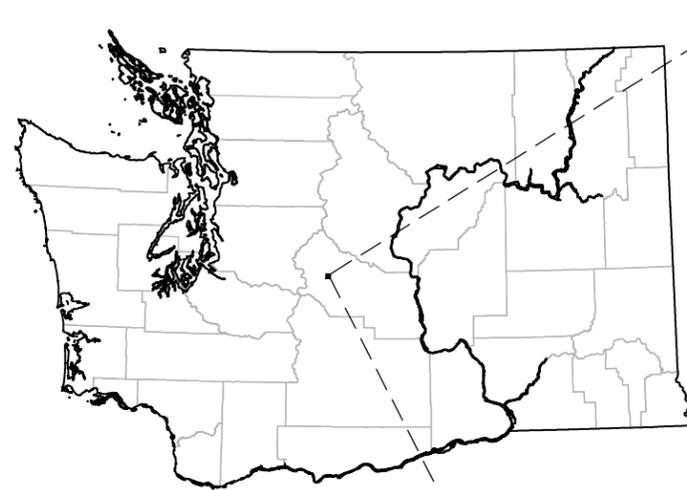


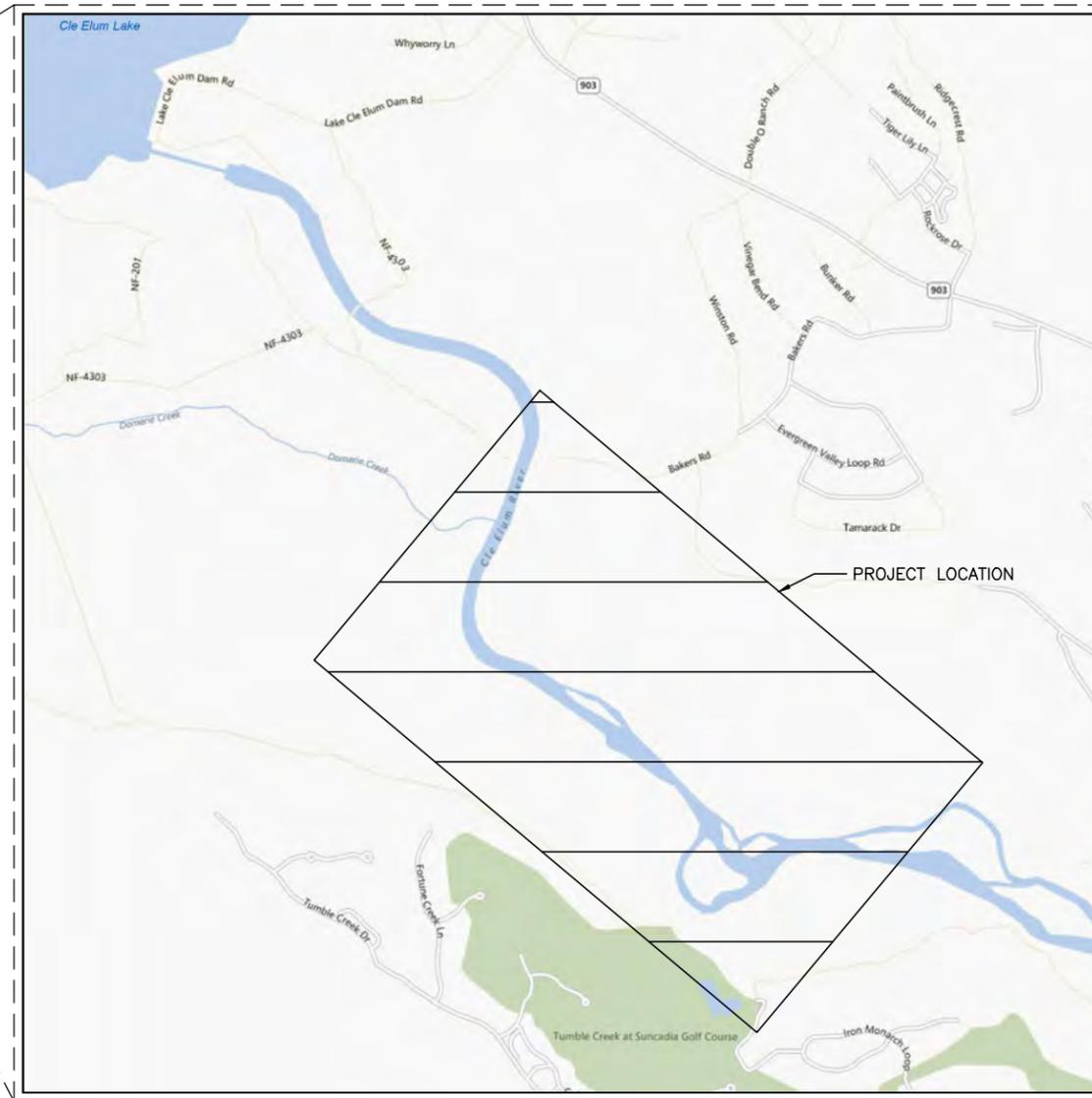
KITTITAS CONSERVATION TRUST

CLE ELUM RIVER RESTORATION

PHASE II



WASHINGTON STATE
SCALE: 1"=50 MILES



VICINITY MAP
SCALE: 1"=1000'



DRAWING LIST

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES
3	GENERAL NOTES AND ELEMENT SCHEDULE
4	OVERALL SITE MAP
5	SITE PLAN 1
6	SITE PLAN 2
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10	SITE PLAN 6
11	ELJ PLAN AND PROFILE
12	BACKFILLED ELJ PLAN AND PROFILE
13	ELJ LAYERING PLAN 1
14	ELJ LAYERING PLAN 2
15	DETAILS 1
16	DETAILS 2
17	PROFILE CHANNELS B AND C1
18	PROFILE CHANNEL D
19	PROFILE CHANNEL E
20	PROFILE CHANNEL H
21	CROSS-SECTIONS
22	CROSS-SECTIONS 2

CONTACT INFORMATION

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ROSLYN, WA 98941
(509) 649-2951



Timothy B. Abbe



0 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



NAME OR INITIALS AND DATE	GEOGRAPHIC INFORMATION
DESIGNED ME, TA, MH	LATITUDE 47°14'00" N
CHECKED TA, MH	LONGITUDE 121°03'30" W
DRAWN BLS	TN/SC/RG T20N/S14/R14E
CHECKED MH, ME, TA	DATE

CLE ELUM RIVER RESTORATION
PHASE II

COVER SHEET

1
SHEET 1 OF 22

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Jun-14-2013 FINAL DRAWINGS

GENERAL NOTES

1. THESE DESIGNS AND DRAWINGS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF KITTITAS CONSERVATION TRUST (KCT) HEREAFTER REFERRED TO AS "OWNER" AND "CONTRACTOR" AND THEIR AUTHORIZED AGENTS.
2. ANY USE, ALTERATION, DELETION, OR EDITING OF THIS DOCUMENT WITHOUT EXPLICIT WRITTEN PERMISSION FROM NATURAL SYSTEMS DESIGN, THE ENGINEER, IS STRICTLY PROHIBITED. ANY OTHER UNAUTHORIZED USE OF THIS DOCUMENT IS PROHIBITED.
3. THE DRAWINGS CONTAINED WITHIN SHOULD NOT BE APPLIED FOR ANY PURPOSE OR PROJECT EXCEPT THE ONE SPECIFIED; SPECIFICALLY THE CONSTRUCTION OF THE RIVER ENHANCEMENT MEASURES ON CLE ELUM RIVER AS SHOWN IN THE FOLLOWING PLAN SET.
4. THIS PROJECT IS ANTICIPATED TO BE CONTRACTED IN FIVE SEPARATE CONTRACTS; (1) LARGE WOOD PROCUREMENT AND PREPARATION, (2) ROCK COLLAR AND RACKING BUNDLE MANUFACTURING/DELIVERY, (3) ACCESS ROAD CONSTRUCTION, CLEARING AND GRUBBING (INCLUDING SLASH AND WOODY DEBRIS COLLECTION AND PLACEMENT), LOGJAM CONSTRUCTION, SIDE CHANNEL EXCAVATION (INCLUDING SORTING OF MATERIALS AS DIRECTED), CONSTRUCTION OF GRAVEL NOURISHMENT BARS AND TOPSOIL PLACEMENT, (4) HELICOPTER LOGJAM ASSEMBLY, (5) PLANTING.
5. CONTRACTOR WILL COORDINATE ALL ACTIVITY WITH OWNER AND ONLY ACCESS PROJECT SITE WITH WRITTEN DATE SPECIFIC AUTHORIZATION OF OWNER.
6. MANUFACTURING/DELIVERY CONTRACTOR WILL COORDINATE WITH OWNER TO DELIVER MATERIALS TO STAGING AREAS AS SPECIFIED IN THE FOLLOWING CONTRACT DOCUMENTS.
7. HELICOPTER ASSEMBLY CONTRACTOR WILL COORDINATE WITH OWNER TO PLACE MATERIALS AS SPECIFIED IN THE FOLLOWING CONTRACT DOCUMENTS. PLACEMENT OF ELJS WILL REQUIRE A MINIMUM HELICOPTER LIFT CAPACITY OF 10,000LBS.
8. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB SITE DIMENSIONS OR CONDITIONS. SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. THE OWNER AND APPROPRIATE REGULATORY AGENCIES WILL BE NOTIFIED OF ANY CHANGE RESULTING IN MORE THAN A 10% DESIGN CHANGE OF PROPOSED FOOTPRINT OR SIGNIFICANTLY AFFECTING THE INTENDED BENEFIT OR FUNCTION OF A PROPOSED PROJECT ELEMENT.
9. THE LOCATION OF ALL FEATURES SHOWN IS APPROXIMATE. FINAL LOCATIONS OF PROJECT ELEMENTS SHALL BE DETERMINED BY THE ENGINEER AT TIME OF CONSTRUCTION TO ACCOMMODATE SITE CONDITIONS.
10. ALL WORK BELOW THE ORDINARY HIGH WATER MARK WILL BE COMPLETED WITHIN THE IN-STREAM CONSTRUCTION WINDOW FOR CLE ELUM RIVER WHICH BEGINS AUGUST ____ AND ENDS SEPTEMBER ____ UNLESS APPROPRIATE EXTENSIONS ARE OBTAINED FROM REGULATORY AUTHORITIES.
11. ELEVATIONS FOR THIS PROJECT AS PROVIDED BY THE * OWNER, ARE REPRESENTATIVE OF 2012 CONDITIONS. THE VERTICAL DATUM IS NAVD 88 (FT). THE HORIZONTAL DATUM IS NAD83 STATE PLANE WASHINGTON SOUTH ZONE (FT).
12. IN GENERAL, THE PROPOSED ENHANCEMENTS ARE INTENDED TO RESULT IN IMPROVED AQUATIC HABITAT CONDITIONS. HOWEVER, LOCAL CHANNEL EROSION, CHANNEL MIGRATION AND/OR AVULSIONS CAN BE EXPECTED TO OCCUR TO SOME DEGREE OVER TIME. THESE CHANNEL PROCESSES ARE NATURAL AND APPROPRIATE FOR THIS RIVER SYSTEM.
13. EVERY REASONABLE EFFORT SHALL BE MADE TO CONDUCT THE ACTIVITIES SHOWN IN THESE DRAWINGS, IN A MANNER THAT MINIMIZES THE ADVERSE IMPACT ON WATER QUALITY, FISH AND WILDLIFE, VEGETATION AND THE NATURAL ENVIRONMENT.
14. ALL ACTIVITIES THAT INVOLVE WORK ADJACENT TO OR WITHIN THE WETTED CHANNEL SHALL, AT ALL TIMES, REMAIN CONSISTENT WITH ALL APPLICABLE WATER QUALITY STANDARDS, EFFLUENT LIMITATION AND STANDARDS OF PERFORMANCE, PROHIBITIONS, PRETREATMENT STANDARDS, AND MANAGEMENT PRACTICES ESTABLISHED PURSUANT TO THE CLEAN WATER ACT (P.L. 92-500; 86 STATE, 816) OR PURSUANT TO APPLICABLE STATE AND LOCAL LAW (SECTION 404).
15. ALL WORK THAT DISTURBS THE SUBSTRATE, BANK, OR SHORE OF A WATERS OF THE STATE THAT CONTAINS FISH LIFE SHALL BE CONDUCTED ONLY DURING THE WORK PERIOD FOR THAT WATERBODY AS INDICATED IN THE MOST RECENT WASHINGTON DEPARTMENT FISH AND WILDLIFE (WDFW) ALLOWABLE WORK PERIODS FOR HYDRAULIC PROJECTS IN FRESHWATER FOR THE PROJECT AREA. THOSE PORTIONS OF THE PROJECT WORK THAT OCCUR OUTSIDE OR ABOVE THE ORDINARY HIGH WATER MARK (ABOVE THE CORPS JURISDICTIONAL LINE) ARE NOT SUBJECT TO THE WORK PERIODS DESCRIBED ABOVE.
16. FOLLOWING CONSTRUCTION, SITE RESTORATION WILL INCLUDE ESTABLISHING LONG-TERM EROSION PROTECTION MEASURES. THESE MEASURES WILL INCLUDE PLANTINGS, EROSION CONTROL FABRIC, SEED, AND MULCH. EQUIPMENT AND EXCESS SUPPLIES WILL BE REMOVED AND THE WORK AREA WILL BE CLEANED. MAINTENANCE ACTIVITIES FOR THE NEWLY CONSTRUCTED RESTORATION PROJECTS ARE ANTICIPATED PERIODICALLY.
17. ALL WORK WILL BE IN COMPLIANCE WITH PERMIT CONDITIONS ISSUED BY VARIOUS REGULATORY AGENCIES AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE COPIES OF ALL PERMITS ON THE JOB SITE AND UNDERSTAND ALL PERMIT CONDITIONS.
18. ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF THE KCT. IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD PLANS FOR CONSTRUCTION OF ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, CURRENT EDITION UNLESS NOTED OTHERWISE. ALL REFERENCES TO THE "STANDARD SPECIFICATIONS" SHALL MEAN THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS, CURRENT EDITION. CONSTRUCTION NOT SPECIFIED ON THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS OBLIGATED TO BE FAMILIAR WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS NOT DISCUSSED IN THE GENERAL NOTES. THE CONTRACT SPECIAL PROVISIONS SHALL SUPERSEDE THOSE OF THE STANDARD SPECIFICATIONS WHERE DISCREPANCIES OCCUR.
19. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 A.M. AND 6:30 P.M. UNLESS PRIOR APPROVAL IS RECEIVED FROM THE KCT.
20. THE CONTRACTOR SHALL PROVIDE, PLACE, AND MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, PILOT CAR, OR OTHER DEVICES NECESSARY TO CONTROL TRAFFIC THROUGH THE CONSTRUCTION AREA AND FOR PUBLIC SAFETY IN ACCORDANCE WITH THESE PLANS, THE STANDARD SPECIFICATIONS, FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
21. CONSTRUCTION LIMITS SHOWN ON THE PLANS DELINEATE BOUNDARIES FOR THE CONTRACTOR'S OPERATIONS. CONSTRUCTION LIMIT FENCING SHALL BE ERECTED ALONG THESE BOUNDARIES PRIOR TO COMMENCEMENT OF CONSTRUCTION AS NECESSARY AT THE DISCRETION OF THE KCT. WITHIN THE CONSTRUCTION LIMITS, EXISTING VEGETATION SHALL BE PROTECTED TO THE EXTENT FEASIBLE. ALL EXISTING TREES SHALL BE PROTECTED UNLESS SHOWN ON THE PLANS TO BE REMOVED.
22. ALL EXTERNAL GREASE AND OIL SHALL BE PRESSURE-WASHED OFF THE EQUIPMENT PRIOR TO TRANSPORT TO THE SITE.
23. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND
24. MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
25. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE OPENING OF BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, THE EQUIPMENT AND FACILITIES NEEDED PRIMARILY FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT HIMSELF WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE HIM FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK.
26. THE CONTRACTOR SHALL HAVE AN EMERGENCY SPILL KIT ONSITE AT ALL TIMES.
27. THE CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE CONTRACT DOCUMENTS AND FOR ALL SUBMITTALS REQUIRED FOR KCT REVIEW AND ACCEPTANCE.
28. THE CONSULTANT TEAM AND OVERSEEING ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS AND SPECIFICATIONS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE SUBMITTED IN WRITING AND MUST BE APPROVED BY THE CONSULTANT TEAM AND OVERSEEING ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS.
29. NO NATIVE TREES OR WETLAND VEGETATION SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE PLANS, OR AS DIRECTLY SPECIFIED ON-SITE BY THE PROJECT MANAGEMENT STAFF. ALL TREES CONFLICTING WITH GRADING SHALL BE TRIMMED. NO GRADING SHALL TAKE PLACE WITHIN THE DRIP LINE OF TREES NOT TO BE REMOVED UNLESS OTHERWISE APPROVED.
30. IF, DURING CONSTRUCTION, ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AND THE STATE OFFICE OF HISTORIC PRESERVATION, KCT AND A QUALIFIED ARCHEOLOGIST SHALL BE NOTIFIED IMMEDIATELY.
31. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUID, SEDIMENTS, SEDIMENT-LADEN WATER, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE RIVER.
32. THE CONSTRUCTION SEQUENCING PLAN AND WATER MANAGEMENT PLAN SHALL CONSIDER AND PROVIDE PROVISIONS FOR FISH EXCLUSION FROM ACTIVE CONSTRUCTION ZONES. FISH WITHIN THE WORK AREA SHALL BE REMOVED AND RELOCATED TO AREAS NOT IMPACTED BY CONSTRUCTION ACTIVITIES.

SURVEY NOTES

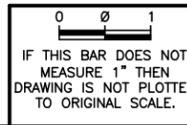
1. UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO KCT A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE KCT AND ENGINEER, REFLECTING THE AS-CONSTRUCTED MODIFICATIONS.
3. ELEVATIONS SHOWN ON THE PLANS FOR TOPS OF BANKS, THALWEGS, GRADE CONTROLS, ETC., ARE BASED UPON THE TOPOGRAPHIC INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL NECESSARY SURFACE ELEVATIONS IN THE FIELD AND NOTIFY THE KCT OF ANY DISCREPANCIES, WHICH MIGHT AFFECT PROPER OPERATION OF THE NEW FACILITIES BEFORE BREAKING GROUND AND PRIOR TO FACILITY INSTALLATION. THE KCT SHALL BE CONTACTED IN THE EVENT ELEVATIONS ARE INCORRECT SO THAT THE PROPER ADJUSTMENTS CAN BE MADE PRIOR TO THE INSTALLATION OF THE FACILITIES, AS SET FORTH IN THE SPECIAL PROVISIONS.

PERMIT NOTES

1. THE CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY THE KCT, AS MAY BE NECESSARY TO COMPLY WITH STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK. SEE SPECIAL PROVISIONS.
2. PERMIT CONDITIONS MAY CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF OFF-SITE TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED ON A FREQUENT BASIS BY THE PROJECT MANAGEMENT AND INSPECTION STAFF ON-SITE. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED AMOUNT AND/OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTAIN SEDIMENT ON-SITE.
3. THE CONTRACTOR SHALL FOLLOW PROVISIONS SET FORTH IN THE HPA, FOLLOW OTHER BMP'S TO CONTROL SEDIMENT AND MINIMIZE DISTURBANCE TO EXISTING VEGETATION.

*ELEVATIONS WERE DERIVED FROM AIRBORNE LIDAR WITH VARIABLE ACCURACY OF APPROXIMATELY 0.7 FEET VERTICALLY. CONTRACTOR IS RESPONSIBLE FOR BIDDING BASED ON ENCOUNTERING VARIABLE GROUND CONDITIONS AND STILL ACHIEVING SPECIFIED GRADING THAT ASSURES AT LEAST 12" OF FLOW INTO SIDE CHANNELS DURING BASE FLOW CONDITIONS (220 CFS).

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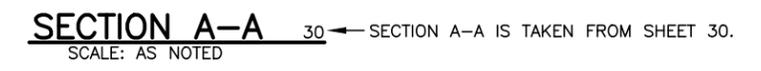
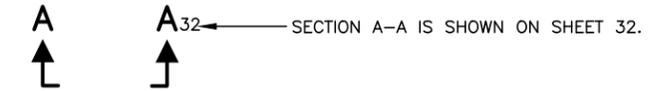
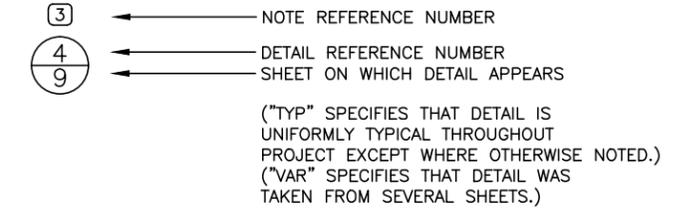
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CHECKED	TA, MH	LONGITUDE	121°03'30" W
DRAWN	BLS	TN/SC/RG	T20N/S14/R14E
CHECKED	MH, ME, TA	DATE	

**CLE ELUM RIVER RESTORATION
PHASE II**

GENERAL NOTES

Jun-14-2013 FINAL DRAWINGS

DETAIL AND SECTION REFERENCING



GENERAL NOTES (CONTINUED)

EROSION, SEDIMENT CONTROL AND WATER MANAGEMENT NOTES

1. THE WORK SHALL USE AND MAINTAIN APPROPRIATE EROSION AND SEDIMENT CONTROLS IN EFFECTIVE OPERATION CONDITION AND PERMANENTLY STABILIZE ALL EXPOSED SOIL AND OTHER FILLS, INCLUDING ANY WORK BELOW THE ORDINARY HIGH WATER MARK, AT THE EARLIEST PRACTICAL DATE USING NATIVE VEGETATION TO THE MAXIMUM EXTENT PRACTICAL. A SEDIMENT AND EROSION CONTROL PLAN WILL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL BY OWNER AND/OR THE ENGINEER BEFORE ANY CONSTRUCTION MAY BEGIN. THE SEDIMENT/EROSION CONTROL PLAN WILL IDENTIFY BEST MANAGEMENT PRACTICES TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
2. ACTIVITIES SHALL BE DESIGNED AND CONSTRUCTED TO AVOID AND MINIMIZE ADVERSE IMPACTS TO WATERS OF THE UNITED STATES TO THE MAXIMUM EXTENT PRACTICAL THROUGH THE USE OF PRACTICAL ALTERNATIVES. ALTERNATIVES THAT SHALL BE CONSIDERED INCLUDE THOSE THAT MINIMIZE THE NUMBER AND EXTENT OF IN-WATER WORK AND EQUIPMENT CROSSINGS OF WETTED CHANNELS.
3. AT NO TIME SHALL SEDIMENT LADEN WATER BE DISCHARGED OR PUMPED DIRECTLY INTO CLE ELLUM RIVER. WATER SHALL BE DISCHARGED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE PROJECT PERMITS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLAN AND IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE CONSTRUCTION. THE PLAN SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT PLAN FOR EASTERN WASHINGTON.
5. IF HIGH FLOW CONDITIONS THAT MAY CAUSE SILTATION OR EROSION ARE ENCOUNTERED DURING CONSTRUCTION, WORK SHALL BE STOPPED UNTIL THE FLOW SUBSIDES.
6. PERMIT CONDITIONS CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF EROSION AND TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED ON A FREQUENT BASIS BY THE PROJECT MANAGEMENT AND INSPECTION STAFF ON-SITE. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED AND /OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTAIN SEDIMENT ON-SITE.
7. IF AT ANY TIME AS A RESULT OF PROJECT ACTIVITIES, FISH ARE OBSERVED IN DISTRESS, A FISH KILL OCCURS, OR WATER QUALITY PROBLEMS DEVELOP (INCLUDING EQUIPMENT LEAKS OR SPILLS), OPERATIONS SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY. WASHINGTON DEPARTMENT OF FISH AND WILDLIFE AND WASHINGTON DEPARTMENT OF ECOLOGY SHALL BE CONTACTED IMMEDIATELY BY THE ENGINEER OR BY HIS/HER DESIGNEE. WORK SHALL NOT RESUME UNTIL FURTHER APPROVAL IS GIVEN BY THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE AND/OR WASHINGTON DEPARTMENT OF ECOLOGY.
8. MATERIAL SHALL NOT BE STORED OUTSIDE OF IDENTIFIED STAGING AREAS. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
9. CONTRACTOR SHALL LIMIT MACHINERY MOVEMENT TO CONSTRUCTION AREAS DEFINED ON SITE PLAN OR IDENTIFIED AS ACCEPTABLE BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
10. CONSTRUCTION LIMITS SHOWN ON THE PLAN DELINEATE BOUNDARIES FOR THE CONTRACTOR'S OPERATIONS.

CONSTRUCTION NOTES

1. CONTRACT DOCUMENTS REFER TO THESE PLANS.
2. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO COMPLETE ALL WORK AS INDICATED IN THE CONTRACT DOCUMENTS.
3. CONTRACTOR SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO TO PROCEEDING WITH THE CONSTRUCTION.
4. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO PROCEEDING WITH THE WORK.
5. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE BY THE OWNER OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
6. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
7. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
8. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUE SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THIS CONTRACT.
9. THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, ROADWAY, DRAINAGE WAYS, PRIVATE BRIDGE, CULVERTS, AND VEGETATION UNTIL SUCH ITEMS ARE TO BE DISTURBED OR REMOVED AS INDICATED ON THE CONTRACT DOCUMENTS.
10. THE CONTRACTOR SHALL KEEP THE JOB SITE CLEAN AND HAZARD FREE. CONTRACTOR SHALL DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH, FOR THE DURATION OF THE WORK. UPON COMPLETION OF WORK, CONTRACTOR SHALL REMOVE ALL MATERIAL AND EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY.
11. NOTES AND DETAILS ON THE PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES HEREIN.
12. DIMENSION CALLOUTS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE PLANS.
13. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF ALL CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURES, WORK, AND PUBLIC DURING CONSTRUCTION.
14. ASTM SPECIFICATIONS NOTED ON THE CONTRACT DOCUMENTS SHALL BE THE LATEST VERSION UNLESS OTHERWISE NOTED.

ELJ COORDINATES

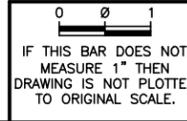
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ELJ 6.02	690361.2055	1503984.651
ELJ 5.99	690212.2852	1504018.053
ELJ 5.98	690266.5646	1504175.324
ELJ 5.90	689359.864	1504120.21
ELJ 5.68	690056.7702	1505441.116
ELJ 5.66	690134.8398	1505581.734

BALLASTED SNAG COORDINATES*

STRUCTURE #	NORTHING	EASTING
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S12	1503831.023	690705.9381
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P2	1502050.684	694866.3405
S1	1502093.609	694744.4363
S2	1502002.811	694372.2141
P3	1501872.037	694117.4121
P4	1501884.8	694111.2175
S3	1501637.012	693449.1238
S4	1501543.436	693220.1308
S5	1501352.984	692793.9155
S6	1501659.582	692206.5891
S7	1502083.887	692015.6169
S8	1502610.276	691557.978
S9	1503023.471	691338.0127
C6	1504666.995	689792.3961
C7	1504673.254	689811.7914
C5	1504655.984	689774.8733
C4	1504631.768	689754.5688
C3	1504591.802	689742.0585
S12	1504198.471	689551.511
S13	1504344.825	689575.1221
P5	1504000.207	689419.4797
P6	1503989.269	689393.5249
C1	1504559.223	689746.8529
C2	1504580.49	689727.4114
S14	1505350.369	689945.8317
S15	1505365.428	689929.0169
S16	1505381.948	689939.6427

* S = SINGLE SNAG; P = SNAGS PAIRED; C = SNAGS CLUSTERED

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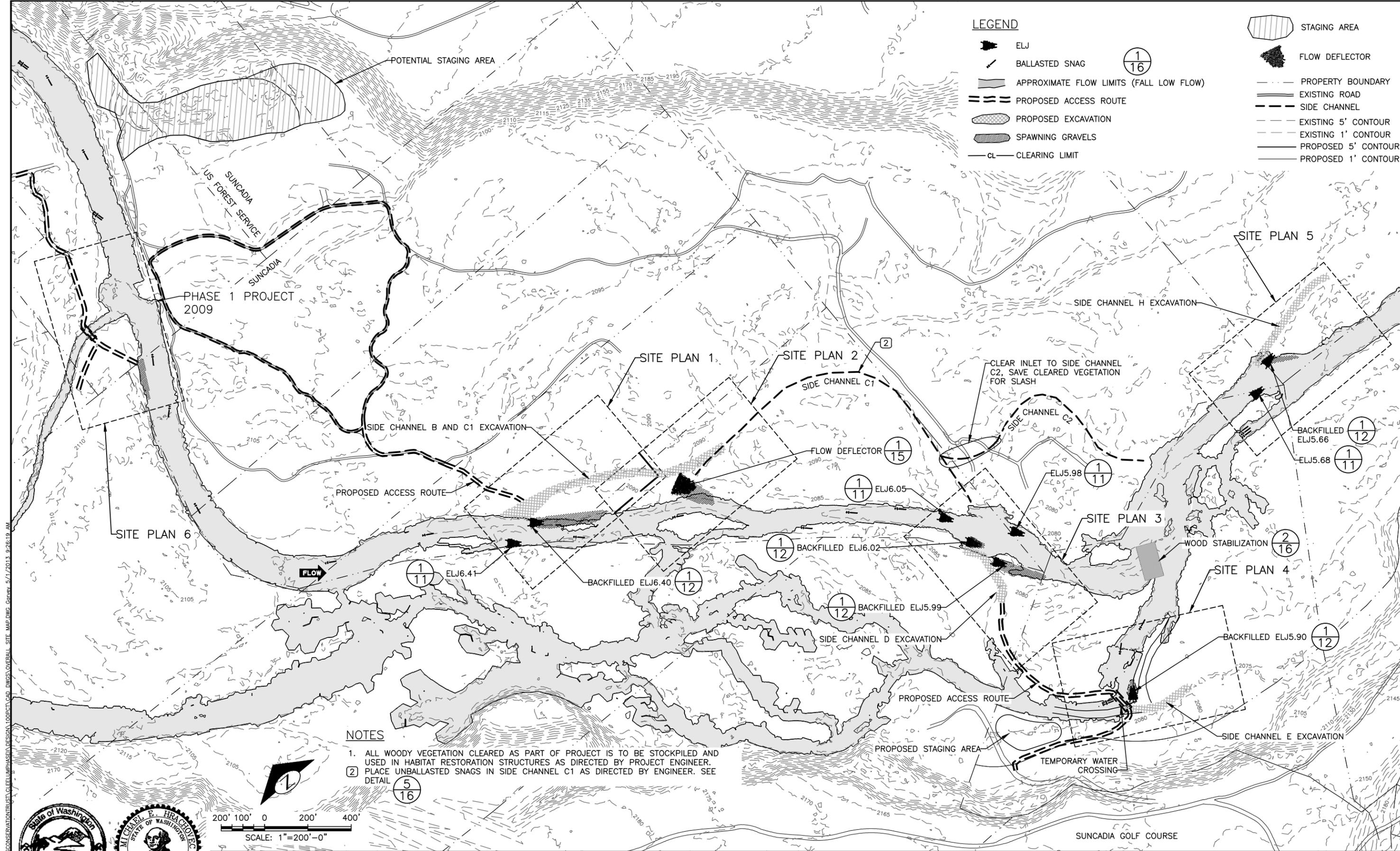


NAME OR INITIALS AND DATE	GEOGRAPHIC INFORMATION
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CHECKED: TA, MH	LONGITUDE: 121°03'30" W
DRAWN: BLS	TN/SC/RG: T20N/S14/R14E
CHECKED: MH, ME, TA	DATE:

CLE ELUM RIVER RESTORATION PHASE II

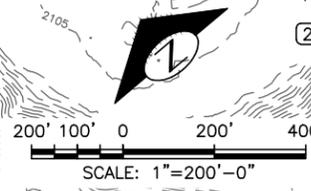
GENERAL NOTES AND ELEMENT SCHEDULE

Jun-14-2013 FINAL DRAWINGS



- LEGEND**
- ELJ
 - BALLASTED SNAG
 - APPROXIMATE FLOW LIMITS (FALL LOW FLOW)
 - PROPOSED ACCESS ROUTE
 - PROPOSED EXCAVATION
 - SPAWNING GRAVELS
 - CL CLEARING LIMIT
 - STAGING AREA
 - FLOW DEFLECTOR
 - PROPERTY BOUNDARY
 - EXISTING ROAD
 - SIDE CHANNEL
 - EXISTING 5' CONTOUR
 - EXISTING 1' CONTOUR
 - PROPOSED 5' CONTOUR
 - PROPOSED 1' CONTOUR

- NOTES**
1. ALL WOODY VEGETATION CLEARED AS PART OF PROJECT IS TO BE STOCKPILED AND USED IN HABITAT RESTORATION STRUCTURES AS DIRECTED BY PROJECT ENGINEER.
 2. PLACE UNBALLASTED SNAGS IN SIDE CHANNEL C1 AS DIRECTED BY ENGINEER. SEE DETAIL



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



NAME OR INITIALS AND DATE	GEOGRAPHIC INFORMATION
DESIGNED ME, TA, MH	LATITUDE 47°14'00" N
CHECKED TA, MH	LONGITUDE 121°03'30" W
DRAWN BLS	TN/SC/RG T20N/S14/R14E
CHECKED MH, ME, TA	DATE

CLE ELUM RIVER RESTORATION PHASE II

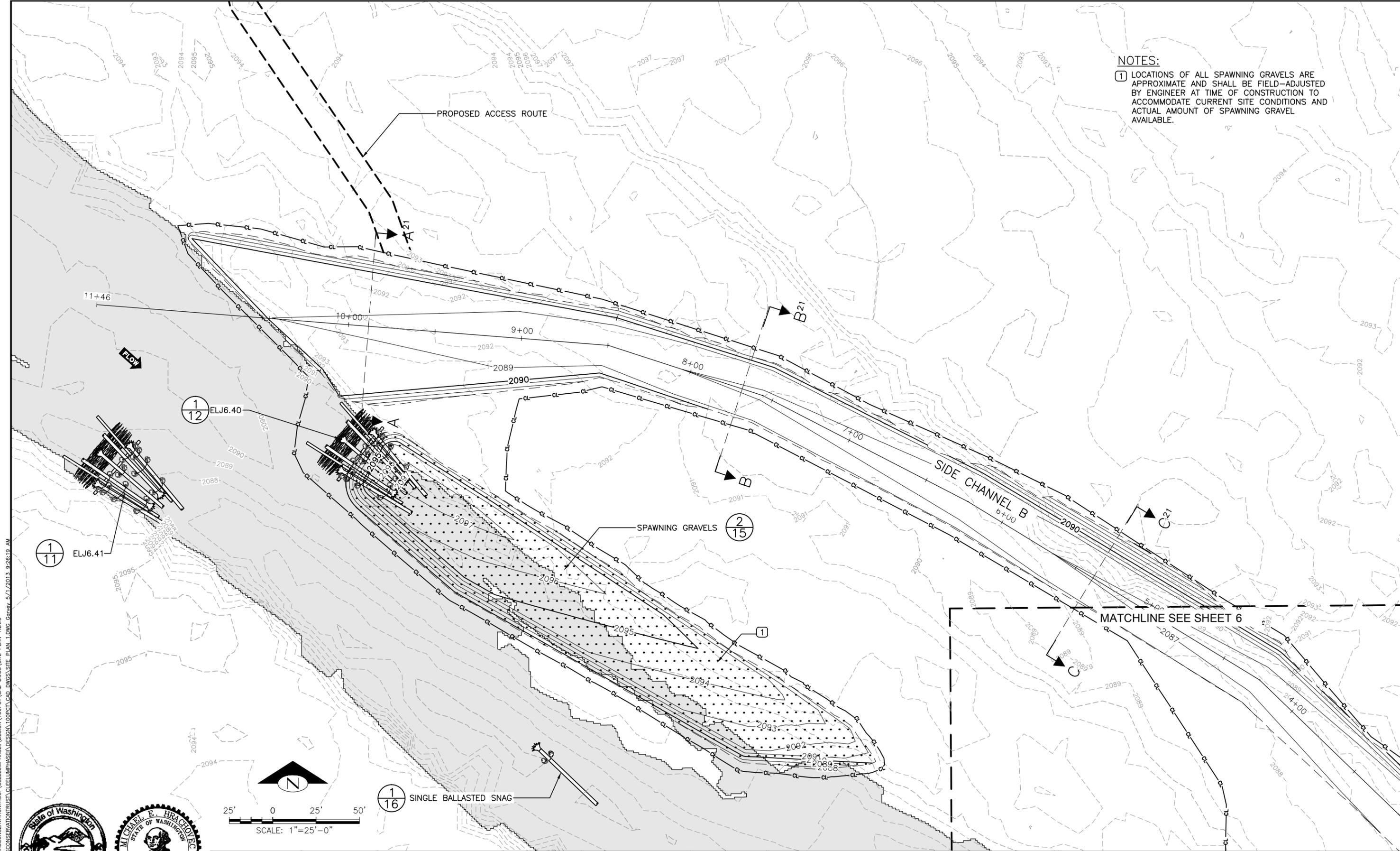
OVERALL SITE MAP

4
SHEET 4 OF 22

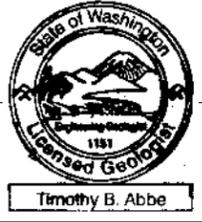
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FINAL DRAWINGS
Jun-14-2013

NOTES:
 ① LOCATIONS OF ALL SPAWNING GRAVELS ARE APPROXIMATE AND SHALL BE FIELD-ADJUSTED BY ENGINEER AT TIME OF CONSTRUCTION TO ACCOMMODATE CURRENT SITE CONDITIONS AND ACTUAL AMOUNT OF SPAWNING GRAVEL AVAILABLE.



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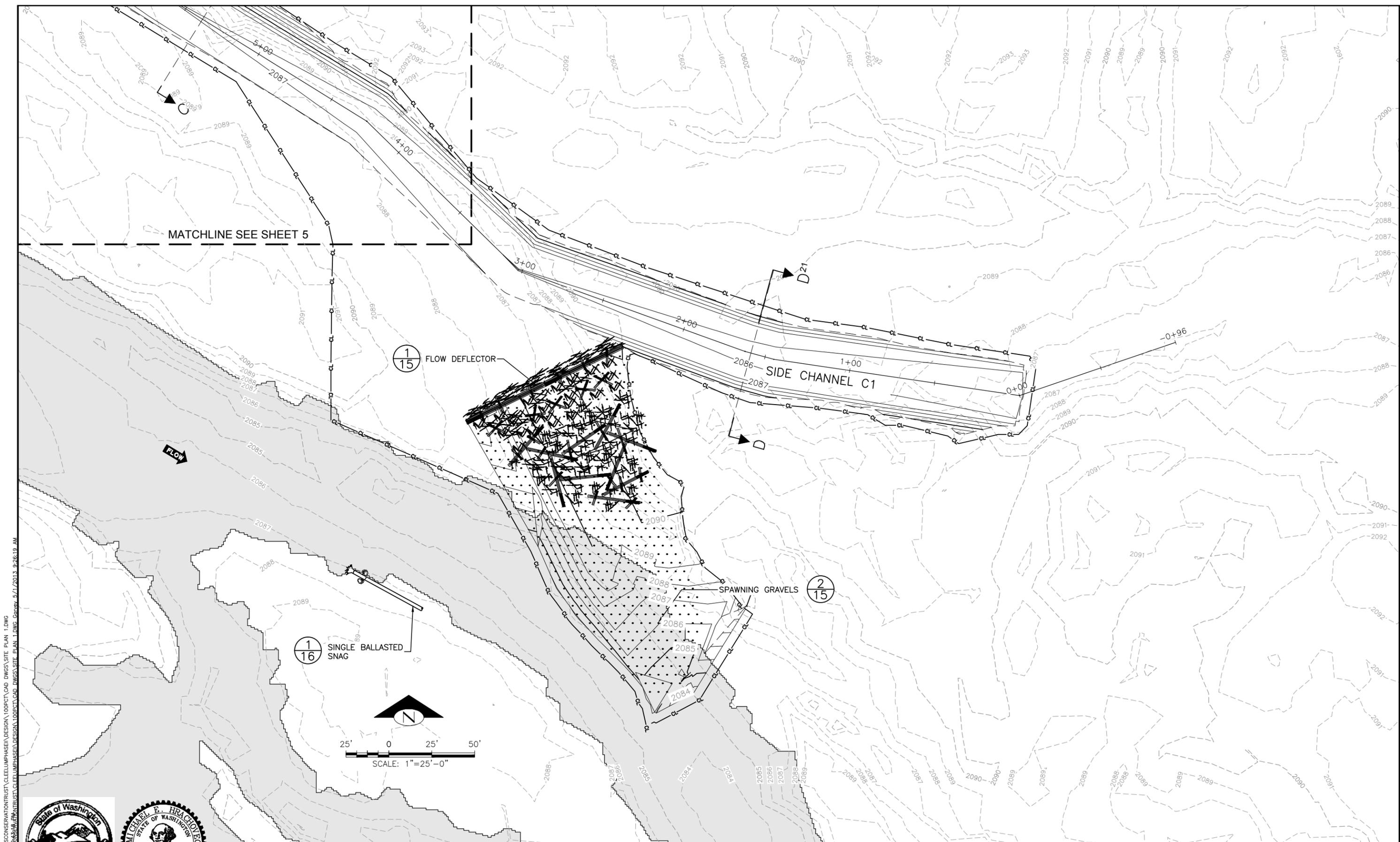
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CHECKED: MH, ME, TA	DATE:

**CLE ELUM RIVER RESTORATION
 PHASE II**

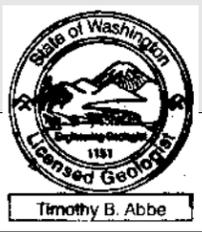
SITE PLAN 1

5
 SHEET 5 OF 22

Jun-14-2013 FINAL DRAWINGS



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CHECKED TA, MH
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CHECKED MH, ME, TA

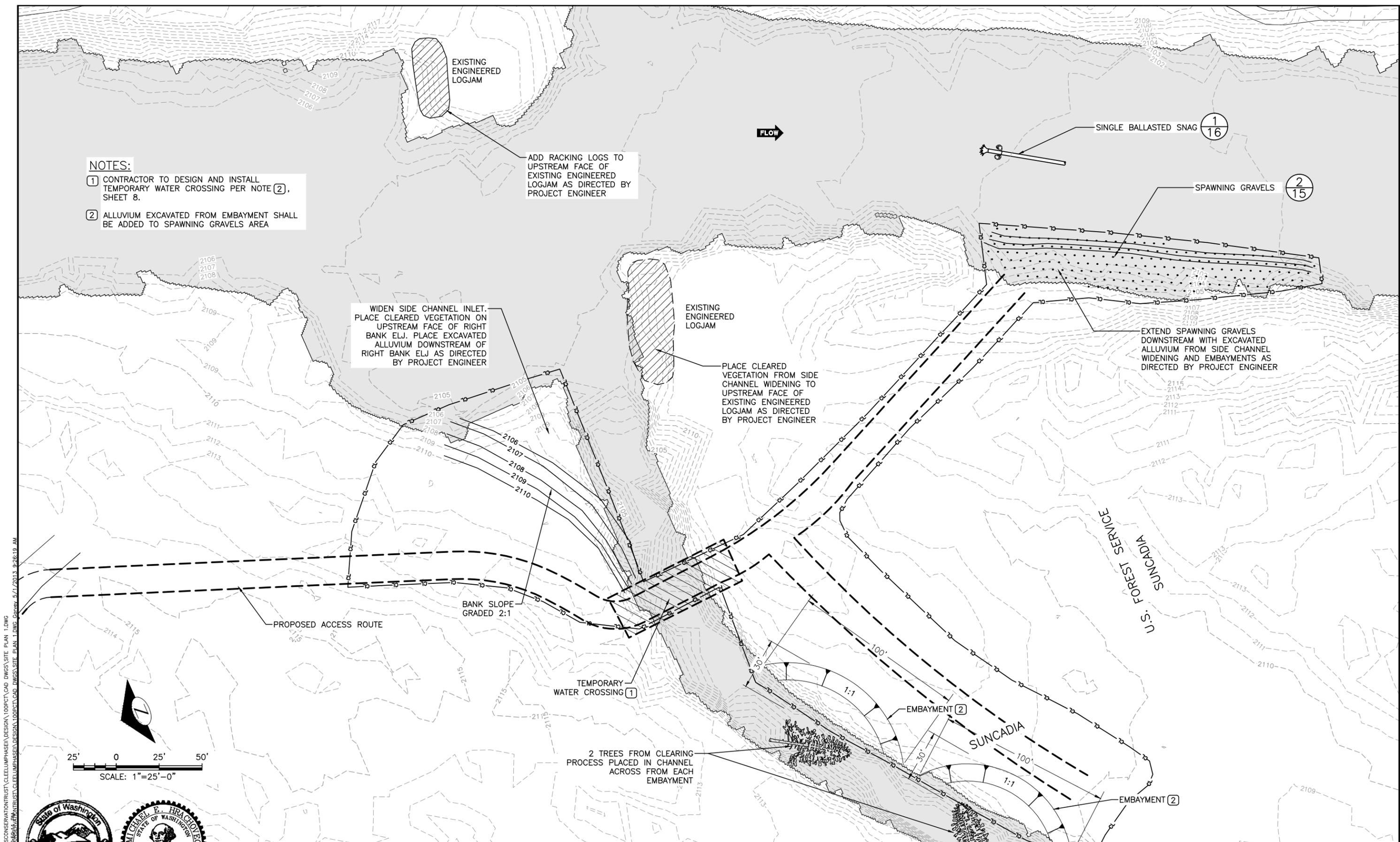
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LONGITUDE 121°03'30" W
TN/SC/RG T20N/S14/R14E
DATE

**CLE ELUM RIVER RESTORATION
 PHASE II**

SITE PLAN 2

6
 SHEET 6 OF 22

Jun-14-2013 FINAL DRAWINGS



NOTES:

- 1 CONTRACTOR TO DESIGN AND INSTALL TEMPORARY WATER CROSSING PER NOTE 2, SHEET 8.
- 2 ALLUVIUM EXCAVATED FROM EMBAYMENT SHALL BE ADDED TO SPAWNING GRAVELS AREA

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Timothy B. Abbe

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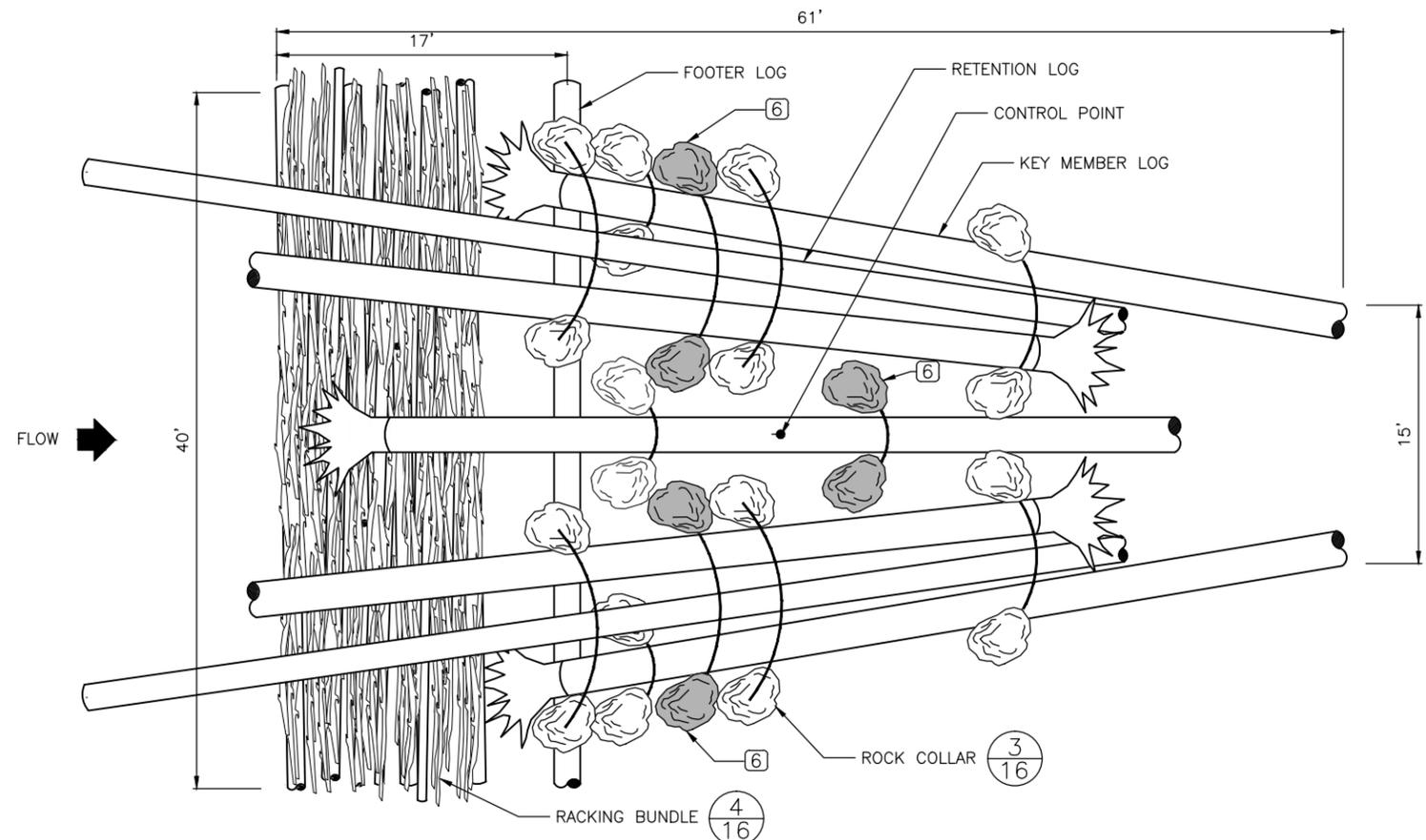


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CHECKED MH, ME, TA	DATE

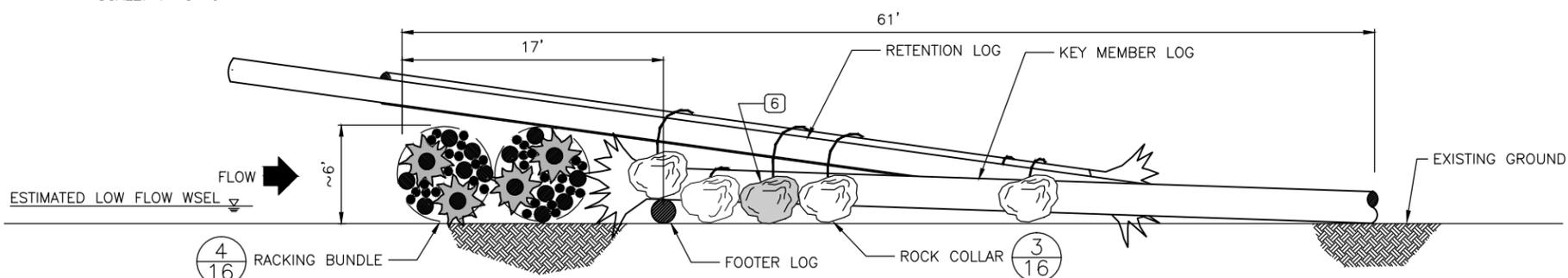
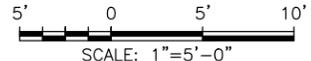
CLE ELUM RIVER RESTORATION PHASE II

SITE PLAN 6

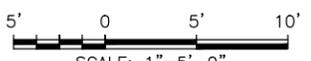
FINAL DRAWINGS
Jun-14-2013



ELJ PLAN



ELJ PROFILE



ELJ 1
SCALE: 1" = 5'

LEGEND

- LOG WITH NO ROOTWAD
- LOG WITH ROOTWAD
- ROCK COLLAR
- RACKING BUNDLE

TYPE 1 NOTES:

1. LOCATIONS FOR ALL STRUCTURE PLACEMENTS WILL BE STAKED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER ALL STRUCTURE LOCATIONS AND TYPES PRIOR TO WOOD PLACEMENT.
2. STRUCTURE MAY BE LOCATED WITHIN LOW FLOW CHANNEL DEPENDING ON SPECIFIC LOCATION.
3. STRUCTURES MAY BE LOCATED NEAR EXISTING LARGE BOULDERS AND/OR WOOD. EXISTING FEATURES TO BE UTILIZED TO THE EXTENT POSSIBLE TO CREATE A MORE STABLE STRUCTURE.
4. FOOTER LOGS SHALL BE PLACED PERPENDICULAR TO THE ANTICIPATED FLOW DIRECTION AT EACH LOCATION.
5. LOGS SHOWN WITHOUT BRANCHES FOR CLARITY.
6. ADDITIONAL ROCK COLLARS PLACED ONLY ON ELJS 6.41, 6.05, 5.98 AND 5.68 THAT ARE NOT BACKFILLED.

LAYER	LOG ID	DESCRIPTION	ORIENTATION	DIA (IN)	LENGTH (FT)	ROOTWAD (Y/N)	INDIVIDUAL WEIGHT (LBS)	NUMBER OF PIECES	TOTAL WEIGHT (TONS)	TOTAL PIECES (9 TOTAL ELJ'S)	TOTAL WEIGHT (9 TOTAL ELJ'S) (TONS)
1	1	FOOTER	PERPENDICULAR	18-20	40	N	3,300	1	1.7	9	15.3
2	2	KEY MEMBER	PARALLEL	24	50	Y	8,500	3	12.8	27	115.2
3	3	RETENTION	PARALLEL	18-20	60	N	4,900	2	4.9	18	44.1
3	2	KEY MEMBER	PARALLEL	24	50	Y	8,500	2	8.5	18	76.5
--	--	ROCK COLLAR (5' WIRE ROPE)	PERPENDICULAR				8,000	2	8.0	18	72.0
--	--	ROCK COLLAR (8' WIRE ROPE)	PERPENDICULAR				8,000	1	4.0	9	9.0
--	--	ADDITIONAL ROCK COLLAR (8' WIRE ROPE)	PERPENDICULAR				8,000	1	4.0	4	16.0
--	--	ROCK COLLAR (12' WIRE ROPE)	PERPENDICULAR				8,000	4	16.0	36	36.0
--	--	ROCK COLLAR (14' WIRE ROPE)	PERPENDICULAR				8,000	2	8.0	18	18.0
--	--	ADDITIONAL ROCK COLLAR (14' WIRE ROPE)	PERPENDICULAR				8,000	2	8.0	8	64.0
--	--	RACKING BUNDLES	PERPENDICULAR	6-16	40	Y	8,000	2	8.0	18	18.0
TOTAL								22	83.9	183	727.1



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



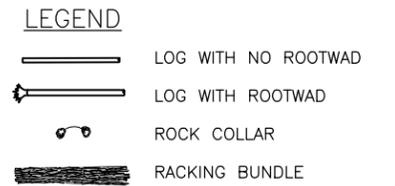
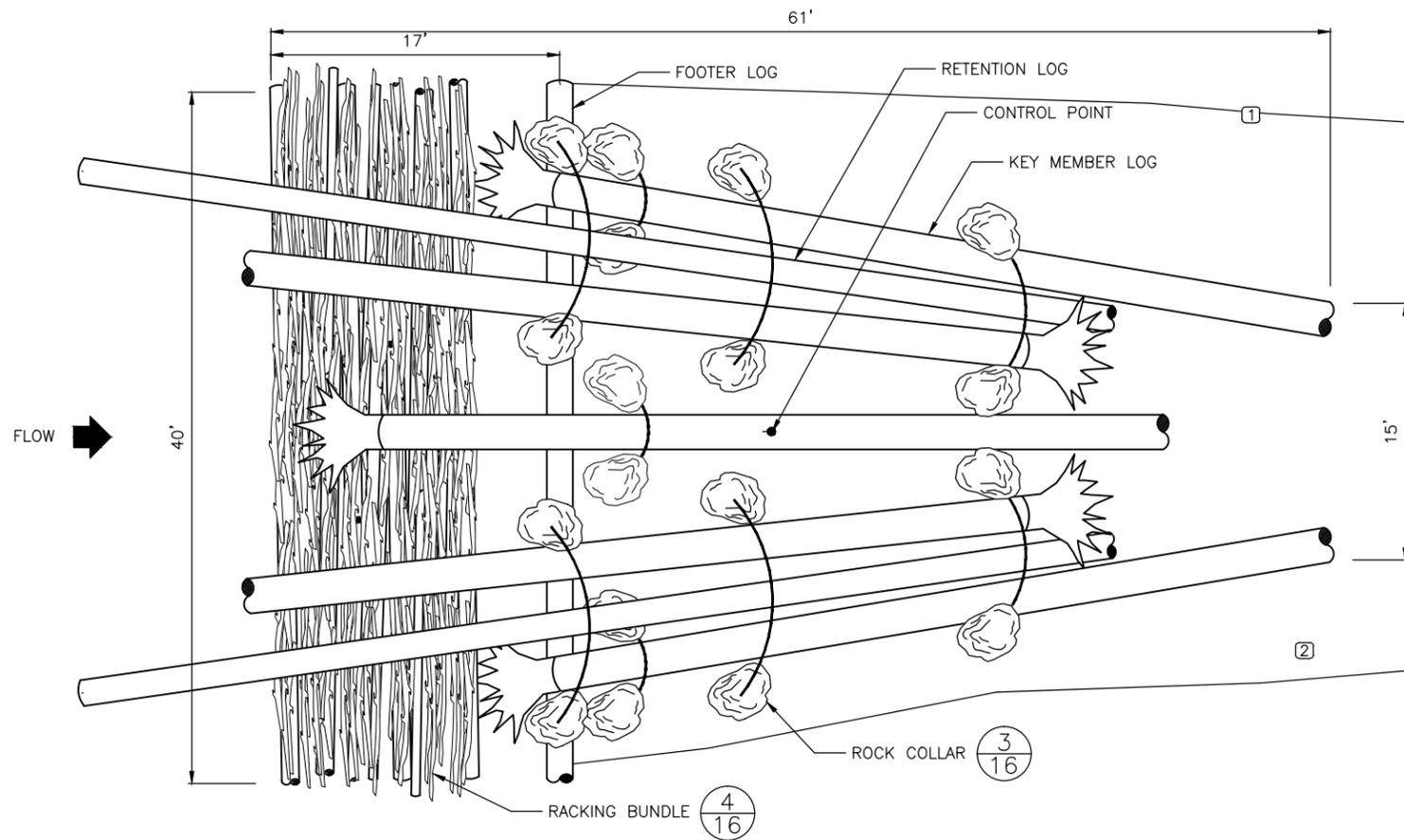
NAME OR INITIALS AND DATE	GEOGRAPHIC INFORMATION
DESIGNED ME, TA, MH	LATITUDE 47°14'00" N
CHECKED TA, MH	LONGITUDE 121°03'30" W
DRAWN BLS	TN/SC/RG T20N/S14/R14E
CHECKED MH, ME, TA	DATE

CLE ELUM RIVER RESTORATION PROJECT

ELJ PLAN AND PROFILE

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Jun-14-2013 FINAL DRAWINGS

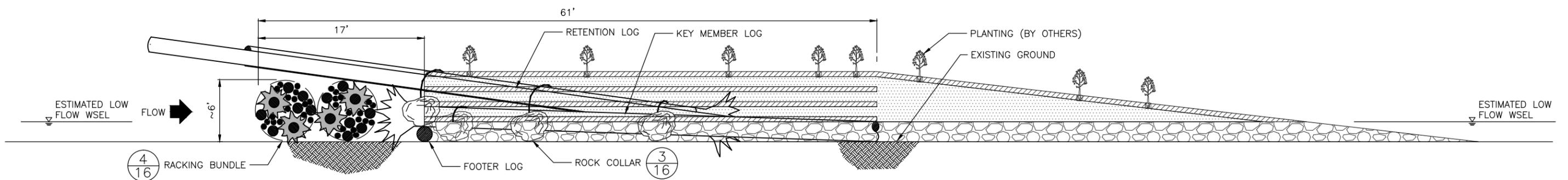


NOURISHMENT BAR NOTES

- ① GRADE TO ADJACENT BANK TOP (MATCH ELEVATIONS), HEIGHT OF BACKFILL SHALL NOT EXCEED HEIGHT OF ADJACENT BANK UNLESS SPECIFIED BY PROJECT ENGINEER.
- ② RIVER SIDE GRADE BANK AT 3:1.
- ③ TAILOUT DOWNSTREAM TO BE DETERMINED BY QUANTITY AND BY PROJECT ENGINEER.
- ④ TRACK COMPACT ALL ALLUVIUM AND SLASH ONCE WOOD HAS BEEN BURIED AND ALL LAYERS DOWNSTREAM OF WOOD.

- SLASH LAYER (6" THICK). ④
- NATIVE MATERIAL (1 FT THICK).
- COARSE NATIVE ALLUVIUM (2 FT THICK).

BACKFILLED ELJ PLAN



BACKFILLED ELJ PROFILE

BACKFILLED ELJ ①
SCALE: 1" = 5'

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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



NAME OR INITIALS AND DATE	GEOGRAPHIC INFORMATION
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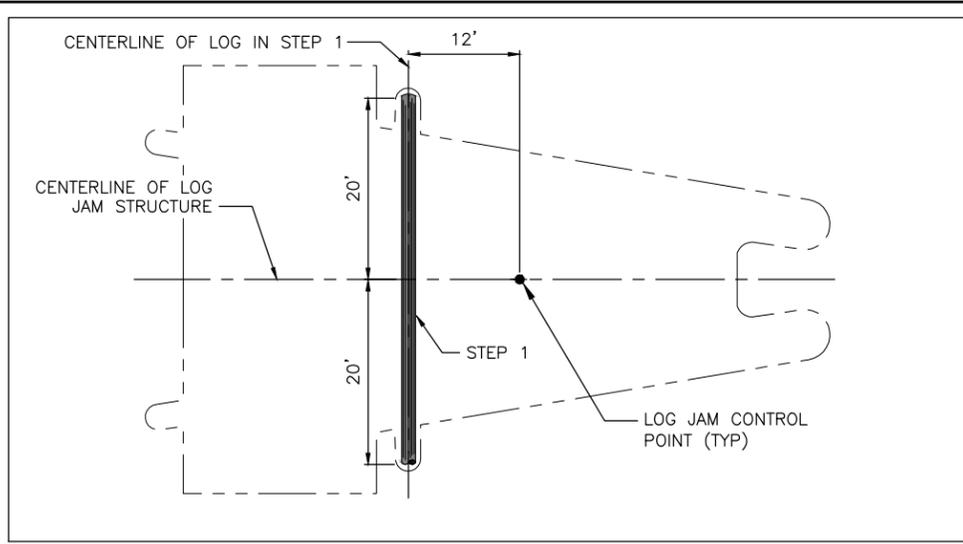
CLE ELUM RIVER RESTORATION PROJECT

BACKFILLED ELJ PLAN AND PROFILE

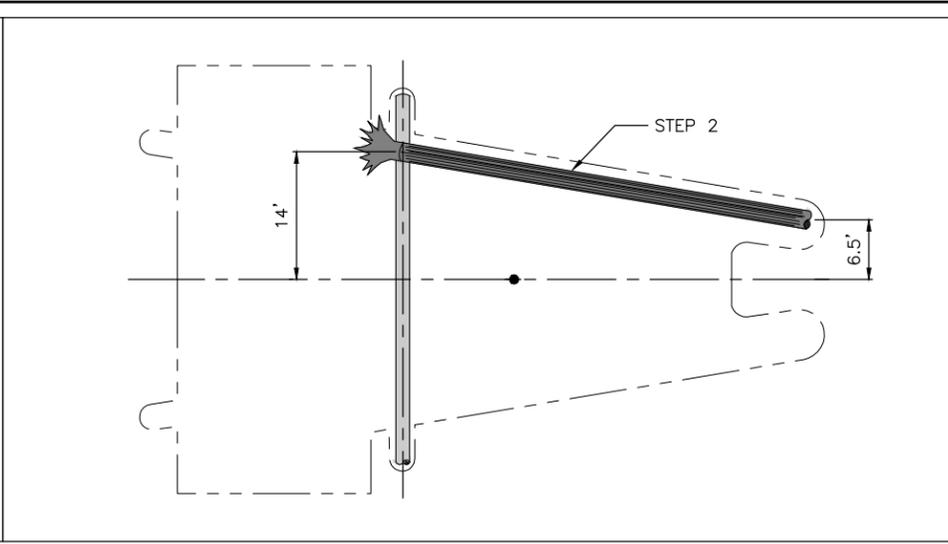
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SHEET 12 OF 22

Jun-14-2013 FINAL DRAWINGS

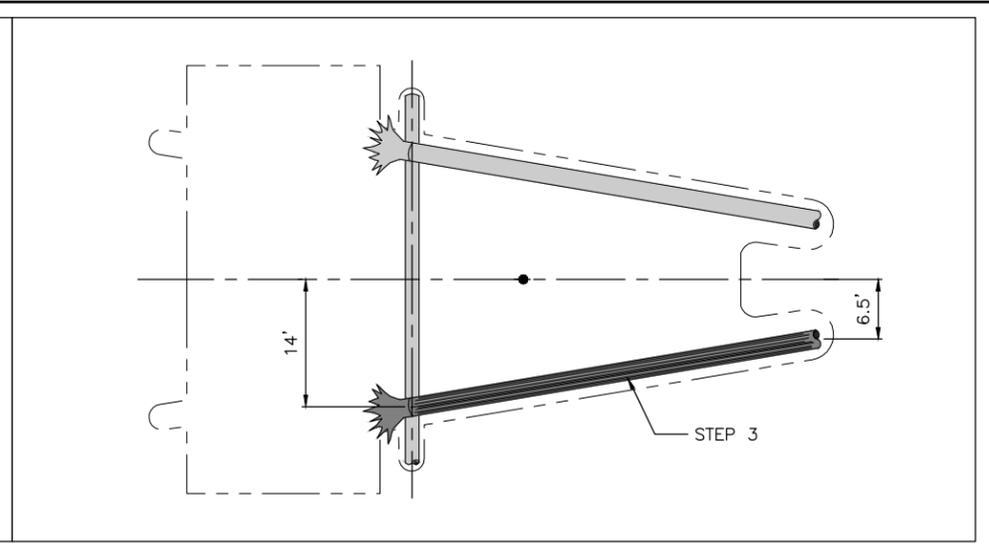
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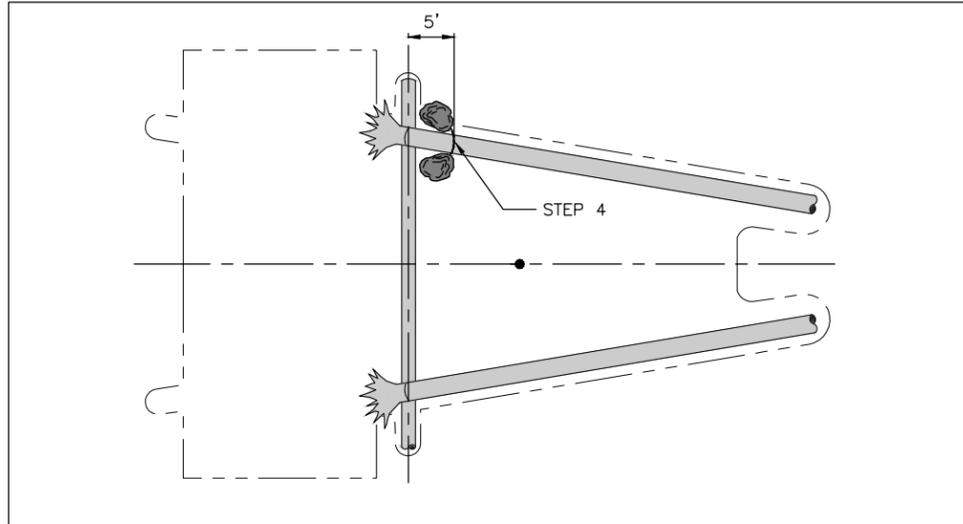
STEP 1 – PLACE HORIZONTAL FOOTER LOG



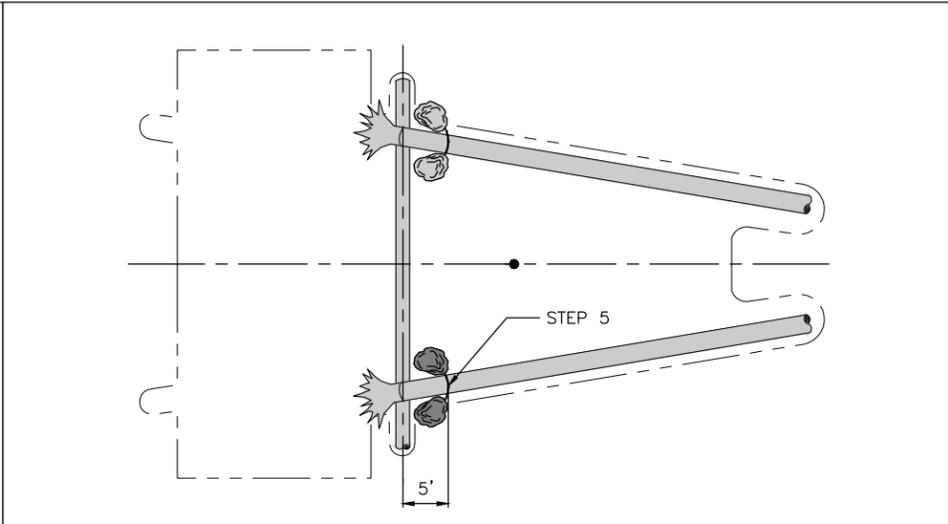
STEP 2 – PLACE PARALLEL KEY MEMBER



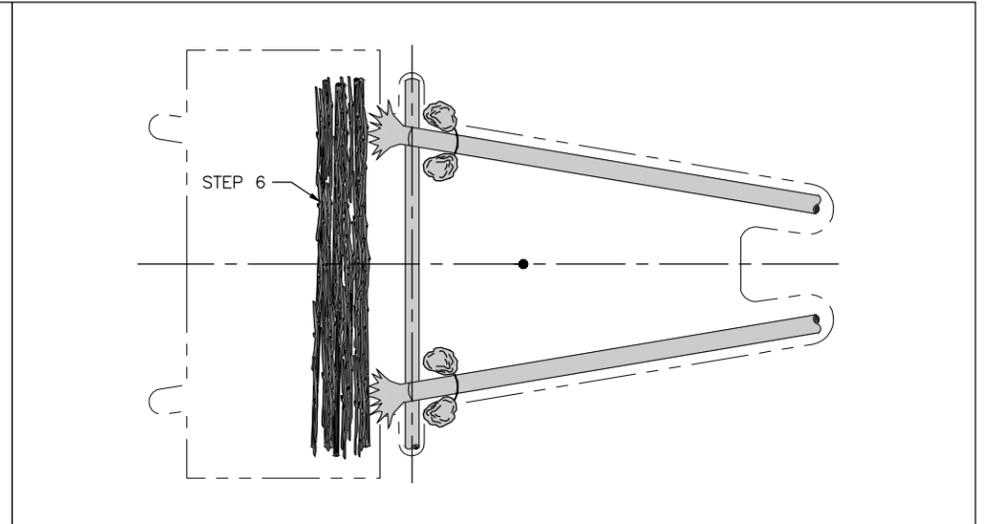
STEP 3 – PLACE PARALLEL KEY MEMBER



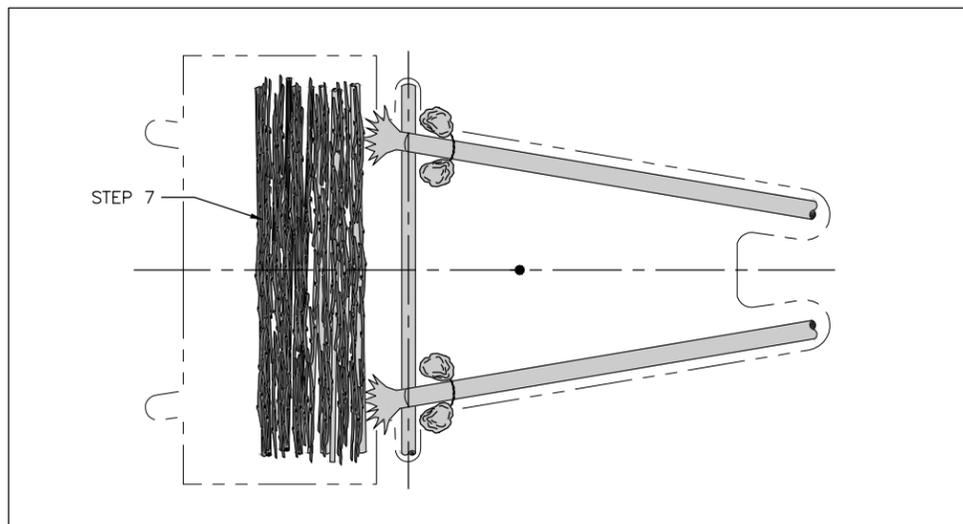
STEP 4 – PLACE 5-FT ROCK COLLAR



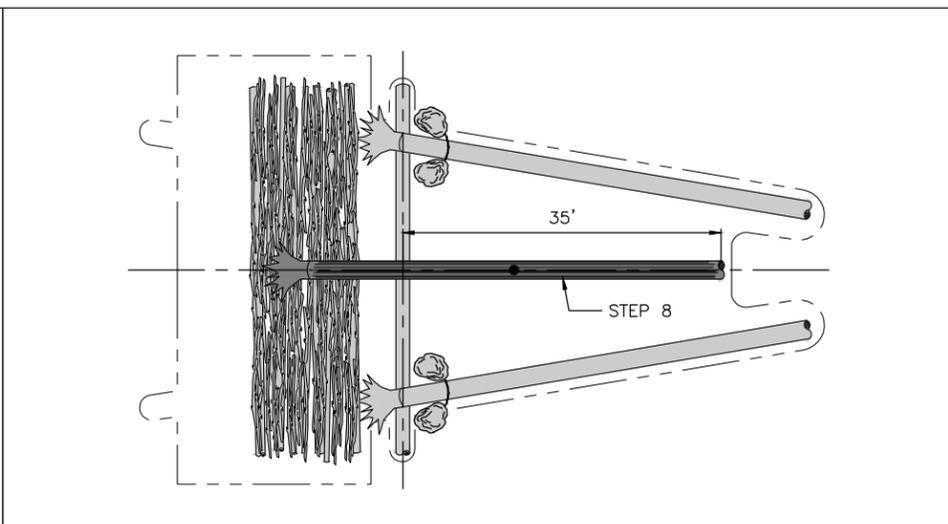
STEP 5 – PLACE 5-FT ROCK COLLAR



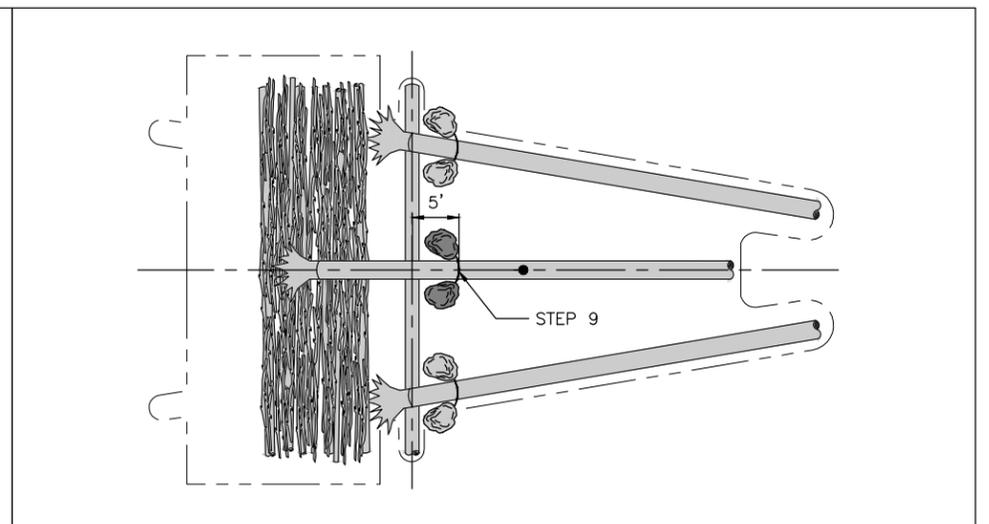
STEP 6 – PLACE RACKING BUNDLE



STEP 7 – PLACE RACKING BUNDLE



STEP 8 – PLACE PARALLEL KEY MEMBER



STEP 9 – PLACE 8-FT ROCK COLLAR



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 IF THIS BAR DOES NOT
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 TO ORIGINAL SCALE.



NAME OR INITIALS AND DATE	GEOGRAPHIC INFORMATION
DESIGNED: ME, TA, MH	LATITUDE: 47°14'00" N
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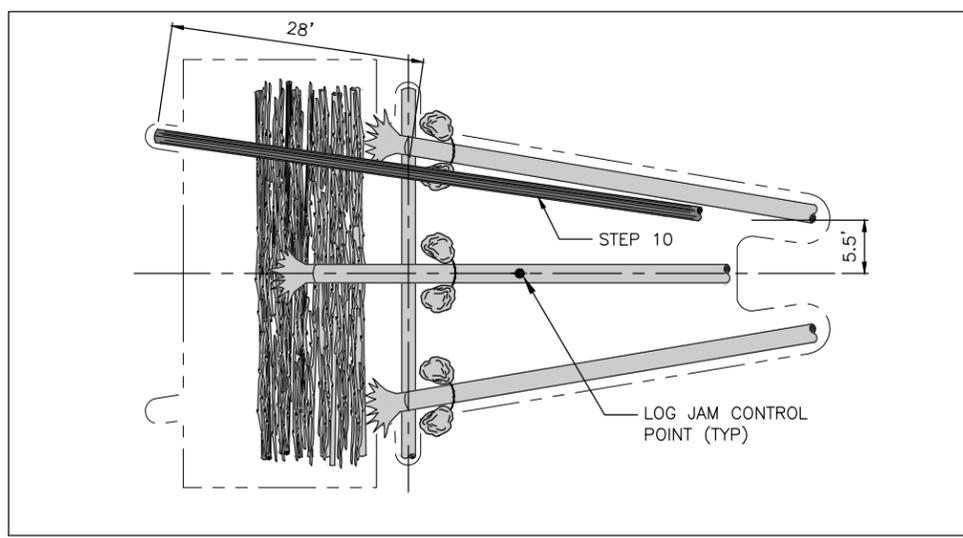
**CLE ELUM RIVER RESTORATION
 PHASE II**

ELJ LAYERING PLAN 1

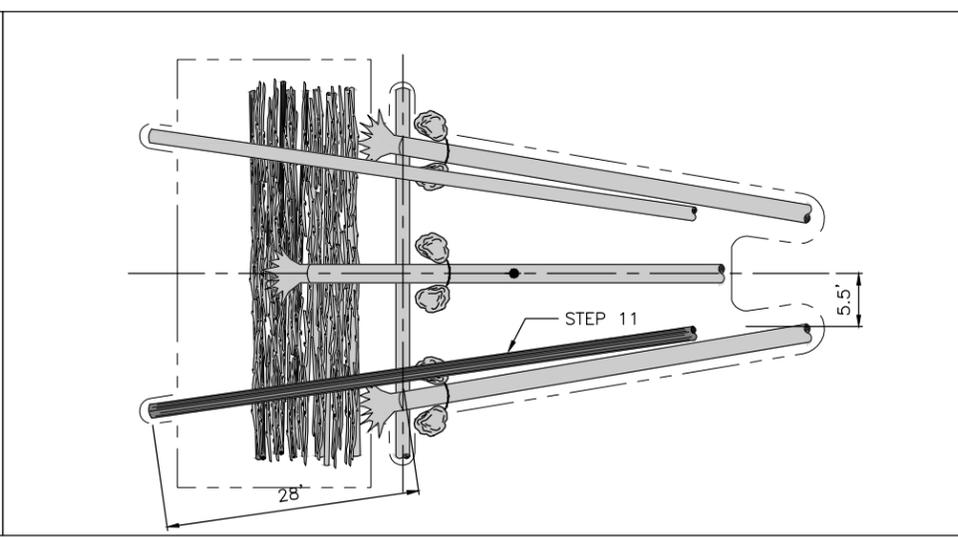
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 SHEET 13 OF 22

Jun-14-2013 FINAL DRAWINGS

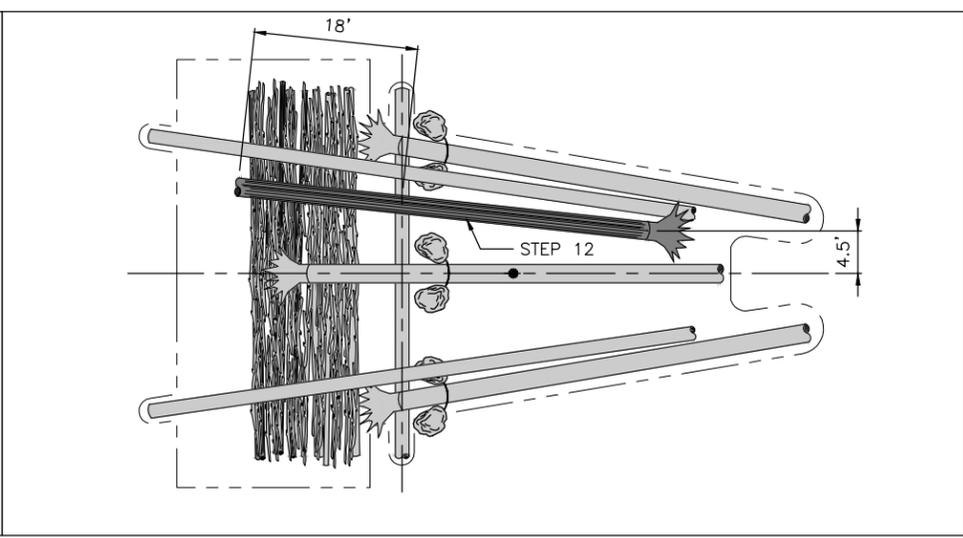
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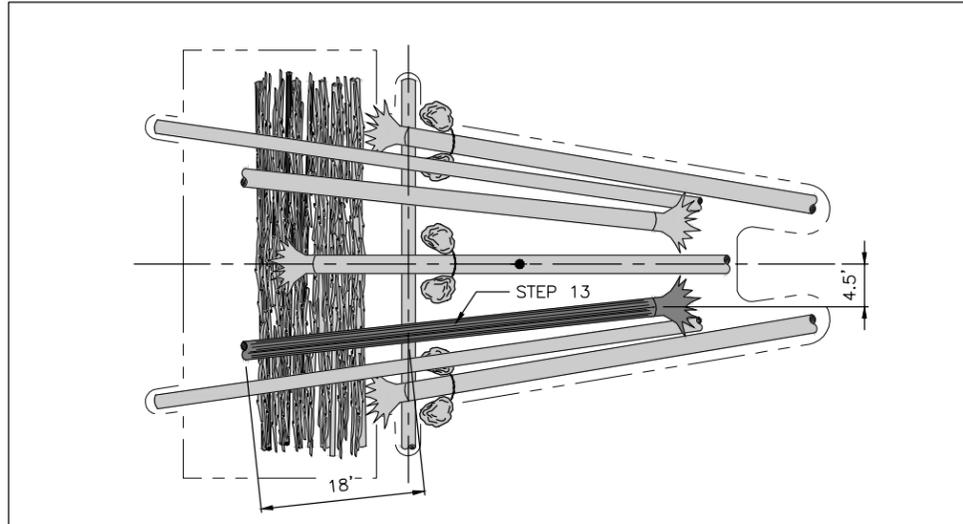
STEP 10 – PLACE PARALLEL RETENTION LOG



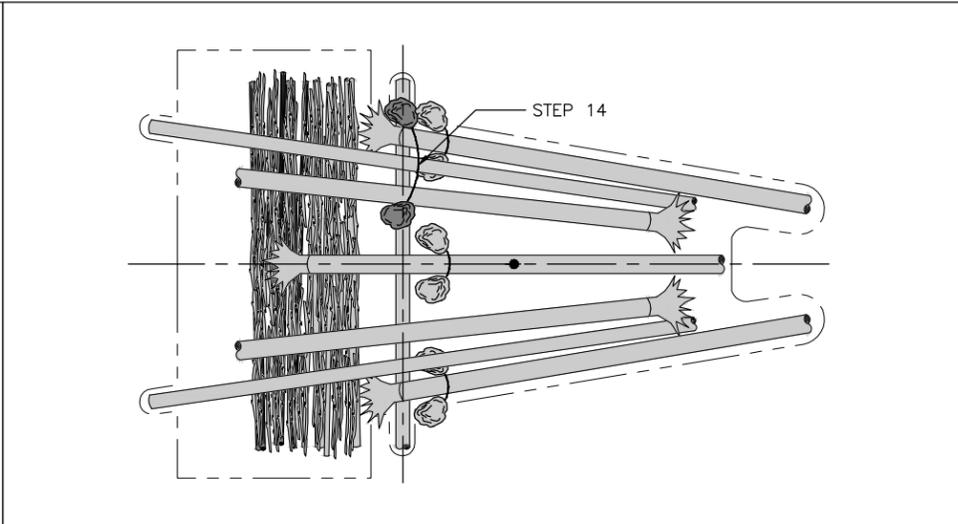
STEP 11 – PLACE PARALLEL RETENTION LOG



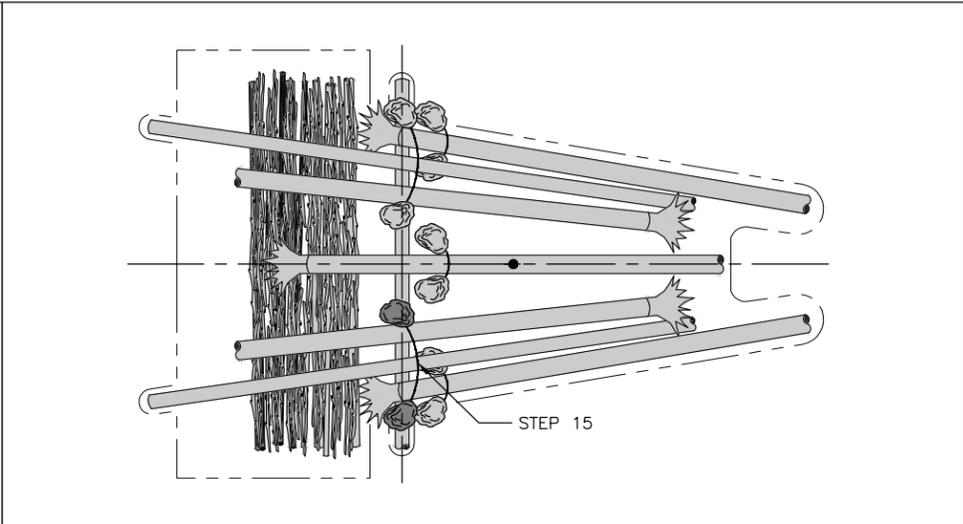
STEP 12 – PLACE PARALLEL KEY MEMBER



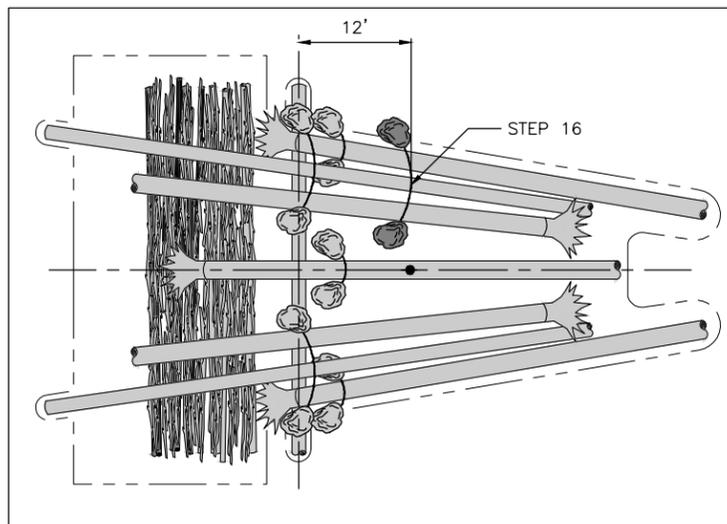
STEP 13 – PLACE PARALLEL KEY MEMBER



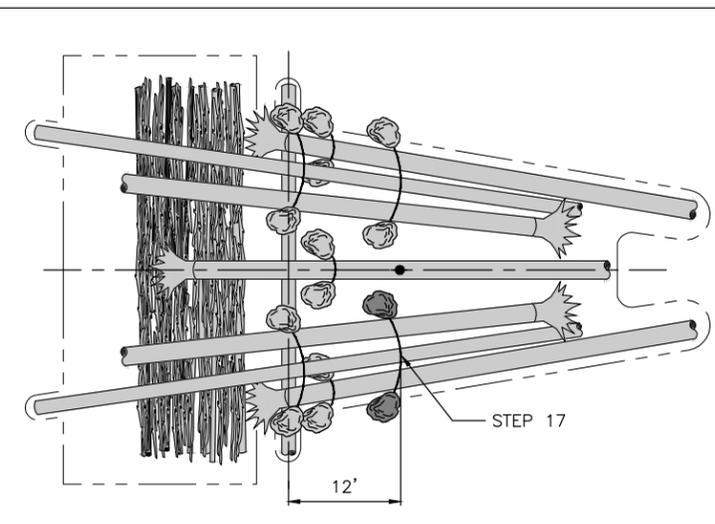
STEP 14 – PLACE 12-FT ROCK COLLAR



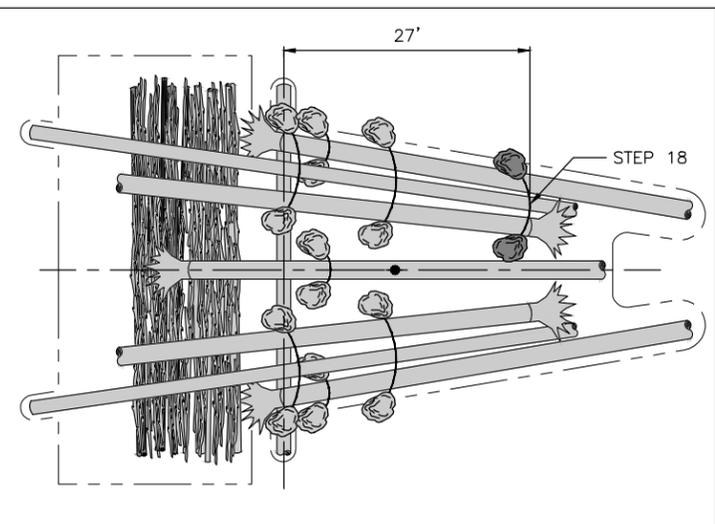
STEP 15 – PLACE 12-FT ROCK COLLAR



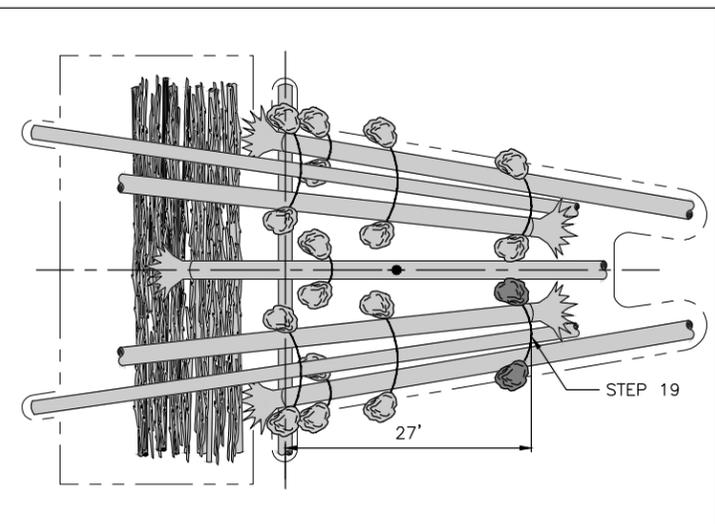
STEP 16 – PLACE 14-FT ROCK COLLAR



STEP 17 – PLACE 14-FT ROCK COLLAR

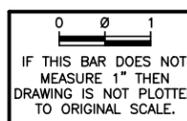


STEP 18 – PLACE 12-FT ROCK COLLAR



STEP 19 – PLACE 12-FT ROCK COLLAR

STEP 20 – SEE NOTE @ SHEET 11



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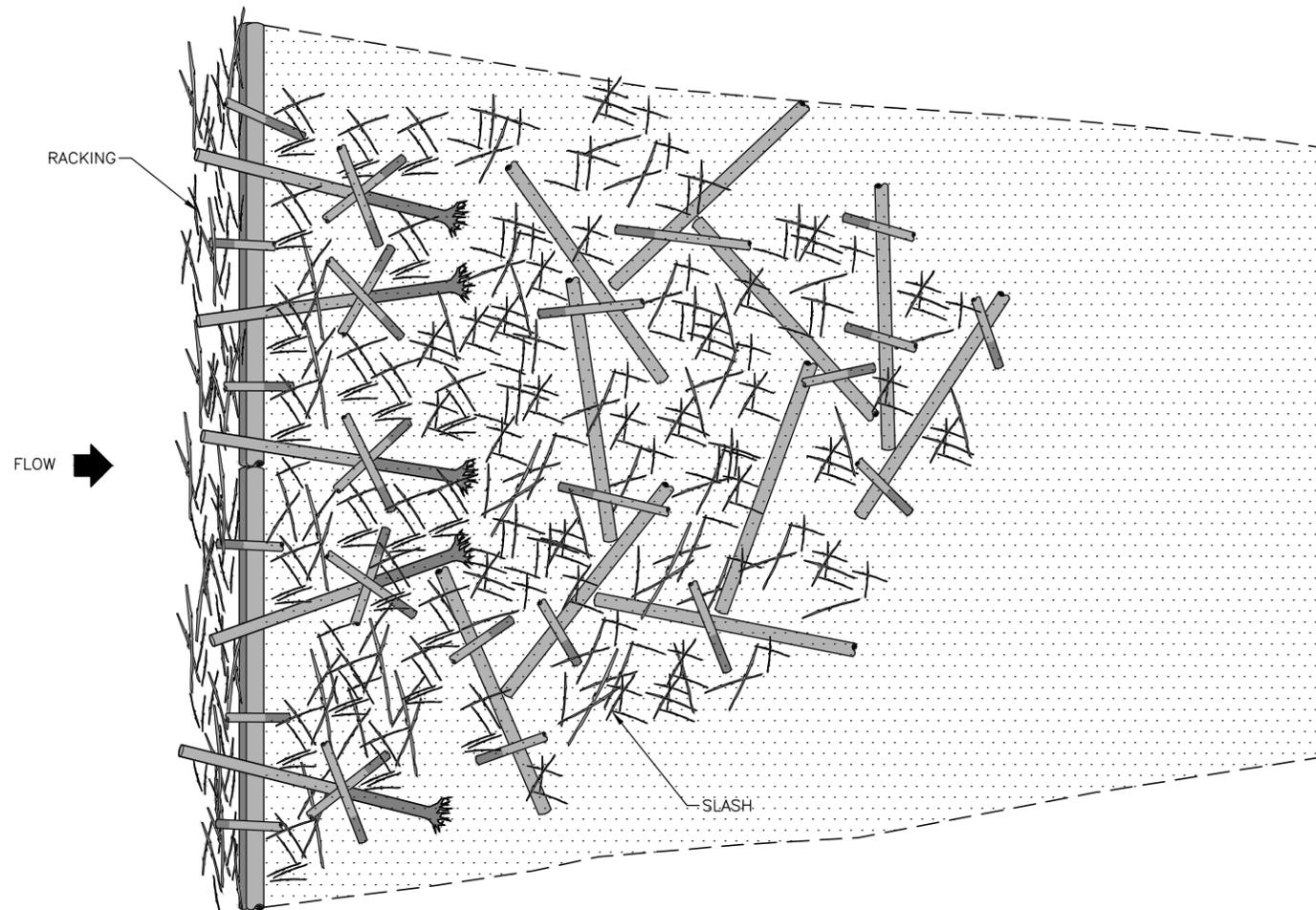
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DRAWN	BLS	TN/SC/RG	T20N/S14/R14E
CHECKED	MH, ME, TA	DATE	

**CLE ELUM RIVER RESTORATION
PHASE II**

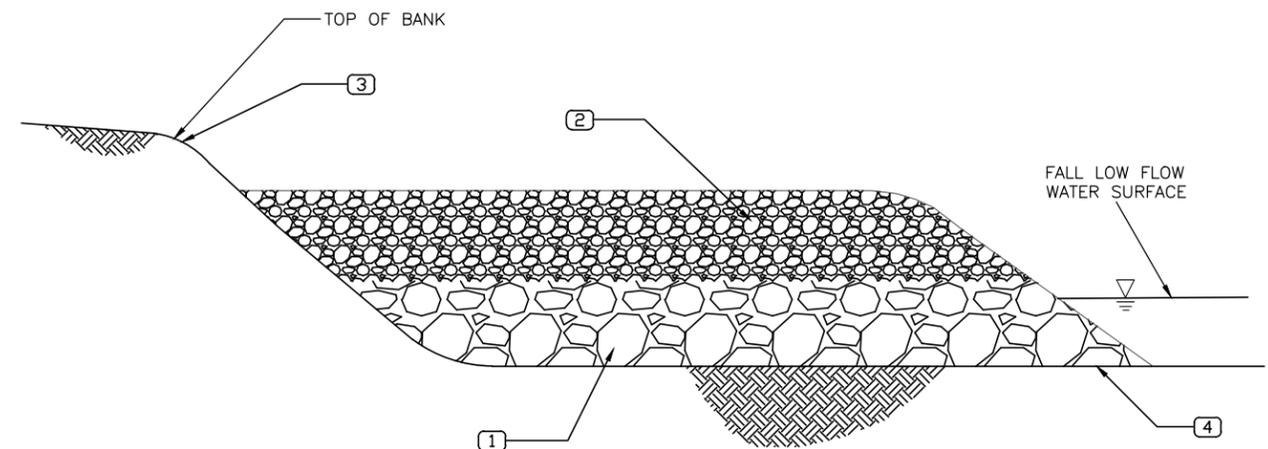
ELJ LAYERING PLAN 2

14
SHEET **14** OF **22**

Jun-14-2013 FINAL DRAWINGS



FLOW DEFLECTOR PLAN VIEW
SCALE: 1"=10'

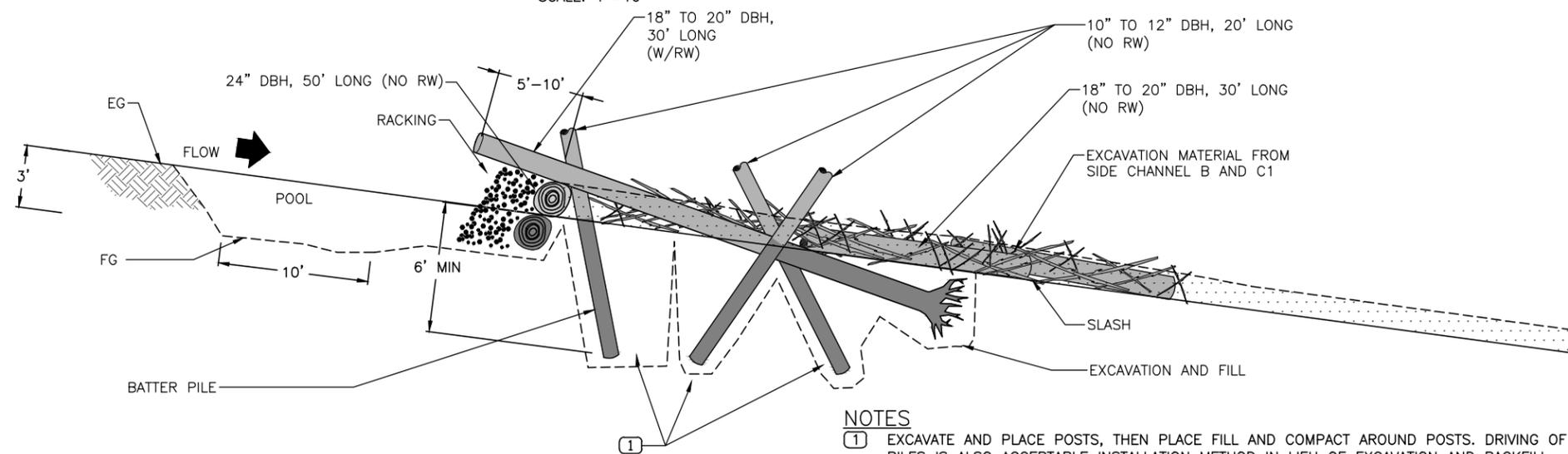


SECTION VIEW
SCALE: NTS

NOTES:

- ① COARSE SPAWNING GRAVEL EXCAVATED FROM SIDE CHANNELS TO BE PLACED IN MAINSTEM CHANNEL TO A HEIGHT ABOVE THE SUMMER LOW FLOW WATER SURFACE.
- ② FINE SPAWNING GRAVEL EXCAVATED FROM SIDE CHANNELS TO BE PLACED ON TOP OF COARSE SPAWNING GRAVEL.
- ③ HEIGHT OF SPAWNING GRAVEL TO NOT EXCEED ADJACENT TOP OF BANK.
- ④ WIDTH OF SPAWNING GRAVEL TO EXTEND INTO MAIN CHANNEL NO MORE THAN 1/2 OF MAIN CHANNEL WIDTH.

SPAWNING GRAVEL (2/15)
SCALE: NTS



FLOW DEFLECTOR PROFILE VIEW
SCALE: 1"=5'

FLOW DEFLECTOR (1/15)

NOTES

- ① EXCAVATE AND PLACE POSTS, THEN PLACE FILL AND COMPACT AROUND POSTS. DRIVING OF PILES IS ALSO ACCEPTABLE INSTALLATION METHOD IN LIEU OF EXCAVATION AND BACKFILL.



Timothy B. Abbe



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CHECKED TA, MH	LONGITUDE 121°03'30" W
DRAWN BLS	TN/SC/RG T20N/S14/R14E
CHECKED MH, ME, TA	DATE

CLE ELUM RIVER RESTORATION PROJECT

DETAILS 1

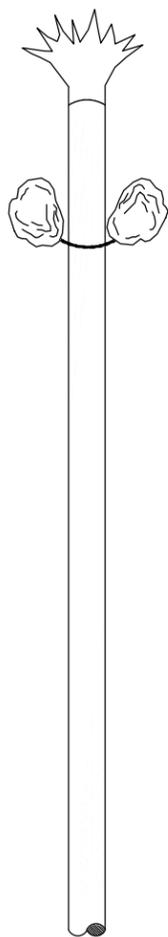
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SHEET **15** OF **22**

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Jun-14-2013 FINAL DRAWINGS

FLOW DIRECTION

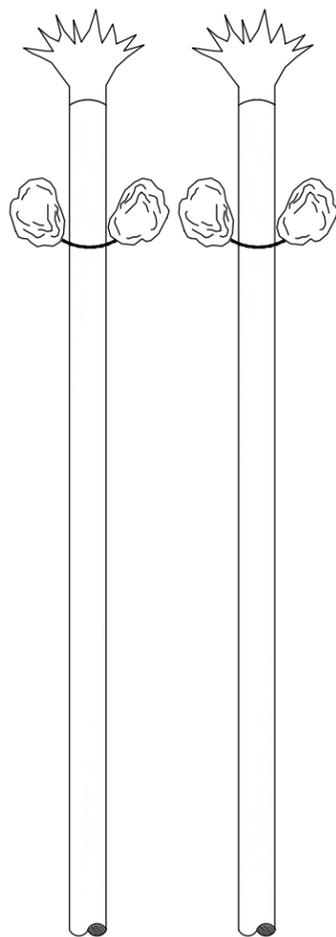


SINGLE

BALLASTED SNAG
SCALE: NTS

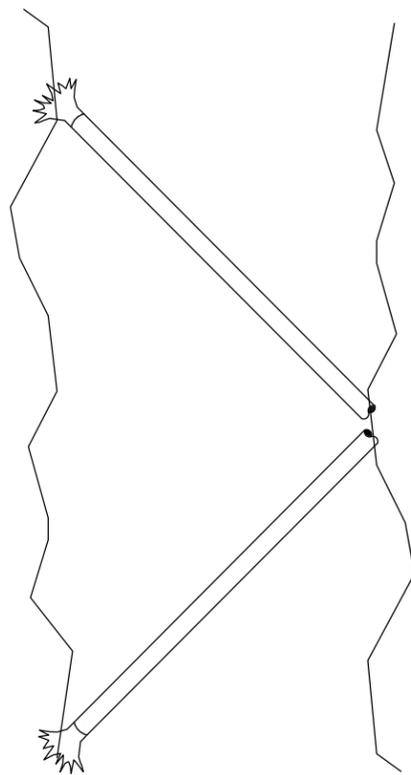
1/16

FLOW DIRECTION



PAIRED

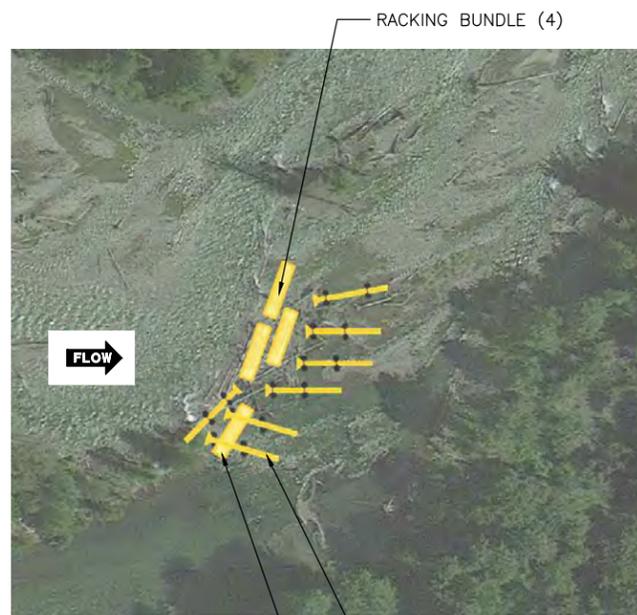
FLOW DIRECTION



UNBALLASTED
SNAGS IN SIDE
CHANNEL

UNBALLASTED SNAG
SCALE: NTS

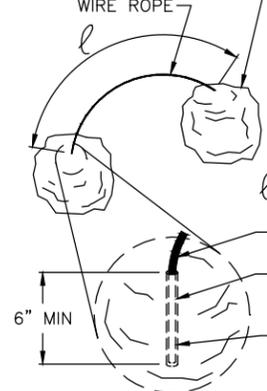
5/16



WOOD STABILIZATION
NTS

2/16

3.5' AVERAGE DIAMETER BOULDER
5/8" NON-GALVANIZED WIRE ROPE



l (FT)	TOTAL LENGTH (FT)	QUANTITY PER STRUCTURE
5	6	2
8	9	1
12	13	2
14	15	4
TOTAL		9

l = EXPOSED WIRE ROPE LENGTH

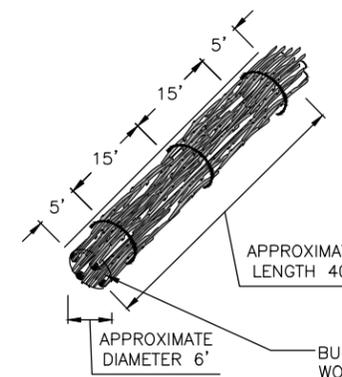
5/8" NON-GALVANIZED WIRE ROPE
3/4" HOLE DRILLED INTO BOULDER, MINIMUM DEPTH 6"
6" MIN
HOLE FILLED WITH EPOXY, MINIMUM STRENGTH 2000 LBS/SQ.IN.

NOTES:

- FOLLOWING EPOXY CURE, EACH ROCK COLLAR SHALL BE TESTED TO ENSURE PROPER BONDING.
- ROCK DIAMETER AVERAGE DIMENSION. MINIMUM ROCK DIAMETER 3-FT. MAXIMUM ROCK DIAMETER 4-FT.
- TOTAL WEIGHT OF ANY 1 COLLAR SHALL NOT EXCEED 5 TONS.
- THE DRILL HOLES MUST BE THOROUGHLY CLEANED OF ALL ROCK POWDER. THE RESIN WILL NOT PROPERLY ADHERE TO THE ROCK IF THE HOLE IS INADEQUATELY CLEANED. CLEANING IS DONE BY POURING WATER INTO THE HOLE WHILE PLUNGING IT WITH A CIRCULAR NYLON BRUSH. THE HOLE IS CLEAN WHEN THE WATER PLUNGES OUT CLEAR AND FREE OF SEDIMENT. HOLE SHALL BE DRY PRIOR TO PLACEMENT OF RESIN.
- THE CABLE MUST BE CUT CLEANLY SO THAT THE END CAN BE INSERTED INTO THE TIGHT FITTING ROCK HOLE.
- THE CABLE SURFACE TO BE BONDED SHOULD BE FREE OF DIRT AND GREASE. NONGALVANIZED CABLE IS OILED, AND THE OIL MAY CAUSE BONDING PROBLEMS UNLESS THE CABLE IS THOROUGHLY CLEANED. ACETONE CAN BE USED TO CLEAN THE CABLE.
- THE HOLE MUST BE FILLED WITH RESIN SO THAT WHEN THE CABLE IS INSERTED, A SMALL AMOUNT OF RESIN WILL Ooze OUT OF THE TOP OF THE HOLE. ONCE THE CABLE IS INSERTED IN THE HOLE, IT SHOULD NOT BE DISTURBED UNTIL THE RESIN HAS CURED.
- FOLLOW RESIN MANUFACTURING RECOMMENDATIONS FOR USE.

ROCK COLLAR
NTS

3/16

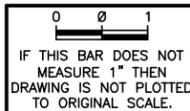


NOTES

- FOLLOWING BINDING BY 5/8" MANILA ROPE WRAPPED TWICE AROUND AND SECURED AT MINIMUM 3 LOCATIONS AS SHOWN, EACH BUNDLE SHALL BE TESTED TO ENSURE ALL INDIVIDUAL PIECES ARE SECURE FOR TRANSPORT.
- MATERIAL FOR RACKING BUNDLE SHALL BE VARIABLE IN SIZE AND LENGTH TO CREATE COMPLEX ASSEMBLEDGE.
- TOTAL WEIGHT OF RACKING BUNDLE SHALL NOT EXCEED 10,000 LBS.

RACKING BUNDLE
NTS

4/16



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



NAME OR INITIALS AND DATE	GEOGRAPHIC INFORMATION
DESIGNED: ME, TA, MH	LATITUDE: 47°14'00" N
CHECKED: TA, MH	LONGITUDE: 121°03'30" W
DRAWN: BLS	TN/SC/RG: T20N/S14/R14E
CHECKED: MH, ME, TA	DATE:

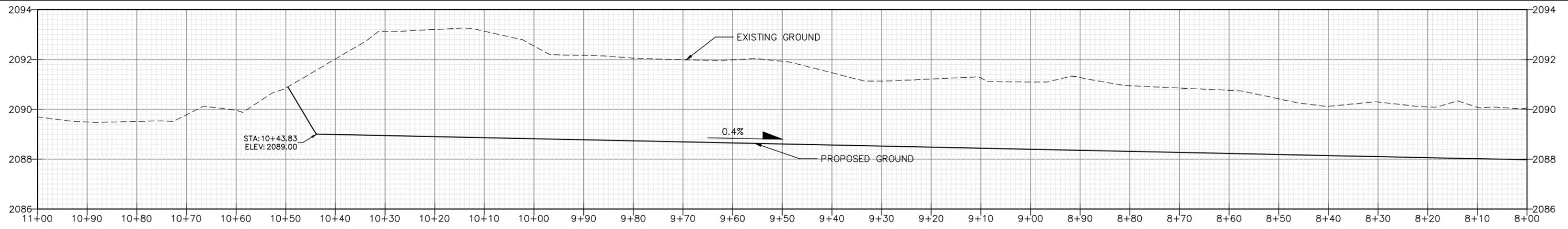
CLE ELUM RIVER RESTORATION
PHASE II

DETAILS 2

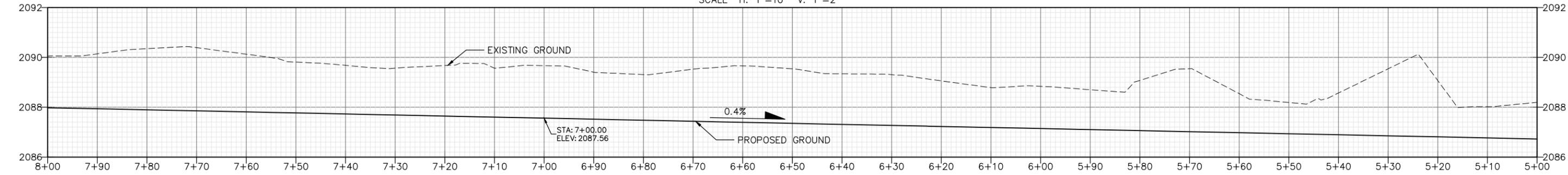
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SHEET 16 OF 22

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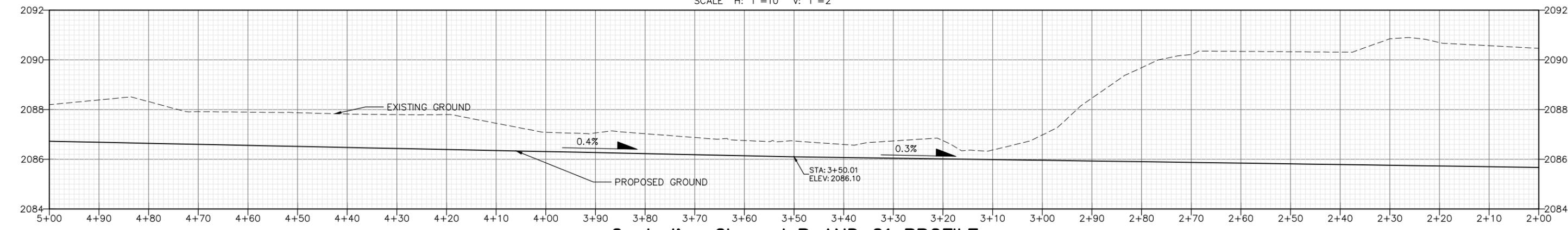
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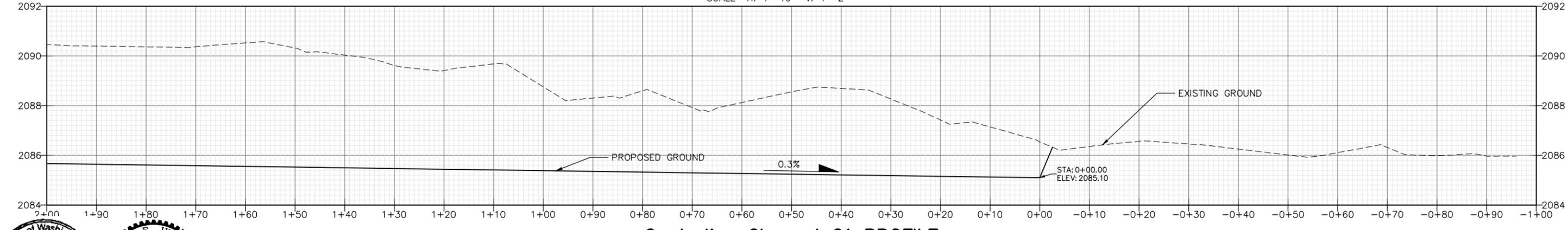
Centerline Channel B PROFILE
SCALE H: 1"=10' V: 1"=2'



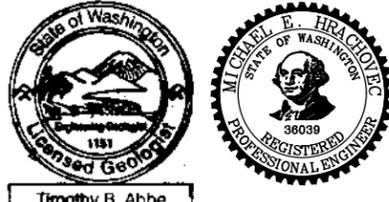
Centerline Channel B PROFILE
SCALE H: 1"=10' V: 1"=2'



Centerline Channel B AND C1 PROFILE
SCALE H: 1"=10' V: 1"=2'



Centerline Channel C1 PROFILE
SCALE H: 1"=10' V: 1"=2'



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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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DESIGNED	ME, TA, MH	LATITUDE	47°14'00" N
CHECKED	TA, MH	LONGITUDE	121°03'30" W
DRAWN	BLS	TN/SC/RG	T20N/S14/R14E
CHECKED	MH, ME, TA	DATE	

CLE ELUM RIVER RESTORATION PHASE II

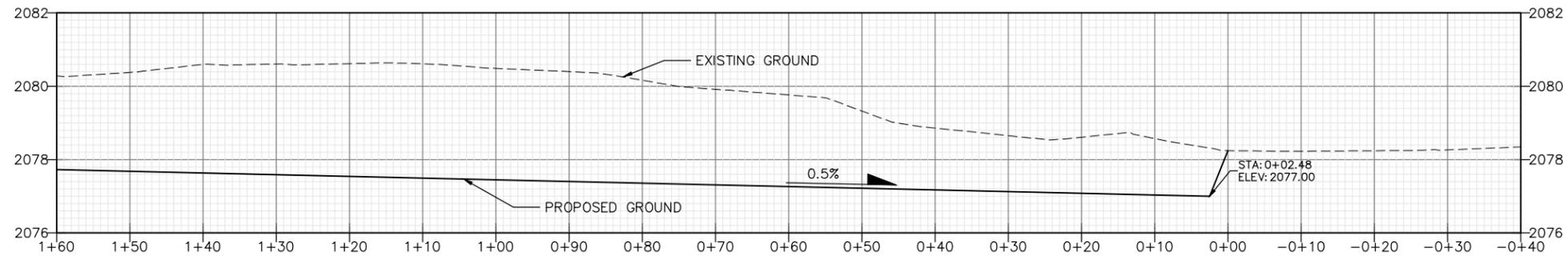
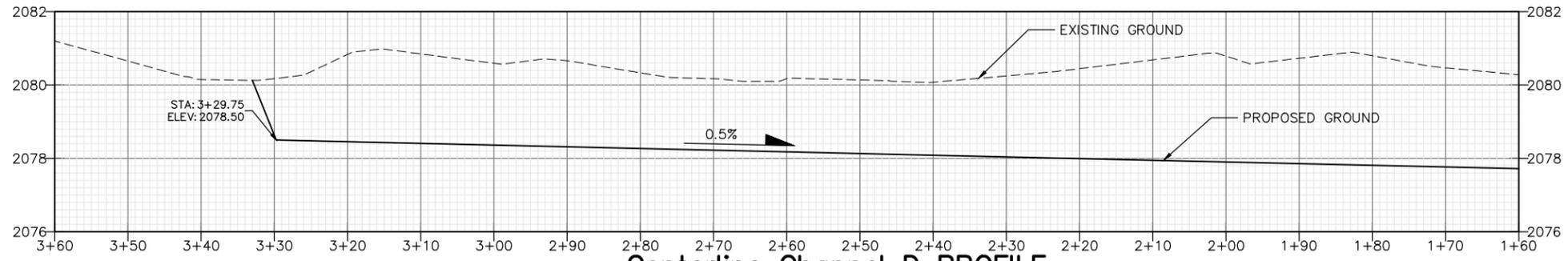
PROFILE CHANNELS B AND C1

17
SHEET 17 OF 22

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Jun-14-2013 FINAL DRAWINGS

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CHECKED <u>TA, MH</u>	LONGITUDE <u>121°03'30" W</u>
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CHECKED <u>MH, ME, TA</u>	DATE _____

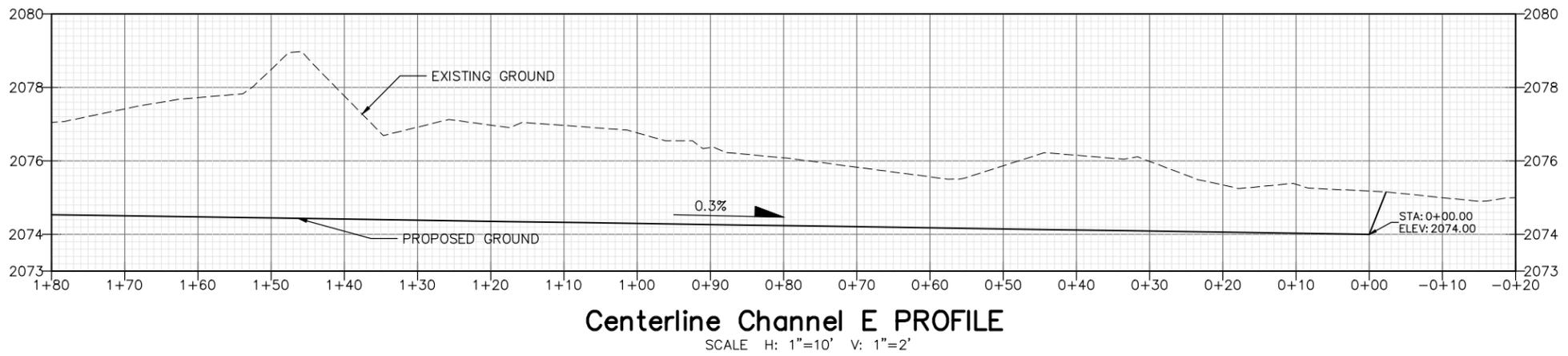
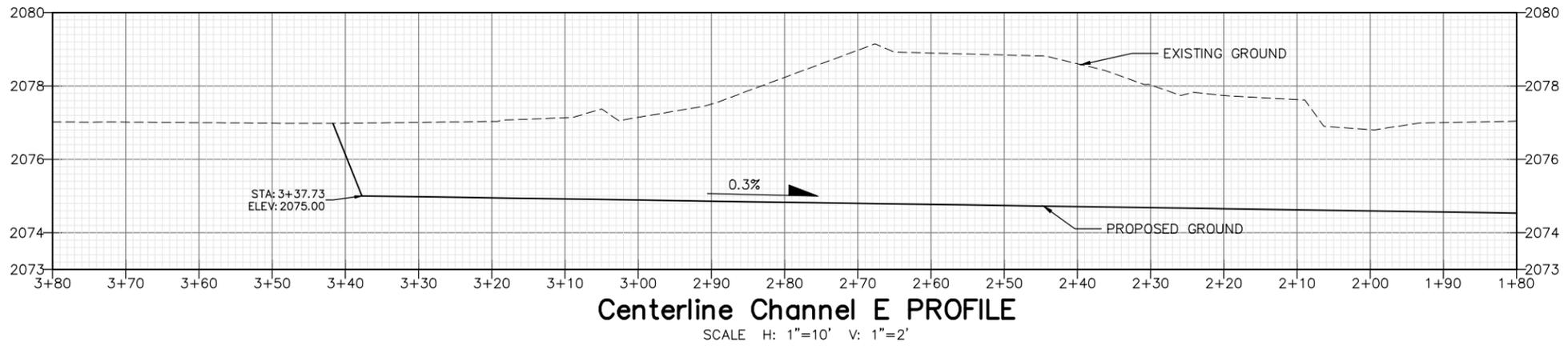
**CLE ELUM RIVER RESTORATION
PHASE II**

PROFILE CHANNEL D

18
SHEET **18** OF **22**

Jun-14-2013 FINAL DRAWINGS

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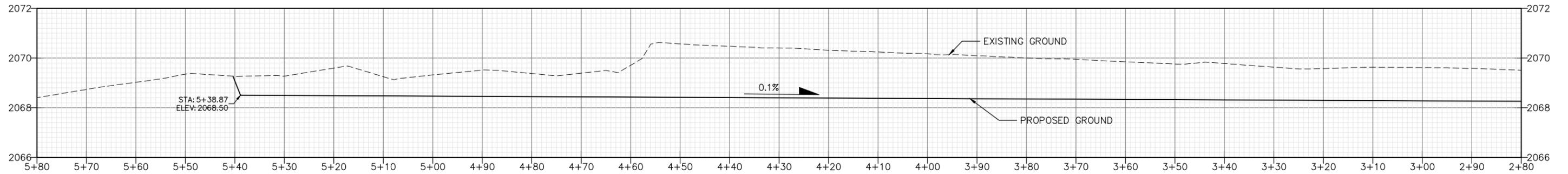
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DRAWN <u>BLS</u>	TN/SC/RG <u>T20N/S14/R14E</u>
CHECKED <u>MH, ME, TA</u>	DATE _____

**CLE ELUM RIVER RESTORATION
PHASE II**

PROFILE CHANNEL E

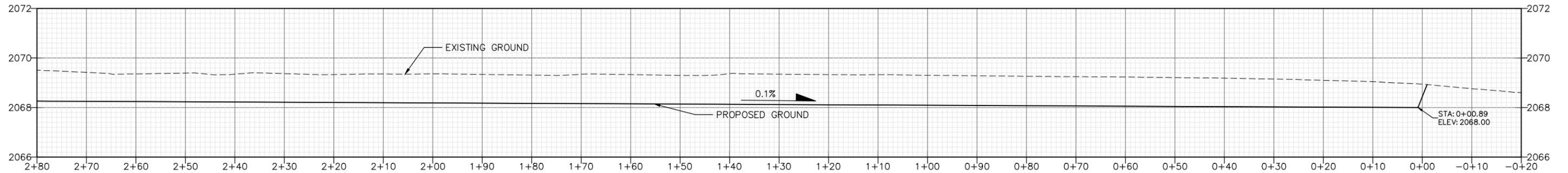
19
SHEET 19 OF 22

Jun-14-2013 FINAL DRAWINGS



Centerline Channel H PROFILE

SCALE H: 1"=10' V: 1"=2'



Centerline Channel H PROFILE

SCALE H: 1"=10' V: 1"=2'

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Timothy B. Abbe



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CHECKED MH, ME, TA	DATE

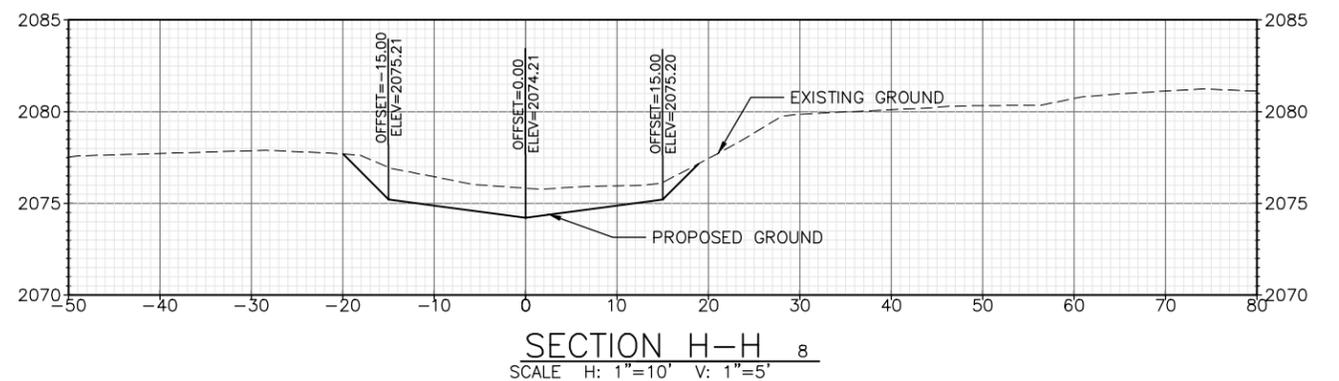
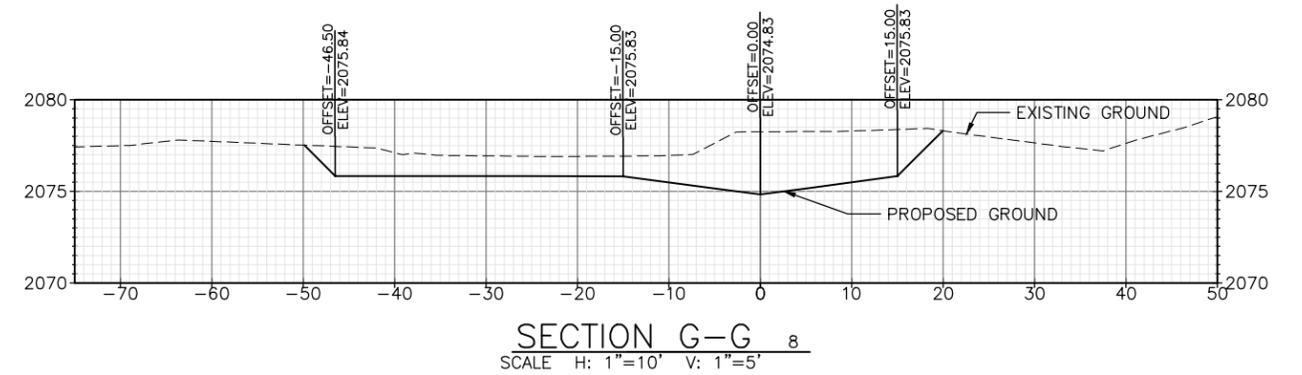
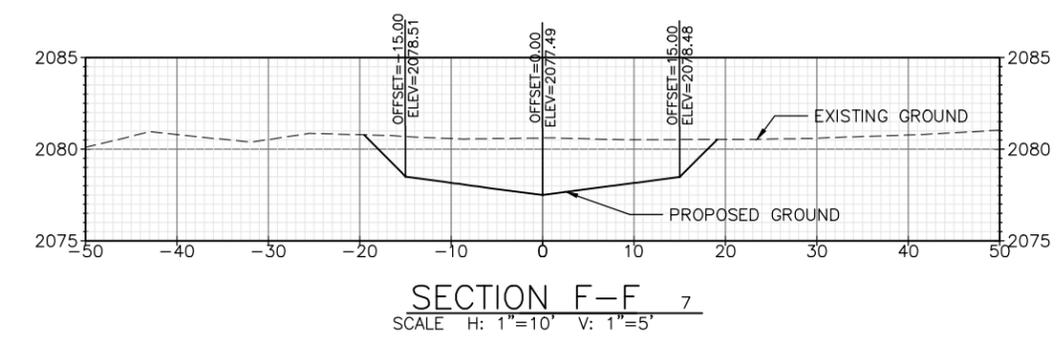
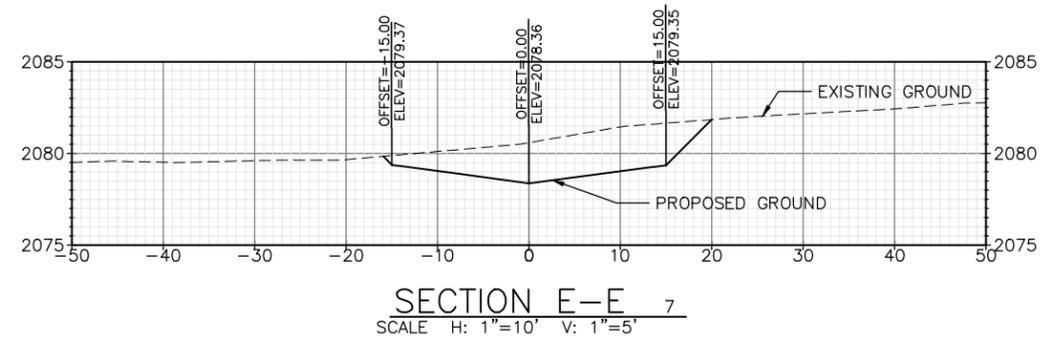
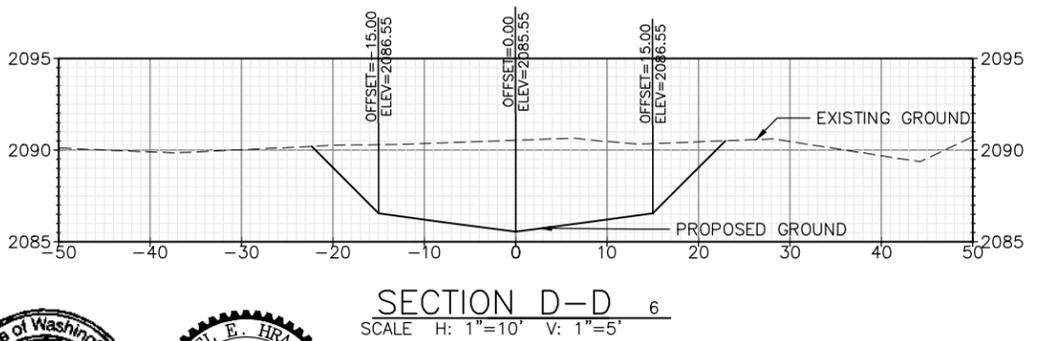
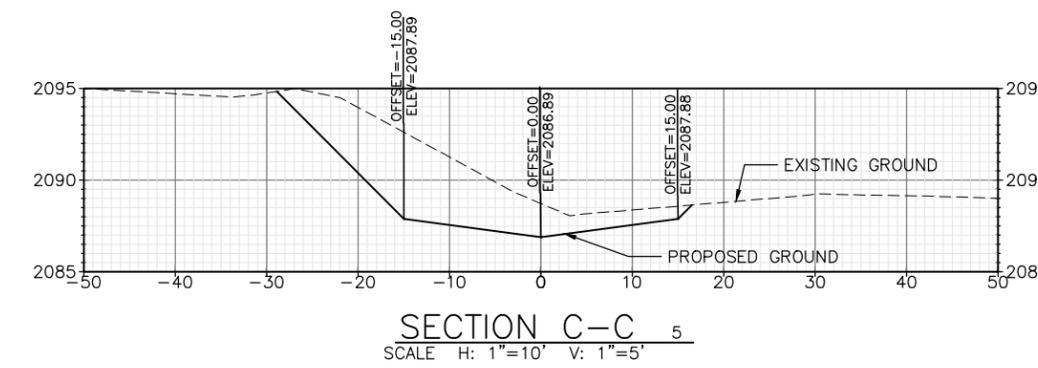
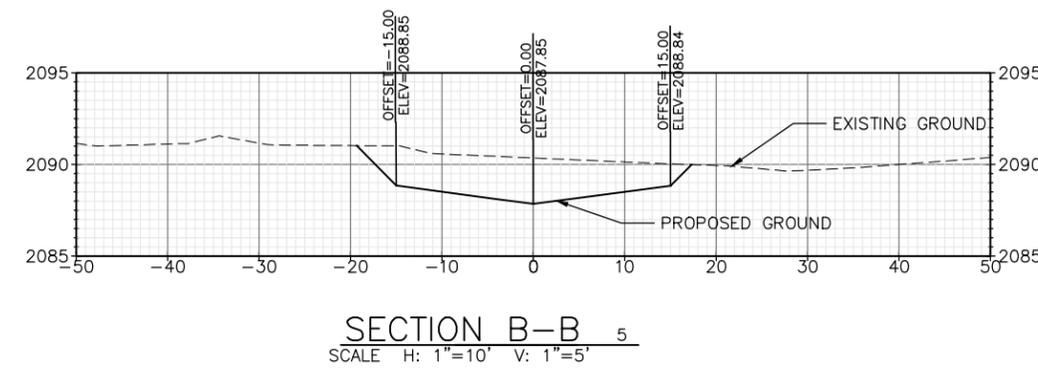
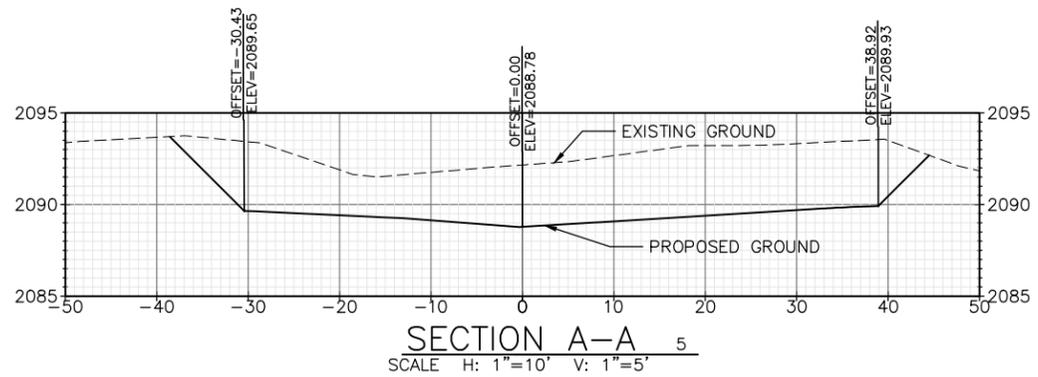
CLE ELUM RIVER RESTORATION
PHASE II

PROFILE CHANNEL H

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SHEET 20 OF 22

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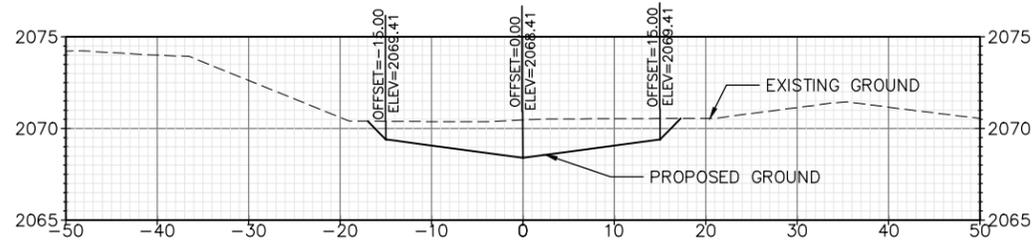
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CHECKED: TA, MH	LONGITUDE: 121°03'30" W
DRAWN: BLS	TN/SC/RG: T20N/S14/R14E
CHECKED: MH, ME, TA	DATE:

**CLE ELUM RIVER RESTORATION
PHASE II**

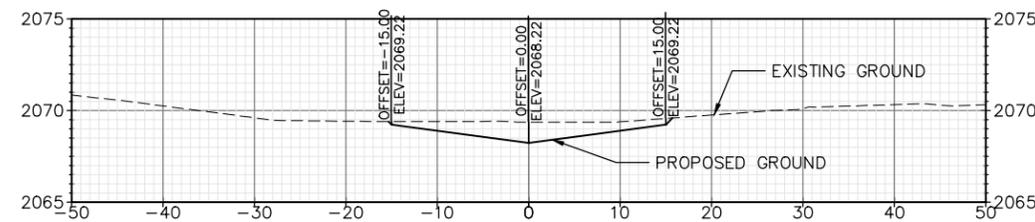
CROSS-SECTIONS

21
SHEET 21 OF 22

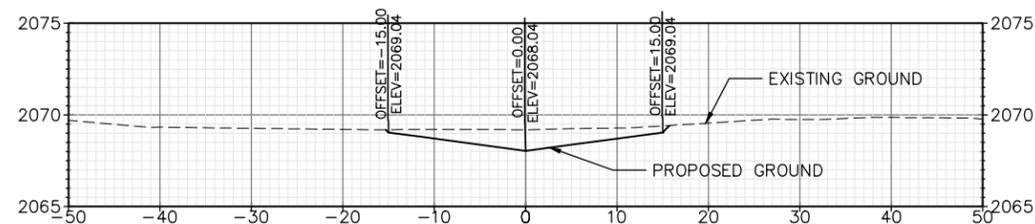
Jun-14-2013 FINAL DRAWINGS



SECTION I-I 9
SCALE H: 1"=10' V: 1"=5'



SECTION J-J 9
SCALE H: 1"=10' V: 1"=5'



SECTION K-K 9
SCALE H: 1"=10' V: 1"=5'

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CHECKED MH, ME, TA	DATE

CLE ELUM RIVER RESTORATION
PHASE II

CROSS-SECTIONS 2

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SHEET 22 OF 22

Jun-14-2013 FINAL DRAWINGS