# NAPA RIVER-RUTHERFORD REACH 4: EAST (LEFT) BANK

# NAPA COUNTY, CALIFORNIA



# **VICINITY MAP** NOT TO SCALE

# **ABBREVIATIONS**

ALD	ALDER	NIC	NOT IN CONTRACT
APPROX	APPROXIMATE	NTS	NOT TO SCALE
Q.	CENTERLINE	ОС	ON CENTER
CW	COTTONWOOD	PIP	PROTECT IN PLACE
DBH	DIAMETER BREAST HEIGHT	PWA	PHILIP WILLIAMS & ASSOCIATES
DEMO	DEMOLISH	Q AG	QUERCUS AGRIFOLIA (LIVE OAK)
DS	DOWNSTREAM	Q LO	QUERCUS LOBATA (VALLEY OAK)
ELEV	ELEVATION	RC	RELATIVE COMPACTION
(E)	EXISTING	SPECS	SPECIFICATIONS
EG	EXISTING GRADE	STA	STATION
FG	FINISHED GRADE	3:1	SLOPE, HORIZONTAL:VERTICAL
FL	FLOW LINE	TBD	TO BE DETERMINED
FT	FOOT, FEET	(TYP)	TYPICAL
GB	GRADE BREAK	US	UPSTREAM
MAX	MAXIMUM	VAR	VARIES
MIN	MINIMUM	VIF	VERIFY IN FIELD
(N)	NEW	WAL	WALNUT
		WIL	WILLOW

# PROJECT LIMITS

# **LOCATION MAP**

NOT TO SCALE

# **LEGEND**

	EXISTING GRADE (PROFILE & SECTION)
	DESIGN GRADE
	APPROX PROPERTY BOUNDARY
	GRADING LIMITS
	PROJECT LIMITS
	APPROX THALWEG
-0-0-0-0-	CONSTRUCTION ACCESS
_vvvv	EXISTING WATERLINE
	APPROX TREELINE
7 -4	NEW CONTOUR LINE
4	EXISTING CONTOUR LINE
	BRUSH MAT (PLAN)
* * * * * * * * * * * * * * * * * * *	LIVE POLE PLANTING (PLAN)
	EXISTING GROUND (SECTION)
	EXCAVATION (SECTION)
	FILL (SECTION)
	VINEYARD TOPSOIL OR PLANTING SOIL

# **LEGEND (CONT.)**

$\times^{23}$	DEMO TREE
	WILLOW BAFFLE
	LARGE WOODY DEBR TYPE 1 & 2
	LARGE WOODY DEBRI
0000	BOULDER CLUSTER
FLOW	FLOW DIRECTION
× 9.36	SPOT ELEVATION
	BENCHMARK
<b>*</b>	CONTROL POINT
₩ 🛛 47	EXISTING UTILITY
INDICA	TES SECTION OR



SHEET NUMBER ON WHICH SECTION OR

WHICH WHICH SECTION OR DETAIL WAS SPECIFIED

# **INDEX OF SHEETS**

CO2 GENERAL NOTES, RIVER BASELINE CONTROL

CO3 PROJECT LAYOUT & KEY PLAN

GRADING PLAN STA 155+50 TO STA 169+15

CO5 GRADING PLAN STA 146+00 TO STA 155+50

CO6 GRADING PLAN STA 134+00 TO STA 146+00 CO7 GRADING PLAN STA 124+60 TO STA 134+00

GRADING SECTIONS: BENCHES 6 AND 7

CO9 GRADING SECTIONS: BENCHES 8, 9, AND BANK STABILIZATION AREA 1

C10 GRADING SECTIONS: BENCHES 10, 11, AND BANK STABILIZATION AREA 2

C11 GRADING SECTIONS: BENCHES 12, 13, 14, AND BANK STABILIZATION AREA 3

C12 BERM TYPICAL SECTION AND CONTROL

C13 LEFT BANK GRADING SECTIONS: BERM STA 1+00 TO STA 6+00

C14 LEFT BANK GRADING SECTIONS: BERM STA 7+00 TO STA 12+00

C15 LEFT BANK GRADING SECTIONS: BERM STA 13+00 TO STA 18+00

C16 RIGHT BANK GRADING SECTIONS: BERM STA 0+00 TO STA 5+00 (NOT INCLUDED)

C17 RIGHT BANK GRADING SECTIONS: BERM STA 6+00 TO STA 11+00 (NOT INCLUDED)

C18 RIGHT BANK GRADING SECTIONS: BERM STA 12+00 TO STA 17+00 (NOT INCLUDED)

C19 RIGHT BANK GRADING SECTIONS: BERM STA 18+00 TO STA 23+00 (NOT INCLUDED)

C20 RIGHT BANK GRADING SECTIONS: BERM STA 24+00 TO STA 29+00 (NOT INCLUDED)

C21 RIGHT BANK GRADING SECTIONS: BERM STA 30+00 TO STA 35+00 (NOT INCLUDED)

C22 RIGHT BANK GRADING SECTIONS: BERM STA 36+00 TO STA 41+00 (NOT INCLUDED)

C23 RIGHT BANK GRADING SECTIONS: BERM STA 42+00 TO STA 45+25 (NOT INCLUDED)

C24 DETAILS - BIOTECHNICAL STABILIZATION

C25 DETAILS - LARGE WOODY DEBRIS (LWD) STRUCTURE

C26 DETAILS - LOW PROFILE LOG AND BOULDER CLUSTER

C27 DETAILS - ROUGHENED RIFFLE, VSL, AND TOE PROTECTION

ROUND POND SHOP AREA - PLAN, SECTION, DETAILS (NOT INCLUDED)

SO1 STRUCTURAL DETAILS (NOT INCLUDED)

RO1 EROSION CONTROL PLAN AND IRRIGATION DETAILS

RO2 IRRIGATION PLAN STA 155+50 TO STA 169+15

IRRIGATION PLAN STA 146+00 TO STA 155+50

RO4 IRRIGATION PLAN STA 134+00 TO STA 146+00

RO5 IRRIGATION PLAN STA 124+60 TO STA 134+00

DONALD G. RIDENHOUR, P.E.

COUNTY ENGINEER, R.C.E. 51790

DATE

C01

J BLOMBERG

A.BORGONOVO NOT TO SCALE

APRIL 2011

# **GENERAL NOTES**

GENERAL

1. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE COUNTY AND ITS REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL AND/OR ALLEGED, IN CONJUNCTION WITH THE PERFORMANCE OF THIS PROJECT.

- 2. A SET OF SIGNED WORKING DRAWINGS AND A SET OF SPECIFICATIONS WILL BE KEPT ON THE JOB SITE AT ALL TIMES ON WHICH ALL CHANGES OR VARIATIONS IN THE WORK, INCLUDING ALL EXISTING UTILITIES, ARE TO BE RECORDED AND/OR CORRECTED DAILY AND SUBMITTED TO THE COUNTY ENGINEER WHEN THE WORK TO BE DONE IS COMPLETED.
- 3. CONTRACTOR SHALL CONTACT THE COUNTY'S DIRECTOR OF PUBLIC WORKS, OR HIS/HER DESIGNEE, TO ARRANGE A PRE-CONFERENCE FOR THE PURPOSE OF REVIEWING JOB REQUIREMENTS AND
- 4. ALL MATERIAL SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
- 5. ALL WORKMANSHIP AND MATERIALS FOR BOTH ON-SITE AND OFF-SITE IMPROVEMENTS SHALL CONFORM TO THE LATEST EDITION OF THE COUNTY OF NAPA PUBLIC WORKS DEPARTMENT ROAD AND STREET STANDARDS AND THE LATEST EDITION OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS AND STANDARD PLANS. THE ON-SITE IMPROVEMENTS SHALL BE INSPECTED BY THE COUNTY PUBLIC WORKS INSPECTORS.
- 6. CONTRACTOR SHALL NOTIFY THE COUNTY OF NAPA DIRECTOR OF PUBLIC WORKS OR HIS DESIGNEE AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY PART OF WORK.
- 7. CONTRACTOR SHALL PROVIDE AND MAINTAIN SUFFICIENT TEMPORARY BARRICADES TO PROVIDE FOR THE SAFETY OF THE STAFF AND GENERAL PUBLIC TO THE SATISFACTION OF THE PUBLIC WORKS

PROTECTION OF EXISTING CONDITIONS

8. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING VEGETATION, STRUCTURES AND UTILITIES DURING CONSTRUCTION.

- 9. PROTECT ALL EXISTING IMPROVEMENTS AND VEGETATION NOT SLATED FOR DEMOLITION. PLACE TEMPORARY FENCING, FLAGGING OR EQUIVALENT AT THE WATER DIVERSION, PERIMETER OF ALL VEGETATED AREAS AND/OR INDIVIDUAL TREES TO BE PRESERVED, AND ANY OTHER IMPROVEMENTS ONSITE.
- 10. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL REVIEW ALL TREE AND OTHER PROTECTION FENCING WITH THE OWNER'S REPRESENTATIVE, AND FIELD ADJUST THE LIMITS AS DIRECTED.

<u>UTILITIES</u>
11. CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITY COMPANIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK ADJACENT TO EXISTING UTILITY LINES.

- 12 CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600 PRIOR TO START OF ANY CONSTRUCTION
- 13. LOCATIONS OF UTILITIES AND FACILITIES SHOWN ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY, CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES AS NEEDED FOR VERIFICATION.
- 14. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES AND PROTECT THROUGHOUT CONSTRUCTION.

- ENVIRONMENTAL PROTECTION

  15. CONTRACTOR SHALL CONDUCT ALL GRADING OPERATIONS IN SUCH MANNER AS TO PRECLUDE WIND BLOWN DIRT AND DUST AND RELATED DAMAGE TO NEIGHBORING PROPERTIES. SUFFICIENT WATERING TO CONTROL DUST IS REQUIRED AT ALL TIMES. CONTRACTOR SHALL ASSUME LIABILITY FOR CLAIMS RELATED TO WIND BLOWN MATERIAL. IF THE DUST CONTROL IS INADEQUATE AS DETERMINED BY THE PUBLIC WORKS DIRECTOR OR HIS DESIGNATED REPRESENTATIVE, THE CONSTRUCTION WORK SHALL BE TERMINATED UNTIL CORRECTIVE MEASURES ARE TAKEN.
- 16 CONTRACTOR SHALL FLIMINATE OR MINIMIZE NON-STORM DISCHARGE FROM THE CONSTRUCTION SITE TO STORM DRAINS AND OTHER WATER RODIES. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN A MANNER THAT MINIMIZE NOT DESCRIBED FROM THE CONSTRUCTION SHE TO STORM DRAINS AND OTHER WATER BOOKS. ALL CONSTRUCTION ACTIVITIES SHALL BE STORED AND USED IN A MANNER THAT MINIMIZES, TO THE MAXIMUM EXTENT PRACTICABLE, ANY POLLUTANTS ENTERING DIRECTLY OF INDIRECTLY INTO GROUND WATER. ALL MATERIALS THAT COULD CAUSE WATER POLLUTION (i.e., MOTOR OIL, FUELS, PAINTS, ETC.) SHALL BE STORED AND USED IN A MANNER THAT WILL NOT CAUSE ANY POLLUTION. ALL DISCARDED MATERIAL AND ANY ACCIDENTAL SPILLS SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED DISPOSAL SITE.
- 17. CONTRACTOR SHALL PROVIDE TO THE PUBLIC WORKS DEPARTMENT ANY CHANGES PROPOSED FOR THE PROJECT'S EROSION CONTROL PLAN AND SHALL PROVIDE A SCHEDULE FOR IMPLEMENTATION OF CONTROL MEASURES. CONTRACTOR SHALL MEET WITH COUNTY PUBLIC WORKS STAFF PRIOR TO OCTOBER 1 TO REVIEW STATUS OF PROJECT'S EROSION CONTROL AND WATER POLLUTION MEASURES.
- 18. CONTRACTOR SHALL SUBMIT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT PROVIDES, AT A MINIMUM, THE EROSION CONTROL MEASURES SHOWN ON SHEET R01. THE SWPPP SHALL COMPLY WITH THE NEW CONSTRUCTION GENERAL STORMWATER PERMIT (2009-009-DWQ). THE PROJECT SHOULD BE ASSUMED TO BE IN THE 'L.U.P. TYPE 3' CATEGORY. CONTRACTOR SHALL MAINTAIN A COPY OF THE SWPPP ONSITE AT ALL TIMES, AND SHALL UPDATE THE SWPPP REGULARLY AS NEEDED TO RESPOND TO SITE CONDITIONS.
- 19. THE CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT EROSION, SEDIMENT AND HAZMAT RUNOFF FROM THE CONSTRUCTION SITE.
- 20. THE OWNER HAS OBTAINED PERMITS FROM RESOURCE AGENCIES FOR THIS PROJECT (SEE SPECS). COMPLY WITH ALL PERMIT REQUIREMENTS INCLUDING BUT NOT LIMITED TO PROTECTION OF WATER QUALITY, WILDLIFE AND VEGETATION. COOPERATE WITH THE ACTIVITIES OF THE COUNTY'S BIOLOGIST AND COMPLY WITH ALL REQUIRED NOTIFICATIONS.
- 21. DURING GRADING, THE CONTRACTOR SHALL PROVIDE AN ONSITE MONITOR TO MAKE SURE THE GRADING LIMITS ARE CLEAR OF RED-LEGGED FROG AND OTHER PROTECTED WILDLIFE.
- 22 CONSTRUCTION OF THE ROLLIDER CRADE CONTROL STRUCTURE LOG STRUCTURES AND ROCK TOE PROTECTION REQUIRES WORK IN THE ACTIVE CHANNEL INCLUDING DEWATERING AND FLOW DIVERSION COMPLY WITH PERMIT REQUIREMENTS FOR WILDLIFE AND WATER QUALITY PROTECTION (SEE SPECS).

TREE PROTECTION
23. ONLY TREES GREATER THAN 12" DIAMETER ARE SHOWN ON THE PLANS.

24. CONTRACTOR TO PROTECT ALL TREES, EXCEPT THOSE SLATED FOR REMOVAL, REGARDLESS OF SIZE, SEE ALSO NOTES 9 AND 10 ABOVE.

# CULTURAL RESOURCES

ONTROTORS SHALL NOTIFY THE OWNER IMMEDIATELY IF CULTURAL RESOURCES ARE ENCOUNTERED DURING EXCAVATION FOR ANY PHASE OF THE PROJECT, AND THAT PORTION OF WORK SHALL BE HALTED UNTIL A CULTURAL RESOURCE CONSULTANT HAS EVALUATED THE SITUATION.

36 THE PROJECT SITE IS ON PRIVATE PROPERTY. THE CONTRACTOR SHALL ONLY LISE SITE ACCESS ROLLES TO THE SITE AS NOTED ON THE DRAWINGS AND AS APPROVED BY THE ENGINEER

- 27. STAGING, STORAGE AND TEMPORARY STOCKPILING SHALL BE LIMITED TO THE AREAS INDICATED ON THE DRAWINGS, AND AS APPROVED BY THE ENGINEER.
- 28. THE CONTRACTOR SHALL ONLY OPERATE EQUIPMENT WITHIN THE LIMITS OF GRADING. THE AREA BETWEEN THE NEW AND EXISTING BERM, AND ALONG APPROVED ACCESS ROUTES WITHIN THE SITE.
- 29 DRAWINGS SHOW SUGGESTED ACCESS ROLITES WITHIN THE SITE. THE CONTRACTOR SHALL LIMIT ITS ACCESS TO THESE LOCATIONS, AND/OR ALTERNATIVE ROLITE(S) AS APPROVED IN WRITING BY THE

TRAFFIC CONTROL

30. ALL TRAFFIC CONTROL REQUIRED FOR CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE CALTRANS TRAFFIC MANUAL. FOR ALL LANE CLOSURES AND DETOURS A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE COUNTY OF NAPA FOR REVIEW AND APPROVAL AT LEAST FIVE (5) WORKING DAYS BEFORE THE SCHEDULE CLOSURE

- TOPOGRAPHIC DATA AND MAPPING
  31. THE TOPOGRAPHIC SURVEY IS BASED ON LIDAR DATA COLLECTED BY AIRBORNE1 OF EL SEGUNDO, CA ON 3/22/07. TOPOGRAPHIC INFORMATION FOR BENCH GRADING WAS SUPPLEMENTED BY GROUND SURVEY PERFORMED BY DOBLE THOMAS & ASSOCIATES IN NOV TO DEC 2009. BENCHMARKS ARE BASED ON GROUND SURVEYS COMPLETED BY DOBLE THOMAS & ASSOCIATES OF NAPA, CA
- 32. THE EXISTING GRADE REFLECTS SITE CONDITIONS AT THE TIME OF THE SURVEYS. CONTRACTOR SHOULD VERIFY GRADES PRIOR TO COMMENCING WORK AND SHALL REPORT ANY DISCREPANCY BETWEEN DESIGN DRAWINGS AND FIELD CONDITIONS IMMEDIATELY TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL NOT COMMENCE WITH GRADING UNTIL THE DISCREPANCY IS RESOLVED.
- 33. HORIZONTAL CONTROL IS CALIFORNIA STATE PLANE ZONE II (NAD83) IN US ET. VERTICAL CONTROL IS NAVD88
- 34. CONTRACTOR SHALL VERIFY AND CHECK EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- 35. CONTRACTOR SHALL VERIFY LOCATIONS, LEVELS DISTANCES, AND FEATURES THAT MAY AFFECT THE WORK. SHOULD EXISTING CONDITIONS DIFFER FROM THOSE SHOWN OR INDICATED, OR IF IT APPEARS THAT THESE PLANS, STANDARD SPECIFICATION, AND SPECIAL PROVISIONS DO NOT ADEQUATELY DETAIL THE WORK TO BE DONE, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WITH ANY RELATED WORK. NO ALLOWANCE WILL BE MADE IN HIS/HER BEHALF FOR ANY EXTRA EXPENSE RESULTING FROM FAILURE OR NEGLECT IN DETERMINING THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. NOTED DIMENSION SHALL TAKE PRECEDENCE OVER SCALE.

- EARTHWORK
  36. A GEOTECHNICAL REPORT WAS PREPARED BY HULTGREN-TILLIS ENGINEERS FOR THIS PROJECT, AND IS PROVIDED FOR INFORMATIONAL PURPOSES. WORK SHALL BE PERFORMED WITH CONSTRUCTION EQUIPMENT THAT IS COMPATIBLE FOR SOIL CONDITIONS. SEE SPECS.
- 37. RESTORE ALL DISTURBED AREAS BY SEEDING AND APPLYING EROSION CONTROL MEASURES PER THE DRAWINGS AND SPECS. RESTORE ALL ACCESS ROUTES TO ORIGINAL GRADES AND CONDITION.

# **SURVEY CONTROL**

Point	Northing	Easting	Elevation	Description
27	1936331.45	6442181.67	165.06	3/8" REBAR 5520
28	1936169.04	6442100.36	164.28	3/8" REBAR 5520
29	1935123.06	6442327.26	167.29	3/8" REBAR 5520
31	1935033.39	6442378.08	166.56	3/8"REBAR 5520
34	1933180.53	6443179.51	161.02	3/8" REBAR 5520
35	1932936.30	6443197.01	160.40	3/8" REBAR 5520
36	1931899.08	6443097.63	155.07	3/8" REBAR 5520
37	1931638.29	6443176.53	154.46	SURVEY SPIKE
10	1936381.05	6442224.14	167.82	3/8" REBAR 5520
233	1935904.47	6442196.37	164.36	3/8"REBAR 5520
234	1935907.81	6442220.67	167.00	3/8"REBAR 5520
235	1935497.89	6442215.40	161.59	3/8"REBAR 5520
236	1935510.83	6442252.15	168.17	3/8"REBAR 5520
237	1935147.89	6442301.86	167.33	3/8"REBAR 5520
239	1934206.75	6443116.81	164.64	3/8"REBAR 5520
240	1933889.32	6443146.84	163.13	3/8"REBAR 5520
241	1933571.04	6443189.12	161.29	3/8"REBAR 5520
242	1933417.59	6443095.91	155.49	3/8"REBAR 5520
244	1932831.74	6443210.73	161.43	3/8"REBAR 5520
245	1932400.41	6443133.92	155.94	SURVEY SPIKE
247	1932390.92	6443173.18	160.06	3/8"REBAR 5520
249	1931458.85	6443285.43	155.86	3/8"REBAR 5520
251	1931410.89	6443645.02	157.68	3/8"REBAR 5520
361	1935592.26	6442236.77	167.38	3/8"REBAR 5520
362	1935392.20	6442263.36	167.41	3/8"REBAR 5520
363	19353446.56	6442256.90	167.41	THE RESIDENCE OF THE PARTY OF T
364	1935551.04	6442411.77	164.59	3/8"REBAR 5520 3/8"REBAR 5520
367	1935551.93	6442284.60	160.89	SURVEY SPIKE
368	1935210.00		168.70	SURVEY SPIKE
372	1935547.31	6442421.58 6442539.58	168.98	SURVEY SPIKE
377	1934948.71	6442457.92	165.87	SURVEY SPIKE
378	1934895.21	6442506.19	165.53	SURVEY SPIKE
380	1934784.88	6442622.07	165.41	SURVEY SPIKE
381	1934633.55	6442816.22	165.04	SURVEY SPIKE
382	1934676.33	6442771.59	164.48	SURVEY SPIKE
383	1934710.99	6442719.21	164.68	SURVEY SPIKE
384	1934872.72	6442726.55	166.22	SURVEY SPIKE
385	1934722.69	6442908.92	166.16	SURVEY SPIKE
386	1934432.25	6443164.25	161.23	SURVEY SPIKE
387	1934606.04	6442842.98	164.53	SURVEY SPIKE
388	1934561.68	6442874.31	164.17	SURVEY SPIKE
389	1934428.49	6442958.07	164.47	SURVEY SPIKE
390	1934360.44	6443011.13	164.65	SURVEY SPIKE
391	1934323.23	6443054.08	163.83	SURVEY SPIKE
392	1934285.98	6443080.86	163.73	SURVEY SPIKE
393	1934250.88	6443104.29	163.78	SURVEY SPIKE
394	1934131.76	6443131.04	164.39	SURVEY SPIKE
395	1934052.04	6443137.00	164.20	SURVEY SPIKE
396	1933972.58	6443141.18	163.51	SURVEY SPIKE

Point	Northing	Easting	Elevation	Description
397	1933816.53	6443153.96	162.56	SURVEY SPIKE
398	1933731.09	6443166.05	161.78	SURVEY SPIKE
399	1933650.70	6443180.86	161.50	SURVEY SPIKE
400	1933914.39	6443308.93	163.77	SURVEY SPIKE
401	1934039.86	6443307.51	164.29	SURVEY SPIKE
402	1933676.68	6443352.95	159.16	SURVEY SPIKE
403	1934211.76	6443270.21	164.46	SURVEY SPIKE
404	1933517.78	6443326.12	162.86	SURVEY SPIKE
405	1933512.98	6443182.45	162.13	SURVEY SPIKE
406	1933396.21	6443167.20	163.13	SURVEY SPIKE
407	1933340.92	6443164.93	161.77	SURVEY SPIKE
409	1933272.00	6443171.82	161.29	SURVEY SPIKE
410	1933212.18	6443178.75	161.01	SURVEY SPIKE
411	1933142.83	6443181.20	160.64	SURVEY SPIKE
412	1933080.80	6443185.39	160.78	SURVEY SPIKE
413	1933001.99	6443191.56	160.71	SURVEY SPIKE
415	1933314.85	6443299.28	161.94	SURVEY SPIKE
416	1933061.86	6443354.26	161.41	SURVEY SPIKE
417	1933004.44	6443395.48	160.04	SURVEY SPIKE
418	1932876.38	6443209.62	161.62	SURVEY SPIKE
419	1932759.18	6443210.80	161.25	SURVEY SPIKE
421	1932707.09	6443220.26	159.97	SURVEY SPIKE
421	1932650.07	6443225.56	159.34	SURVEY SPIKE
423	1932588.55	6443232.69	159.44	SURVEY SPIKE
424	1932519.85	6443217.59	159.67	SURVEY SPIKE
425	1932456.23	6443196.97	159.91	SURVEY SPIKE
427	1932320.43	6443158.70	161.22	SURVEY SPIKE
429	1932479.69	6443379.43	155.54	SURVEY SPIKE
430	1932181.20	6443271.27	160.50	SURVEY SPIKE
431	1932078.88	6443280.97	160.26	SURVEY SPIKE
432	1932195.05	6443139.72	159.69	SURVEY SPIKE
434	1932069.40	6443141.98	159.44	SURVEY SPIKE
435	1932003.51	6443133.57	159.31	SURVEY SPIKE
436	1931926.37	6443137.27	158.30	3/8"REBAR 5520
437	1931863.30	6443140.55	159.20	SURVEY SPIKE
439	1931748.56	6443187.51	159.27	SURVEY SPIKE
441	1932021.33	6443327.70	154.89	SURVEY SPIKE
444	1931613.28	6443240.79	158.57	SURVEY SPIKE
445	1931555.58	6443273.13	157.90	3/8"REBAR 5520
446	1931521.00	6443317.14	156.50	SURVEY SPIKE
449	1931356.95	6443522.80	151.44	SURVEY SPIKE
451	1935718.54	6442237.86	167.41	SURVEY SPIKE
452	1935831.13	6442225.13	168.11	SURVEY SPIKE
454	1936083.52	6442223.86	167.85	SURVEY SPIKE
455	1936149.18	6442226.89	167.68	SURVEY SPIKE
456	1936207.64	6442219.35	167.55	SURVEY SPIKE
457	1936294.26	6442212.59	168.25	SURVEY SPIKE
458	1936468.44	6442237.97	168.87	SURVEY SPIKE
459	1936551.05	6442255.27	169.02	SURVEY SPIKE

● PWA	PHILIP WILLIAMS & ASSOCIATES, LTD. ENVIRONMENTAL HYDROLOGY	550 KEARNY STREET, SUITE 900 SAN FRANCISCO, CALIFORNIA 94108 PHONE (415) 262-2300 FAX (415) 262-2303

NAPA RIVER RESTORATI RUTHERFORD REACH 4 EAST (LEFT) BANK

NOTES

NAPA COUNTY RTMENT OF PUBLIC W 1195 Third St, Suite 201 Napa, CA 94559 'n



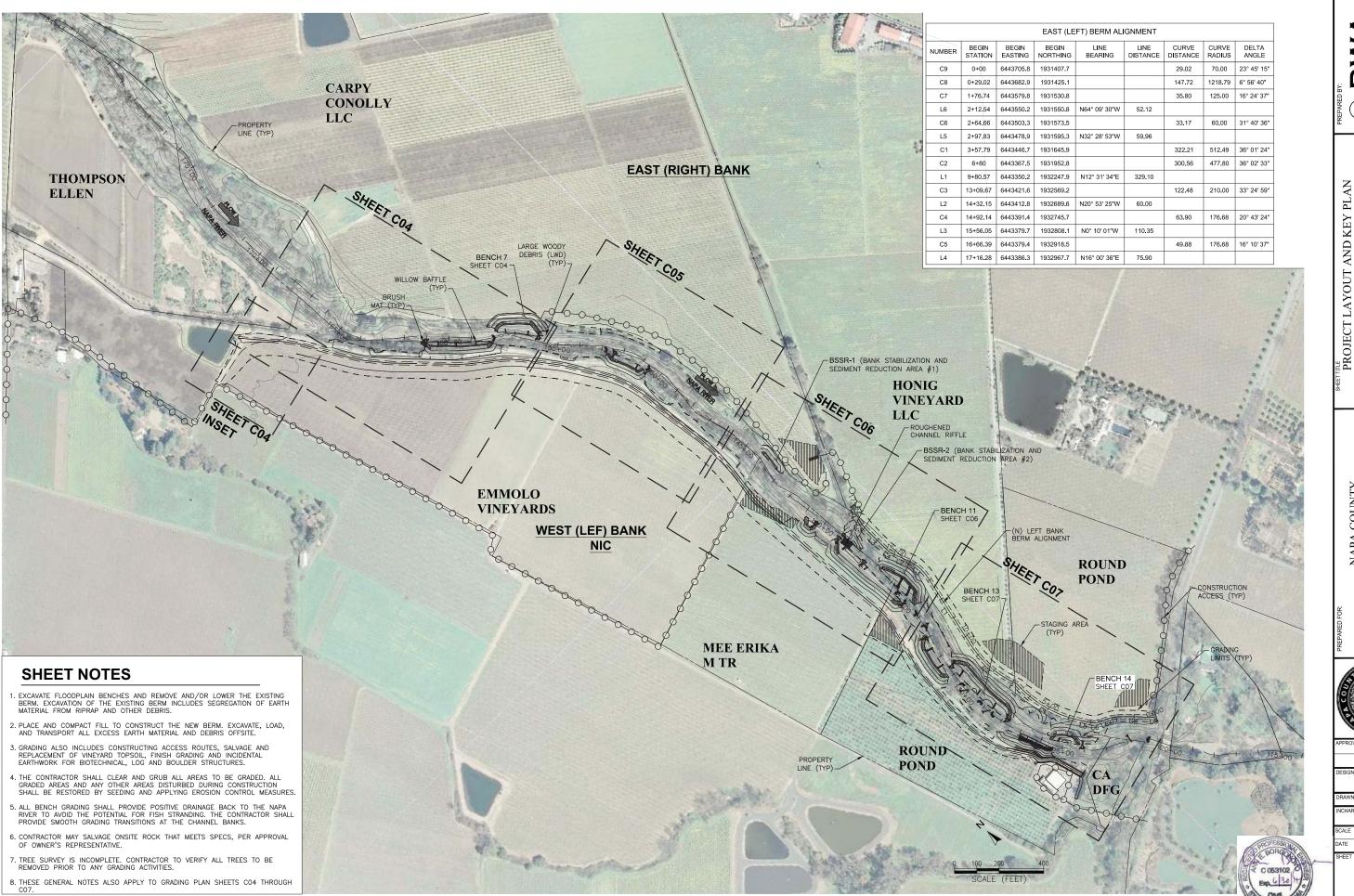
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APPROVED

DESIGNED	
l	R. BROWN
	J. BLOMBERG
DRAWN	B.TANAKA
	D.IMIGHON

AS SHOWN APRIL 2011

C02

C 053102



KEY

NAPA RIVER RESTORATIO RUTHERFORD REACH 4 EAST (LEFT) BANK

NAPA ( DEPARTMENT O



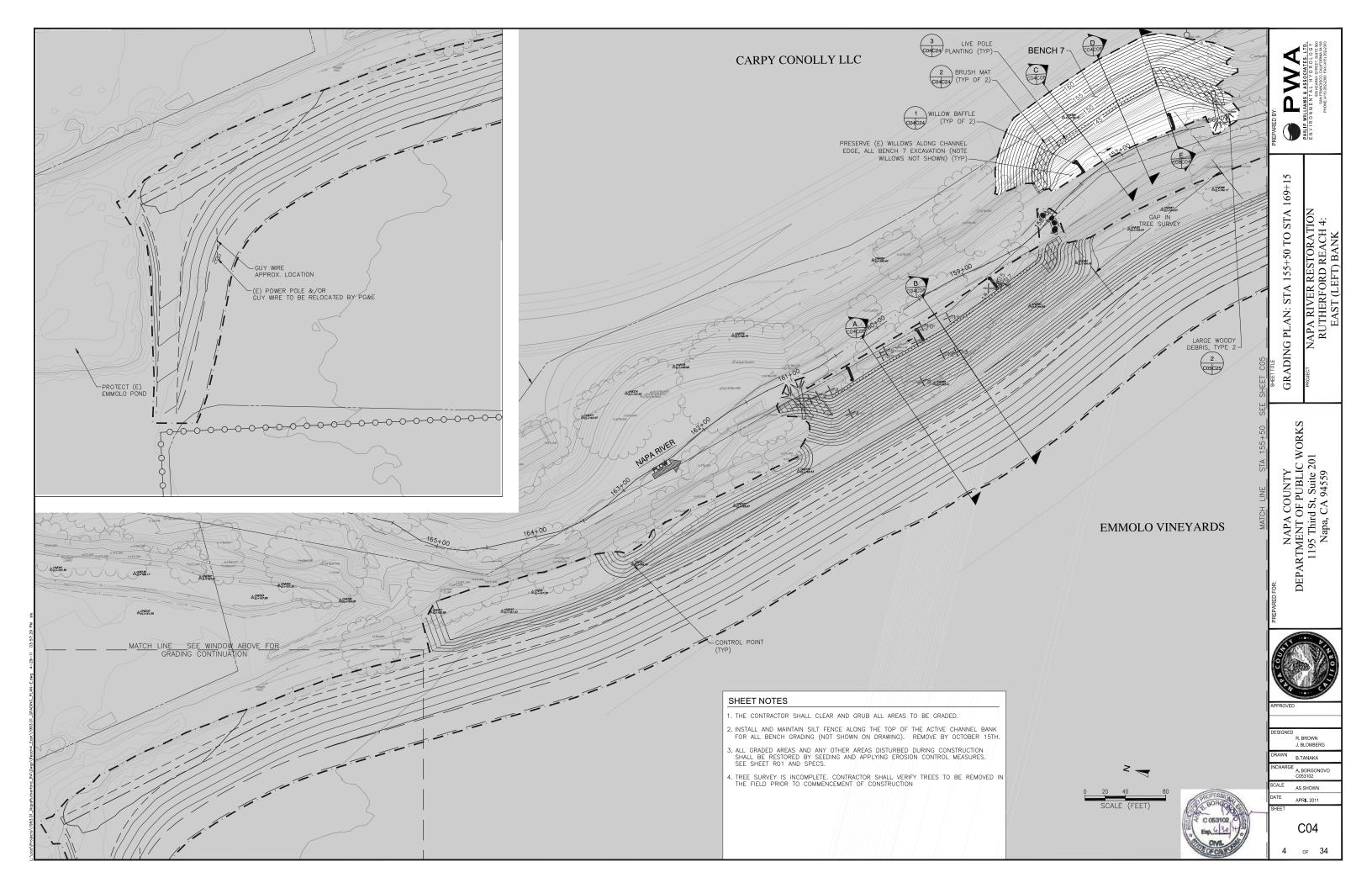
R. BROWN

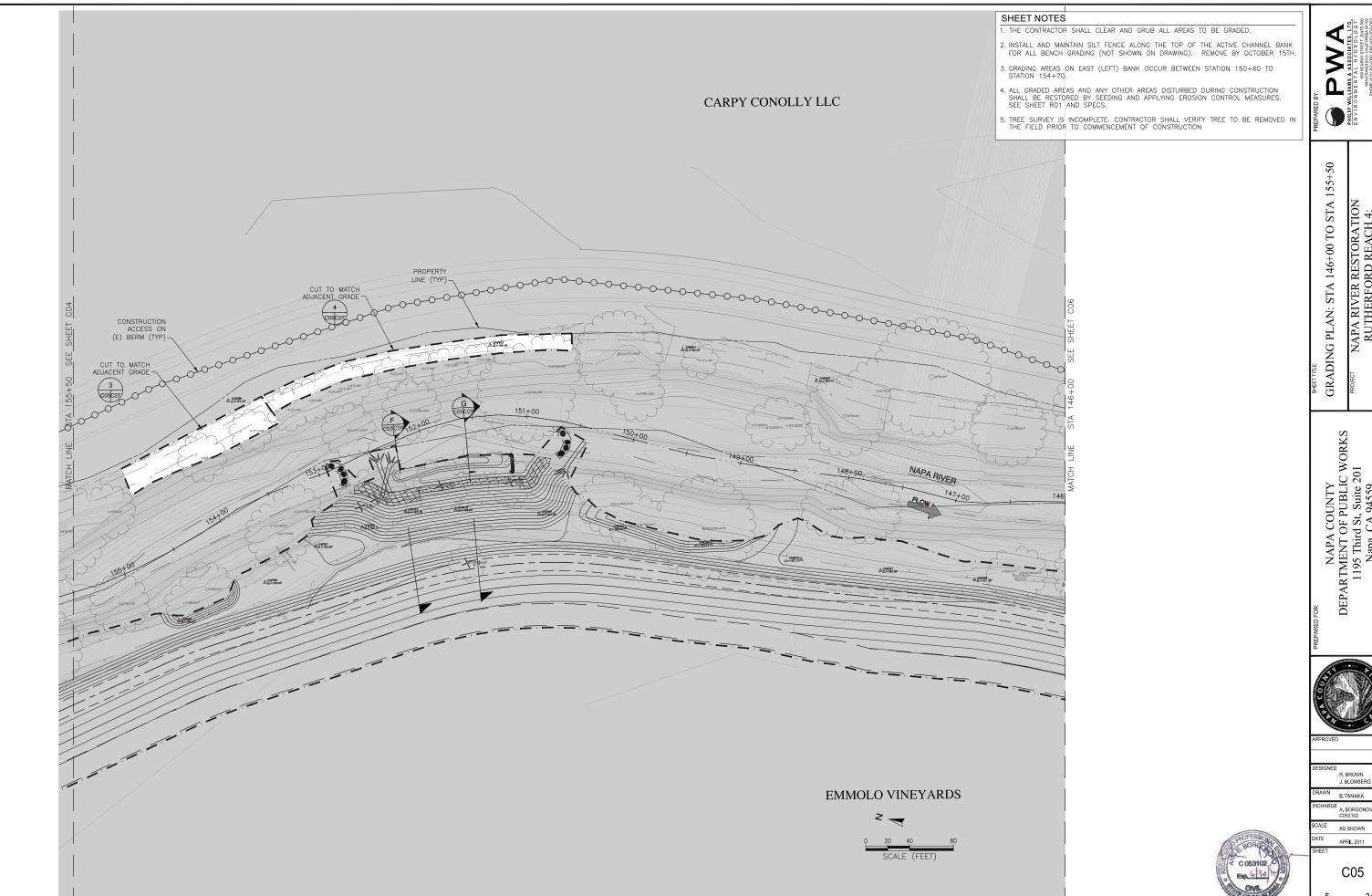
J BLOMBER B.TANAKA

A. BORGONOVO AS SHOWN

APRIL 2011

C03





NAPA RIVER RESTORATION RUTHERFORD REACH 4: EAST (LEFT) BANK

NAPA COUNTY
DEPARTMENT OF PUBLIC WORKS
1195 Third St, Suite 201
Napa, CA 94559

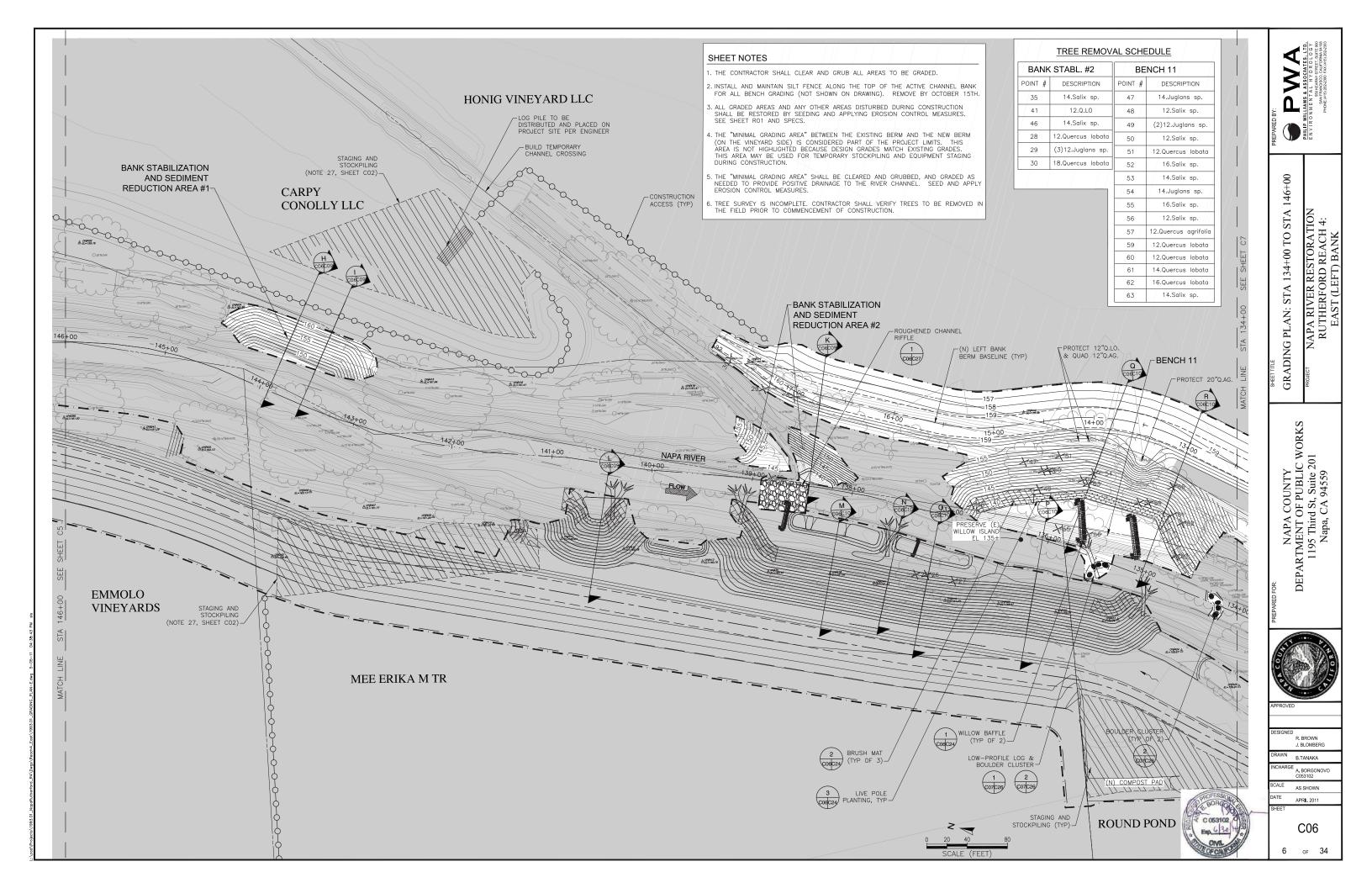


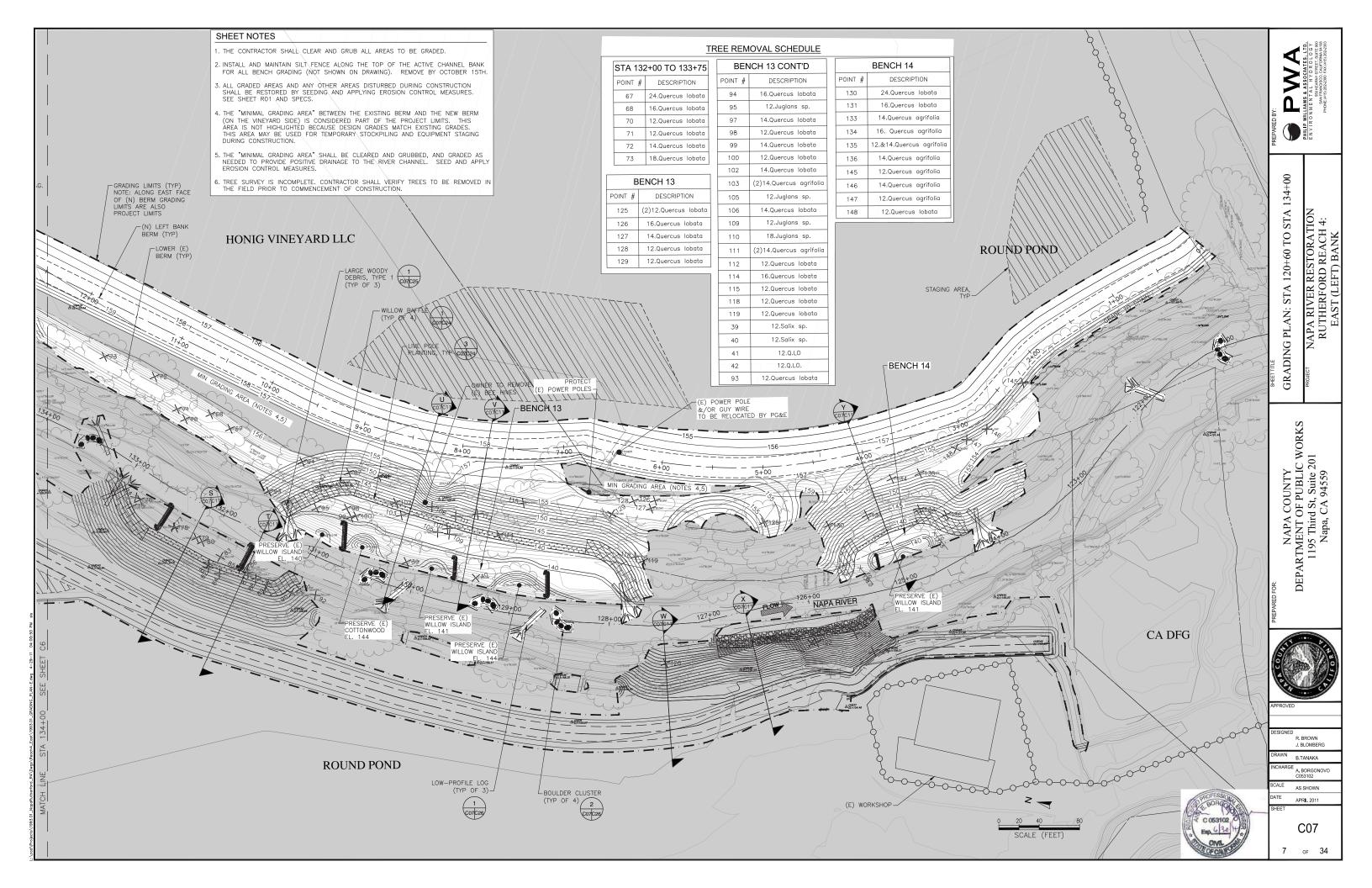
VN B.TANAKA

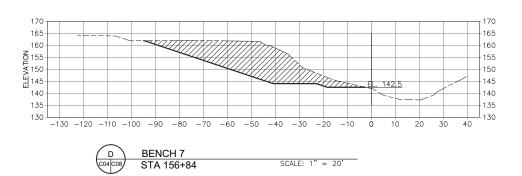
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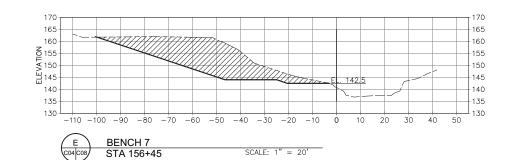
AS SHOWN APR**I**L 2011

C05









# NOTES

- 1. SECTIONS ARE SHOWN LOOKING DOWNSTREAM. STATION 0 IS THE CHANNEL BASELINE, SEE SHEET CO2 FOR CONTROL TABLE.
- 2. THE ACCURACY OF TOPOGRAPHIC DATA WITHIN THE ACTIVE CHANNEL IS LIMITED. THE GROUND SURVEY GENERALLY EXTENDS DOWN THE CHANNEL BANK, BUT NOT ACROSS THE CHANNEL. LIDAR DATA FOR THE CHANNEL DOES NOT EXTEND BELOW THE WATER SURFACE AT THE TIME OF THE SURVEY.
- 3. AT SOME LOCATIONS THE MATCHLINE BETWEEN THE GROUND SURVEY AND LIDAR TOPOGRAPHIC DATA DOES NOT ALIGN VERTICALLY. ALL AVAILABLE DATA IS SHOWN FOR COMPLETENESS. THE GROUND SURVEY DATA (ON THE BENCH SIDE) IS A MORE ACCURATE REPRESENTATION OF ACTUAL CONDITIONS.



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1195 Third St, Suite 201
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PW.

NAPA RIVER RESTORATION RUTHERFORD REACH 4: EAST (LEFT) BANK

GRADING SECTIONS BENCHES 6 AND 7

DESIGNED R. BROWN J. BLOMBERG

DRAWN B.TANAKA

A. BORGONOVO C053102

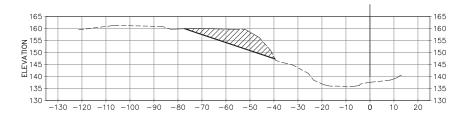
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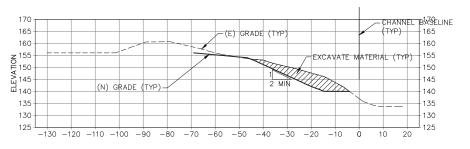


BANK STABILIZATION AND SEDIMENT REDUCTION AREA 1 STA 143+91 SCALE: 1" = 20'





BANK STABILIZATION AND SEDIMENT REDUCTION AREA 1
STA 143+56
SCALE: 1" = 20'





BANK STABILIZATION AND SEDIMENT REDUCTION AREA 2
STA 137+33
SCALE: 1" = 20'

# NOTES

- 1. SECTIONS ARE SHOWN LOOKING DOWNSTREAM. STATION 0 IS THE CHANNEL BASELINE, SEE SHEET CO2 FOR CONTROL TABLE.
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PREPARED FOR:

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GRADING SECTIONS: BENCHES 8 & BANK STABILIZATION AREAS 1 &

NAPA RIVER RESTORATION RUTHERFORD REACH 4: EAST (LEFT) BANK



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C 053102

DESIGNED R. BROWN

J. BLOMBERG

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DRAWN B.TANAKA

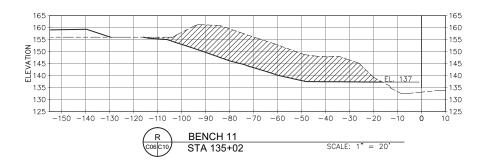
A. BORGONOVO C053102

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- 1. SECTIONS ARE SHOWN LOOKING DOWNSTREAM. STATION 0 IS THE CHANNEL BASELINE, SEE SHEET CO2 FOR CONTROL TABLE.
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NAPA RIVER RESTORATION RUTHERFORD REACH 4: EAST (LEFT) BANK

GRADING SECTIONS BENCHES 10 AND 11

PW,



R. BROWN J. BLOMBERG

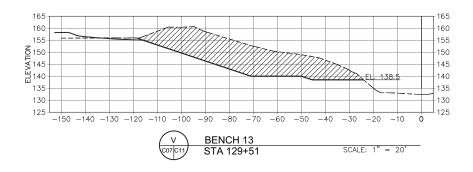
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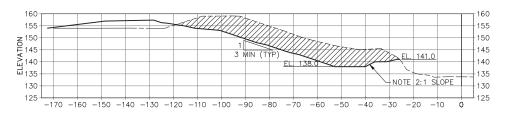
A. BORGONOVO C053102

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APRIL 2011

C10







# NOTES:

- SECTIONS ARE SHOWN LOOKING DOWNSTREAM. STATION 0 IS THE CHANNEL BASELINE, SEE SHEET CO2 FOR CONTROL TABLE.
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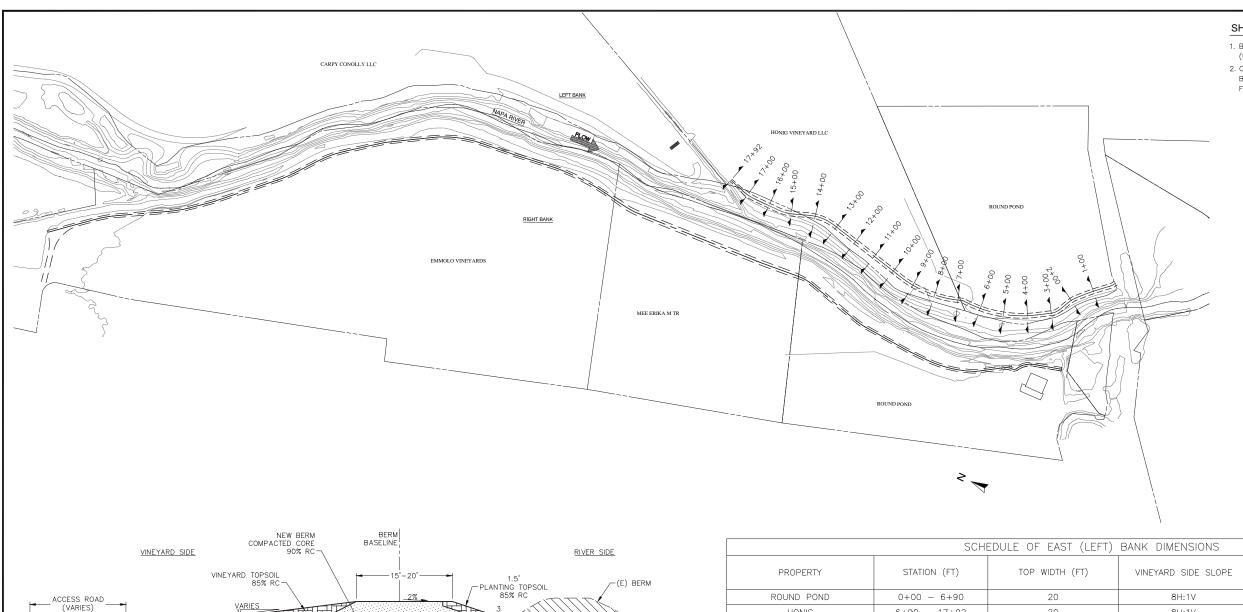
B.TANAKA

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C11



7' MIN \_BETWEEN TOE OF (N) BERM\_ AND TOP OF BANK OR TOP OF CUT SLOPE

# SHEET NOTES

- BERM SECTIONS ARE SHOWN LOOKING UPSTATION (UPSTREAM)
- 2. OVEREXCAVATE WITHIN THE FOOTPRINT OF THE NEW BERM CORE TO THE BERM DAYLIGHT ELEVATION. PLACE FILL FOR NEW BERM IN UNIFORM LIFTS.

NEW BERMS TYPICAL SECTIONS AND HORIZONTAL CONTROL

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WN B.TANAKA

A. BORGONOVO C053102

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C12

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EAST (LEFT) BANK NEW BERM: ELEVATION CONTROL

SCALE: 1" = 10'

(E) GRADE-

LEVEL AND SCARIFY
(N) BERM BASE —

NEW BERM
TYPICAL SECTION

-BERM DAYLIGHT EL (NOTE 2)

C06, C07-

COMPACT TO 90% RC

BERM STATION	PROPOSED
0+00	156.2
1+24	156.5
3+33	157.0
5+41	157.5
7+49	158.0
9+86	158.5
12+43	159.0
14+99	159.5
17+50	160.0
17+92	159.1

SCHEDULE OF EAST (LEFT) BANK DIMENSIONS					
PROPERTY	STATION (FT)	TOP WIDTH (FT)	VINEYARD SIDE SLOPE	RIVER SIDE SLOPE	ACCESS ROAD WIDTH (FT)
ROUND POND	0+00 - 6+90	20	8H:1V	3H:1V	20
HONIG	6+90 - 17+92	20	8H:1V	3H:1V	20



R. BROWN J. BLOMBERG

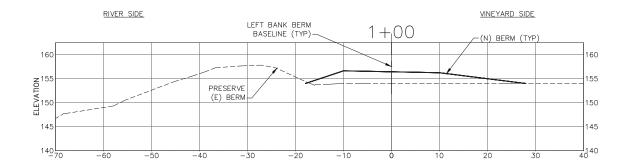
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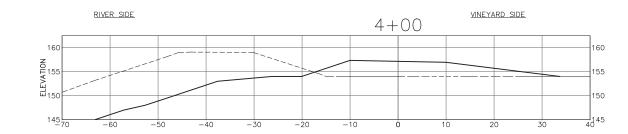
A. BORGONOVO C053102

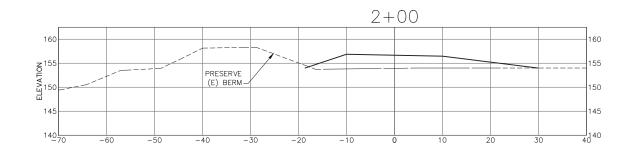
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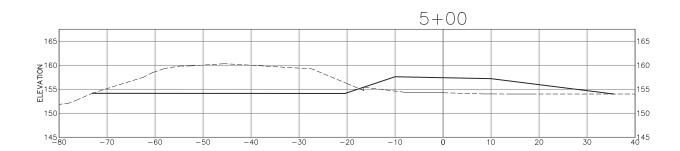
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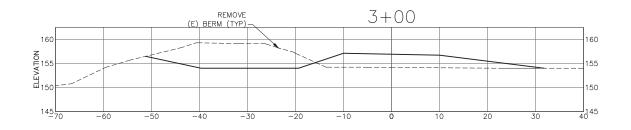
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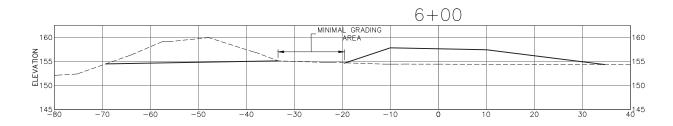












**SHEET NOTES** 

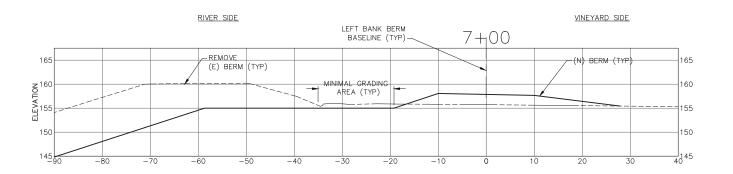
SCALE FOR ALL GRADING SECTIONS IS 1"=10'. SECTIONS ARE SHOWN LOOKING UPSTREAM.

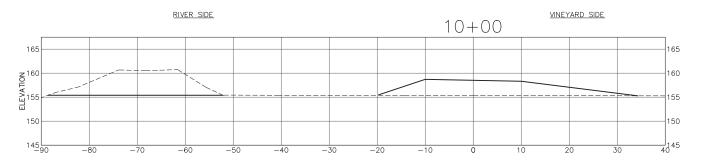
3. OVEREXCAVATE AS NEEDED TO CREATE LEVEL BERM FOUNDATION. SUBGRADE LIMITS NOT SHOWN ON THIS SHEET. SEE TYPICAL SECTIONS, SHEET C12.

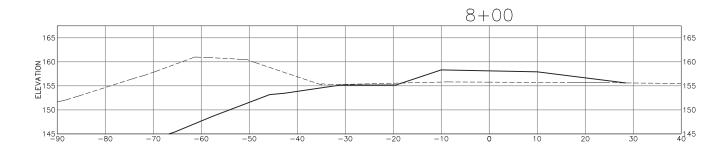
4. STATION 0 ON THE CROSS-SECTION ALIGNS WITH THE (N) BERM BASELINE.

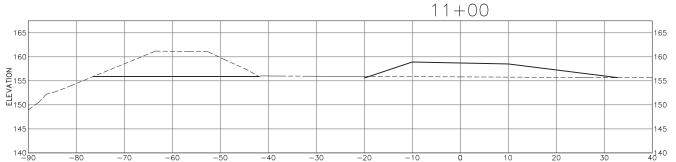
2. SEE SHEET C12 FOR TYPICAL SECTION.

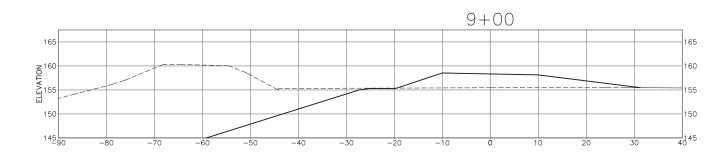
# LEFT BANK (EAST) **GRADING SECTIONS**

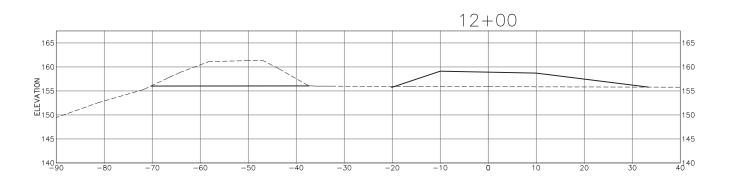








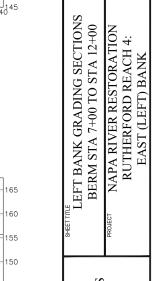




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LEFT BANK (EAST) **GRADING SECTIONS** 



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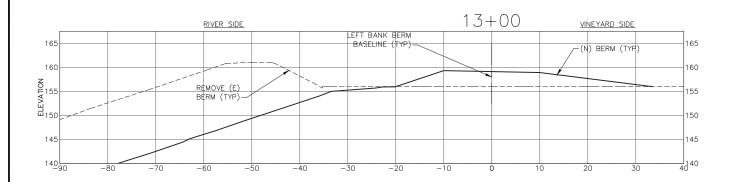
R. BROWN J. BLOMBERG

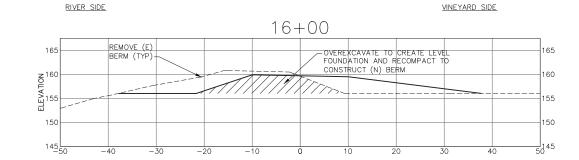
WN B.TANAKA A. BORGONOVO C053102

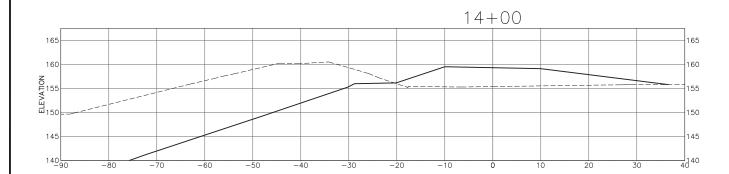
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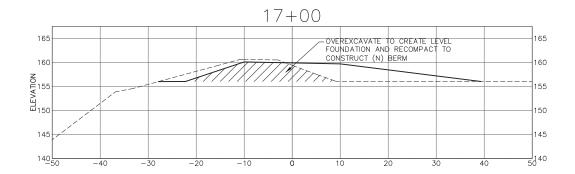
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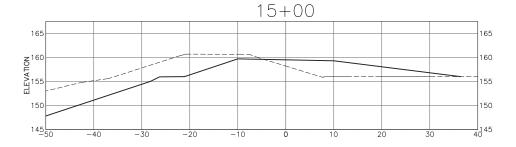












LEFT BANK (EAST) **GRADING SECTIONS** 

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PWAA

PHILIP WILLIAMS & ASSOCIATES, LTD.

E N VI R O N M E NT A L H V R R L O L O G Y

SON TRANSCOCCAFFORM AKING

SON TRANSCOCCAFFORM AKING

PHORE (#4) 300-2500 DVA (#1) 300-2500

LEFT BANK GRADING SECTIONS BERM STA 13+00 TO STA 17+00 NAPA RIVER RESTORATION RUTHERFORD REACH 4: EAST (LEFT) BANK

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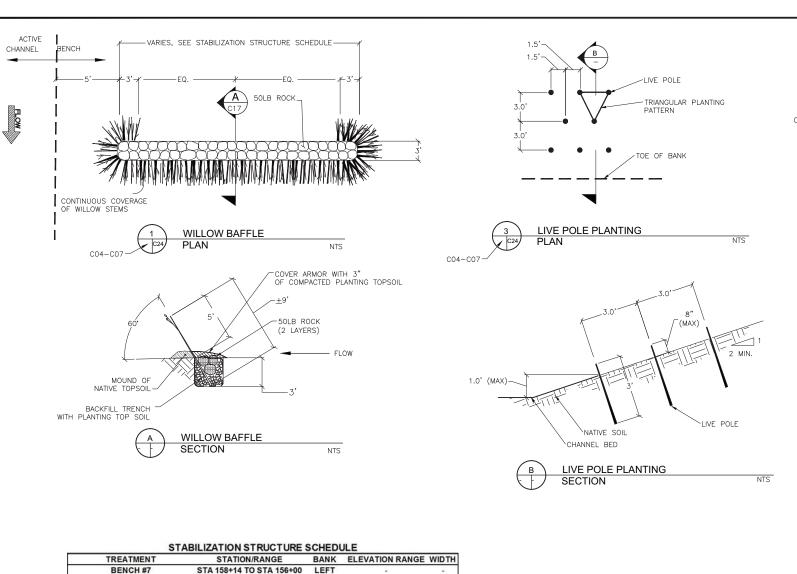
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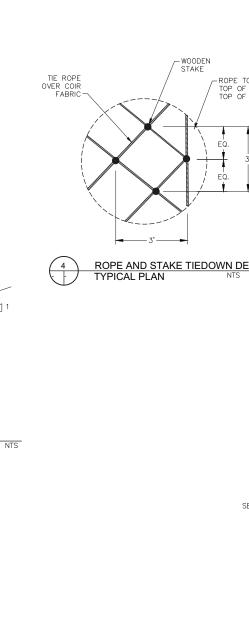
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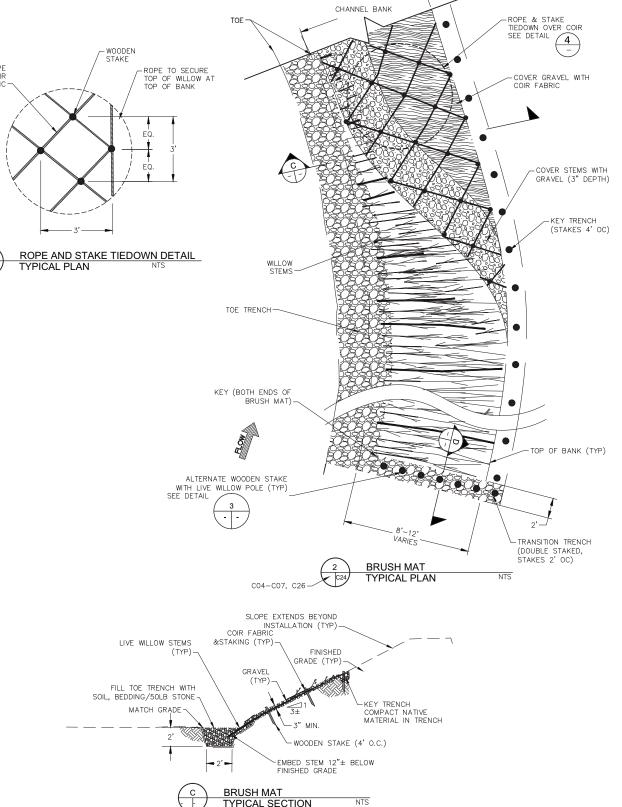
A. BORGONOVO C053102

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-WOODEN STAKE (2' OC)

BRUSH MAT TRANSITION TRENCH TYPICAL CROSS SECTION NTS

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BEDDING-TO CONTRACTOR OF THE PARTY OF T



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DETAILS

STABILIZATION

BIOTECHNICAL

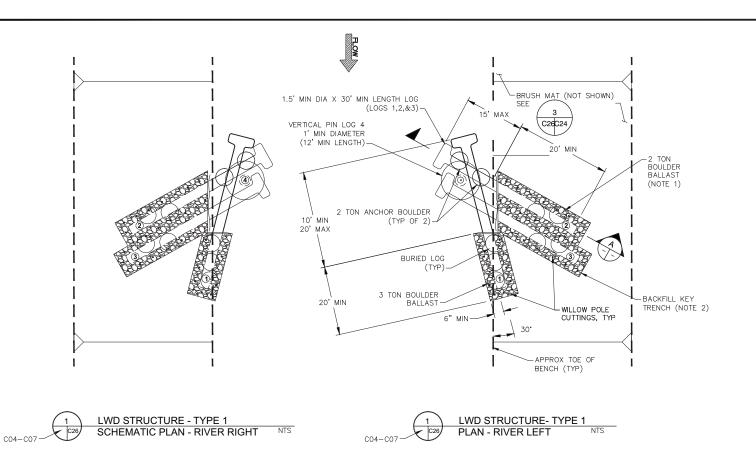
NAPA RIVER RESTORATION RUTHERFORD REACH 4: EAST (LEFT) BANK

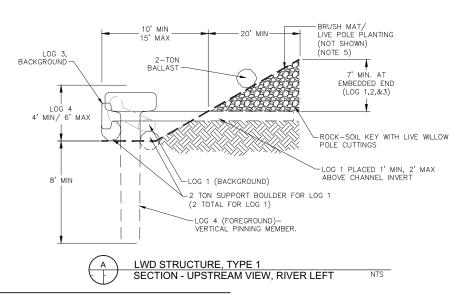
A. BORGONOVO C053102 AS SHOWN

APR**I**L 2011 C24

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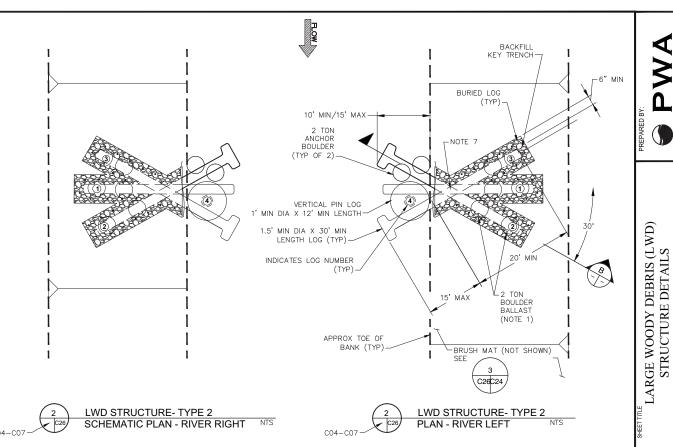
TREATMENT	STATION/RANGE	BANK	<b>ELEVATION RANGE</b>	WIDTH
BENCH #7	STA 158+14 TO STA 156+00	LEFT		-
BRUSH MAT	157+40 TO 158+00		145 TO 150	-
WILLOW BAFFLE	157+40		-	15
WILLOW BAFFLE	156+40			15
LARGE WOODY DEBRIS TYPE 2	156+00			
BRUSH MAT	156+00 TO 156+50		145 TO 150	Ē.
BENCH #11	STA 136+85 TO STA 134+50	LEFT		2
BRUSH MAT	136+25 TO 136+75	.777716.1	138 TO 143	
WILLOW BAFFLE	135+15			40
WILLOW BAFFLE	135+70			40
LARGE WOODY DEBRIS TYPE 3		CENTER	2	-
BOULDER CLUSTER	135+60	CENTER	21	
BOULDER CLUSTER	134+30	CENTER		23
BRUSH MAT	134+50 TO 135+00	ozz.i.	138 TO 143	- 2
BENCH #13	STA 131+50 TO STA 127+75	LEFT	54	
BRUSH MAT	130+75 TO 131+55	LEFT	141 TO 145	
LARGE WOODY DEBRIS TYPE 1			141 10 145	-
WILLOW BAFFLE	130+75		-	25
BOULDER CLUSTER	130+40	CENTER	-	25
LARGE WOODY DEBRIS TYPE 3		CENTER	-	-
WILLOW BAFFLE	129+60	CENTER	-	25
BOULDER CLUSTER	129+30	CENTER	•	
LARGE WOODY DEBRIS TYPE 3		The state of the s		*
		CENTER	•	25
WILLOW BAFFLE	128+65	OFLITTED	•	25
BOULDER CLUSTER	128+50	CENTER	*	*
LARGE WOODY DEBRIS TYPE 1				~
BRUSH MAT	127+75 TO 128+30		141 TO 145	- 5
BENCH #14	125+75 TO 124+25	LEFT	appropriate State of the Control of	
BRUSH MAT	125+35 TO 125+75		139 to 143	
WILLOW BAFFLE	125+25		₩7	15
BRUSH MAT	124+25 TO 124+75		139 to 143	**
LARGE WOODY DEBRIS TYPE 1	124+15		*	-
IN CHANNEL	121+00 TO 121+90	CENTER	•	
BOULDER CLUSTER	121+00	CENTER		-
LARGE WOODY DEBRIS TYPE 3	121+90	CENTER		-

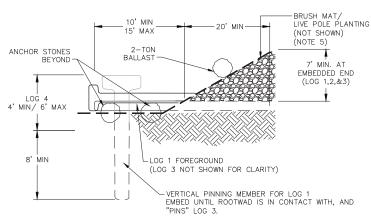






- PRIOR TO INSTALLATION, FIELD STAKE LWD STRUCTURE LOCATIONS (LOG ENDPOINTS) FOR REVIEW BY THE OWNER'S REPRESENTATIVE. ALLOW 3 WORKING DAYS FOR REVIEW AND ADJUST STAKES AS DIRECTED.
- LOGS SHALL BE PLACED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. FIELD FIT AND ADJUST AS NEEDED TO CONFORM IRREGULAR LOGS TO NEAT DIMENSIONS SHOWN AND TO ACHIEVE LOG INTERLOCKING.
- DETAIL SHOWS EMBEDMENT DEPTH ASSUMING THE LOG IS THE MINIMUM LENGTH SPECIFIED. IF LONGER LOGS ARE USED, INCREASE EMBEDMENT LENGTH AND DEPTH AS NEEDED TO MEET REQUIREMENTS SHOWN.
- BACKFILL TRENCH WITH ROCK—SOIL MIX AND COMPACT TO 90% RC. STAKE THE ENDPOINTS OF THE BURIED LOG TO GUIDE BALLAST PLACEMENT.
- INSTALL BRUSH MAT OVER FINISHED GRADE PER SHEET C24. INSTALL LIVE POLE PLANTING (PER SHEET C24) ON ANY PORTION OF THE DISTURBED BANK NOT COVERED WITH BRUSH MAT.
- BALLAST BOULDERS CAN EITHER BE ONE 2-TON ROCK OR TWO 1-TON ROCKS AT CONTRACTOR'S OPTION. PLACE DIRECTLY OVER THE EMBEDDED LOG AND EMBED MIN 6 INCHES BELOW GRADE. BOULDERS MAY BE BURIED WITHIN KEY TRENCH. FIELD LOCATE AS DIRECTED BY THE OWNER'S REPRESENTATIVE. TRIM HOLE IN COMPLETED BRUSH MAT AS NEEDED FOR ROCK PLACEMENT.
- LOGS MAY BE NOTCHED (3" MAX) TO ACHIEVE ORIENTATION AND EMBEDMENT AS





LWD STRUCTURE, TYPE 2 SECTION AT LOG 2 - UPSTREAM VIEW, RIVER LEFT



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VAPA RIVER RESTORATIO RUTHERFORD REACH 4 EAST (LEFT) BANK

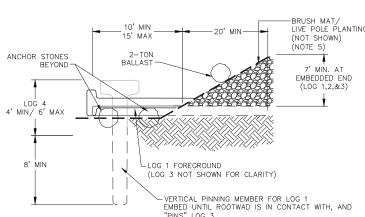
R. BROWN J. BLOMBERO

B.TANAKA

A. BORGONOVO

AS SHOWN APRIL 2011

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DESIGNED R. BROWN J. BLOMBERG

DRAWN S. STOLLER

CHARGE A. BORGONOVO C053102

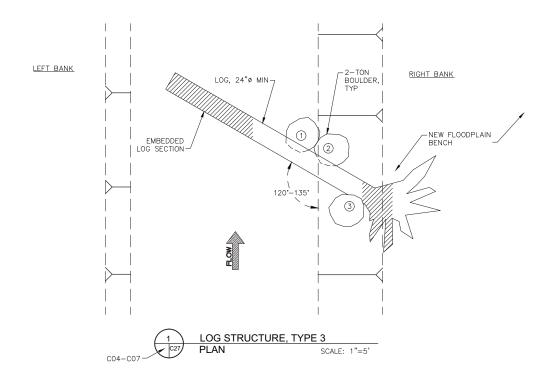
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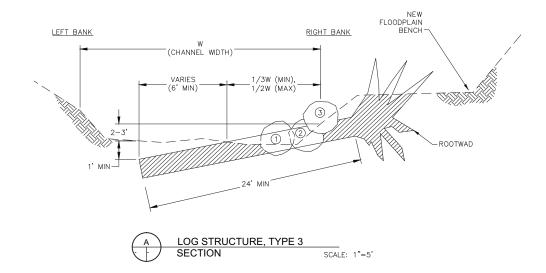
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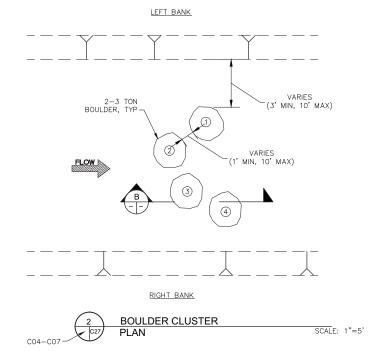
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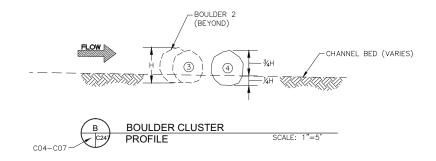




# NOTES

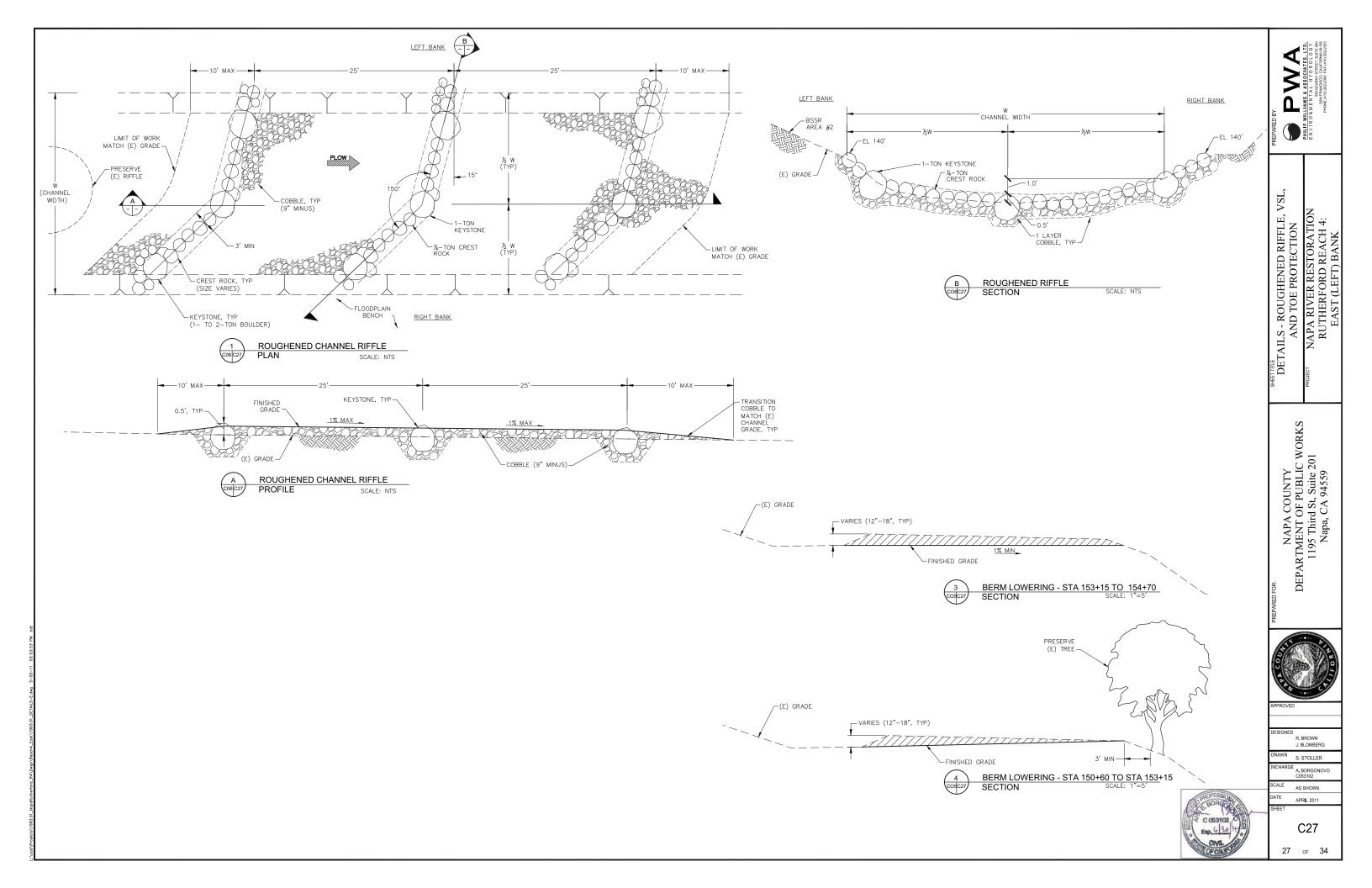
- 1. BOULDERS 1 AND 2 SHOWN BEYOND ROOTWAD.
- LOW PROFILE LOG DETAIL IS SCHEMATIC TO ILLUSTRATE GENERAL PLACEMENT OF MATERIALS. FIELD FIT AND ADJUST AS—NEEDED TO CONFORM TO SITE CONATIONS AND ACHIEVE INTEGRATION OF MATERIALS.

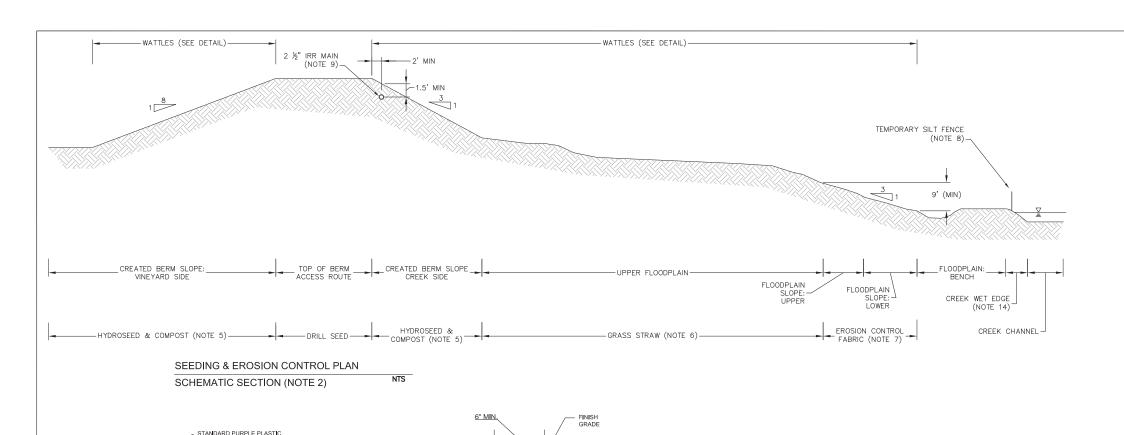




# NOTES

 BOULDER CLUSTER DETAIL IS SCHEMATIC TO ILLUSTRATE GENERAL CONFIGURATION AND SPACING OF MATERIALS. FIELD FIT AND ADJUST AS—NEEDED TO CONFORM TO SITE CONDITIONS AND ACHIEVE INTENDED FUNCTION.





KBI MODEL OR APPROVED EQUAL BRASS GATE VALVE (LINE SIZE)

1/2" PEA GRAVEL

10" DIA WATTLE-

EXCAVATE 4" TRENCH FOR

WATTLE PLACEMENT

MANUAL ISOLATION

VALVE

LINE SHALL BE CAPPED AFTER TESTING AND

IDENTIFIED FOR INSTALLATION OF CONTROL VALVE

RF-VEGETATION

SOLID BRICK

FOOTING (EA. SIDE)

NOT TO SCALE (c) Restoration Resources. 2010

WATTLE DETAIL

SECTION VIEW

BACKELL WITH NATIVE SOIL, NO ROCKS > 1" IN DIAMETER

SIZE AS INDICATED

AS INDICATED ON

WOODEN STAKE PLACED THROUGH WATTLE

TOP OF SLOPE

PLACE WATTLE ON ELEVATION CONTOUR AT TOE OF SLOPE

10' MIN ON SLOPES 2:1 OR STEEPER 15' MAX ON SLOPES BETWEEN 4:1 AND 2:1

20' MAX ON SLOPES 4:1 OR SHALLOWER

PLACE WATTLE ON ELEVATION CONTOUR AT

NOTE:

## **EROSION CONTROL SEEDING MIXES AND RATES (NOTE 11)**

Habitat Type: Berm Top and Access Route (note 12)		Acres 4.56	
Biological Name / Common Name	Seeding Method	lbs/ac	lbs. Req.
Hordeum brachyantherum / Meadow Barley	Drill Seed	10	46
Vulpia microstachys / Small Fescue	Drill Seed	14	64

Habitat Type: Created Berm Side Slope		Acres 5.62	
Biological Name / Common Name	Seeding Method	lbs/ac	lbs. Req.
Bromus carinatus / California Brome	Hydroseed	3	17
Elymus glaucus / Blue Wildrye	Hydroseed	3	17
Eschscholzia californica / California Poppy	Hydroseed	4	22
Festuca idahoensis / Idaho Fescue	Hydroseed	3	17
Hordeum brachyantherum / Meadow Barley	Hydroseed	3	17
Lupinus bicolor / Miniature Lupine	Hydroseed	4	22
Trifolium willdenovii / Tomcat Clover	Hydroseed	4	22
Vulpia microstachys / Small Fescue	Hydroseed	8	45

Habitat Type: Staging Area		Acres 1.41	
Biological Name / Common Name	Seeding Method	lbs/ac	lbs. Req.
Triticum X Elymus "Regreen" / Sterile Wheat	Broadcast Seed	26	37
Eschscholzia californica / California Poppy	Broadcast Seed	4	6
Lupinus bicolor / Miniature Lupine	Broadcast Seed	4	6
Trifolium willdenovii / Tomcat Clover	Broadcast Seed	4	6
	1		

Habitat Type: Upper Floodplain Woodland		Acres 3.67	
Biological Name / Common Name	Seeding Method	lbs. / ac.	lbs. Req.
Bromus carinatus / California Brome	Broadcast Seed	8	29
Elymus glaucus / Blue Wildrye	Broadcast Seed	8	29
Grindelia camporum / Gum Plant	Broadcast Seed	5	18
Hordeum brachyantherum / Meadow Barley	Broadcast Seed	8	29
Melica Californica / California Melic	Broadcast Seed	8	29
Vulpia microstachys / Small Fescue	Broadcast Seed	8	29

Biological Name / Common Name	Seeding Method	lbs. / ac.	lbs. Req
Elymus glaucus / Blue Wildrye	Broadcast Seed	8	11
Festuca idahoensis / Idaho Fescue	Broadcast Seed	8	11
Hordeum brachyantherum / Meadow Barley	Broadcast Seed	8	11
Leymus triticoides / Creeping Wildrye	Broadcast Seed	8	11

Habitat Type: Floodplain Slope: Lower		Acres 1.19	
Biological Name / Common Name	Seeding Method	lbs. / ac.	lbs. Req.
Hordeum brachyantherum / Meadow Barley	Broadcast Seed	8	10
Leymus triticoides / Creeping Wildrye	Broadcast Seed	8	10

Habitat Type: Lower Floodplain Bench		Acres 0.35	
Biological Name / Common Name	Seeding Method	lbs. / ac.	lbs. Req.
Leymus triticoides / Creeping Wildrye	Broadcast Seed	10	4

SUBGRADE

\_6" (TYP)

1. REFER TO SPECIFICATIONS AND PLAN SHEETS FOR MORE INFORMATION.

MAIN LINE TRENCHING

-EROSION CONTROL

NTS

BI ANKET

- THIS SHEET SHOWS MINIMUM EROSION CONTROL MEASURES THAT ARE REQUIRED. INSTALL ADDITIONAL MEASURES AS NEEDED FOR SEDIMENT AND EROSION CONTROL AND SWPPP COMPLIANCE
- 2. THE SECTION SHOWS DESIGNATION OF SEEDING & EROSION CONTROL ZONES FOR GRADED AREAS. SEED ALL DISTURBED AREAS PER TABLE.
- 3. UPON COMPLETION OF THE WORK RESTORE STAGING AREA(S) AND ACCESS ROUTES BY SEEDING (PER TABLES) AND APPLYING GRASS STRAW PER NOTE 6.
- 4. SEE SEED MIX TABLES FOR SPECIES, QUANTITIES AND APPLICATION METHOD BY HABITAT ZONE,
- APPLY SEED, HYDROSTRAW AND MYCORRHIZAE USING HYDROSEEDING MACHINE SEE SPECS. AFTER HYDROSEEDING, APPLY UNIFORM 2-INCH MINIMUM LAYER OF ORGANIC COMPOST ON BERM SIDE SLOPES.
- APPLY CERTIFIED WEED-FREE NATIVE GRASS STRAW AT A RATE OF 1.5-TONS PER ACRE, APPLY BY HAND IN AREAS WHERE EXISTING VEGETATION OR TERRAIN PROHIBIT VEHICULAR ACCESS; STRAW MAY BE BLOWN AS DEFINED IN THE WRITTEN SPECIFICATIONS ONTO THE SOIL SURFACE IN THOSE AREAS WHICH ARE ACCESSIBLE.
- 7. INSTALL BIODEGRADABLE EROSION CONTROL FABRIC. SECURE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, AND THE SPECS (USE MOST STRINGENT REQUIREMENTS).
- 8. INSTALL AND MAINTAIN SILT FENCE ALONG THE TOP OF THE ACTIVE CHANNEL BANK DURING BENCH GRADING. INSTALLATION LOCATIONS SHALL BE VERIFIED BY ENGINEER. REMOVE BY OCTOBER 15TH.
- 9. INSTALL IRRIGATION MAINS WHERE SHOWN ON SHEETS RO2 TO RO5. IRRIGATION MAINS SHALL BE LOCATED AT LEAST 2-FEET FROM DRIVABLE PORTION OF BERM AND WITH 18-INCHES MINIMUM COVER, BACKFILL TRENCH TO 90% RELATIVE COMPACTION. MAINLINE SHALL BE SLEEVED UNDER ALL VEHICLE ACCESS CROSSINGS.
- 10. POC LOCATIONS WILL BE CONFIRMED BY OWNERS.
- 11. DISTURBED AREAS WILL BE PLANTED UNDER SEPARATE REVEGETATION CONTRACT. IN THE EVENT THAT CONTRACT SCHEDULES OVERLAP, COOPERATE AND COORDINATE WITH
- 12. DRILL SEED ON BERM TOP ONLY.

SHEET NOTES

- 13. LIMITS OF FLOODPLAIN SLOPE VARY. PRIOR TO SEEDING AND INSTALLATION OF EROSION CONTROL FABRIC, CONTRACTOR SHALL STAKE LIMIT OF FLOODPLAIN BENCHES AND SLOPES AND VERIFY WITH OWNERS' REPRESENTATIVE. EROSION CONTROL FABRIC SHALL BE INSTALLED ON ALL DISTURBED OR CUT FLOODPLAIN SLOPES TO A MINIMUM VERTICAL DIMENSION OF 9—FEET. THE VERTICAL EXTENT OF EROSION CONTROL FABRIC SHALL BE MEASURED FROM THE NEW FLOODPLAIN BENCH ELEVATION.
- 14. WHERE DIRECTED BY THE OWNERS' REPRESENTATIVE, GRADE WET EDGE TO 3:1 AND PLACE LIVE POLE PLANTING.
- 15. ALL EROSION CONRTOL WORK AND SEEDING SHALL BE COMPLETED BY OCTOBER 15TH.



RESTORATION RESOURCES

NAPA RIVER RESTORATION RUTHERFORD REACH 4: EAST (LEFT) BANK

EROSION CONTROL PLAN & IRRIGATION DETAILS

NAPA COUNTY
DEPARTMENT OF PUBLIC WORKS
1195 Third St, Suite 201
Napa, CA 94559



IGNED R. SWIFT, L. PIPER

RGE R, SWIFT PRESIDEN

1" = 40' APRIL 2011

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