compensatory mitigation credits may be generated by activities undertaken in conjunction with, but supplemental to, such programs in order to maximize the overall ecological benefits of the restoration or conservation project.

If mitigation fees are used to implement projects or portions of projects prioritized in a Salmon Recovery Plan, the impacts for which mitigation fees were collected must be accounted for when measuring progress toward watershed-wide salmon recovery goals. For each mitigation project implemented through the MRP, the MRP Manager will provide details of the mitigation project to WRIA Forum staff for entry into the Habitat Work Schedule, which is an online mapping and tracking tool used to measure progress and increase accountability for implementation of salmon recovery projects statewide. At minimum, information added to the Habitat Work Schedule database will include the amount of funding from mitigation fees, the type and amount of enhancement, restoration, creation, etc. to aquatic resources and buffers at the mitigation project, and the reports about permitted impact projects from which mitigation fees were derived (see Appendix G, Section 6.1). Mitigation projects will be clearly categorized as such in the Habitat Work Schedule database so it is evident to salmon recovery planning staff that ecological lift at mitigation projects is achieved at the expense of allowing permitted ecological impacts elsewhere in the watershed."

AUTHORITY: Issuance of a Public Notice regarding proposed ILF receiving sites is required pursuant to: "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule," as published in the April 10, 2008, Federal Register, Vol. 73, No. 70, Pages 19594-19705 (33 CFR Parts 325 and 332).

EVALUATION OF PROPOSAL: The Corps and Ecology are soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate this proposed ILF receiving site. The Corps and Ecology, in evaluating this proposal, will consider any comments received.

This is not an application for work in waters of the United States. The Corps issued NWP's 3 and 27 for construction of the project on June 22, 2012. Ecology issued an individual 401 water quality certification on June 28, 2012. After preliminary approval from the KC ILF Program Interagency Review Team, KC has constructed the project at the risk of subsequently receiving comments on the mitigation plan design or credit, which may necessitate resolution. During processing of NWPs 3 and 27, the proposed work was reviewed under the Endangered Species Act of 1973, the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 and the National Historic Preservation Act. The project is in compliance with these laws and no further action is required.

COMMENT AND REVIEW PERIOD – Conventional mail or e-mail comments on this proposed ILF receiving site will be accepted and made part of the record and will be considered in determining whether it would be in the public interest to authorize this addendum to the KC ILF Program Instrument. 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 ILF sponsor's name and reference number as shown below. All e-mail comments should be sent to gail.m.terzi@usace.army.mil at the Corps and bmur461@ecy.wa.gov at Ecology.

Conventional mail comments should be sent to the U.S. Army Corps of Engineers, Regulatory Branch, Attention: Ms. Gail Terzi, Post Office Box 3755, Seattle, Washington 98124-3755 and/or to the Department of Ecology, Attention: Mr. Brad Murphy, Post Office Box 47600, Olympia, Washington 98504-7600.

Any person may request, in writing, within the comment period, that a public hearing be held to consider the Mitigation Plan. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

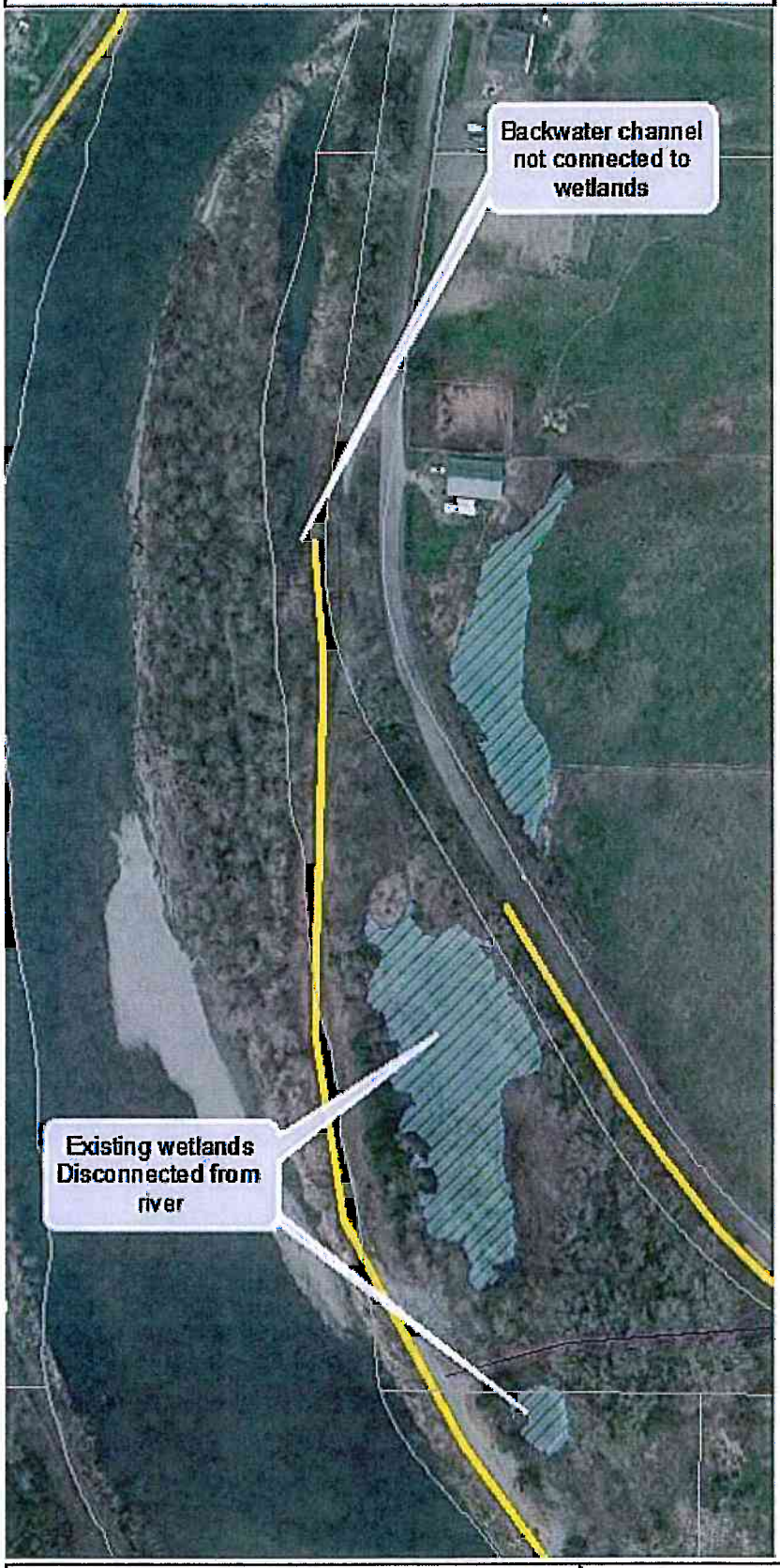
Either conventional mail or e-mail comments must include the sponsor's name and reference number, as shown below, and the commenter's name, address, and phone number. All comments received will become part of the administrative record and are subject to public release under the Freedom of Information Act, including any personally identifiable information such as name, phone numbers, and addresses. 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. Please include the following name and reference number with any comments:

King County Mitigation Reserves Program ILF (McElhoe-Pearson ILF Mitigation Site)
NWS-2009-495

ENCLOSURES Drawings (13)

McElhoe-Pearson Mitigation Project

PRE-PROJECT CONDITIONS



This graphic shows the pre-project conditions at the McElhoe-Pearson restoration project on the Snoqualmie River. The project involves excavating a backwater side channel and breaching a levee to reconnect riverine approximately one acre of wetlands to the river, including a number of habitat features to improve wetland functions.

The elements of the project meeting the WSDOT mitigaiton need are shown on the subsequent page.

Legend

- Levee Maintained by King County
- Cross Levee
- Existing Wetland Boundaries
- Parcel boundaries

Feet
0 100 200 300

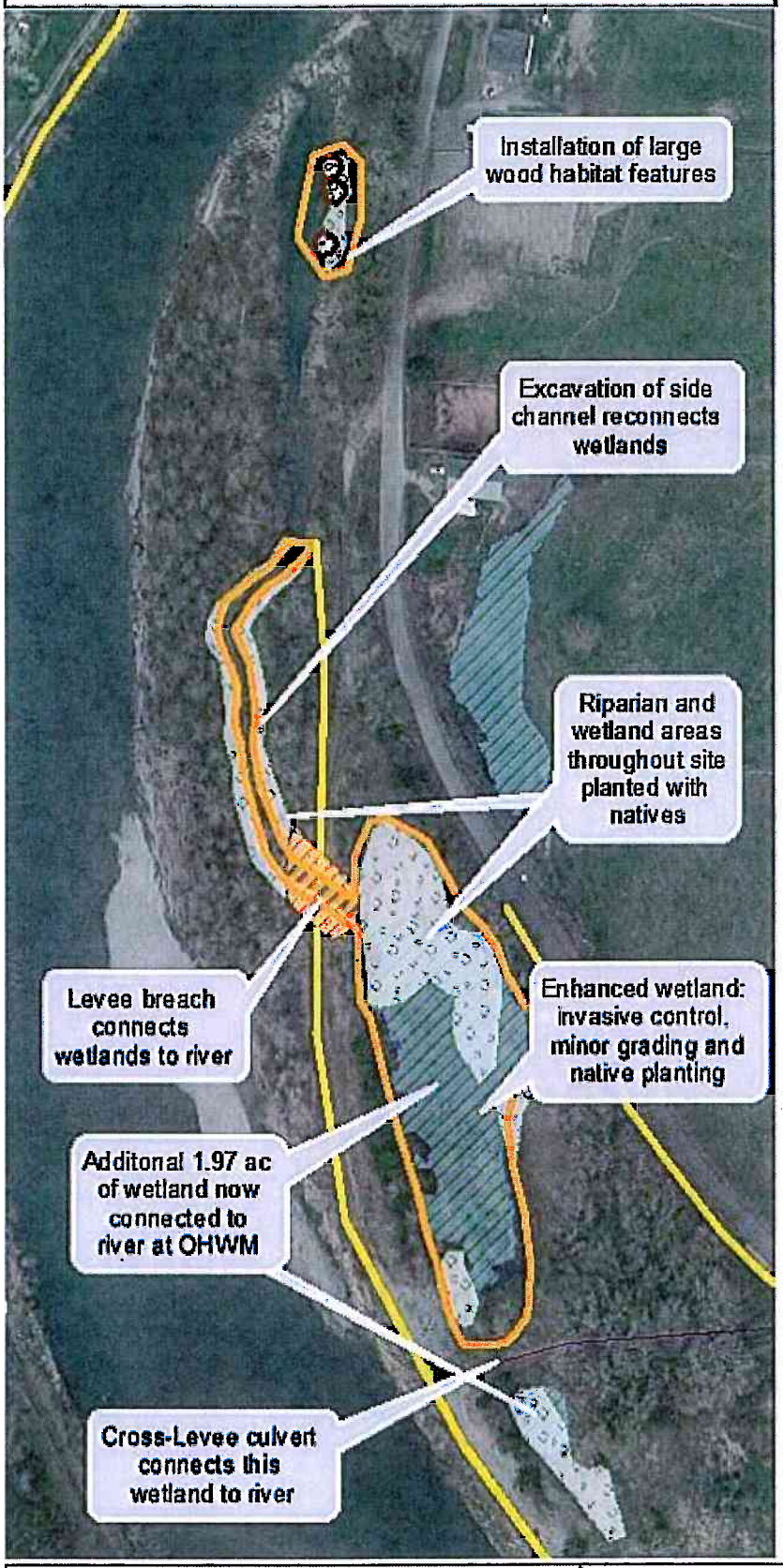
King County

Latitude: 47.6616
Longitude: -121.92673

Purpose: McElhoe-Pearson ILF Mitigation Project **Project Sponsor:** King County DNRP **Date:** November 7, 2013	NWS-2009-495	**Location:** 65XX 310th Ave NE **Sec/Twp/Rng:** 09/ 25N/ 07E **County:** King **State:** WA

McElhoe-Pearson Restoration Project: Mitigation Project Elements

POST-PROJECT CONDITIONS



This graphic shows the project elements implemented at the McElhoe-Pearson mitigation project on the Snoqualmie River. The project involves excavating a backwater side channel and breaching a levee to reconnect approximately two acres of riverine wetlands to the river, including a number of habitat features to improve wetland functions.

The elements of the project meeting the WSDOT mitigation need are shown on the graphic to the left and summarized in the table below.

Legend

- WSDOT Mitigation Area
- Levee Maintained by King County
- Cross Levee
- Levee Breach Area
- Existing Wetland Boundaries
- Riparian/Wetland Planting Area
- Large Wood Features (9 pcs)

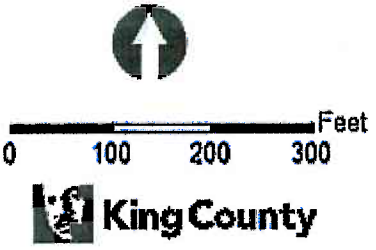
Impact Amounts (All Offsite at Tokul Cr):

Aquatic Resource Type	Permanent Impacts	Replacement Ratio	Mitigation Requirement (sf)
Stream	15,580	1.25:1	19,475
Riparian	10,986	1.5:1	11,016
LWD	~12 trees	0.67:1	9 key pieces

Mitigation Amounts:

Mitigation Project Elements	Area (sf)
Existing wetland area enhanced by newconnection	41,426
Excavation of side channel	9,191
Riparian planting (side channel & around LWD)*	16,960
Installation of LWD	9 key pieces

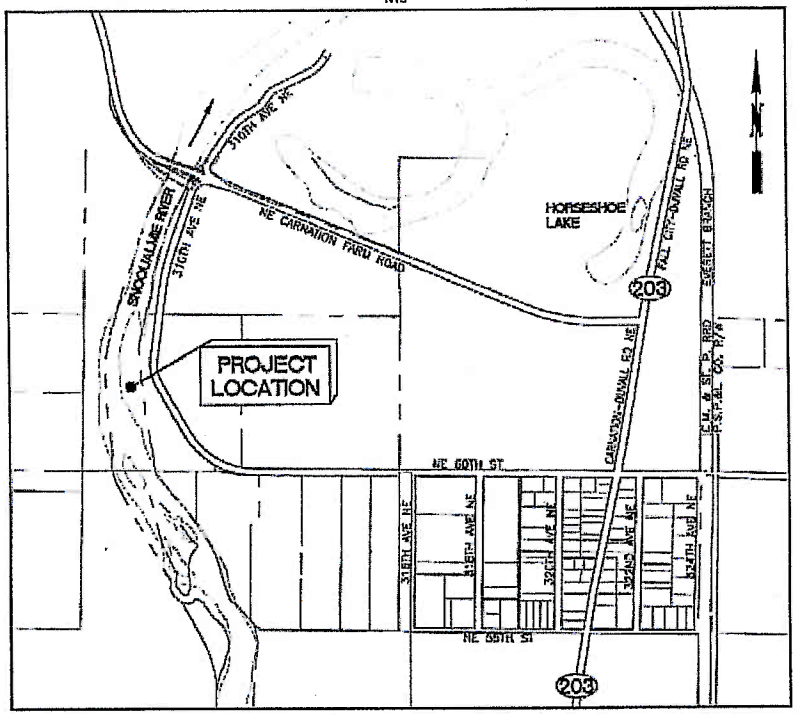
**Includes riparian areas along side channel and around log clusters*

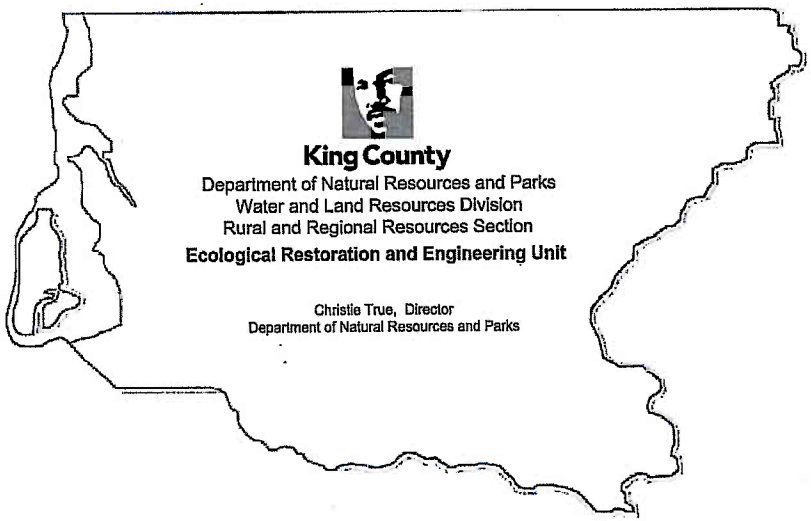


Purpose: McElhoe-Pearson ILF Mitigation Project **Project Sponsor:** King County DNRP **Date:** November 7, 2013	NWS-2009-495	**Location:** 65XX 310th Ave NE **Sec/Twp/Rng:** 09/26N/07E **County:** King **State:** WA

VICINITY MAP

NTS





King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Resources Section
Ecological Restoration and Engineering Unit

Christie True, Director
Department of Natural Resources and Parks

McELHOE PEARSON
RESTORATION PROJECT 2012

INDEX

MERIDIAN W.S.L.G.N.Z.

N.A.V.D. 88

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK:			APPROVED: DIANE CONCANNON	8/2012	FED. AID No. –	King County Department of Natural Resources and Parks Water and Land Resources Division Rural and Regional Services Section Ecological Restoration and Engineering Services Unit *Christie True, Director*	McELHOE PEARSON RESTORATION PROJECT 2012
SURVEYED: D. MALTOS	5/2011		PROJECT MANAGER: FAUNA NIPP	8/2012	PROJECT No. 1034170		COVER, VICINITY MAP & INDEX
SURVEY BASE MAP: R. CLARK	5/2011		DESIGNED: CAROLYN BUTCHART, P.E.	8/2012	SURVEY No. 11029		NWS-2009-495
CHECKED: T. CRAY	5/2011		DESIGN ENTERED: KAY KITAMURA	8/2012	MAINTENANCE DIVISION No. 2		
		NUM. REVISION BY DATE					

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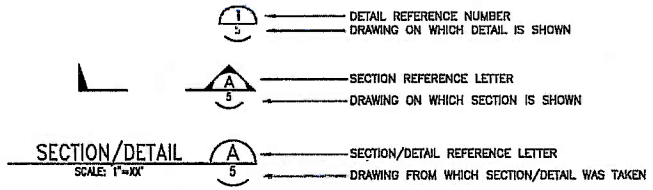
GENERAL NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLAN COORDINATE SYSTEM, NORTH ZONE. (NAD 83/91).
2. VERTICAL DATUM: NAVD 88
3. KING COUNTY WILL STAKE CONTROL, ROW, AND VEGETATION TO BE PROTECTED.
4. BEFORE BEGINNING CONSTRUCTION THE CONTRACTOR SHALL VERIFY THAT EXISTING CONDITIONS ARE AS INDICATED IN THE PLANS AND SPECIFICATIONS.
5. RESTORATION PLANTINGS WILL BE COMPLETED BY THE OWNER FOLLOWING CONTRACTOR PROJECT COMPLETION.
6. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. UTILITIES WHICH ARE NOT ABANDONED OR REMOVED SHALL BE PROTECTED, SUPPORTED, OR MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

DRAWING REFERENCE:



ABBREVIATIONS:

"-"	INDICATES THAT THE DETAIL/SECTION IS SHOWN ON THE SAME DRAWING
"TYP"	INDICATES THAT THE DETAIL/SECTION IS UNIFORMLY TYPICAL THROUGHOUT PROJECT EXCEPT WHERE OTHERWISE NOTED
"VAR"	SPECIFIES THAT DETAIL/SECTION WAS TAKEN FROM SEVERAL DRAWINGS
"NTS"	NOT TO SCALE
"TESC"	TEMPORARY EROSION & SEDIMENT CONTROL
"WSE"	WATER SURFACE ELEVATION

CONSTRUCTION SEQUENCE:

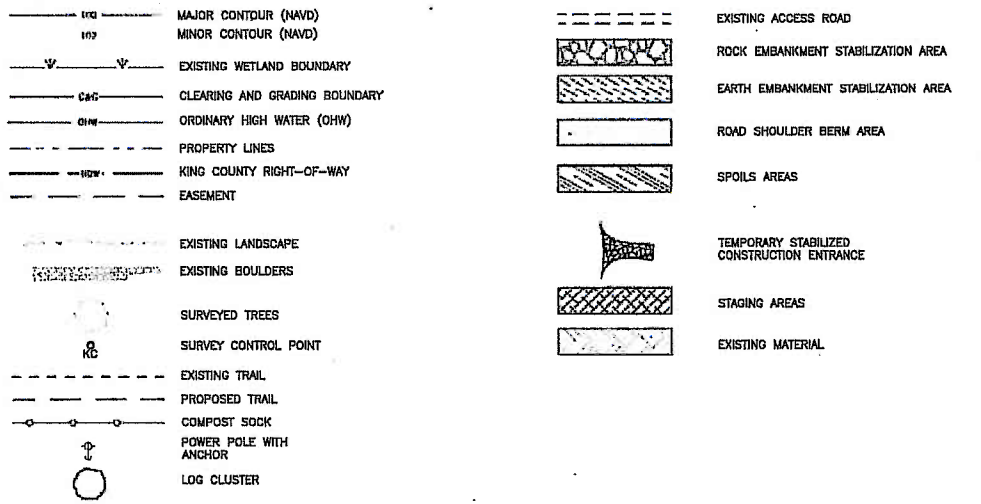
SITE PREPARATION:

1. CONDUCT A PRE-CONSTRUCTION MEETING.
2. INSTALL TEMPORARY ACCESS AS SHOWN ON PLANS.
3. INSTALL COMPOST SOCKS AS SHOWN ON PLANS.
4. MAINTAIN TESC MEASURES IN ACCORDANCE WITH THE PROJECT SPECIFICATONS AND GENERAL IN-WATER FEATURES.

DESIGN FEATURES:

1. CONSTRUCT ROAD STABILIZATION AND SHOULDER BERM.
2. INSTALL TURBIDITY CURTAINS AS SHOWN ON PLANS.
3. BREACH LEVEE AND EXCAVATE OUTLET CHANNEL AND AS SHOWN ON PLANS. STAGE ALL SLASH AND FELLED TREES FOR RE-USE ON-SITE.
4. PLACE SLASH AND FELLED TREES AS FIELD DIRECTED.
5. DEPOSIT SPOILS ON SITE AS SHOWN ON PLANS AND FIELD DIRECTED.
6. FINAL GRADE WETLAND RESTORATION AND PLACE SLASH AND FELLED TREES AS FIELD DIRECTED.
7. EXCAVATE KING COUNTY ACCESS ROAD, INSTALL CULVERT, AND BACKFILL ACCESS ROAD AS SHOWN ON PLANS.
8. FINAL GRADE WETLAND EXCAVATION AREA AND INSTALL SLASH AND FELLED TREES PER FIELD DIRECTION.
9. INSTALL LOG CLUSTERS.

LEGEND:



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FIELD BOOK:						APPROVED: DIANE CONCANNON	5/2012	FED. AID No. -		
SURVEYED: D. MALTOS	5/2011					PROJECT MANAGER: FAUNA NOPP	5/2012	PROJECT No. 1034170		
SURVEY BASE MAP: R. CLARK	5/2011					DESIGNED: CAROLYN BUTCHART, P.E.	5/2012	SURVEY No. 11029		
CHECKED: T. GRAY	5/2011					DESIGN ENTERED: KAY KITAMURA	5/2012	MAINTENANCE DIVISION No. 2		
		NUM.	REVISION	BY	DATE					

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration
and Engineering Services Unit
Christie True, Director

McELHOE PEARSON RESTORATION PROJECT 2012

LEGEND & ABBREVIATIONS
NWS-2009-495

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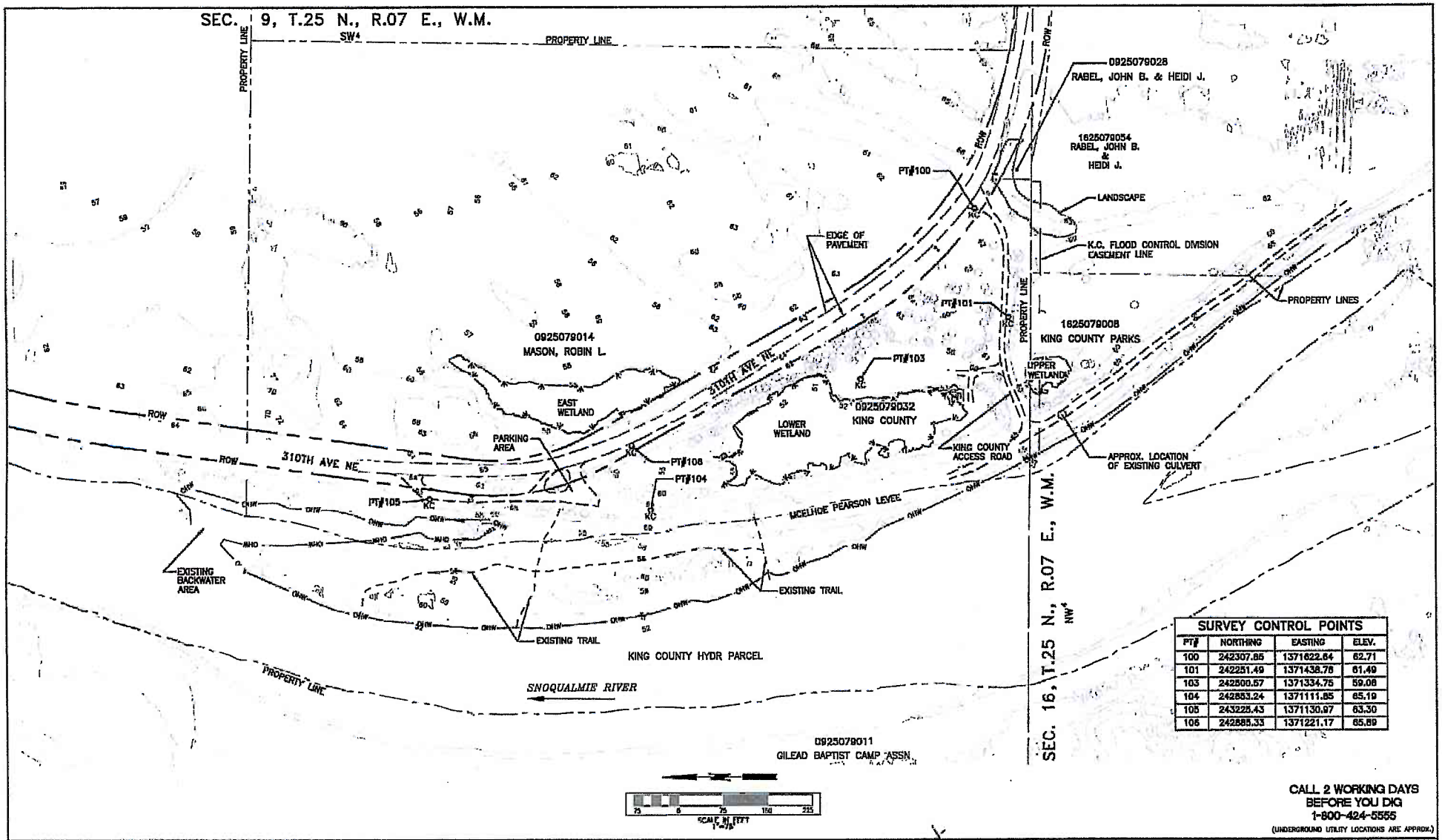

SURVEY CONTROL POINTS			
PT#	NORTHING	EASTING	ELEV.
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101	242251.49	1371438.78	61.49
103	242500.57	1371334.75	59.08
104	242853.24	1371111.85	65.19
105	243225.43	1371130.97	63.30
106	242885.33	1371221.17	65.89

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McELHOE PEARSON RESTORATION PROJECT 2012

EXISTING SITE PLAN

NWS-2009-495

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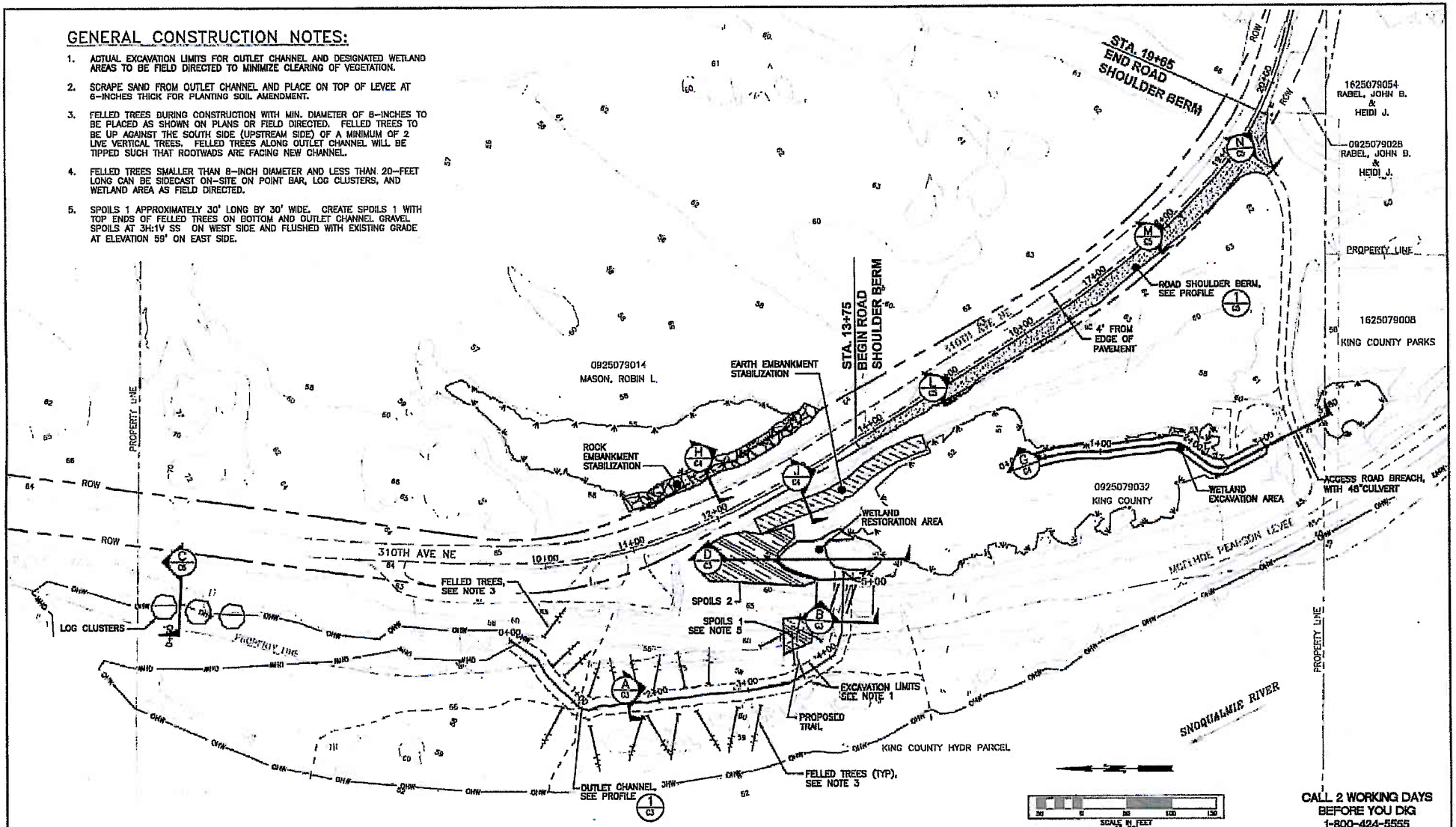
I:\2006-40 McElhoe Pearson Levee Removal\DWG\1034170_C1-EX-SITE.dwg, 8/9/2012 1:39:45 PM, kitamura, 5500 West, pc3, 1:2

GENERAL CONSTRUCTION NOTES:

1. ACTUAL EXCAVATION LIMITS FOR OUTLET CHANNEL AND DESIGNATED WETLAND AREAS TO BE FIELD DIRECTED TO MINIMIZE CLEARING OF VEGETATION.
2. SCRAPE SAND FROM OUTLET CHANNEL AND PLACE ON TOP OF LEVEE AT 6-INCHES THICK FOR PLANTING SOIL AMENDMENT.
3. FELLED TREES DURING CONSTRUCTION WITH MIN. DIAMETER OF 8-INCHES TO BE PLACED AS SHOWN ON PLANS OR FIELD DIRECTED. FELLED TREES TO BE UP AGAINST THE SOUTH SIDE (UPSTREAM SIDE) OF A MINIMUM OF 2 LIVE VERTICAL TREES. FELLED TREES ALONG OUTLET CHANNEL WILL BE TIPPED SUCH THAT ROOTWADS ARE FACING NEW CHANNEL.
4. FELLED TREES SMALLER THAN 8-INCH DIAMETER AND LESS THAN 20-FEET LONG CAN BE SIDECAST ON-SITE ON POINT BAR, LOG CLUSTERS, AND WETLAND AREA AS FIELD DIRECTED.
5. SPOILS 1 APPROXIMATELY 30' LONG BY 30' WIDE. CREATE SPOILS 1 WITH TOP ENDS OF FELLED TREES ON BOTTOM AND OUTLET CHANNEL GRAVEL SPOILS AT 3H:1V SS ON WEST SIDE AND FLUSHED WITH EXISTING GRADE AT ELEVATION 59' ON EAST SIDE.



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King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

McELHOE PEARSON RESTORATION PROJECT 2012

PROPOSED SITE PLAN
NWS-2009-495

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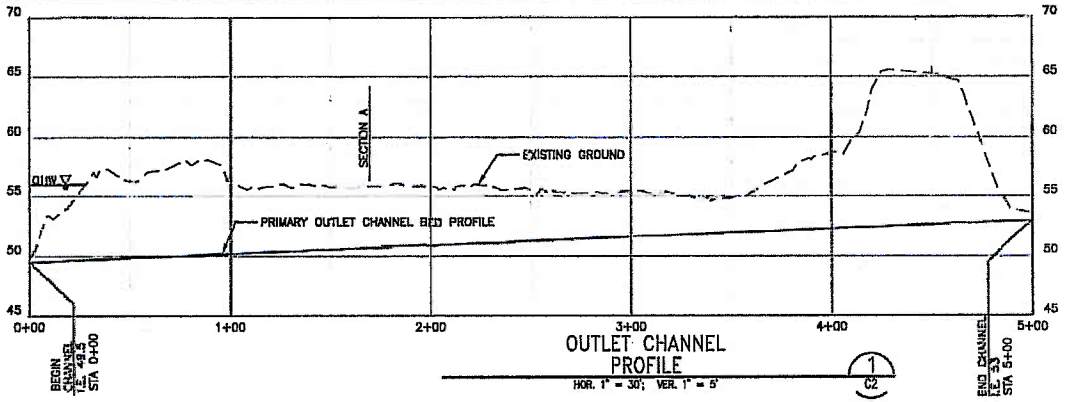
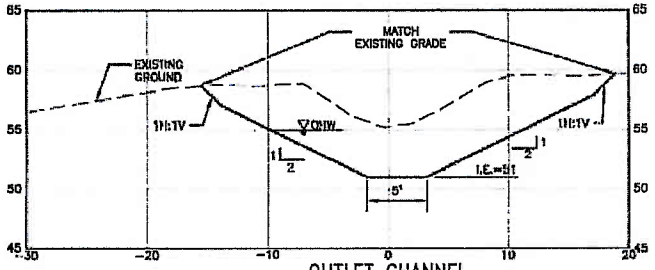


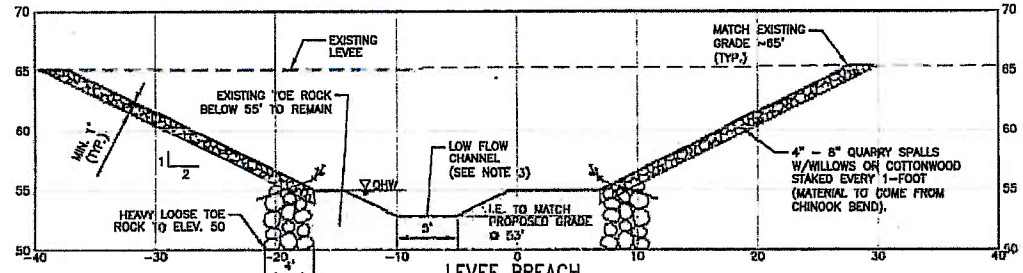
OUTLET CHANNEL PROFILE (1 / C2)
HOR. 1" = 30'; VER. 1" = 5'

NOTES:

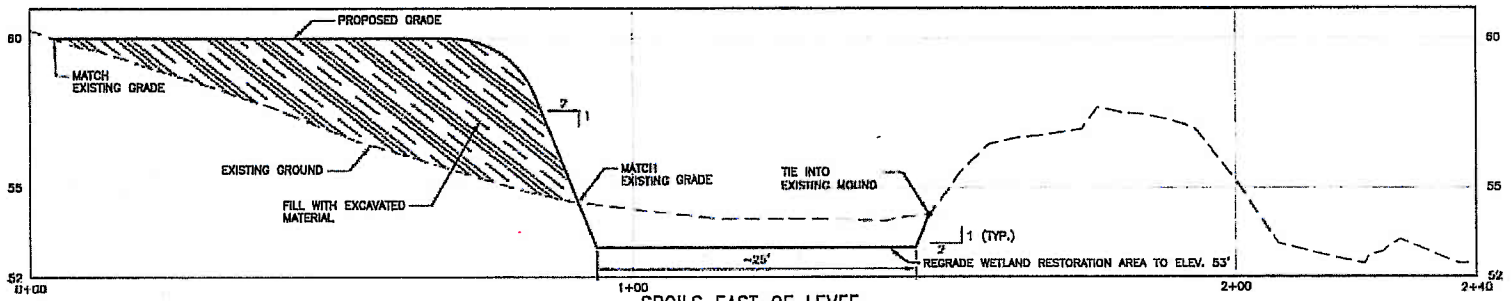
1. OUTLET CHANNEL TO BE EXCAVATED AT CONSISTENT GRADE FROM BEGINNING AND END STATIONS SHOWN ON THE PLANS. SPOILS TO BE PLACED PER DETAIL D.
2. TYPICAL OUTLET CHANNEL TO BE 5' WIDE AT BOTTOM AND EXCAVATED AT 2H:1V UNTIL LAST 2 FEET BEFORE TYING INTO EXISTING GRADE AT 1H:1V. SIDE SLOPES MAY VARY AS FIELD DIRECTED TO MINIMIZE VEGETATION DISTURBANCE.
3. BENCHES AT ELEV. 55' THROUGH LEVEE BREACH TO BE FIELD DIRECTED AS LOW FLOW CHANNEL ALIGNMENT VARIES.
4. TOE ROCK WITHIN EXISTING LEVEE PRISM TO BE 5' THICK OF HEAVY LOOSE RIPRAP FROM ELEV. 50' TO 55'.
5. 8" DIA OR GREATER AND 20' OR SHORTER FELLED TREES DURING CONSTRUCTION TO BE PLACED ON SOUTH SIDE AGAINST A MINIMUM OF TWO STANDING TREES OF MIN. 4" DIA.



OUTLET CHANNEL SECTION A–A (TYP) (A / C2)
HOR. 1"=5'; VER. 1"=5'



LEVEE BREACH SECTION B–B (TYP) (B / C2)
HOR. 1"=5'; VER. 1"=5'



SPOILS EAST OF LEVEE SECTION D–D (D / C2)
HOR. 1" =10'; VER. 1" = 2'

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FIELD BOOK:			
SURVEYED:	D. MALTOS	5/2011	
SURVEY BASE MAP:	R. CLARK	5/2011	
CHECKED:	T. CRAY	5/2011	

NUM.	REVISION	BY	DATE

APPROVED:	DIANE CONCANNON	8/2012
PROJECT MANAGER:	FAUNA NOPP	8/2012
DESIGNED:	CAROLYN BUTCHART, P.E.	8/2012
DESIGN ENTERED:	KAY KITAMURA	8/2012

FED. AID No. –
PROJECT No. 1034170
SURVEY No. 11029
MAINTENANCE DIVISION No. 2

CAROLYN D. BUTCHART — STATE OF WASHINGTON — 19990 — REGISTERED PROFESSIONAL ENGINEER

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

McELHOE PEARSON RESTORATION PROJECT 2012

OUTLET CHANNEL PROFILES & SECTIONS
NWS-2009-495

SHEET C3 OF 11 SHEETS
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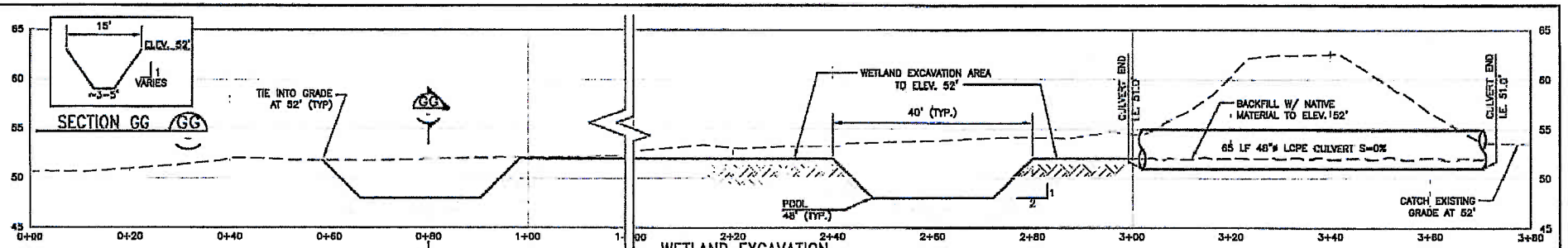
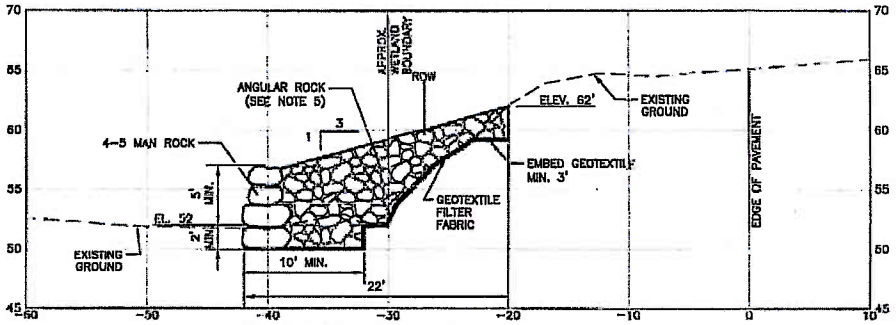
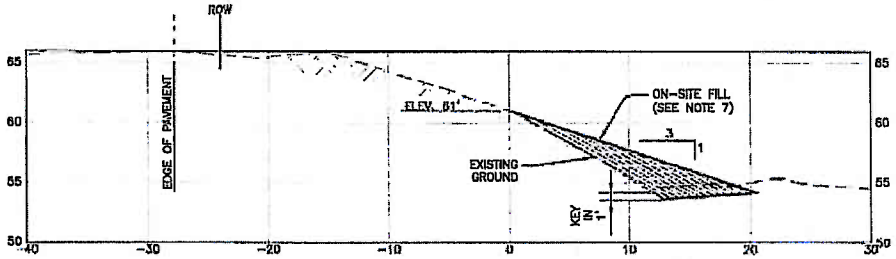


WETLAND EXCAVATION AND CULVERT PROFILE (G, C2)
HOR. 1" =10'; VER. 1" = 5'



ROCK EMBANKMENT STABILIZATION SECTION H-H (TYP) (H, C2)
HOR. 1"=5'; VER. 1"=5'



EARTH EMBANKMENT STABILIZATION SECTION J-J (TYP) (J, C2)
HOR. 1"=5'; VER. 1"=5'

WETLAND EXCAVATION NOTE:

1. EXCAVATE WETLAND AREA TO ELEV. 52' INCLUDING THREE (3) DEEPER POOLS TO ELEV. 48' AS FIELD DIRECTED TO MINIMIZE DISTURBANCE OF EXISTING VEGETATION.

ROCK EMBANKMENT NOTES:

2. STRIP VEGETATION FROM EXISTING GRADE AND SMOOTH SURFACE BY REMOVING OBSTRUCTIONS OR PLACING CLEAN FREE DRAINING SAND FILL PRIOR TO GEOTEXTILE PLACEMENT.
3. STAKE ELEV. 62', OFFSET 22' FROM ELEV. 62' TO STAKE TOE.
4. GEOTEXTILE FILTER FABRIC TO BE GEOTEXTILE FOR PERMANENT EROSION CONTROL & DITCH LINING PER WSDOT 9.33.2 (1) TABLE 4&5 CLASS A OR B, OR OTHER EQUIVALENT NON WOVEN FABRIC. FABRIC TO EXTEND AS SHOWN ON PLANS. ALL SEAMS SHALL OVERLAP A MIN. OF 3'.
5. FREE DRAINING ANGULAR ROCK FILL SHALL BE SOUND ROCK WITH A MINIMUM WEIGHT OF 30 LBS. AND TYPICAL INTERMEDIATE DIAMETER BETWEEN 1-3'.
6. ROCKERY BASE COURSE TO BE SOUND ROCK A MINIMUM OF 4' INTO BANK AND EMBEDDED A MIN OF 2' BELOW EXISTING GRADE. UPPER ROCKERY COURSE(S) TO BE SOUND ROCK A MINIMUM OF 3' INTO BANK.

EARTH EMBANKMENT NOTE:

7. FILL TO BE ON-SITE SPOILS FROM LEVEE BREACH. CLEAR AND GRUB SUBGRADE. BUILD 1' LIFTS AND COMPACT WITH BUCKET.

CULVERT NOTE:

8. SEE CULVERT TRENCH AND BACKFILL DETAIL ON SHEET C8.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555 (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SURVEY BASE MAP: R. CLARK	5/2011			DESIGNED: CAROLYN BUTCHART, P.E.	5/2012	PROJECT No. 1034170	
CHECKED: T. CRAY	5/2011					SURVEY No. 11029	
		NUM.	REVISION	BY	DATE	DESIGN ENTERED: KAY KITAMURA	5/2012
						MAINTENANCE DIVISION No. 2	

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Christie True, Director

McELHOE PEARSON RESTORATION PROJECT 2012

WETLAND AND ROAD ENHANCEMENT DETAILS

NWS-2009-495

SHEET C4 OF 11 SHEETS

2006-40

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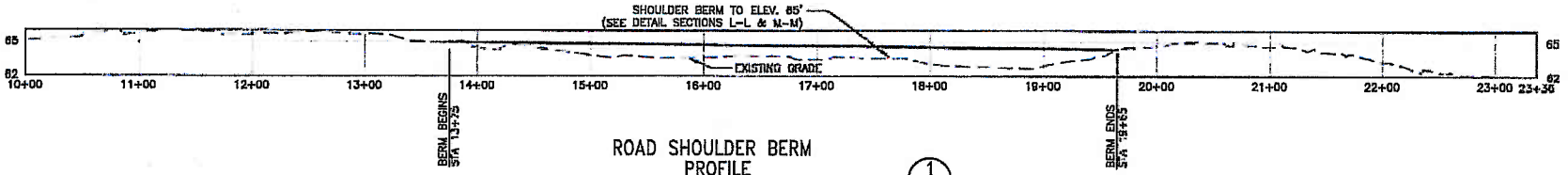
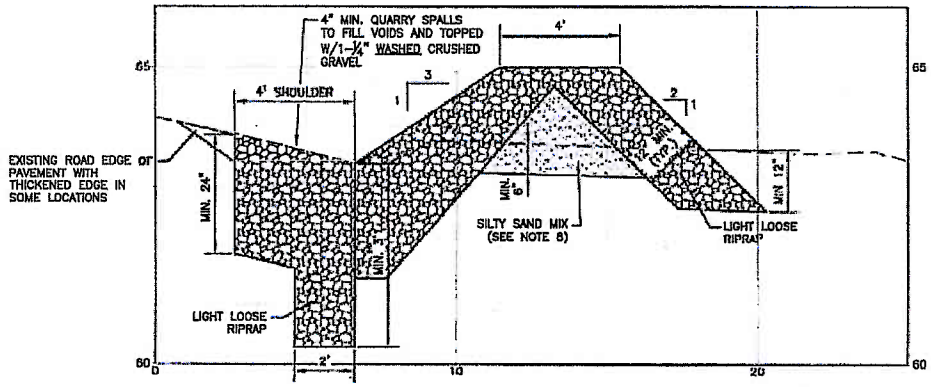


ROAD SHOULDER BERM PROFILE

HOR. 1" = 50'; VER. 1" = 5'

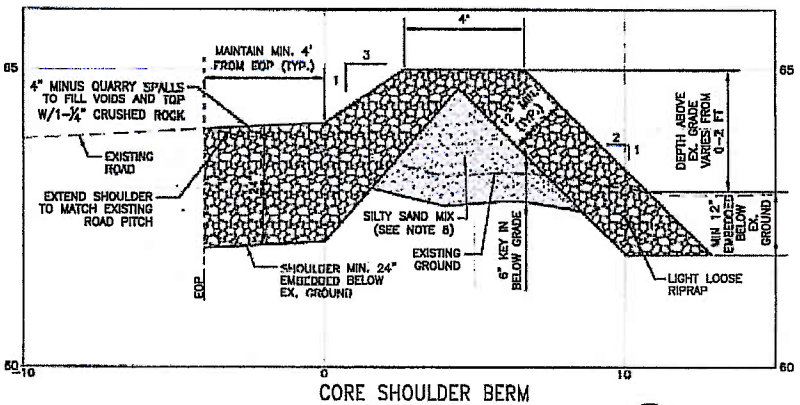
1 / C2



INFILTRATION TRENCH

HOR. 1"=2'; VER. 1"=1'
STA 13+75 TO 15+85

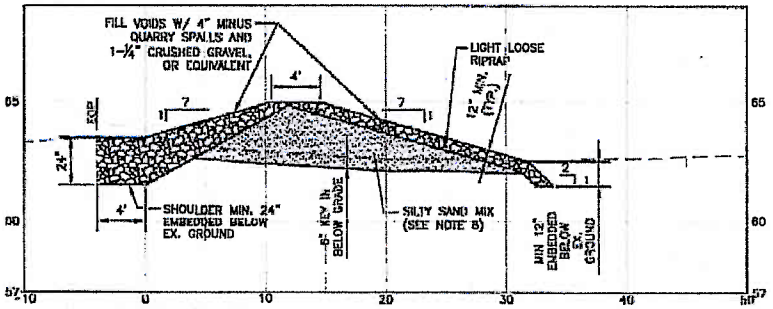
L / C2



CORE SHOULDER BERM SECTION M-M

HOR. 1"=2'; VER. 1"=1'
STA 13+75 TO 19+15
AND STA 19+35 TO 19+65

M / C2



BERM ACROSS ACCESS ROAD SECTION N-N

HOR. 1"=5'; VER. 1"=1'
STA 19+15 TO 19+35

N / C2

SHOULDER BERM NOTES:

1. ROADSIDE TOE OF BERM TO BE OFFSET 4' FROM EDGE OF PAVEMENT TO PROVIDE SHOULDER.
2. SHOULDER TO MATCH EXISTING PITCH OF PAVEMENT WITH A MINIMUM OF 24" OF LIGHT LOOSE RIPRAP.
3. TIE SHOULDER INTO EXISTING PAVEMENT WITH CARE NOT TO DISTURB THICKENED AND EXTENDED PAVEMENT EDGES. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE EXACT LOCATION AND DIMENSIONS OF THICKENED/EXTENDED EDGE OF PAVEMENT AND TAKE CARE NOT TO DISTURB.
4. FILL VOIDS IN SHOULDER WITH 4" MINUS QUARRY SPALLS AND 1-1/4" CRUSHED ROCK.
5. INFILTRATION TRENCH ALONG CROWNED ROAD SECTION BETWEEN STATIONS 13+75 TO 15+85 TO BE OFFSET 2' FROM EDGE OF PAVEMENT WITH MINIMUM DIMENSIONS OF 2' WIDE BY 3' DEEP. BACKFILL WITH LIGHT LOOSE RIPRAP.
6. BERM CORE TO BE BUILT IN 8" LIFTS AND COMPACTED W/ ROLLER TO 95% MAX. DENSITY AS DETERMINED BY MODIFIED PROCTOR.
7. DENSITY TEST OF BERM CORE TO BE TAKEN BEFORE COVERED W/ LLRR.
8. POUR SILTY SAND MIX BERM CORE FIRST, THEN OVERLAY W/ LLRR.
   SILTY SAND MIX TO BE:

SIEVE	%PASSING
4"	100
2"	75–100
NO. 4	40–75
NO. 40	30–50
NO. 200	20 MIN.

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SURVEY BASE MAP: R. CLARK	5/2011			DESIGNED: CAROLYN BUTCHART, P.E.	8/2012	SURVEY No. 11029	
CHECKED: T. CRAY	5/2011			DESIGN ENTERED: KAY KITAMURA	8/2012	MAINTENANCE DIVISION No. 2	
		NUM.	REVISION	BY	DATE		

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Ecological Restoration and Engineering Services Unit
Christie True, Director

McELHOE PEARSON RESTORATION PROJECT 2012

ROAD STABILIZATION DETAILS
NWS-2009-495

SHEET C5 OF 11 SHEETS
2006-40

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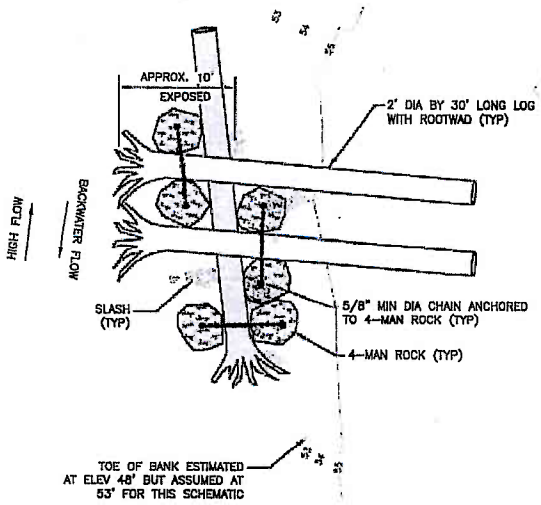
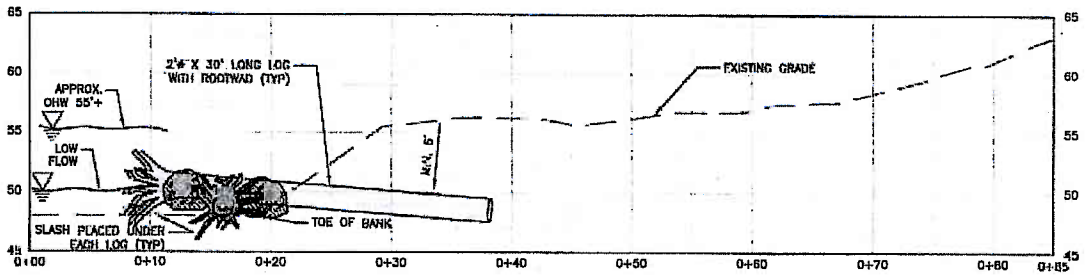


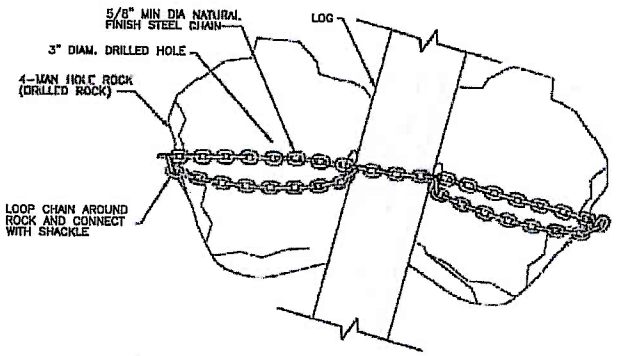
LOG CLUSTER DETAIL – PLAN (TYP)
SCALE: N.T.S.

WOOD ENHANCEMENT NOTES:

1. ALL LOGS TO BE DOUGLAS FIR OR CEDAR. LOGS WITH ROOTWADS TO BE A MINIMUM OF 2' DIA.
2. LAYER 1 LOG TO BE SEMI-PARALLEL TO FLOW WITH ROOTWAD FACING UPSTREAM.
3. ANCHOR LAYER 1 LOG WITH 4-MAN HOLE ROCKS AS SHOWN ON THE PLAN AND PER DETAIL ON THIS SHEET.
4. LAYER 2 LOGS TO BE PERPENDICULAR TO FLOW EMBEDDED A MINIMUM OF 20' INTO THE BANK.
5. ANCHOR LAYER 2 LOGS WITH 4-MAN HOLE ROCKS ON EACH SIDE OF LOG.
6. SLASH TO BE PLACED UNDER EACH LOG BEFORE PLACEMENT.



LOG CLUSTER DETAIL – SECTION (TYP) (C/C2)
SCALE: 1"=5' HORIZ, 1"=2.5' VERT.



ROCK ANCHOR FOR LOGS
SCALE: N.T.S.

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				DATE			

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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

McELHOE PEARSON RESTORATION PROJECT 2012

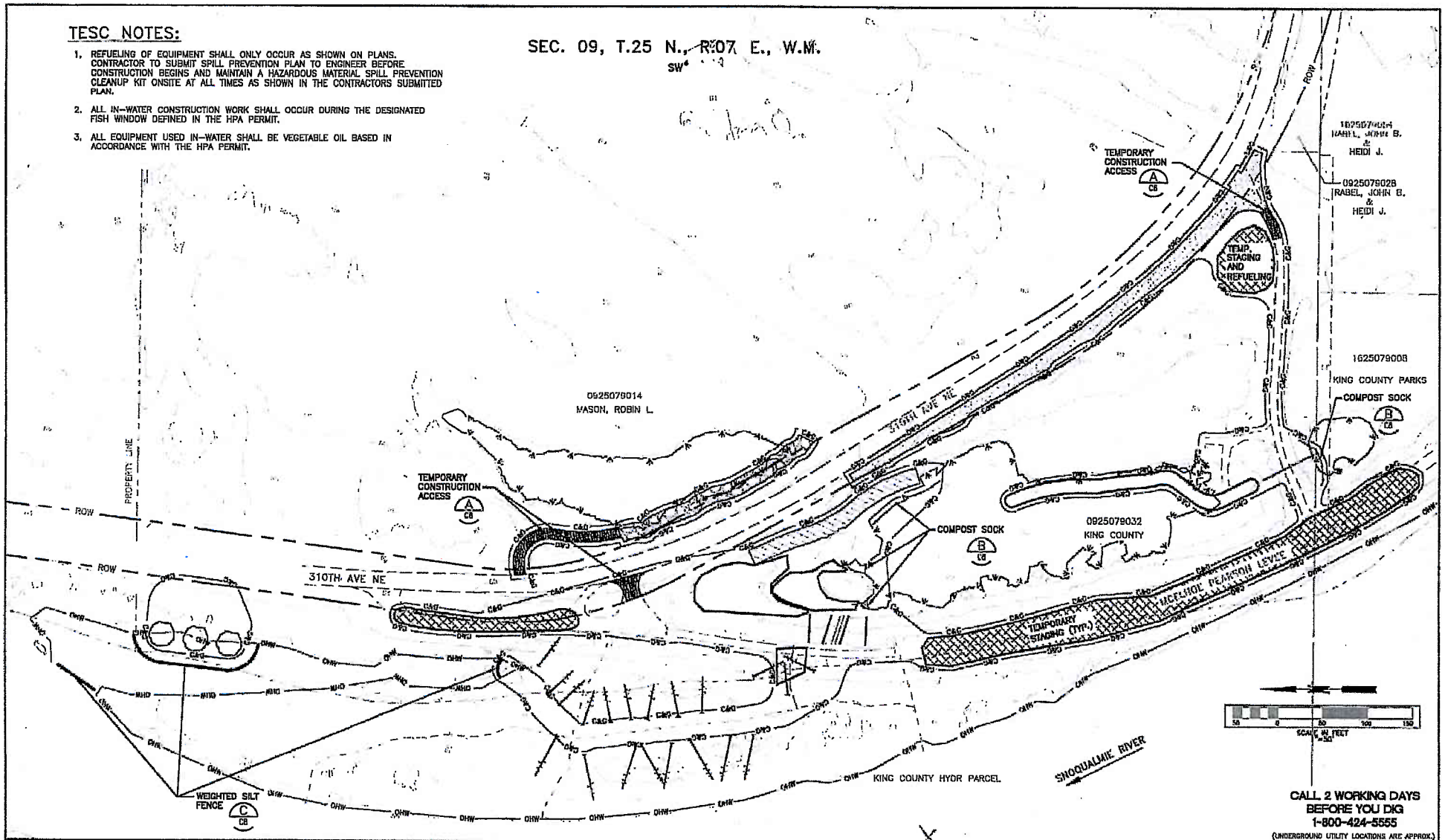
LOG CLUSTER DETAILS
NWS-2009-495

SHEET C6 OF 11 SHEETS
2006-40

TESC NOTES:

1. REFUELING OF EQUIPMENT SHALL ONLY OCCUR AS SHOWN ON PLANS. CONTRACTOR TO SUBMIT SPILL PREVENTION PLAN TO ENGINEER BEFORE CONSTRUCTION BEGINS AND MAINTAIN A HAZARDOUS MATERIAL SPILL PREVENTION CLEANUP KIT ONSITE AT ALL TIMES AS SHOWN IN THE CONTRACTORS SUBMITTED PLAN.
2. ALL IN-WATER CONSTRUCTION WORK SHALL OCCUR DURING THE DESIGNATED FISH WINDOW DEFINED IN THE HPA PERMIT.
3. ALL EQUIPMENT USED IN-WATER SHALL BE VEGETABLE OIL BASED IN ACCORDANCE WITH THE HPA PERMIT.

SEC. 09, T.25 N., R.07 E., W.M.



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McELHOE PEARSON RESTORATION PROJECT 2012

TESC PLAN
NWS-2009-495

SHEET C7 OF 11 SHEETS
2006-40

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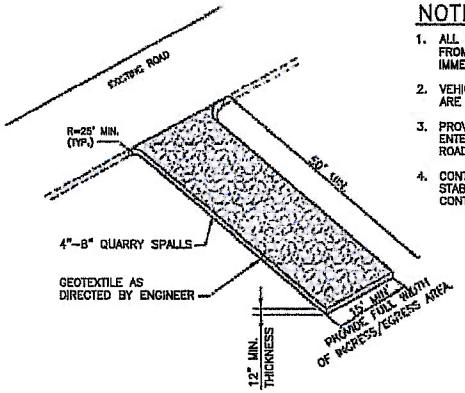
NOTES:

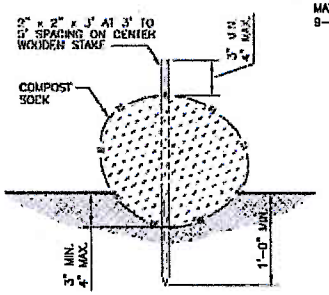
1. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY.
2. VEHICLE TIRES SHALL BE INSPECTED TO ENSURE THEY ARE FREE OF MUD BEFORE ENTERING PUBLIC ROADWAYS.
3. PROVIDE FLAGGING FOR CONSTRUCTION VEHICLES ENTERING AND LEAVING SITE AND ENTERING PUBLIC ROADWAYS.
4. CONTRACTOR SHALL MAINTAIN AND AUGMENT EXISTING STABILIZED CONSTRUCTION ENTRANCES AS NEEDED TO CONTROL SEDIMENT.



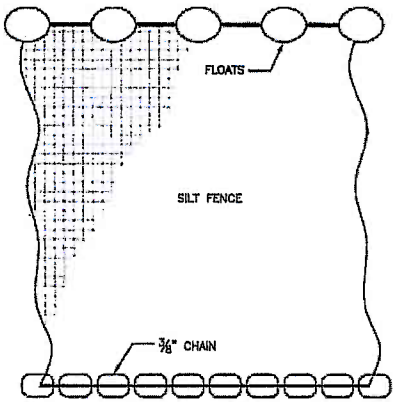
STABILIZED TEMPORARY CONSTRUCTION ACCESS (A, C7)
NTS

NOTE:

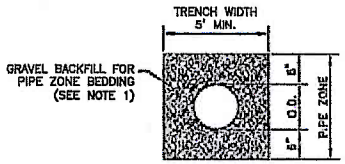
1. COMPOST SOCK SHALL BE 100% NATURAL AND BIODEGRADABLE. MATERIAL AND INSTALLATION SHALL BE PER 8-01.3(12) AND 9-14.5 (6).



COMPOST SOCK (B, C7)
NTS



WEIGHTED SILT FENCE (TYP.) (C, C7)
NTS



48" LCPE CULVERT DETAIL

NOTE:

1. GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL CONSIST OF CRUSHED, PROCESSED, OR NATURALLY OCCURRING GRANULAR MATERIAL PER THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT PASSING
1½"	99–100
1"	75–100
⅝"	50–100
NO. 4	20–80
NO. 40	3–24
NO. 200	10.0 MAX
SAND EQUIVALENT	35 MIN.

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McELHOE PEARSON RESTORATION PROJECT 2012

TESC DETAILS
NWS-2009-495

SHEET C8 OF 11 SHEETS
2006-40

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McELHOE PEARSON RESTORATION PLANTING PLAN

SCIENTIFIC NAME	COMMON NAME	LOCATION			QUANTITY	SIZE	SPACING
	Trees	Upland	Wetland	Emergent or Aquatic			
Acer macrophyllum	big leaf maple	350	0	0	350	1 gal	8-10' o.c.
Alnus rubra	red alder	275	25	0	300	1 gal	6-8' o.c.
Populus trichocarpa	black cottonwood	850	50	0	900	1 gal	6-8' o.c.
Picea sitchensis	Sitka spruce	175	50	0	225	1 gal	10-15' o.c.
Pseudotsuga menziesii	Douglas fir	200	0	0	200	1 gal	10-15' o.c.
Salix lasiandra	Pacific willow	0	25	0	25	1 gal	6-8' o.c.
Fraxinus latifolia	Oregon ash	0	50	0	50	1 gal	10-15' o.c.
	Shrubs						
Holodiscus discolor	oceanspray	150	0	0	150	1 gal	3-4' o.c.
Rosa nutkana	Nootka rose	100	0	0	100	1 gal	3-4' o.c.
Rosa pisocarpa	swamp rose	0	50	0	50	1 gal	3-4' o.c.
Rubus parviflorus	thimbleberry	150	0	0	150	1 gal	3-4' o.c.
Symphoricarpos albus	snowberry	150	0	0	150	1 gal	3-4' o.c.
Cornus sericea	red twig dogwood	0	50	0	50	1 gal	3-4' o.c.
Physocarpus capitatus	Pacific ninebark	0	50	0	50	1 gal	3-4' o.c.
Rubus spectabilis	salmonberry	0	50	0	50	1 gal	3-4' o.c.
Polystichum munitum	sword fern	100	0	0	100	1 gal	3-4' o.c.
Salix scouleriana	Scouler's willow	100	0	0	100	1 gal	4-6' o.c.
	Livestakes						
Salix lasiandra	Pacific willow	0	100	0	100	5' poles, 3/4"-1-1/2"	5-8' o.c.
Salix sitchensis	Sitka willow	0	400	50	450	5' poles, 3/4"-1-1/2"	4-6' o.c.
	Emergents						
Scirpus acutus	hard-stemmed bulrush	0	0	550	550	plugs	18" o.c.
Scirpus microcarpus	small-flowered bulrush	0	0	550	550	plugs	18" o.c.
Carex obnupta	slough sedge	0	0	550	550	plugs	18" o.c.
Carex stipata	sawbeak sedge	0	0	550	550	plugs	18" o.c.
	Aquatic						
Sparganium angustifolium	burreed	0	0	200	200	4" pots	18" o.c.

PLANT LIST INCLUDES 3 TREES & 6 SHRUBS FOR "MASON MITIGATION"

PLANTING PLAN

	UPLAND	78,108 SQ. FT
	WETLAND	9,090 SQ. FT
	WETLAND EMERGENT	4,528 SQ. FT
	AQUATIC	1,437 SQ. FT

SEC. 9, T.25 N., R.07 E., W.M.

SW4

0925079014
MASON, ROBIN L.

1625079054
RABEL, JOHN B.
&
HEIDI J.

0925079028
RABEL, JOHN B
&
HEIDI J.

1625079008
KING COUNTY PARKS

0925079032
KING COUNTY

SEC. 16, T.25 N., R.07 E., W.M.

NW4

ROW

MOTH AVE NE

HOLLING PEARSON LEVEE

OHW

MHO

SHOOUALMIE RIVER

KING COUNTY HYDR PARCEL

SCALE IN FEET
1" = 50'

CALL 2 WORKING DAYS
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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CHECKED: T. CRAY	5/2011				SURVEY No. 11029
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King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration
and Engineering Services Unit
Christie True, Director

McELHOE PEARSON RESTORATION PROJECT 2012

PLANTING PLAN
NWS-2009-495

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