

CLARK COUNTY STAFF REPORT

DEPARTMENT: Public Works / Parks / Legacy Lands

DATE: June 14, 2016

REQUESTED ACTION: Approve the resolution authorizing the Director of Public Works to submit grant application #16-1777 to the Lower Columbia Fish Recovery Board and the Recreation and Conservation Office for grant funding assistance through the Salmon Recovery Funding Board. The application proposes restoration of 13 acres of the Lower Daybreak property.

Consent Hearing County Manager

PUBLIC WORKS GOALS:

- Provide safe and efficient transportation systems in Clark County
- Create and maintain a vibrant system of parks, trails and green spaces
- Continue responsible stewardship of public funds
- Promote family-wage job creation and economic development to support a thriving community
- Maintain a healthy, desirable quality of life
- Increase partnerships and foster an engaged, informed community
- Cultivate a nimble, responsive work force
- Make Public Works a great place to work

BACKGROUND

The grant application requests funding to restore 13 acres of land along the shoreline of the East Fork Lewis River on the Lower Daybreak property. Property contains 3,880 feet of East Fork Lewis Shoreline and 2,800 feet of Manley Creek. Property is immediately adjacent to the Daybreak Boat launch and Daybreak Regional Park. Two side channels of the East Fork are located on the property, one at the upstream end and one at the downstream end.

The property is in a key salmon habitat restoration location. The site is located in reach 8A of the Lower East Fork Habitat Restoration Plan adopted by the Lower Columbia Fish Recovery Board in 2009. Reach 8A is designated a Tier 1 reach in the plan, the most important to successful salmon recovery. The East Fork Plan calls for several restoration projects on the site, including the side channel enhancement that has already been completed by Fish First immediately downstream of the boat launch and the in-stream and side channel work proposed in this SRFB grant application #16-1777. Elements of the current proposal include:

- Placing large wood in the main-stem East Fork to enhance in-stream habitat and minimize fine sediment input into the river from a 2,000 foot long high eroding bank;
- Excavating the long eroding bank to provide benches where native riparian vegetation will be able to establish itself;
- Replanting 2.9 acres of the bench area and 8.1 acres of shoreline with riparian vegetation; and
- Enhancing the side channel at the downstream end of the property.

Improving the in-stream habitat and addressing the eroding bank was ranked as the 5th highest rated project of the 55 potential salmon recovery projects in the lower 15 miles of the river.

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PW16-063

COUNCIL POLICY IMPLICATIONS

The Lower Columbia Fish Recovery Board and the Recreation and Conservation Office require the governing bodies of potential project sponsors to approve resolutions authorizing submittal of the grant application. The grant application requests \$753,770, or 83.94% of the estimated cost to complete the restoration project. A local match of \$144,250, or 16.06%, is required. Funding for the local match would come, in part, from Clark Public Utilities (\$91,550) who has agreed to be responsible for the restoration planting components. The balance of local match (\$52,700) will come from the Conservation Futures fund.

Simultaneous with this Salmon Recovery Funding Board grant application, we are submitting Aquatic Lands Enhancement grant #16-1996 to the state Recreation and Conservation Office to construct phase 1 public access and recreation improvements on the Lower Daybreak property. Staff has prepared a separate staff report and resolution requesting authorization to submit that grant application.

ADMINISTRATIVE POLICY IMPLICATIONS

Staff will draft an interlocal agreement with Clark Public Utilities to secure the project partnership after the Board considers the attached resolution requesting submittal of the grant application.

COMMUNITY OUTREACH

The Lower Daybreak Master Plan, adopted by the Board of County Councilors in 2010, includes a recommended set of Phase I improvements to begin implementation of the plan. Both the restoration components proposed in this SRFB application #16-1777 and the public access and recreation components proposed in the Aquatic Lands Enhancement grant application #16-1996 are elements of the phase I improvements.

Since adoption of the master plan, the update of Conservation Areas Acquisition Plan, adopted by the Board of County Councilors in 2014, and the update of the Parks Recreation and Open Space Plan, adopted by the Board of County Councilors in 2015, identify implementation of phase I improvements of these parcels as a priorities in their respective 6-year capital improvement project lists.

Clark County actively participated in development of the Lower East Fork Lewis River habitat restoration plan and is a voting member of the Lower Columbia Fish Recovery Board.

BUDGET IMPLICATIONS

YES	NO	
X		Action falls within existing budget capacity.
	X	Action falls within existing budget capacity but requires a change of purpose within existing appropriation
	X	Additional budget capacity is necessary and will be requested at the next supplemental. If YES, please complete the budget impact statement. If YES, this action will be referred to the county council with a recommendation from the county manager.

Submittal of the grant application falls within existing budget capacity. If the county application is competitive and grant funds awarded, a formal grant agreement will need to be executed between Clark County and the state Recreation and Conservation Office. Grant funding decisions are not made until December, 2016. If the application is successful, the Board of County Councilors would consider execution of the grant agreement in the first quarter of 2017. The 2017 Spring Supplemental Budget will be amended to recognize the terms of the grant agreement, if executed.

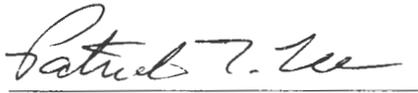
PW16-063

BUDGET DETAILS

Local Fund Dollar Amount	\$52,700
Grant Fund Dollar Amount	\$845,320
Account	Conservation Futures Fund
Company Name	Washington State Recreation and Conservation Office

DISTRIBUTION:

Board staff will post all staff reports to The Grid. <http://www.clark.wa.gov/thegrid/>


Patrick T. Lee
Legacy Lands Program Coordinator


Mark McCauley
Acting County Manager


APPROVED:
CLARK COUNTY, WASHINGTON
BOARD OF COUNTY COUNCILORS
DATE: June 14, 2016
SR# SR 119-16



PW16-063

BUDGET IMPACT ATTACHMENT

Part I: Narrative Explanation

I. A – Explanation of what the request does that has fiscal impact and the assumptions for developing revenue and costing information

Submittal of the grant application falls within existing budget capacity. If the county application is competitive and grant funds awarded, a formal grant agreement will need to be executed between Clark County and the state Recreation and Conservation Office in the first quarter of 2017. The 2017 Spring Supplemental Budget will be amended to recognize the terms of the grant agreement, if executed.

Part II: Estimated Revenues

Fund #/Title	Current Biennium		Next Biennium		Second Biennium	
	GF	Total	GF	Total	GF	Total
3085, Conservation Futures	0	0	0	\$52,700	0	0
State SRI'B grant	0	0	0	\$753,770	0	0
Clark Public Utilities				\$91,550		
Total	0	0	0	\$898,020	0	0

II. A – Describe the type of revenue (grant, fees, etc.)

State Salmon Recovery Funding Board Grant (83.94% of total)

Agreement with Clark Public Utilities (10.19% of total)

Clark County Conservation Futures fund (5.87% of total).

Part III: Estimated Expenditures

III. A – Expenditures summed up

Fund #/Title	FTE's	Current Biennium		Next Biennium		Second Biennium	
		GF	Total	GF	Total	GF	Total
3085, Conservation Futures	0.29	0	0	0	\$898,020	0	0
Total							

III. B – Expenditure by object category

Fund #/Title	Current Biennium		Next Biennium		Second Biennium	
	GF	Total	GF	Total	GF	Total
Salary/Benefits	0	0	0	\$52,700	0	0
Contractual				\$845,320		
Supplies						
Travel						
Other controllables						
Capital Outlays	0	0	0	0	0	0
Inter-fund Transfers						
Debt Service						
Total	0	0	0	\$898,020	0	0

RESOLUTION NO. 2016- 06-03

Authorizing the Director of Public Works or his designee to submit applications for grant funding assistance from the Salmon Recovery Funding Board to the Washington State Recreation and Conservation Office.

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WHEREAS, under the provisions of the Washington State Salmon Recovery Board (SFRB), as provided in Revised Code of Washington 77.85, Washington Administrative Code 420, and subsequent legislative action, Clark County may request state grant assistance to aid in financing the cost of a salmon recovery project; and

WHEREAS, any grant assistance received by Clark County pursuant to the requested aid through the SRFB program will be used for direct costs associated with implementation of the projects referenced above; and

WHEREAS, Clark County expects that the county's matching share of project funding will be derived from the Conservation Futures Fund and potential partnerships, and that pursuant to WAC 420-12-040 the county must certify the available match at least one month before funding approval; and

WHEREAS, Clark County will be responsible for supporting all non-cash commitments to this project that do not materialize; and

WHEREAS, Clark County acknowledges that the grant assistance, if approved, will be paid on a reimbursement basis, and that pursuant to the terms of the grant, Clark County will only request payment from the RCO after incurring eligible and allowable costs and remitting payment to our vendors, and that the RCO will hold retainage until the project is deemed complete; and

WHEREAS, Clark County acknowledges that any property owned by Clark County that is developed, renovated or restored with grant assistance must be dedicated for the purpose of the grant in perpetuity after the project is complete unless otherwise provided and agreed to by

23 Clark County and the Recreation and Conservation Funding Board in the project agreement or
24 an amendment thereto; now, therefore,

25 **THE BOARD OF COUNTY COUNCILORS OF CLARK COUNTY, STATE OF**
26 **WASHINGTON, HEREBY RESOLVE AS FOLLOWS:**

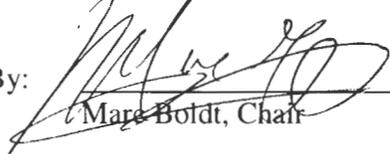
- 27 1. The Director of Public Works or his designee is authorized to make formal
28 application on behalf of Clark County to the Recreation and Conservation Office for grant
29 assistance for application 16-1777, East Fork Lewis River Reach 8A Restoration project; and
30 2. The Board will sign the attached resolution (Attachment A) created by the RCO
31 as a requirement to qualify for grant funding for the above project; and
32 3. The Director shall submit this resolution and the attached document as part of
33 Clark County's formal application to the RCO for assistance;
34 4. The recitals above are adopted as findings in support of this resolution.

ADOPTED this 14th day of June, 2016.

BOARD OF COUNTY COUNCILORS
FOR CLARK COUNTY

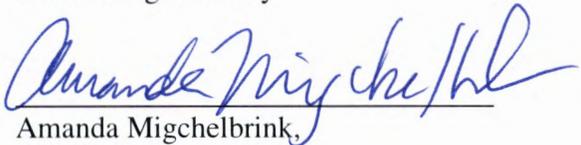
Attest:


Clerk to the Board

By: 
Mare Boldt, Chair

Approved as to form only:
ANTHONY F. GOLIK
Prosecuting Attorney

By: _____
Jeanne E. Stewart, Councilor


Amanda Migchelbrink,
Civil Deputy

By: _____
Julie Olson, Councilor

By: _____
David Madore, Councilor

By: _____
Tom Mielke, Councilor

RESOLUTION No. 2016 - 06-04

Authorize the Director of Public Works or his designee to submit a grant application for a salmon recovery project to the Salmon Recovery Funding Board as provided in Revised Code of Washington 77.85, Washington Administrative Code 420, and subsequent legislative actions.

Project Sponsor: Clark County

Project: Grant application 16-1777, East Fork Lewis River Reach 8A Restoration

WHEREAS, under the provisions of the Salmon Recovery Act, state grant assistance is requested to aid in financing the cost of acquisition; and

WHEREAS, Clark County considers it in the best public interest to complete the project described in the application.

NOW, THEREFORE, BE IT RESOLVED that:

1. The Director of Public Works or his designee is authorized to make formal application to the Salmon Recovery Funding Board for grant assistance.
2. Our organization has reviewed the sample project agreement on the Recreation and Conservation Office's Web site at:
www.rco.wa.gov/documents/manuals&forms/SampleProjAgreement.pdf and authorize Mark McCauley, County Manager, or Heath Henderson, Director of Public Works, to enter into such a project agreement, if funding is awarded. We understand and acknowledge that the project agreement will contain the indemnification and other terms and conditions that are contained in the sample project agreement.
3. Any grant assistance received will be used for direct costs associated with implementation of the project referenced above.
4. Our organization expects our matching share of project funding will be derived from the County's Conservation Futures fund and meets the requirements of Washington Administrative Code 420-12-040. In addition, our organization understands it is responsible for supporting all non-cash commitments to this project should they not materialize.
5. We acknowledge that if the Salmon Recovery Funded Board approves grant assistance for the project, the Recreation and Conservation Office will pay us on only a reimbursement basis, except for a specially approved advance payment. We understand reimbursement basis means that we will only request payment from the Recreation and Conservation Office after we incur eligible and allowable costs and pay them. The Recreation and Conservation Office also may determine an amount of retainage and hold that amount until the project is complete. The Recreation and Conservation Office may approve advance payments in limited circumstances, pursuant to Washington Administrative Code 420-12-060 and the policy outlined in Manual 8, Reimbursements.

6. We acknowledge that any property restored be maintained for a period of 10 years after the project is complete unless otherwise provided and agreed to by our organization and the Salmon Recovery Funding Board.
7. This application authorization becomes part of a formal application to the Salmon Recovery Funding Board for grant assistance.
8. We provided appropriate opportunity for public comment on this application.
9. We certify that this resolution was properly and lawfully adopted following the requirements of our organization and applicable laws and policies and that the person signing as authorized representative is duly authorized to do so.

This resolution was adopted by our organization during the meeting held at Vancouver, Washington on this 14th day of June, 2016.

Signed and approved by the following authorized representative:

Attest:

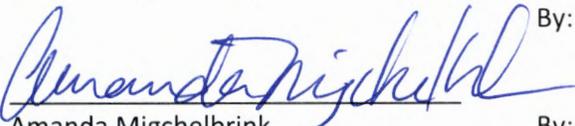
BOARD OF COUNTY COUNCILORS
FOR CLARK COUNTY


Clerk to the Board

By: 
Marc Boldt, Chair

reviewed
~~Approved~~ as to form only:
ANTHONY F. GOLIK
Prosecuting Attorney

By: _____
Jeanne E. Stewart, Councilor


Amanda Migchelbrink,
Civil Deputy

By: _____
Julie Olson, Councilor

By: _____
David Madore, Councilor

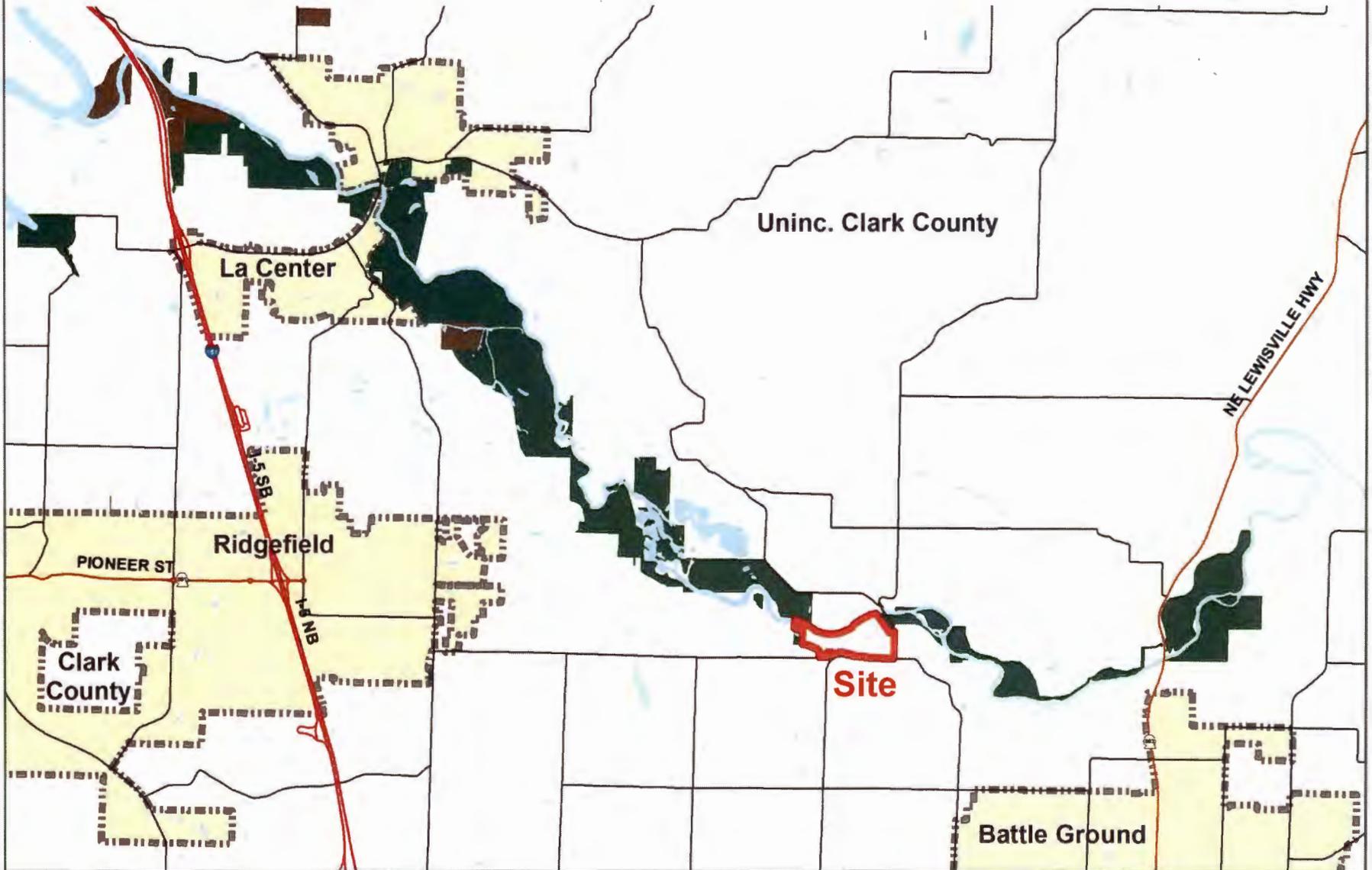
By: _____
Tom Mielke, Councilor

REGIONAL LOCATION MAP - EAST FORK LEWIS RIVER GREENWAY

Project: EFL Reach 8A Restoration (16-1777)

Program: Salmon Recovery Funding Board

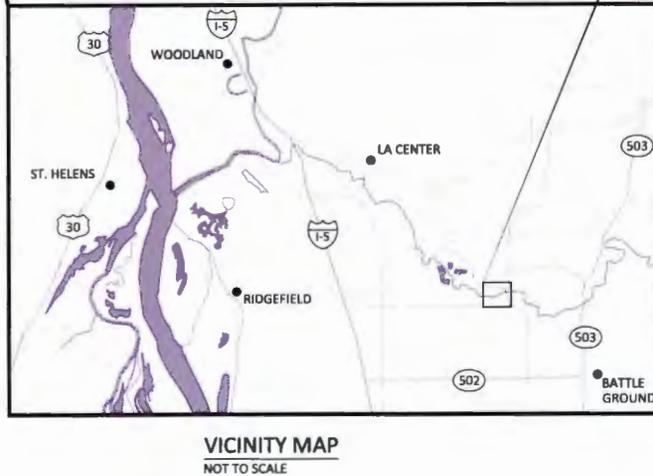
Sponsor: Clark County



EAST FORK LEWIS RIVER REACH 8A - WEST DAYBREAK PRELIMINARY DESIGN REVISION

CLARK COUNTY, WA
APRIL, 2016

Preliminary
Not for Construction



SHEET INDEX

- 1 COVER, VICINITY MAP AND SHEET INDEX
- 2 GENERAL NOTES
- 3 GENERAL NOTES
- 4 EROSION CONTROL DETAILS
- 5 EXISTING CONDITIONS, ACCESS AND STAGING
- 6 PROPOSED CONDITIONS
- 7 TYPICAL MAINSTEM ENHANCEMENT PLAN AND SECTIONS
- 8 TYPICAL BACKWATER ENHANCEMENT PLAN AND SECTION
- 9 REVEGETATION PLAN
- 10 REVEGETATION DETAILS

COORDINATES:
LATITUDE: 45° 48' 48" N
LONGITUDE: 122° 35' 40" W
TOWNSHIP 4N, RANGE 2E, SECTION 20
WATERBODY: EAST FORK LEWIS RIVER
TRIBUTARY OF: LEWIS RIVER

NO.	BY	DATE	REVISION DESCRIPTION

NS	GJ, CA, BN	CA, GJ
DRAWN	DESIGNED	CHECKED
BN	4/8/16	160213
APPROVED	DATE	PROJECT

CLARK COUNTY
EAST FORK LEWIS RIVER REACH 8A - WEST DAYBREAK
PRELIMINARY DESIGN REVISION



501 Portway Avenue, Suite 101
Hood River, OR 97031
541.386.9003
www.interfluve.com

COVER, VICINITY MAP AND
SHEET INDEX

SHEET
1 OF 10

THE CONTRACTOR SHALL ATTEND A MANDATORY PRE-BID SITE MEETING.

THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH CLARK COUNTY (OWNER) AND OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

ALL WORK SHALL CONFORM TO THE CURRENT EDITIONS OF STANDARD PLANS AND SPECIFICATIONS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), AND LOCAL STANDARDS UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT WILL PREVAIL.

IN CASE OF DISCREPANCY BETWEEN NOTES, LOCAL REGULATIONS, OR OTHER CONTRACT DOCUMENTATION, CONTRACTOR SHALL OBTAIN CLARIFICATION/ DIRECTION FROM OWNER.

WDFW IN-WATER WORK PERIODS

WORK SHALL OCCUR DURING THE PERMITTED IN-WATER WORK PERIOD STATED IN THE HYDRAULIC PROJECT APPROVAL.

EXISTING DATA

ADDITIONAL TOPOGRAPHIC SURVEY REQUIRED PRIOR TO FINAL PLANS.

PROPERTY BOUNDARIES SHOWN ARE FROM CLARK COUNTY TAX PARCEL GIS LAYER .

SOILS

SOILS ON SITE CONSIST OF WASHOUGAL LOAM, 0 TO 3 PERCENT SLOPES; WASHOUGAL GRAVELLY LOAM, 0 TO 8 PERCENT SLOPES AND RUYALLUP FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES PER NRCS USDA WEB SOIL SURVEY.

UTILITIES

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVING UTILITIES LOCATED PRIOR TO CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL CALL (800-424-5555) FOR UTILITY LOCATE PRIOR TO CONSTRUCTION.

THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE EFFECTED UTILITY SERVICE TO REPORT ANY DAMAGED OR DESTROYED UTILITIES.

THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND LABOR TO AID THE EFFECTED UTILITY SERVICE IN REPAIRING DAMAGED OR DESTROYED UTILITIES AT NO ADDITIONAL COST.

CONSTRUCTION STAKING

CONTRACTOR SHALL STAKE PROJECT LIMITS, GRADE STAKES, AND ELEVATION CONTROL POINTS. SOME FIELD ADJUSTMENTS TO THE LINES AND GRADES ARE TO BE EXPECTED.

CONTRACTOR SHALL MEET WITH THE OWNER AND OWNER'S REPRESENTATIVE TO DEFINE AND MARK LIMITS OF DISTURBANCE PRIOR TO MOBILIZATION OF EQUIPMENT OR MATERIALS ONTO THE SITE.

THE CONTRACTOR SHALL REPLACE DAMAGED OR DESTROYED CONSTRUCTION STAKES AT NO ADDITIONAL COST.

CONSTRUCTION MATERIALS

LOCATION, ALIGNMENT, AND ELEVATION OF LOGS AND LOGS WITH ROOTWADS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD CONDITIONS, AND MATERIAL SIZE.

EXCAVATED SOILS SHALL BE PLACED IN ON-SITE SPOILS AREAS SHOWN ON PLANS AND COMPACTED BY CONSTRUCTION EQUIPMENT TRAVEL AND BUCKET COMPACTION TO NO GREATER THAN 90% STANDARD PROCTOR.

MATERIALS NOT SUITABLE FOR PLACEMENT IN SPOILS AREAS SHALL BE STOCKPILED NEATLY IN AN APPROVED LOCATION WITHIN THE STOCKPILE AND STAGING AREA. AT COMPLETION OF WORK, THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY PERMITS AND FEES REQUIRED FOR LEGAL DISPOSAL.

EQUIPMENT

EXCAVATORS SHALL BE FITTED WITH NON-TOXIC HYDRAULIC FLUIDS AT NO ADDITIONAL COST.

CONSTRUCTION ACCESS/TRAFFIC CONTROL

CONTRACTOR SHALL SUBMIT AN ACCESS, STAGING, AND STOCKPILE PLAN TO THE OWNER FOR APPROVAL.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ANY REQUIRED TRAFFIC CONTROL OR ACCESS PERMITS.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ANY REQUIRED TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO, SIGNAGE AND FLAGGERS.

ALL SAPLINGS AND TREES TO BE TRANSPLANTED OR REMOVED SHALL BE CLEARLY MARKED AND APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE.

ALL EQUIPMENT, MATERIALS AND PERSONNEL SHALL REMAIN WITHIN THE LIMITS OF DISTURBANCE.

THE CONTRACTOR SHALL KEEP THE WORK AREAS IN A NEAT AND SIGHTLY CONDITION FREE OF DEBRIS AND LITTER FOR THE DURATION OF THE PROJECT.

ALL DISTURBED AREAS INCLUDING BUT NOT LIMITED TO ROADS, DRIVEWAYS, ACCESS ROUTES, FENCES, AND IRRIGATION SYSTEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AND REVEGETATED PER PLANS.

IMPORT AND PLACEMENT OF GRAVEL MAY BE REQUIRED TO RESTORE ACCESS ROADS TO PRE-PROJECT CONDITION AT CONTRACTOR'S EXPENSE.

FOR DURATION OF PROJECT, CONTRACTOR SHALL KEEP ALL PRIVATE AND PUBLIC ROADS USED FOR ACCESS FREE OF DEBRIS AND MUD.

AT PROJECT COMPLETION, PAVEMENT SHALL BE CLEANED OF CONSTRUCTION DEBRIS AND RESTORED TO PRE-PROJECT CONDITION OR BETTER AT CONTRACTOR'S EXPENSE.

ALL DISTURBED AREAS OUTSIDE THE LIMITS OF DISTURBANCE SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST.

EROSION CONTROL

CONTRACTOR SHALL BE SOLELY RESPONSIBLE AT OWN EXPENSE FOR PROVIDING AND MAINTAINING ALL NECESSARY EROSION CONTROL FACILITIES TO COMPLY WITH APPLICABLE EROSION CONTROL REGULATIONS AND TO MAINTAIN CLEAN ACCESS ROUTES.

EROSION/ SEDIMENTATION CONTROL PLAN

THE EROSION AND SEDIMENT CONTROL (ESC) PLAN PROVIDED IS FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING EROSION CONTROL MEASURES TO COMPLY WITH APPLICABLE REGULATIONS.

THE RECOMMENDATIONS FOR AN ESC PLAN INCLUDED HEREIN WILL PROVIDE A GUIDELINE FOR THE CONTRACTOR TO DEVELOP AND IMPLEMENT AN ESC PLAN.

- A. THE IMPLEMENTATION OF AN ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- B. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- C. ESC FACILITIES AS APPROXIMATELY SHOWN ON THIS PLAN ARE TO BE CONSTRUCTED PRIOR TO CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, OR VIOLATE APPLICABLE WATER STANDARDS.
- D. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED AT NO ADDITIONAL COST FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- E. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- F. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
- G. STABILIZED CONSTRUCTION ENTRANCES AND ADDITIONAL MEASURES MAY BE REQUIRED AND SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT.

INSPECTION AND MAINTENANCE

ALL ESC FACILITIES SHALL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ESC FACILITIES SHALL BE INSPECTED DAILY AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD AND AFTER EVENTS EXCEEDING 2 HOURS DURATION.

CONTRACTOR'S ESC RECORD

WEEKLY REPORTS SUMMARIZING THE SCOPE OF INSPECTIONS, THE PERSONNEL CONDUCTING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN, AND ACTIONS TAKEN AS A RESULT OF THESE INSPECTIONS SHALL BE PREPARED AND RETAINED ON SITE BY THE CONTRACTOR. IN ADDITION, A RECORD OF THE FOLLOWING DATES SHALL BE INCLUDED IN THE REPORTS:

- 1. WHEN MAJOR GRADING ACTIVITIES OCCUR,
- 2. DATES OF RAINFALL EVENTS EITHER EXCEEDING 2 HOURS DURATION OR MORE THAN 0.5 INCHES/24 HOURS,
- 3. WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON SITE, OR ON A PORTION OF THE SITE,
- 4. WHEN STABILIZATION MEASURES ARE INITIATED FOR PORTIONS OF THE SITE.

ESC RECORDS SHALL BE MADE AVAILABLE TO THE OWNER AND OWNER'S REPRESENTATIVE ON REQUEST AND SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO APPLICATION FOR PAYMENT.

Preliminary
Not for Construction

NO.	BY	DATE	REVISION DESCRIPTION

NS	GJ, CA, BN	CA, GJ
DRAWN	DESIGNED	CHECKED
BN	4/8/16	160213
APPROVED	DATE	PROJECT

CLARK COUNTY
EAST FORK LEWIS RIVER REACH 8A - WEST DAYBREAK
PRELIMINARY DESIGN REVISION



501 Parkway Avenue, Suite 101
Hood River, OR 97031
541.386.9003
www.interfluve.com

GENERAL NOTES

STABILIZE SOILS AND PROTECT SLOPES

FROM MAY 1 THROUGH SEPTEMBER 30, ALL EXPOSED SOILS SHALL BE PROTECTED FROM EROSION BY MULCHING, PLASTIC SHEETING, HYDROSEED COVERING, OR OTHER APPROVED MEASURES WITHIN THREE DAYS OF GRADING. FROM OCTOBER 1 THROUGH APRIL 30, ALL EXPOSED SOILS MUST BE PROTECTED WITHIN 2 DAYS OF GRADING. SOILS SHALL BE STABILIZED BEFORE A WORK SHUTDOWN, HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES. HYDROSEED AS SOON AS PRACTICAL ALL DISTURBED AREAS NOT INDICATED IN THE CONTRACT DOCUMENTS FOR OTHER PERMANENT STABILIZATION MEASURES.

DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. REDUCE SOIL VELOCITIES ON DISTURBED SLOPES BY PROVIDING TEMPORARY BARRIERS. STORMWATER FROM OFF SITE SHOULD BE HANDLED SEPARATELY FROM STORMWATER GENERATED ON SITE.

AFTER FINAL SITE STABILIZATION

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED FROM THE SITE OR INCORPORATED INTO FINISHED GRADING. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

FISH RESCUE

DEWATERING OF IN-CHANNEL WORK AREAS SHALL OCCUR CONCURRENT WITH FISH RESCUE. CONTRACTOR SHALL COORDINATE WITH THE ESTUARY PARTNERSHIP FOR FISH RESCUE. CONTRACTOR SHALL PROVIDE ESTUARY PARTNERSHIP AMPLE TIME TO SCHEDULE FISH RESCUE. IF DIVERSION FAILS DUE TO CONTRACTOR NEGLIGENCE, FISH RESCUE SHALL BE REPEATED AT CONTRACTOR'S EXPENSE.

ALL FISH RESCUE EFFORTS SHALL BE SUPERVISED BY AN AQUATIC BIOLOGIST EXPERIENCED WITH THE COLLECTION AND HANDLING OF SALMONID FISHES FROM CONSTRUCTION SITES.

ALL FISH TRAPPED IN RESIDUAL POOLS WITHIN THE PROJECT AREA WILL BE CAREFULLY COLLECTED BY SEINE AND/OR DIP NETS AND PLACED IN CLEAN TRANSFER CONTAINERS WITH ADEQUATE VOLUME OF FRESH RIVER WATER.

CAPTURED FISHES SHALL BE IMMEDIATELY RELEASED INTO ADJACENT UNDISTURBED AREAS OF THE WATER BODY WHERE FISH WERE TRAPPED.

CONSTRUCTION DEWATERING

CONTRACTOR SHALL PERFORM CONSTRUCTION DEWATERING IN SUCH A MANNER AS TO AVOID THE RELEASE OF TURBID OR SEDIMENT-LADEN WATER IN ORDER TO PREVENT CONTAMINATION OR INCREASE TURBIDITY OF SURFACE WATERS. EXCAVATION OF DEWATERING SUMPS BEYOND LIMITS SHOWN SHALL BE AT NO ADDITIONAL COST. SEDIMENT LADEN WATER MAY BE PUMPED TO AN UPLAND DISCHARGE LOCATION AND ALLOWED TO SHEET FLOW THROUGH EXISTING VEGETATION BEFORE INFILTRATING INTO THE GROUND. IF THIS METHOD IS NOT SUFFICIENT TO PREVENT RETURN OF TURBID WATER TO SURFACE WATERS OR SENSITIVE FLOODPLAIN AREAS, A 'DIRT-BAG' OR SEDIMENT RETENTION STRUCTURE MAY BE REQUIRED AS NECESSARY TO COMPLY WITH LAWS AND PERMIT REQUIREMENTS AT NO ADDITIONAL COST.

CONTRACTOR SHALL PROVIDE, OPERATE, AND MAINTAIN NUMBER AND SIZE OF PUMPS AS NECESSARY TO ACHIEVE DEWATERING NEEDS. AT A MINIMUM, CONTRACTOR SHALL PROVIDE A 6" DRI-PRIME DIESEL POWERED PUMP AND A PORTABLE 2" PUMP. ADDITIONAL PUMPS AND OF DIFFERENT CAPACITIES MAY BE REQUIRED AT CONTRACTOR'S EXPENSE.

OWNER OR OWNER'S REPRESENTATIVE SHALL APPROVE DEWATERING DISCHARGE LOCATION PRIOR TO IMPLEMENTATION.

TREE SALVAGE

ANY REMOVED VEGETATION GREATER THAN 6 INCHES DIAMETER AND 15 FEET LONG SHALL BE INCORPORATED INTO LOG STRUCTURES AS SLASH. CONTRACTOR IS RESPONSIBLE FOR REMOVING SMALLER CLEARING AND GRUBBING DEBRIS FROM THE SITE AND DISPOSING AT A LEGAL LOCATION UNLESS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.

ALL TREES REMOVED WITHIN CLEARING LIMITS SHALL BE REMOVED WHOLE WITH ROOTWAD AND UTILIZED IN THE PROJECT CONSTRUCTION AS DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE.

LIVE TREES

ALL TREES NOT MARKED FOR REMOVAL SHALL BE LEFT STANDING UNDISTURBED. CONSTRUCTION ACTIVITY SHALL NOT DEBARK OR DAMAGE LIVE TREES.

ANY LIVE TREES DEBARKED OR OTHERWISE DISTURBED, SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

CULTURAL RESOURCES

IF ANY ARCHAEOLOGICAL RESOURCES AND/OR ARTIFACTS ARE ENCOUNTERED DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITY SHALL IMMEDIATELY CEASE. THE WASHINGTON DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION SHALL BE CONTACTED AT (360) 586-3065.

ABBREVIATIONS

APPROX CCES-LL	APPROXIMATE CLARK COUNTY ENVIRONMENTAL SERVICES - LEGACY LANDS
•	DEGREES
DIA. or Ø	DIAMETER
EXIST	EXISTING
EL or ELEV	ELEVATION
ESC	EROSION AND SEDIMENT CONTROL
FT or '	FEET
FTR	FULLY THREADED ROD
HORIZ	HORIZONTAL
IN or "	INCH
INV	INVERT
LWM	LARGE WOODY MATERIAL
MAX	MAXIMUM
MIN	MINIMUM
NWI	NATIONAL WETLANDS INVENTORY
OHW	ORDINARY HIGH WATER
%	PERCENT
R/Mx	RIVER MILE x
STA.	STATION
TBM	TEMPORARY BENCHMARK
TYP	TYPICAL
VERT	VERTICAL
WSE	WATER SURFACE ELEVATION
YR	YEAR

CLARK COUNTY STANDARD PLAN NOTES

Last Update 02/2018

Standard plan notes must be included on all plans. Notes, which in no way apply to the project, may be omitted; however, the remaining notes must not be renumbered. For example, if General Note #3 were omitted, the remaining notes should be numbered 1, 2, 4, 5, 6, etc.

GENERAL NOTES

- All construction shall be in accordance with the Clark County Code (CCC), Clark County Street and Road Standards (CCSRS), Clark County Standard Details Manual (CCSDM) and the Land Use Conditions of Approval. It shall be the sole responsibility of the applicant and the professional civil engineer to correct any error, omission, or variation from the above requirements found in these plans.
- Approval of roadways, grading, erosion control and drainage plan by Clark County does not constitute an approval of any other construction (e.g., domestic water conveyance, sewer conveyance, gas, electrical, etc.).
- Before any construction or development activity, a preconstruction meeting must be held between the Department of Community Development, Engineering Services (DCDES) Construction Inspection Section of the Engineering Services Division, the Applicant, and the Applicant's Consulting Engineer and Construction Representative.
- A copy of these approved plans must be on the job site whenever construction is in progress.
- Construction notes shall be limited in accordance with the Nutsheet Ordinance CCC 9.14.01(3); normally, this is 7 a.m. to 10 p.m., seven days a week.
- It shall be the Applicant's/Contractor's responsibility to obtain all construction easements and/or right of entries prior to construction work.
- All franchised utilities (i.e., gas, electric, phone) or other installations that are not shown on these approved plans shall not be constructed unless an approved set of plans that meets all requirements of CCSRS (CCC 40.360.030) is submitted to the DCDES Construction Inspection Section three days prior to construction.
- Datum shall be Clark County Datum NGVD 1929(47) unless otherwise approved by DCDES.
- All utility trenches shall be backfilled and compacted to 95 percent maximum density as determined by AASHTO T-99, within the roadway prism (CCC40.360.030(C)(4)(e)).
- All roadway subgrades within the roadway prism shall be backfilled and compacted to 95 percent maximum density as determined by AASHTO T-99 (WSDOT 2.06.3).
- Open cutting of existing roadways is not allowed unless specifically approved by DCDES and noted on these approved plans. Any open cut shall be restored in accordance with Clark County Code (see Standard Trench Restoration Notes of Standard Details Manual).
- The Contractor shall be responsible for providing adequate safeguards, safety devices, protective equipment, flaggers, and any other needed actions to protect the life, health, and safety of the public, and to protect property in connection with the performance of work covered by the contractor. Any work within the traveled right-of-way that may interrupt normal traffic flow shall require at least one flagger for each lane of traffic affected. Section 1.07.23, "Traffic Control," of the WSDOT Standard Specifications shall apply in its entirety.
- Storm Drain, Erosion Control, Trench Restoration, Grading, and Signage & Striping General Notes per Standard Plans D1.0, ECH1 and UGN1 respectively are made part of these notes, and are to be included in the construction plan set.
- If any cultural resources and/or human remains are discovered in the course of undertaking the development activity, the Department of Archaeology and Historic Preservation in Olympia and Clark County Department of Community Development shall be notified. Failure to comply with these State requirements may constitute a Class C Felony, subject to imprisonment and/or fines.

STRUCTURAL NOTES

- These plans are approved for standard road and drainage improvements only. Plans for structures such as bridges, vaults, and retaining walls require a separate review and approval by Clark County Building Department and/or Public Works Department, and WSDOT Bridge Section prior to construction.

RECOMMENDED CONSTRUCTION SEQUENCE FOR EROSION CONTROL

- Pre-construction meeting.
- Flag or fence clearing limits.
- Post Notice of Construction Activity sign with name and phone number of Erosion Sediment Control supervisor.
- Install catch basin protection if required.
- Grade and install construction entrance(s).
- Install perimeter protection (silt fence, brush barrier, etc.).
- Construct sediment ponds and traps.
- Grade and stabilize construction roads.
- Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading the project development.
- Maintain erosion control measures in accordance with Clark County standards and manufacturer's recommendations.
- Relocate surface water controls and erosion control measures or install new measures so that as site conditions change the erosion and sediment control is always in accordance with the Clark County Erosion and Sediment Control Standards.
- Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting or equivalent.
- Stabilize all areas that reach final grade within seven days.
- Seed and sod any areas to remain unworked for more than 30 days.
- Upon completion of the project, all disturbed areas must be stabilized and best management practices removed if appropriate.

Preliminary
Not for Construction

NO.	BY	DATE	REVISION DESCRIPTION

NS	GJ, CA, BN	CA, GJ
DESIGNED		
BN	4/8/16	160213
APPROVED	DATE	PROJECT

CLARK COUNTY
EAST FORK LEWIS RIVER REACH 8A - WEST DAYBREAK
PRELIMINARY DESIGN REVISION



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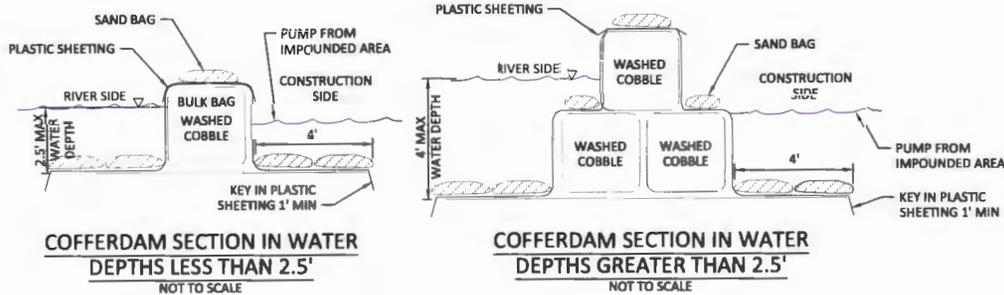
GENERAL NOTES

SHEET

3 OF 10

BULK BAG NOTES:

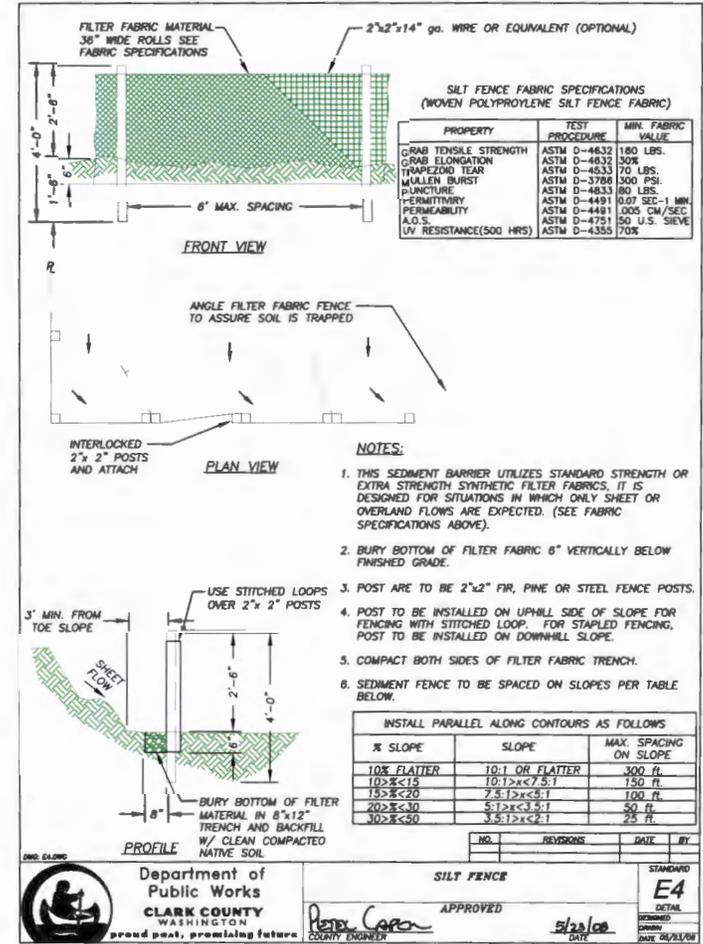
- BULK BAG COFFERDAM SHALL BE CONSTRUCTED OF SEVERAL UNITS OF BULK BAGS FILLED WITH WASHED GRAVEL, AND ABUTTED SIDE BY SIDE TO CREATE A ROW THAT ISOLATES THE CONSTRUCTION SITE.
- IF WATER DEPTH EXCEEDS 85% OF THE BULK BAG HEIGHT, AN ADDITIONAL TOP ROW OF BULK BAGS SHALL BE INSTALLED, SUPPORTED BY TWO BOTTOM ROWS OF BULK BAGS. BULK BAG COFFERDAM SHALL BE SEALED BY COVERING THE COFFERDAM WITH PLASTIC SHEETING HELD IN PLACE BY STANDARD SANDBAGS PLACED IN ROWS ON TOP OF COFFERDAM, AND AT TOE OF COFFERDAM.
- THE PLASTIC SHEETING SHALL BE DRAPED ALONG THE CHANNEL BOTTOM ON BOTH SIDES OF THE COFFERDAM WITH OUTWARD EDGE OF SHEETING MINIMUM 4-FEET FROM TOE OF COFFERDAM. THE DRAPED PORTION OF PLASTIC SHEETING SHALL BE PINNED TO THE CHANNEL BED BY MINIMUM TWO ROWS OF STANDARD SANDBAGS.
- THE CONSTRUCTION SIDE EDGE OF PLASTIC SHEETING SHALL BE TOED INTO THE CHANNEL BED MINIMUM 1-FT. TOEING IN THE OUTWARD EDGE OF PLASTIC SHEETING SHALL OCCUR AFTER THE COFFERDAM IS CLOSED TO PREVENT TURBIDITY RELEASE TO THE WATERWAY.
- THE TERMINAL ENDS OF BULK BAG COFFERDAM, WHERE IT CONNECTS TO CHANNEL BANK OR HIGH GROUND, SHALL BE SEALED WITH PLASTIC SHEETING AND STANDARD SANDBAGS.
- BULK BAGS SHALL BE CUBE-SHAPED POLYPROPYLENE WOVEN FABRIC BAGS WITH FULLY OPEN TOP, FLAT BOTTOM, FOUR LOOPS, MINIMUM 2-TON WEIGHT CAPACITY, MINIMUM 5:1 SAFETY FACTOR.
- PLASTIC SHEETING SHALL BE MINIMUM 6-MIL THICKNESS. ROLL LENGTH SHALL BE LONG ENOUGH TO ENSURE THAT ENTIRE LENGTH OF COFFERDAM WILL BE COVERED WITHOUT A SEAM. MINIMUM 12-FT WIDE ROLL SHALL BE USED FOR SINGLE LAYER BULK BAG COFFERDAM. MINIMUM 16-FT WIDE ROLL SHALL BE USED FOR 2-LAYER STACKED BULK BAG COFFERDAM.
- BULK BAG COFFERDAM SHALL BE COMPLETELY REMOVED AFTER CONSTRUCTION IS COMPLETED AND TURBIDITY HAS BEEN REMOVED.
- CONTENTS OF BULK BAGS SHALL NOT BE EMPTIED ONSITE.
- MEASUREMENT AND PAYMENT FOR BULK BAG COFFERDAM, SAND BAGS, PLASTIC SHEETING, WASHED GRAVEL PLACEMENT, MAINTENANCE AND REMOVAL OF ALL MATERIALS SHALL BE INCIDENTAL TO THE LUMP SUM ALL INCLUSIVE COST FOR DIVERSION AND DEWATERING.
- ALTERNATE COFFERDAM MATERIALS AND CONFIGURATIONS MAY BE ALLOWED BUT SHALL NOT BE IMPLEMENTED WITHOUT REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND/OR VENDOR CUT SHEETS FOR SUBSTITUTIONS.



1
6,7 TYPICAL DETAIL - COFFERDAM
NOT TO SCALE

Preliminary
Not for Construction

EROSION CONTROL INSPECTION REQUIRED
BEFORE YOU BEGIN ANY SITEWORK



2
6 TYPICAL DETAIL - SILT FENCE
NOT TO SCALE

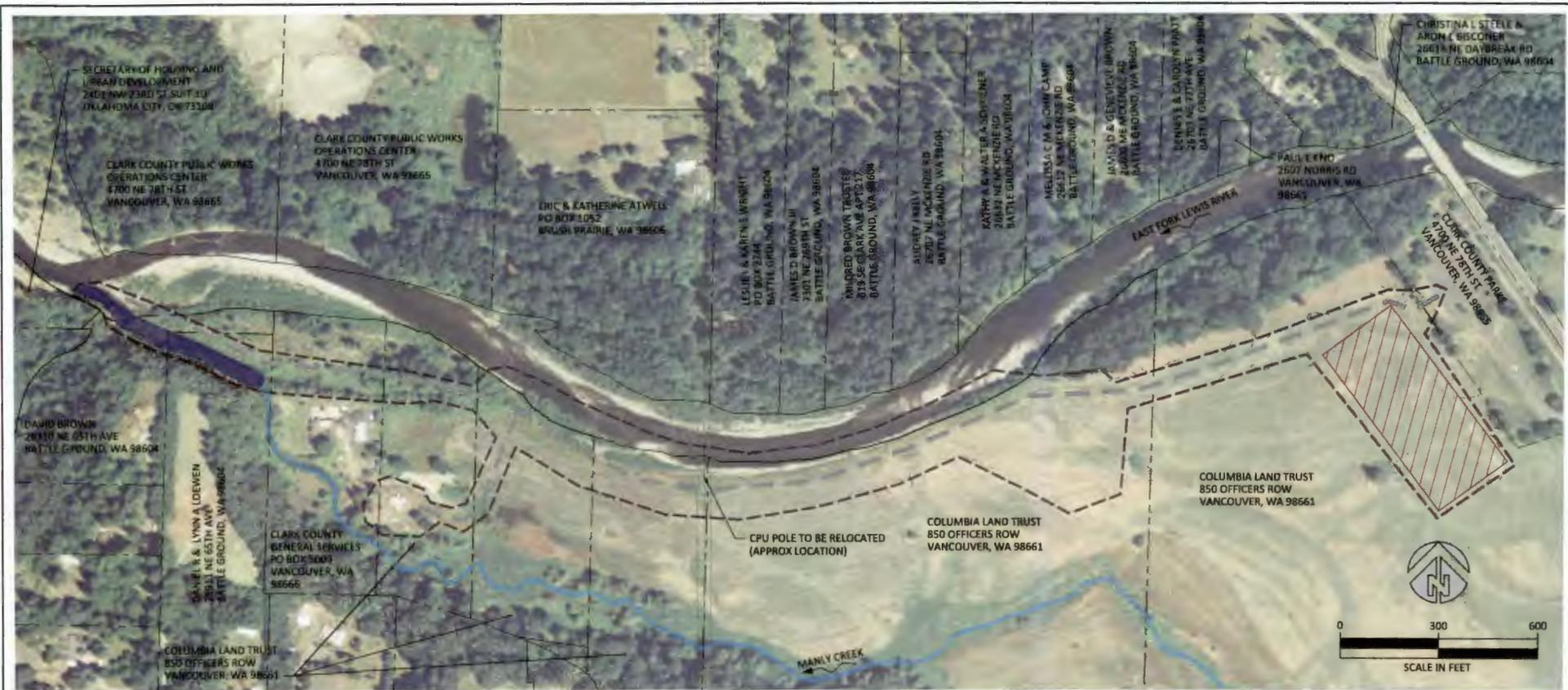
NO.	BY	DATE	REVISION DESCRIPTION

NS	GJ, CA, BN	CA, GJ
DRAWN	DESIGNED	CHECKED
BN	4/8/16	160213
APPROVED	DATE	PROJECT

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EROSION CONTROL DETAILS



LEGEND

-  EXISTING CONTOURS
-  TAXLOTS
-  TEMPORARY ACCESS
-  TEMPORARY STAGING
-  LIMITS OF DISTURBANCE
-  OVERHEAD POWER (APPROX LOCATION)
-  EXISTING BACKWATER AREA
-  MANLY CREEK CHANNEL (APPROX LOCATION)

TEMPORARY BENCHMARKS

NOTE: BENCHMARKS LISTED ARE FROM 2011 PLANS. ADDITIONAL SURVEY WILL BE PERFORMED PRIOR TO FINAL PLANS.

REBAR WITH CAP SET BY RUSSELL LAWRENCE, PE

BM1	76.59'	109' W OF POWER POLE
BM2	75.79'	210' E OF POWER POLE
BM3	70.94'	IN BANK NEAR ROOTWAD

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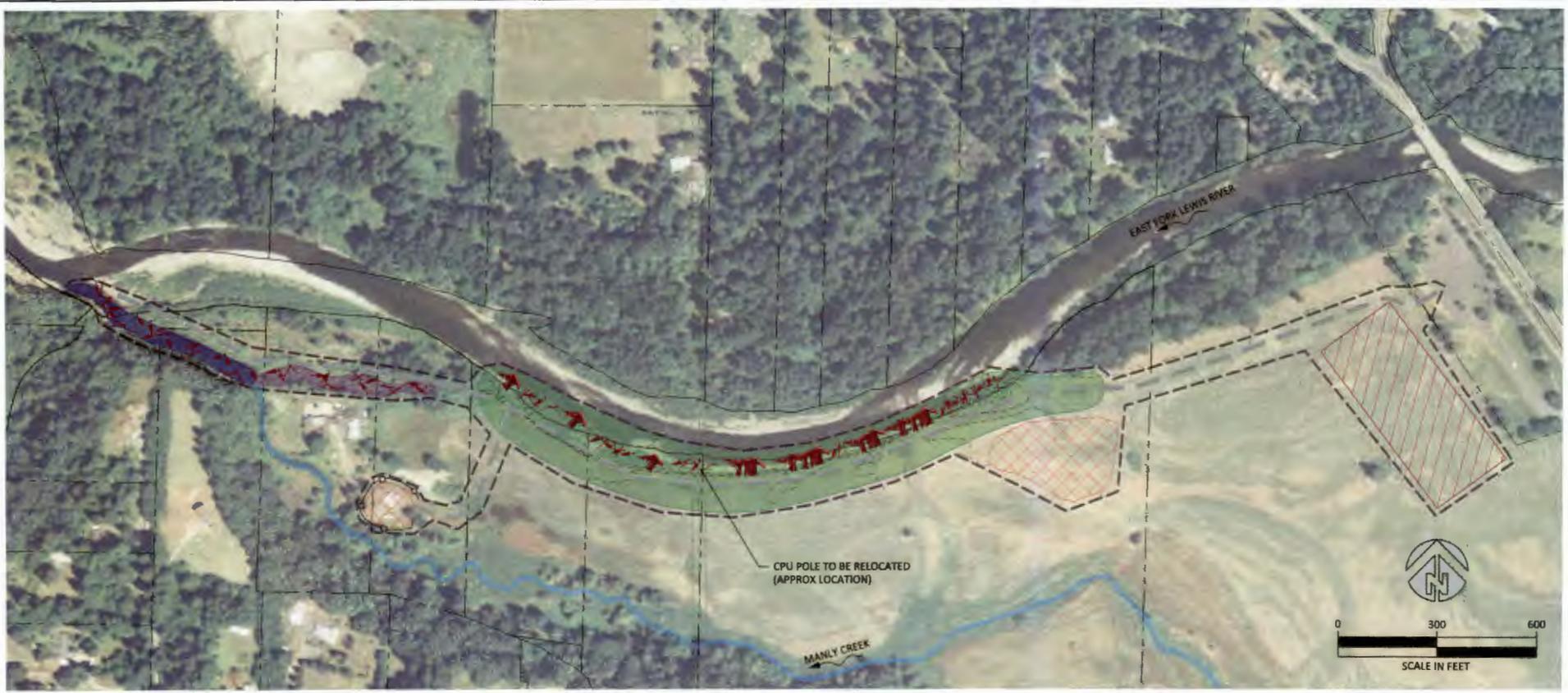
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**EXISTING CONDITIONS, ACCESS
 AND STAGING**

SHEET
5 of 10



LEGEND

- EXISTING CONTOURS
- TAXLOTS
- TEMPORARY ACCESS
- TEMPORARY STAGING
- LIMITS OF DISTURBANCE
- OVERHEAD POWER (APPROX LOCATION)
- TEMPORARY COFFERDAM $\frac{1}{4}$
- TEMPORARY SILT FENCE $\frac{2}{4}$

- EXISTING BACKWATER AREA
- MANLY CREEK CHANNEL (APPROX LOCATION)
- MAINSTEM BANK ENHANCEMENT AREA, SEE SHEET 7
- BACKWATER ENHANCEMENT AREA, SEE SHEET 8
- ON-SITE SPOILS DISPOSAL LOCATION
- INDIVIDUAL LARGE WOOD PLACEMENT
- WHOLE TREE PLACEMENT
- MAINSTEM LOG STRUCTURE, SEE SHEET 7

Preliminary
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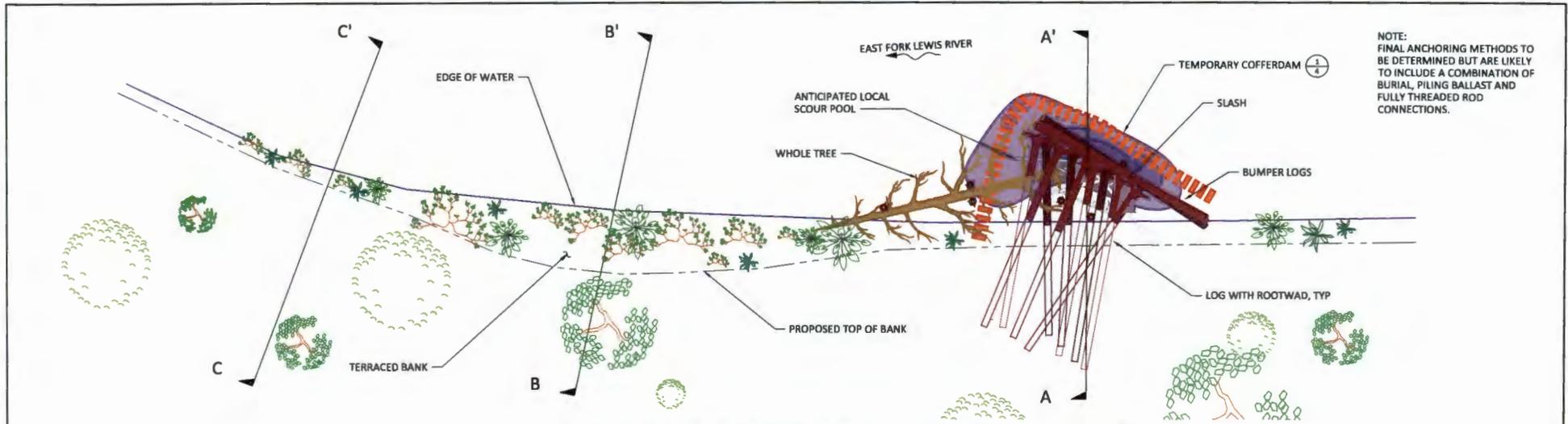
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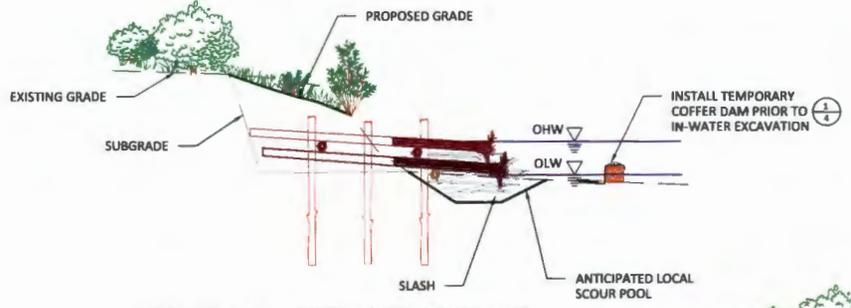
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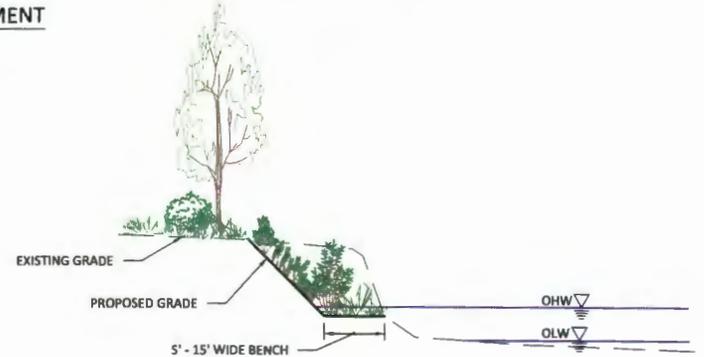
PROPOSED CONDITIONS



TYPICAL PLAN VIEW - MAINSTEM BANK ENHANCEMENT



SECTION A-A' - LARGE WOOD STRUCTURE



SECTION B-B' - TERRACED BANK



SECTION C-C' - SLOPED BANK

TYPICAL SECTION VIEWS - MAINSTEM BANK ENHANCEMENT

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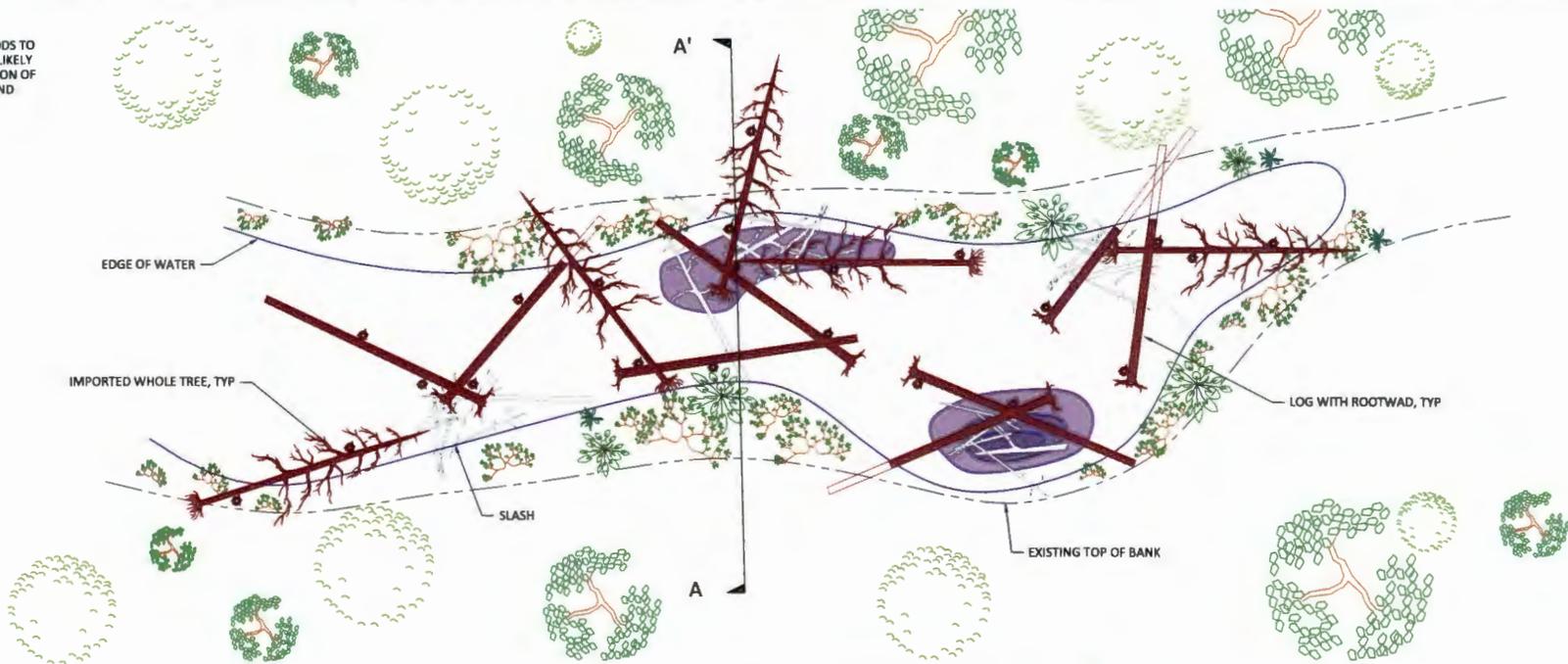
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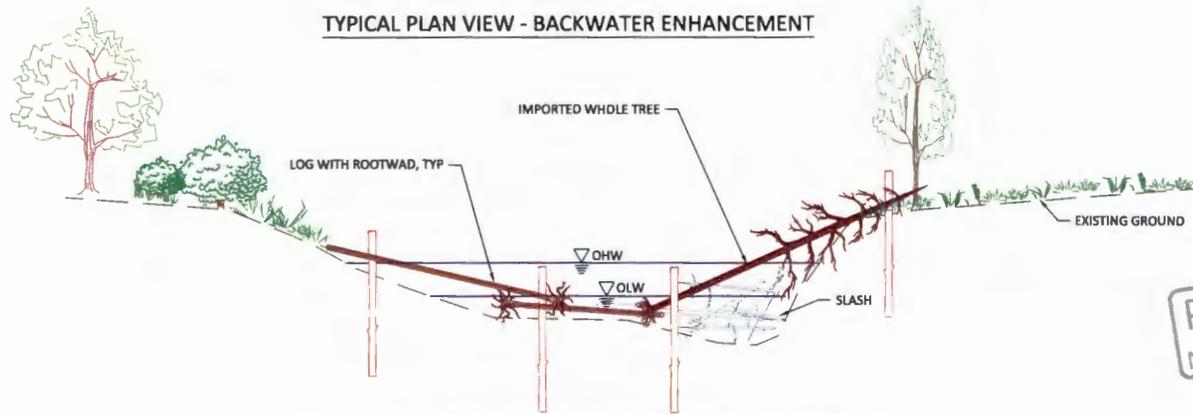
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TYPICAL MAINSTEM
ENHANCEMENT
PLAN AND SECTIONS

NOTE:
FINAL ANCHORING METHODS TO
BE DETERMINED BUT ARE LIKELY
TO INCLUDE A COMBINATION OF
BURIAL, PLUNG BALLAST AND
FULLY THREADED ROD
CONNECTIONS.



TYPICAL PLAN VIEW - BACKWATER ENHANCEMENT



TYPICAL SECTION VIEW A-A' - BACKWATER ENHANCEMENT

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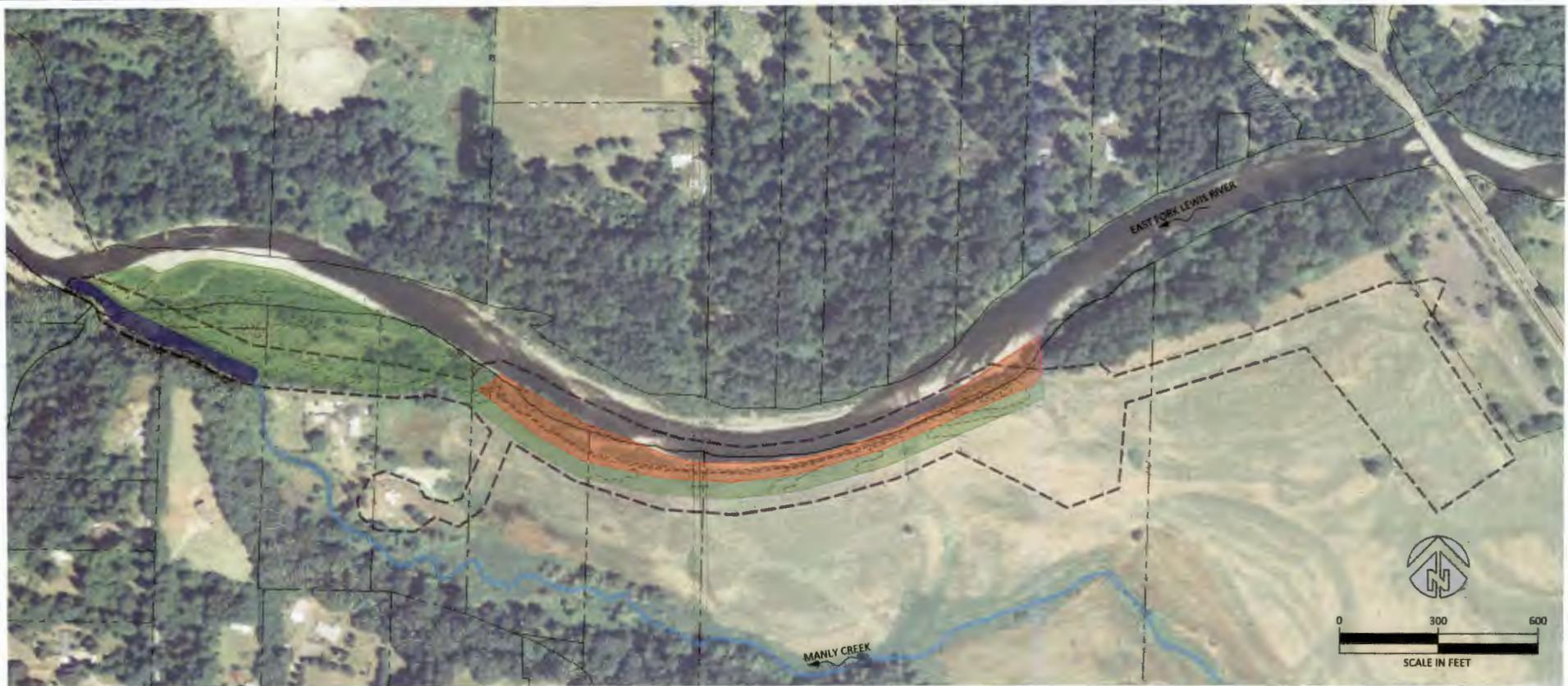
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TYPICAL BACKWATER
ENHANCEMENT
PLAN AND SECTION

SHEET
8 OF 10



LEGEND

- EXISTING CONTOURS
- TAXLOTS
- LIMITS OF DISTURBANCE
- OVERHEAD POWER (APPROX LOCATION)
- BANK REVEGETATION AREA (2.9 ACRES)
- RIPARIAN REVEGETATION AREA (8.1 ACRES)
- EXISTING BACKWATER AREA
- MANLY CREEK CHANNEL (APPROX LOCATION)

NOTE:

SEE SHEET 10 FOR REVEGETATION
DETAILS AND PLANTING PLAN

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REVEGETATION PLAN

SHEET
9 of 10

PRELIMINARY PLANTING PLAN

PROVIDED BY CLARK COUNTY AND CLARK PUBLIC UTILITIES

SEED MIXES

Wetland areas: 50lb per acre			
Botanical Name	Common Name		% By Weight
<i>Agrostis exarata</i>	Spike bentgrass		0.5%
<i>Deschampsia cespitosa</i>	Tufted hairgrass		2.5%
<i>Glyceria occidentalis</i>	Western mangrass		25.0%
<i>Juncus effusus</i>	Soft rush		8.0%
<i>Beckmannia syzigachne</i>	Slough grass		4.0%
<i>Alopecurus geniculatus</i>	Water foxtail		15.0%
<i>Hordeum brachyantherum</i>	Meadow barley		45.0%

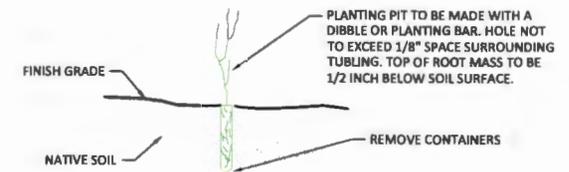
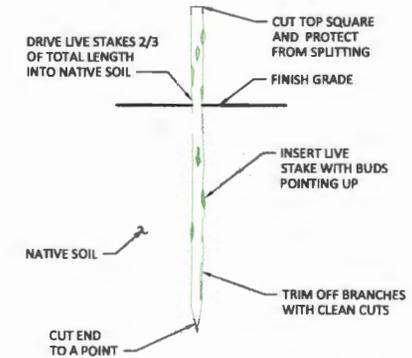
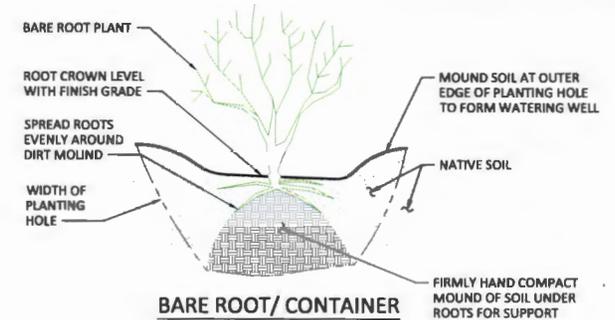
Upland/Spoils areas: 15lb per acre			
Botanical Name	Common Name		% By Weight
<i>Elymus glaucus</i>	Blue wildrye		50.0%
<i>Agrostis exarata</i>	Spike bentgrass		10.0%
<i>Bromus carinatus</i>	California brome		10.0%
<i>Festuca idahoensis</i>	Idaho fescue		30.0%

All disturbed areas:			
Botanical Name	Common Name		Application Rate
<i>Hordeum vulgare var Pabo</i>	Pabo barley		50lbs/ac

WOODY PLANTINGS

Riparian areas			
Botanical Name	Common Name	Stock	Density
<i>Fraxinus latifolia</i>	Oregon ash	Container	1600 plants/acre
<i>Populus trichocarpa</i>	Black cottonwood	Container	1600 plants/acre
<i>Thuja plicata</i>	Western red cedar	Container	1600 plants/acre
<i>Alnus rubra</i>	Red alder	Container	1600 plants/acre
<i>Acer macrophyllum</i>	Bigleaf maple	Container	1600 plants/acre
<i>Pseudotsuga menziesii</i>	Douglas fir	Container	1600 plants/acre
<i>Salix spp</i>	Willow	Container	1600 plants/acre
<i>Cornus sericea</i>	Red osier dogwood	Container	1600 plants/acre
<i>Physocarpus capitatus</i>	Pacific ninebark	Container	1600 plants/acre
<i>Pyrus fusca</i>	Pacific crabapple	Container	1600 plants/acre
<i>Rhamnus purshiana</i>	Cascara buckthorn	Container	1600 plants/acre
<i>Crataegus douglasii</i>	Black hawthorn	Container	1600 plants/acre

Bank stabilization areas			
Botanical Name	Common Name	Stock	Density
<i>Salix spp</i>	Willow	Container/ live cuttings	1900 plants/acre
<i>Cornus stolonifera</i>	Red osier dogwood	Container/ live cuttings	1900 plants/acre
<i>Physocarpus capitatus</i>	Pacific ninebark	Container/ live cuttings	1900 plants/acre
<i>Populus trichocarpa</i>	Black cottonwood	Container/ live cuttings	1900 plants/acre
<i>Fraxinus latifolia</i>	Oregon ash	Container/ live cuttings	1900 plants/acre
<i>Thuja plicata</i>	Western red cedar	Container/ live cuttings	1900 plants/acre
<i>Alnus rubra</i>	Red alder	Container/ live cuttings	1900 plants/acre



Preliminary
Not for Construction

3 REVEGETATION DETAILS
9 NOT TO SCALE

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REVEGETATION DETAILS

SHEET

10 of 10