

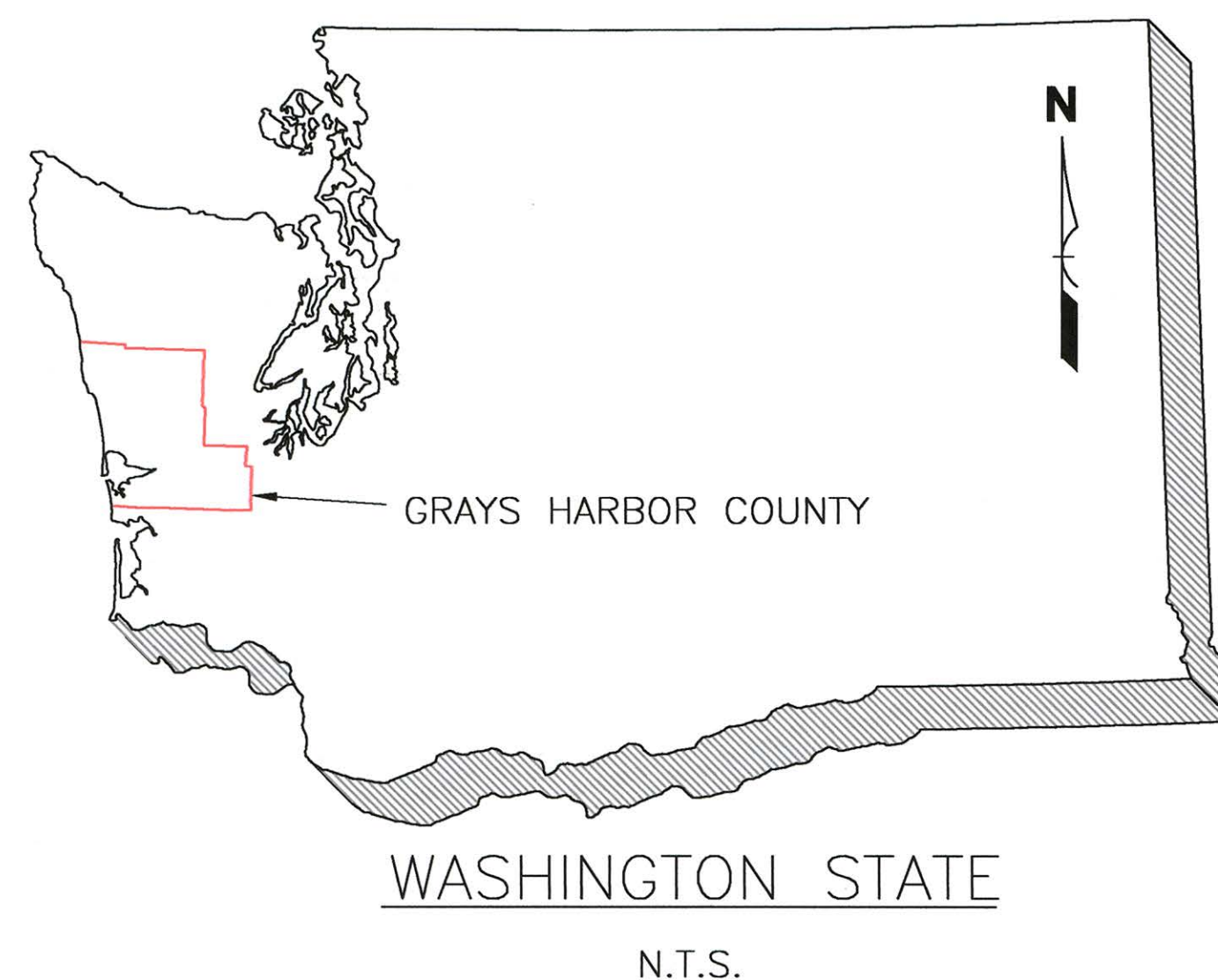


# WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

## LOWER SATSOP FLOODPLAIN RESTORATION GRAYS HARBOR COUNTY, WA – WRIA: 22

### SHEET INDEX

1. COVER SHEET
2. EXISTING WETLAND LOCATIONS AND PROPERTY OWNERSHIP MAP
3. EXISTING CONDITIONS
4. CUT AND GRADING PLAN
5. POND C GRADING
6. POND C OUTLET
7. SECTIONS
8. DETAILS AND NOTES



VICINITY MAP  
N.T.S.

### DIRECTIONS TO SITE

SITE IS SOUTH OF HIGHWAY 12 ON KEYS ROAD ALONG THE SATSOP RIVER.  
FOR POND AREA ACCESS USE ENTRANCE THROUGH WDFW GATE AT THE WEST SIDE OF KEYS ROAD.  
SITE ADDRESS: 110 KEYS ROAD ELMA, WA 98541

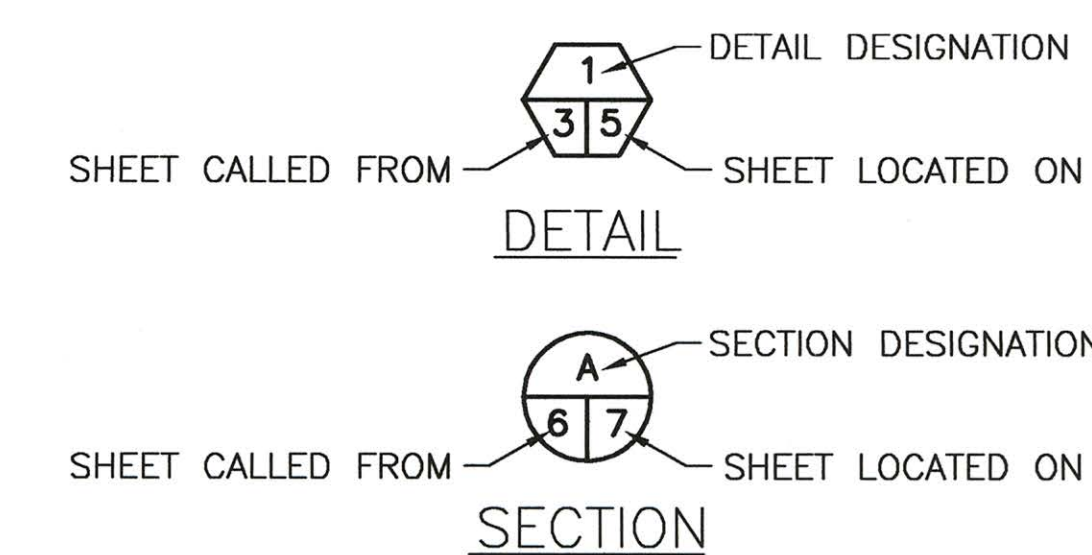
### APPROVED FOR CONSTRUCTION

*Donald C. Ponder* 3/22/19  
Donald C. Ponder, PE Date  
Environmental Engineering Section Manager  
Fish Passage Division, Habitat Program, WDFW

### ABBREVIATIONS

AISC	—	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALUM	—	ALUMINUM
APPROX.	—	APPROXIMATELY
AASHTO	—	AMERICAN ASSOCIATION OF HIGHWAY AND TRANSPORTATION OFFICIALS
BM	—	BENCH MARK
CL	—	CENTERLINE
CLR.	—	CLEARANCE
CONC	—	CONCRETE
CP	—	CONTROL POINT
CR	—	CREEK
DIA.	—	DIAMETER
DBH	—	DIAMETER AT BREAST HEIGHT
E.	—	EAST
EX.	—	EXISTING
ELEV.	—	ELEVATION
F.B.	—	FLAT BAR
F.C.	—	FISH CONDUIT
FG	—	FINISH GRADE
FT	—	FOOT
FTG	—	FOOTING
F.W.	—	FISHWAY
GALV	—	GALVANIZED
GA.	—	GAUGE
HORZ.	—	HORIZONTAL
HPA	—	HYDRAULIC PROJECT APPROVAL
HSS	—	STRUCTURAL TUBING
ID	—	INSIDE DIAMETER
IE	—	INVERT ELEVATION
LAT.	—	LATITUDE
LFW	—	LOWER FISHWAY
LF	—	LINEAL FEET
LG	—	LONG
LONG.	—	LONGITUDE
LT	—	LEFT
MAX.	—	MAXIMUM
M.B.	—	MACHINE BOLT
MFG.	—	MANUFACTURER'S
MIL.	—	MILLIMETER
MIN.	—	MINIMUM
MISC.	—	MISCELLANEOUS
N.	—	NORTH
NF	—	NATIONAL FOREST
NO.	—	NUMBER
NRCS	—	NATURAL RESOURCES CONSERVATION SERVICE
N.T.S.	—	NOT TO SCALE
MOD.	—	MODEL
O.C.	—	ON CENTER
OD	—	OUTSIDE DIAMETER
OHW	—	ORDINARY HIGH WATER
OSB	—	ORIENTED STRAND BOARD
PAV'T	—	ASPHALT CONCRETE PAVEMENT
PE	—	PROFESSIONAL ENGINEER
PK	—	PARKER KALON NAIL
PL	—	PLATE
PT	—	PRESSURE TREATED
REQ'D	—	REQUIRED
RT	—	RIGHT
S.	—	SOUTH
SEC.	—	SECTION
S.F.	—	SQUARE FEET
SHT.	—	SHEET
SPEC'S.	—	PROJECT SPECIFICATIONS
S.S.	—	STAINLESS STEEL
TBM	—	TEMPORARY BENCH MARK
TRIB.	—	TRIBUTARY
TYP	—	TYPICAL
UFW	—	UPPER FISHWAY
US	—	UNITED STATES
VERT.	—	VERTICAL
W.	—	WEST
WA.	—	WASHINGTON
WRIA	—	WATER RESOURCE INVENTORY AREA
WSDOT	—	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
W.S.	—	WATER SURFACE

### SHEET SYMBOLS



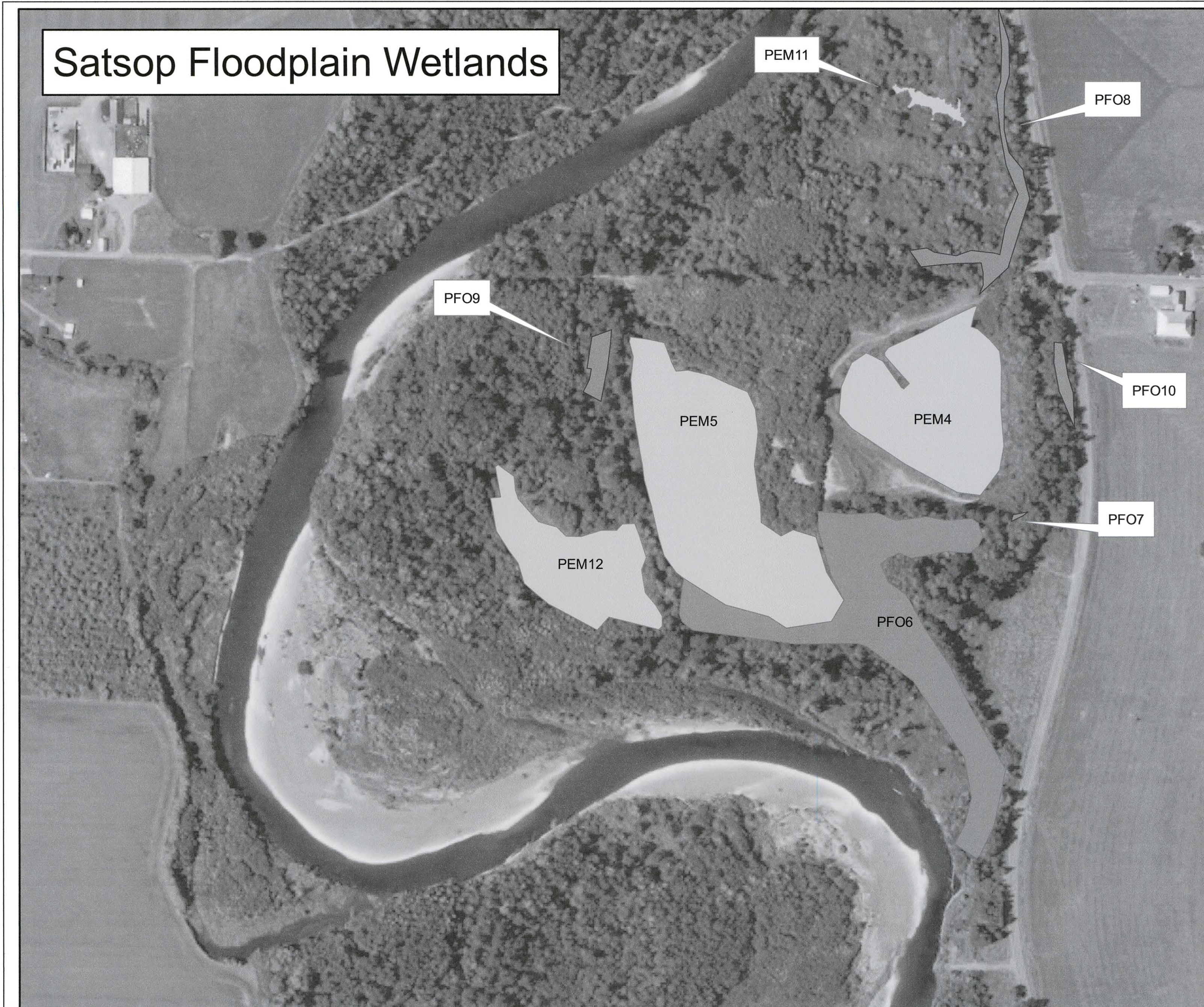
Vertical Datum  
NAVD 88

LiDAR: Acquired on March 1st, 2015.  
Aerial Photography: April 8th, 2015

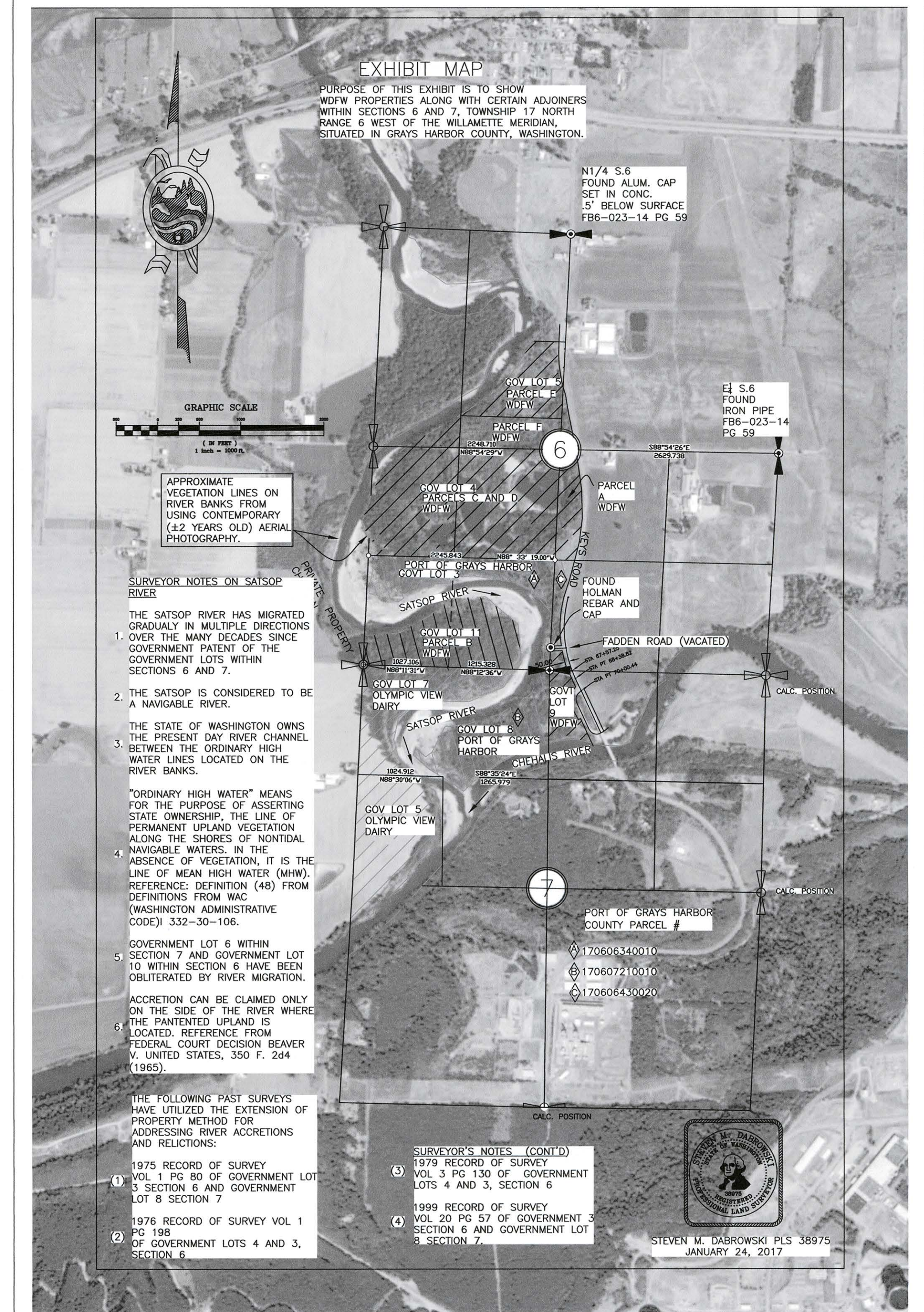
SHEET 1 OF 8



# Satsop Floodplain Wetlands



- NOTES:
- NOT TO SCALE.
  - WETLANDS DELINEATED BY ECOLUTION IN "LOWER SATSOP FLOODPLAIN RESTORATION AND EROSION REDUCTION PROJECT, MITIGATION PLAN", 2017.



FILE NAME: C:\DATA\PROJECTS\WAS\WAS\TOPO\DATA\2014\TOPO DATA\SATSOP FINAL DESIGN PLOT AREA PHASE 1.DWG  
LAYOUT TAB: SHEET 2 WETLANDS AND OWNERSHIP  
PLOT TIME: 2/17/2019 10:22:30 AM  
USER NAME: CORWIN, KEN W (DPW)



WASHINGTON STATE  
DEPARTMENT OF FISH AND WILDLIFE

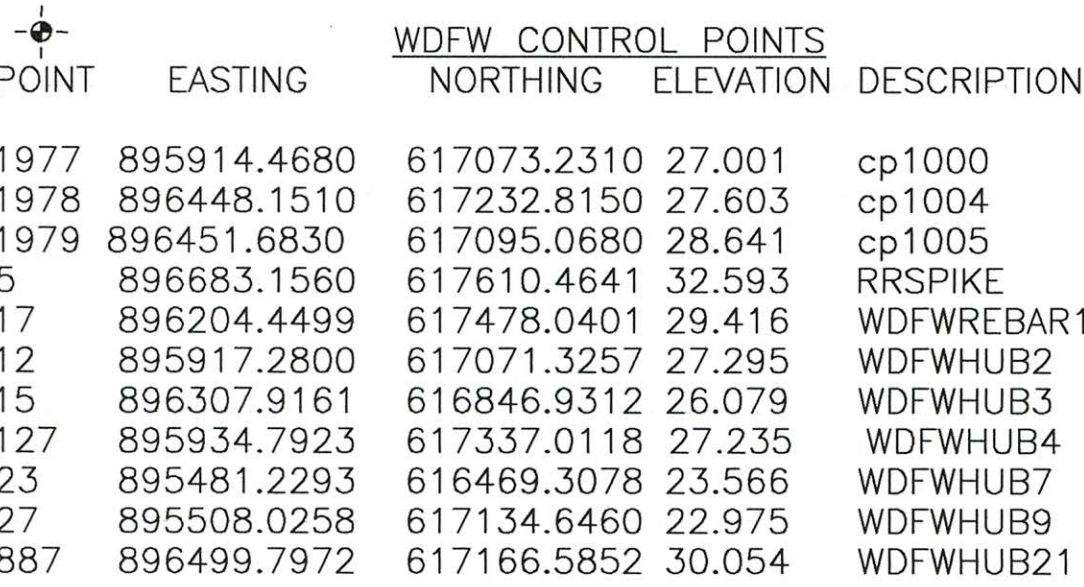


SYM	DATE	REVISION DESCRIPTION	BY
		APPROVED AND RELEASED FOR CONSTRUCTION	
CHIEF ENGINEER		DATE:	
PROGRAM		DATE:	

DESIGNED BY	M. CRAMER, P.E.
CHECKED BY	C. MORSS, P.E.
DRAWN BY	K. CORWIN
DATE	3-15-19

LOWER SATSOP RIVER FLOODPLAIN RESTORATION		SITE ID:
HABITAT RESTORATION PROJECT		
EXISTING WETLAND LOCATIONS AND PROPERTY OWNERSHIP MAP		
SHEET	OF	
2	8	

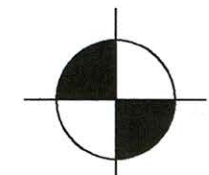
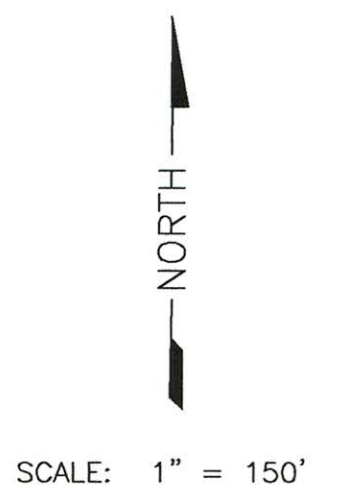




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		NORTHING	ELEVATION	
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1978	896448.1510	617232.8150	27.603	cp1004
1979	896451.6830	617095.0680	28.641	cp1005
1985	896683.1560	617610.4641	32.593	RRSPIKE
1987	896204.4499	617478.0401	29.416	WDFWREBAR1
1988	895917.2800	617071.3257	27.295	WDFWHUB2
1989	896307.9161	616846.9312	26.079	WDFWHUB3
1992	895934.7923	617337.0118	27.235	WDFWHUB4
1993	895481.2293	616469.3078	23.566	WDFWHUB7
1997	895508.0298	617134.6460	22.975	WDFWHUB9
2007	896499.7972	617166.5852	30.054	WDFWHUB21

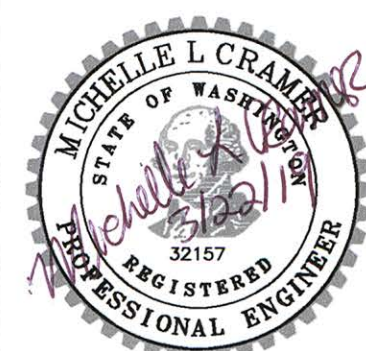


PROPOSED STABILIZED  
CONSTRUCTION ENTRANCE. SEE  
SHEET 8 FOR DETAIL.



VERTICAL DATUM  
NAVD 88

WASHINGTON STATE  
DEPARTMENT OF FISH AND WILDLIFE



				0 ————— 1"	LOWER SATSOP RIVER FLOODPLAIN RESTORATION		SITE ID:	
				BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS	HABITAT RESTORATION PROJECT			
SYM	DATE	REVISION DESCRIPTION		BY	EXISTING CONDITIONS SITE PLAN		SHEET	OF
APPROVED AND RELEASED FOR CONSTRUCTION							DESIGNED BY <u>M. CRAMER, P.E.</u>	3
					CHECKED BY <u>C. MORSS, P.E.</u>			
CHIEF ENGINEER _____ DATE: _____					DRAWN BY <u>K. CORWIN</u>			
PROGRAM _____ DATE: _____					DATE <u>3-15-19</u>			







FILE NAME: C:\DATA\PROJECTS\12-PROJECTS\CRAMER\12500\12500 DATA\12500 FINAL DESIGN PLOT AREA PHASE 1.DWG  
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DRAWN BY: K. CORWIN  
USER NAME: CORWIN, KEN W (CPW)



WASHINGTON STATE  
DEPARTMENT OF FISH AND WILDLIFE

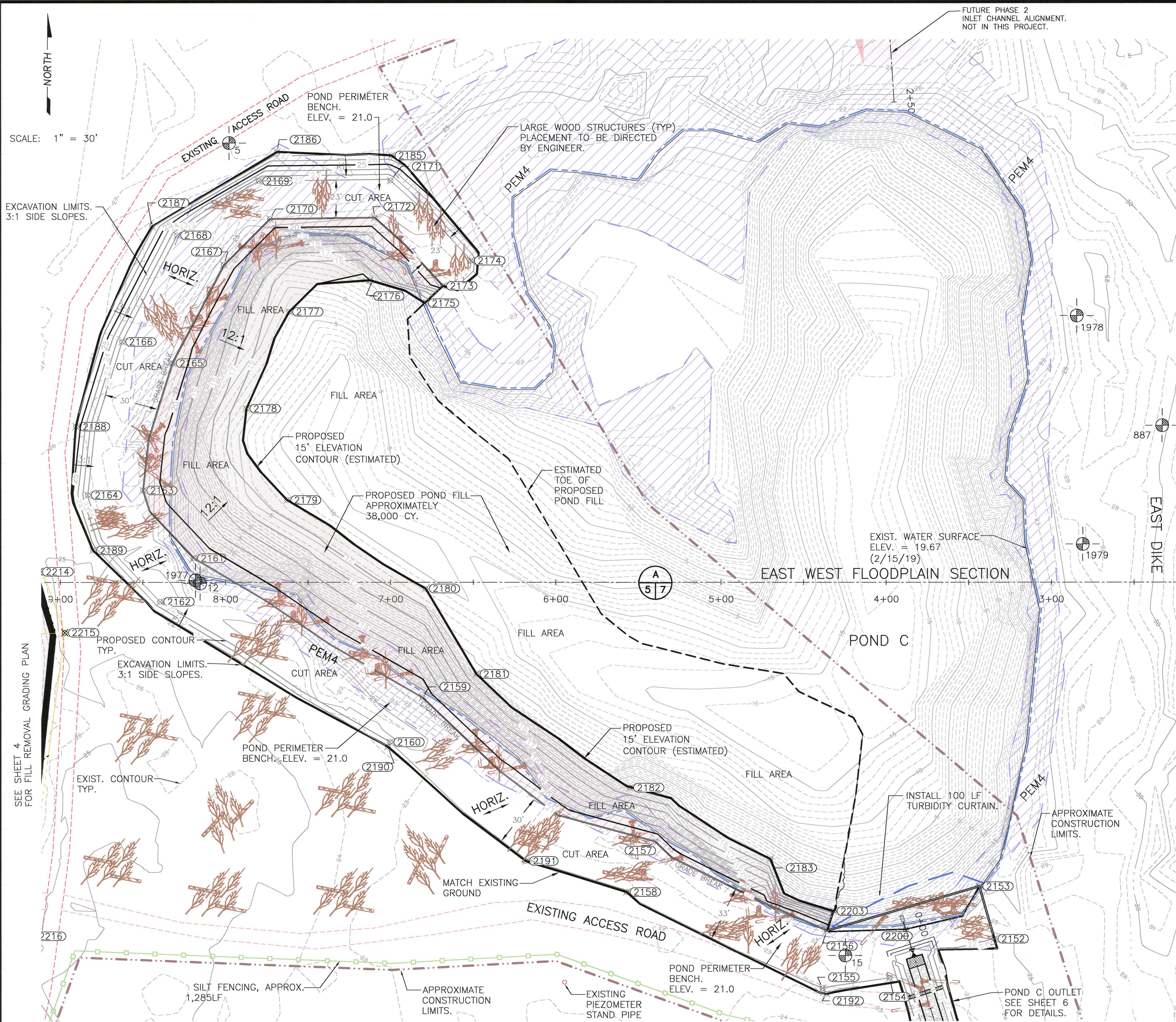


SYM	DATE	REVISION DESCRIPTION	BY
APPROVED AND RELEASED FOR CONSTRUCTION			
CHIEF ENGINEER		DATE:	
PROGRAM		DATE:	

0	1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS	
DESIGNED BY	M. CRAMER, P.E.
CHECKED BY	D. SMALL, P.E.
DRAWN BY	K. CORWIN
DATE	3-15-19

LOWER SATSOP RIVER FLOODPLAIN RESTORATION	
HABITAT RESTORATION PROJECT	
POND C GRADING	

SITE ID:	
SHEET	OF
5	8



GRADING DESIGN POINTS

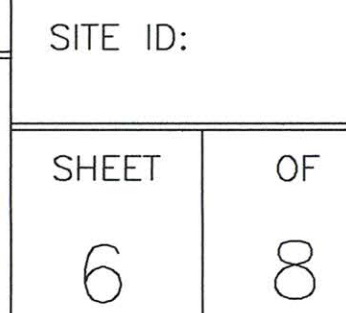
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2220	23.88	617044.95	895729.25	fg
2212	38.05	617075.05	895667.44	fg
2155	22.00	616827.26	896294.05	fg
2219	25.02	616944.95	895729.25	fg
2154	22.00	616833.47	896334.55	fg
2218	25.22	616844.95	895729.25	fg
2217	25.25	616744.95	895729.25	fg
2216	25.31	616858.79	895815.36	fg
2215	24.43	617041.70	895835.34	fg
2214	24.65	617078.48	895819.72	fg
2213	37.27	617081.78	895708.68	fg
2211	35.00	617062.04	895633.89	fg
2210	27.00	617029.33	895591.10	fg
2209	27.00	616924.22	895584.71	fg
2208	27.00	616761.74	895610.04	fg
2207	27.00	616733.20	895630.58	fg
2205	24.42	616733.05	895772.67	fg
2203	37.00	616873.80	896300.73	fg
2202	23.00	616797.85	896350.11	fg
2201	23.00	616785.43	896382.54	fg
2200	22.00	616862.78	896344.38	fg
2199	22.00	616737.56	896354.60	fg
2198	22.00	616732.44	896374.92	fg
2197	23.00	616800.20	896378.72	fg
2196	23.00	616797.85	896350.11	fg
2195	21.00	616862.78	896344.38	fg
2194	21.65	616737.56	896354.60	fg
2193	22.00	616732.44	896374.92	fg
2192	23.17	616823.94	896296.51	fg
2191	22.33	616904.02	896114.54	fg
2190	22.98	616973.01	896030.93	fg
2189	24.73	617091.33	895852.38	fg
2188	25.91	617165.92	895842.10	fg
2187	27.33	617286.55	895888.22	fg
2186	27.80	617331.49	895964.12	fg
2185	26.85	617329.32	896033.25	fg
2183	15.00	616905.19	896262.48	fg
2182	15.00	616948.24	896177.52	fg
2181	15.00	617016.71	896084.62	fg
2180	15.00	617068.29	896053.95	fg
2179	15.00	617121.64	895970.06	fg
2178	15.00	617176.75	895945.41	fg
2177	15.00	617235.14	895971.27	fg
2176	15.00	617254.16	896020.25	fg
2175	15.00	617240.34	896053.46	fg
2174	22.00	617265.97	896081.24	fg
2173	21.00	617250.71	896064.40	fg
2172	21.00	617291.87	896023.14	fg

Point Table				
Point #	Elevation	Northing	Easting	Description
2171	22.00	617314.20	896032.68	fg
2170	21.00	617291.11	895959.70	fg
2169	22.00	617313.93	895953.03	fg
2168	22.00	617281.20	895903.46	fg
2167	21.00	617263.40	895931.75	fg
2166	22.00	617217.03	895870.13	fg
2165	21.00	617204.17	895900.63	fg
2164	22.00	617124.66	895849.31	fg
2163	21.00	617127.45	895882.82	fg
2162	22.00	617060.33	895893.15	fg
2161	21.00	617086.60	895913.57	fg
2160	22.00	616975.64	896032.42	fg
2159	21.00	617002.59	896051.95	fg
2158	22.34	616885.28	896175.47	fg
2157	21.00	616915.82	896192.79	fg
2153	21.00	616888.71	896388.94	fg

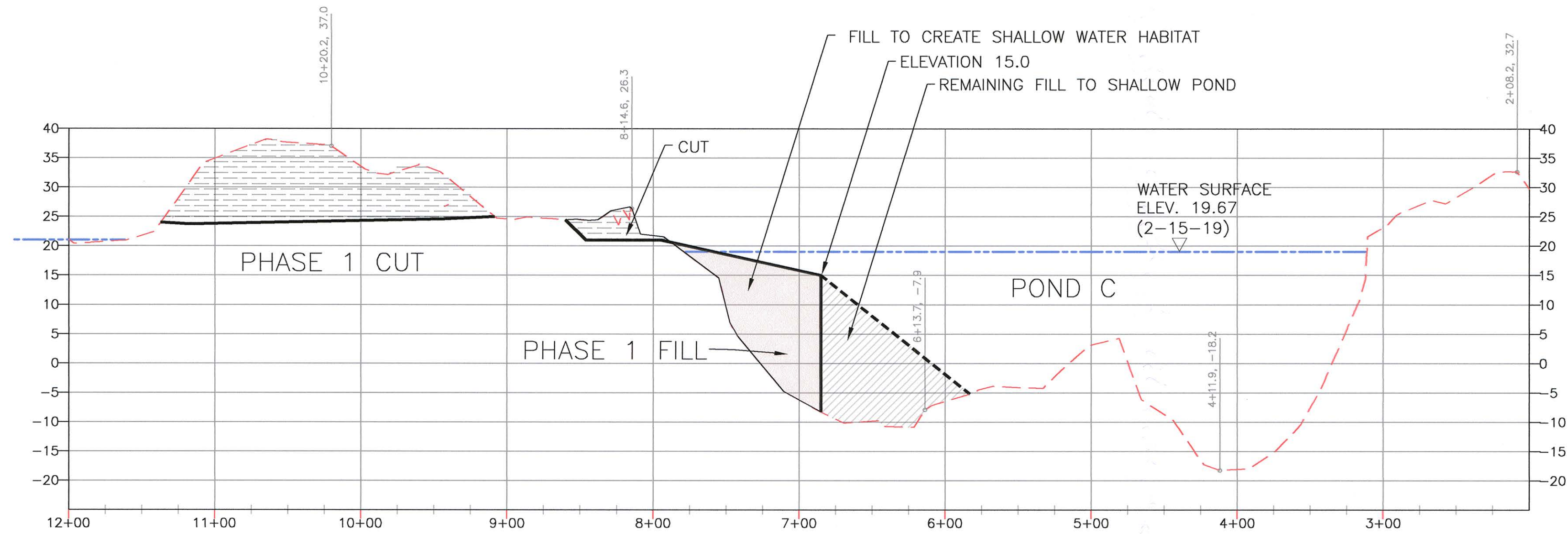
- INDICATES TBM
- INDICATES FINISH GRADE POINT
- INDICATES PROPOSED FILL AREA TO ELEVATION 15.0

TOLERANCES  
NOTE:  
IN CUT REMOVAL AREA, FINAL GRADE SHALL BE WITHIN 3 FT. HORIZONTAL AND 0.5 FT. VERTICAL TO PLAN. ENGINEER MAY REQUIRE MODIFICATIONS IF GRADING DOES NOT MEET THIS TOLERANCE.  
FROM PROPOSED POND PERIMETER TO DESIGN ELEVATION 15, FINISH GRADE SHALL NOT BE LOWER THAN ELEVATION 15.

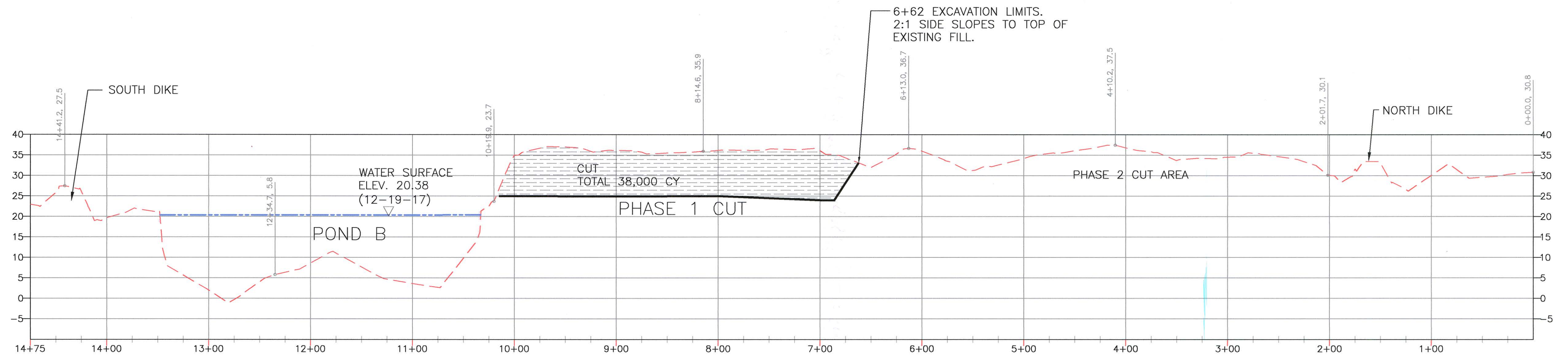






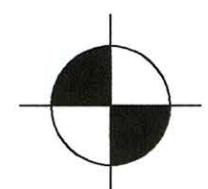


**A**  
**5/7** EAST WEST FLOODPLAIN SECTION  
SCALE: 1" = 60' HORIZ., 1" = 15' VERT.



**B**  
**4/7** NORTH SOUTH FLOODPLAIN SECTION  
SCALE: 1" = 60' HORIZ., 1" = 15' VERT.

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DRAWN BY: K. CORWIN  
USER NAME: CORWIN, KEN W (CPW)



VERTICAL DATUM  
NAVD 88

WASHINGTON STATE  
DEPARTMENT OF FISH AND WILDLIFE



SYM	DATE	REVISION DESCRIPTION	BY
APPROVED AND RELEASED FOR CONSTRUCTION			
CHIEF ENGINEER		DATE:	
PROGRAM		DATE:	

0 1"  
BAR MEASURES  
ONE INCH ON  
ORIGINAL DRAWINGS

DESIGNED BY M. CRAMER, P.E.  
CHECKED BY C. MORSS, P.E.  
DRAWN BY K. CORWIN  
DATE 3-15-19

LOWER SATSOP RIVER FLOODPLAIN RESTORATION  
HABITAT RESTORATION PROJECT  
SECTIONS

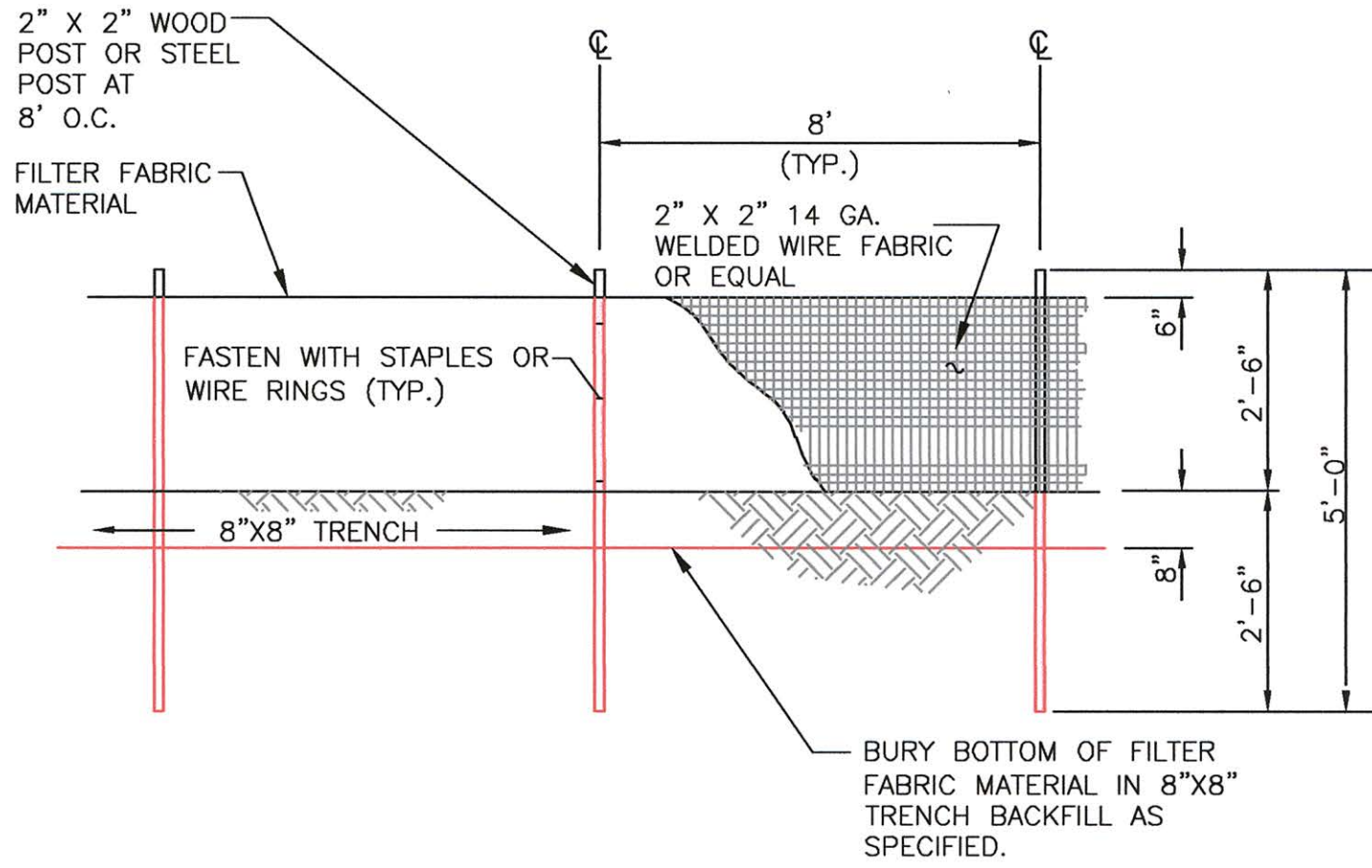
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SHEET 7 OF 8



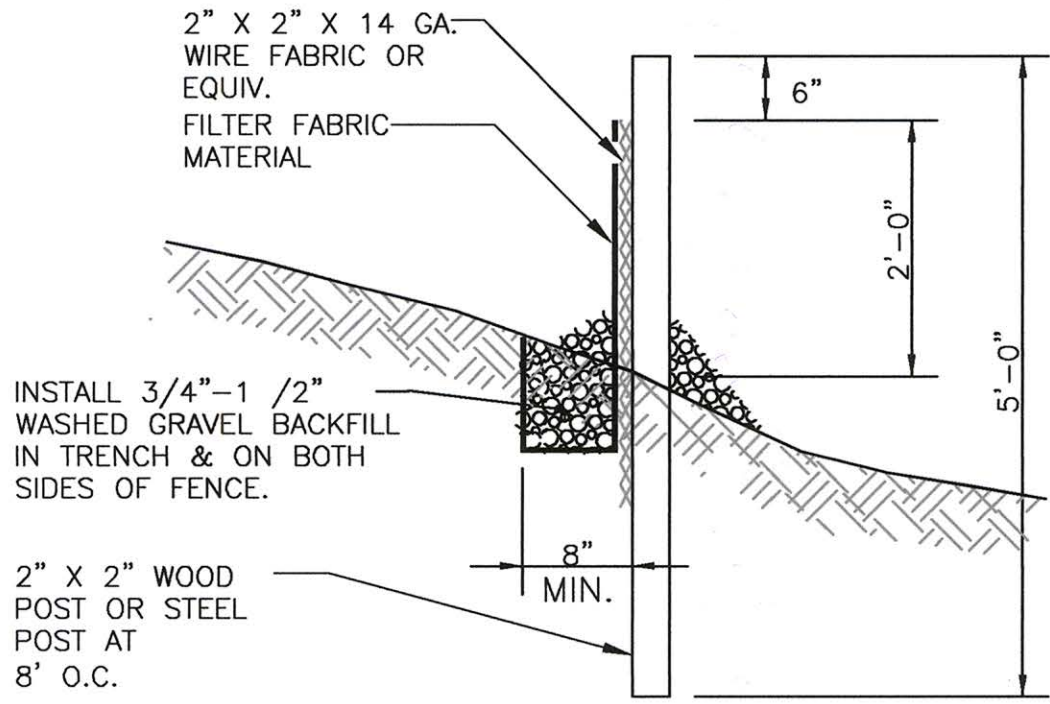
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3/25/2019  
USER NAME: CORWIN, KEN E (DWG)

SILT FENCE NOTES:

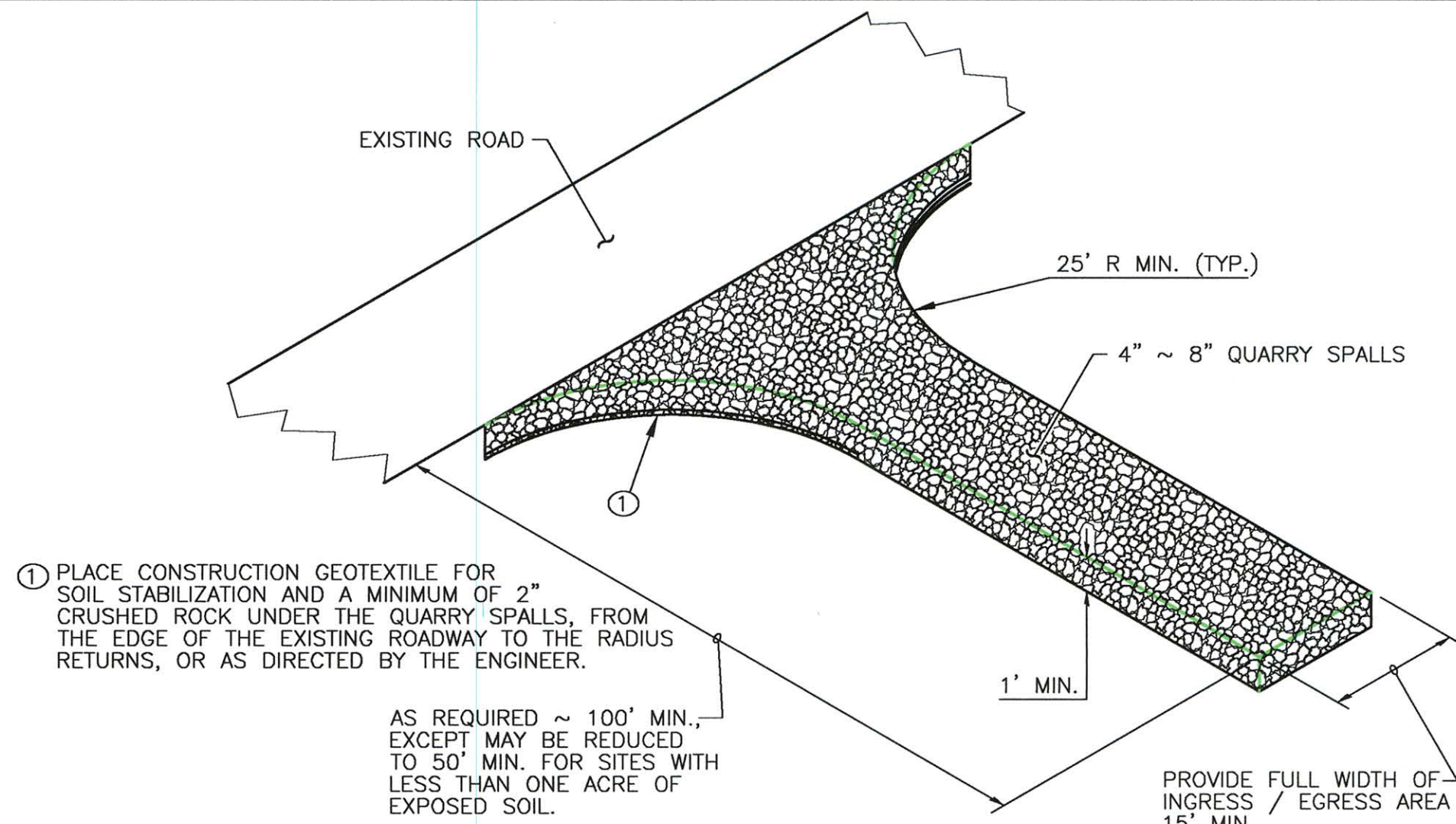
1. FILTER FABRIC SHALL BE PURCHASED CONTINUOUS ROLL CUT TO LENGTH AS NEEDED. IF JOINTS ARE NECESSARY FABRIC SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POSTS WITH A MINIMUM OF (6)INCH OVERLAP. BOTH ENDS SHALL BE SECURED AS REQUIRED.
2. SILT FENCING SHALL BE INSTALLED TO FOLLOW CONTOURS. FENCE POSTS SHALL BE SPACED A MAXIMUM OF EIGHT (8) FEET APART UNLESS OTHERWISE SHOWN HEREIN. ALL POSTS SHALL BE DRIVEN INTO THE GROUND A MINIMUM OF 30 INCHS.
3. A TRENCH SHALL BE EXCAVATED, ROUGHLY EIGHT (8) INCHES WIDE BY EIGHT (8) INCHES DEEP UPSLOPE AND ADJACENT TO THE POST TO ALLOW THE FILTER FABRIC TO BE BURIED.
4. FENCE SHALL BE FASTENED TO THE UPSLOPE SIDE OF THE POSTS USING ONE (1) INCH MINIMUM LENGTH WIRE STAPLES TIE WIRE OR APPROVED HOG RINGS. ALL WIRE SUPPORT SHALL EXTEND INTO THE TRENCH A MINIMUM OF FOUR (4) INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE ORIGINAL GRADE.
5. ALL FILTER FABRIC SHALL BE STAPLED OR WIRED TO SUPPORT FENCING AND A MINIMUM OF 20 INCHES OF FABRIC SHALL BE EXTENDED INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED OR FASTENED TO EXISTING TREES OR STRUCTURES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
6. IF HIGH STRENGTH FILTER FABRIC AND CLOSER SPACING ARE USED, THE WIRE SUPPORT FENCING MAY BE ELIMINATED. HIGH STRENGTH FABRIC SHALL BE STAPLED OR WIRED DIRECTLY TO POSTS AS REQUIRED BY THE ENGINEER.
7. TRENCH SHALL BE BACKFILLED WITH 3/4 INCH MINIMUM DIAMETER WASHED GRAVEL OR OTHER SIMILAR SOURCE AS APPROVED BY THE ENGINEER.
8. SILT FENCING SHALL BE INSTALLED WHERE SHOWN ON THE PLAN, OR AS MARKED IN THE FIELD BY THE ENGINEER, PRIOR TO COMMENCEMENT OF WORK. ALL FENCING SHALL BE INSPECTED DAILY DURING CONSTRUCTION AND AFTER EACH SIGNIFICANT RAINFALL EVENT UNTIL SITE HAS BEEN PERMANENTLY STABILIZED. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. REMOVAL OF TRAPPED SEDIMENT SHALL BE PERFORMED WHEN AMOUNTS REACH APPROXIMATELY 1/3 HEIGHT OF THE FENCE ABOVE GROUND.
10. SILT FENCING SHALL REMAIN IN-PLACE UNTIL SITE HAS BEEN REVEGETATED TO ORIGINAL CONDITION OR DIRECTED BY THE ENGINEER.



TYPICAL SILT FENCE DETAIL  
N.T.S.



TYPICAL SILT FENCE SECTION VIEW  
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE  
N.T.S.

STOCK PILES:

1. STOCKPILES SHALL BE STABILIZED (WITH PLASTIC COVERING OR OTHER APPROVED DEVICE).
2. IN ANY SEASON, SEDIMENT LEACHING FROM STOCK PILES MUST BE POSITIVELY PREVENTED.

STABILIZED CONSTRUCTION ENTRANCE:

1. MATERIAL SHALL BE 4" TO 6" QUARRY SPALLS. (WSDOT STANDARD SPECIFICATIONS 9-13(1).5).
2. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 100 FEET LONG. WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA.
3. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, TOP DRESS WITH 6" QUARRY SPALLS BEFORE REMOVING VEHICLE FROM THE SITE.

MULCHING SPECIFICATION AND NOTES:

1. MULCH SHALL BE MADE ON SITE BY CHIPPING AND SHREDDING WOODY PLANTS LOCATED IN CONSTRUCTION DISTURBANCE AREAS AS SHOWN ON THE PLANS. PLANTS WITH DIAMETERS LESS THAN OR EQUAL TO 8 INCHES DBH (DIAMETER MEASURED AT BREAST HEIGHT) SHALL BE CHIPPED AND SHREDDED. WOODY PLANTS WITH DBH GREATER THAN 8 INCHES SHALL BE USED IN LARGE WOOD STRUCTURES ALONG POND C WETTED PERIMETER, BACKWATER SWALE AND IN THE FLOODPLAIN AS SHOWN ON THE PLANS. MULCH SHALL BE STOCKPILED ON SITE AS SHOWN ON THE PLANS UNTIL ALL LAND DISTURBING ACTIVITIES AND GRADING ARE COMPLETE.
2. ALL DISTURBED AREAS SHALL BE MULCHED REGARDLESS OF QUANTITY PRODUCED ON SITE. MULCH SHALL BE SPREAD EVENLY TO A DEPTH OF 3 INCHES IN DISTURBED AREAS AS SHOWN ON THE PLANS FOLLOWING CONSTRUCTION ACTIVITIES. MULCH SHALL BE FREE FROM INVASIVE PLANTS INCLUDING BLACKBERRIES, KNOTWEED, SCOTCH BROOM, ENGLISH IVY, ETC... ALL INVASIVE PLANTS ENCOUNTERED SHALL BE DISPOSED OF AT LEGAL LOCATION BY CONTRACTOR.
3. MULCH SHALL CONSIST OF WOOD CHIPS AND SHREDDED LEAVES WITH A SIZE RANGE OF 1/4 INCH TO 1 INCH.

STRAW WATTLE INSTALLATION NOTES:

1. STRAW WATTLES SHALL BE 20 INCH DIAMETER. WATTLES SHALL BE STAKED AND INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND CONSIST OF 100% WEED FREE STRAW MATRIX WITH PHOTODEGRADABLE NETTING ENGINEERED FOR HIGH FLOW.
2. SPACING OF STRAW WATTLES: 35 FEET O.C.

UTILITY NOTIFICATION NOTES:

"BEFORE YOU DIG CALL THE ONE CALL UTILITY NOTIFICATION CENTER 811 OR 1-800-424-5555 OR VISIT [WWW.CALLBEFOREYODIG.ORG](http://WWW.CALLBEFOREYODIG.ORG) A MINIMUM OF TWO BUSINESS DAYS PRIOR TO CONSTRUCTION. IT'S THE LAW."

"WDFW MAKES NO REPRESENTATION AS TO THE EXISTENCE OR NONEXISTENCE OF ANY UTILITY, PUBLIC AND/OR PRIVATE, BURIED OR OVERHEAD, EXCEPT AS SHOWN ON THE DRAWINGS. WHERE UTILITIES ARE SHOWN ON THE DRAWINGS, THE LOCATION, DEPTH AND/OR HEIGHT ARE APPROXIMATE. THE EXACT LOCATION, DEPTH AND/OR HEIGHT MUST BE DETERMINED BY THE UTILITY COMPANY AND/OR THE LAND OWNER PRIOR TO ANY CONSTRUCTION WITHIN THE PROJECT VICINITY."

SURVEY NOTES:

1. THIS SURVEY WAS PERFORMED BETWEEN 2014 AND 2019 AND IS INTENDED TO BE USED FOR THIS DESIGN PURPOSE.
2. THE VERTICAL DATUM IS NAVD 88.
3. THIS IS NOT A PROPERTY BOUNDARY SURVEY, PROPERTY AND RIGHT-OF-WAY LINES HAVE NOT BEEN DETERMINED.
4. UNDERGROUND UTILITIES WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.
5. CONTOUR INTERVAL IS 1-FOOT.

NOTES:

ENGINEER TO DIRECT INSTALLATION OF LARGE WOOD STRUCTURES.

ENGINEER TO INSPECT LOGS PRIOR TO INSTALLATION.

WOOD PLACED ON GROUND WITH NO WIRE OR CABLE ANCHORING.

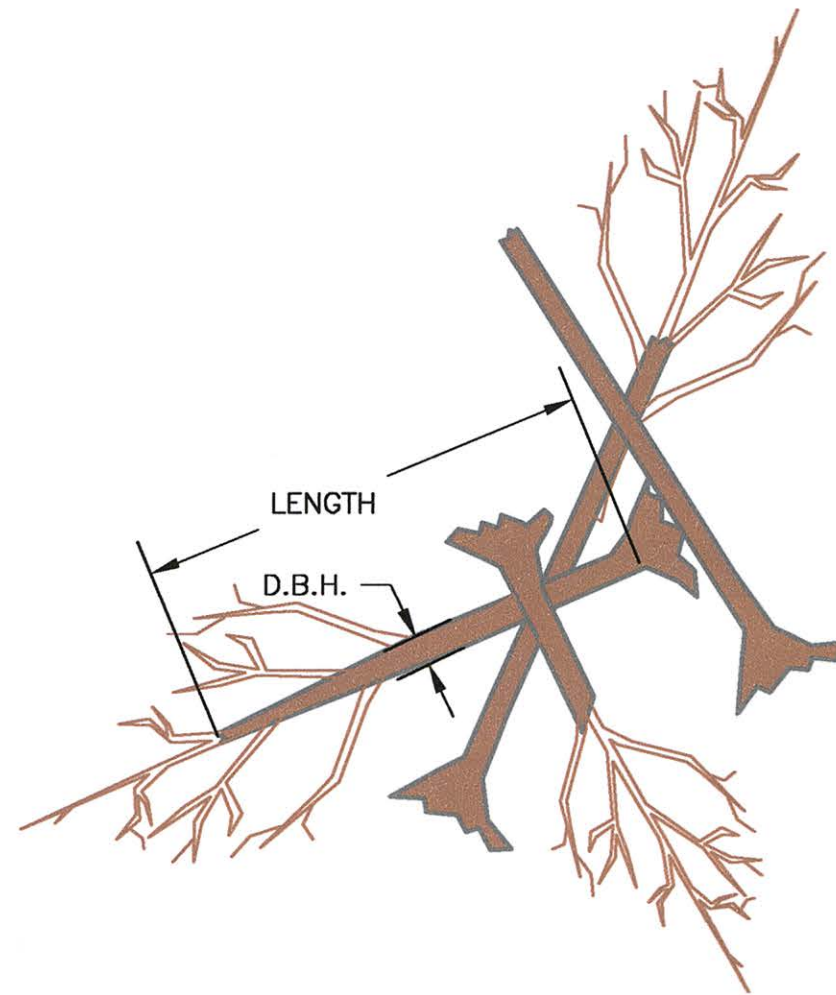
DIAMETER ≥ 8" D.B.H.

LOG LENGTH VARIES.

APPROXIMATELY 4 TO 6 PIECES OF WOOD PER LARGE WOOD STRUCTURE

DISTRIBUTION AND CONFIGURATION OF LARGE WOOD STRUCTURES SHALL VARY BASED ON AVAILABLE WOOD.

DETAIL IS TYPICAL OF ALL INSTALLATIONS.



TYPICAL LARGE WOOD  
FLOODPLAIN AND POND PERIMETER PLACEMENT  
N.T.S.

LARGE WOOD NOTES:

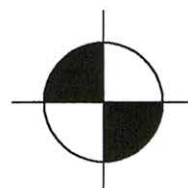
1. SIZE, LOCATION AND ORIENTATION OF LARGE WOOD PLACEMENTS ARE APPROXIMATE. FINAL LOCATION AND ORIENTATION WILL BE DEPEND UPON THE SIZE AND SHAPE OF THE MATERIAL SALVAGED. LARGE WOOD PLACEMENTS TO BE FIT IN THE FIELD AS DIRECTED BY ENGINEER.
2. WOOD GREATER THAN 8" D.B.H. REMOVED FROM EXCAVATION AREA SHALL BE SALVAGED AND USED AS LWD WITH ROOTWADS ATTACHED AND FREE FROM INVASIVE PLANTS INCLUDING BLACKBERRIES, KNOTWEED, SCOTCH BROOM, ENGLISH IVY, ETC... ALL INVASIVE PLANTS ENCOUNTERED SHALL BE DISPOSED OF AT LEGAL LOCATION BY CONTRACTOR.
3. SALVAGED LARGE WOOD QUANTITIES (ESTIMATED)  
100 PIECES ≥ 8" D.B.H. WITH INTACT ROOTWADS & BRANCHES PLACED AT BACKWATER SWALE  
100 PIECES ≥ 8" D.B.H. PLACED ALONG POND C PERIMETER  
ADDITIONAL SALVAGED LARGE WOOD ≥8" SHALL BE PLACED IN THE FLOODPLAIN AS DIRECTED BY ENGINEER.
4. SALVAGED LARGE WOOD SHALL BE STOCKPILED, THEN PLACED FOLLOWING POND FILLING AND GRADING.
5. SALVAGED TREES ≥ 8" DIAMETER IN HIGHER QUANTITY AS SPECIFIED SHALL BE MANAGED IN THE FIELD AS DIRECTED BY ENGINEER

GENERAL CONSTRUCTION NOTES:

1. COPIES OF THE PERMITS SHALL BE MAINTAINED ONSITE BY THE CONTRACTOR AND MADE AVAILABLE WHEN/IF REQUESTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL PERMIT TERMS AND CONDITIONS.
2. THIS PROJECT SHALL BE CONSTRUCTED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS AND DESCRIBED IN THE CONSTRUCTION SPECIFICATIONS.
3. ADJUSTMENTS TO LOCATIONS/TOLERANCES MUST BE APPROVED BY ENGINEER.
4. MAINTAIN A MINIMUM OF 5 FEET OF CLEARANCE FROM TREES MARKED FOR PRESERVATION.
5. TREE PRUNING MAY BE NECESSARY ON THE TREES MARKED FOR PRESERVATION. MEANS, METHODS, AND EXTENT WILL BE DISCUSSED WITH THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
6. IDENTIFY ANY STRUCTURES OR MATERIALS WITHIN THE PROJECT AREA SLATED FOR RELOCATION OR REMOVAL PRIOR TO PROJECT IMPLEMENTATION (E.G. EXISTING BOULDERS/RIP RAP) AND CONDUCT OR ARRANGE FOR THEIR REMOVAL OR RELOCATION. DISPOSE OF THE DEBRIS GENERATED FROM REMOVAL AT AN APPROPRIATE OFF-SITE, UPLAND LOCATION, LANDFILL, OR RECYCLING FACILITY AS APPROPRIATE. IT IS EXPECTED THAT TRACK HOE AND DUMP TRUCK-TYPE EQUIPMENT WOULD BE USED TO ACCOMPLISH ANY NECESSARY DEMOLITION AND DISPOSAL OF THE DEBRIS.
7. EQUIPMENT USED ON THIS PROJECT MUST BE IN EXCELLENT WORKING CONDITION, WELL MAINTAINED AND COMPLETELY FREE OF FLUID LEAKS OF ANY KIND.
8. ANY DAMAGE TO THE PROPERTY OUTSIDE OF THE SCOPE OF THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE / REPAIR.
9. ALL EROSION CONTROL DEVICES MADE OF NON-BIO-DEGRADABLE MATERIALS TO BE REMOVED UPON DEMOBILIZATION.
10. ALL STREAMBED MATERIALS SHALL BE INSPECTED AND APPROVED BY ENGINEER PRIOR TO INSTALLATION.
11. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUIDS, SEDIMENTS, SEDIMENT-LADEN WASTE, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE PONDS, RIVER OR WETLANDS.

CONSTRUCTION SEQUENCE NOTES:

1. CALL FOR A PRE-CONSTRUCTION MEETING WITH THE ENGINEER.
2. CONSTRUCTION STAKING WILL BE PERFORMED THE ENGINEER.
3. IMPLEMENT TRAFFIC CONTROL MEASURES (IF USED).
4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
5. CONSTRUCT A WORK ISOLATION ZONE.
6. CLEAR AND GRUB VEGETATION, STOCK PILE MULCH AND SALVAGE WOOD.
7. CONSTRUCT WATER QUALITY TREATMENT CHANNEL, POND WATER LEVEL LOWERING SYSTEM, AND INSTALL FISH SCREEN PER PLANS.
8. EXCAVATE SPOILS AND CUT AREAS, PLACE IN POND PER PLANS.
9. GRADE DISTURBED AREAS PER PLANS.
10. CONVERT WATER QUALITY TREATMENT CHANNEL INTO BACK WATER SWALE. REMOVE POND WATER LOWERING SYSTEM.
11. PLACE LARGE WOOD STRUCTURES
12. REMOVE TEMPORARY EROSION CONTROL AND TRAFFIC MEASURES.
13. STABILIZE ALL DISTURBED AREAS WITHIN 7 DAYS OF COMPLETION. REMOVE WASTE FROM SITE.



VERTICAL DATUM  
NAVD 88

WASHINGTON STATE  
DEPARTMENT OF FISH AND WILDLIFE



SYM	DATE	REVISION DESCRIPTION	BY
APPROVED AND RELEASED FOR CONSTRUCTION			
CHIEF ENGINEER _____		DATE: _____	
PROGRAM _____		DATE: _____	

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS
DESIGNED BY <u>M. CRAMER, P.E.</u>
CHECKED BY <u>C. MORRIS, P.E.</u>
DRAWN BY <u>K. CORWIN</u>
DATE <u>3-15-19</u>

LOWER SATSOP RIVER FLOODPLAIN RESTORATION		SITE ID:	
HABITAT RESTORATION PROJECT		SHEET 8 OF 8	
DETAILS AND NOTES			