

Auburn Narrows Natural Area

SE AUBURN BLACK DIAMOND RD

128TH WAY SE

130TH AVE SE

SE 336TH PL

SE 338TH ST

133RD AVE SE

PROJECT LOCATION

Green River

Porter Levee Natural Area

SE GREEN VALLEY RD

RM 33.5

RM 34.0

PORTER REACH RESTORATION PROJECT

(RIVER MILE 33.3 TO 34.6)

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18	TRAFFIC CONTROL PLAN (PLACE HOLDER)



Know what's below.
Call before you dig.

(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEYED:	XXX	XXX	NUM.	REVISION	BY	DATE	APPROVED: WILL MANSFIELD, P.E.	FUNDING SOURCE No.	SFRB Grant
				JOB DESIGN		07/2014			
SURVEY BASEMAP:	XXX	XXX		RECORD CHANGES	DL	01/2019	PROJECT MANAGER: FAUNA NOPP	PROJECT No.	1114123
CHECKED:	XXX	XXX					DESIGNED: CAROLYN BUTCHART, P.E.	CONTRACT No.	TBD
			NUM.	RECORD CHANGES APPROVED	BY	DATE	T. HURLEY, J. LATTERELL, PHD.		
							GEO DESIGN: D. LACSON, CARDINO		



King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Biological Restoration
and Engineering Services Unit
Chelsa Tron, Director









PORTER REACH RESTORATION PROJECT

VICINITY MAP AND SHEET INDEX

SHEET
1
OF
18
SHEETS

2012-15

LEGEND

















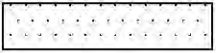



SURVEY	DESCRIPTION
	CONTOUR INTERVAL
	CONTOUR INDEX
	RIGHT-OF-WAY
	STATE/COUNTY/CORPORATE LIMIT
	EASEMENT (PERMANENT)
	RIGHT OF WAY
	PROPERTY LINE
	BUILDING FOOTPRINT






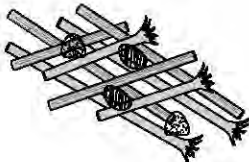
EXISTING UTILITIES

←	GUY WIRE ANCHOR	□	POWER METER
○	POWER POLE	⊗ P	POWER RISER

CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS
OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION

CONSTRUCTION	DESCRIPTION
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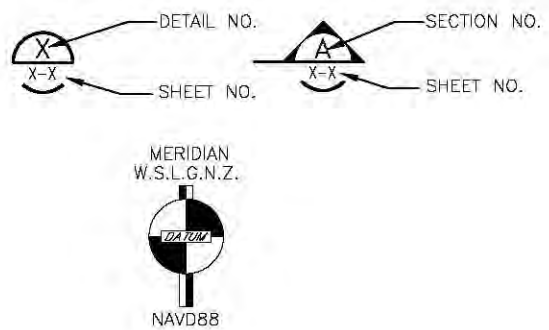
	EASEMENT (TEMPORARY)
	CLEARING AND GRADING LIMITS
	EXIST. EDGE OF PAVEMENT (EOP)
	EXIST. SHOULDER (SHLDR)
	100-YR FLOODWAY BOUNDARY
	CENTERLINE
	PROJECT LIMITS
	PUMP
	EXISTING GRADE
	PROPOSED GRADE
	CONSTRUCTION LIMIT
	ORDINARY HIGH WATER
	NATIVE MATERIAL (ALLUVIUM) BACKFILL
	ROCK REVETMENT
	EXISTING SUBSTRATE
	EXISTING LEVEE TO BE LOWERED AND FACE ROCK REMOVED
	GEOGRID LIFTS BACKFILL
	WETLAND BOUNDARY
	DRAINAGE CULVERT WITH FLAP GATE
	TEMPORARY STAGING

HB-, B-	●	DEEP GEOTECH BORING, PERMANENT WELL
ET	◆	GEOTECH TEST PITS
MW	●	SHALLOW GROUND WATER MONITORING WELL
		EXISTING TREE
		DEFLECTOR JAM (D#) (PLAN VIEW)
		EXPOSED JAM
		BURIED JAM
		BANK WOOD CLUSTER

ABBREVIATIONS

APPROX.	APPROXIMATELY
CL	CENTERLINE
EA	EACH
EL	ELEVATION
EX	EXISTING
FT	FOOT/FEET
GVR	GREEN VALLEY ROAD
IE	INVERT ELEVATION
LF	LINEAL FOOT/FEET
LWD	LARGE WOODY DEBRIS
NTS	NOT TO SCALE
O.C.	ON CENTER
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
WSE	WATER SURFACE ELEVATION


SYMBOLS



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				30% DESIGN RECORD CHANGES	DL	07/2014 01/2018		
SURVEY BASEMAP:	XXX	XXX					PROJECT MANAGER: FAUNA NOPP	PROJECT No. 1114123
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King County
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 Water and Land Resources Division
 Rural and Regional Services Section
 Ecological Restoration
 and Engineering Services Unit
Christie True, Director

PORTER REACH RESTORATION PROJECT

LEGEND AND ABBREVIATIONS

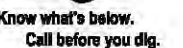
SHEET
2
 OF
18
 SHEETS
2012-15


1. CONTRACTOR TO SURVEY AND STAKE CLEARING LIMITS WITH HVF AND PROJECT CONTROL POINTS AND STATIONING.
2. MARK CLEARING LIMITS AND TREES TO BE SAVED ON SITE.
3. PROTECT EXISTING UTILITIES AND ROADWAY PAVEMENT.
4. INSTALL TESC MEASURES AS PER SHEETS 15 AND 16.
5. CLEAR VEGETATION EXCEPT FOR TREES MARKED TO BE SAVED IN ALL GRADING AREAS AND STOCKPILE AS SHOWN ON PLANS.
6. CONSTRUCT S.E. GREEN VALLEY ROAD PROTECTION AND DEFLECTOR JAM,
7. CONSTRUCT BANK WOOD CLUSTERS.
8. INSTALL WATER DIVERSION AND WATER MANAGEMENT MEASURES AS NEEDED FOR THE PORTER LEVEE REMOVAL.
9. COORDINATE WITH ON SITE X-AGENCY FISH BIOLOGIST PRIOR TO IN-WATER EXCAVATION. FISH REMOVAL TO BE DONE BY X-AGENCY IF NECESSARY.
10. REMOVE ROCK FACE MATERIAL FROM PORTER LEVEE AND DISPOSE OFFSITE AT AN APPROVED LOCATION.
11. REMOVE WATER DIVERSION AND WATER MANAGEMENT MEASURES.
12. CONSTRUCT HABITAT JAMS
13. INSTALL LANDSCAPING.
14. REMOVE TESC MEASURES.

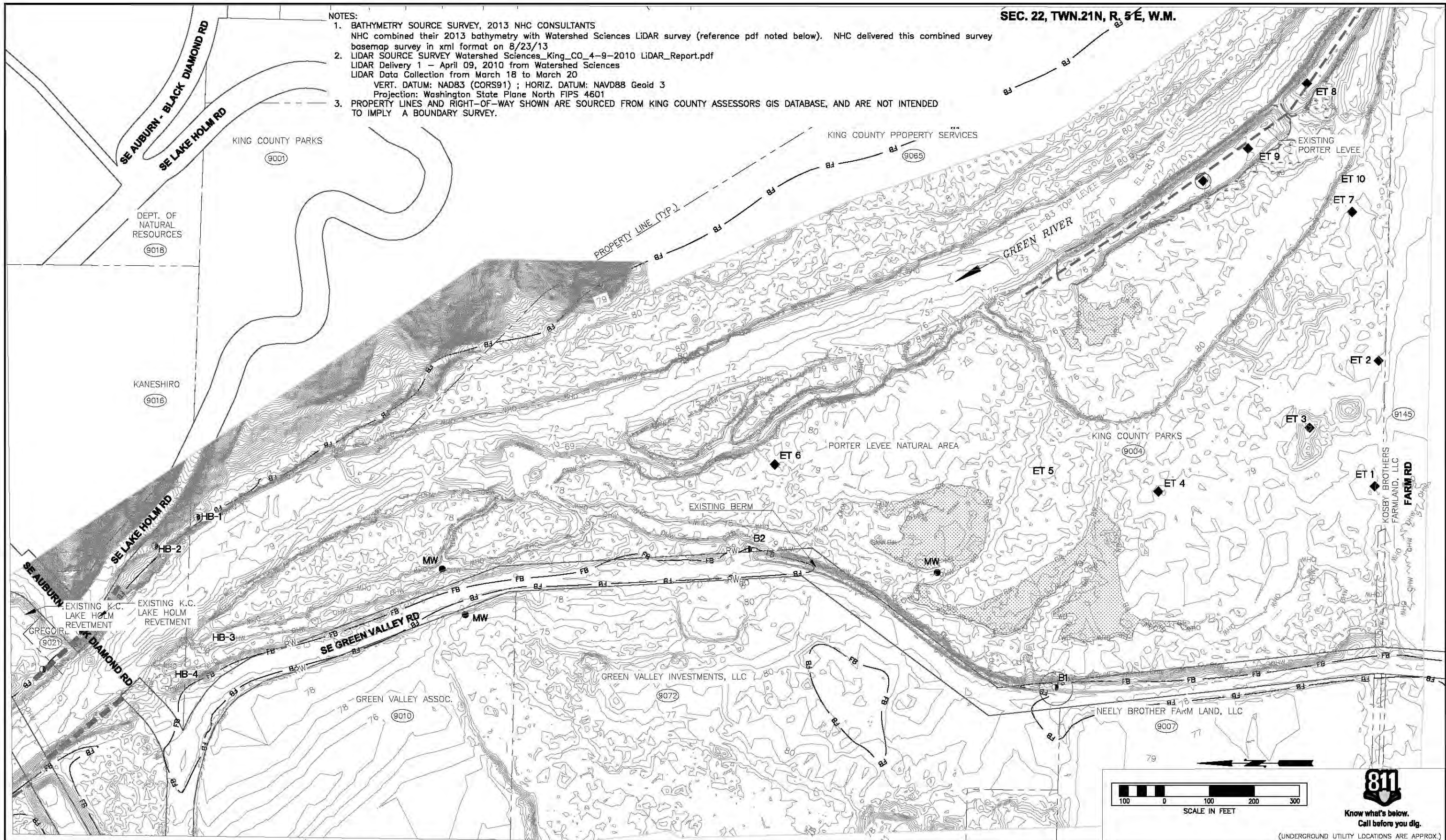
1. POST SIGN WITHIN PROJECT AREA WITH NAME AND PHONE NUMBER OF PROJECT CESCCL.
2. INSTALL CONSTRUCTION ENTRANCES.
3. INSTALL SURFACE WATER CONTROLS AS SHOWN ON TECS PLAN.
4. MAINTAIN TESC MEASURES IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

1. IN WATER WORK SHALL NOT BEGIN UNTIL TEMPORARY RIVER ISOLATION SYSTEM IS IN PLACE.
2. CONTRACTOR SHALL NOTIFY OWNER 2 DAYS PRIOR TO IN-WATER WORK TO ALLOW DE-FISHING IN WATER ISOLATION AREA.
3. INSTALL TEMPORARY RIVER ISOLATION PER PRE-APPROVED SUBMITTAL.
4. EXCAVATE EXISTING FACE RIPRAP AS SHOWN ON PLANS AND HAUL TO APPROVED DISPOSAL SITE.
5. LOWER EXISTING LEVEE TO ELEVATION SHOWN ON PLANS AND RE-LOCATE EXCAVATED MATERIAL AS SHOWN ON PLANS.
6. INSTALL CULVERT OUTLET PER PLANS.


1. SOIL TEST BORING LOCATIONS ARE INDICATED ON PLANS. BORING LOGS ARE INCLUDED IN THE CONTRACT DOCUMENTS.
2. REFUELING OF EQUIPMENT SHALL ONLY OCCUR IN ACCORDANCE WITH THE SPILL PREVENTION PLAN (SPP) PRE-APPROVED SUBMITTAL. CONTRACTOR SHALL MAINTAIN A HAZARDOUS MATERIAL SPILL PREVENTION CLEANUP KIT ON-SITE AT ALL TIMES PER THE PRE-APPROVED SPP.
3. STORING (DURING NON WORK PERIODS) AND REFUELING OF EQUIPMENT SHALL ONLY OCCUR WITHIN THE STAGING AREA AS SHOWN ON THE PLANS.
4. ALL IN-WATER CONSTRUCTION WORK SHALL OCCUR DURING THE DESIGNATED FISH WINDOW DEFINED IN THE HPA PERMIT.
5. ALL EQUIPMENT OPERATING BELOW OHW AND WITHIN 50 FT OF RIVER SHALL USE HYDRAULIC FLUID PER THE HPA PERMIT.
6. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HAVE BEEN 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 WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
7. UTILITIES WHICH ARE NOT ABANDONED OR REMOVED SHALL BE PROTECTED, SUPPORTED OR MAINTAINED DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

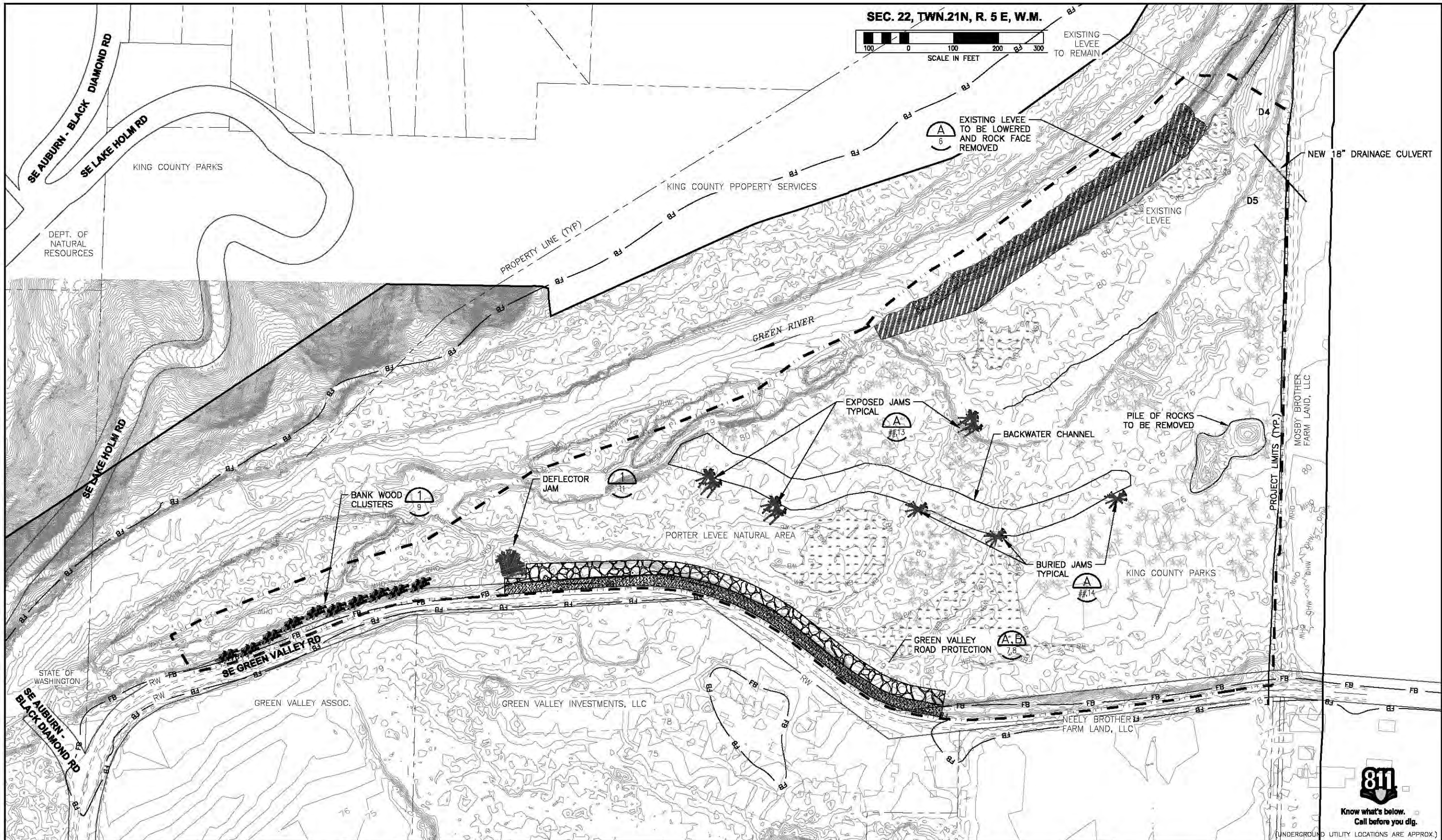



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SURVEY BASEMAP: XXX XXX			30% DESIGN	DL	07/2014	PROJECT MANAGER: FAUNA NOPP	PROJECT No. 1114123			
CHECKED: XXX XXX			RECORD CHANGES		01/2016	DESIGNED: CAROLYN BUTCHART, P.E.	CONTRACT No. TBD			
						T. HURLEY, J. LATTERELL, PH.D.				
		NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: D. LACSON, CARDNO				



- NOTES:
1. BATHYMETRY SOURCE SURVEY, 2013 NHC CONSULTANTS
NHC combined their 2013 bathymetry with Watershed Sciences LiDAR survey (reference pdf noted below). NHC delivered this combined survey basemap survey in xml format on 8/23/13
 2. LIDAR SOURCE SURVEY Watershed Sciences_King_CO_4-9-2010 LiDAR_Report.pdf
LIDAR Delivery 1 - April 09, 2010 from Watershed Sciences
LIDAR Data Collection from March 18 to March 20
VERT. DATUM: NAD83 (CORS91) ; HORIZ. DATUM: NAVD88 Geoid 3
Projection: Washington State Plane North FIPS 4601
 3. PROPERTY LINES AND RIGHT-OF-WAY SHOWN ARE SOURCED FROM KING COUNTY ASSESSORS GIS DATABASE, AND ARE NOT INTENDED TO IMPLY A BOUNDARY SURVEY.

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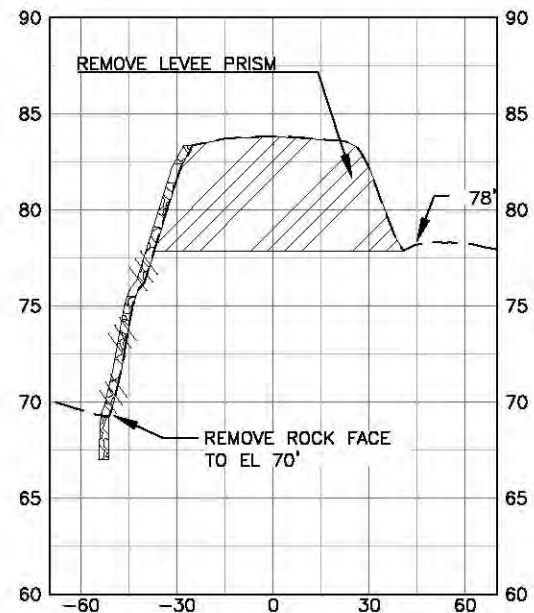
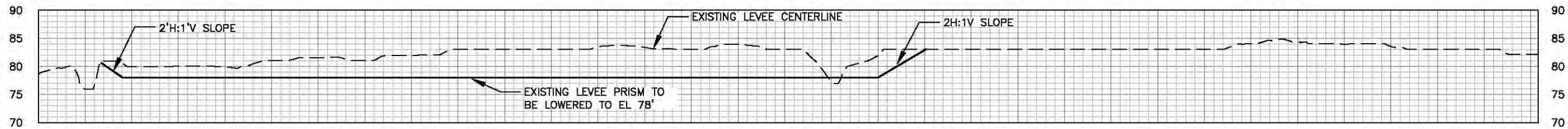
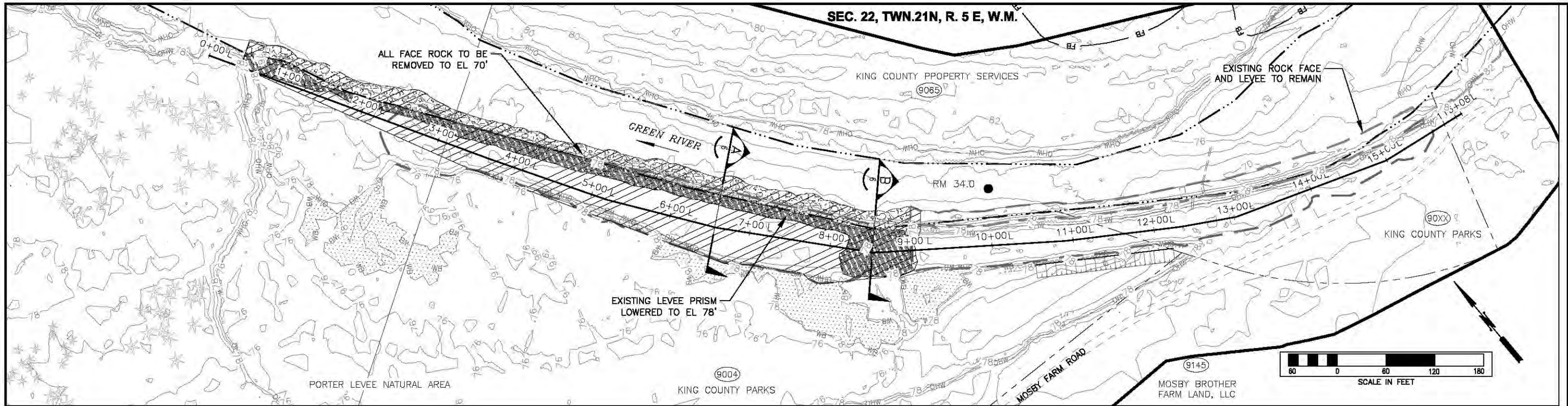


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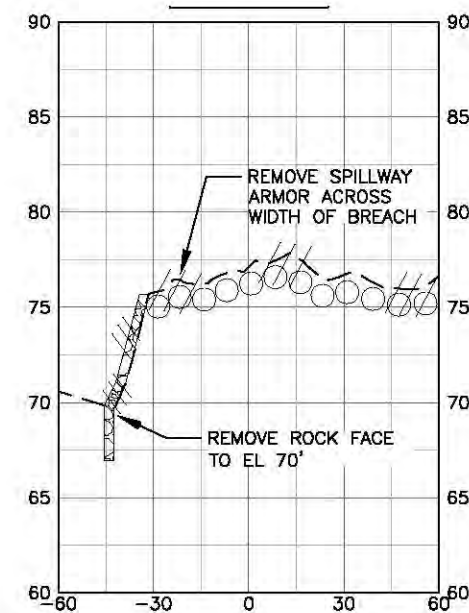
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)



LEVEE ROCK FACE REMOVAL
AND LOWERING SECTION - TYPICAL

SCALE 1"=30' HORIZ., 1"=5' VERT.

A
6



LEVEE BREACH ROCK REMOVAL SECTION

SCALE 1"=30' HORIZ., 1"=5' VERT.

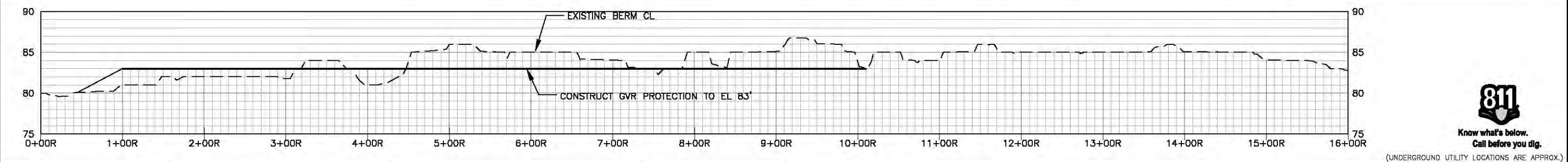
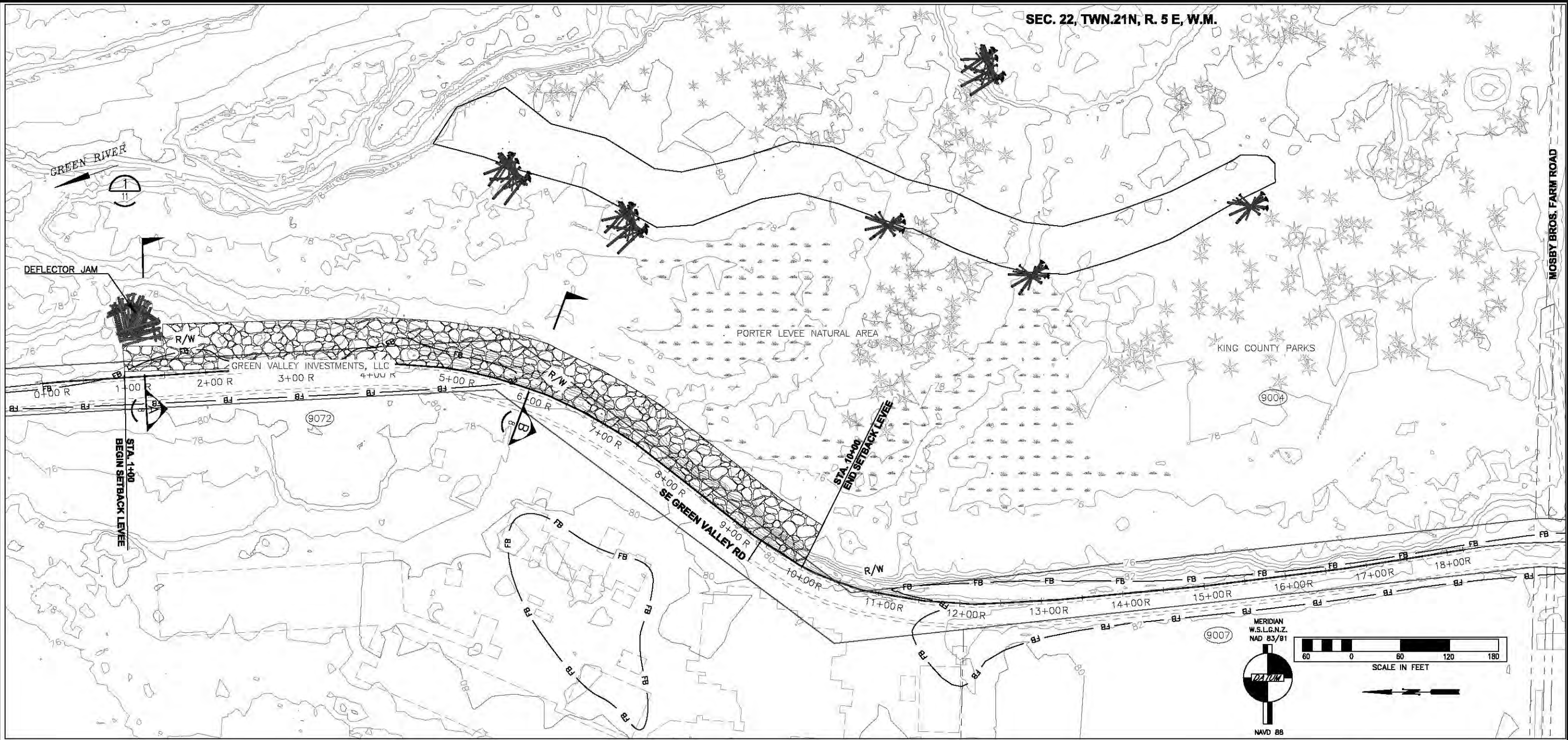
B
6



Know what's below.
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				30% DESIGN RECORD CHANGES	DL	07/2014 01/2018							
SURVEY BASEMAP:	XXX	XXX					PROJECT MANAGER: FAUNA NOPP						
CHECKED:	XXX	XXX					DESIGNED: CAROLYN BUTCHART, P.E.						
							T. HURLEY, J. LATTERELL, PHD.						
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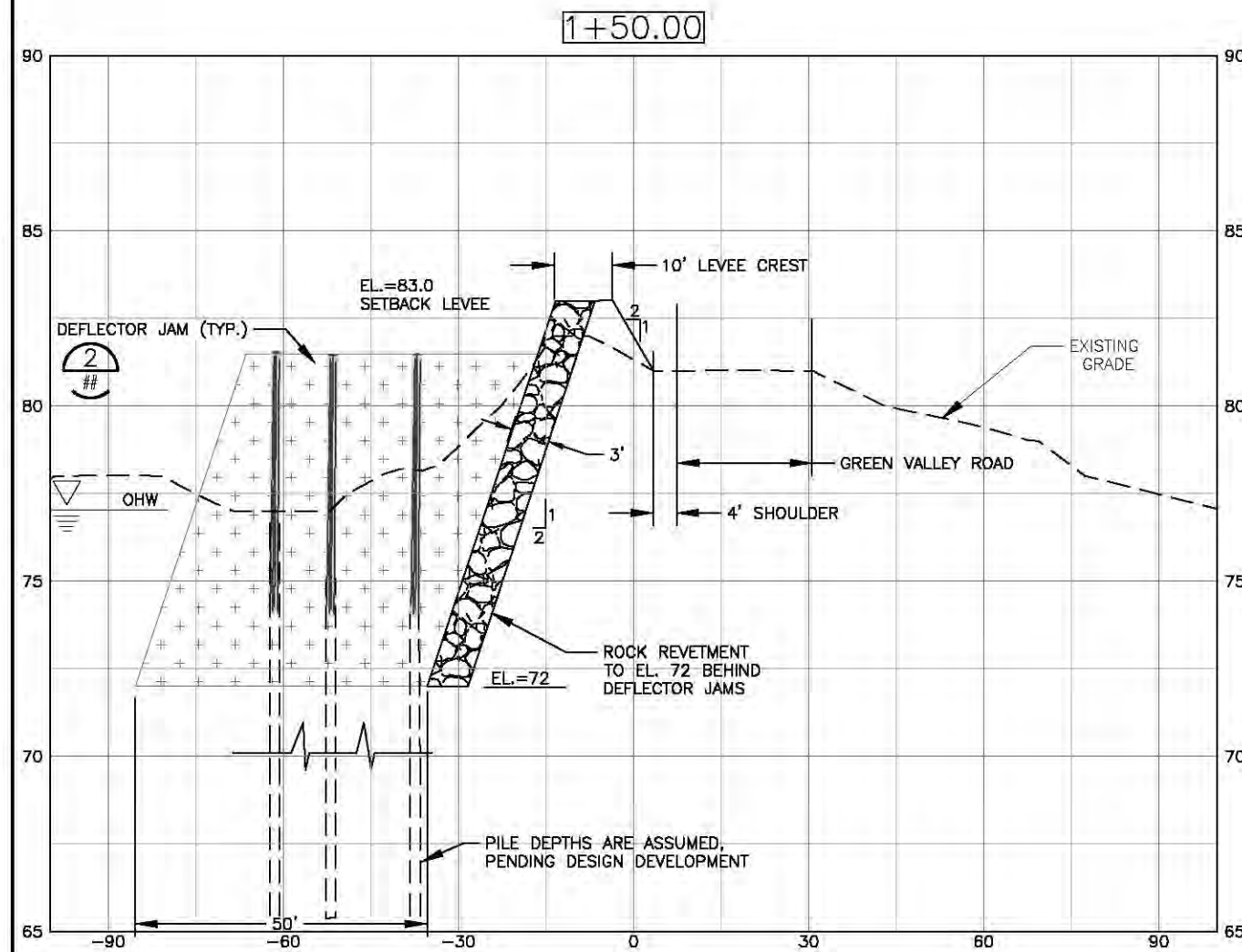
King County
Department of Natural Resources and Parks
Water and Land Resources Division
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Ecological Restoration and Engineering Services Unit
Christie True, Director

PORTER REACH RESTORATION PROJECT

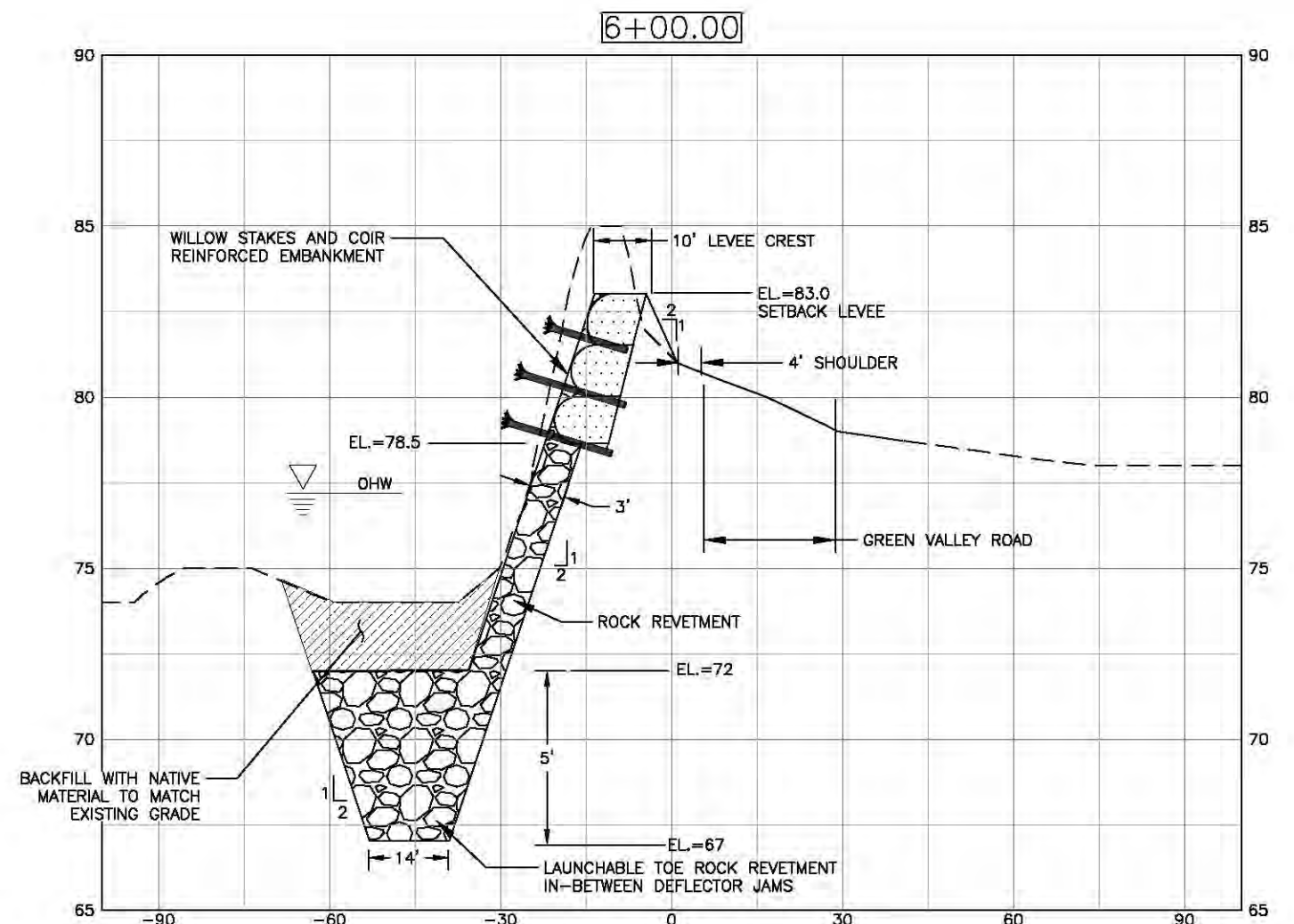
GREEN VALLEY ROAD PROTECTION PLAN

SHEET
7
OF
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2012-15



ROAD PROTECTION LEVEE SETBACK
DEFLECTOR JAM SECTION -- STA. 1+50 A
SCALE: 1"=15' HORIZ. 1"=5' VERT. 8



GVR BIOREVEEMENT
LAUNCHABLE TOE SECTION -- TYP B
SCALE: 1"=15' HORIZ. 1"=5' VERT. 8



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			NUM.	RECORD CHANGES APPROVED	BY	DATE	T. HURLEY, J. LATTERELL, PHD.			
							CAD DESIGN: D. LACSON, CARDNO		GREEN VALLEY ROAD PROTECTION SECTIONS AND DETAILS	2012-15

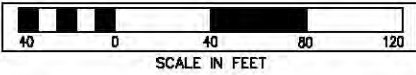
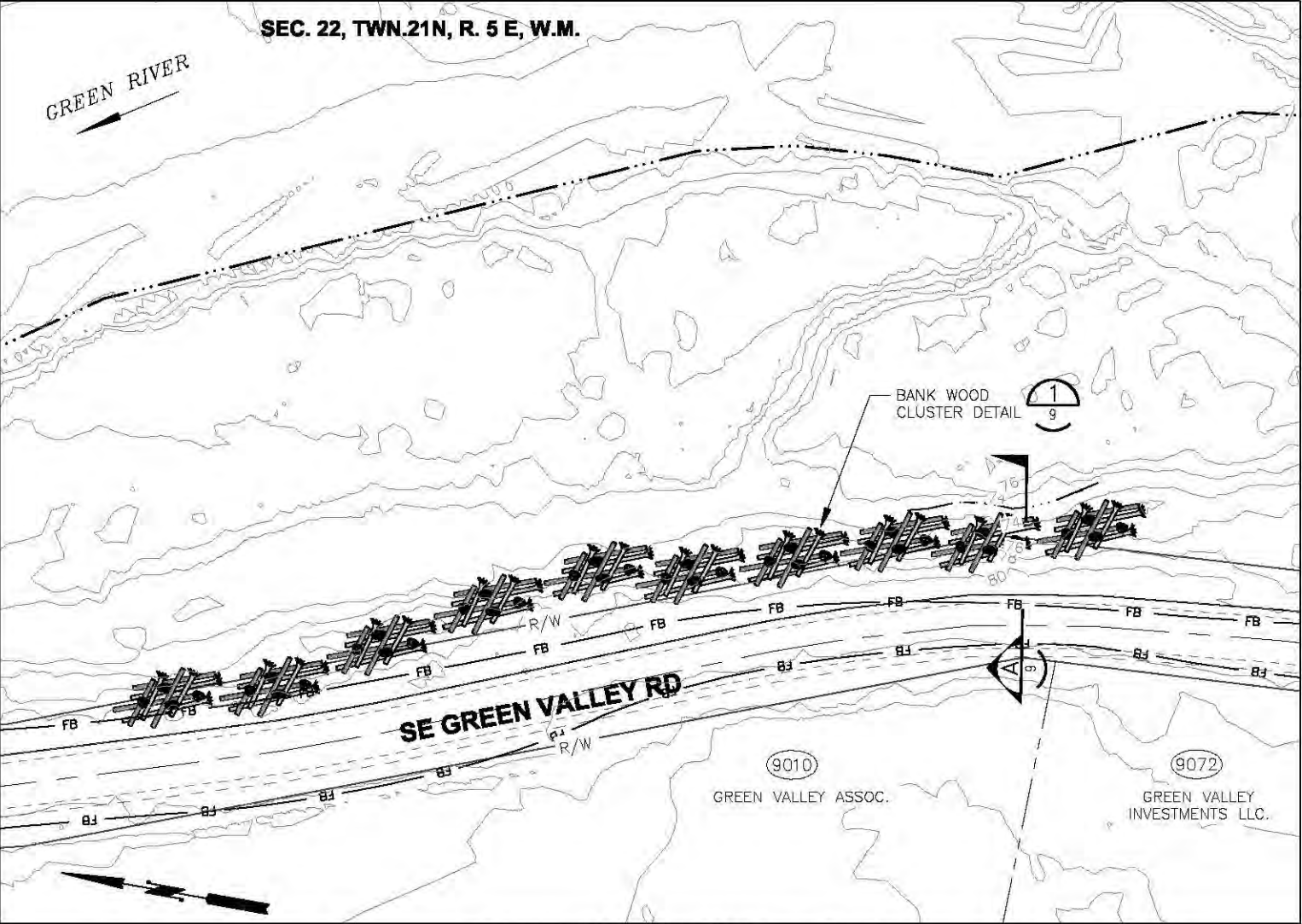


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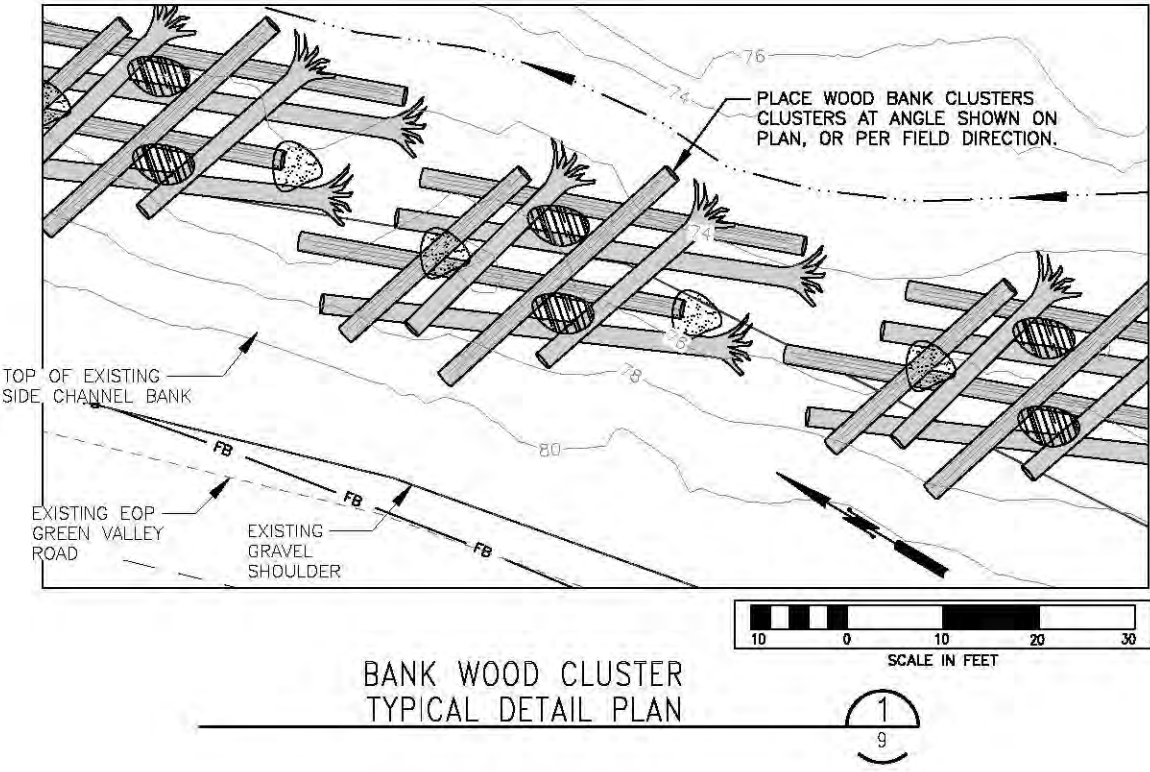
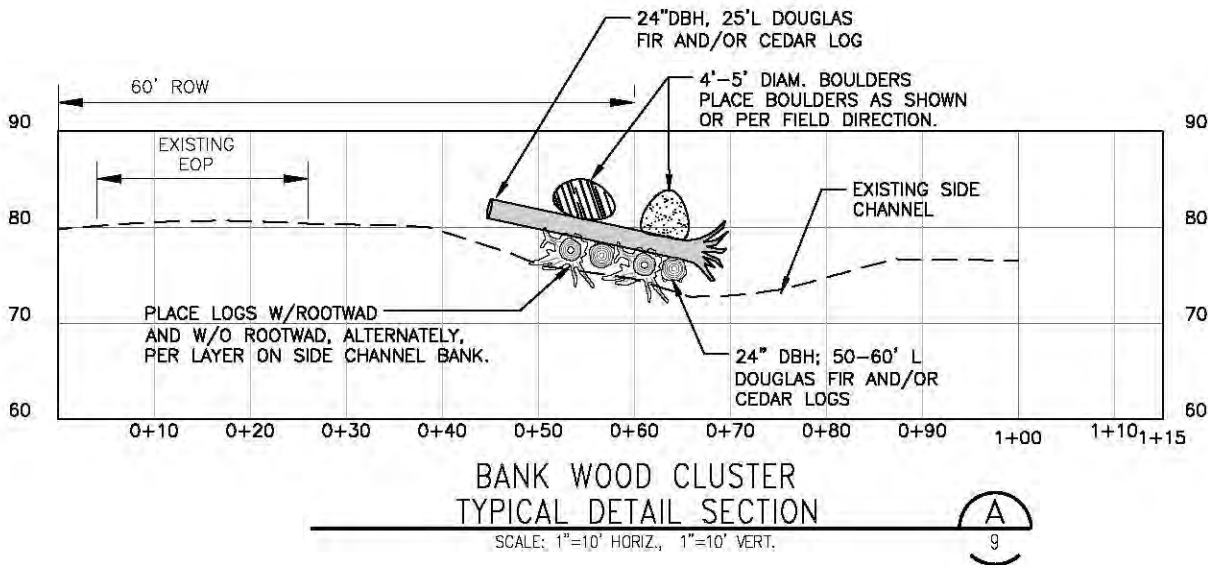
GREEN VALLEY ROAD PROTECTION
SECTIONS AND DETAILS

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BANK WOOD CLUSTERS - PLAN

BANK WOOD CLUSTER SCHEDULE				
MATERIAL	DBH (IN.)	LENGTH (L.F.)	QUANTITY (EACH CLUSTER)	QUANTITY (TOTAL)
LOG W/ROOTWAD	24	25	2	20
LOG W/O ROOTWAD	24	25	2	20
LOG W/ROOTWAD	24	50-60'	2	20
LOG W/O ROOTWAD	24	50-60'	2	20
4'-5' BOULDER	N/A	N/A	4	40



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PLACE HOLDER



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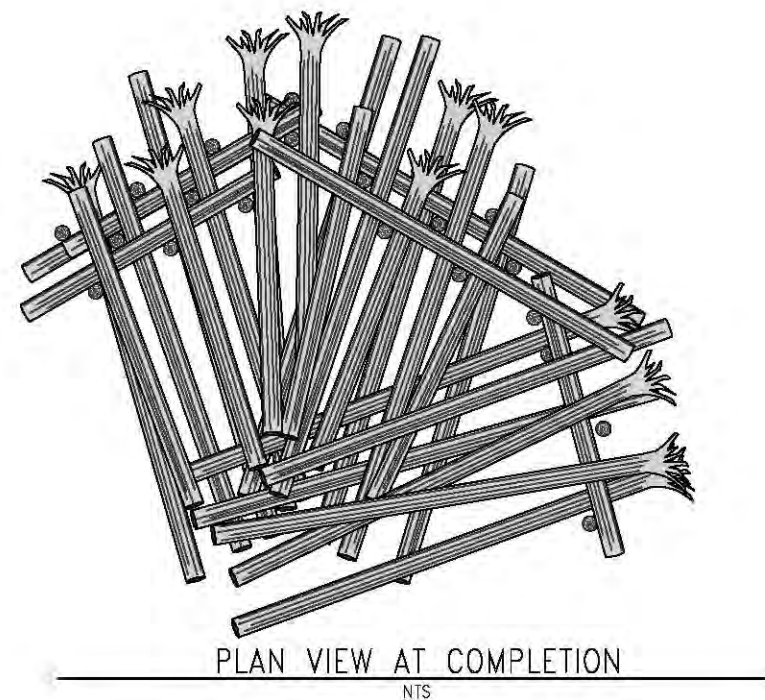
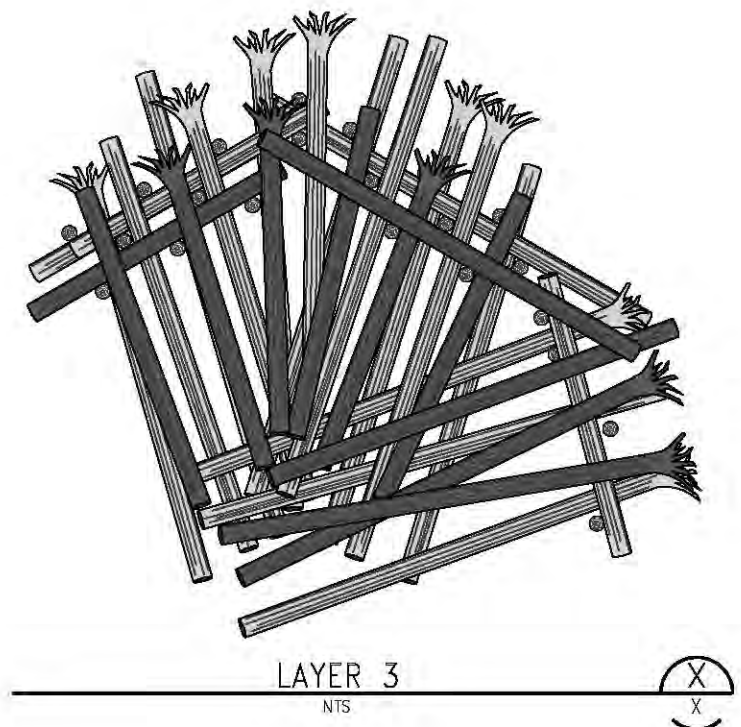
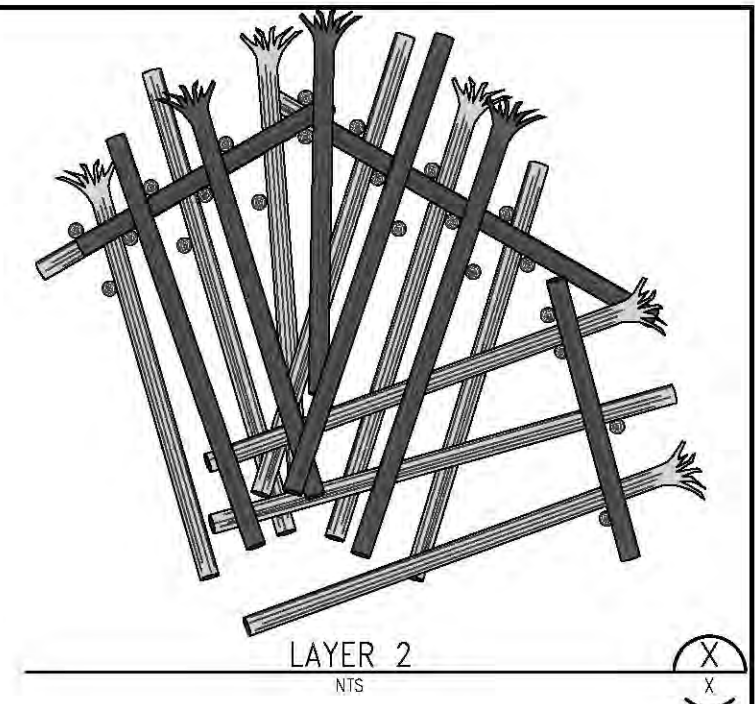
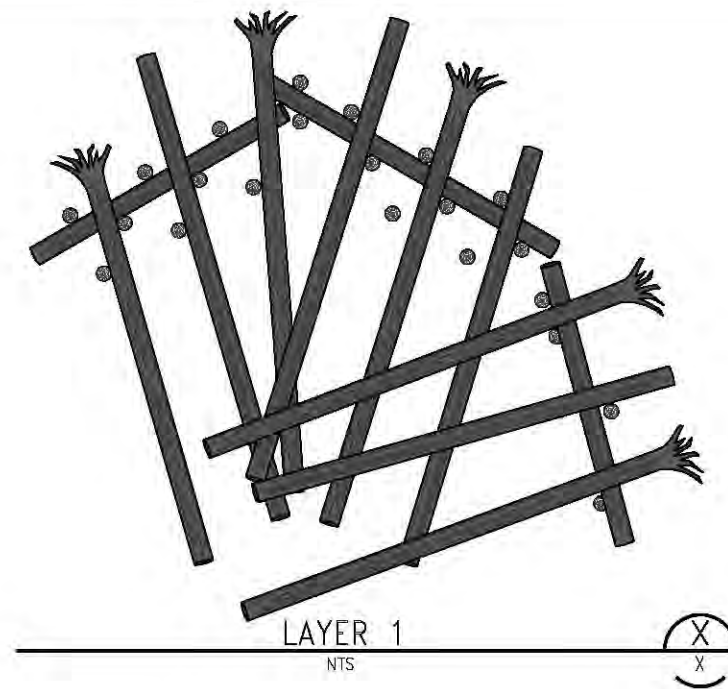
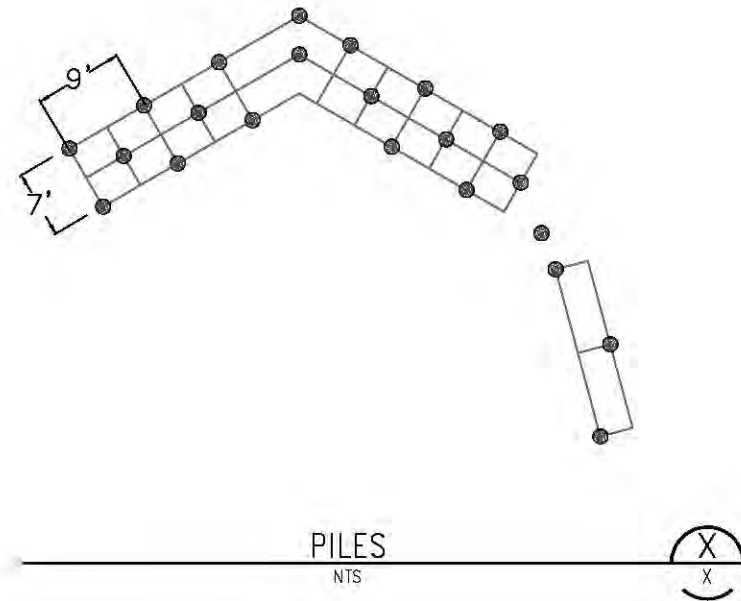
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PORTER REACH RESTORATION PROJECT

DRAINAGE CULVERT SECTION AND DETAILS

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OF
18
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DEFLECTORY JAM WOOD SCHEDULE			
MATERIAL	DBH (IN.)	LENGTH (L.F.)	TOTAL QUANTITY
LOG W/ROOTWAD	24	45-50	10
LOG W/O ROOTWAD	24	45-50	6
LOG W/ROOTWAD	24	30-40'	3
LOG W/O ROOTWAD	24	30-40'	9



Know what's below.
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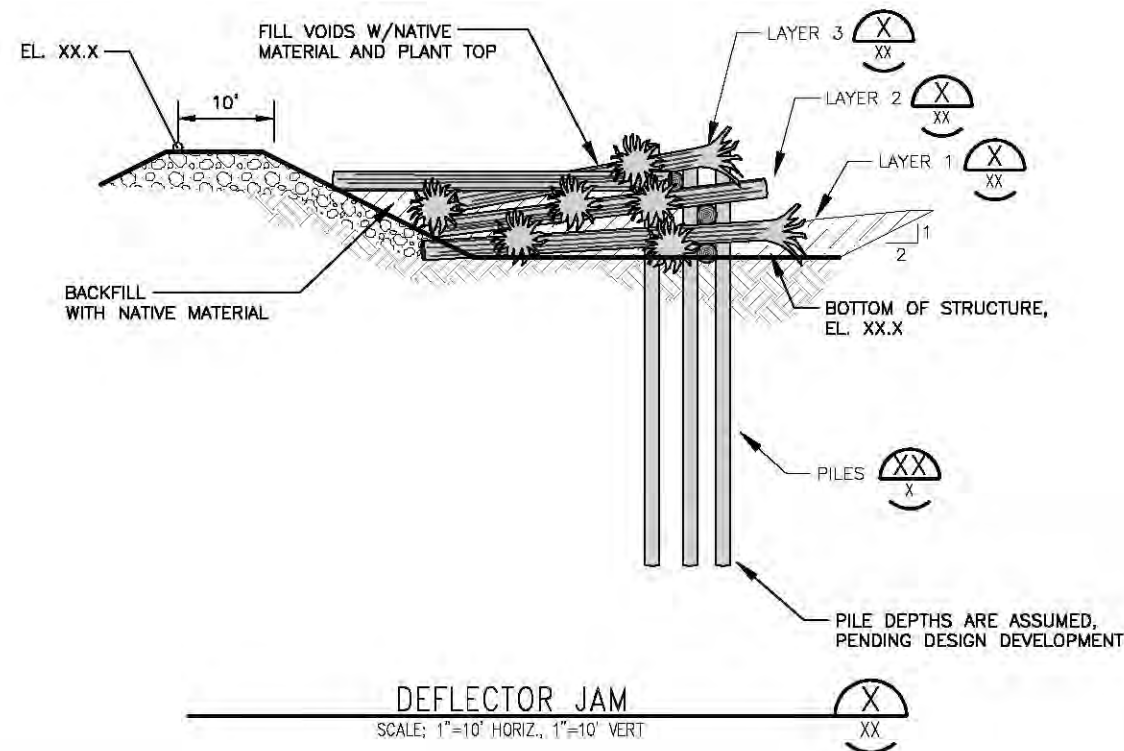
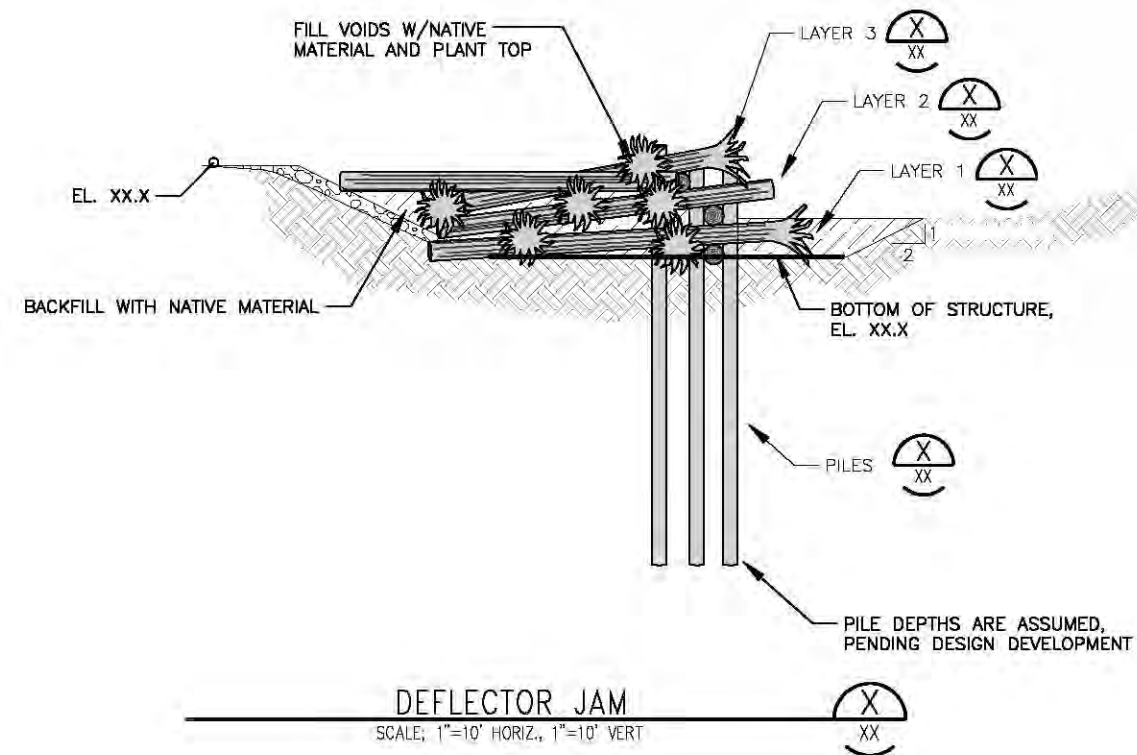
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SURVEY BASEMAP:	XXX	XXX					PROJECT MANAGER: FAUNA NOPP	PROJECT No. 1114123
CHECKED:	XXX	XXX					DESIGNED: CAROLYN BUTCHART, P.E.	CONTRACT No. TBD
							T. HURLEY, J. LATTERELL, PHD.	
			NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: D. LACSON, CARDNO	

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

PORTER REACH RESTORATION PROJECT

DEFLECTOR JAM SECTION AND DETAILS

SHEET
11
OF
18
SHEETS
2012-15



Know what's below.
Call before you dig.

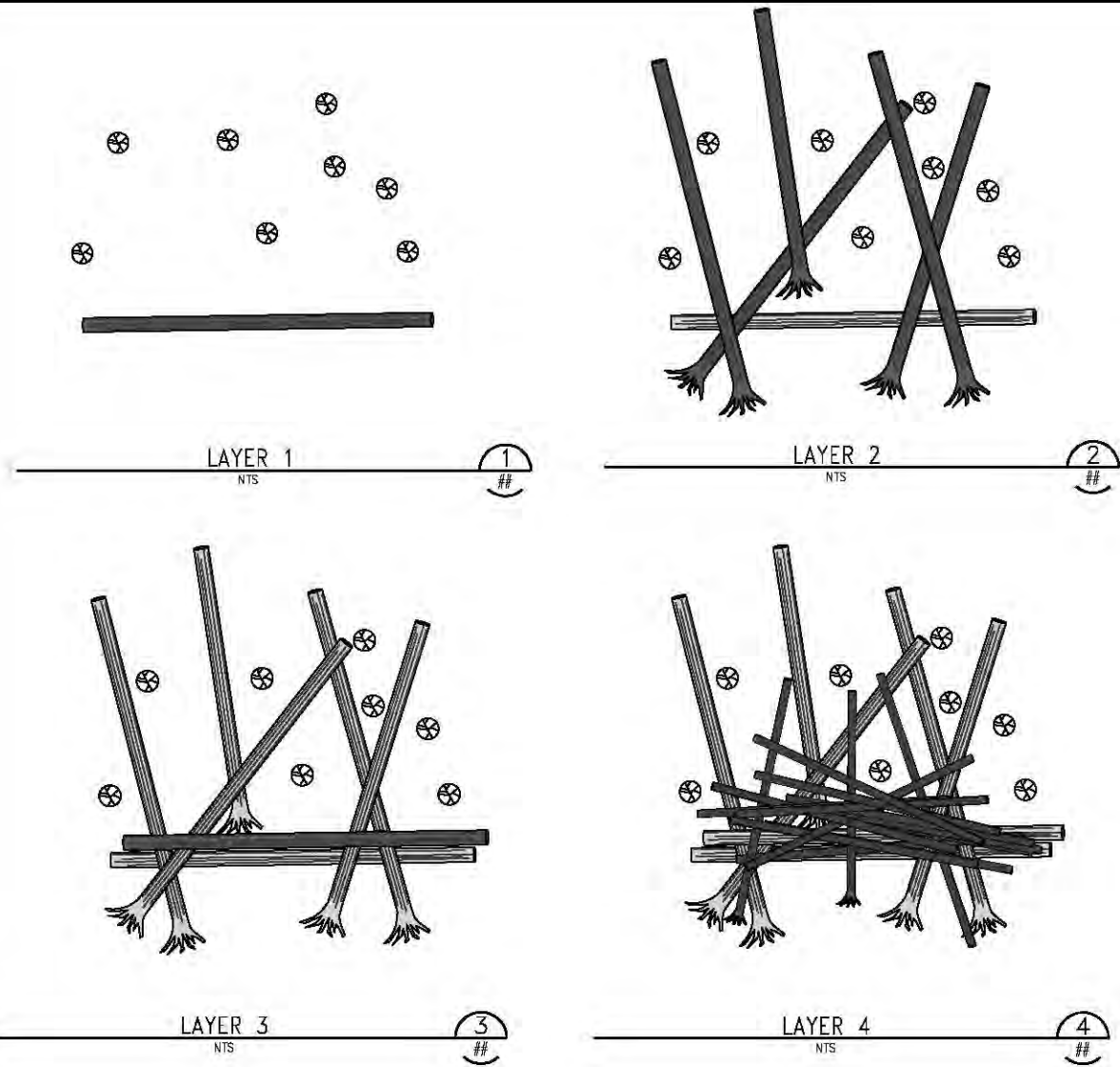
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEYED:	XXX	XXX	NUM.	REVISION	BY	DATE	APPROVED: WILL MANSFIELD, P.E.	FUNDING SOURCE No. SFRB Grant	
				30% DESIGN	DL	07/2014			
				RECORD CHANGES	DL	01/2016			
SURVEY BASEMAP:	XXX	XXX					PROJECT MANAGER: FAUNA NOPP	PROJECT No. 1114123	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 Trus, Director
CHECKED:	XXX	XXX					DESIGNED: CAROLYN BUTCHART, P.E.	CONTRACT No. TBD	
							T. HURLEY, J. LATTERELL, PHD.		
							CAD DESIGN: D. LACSON, CARDNO		
			NUM.	RECORD CHANGES APPROVED	BY	DATE			

PORTER REACH RESTORATION PROJECT

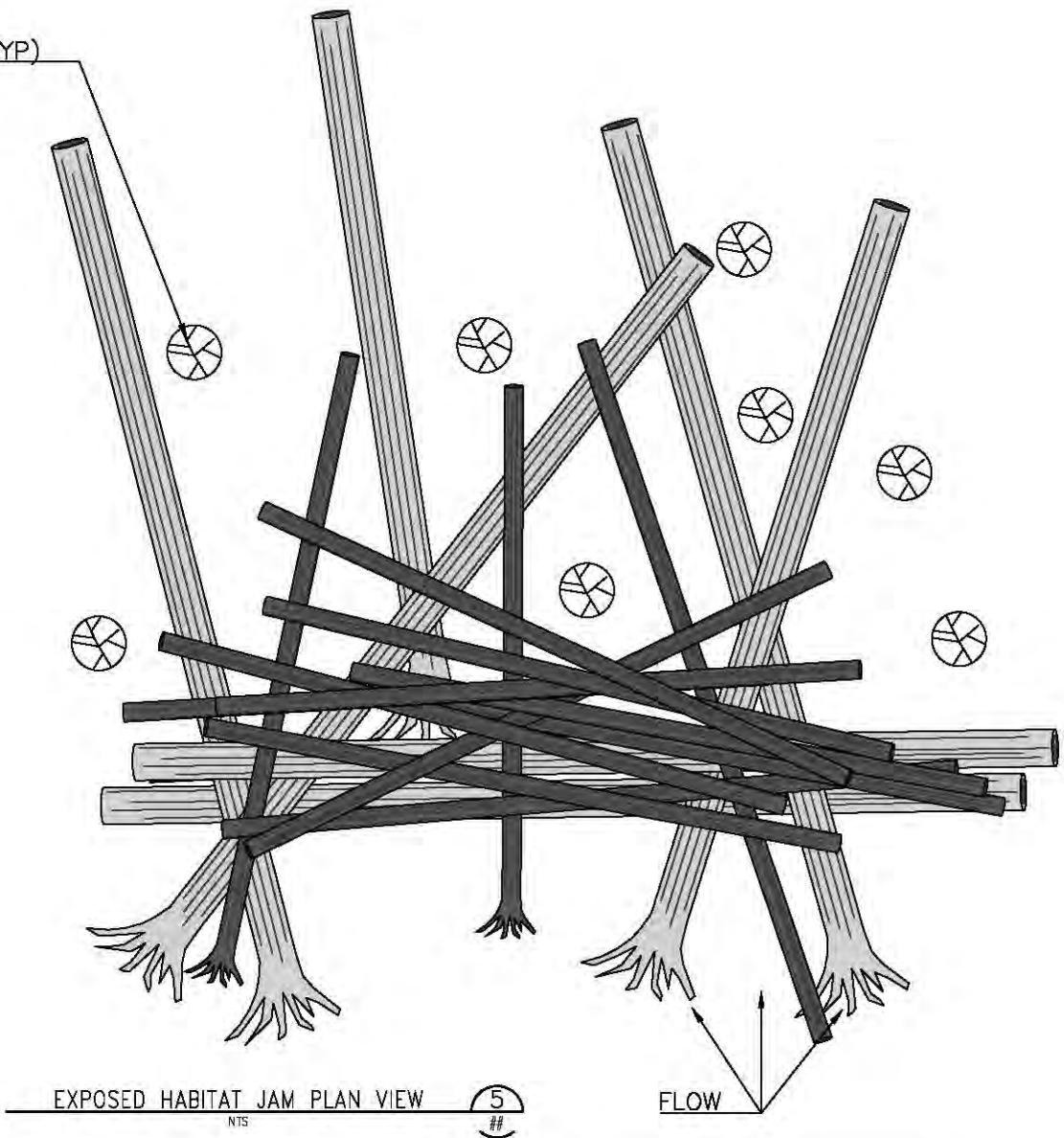
DEFLECTOR JAM LAYERING PLAN

SHEET
12
OF
18
SHEETS
2012-15



EXISTING STANDING TREES (TYP)

PLACEHOLDER FOR NOTES




EXPOSED HABITAT JAM LOG SCHEDULE			
MATERIAL	DBH (IN.)	LENGTH (L.F.)	TOTAL QUANTITY (EACH JAM)
LOG W/ROOTWAD	24	50	5
LOG W/O ROOTWAD	24	50	2
LOG W/ROOTWAD	10–15	30–40'	10
LOG W/O ROOTWAD	10–15	30–40'	M

PLACEHOLDER FOR EXPOSED HABITAT JAM SECTION



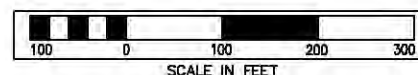
Know what's below.
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEYED:	XXX	XXX	NUM.	REVISION	BY	DATE	APPROVED: WILL MANSFIELD, P.E.	FUNDING SOURCE No. SFRB Grant	PROJECT No. 1114123	CONTRACT No. TBD	 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	PORTER REACH RESTORATION PROJECT	EXPOSED HABITAT JAM SECTIONS AND DETAILS	SHEET 13 OF 18 SHEETS
				30% DESIGN		07/2014								
				RECORD CHANGES	DL	01/2018								
SURVEY BASEMAP:	XXX	XXX					PROJECT MANAGER: FAUNA NOPP							
CHECKED:	XXX	XXX					DESIGNED: CAROLYN BUTCHART, P.E.							
							T. HURLEY, J. LATTERELL, PHD.							
			NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: D. LACSON, CARDNO							

2012-15

PLACE HOLDER



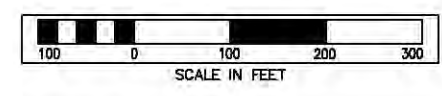
Know what's below.
Call before you dig.

(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEYED:	XXX	XXX	NUM.	REVISION	BY	DATE	APPROVED: WILL MANSFIELD, P.E.	FUNDING SOURCE No. SFRB Grant	 SEATTLE 801 SECOND AVE, SUITE 700 SEATTLE, WA 98104 TEL: (206) 269-0104 FAX: (206) 269-0098 www.cardno.com	 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 Trus, Director	PORTER REACH RESTORATION PROJECT	SHEET 15 OF 18 SHEETS 2012-15
				30% DESIGN		07/2014						
				RECORD CHANGES	DL	01/2016						
SURVEY BASEMAP:	XXX	XXX					PROJECT MANAGER: FAUNA NOPP	PROJECT No. 1114123			TEBC PLAN (PLACE HOLDER)	
CHECKED:	XXX	XXX					DESIGNED: CAROLYN BUTCHART, P.E.	CONTRACT No. TBD				
							T. HURLEY, J. LATTERELL, PHD.					
			NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: D. LACSON					

PLACE HOLDER

DETAIL/SECTION NTS		DESCRIPTION NTS	
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Know what's below.
Call before you dig.
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEYED: XXX XXX	XXX XXX	NUM.	REVISION	BY	DATE	APPROVED: WILL MANSFIELD, P.E.	FUNDING
			30% DESIGN		07/2014		SOURCE No.
			RECORD CHANGES	DL	01/2016	PROJECT	PROJECT No. 1114123
						MANAGER: FAUNA NOPP	
SURVEY BASEMAP: XXX XXX	XXX XXX					DESIGNED: CAROLYN BUTCHART, P.E.	CONTRACT No. TBD
						T. HURLEY, J. LATTERELL, PHD.	
CHECKED: XXX XXX	XXX XXX					CAD DESIGN: D. LACSON	
		NUM.	RECORD CHANGES APPROVED	BY	DATE		



SEATTLE
801 SECOND AVE, SUITE 700 SEATTLE, WA 98104
TEL: (206) 269-0104 FAX: (206) 269-0088
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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 Trus, Director

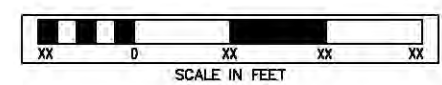
PORTER REACH RESTORATION PROJECT	TEBC DETAILS (PLACE HOLDER)	SHEET 16 OF 18 SHEETS
		2012-15

PLACE HOLDER

DETAIL/SECTION
NTS





DESCRIPTION
NTS



Know what's below.
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEYED:		XXX	XXX	NUM.		REVISION		BY	DATE	APPROVED: WILL MANSFIELD, P.E.		FUNDING SOURCE No. SFRB Grant		 SEATTLE 801 SECOND AVE, SUITE 700 SEATTLE, WA 98104 TEL: (206) 269-0104 FAX: (206) 269-0098 www.cardno.com	 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 Trus, Director	PORTER REACH RESTORATION PROJECT PLANTING PLAN AND DETAILS (PLACE HOLDER)	SHEET 17 OF 18 SHEETS 2012-15
SURVEY BASEMAP:		XXX	XXX			30% DESIGN		DL	07/2014	PROJECT MANAGER: FAUNA NOPP		PROJECT No. 1114123					
CHECKED:		XXX	XXX			RECORD CHANGES				DESIGNED: CAROLYN BUTCHART, P.E.		CONTRACT No. TBD					
										T. HURLEY, J. LATTERELL, PHD.							
				NUM.		RECORD CHANGES APPROVED		BY	DATE	CAD DESIGN: D. LACSON							



FIELD BOOK:					
SURVEYED:					
SURVEY BASE MAP:					
DESIGN ENTERED:					
DESIGNED:	DOVEY, PE	1/2014			
CHECKED:	DOVEY, PE	1/2014			
SUPERVISOR:	KARA, PE	1/2014			
	REVISION		BY	DATE	

30% 3-20-2014

FEDERAL AID No. _____
PROJECT No. _____
SURVEY No. _____
MAINTENANCE DIVISION No. 4



KING COUNTY DEPT. OF TRANSPORTATION
HAROLD TANIGUCHI, DIRECTOR
PORTER REACH RESTORATION
TRAFFIC CONTROL PLAN
(PLACE HOLDER)

SHEET 18 OF 18 SHEETS
2012-15
King County