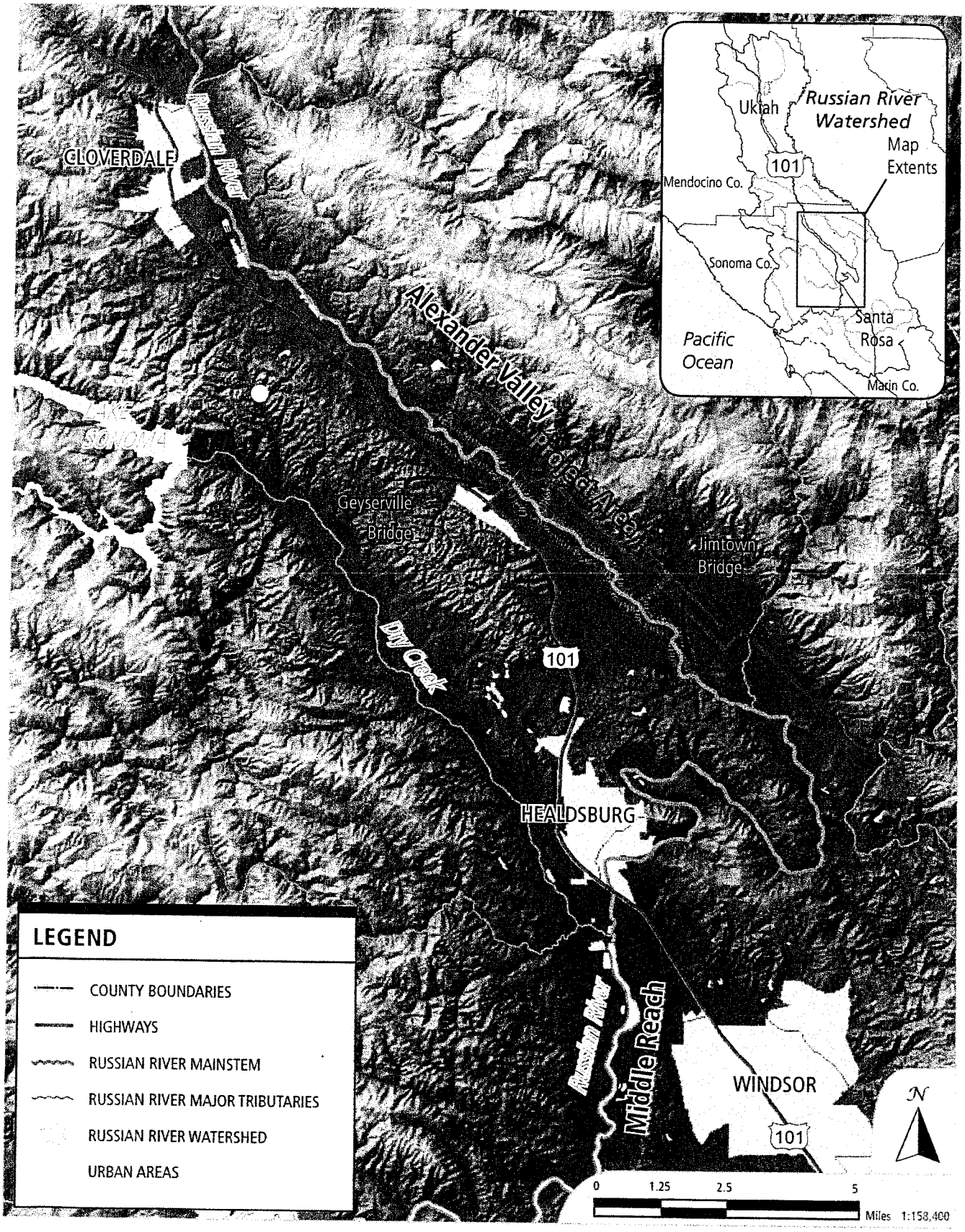


FIGURE 1: PROJECT SITE VICINITY MAP.

500 Seabright Ave, Suite 202 Santa Cruz, CA 95062
PH 831.427.0288 FAX 831.427.0472

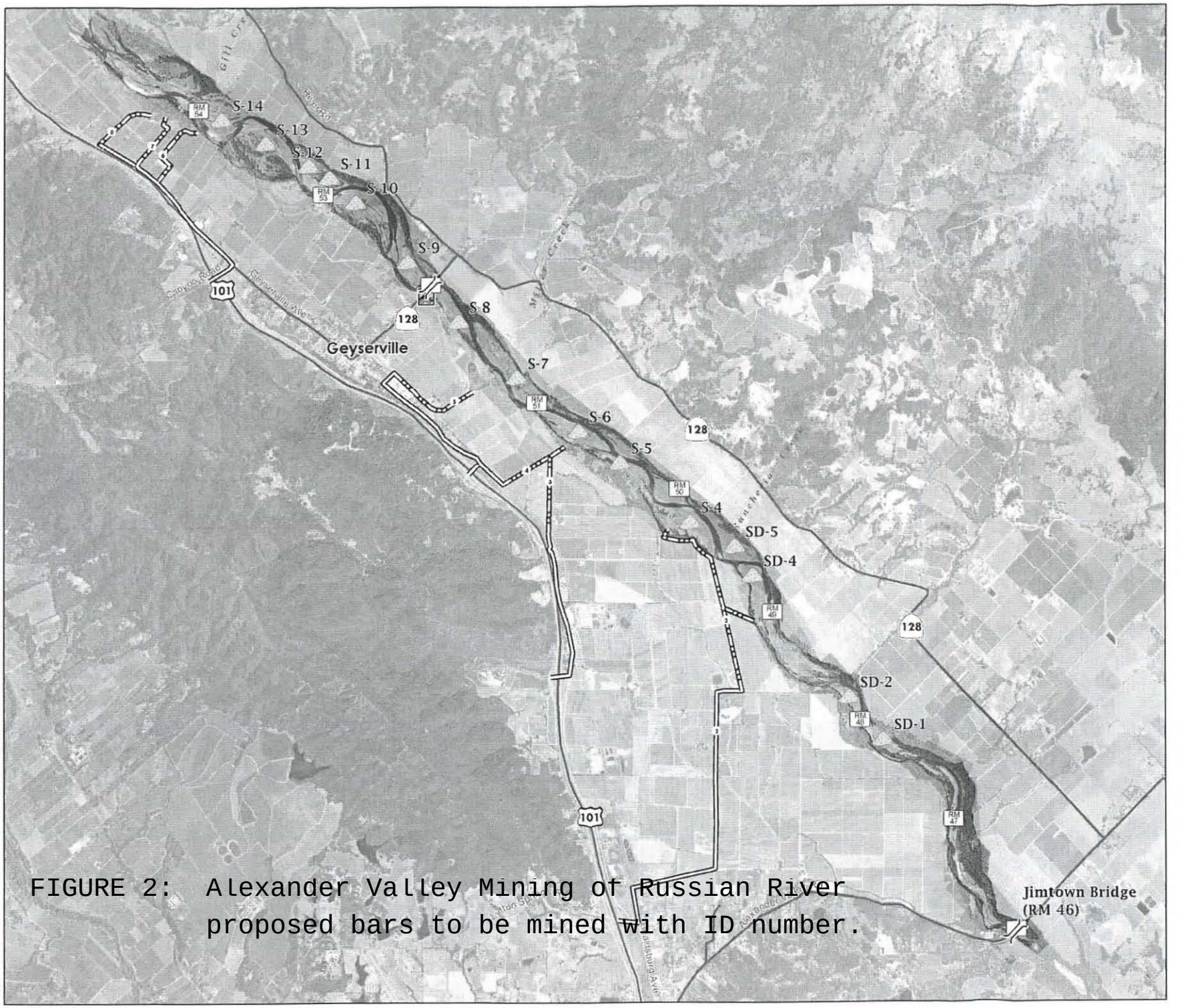
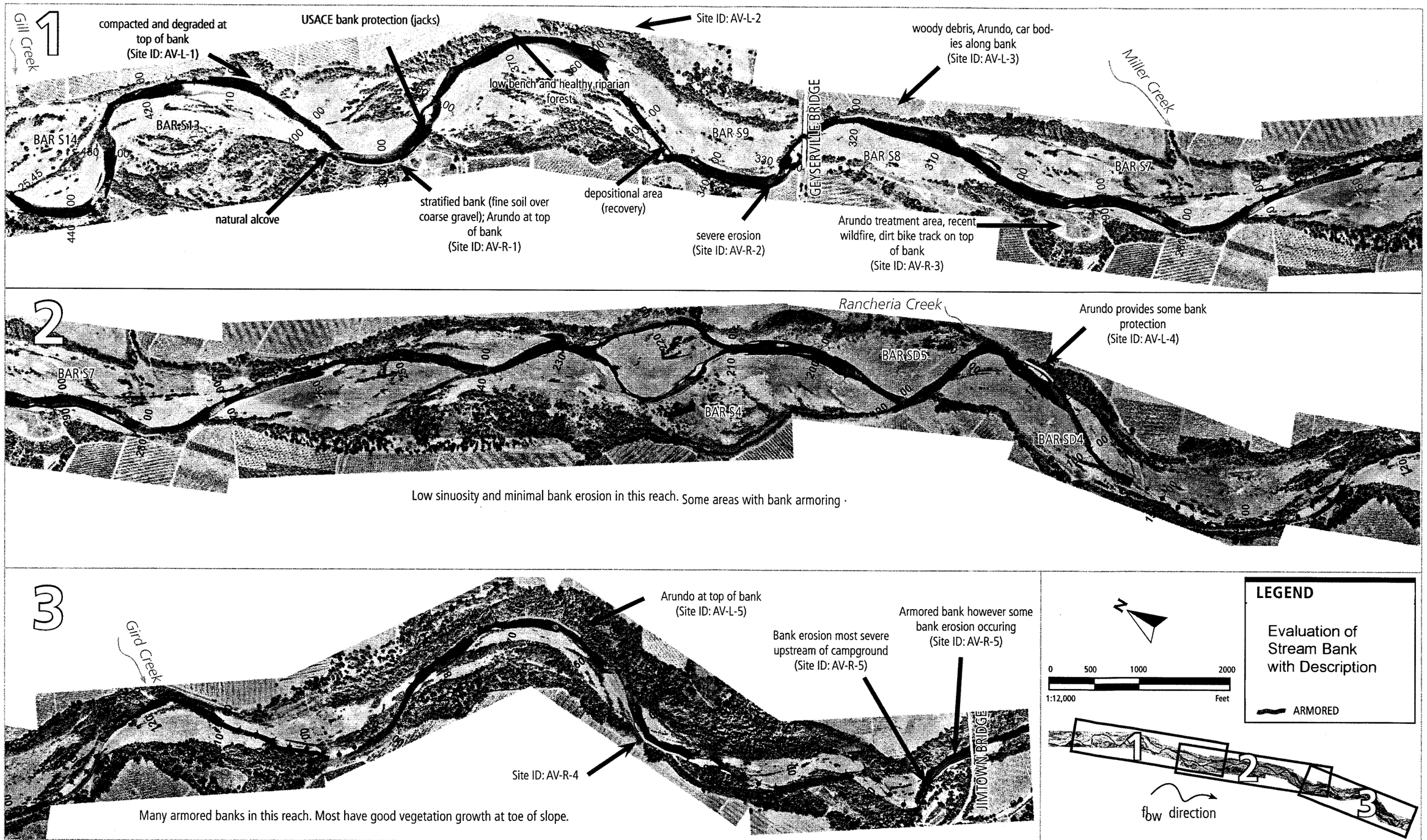


FIGURE 2: Alexander Valley Mining of Russian River proposed bars to be mined with ID number.



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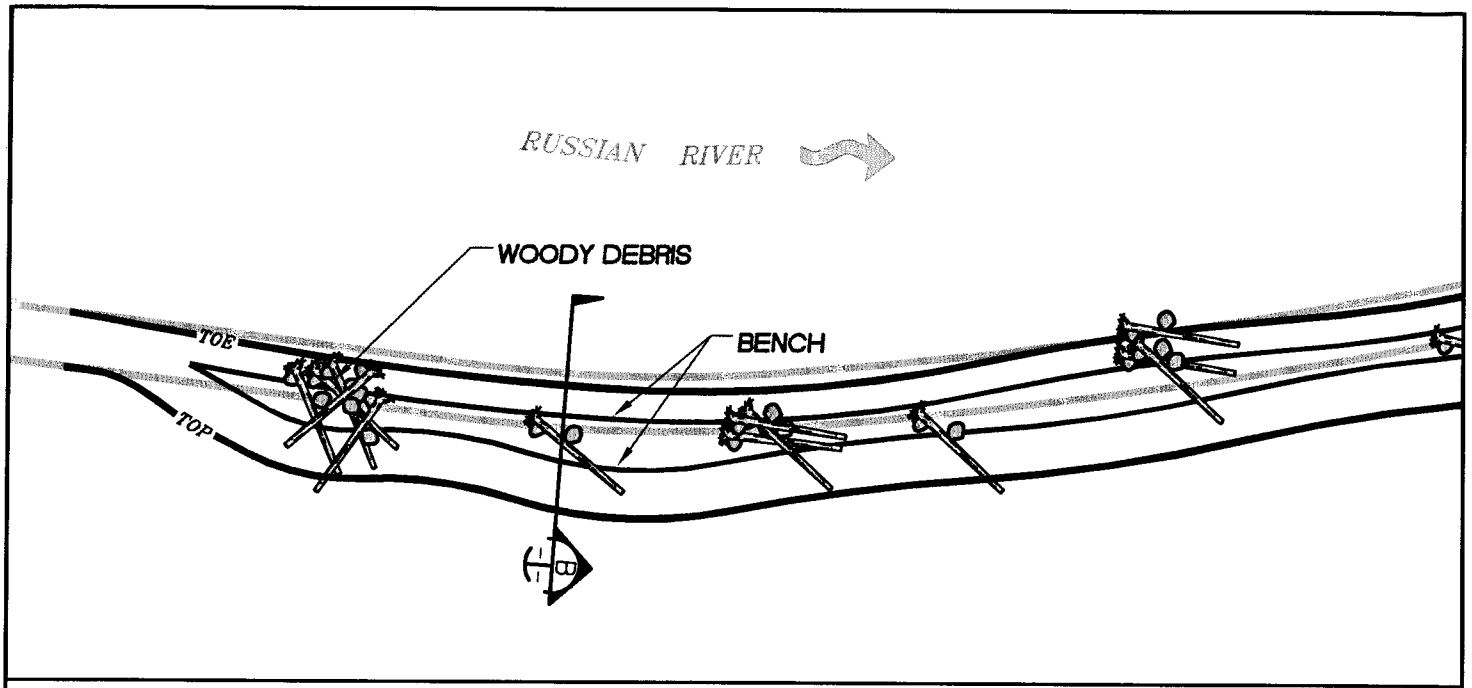
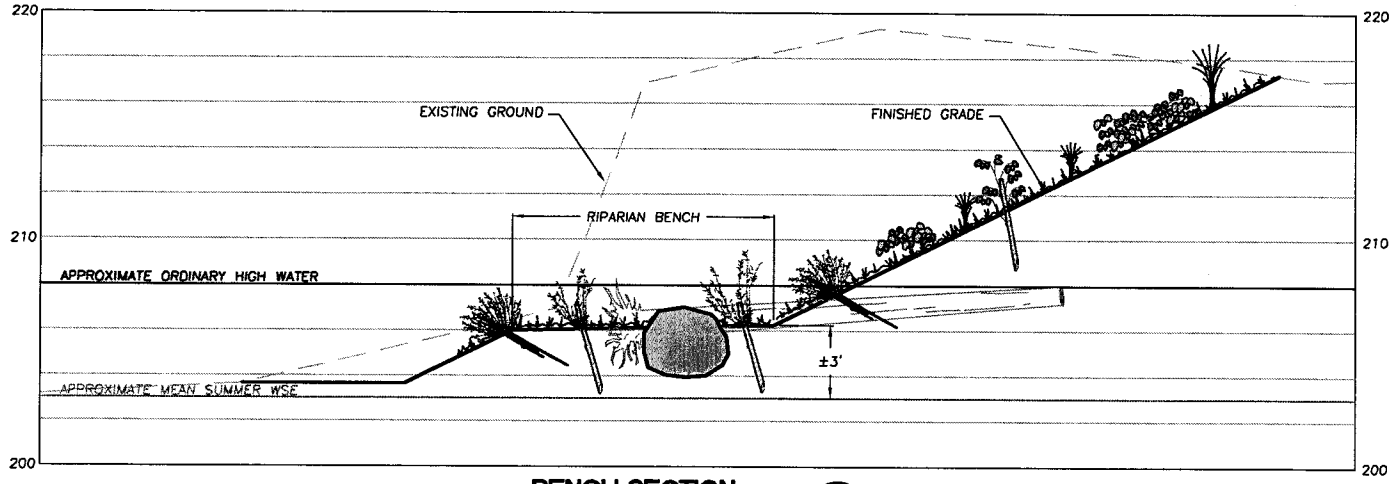
PH 831.427.0288 FX 831.427.0472

FIGURE 3: Evaluation of streambanks in the Alexander Valley reach of the Russian River (March 2008).



PLAN VIEW
SCALE: 1"=60'



BENCH SECTION B
SCALE: 1"=8'

DATE: 7/01/08
JOB NO.: 08-655

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ALEXANDER VALLEY
RIVER ENHANCEMENT PLAN

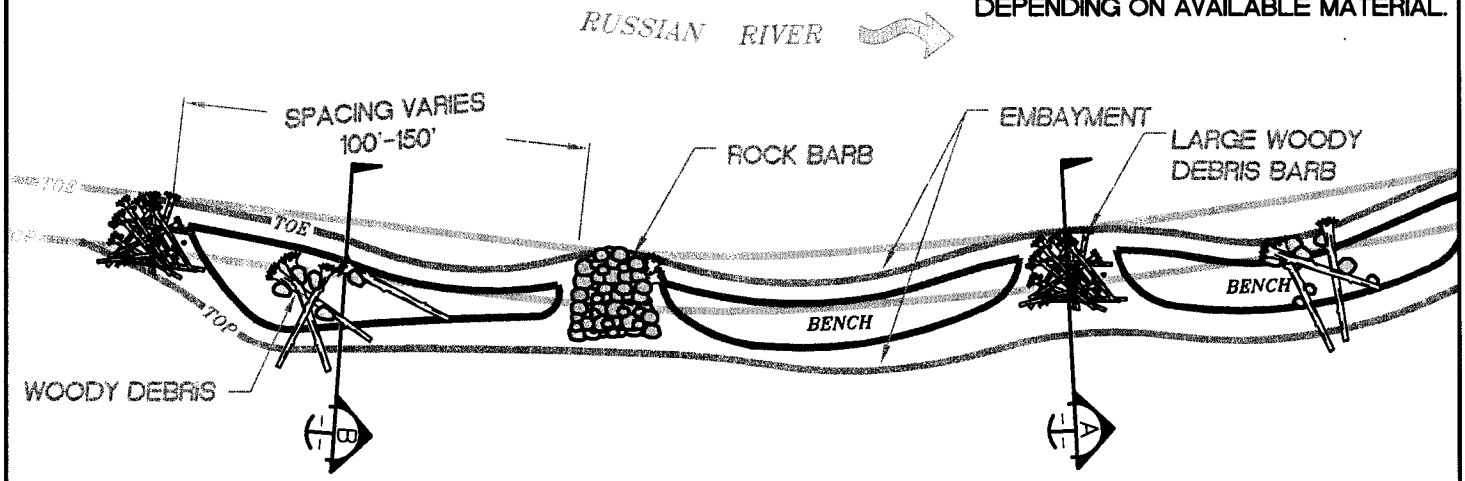
OPTION 1:
BENCHING

DRAFT
NOT FOR CONSTRUCTION

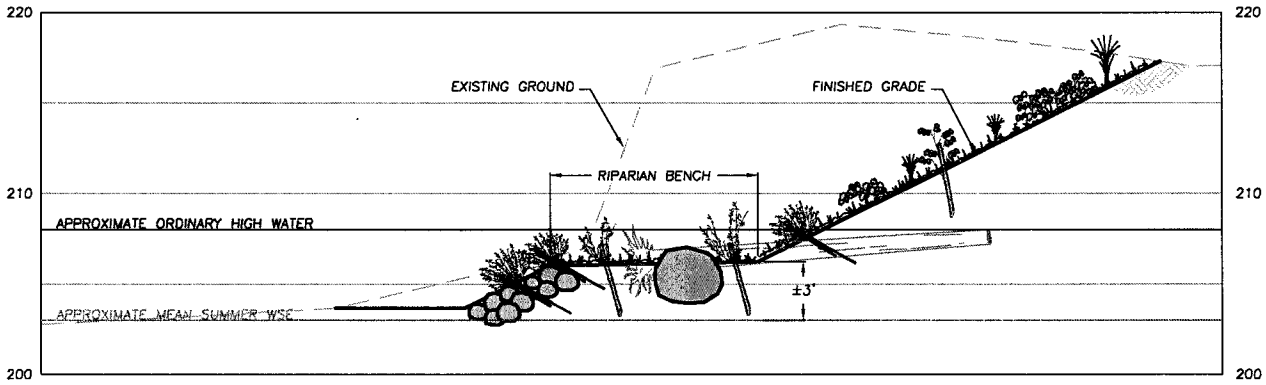
FIGURE 4A

R:\LAND PROJECTS\03-248_STAR_Alexander_Valley\dwg\SHG-2007 ALEXANDER VALLEY-BANK PROTECTION FIGS.dwg 4/8/2008 11:39:47 AM PDT

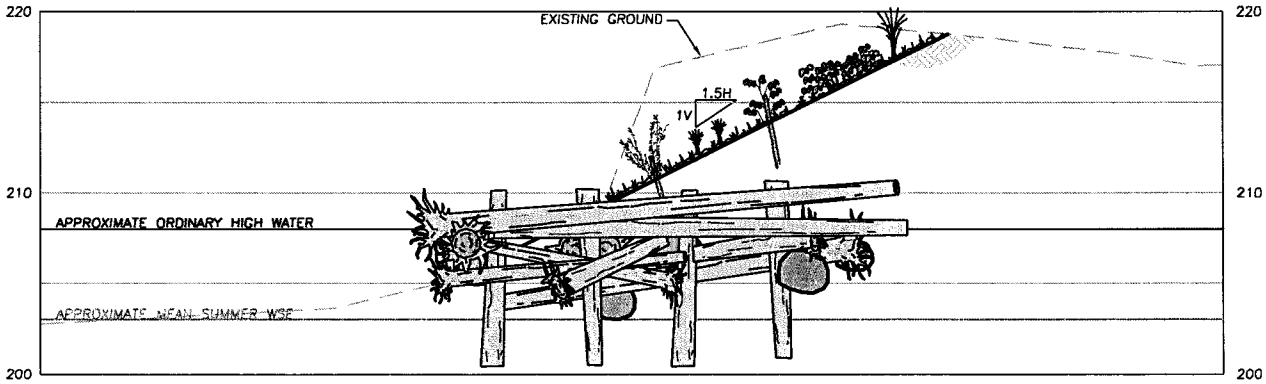
NOTE:
BARBS MAY BE CONSTRUCTED OF ROCK OR LARGE WOODY DEBRIS, DEPENDING ON AVAILABLE MATERIAL.



PLAN VIEW
SCALE: 1"=60'



EMBAYMENT SECTION B
SCALE: 1"=10'



BARB SECTION A
SCALE: 1"=10'

DATE: 7/01/08
JOB NO.: 08-655

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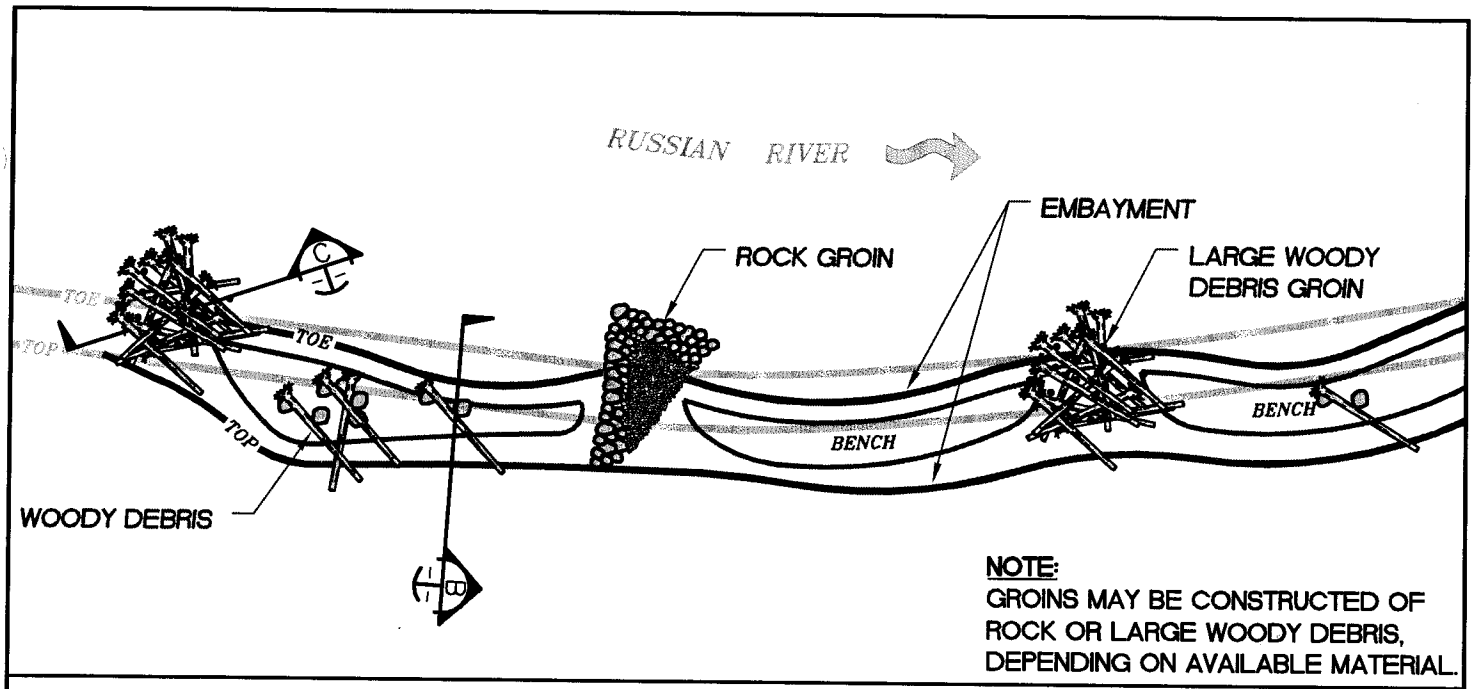
ALEXANDER VALLEY
RIVER ENHANCEMENT PLAN

OPTION 2:
BARB AND
EMBAYMENT

DRAFT
NOT FOR CONSTRUCTION

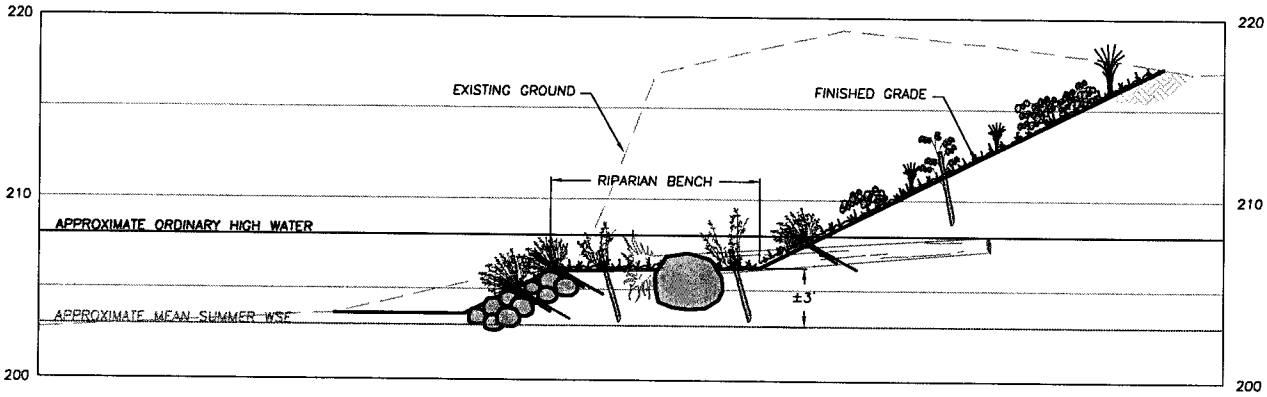
FIGURE 4B

R:\LAND PROJECTS\03-"_Alexander_Valley\dwg\SHG-2007 ALEXANDER VALLEY-BANK PROTECTION FIGS.dwg 4/2/2008 11:37:47 AM PDT

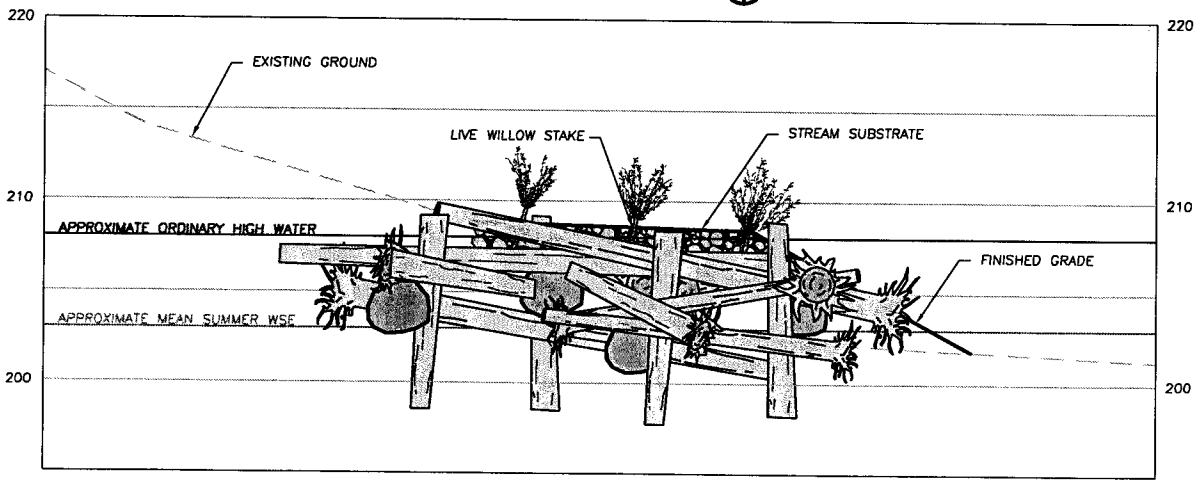


NOTE:
GROINS MAY BE CONSTRUCTED OF ROCK OR LARGE WOODY DEBRIS, DEPENDING ON AVAILABLE MATERIAL.

PLAN VIEW
SCALE: 1"=60'



EMBAYMENT SECTION B
SCALE: 1"=10'



GROIN SECTION C
SCALE: 1"=10'

DATE: 7/01/08
JOB NO.: 08-655

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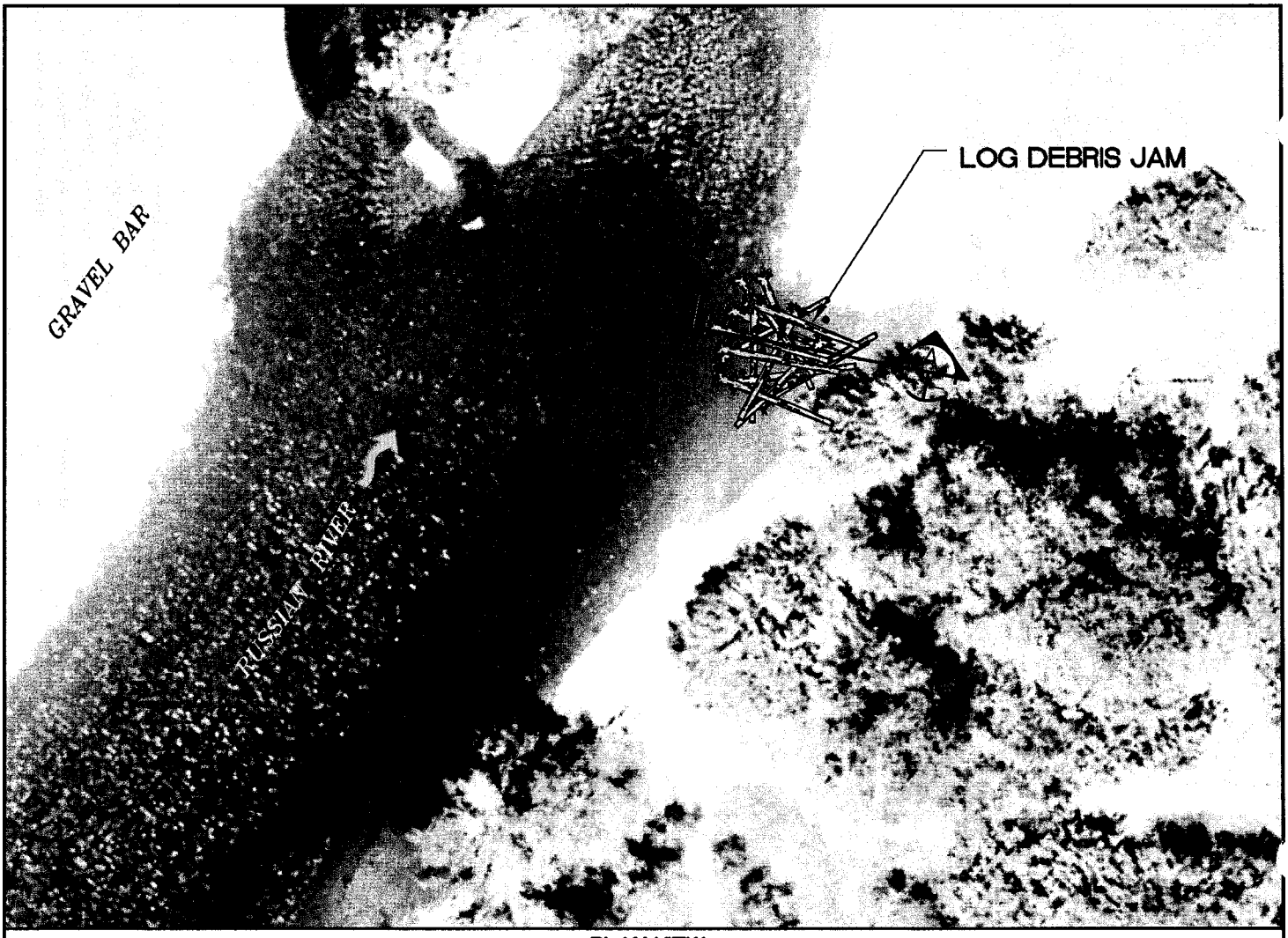
ALEXANDER VALLEY RIVER ENHANCEMENT PLAN

OPTION 3: GROIN AND EMBAYMENT

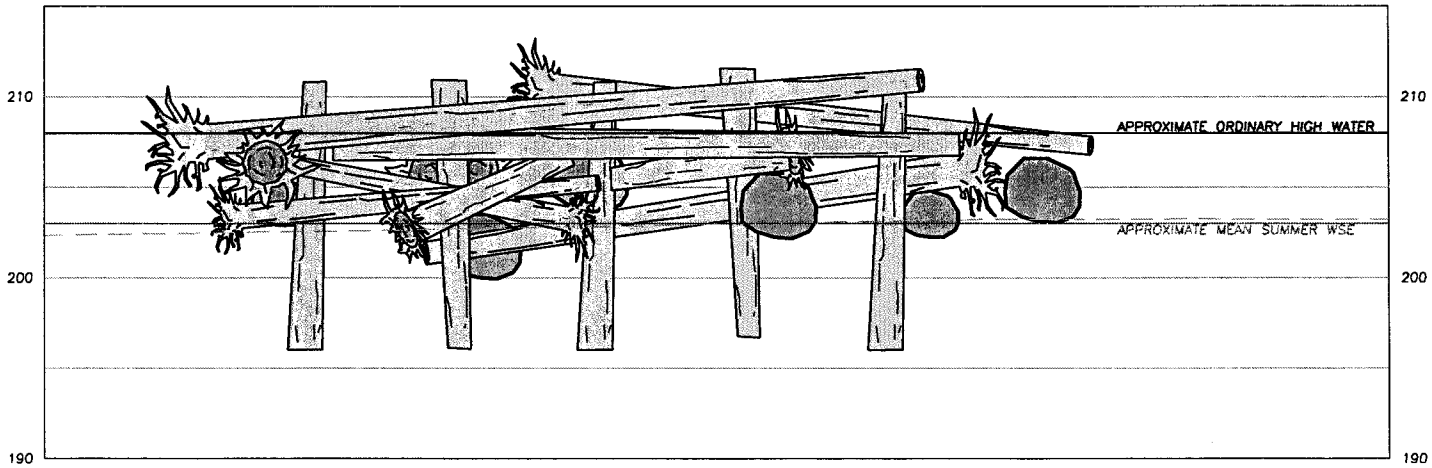
DRAFT
NOT FOR CONSTRUCTION

FIGURE 4C

R:\LAND PROJECTS\03-348_STAR_Alexander_Valley\dwg\SAG-2007 ALEXANDER VALLEY-BANK PROTECTION FIGS.dwg 4/2/2008 11:39:17 AM PDT



PLAN VIEW
SCALE: 1"=60'



SECTION A
SCALE: 1"=10'

DATE: 7/01/08
JOB NO.: 08-655

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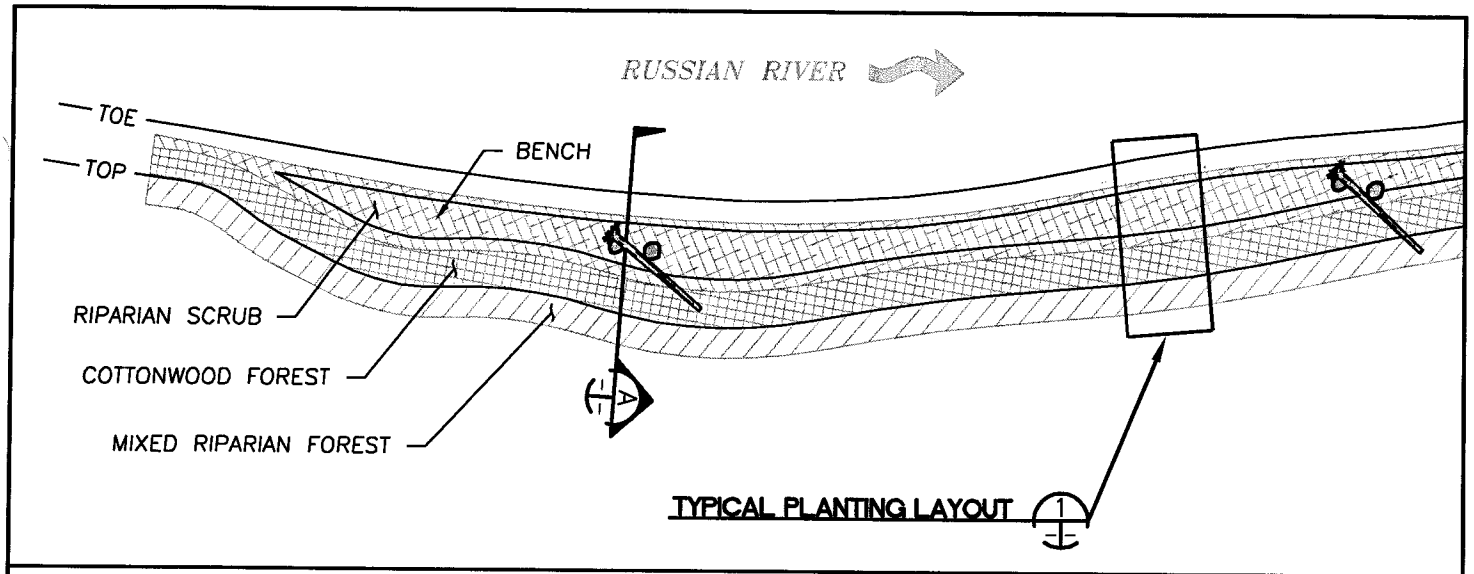
ALEXANDER VALLEY
RIVER ENHANCEMENT PLAN

LOG DEBRIS JAM

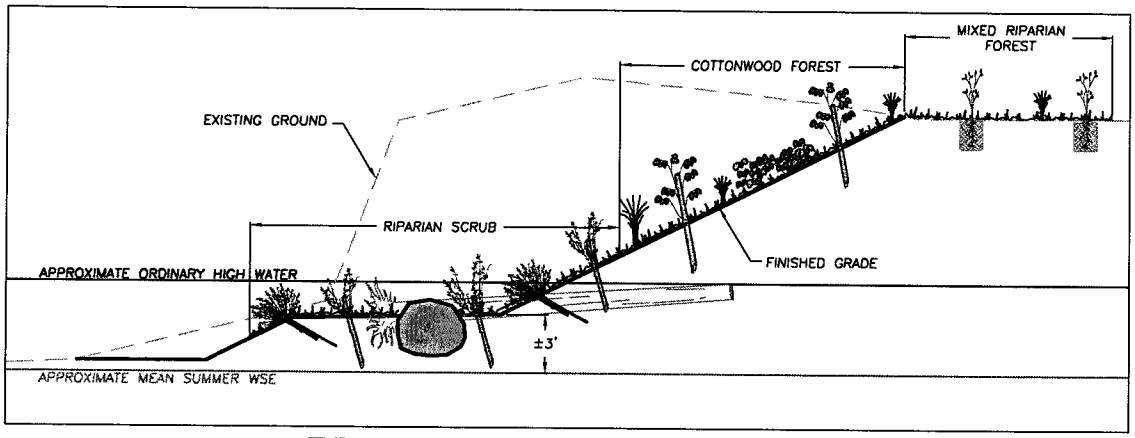
DRAFT
NOT FOR CONSTRUCTION

FIGURE 4D

B:\LAND PROJECTS\43-_Alexander_Valley\dwg\SHG-2007 ALEXANDER VALLEY-BANK PROTECTION FIGS.dwg 4/2/2009 11:29:47 AM PDT



PLAN VIEW
SCALE: 1"=60'



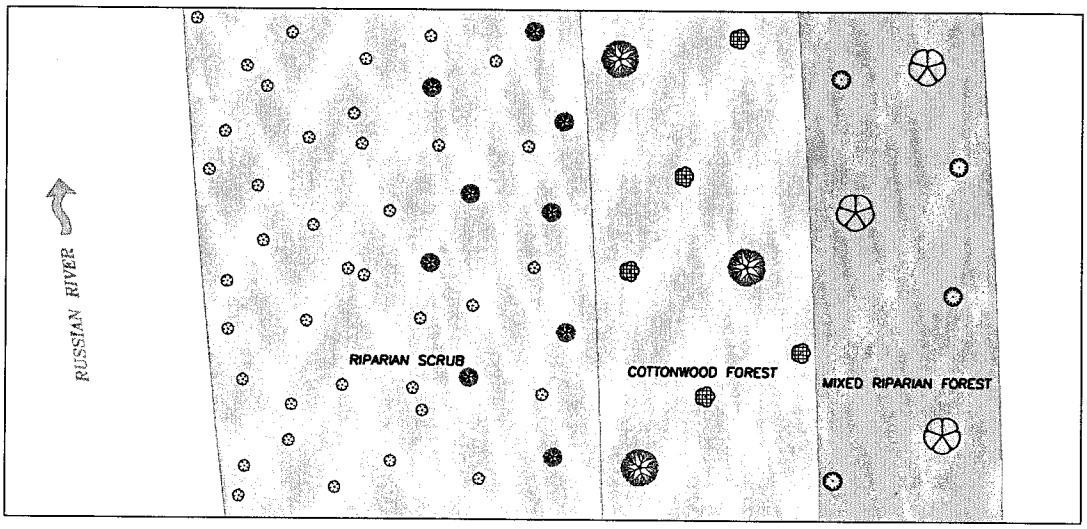
TYPICAL REVEGETATION SECTION
SCALE: 1"=10'

LEGEND

RIPARIAN SCRUB
- WILLOW AND MULE FAT CUTTINGS
- COTTONWOOD AND ALDER CUTTINGS
- LOWER SEED MIX

COTTONWOOD FOREST
- SHRUB PLANTING
- TREE PLANTING
- LOWER SEED MIX

MIXED RIPARIAN FOREST
- SHRUB PLANTING
- TREE PLANTING
- UPPER SEED MIX



NOTE: REFERENCE TABLE 2 FOR THE PLANTING PALETTE.

TYPICAL PLANTING LAYOUT
SCALE: 1"=10'

DATE: 7/01/08
JOB NO.: 08-655

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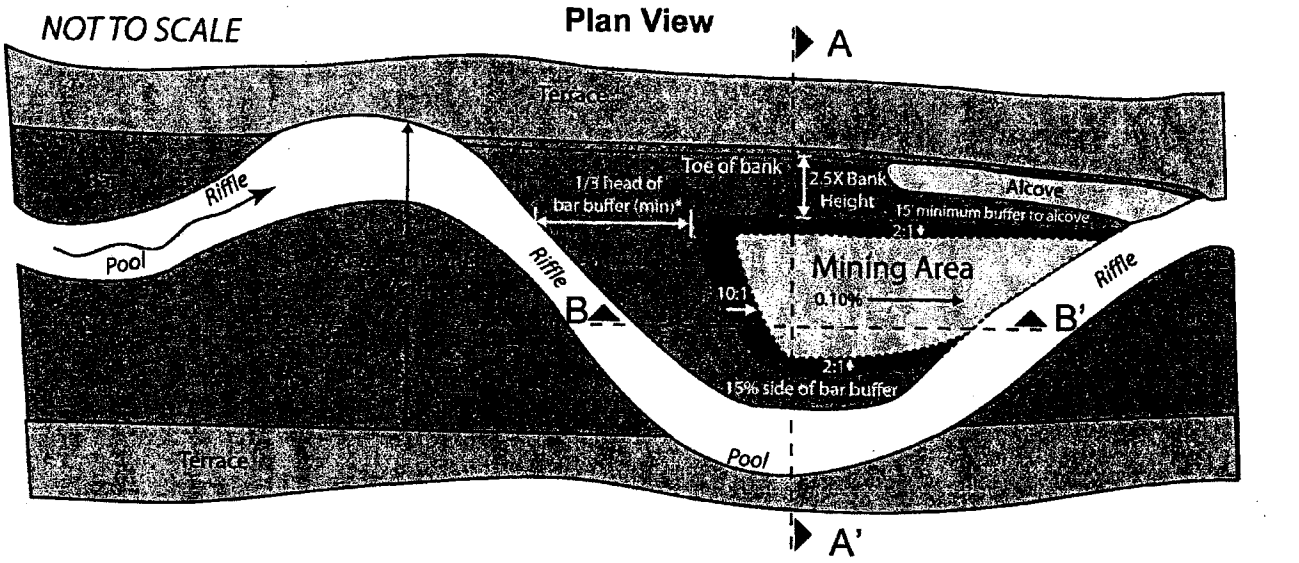
ALEXANDER VALLEY RIVER ENHANCEMENT PLAN

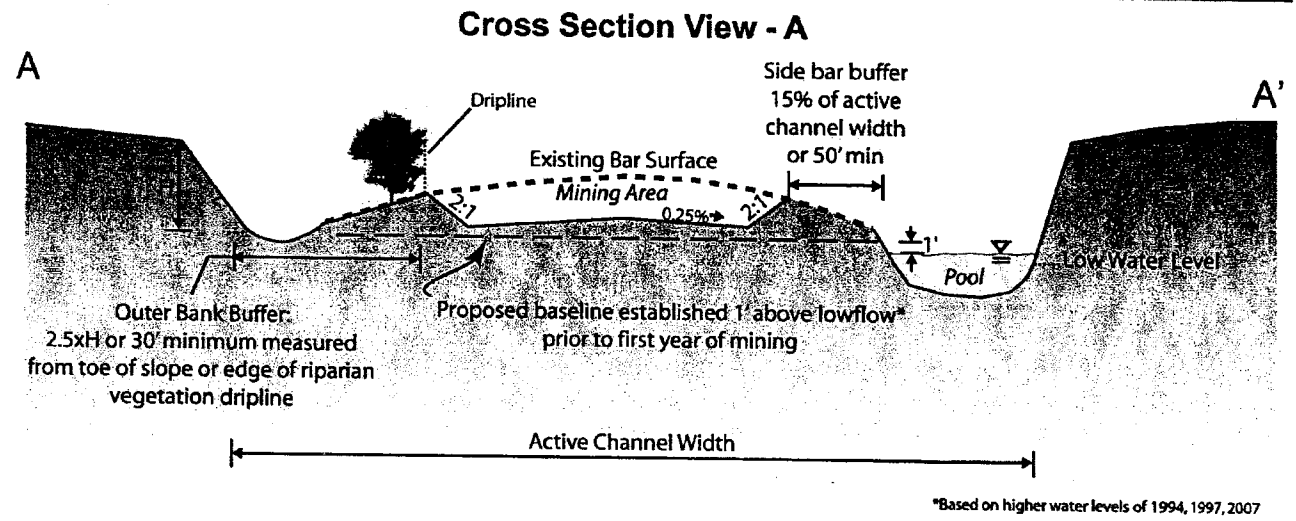
REVEGETATION PLAN

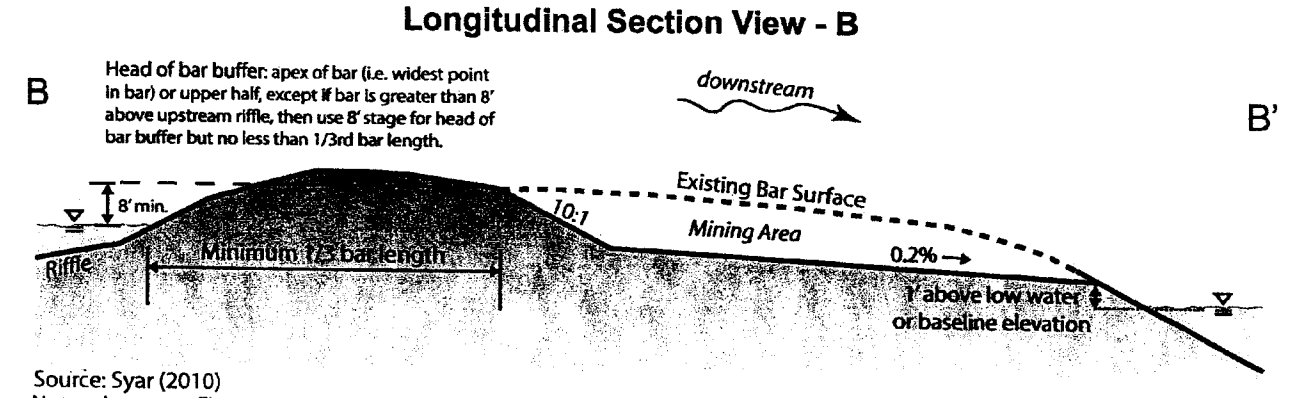
DRAFT
NOT FOR CONSTRUCTION

FIGURE 4E

R:\LAND PROJECTS\03-348_STAR_Alexander_Valley\dwg\SAC-2007 ALEXANDER VALLEY-BANK PROTECTION FIGS.dwg 4/7/2008 11:39:47 AM PDT

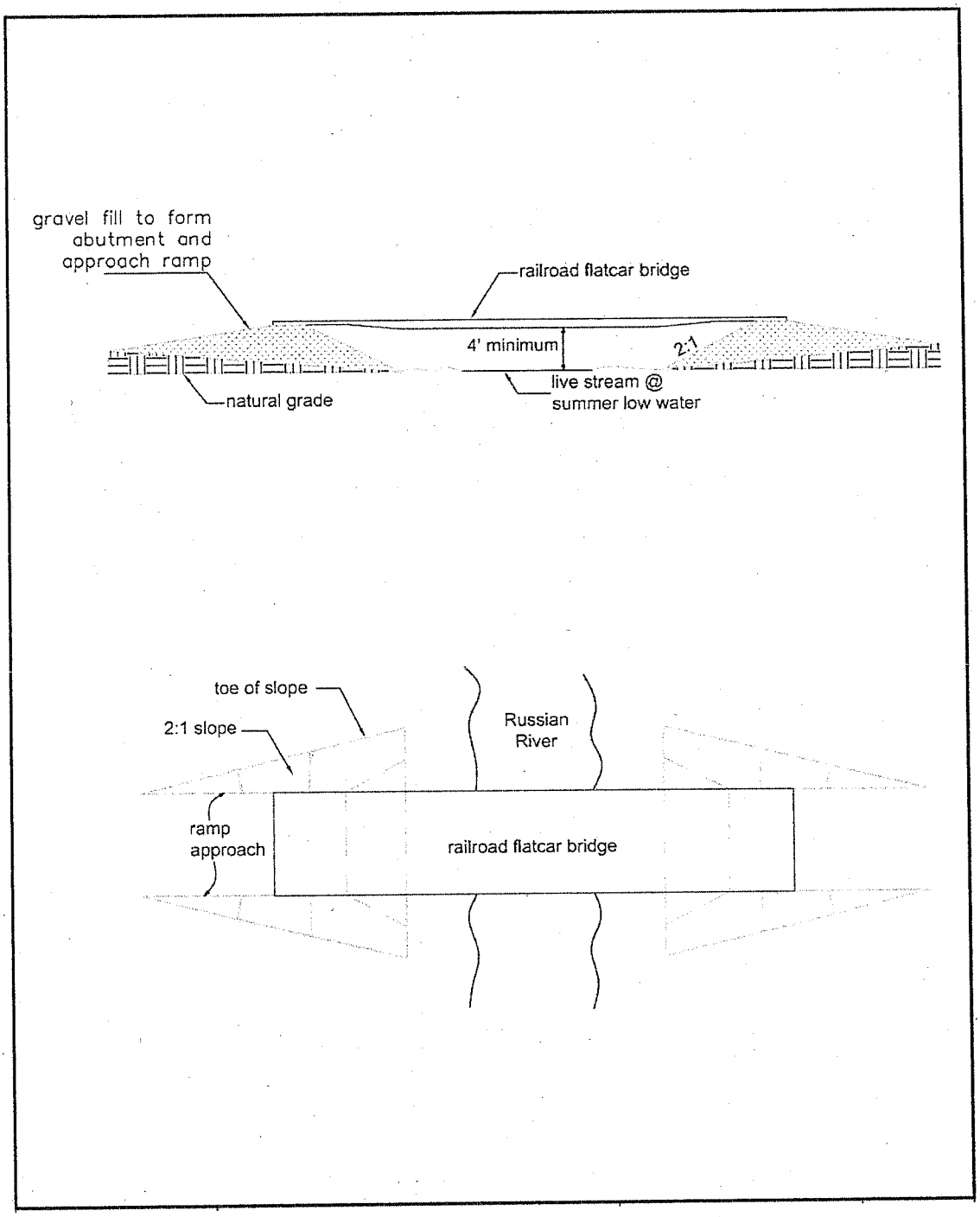






Source: Syar (2010)
Note: please see Figure 1-6 for cross sections

Figure 5



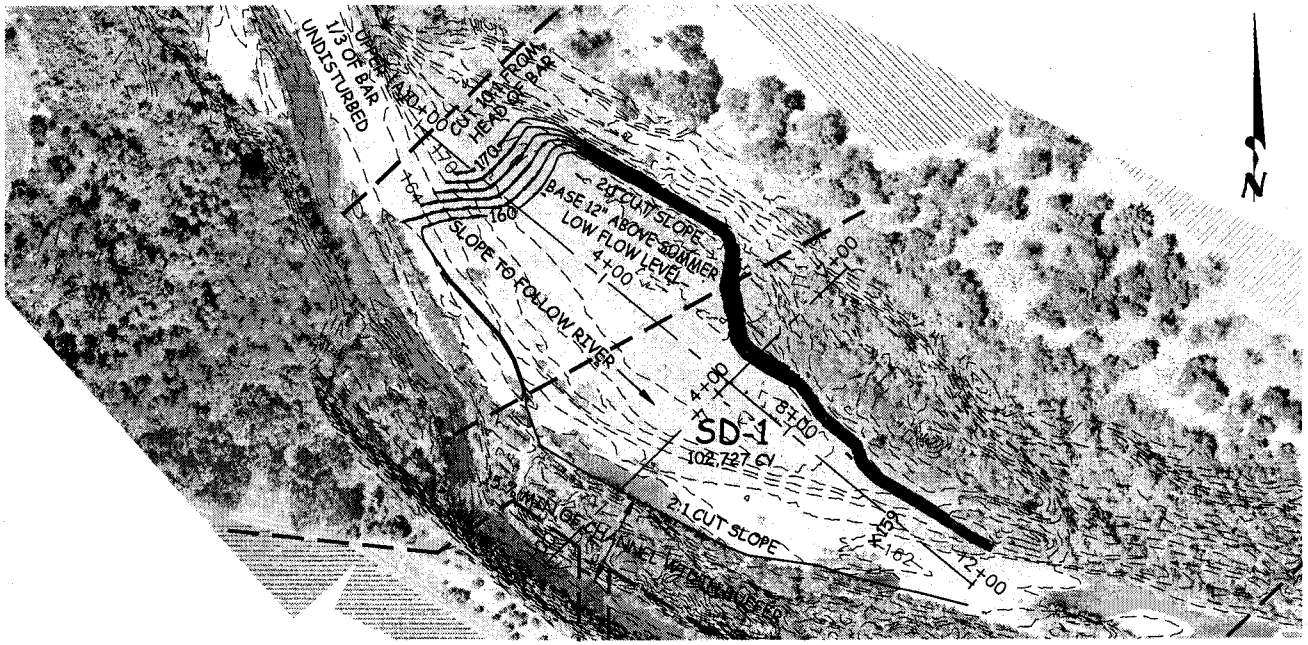
Source: LSA, 2007

Figure 6

Typical Temporary Bridge

TABLE 1: Proposed Stream Bank Stabilization Locations

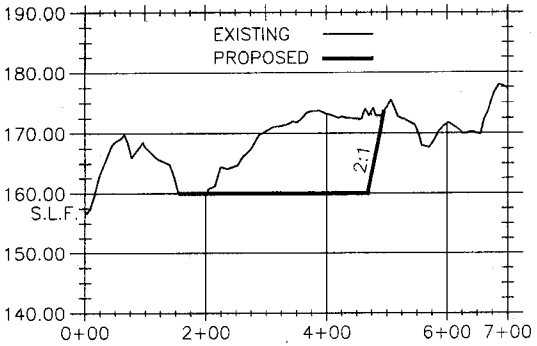
Site ID	Station Number	Length (feet)	Bank Retreat (feet)
AV-L-1	404+00 to 410+00	600	170
AV-R-1	384+00 to 394+00	1100	300
AV-L-2	358+00 to 372+00	1400	220
AV-R-2	330+00 to 336+00	600	50
AV-L-3	310+00 to 325+00	1500	30
AV-R-3	278+00 to 302+00	2400	150 @ station 282
AV-L-4	168+00 to 172+00	400	90
AV-L-5	62+00 to 70+00	800	120
AV-R-4	43+00 to 49+00	600	45
AV-R-5	6+00 to 15+00	900	100



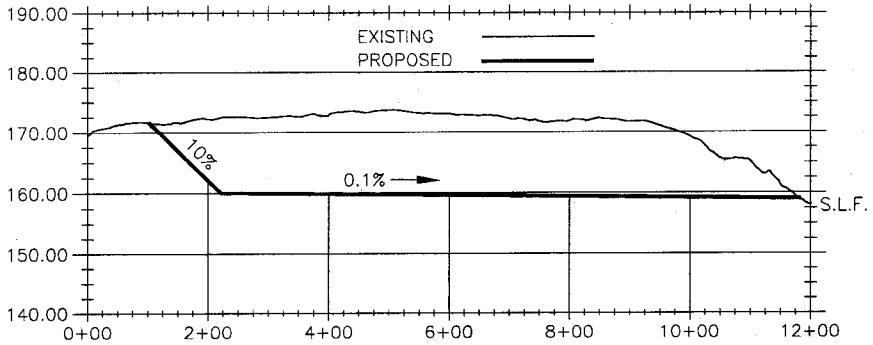
LEGEND

PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

PROFILE SD-1 B

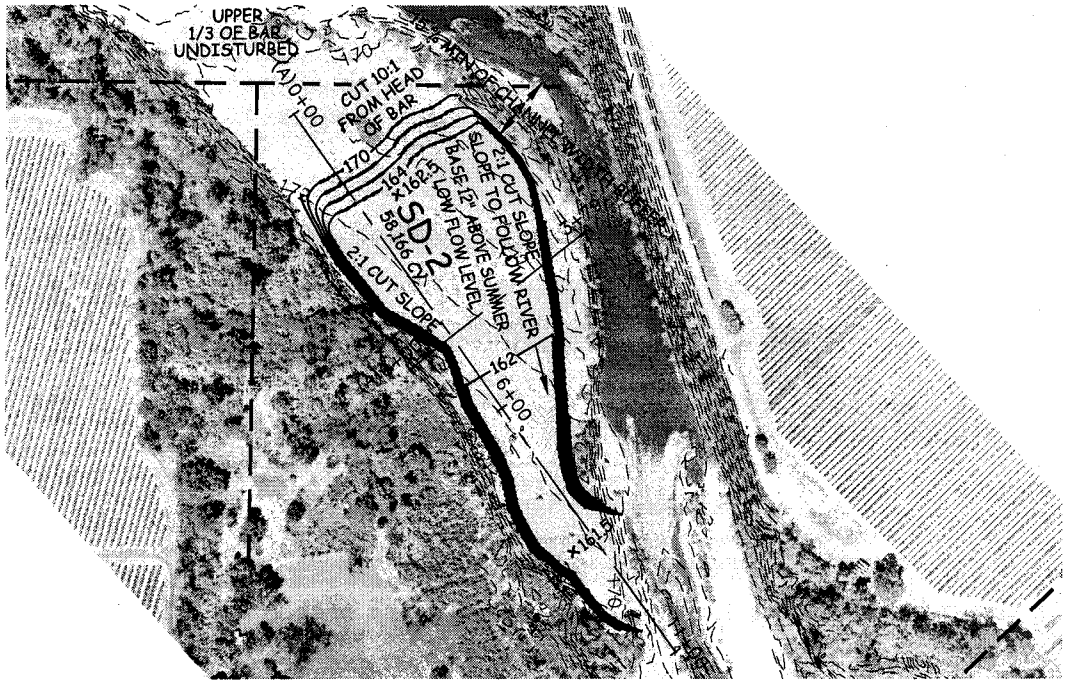


PROFILE SD-1 A



0 200' 1" 600' 3"

YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY SD-1	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.

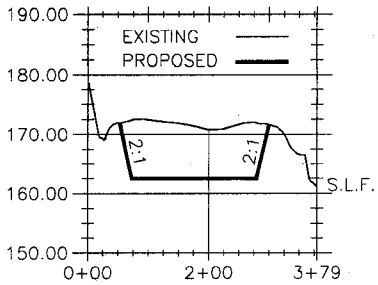


N

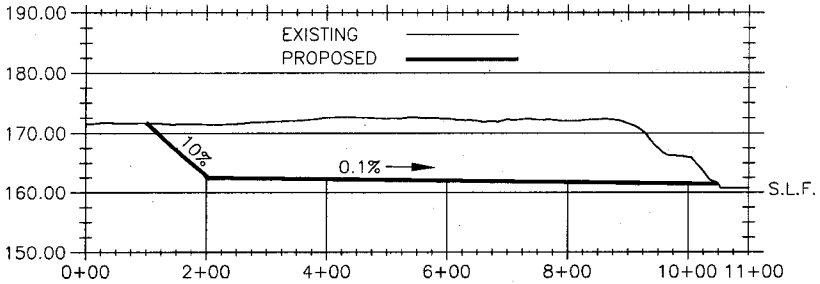
LEGEND

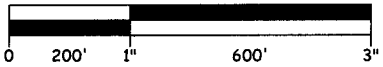
PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F

PROFILE SD-2 B

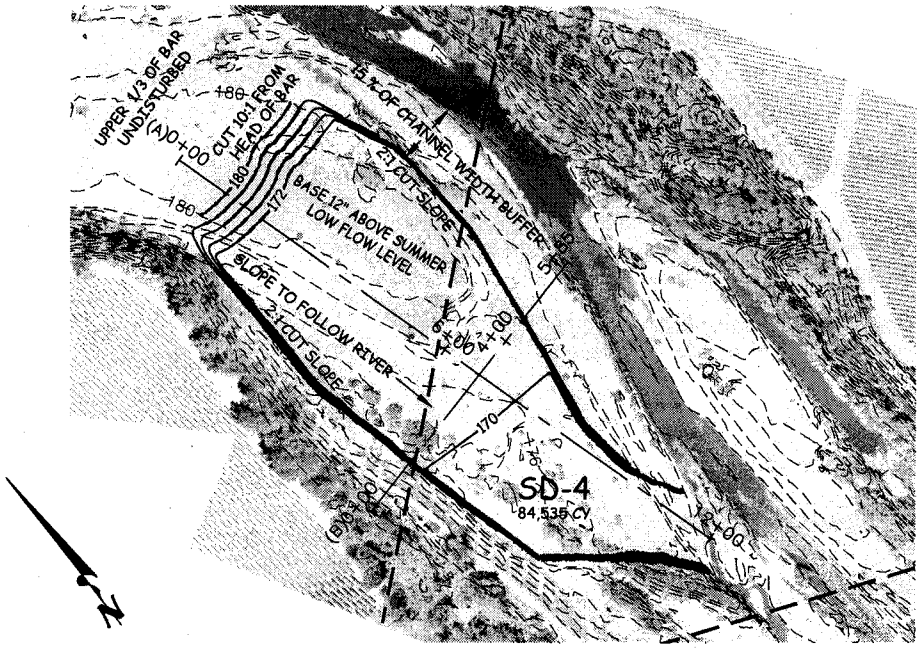


PROFILE SD-2 A





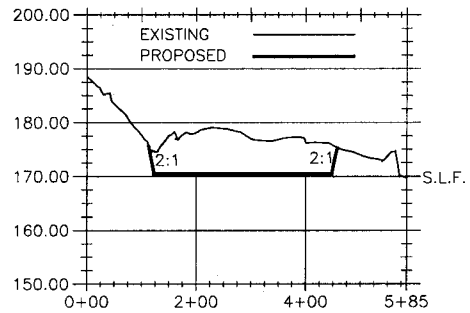
YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY SD-2	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.



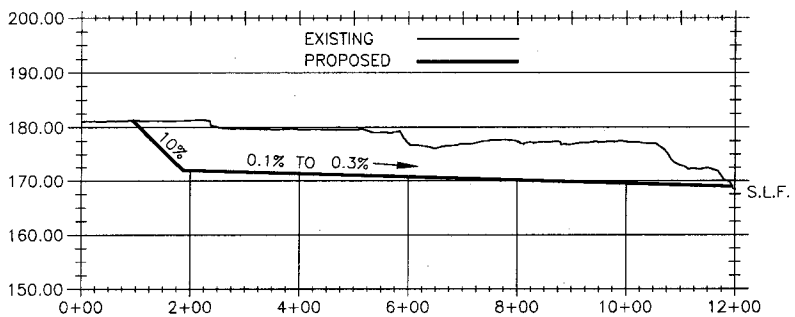
LEGEND

PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

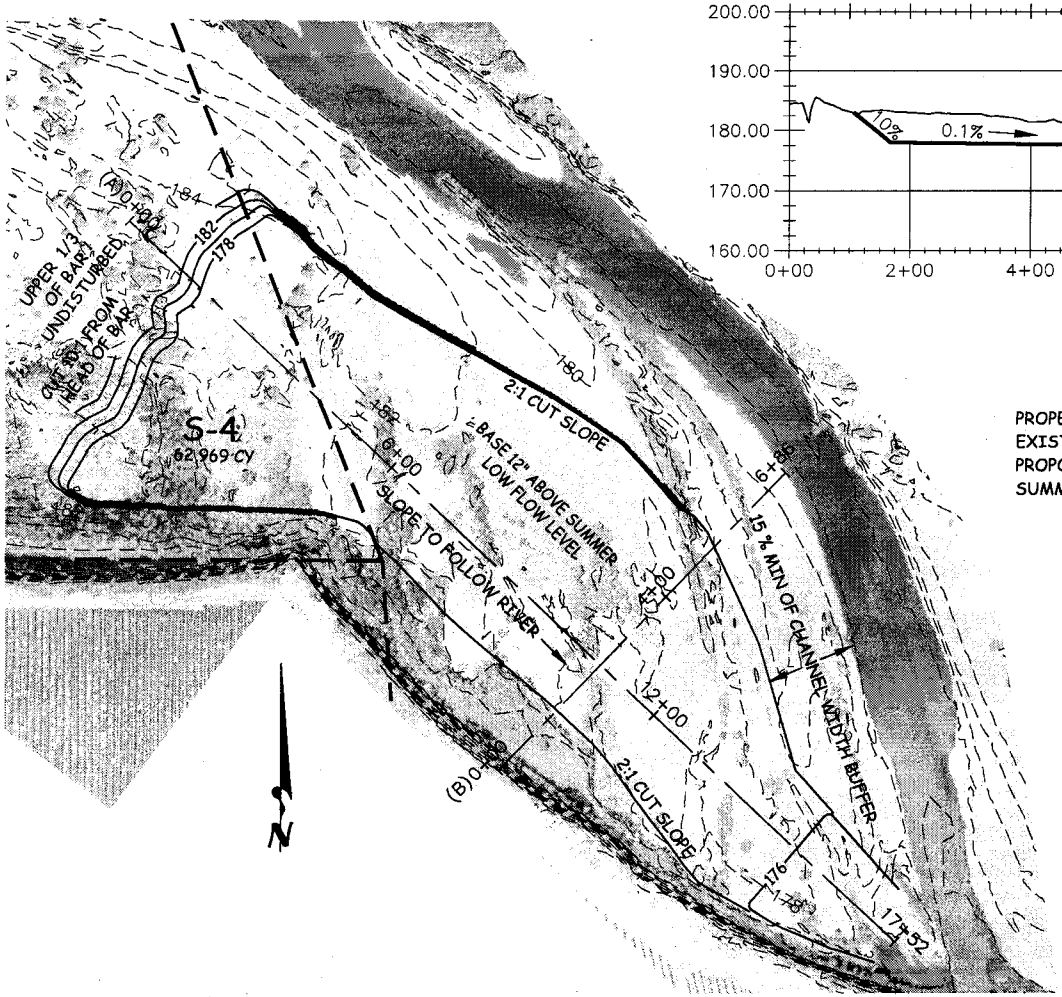
PROFILE SD-4 B

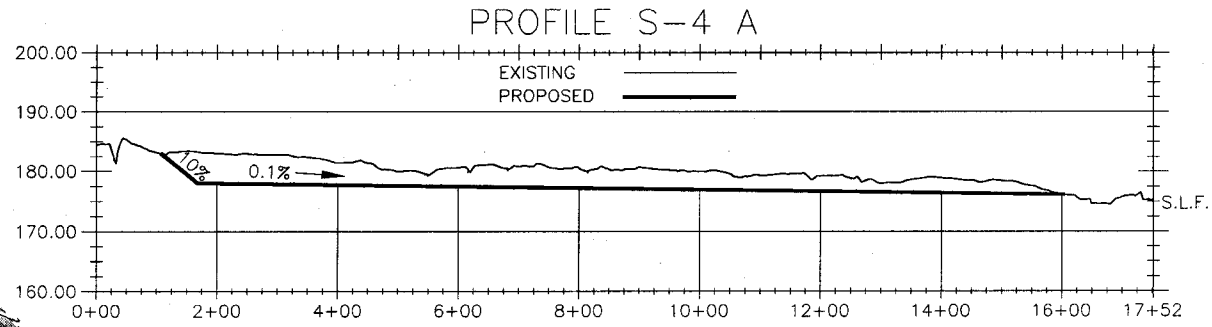


PROFILE SD-4 A



YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY SD-4	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.

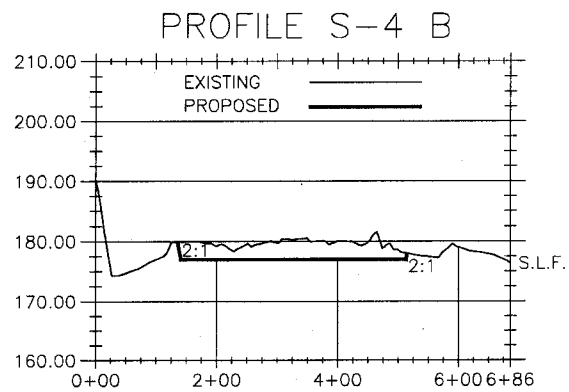




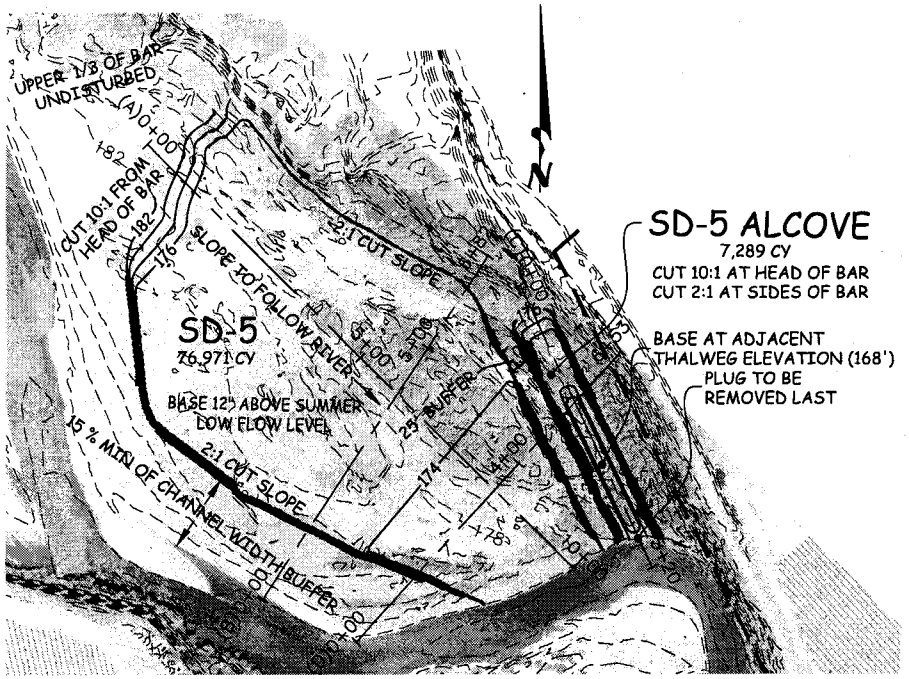
LEGEND

PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

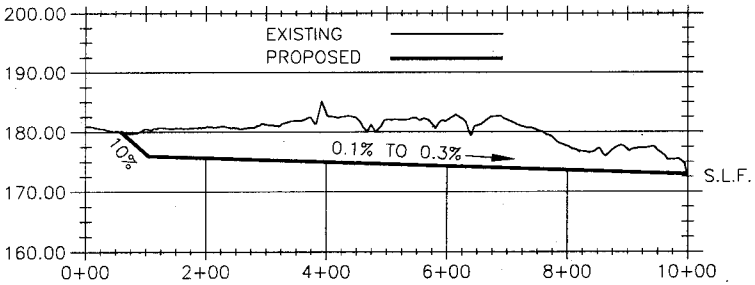
0 200' 1" 600' 3"



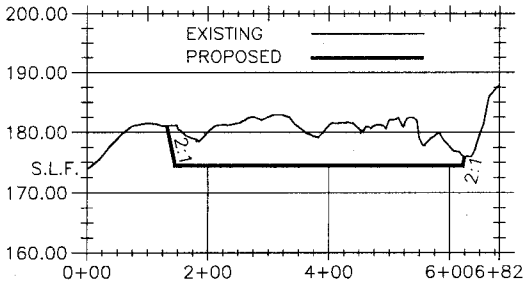
YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-4	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.



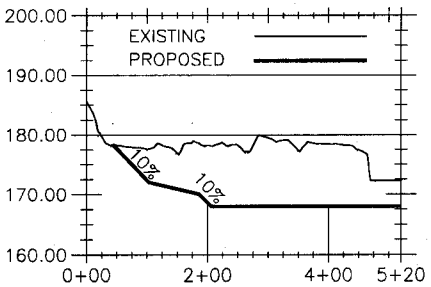
PROFILE SD-5 A



PROFILE SD-5 B



PROFILE SD-5 C

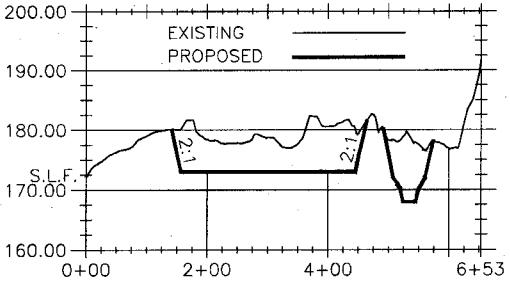


LEGEND

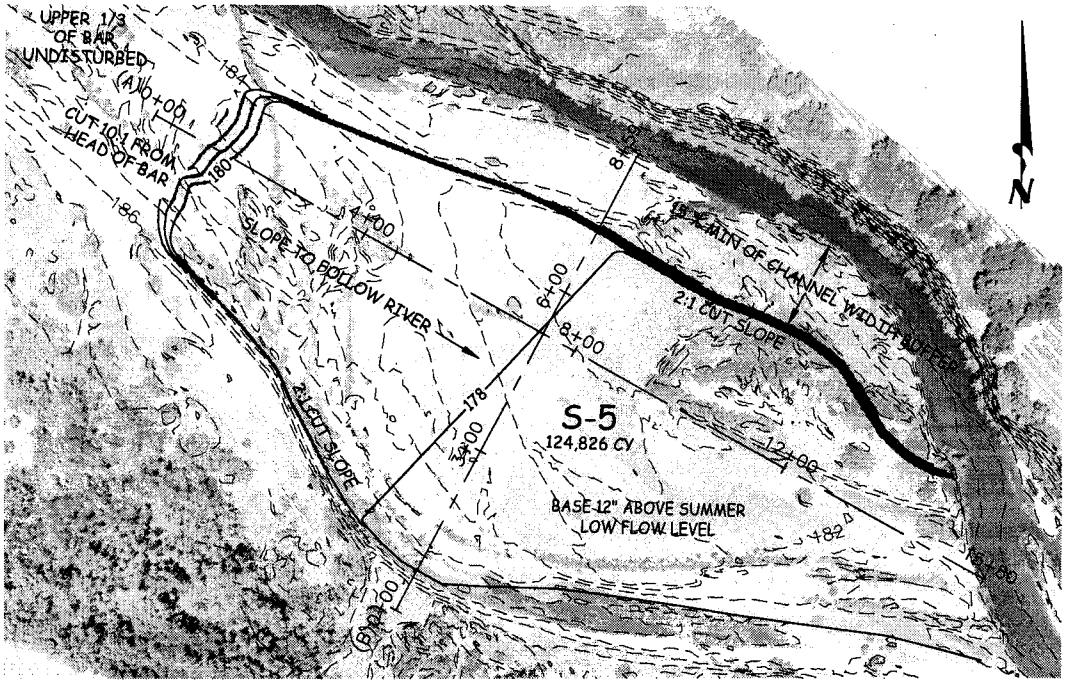
PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

0 200' 1" 600' 3"

PROFILE SD-5 D

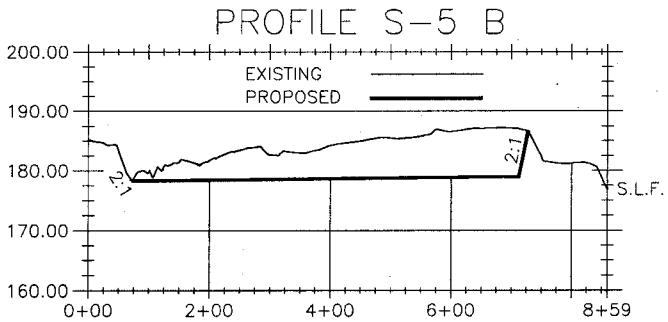


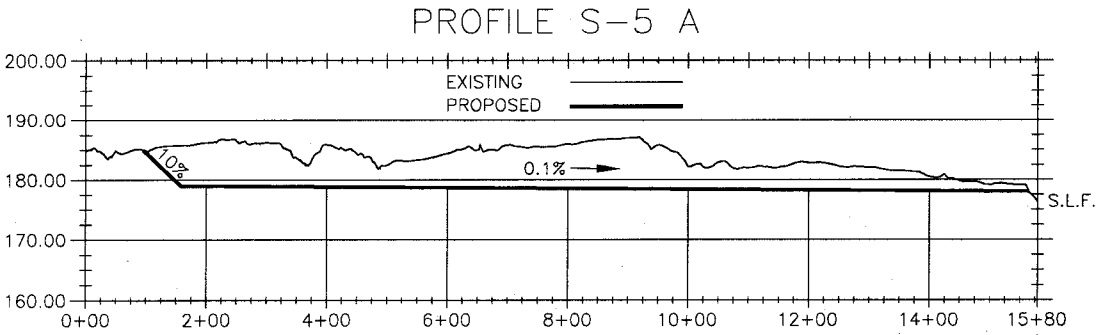
YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY SD-5	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.

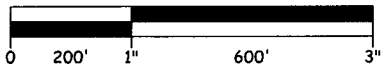


LEGEND

PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

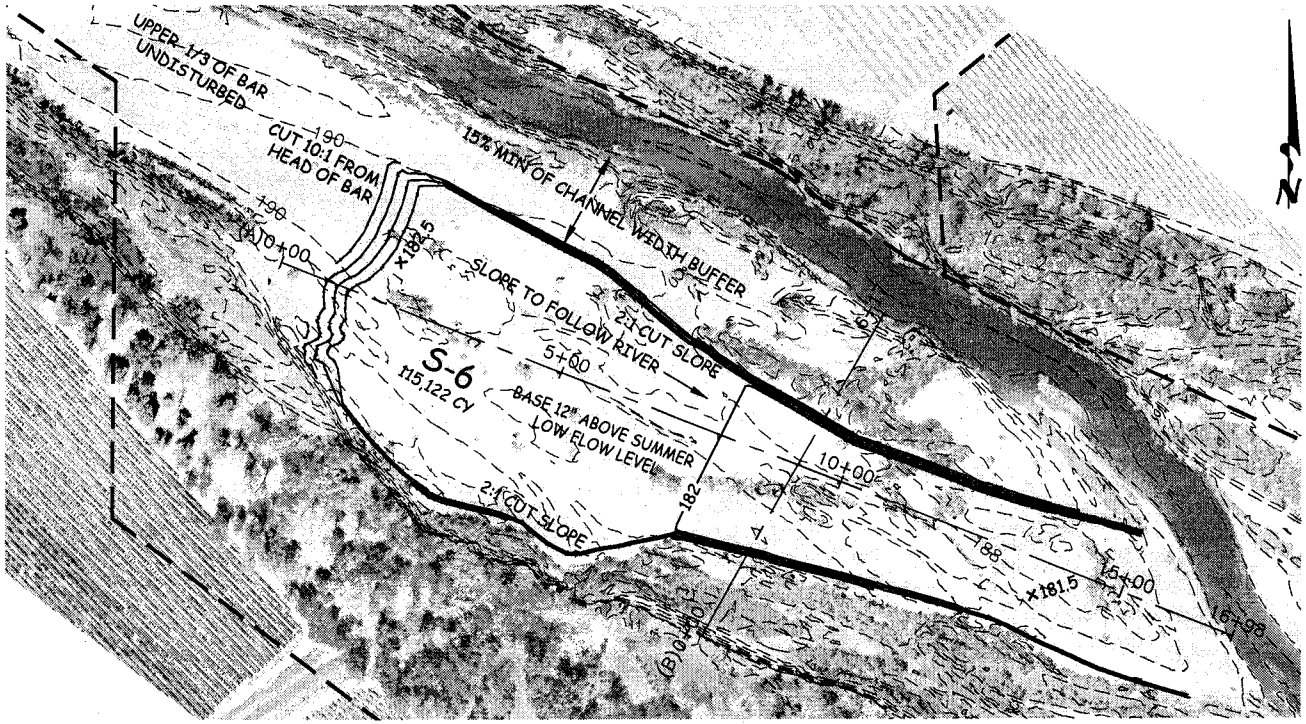






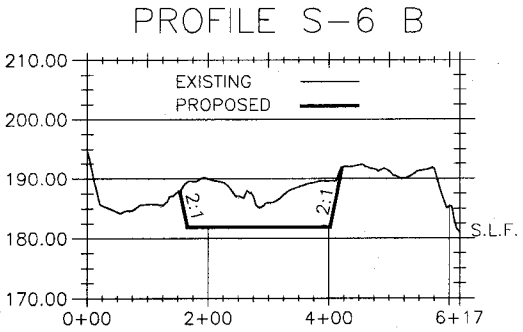
YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-5	BAR MINING PLAN	SHT. NO. 1 of 1

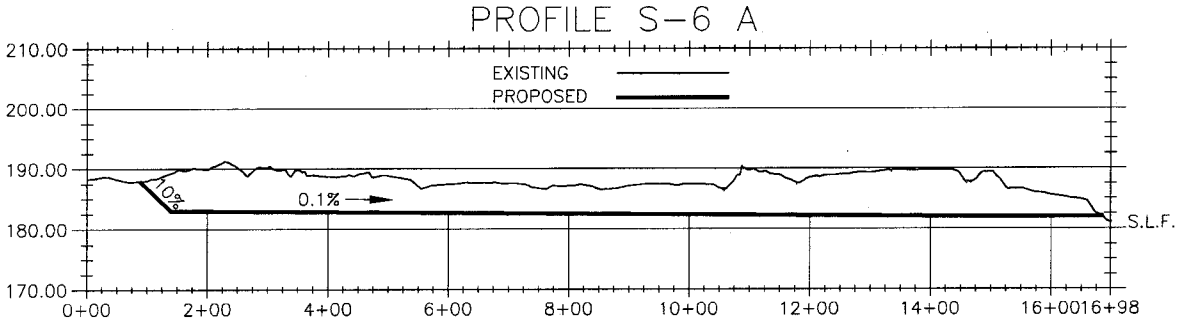
YOLANO ENGINEER'S INC.



LEGEND

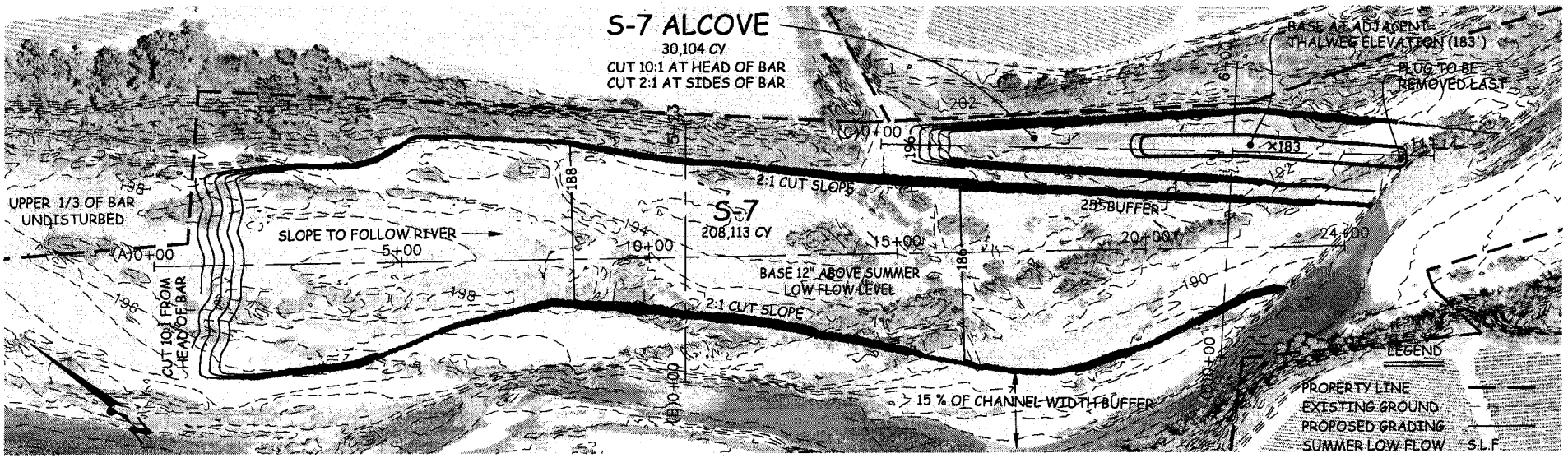
PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.



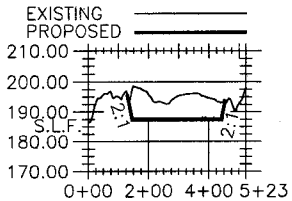


0 200' 1" 600' 3"

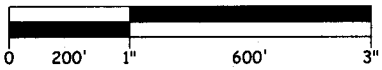
YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-6	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.



PROFILE S-7 B

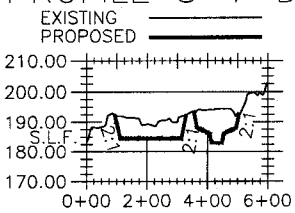


PLAN SCALE

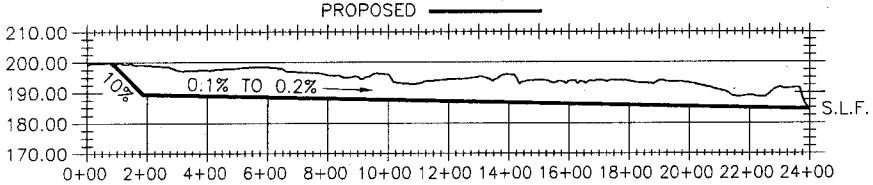


PROFILE SCALE

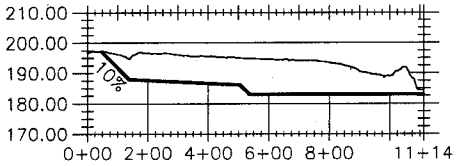
PROFILE S-7 D



PROFILE S-7 A

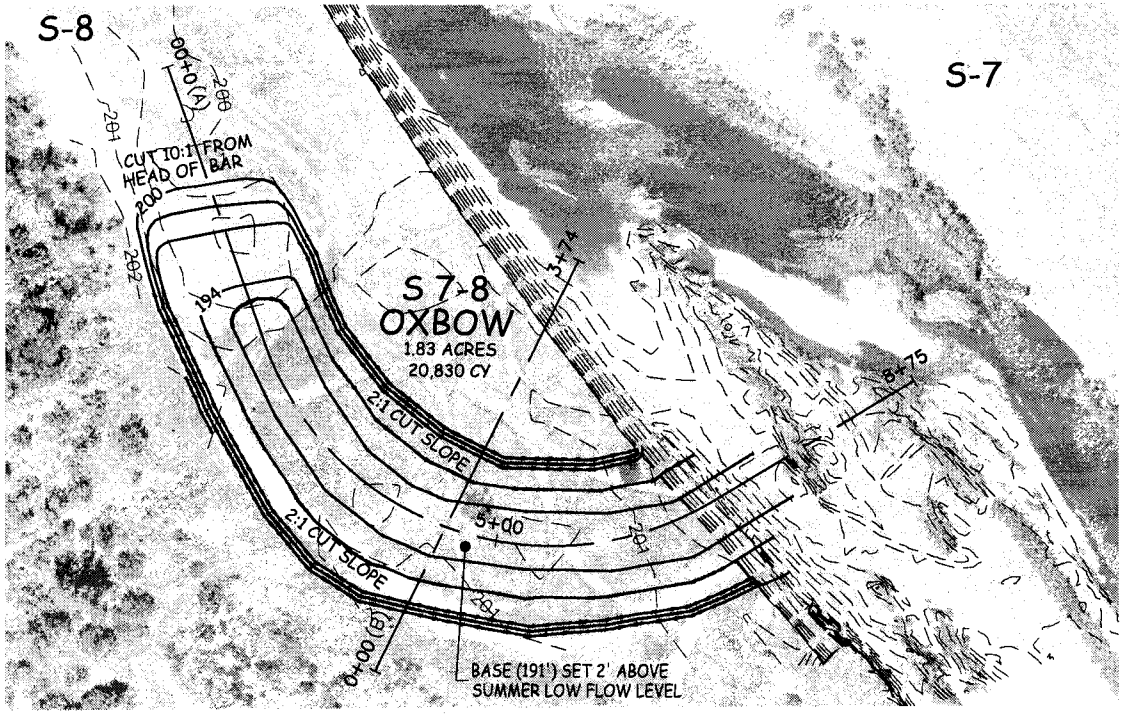


PROFILE S-7 C



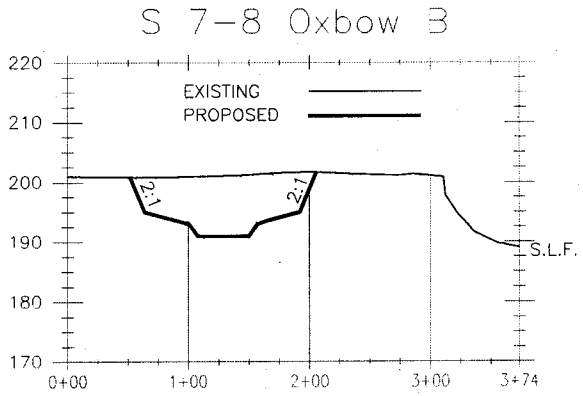
YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-7	BAR MINING PLAN	SHT. NO. 1 of 1

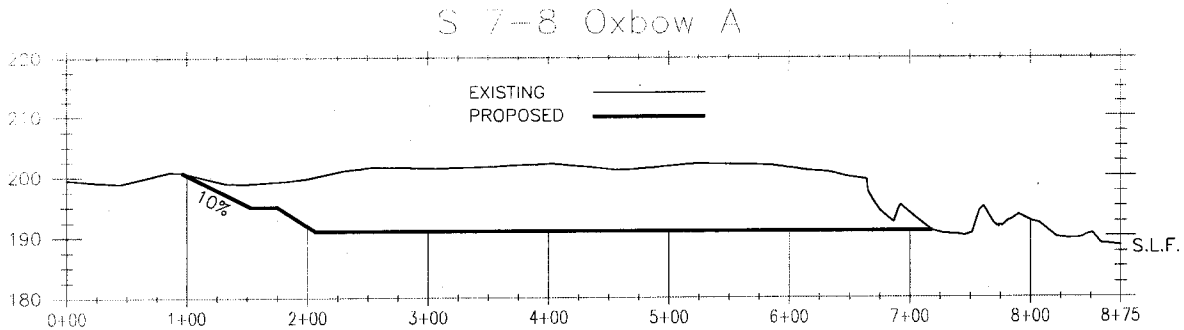
YOLANO ENGINEER'S INC.

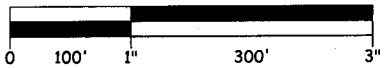


LEGEND

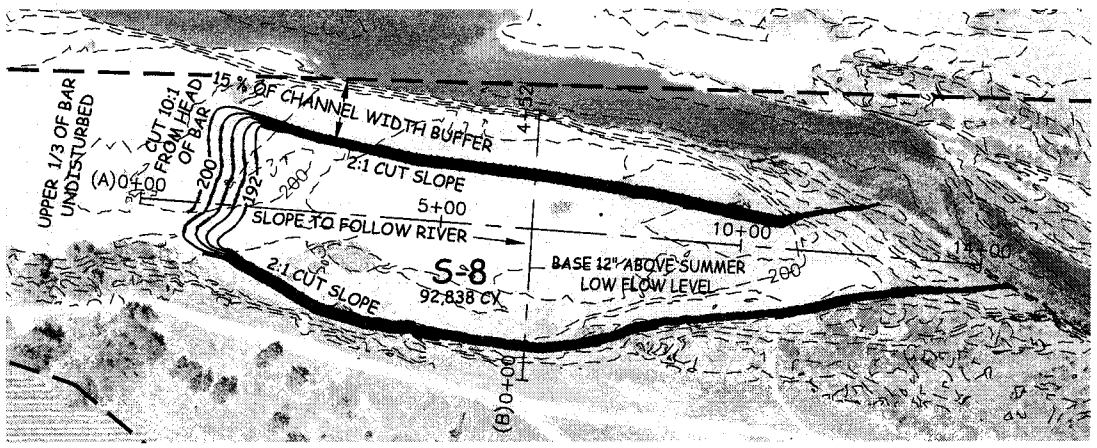
PROPERTY LINE	— — —
EXISTING GROUND	- - - - - -
PROPOSED GRADING	———
SUMMER LOW FLOW	S.L.F.







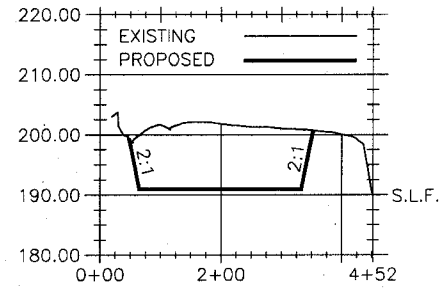
YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-7 & S-8 OXBOW	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.



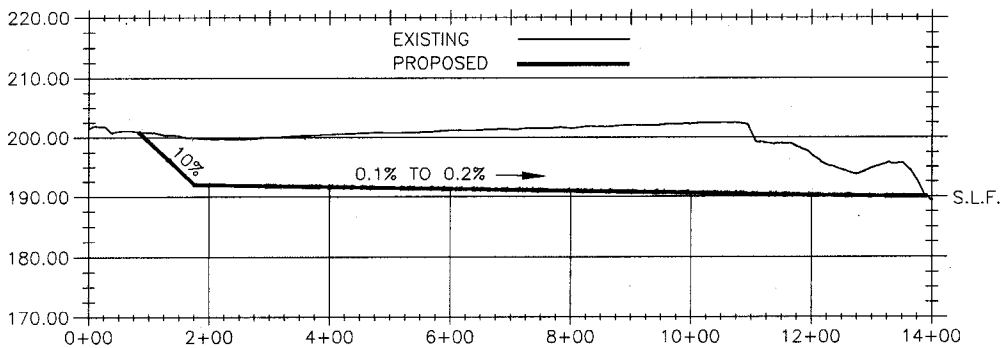
LEGEND

PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

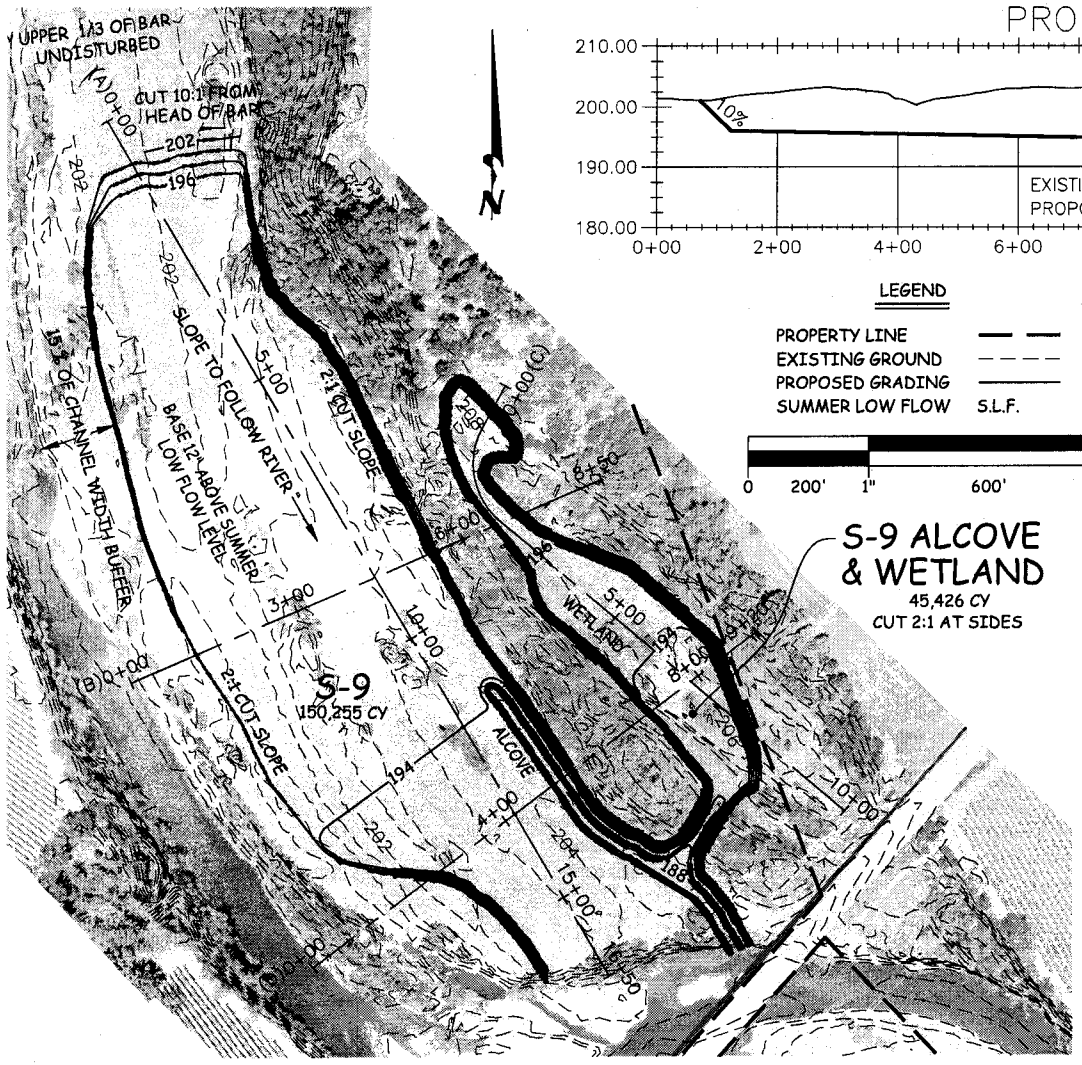
PROFILE S-8 B

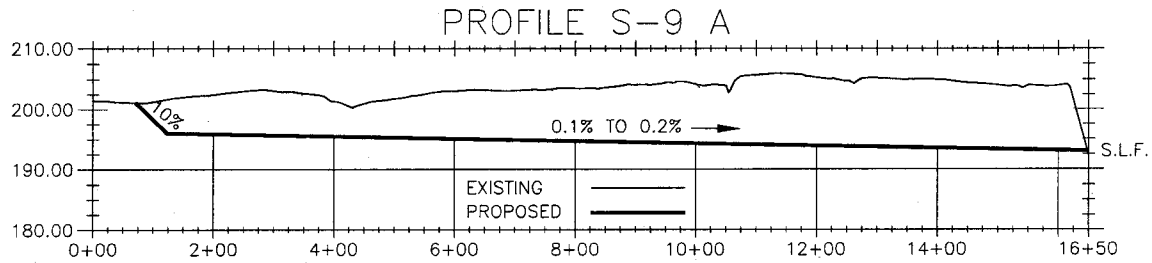


PROFILE S-8 A



YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-8	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.

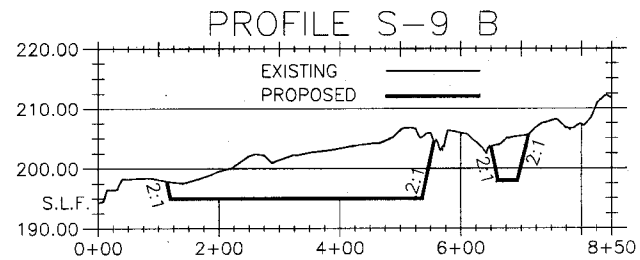


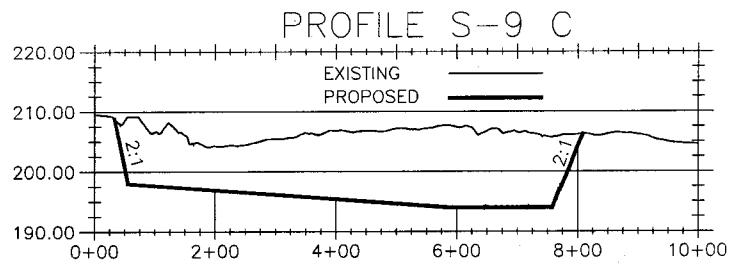


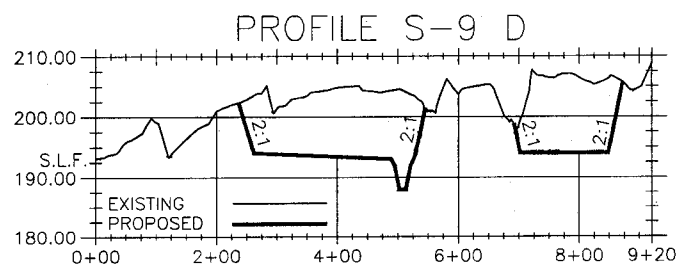
LEGEND

PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

0 200' 1" 600' 3"

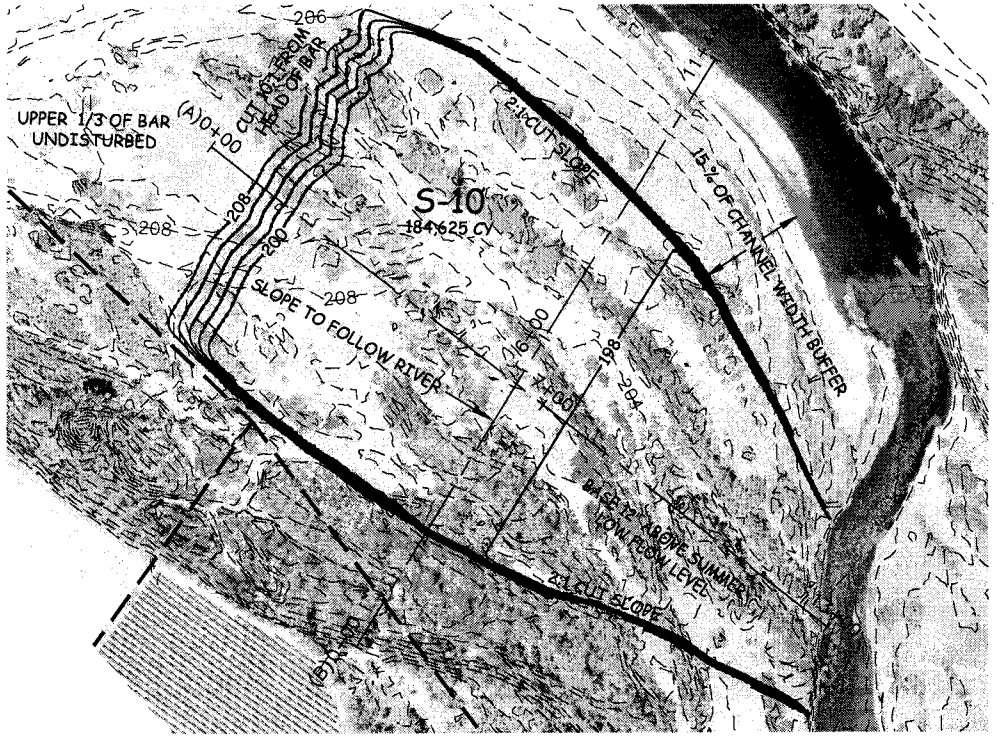






YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-9	BAR MINING PLAN	SHT. NO. 1 of 1

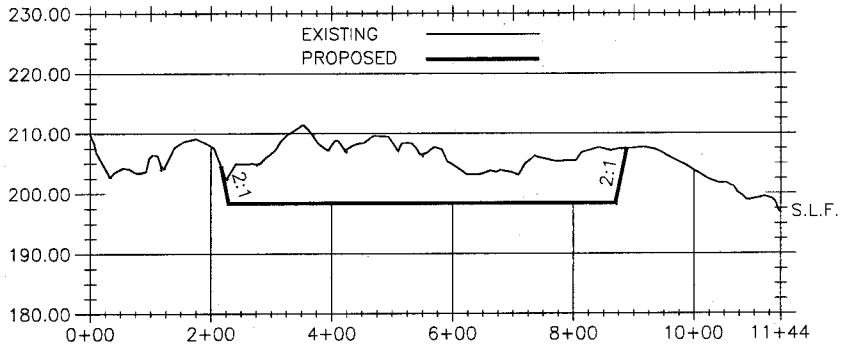
YOLANO ENGINEER'S INC.



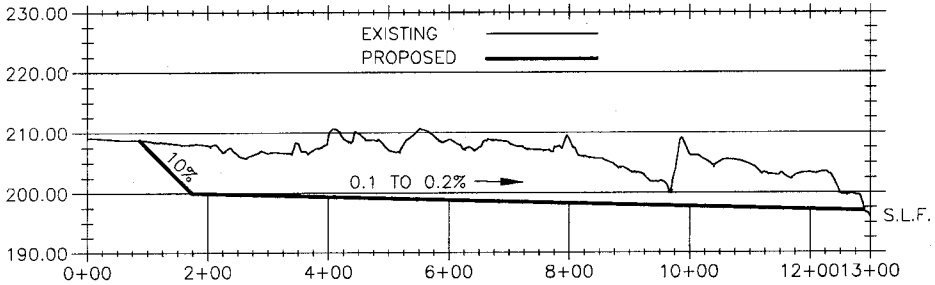
LEGEND

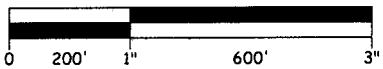
PROPERTY LINE	— —
EXISTING GROUND	- - - -
PROPOSED GRADING	———
SUMMER LOW FLOW	S.L.F.

PROFILE S-10 B

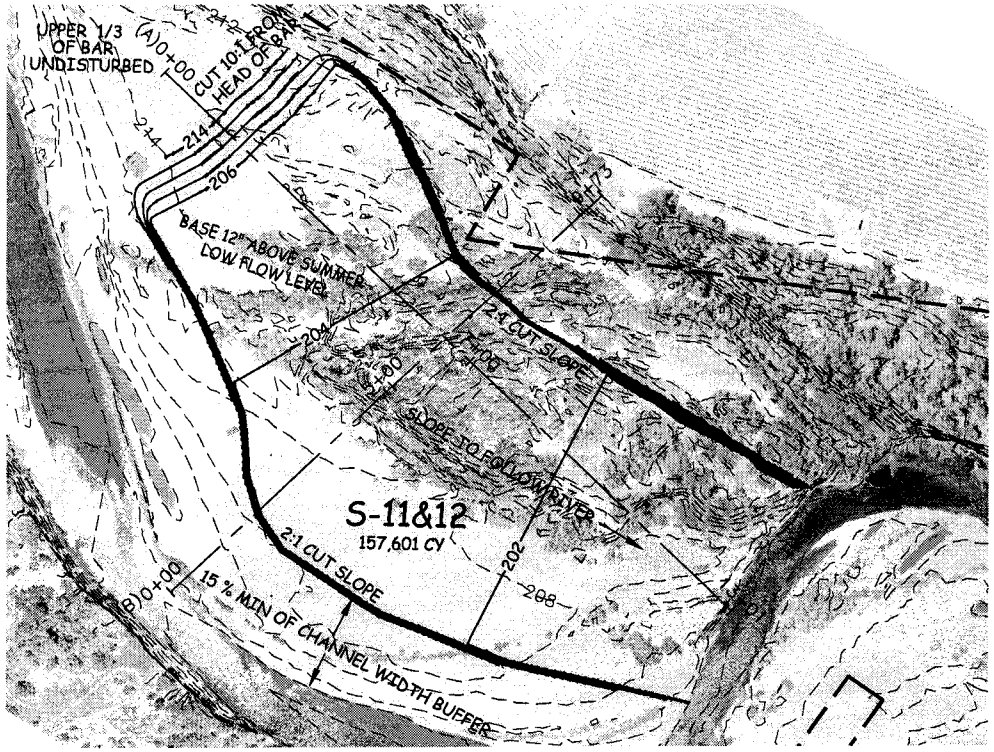


PROFILE S-10 A





YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-10	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.

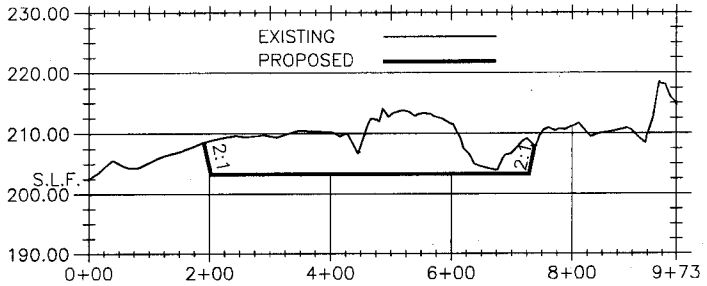


LEGEND

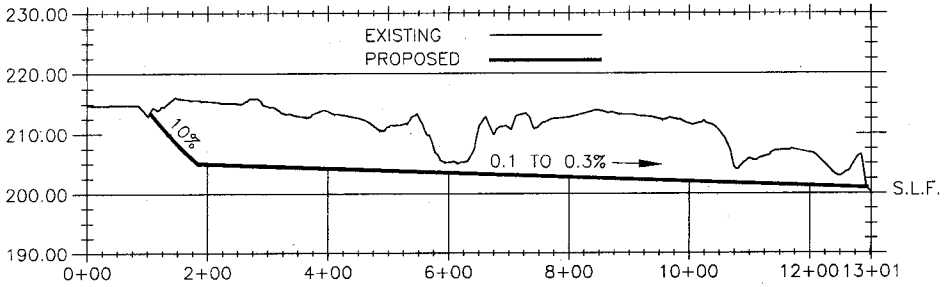
PROPERTY LINE	— —
EXISTING GROUND	- - - -
PROPOSED GRADING	———
SUMMER LOW FLOW	S.L.F.

N

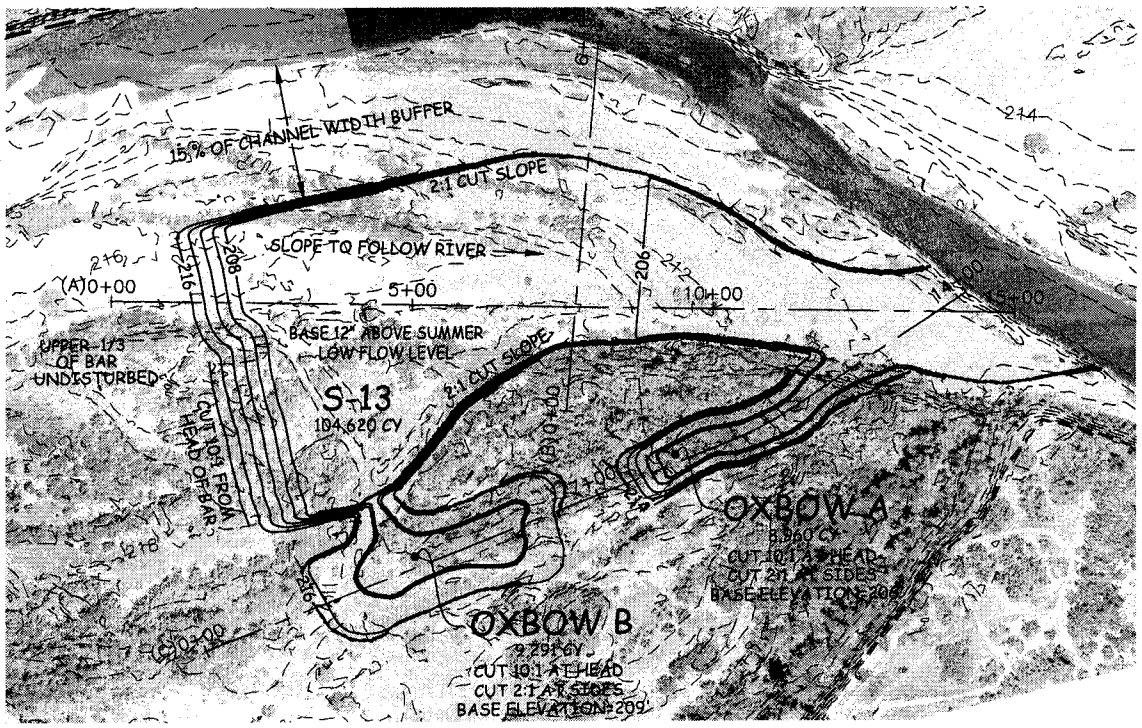
PROFILE S-11&12 B



PROFILE S-11&12 A



YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-11 & 12	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.

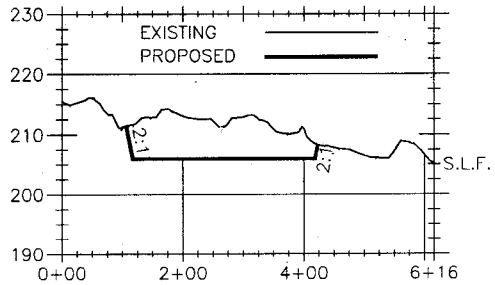


LEGEND

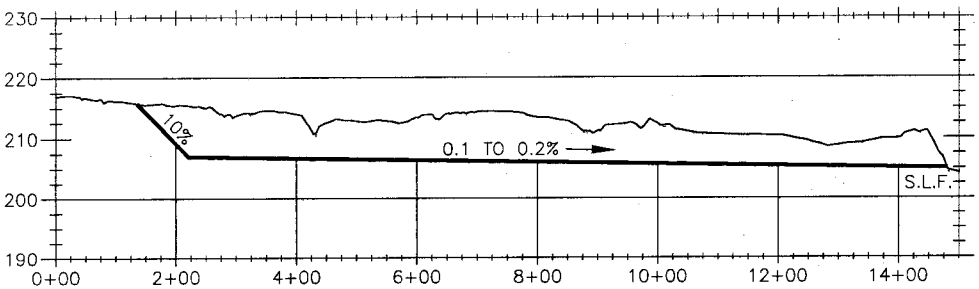
PROPERTY LINE	
EXISTING GROUND	
PROPOSED GRADING	
SUMMER LOW FLOW	S.L.F.

0 200' 1" 600' 3"

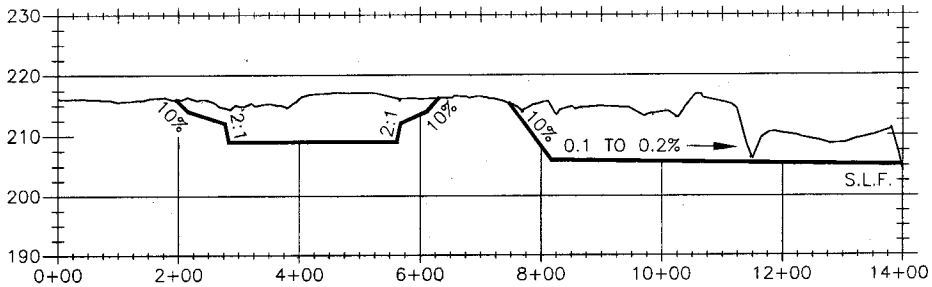
PROFILE S-13 B



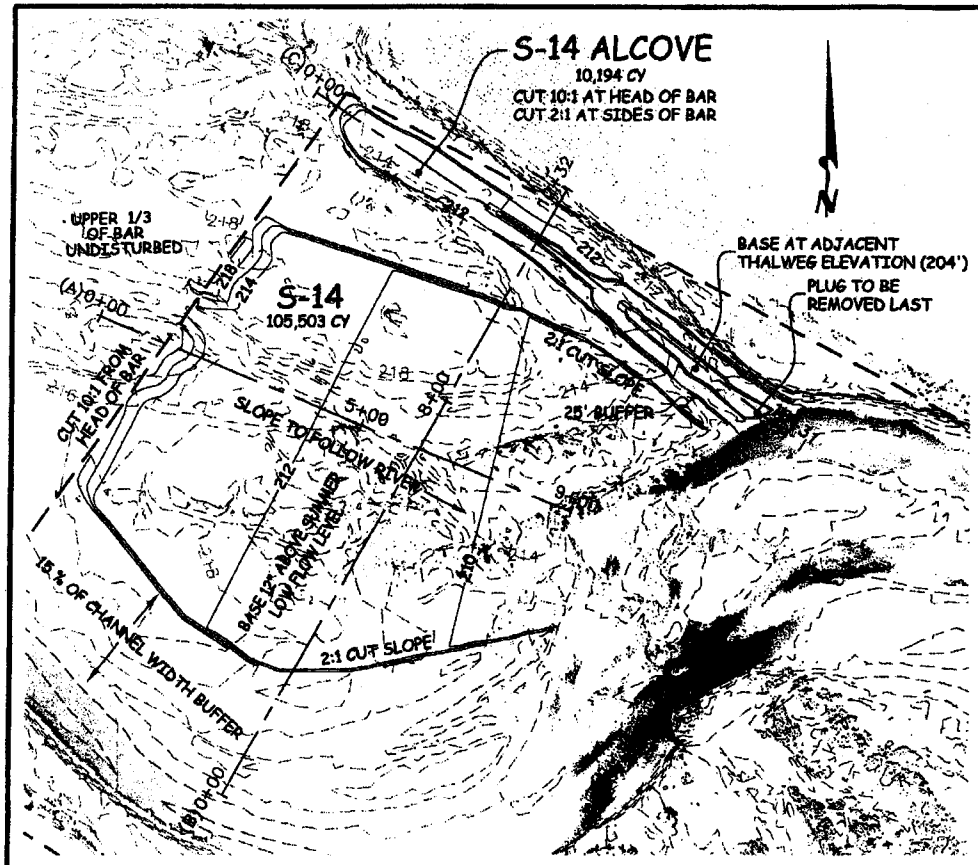
PROFILE S-13 A

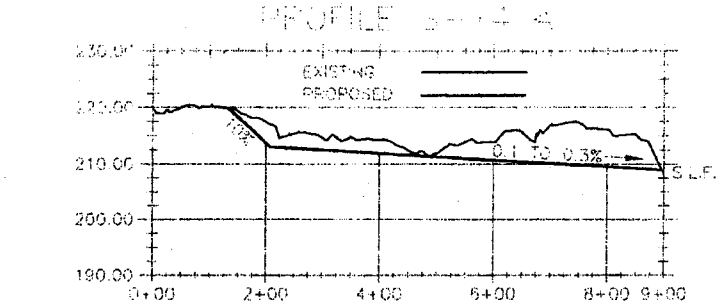


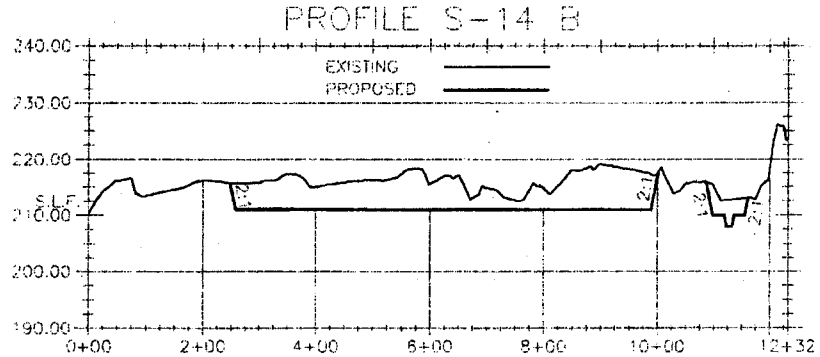
PROFILE S-13 C

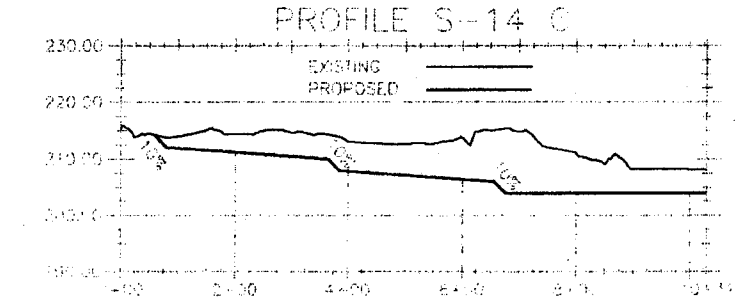


YOLANO ENGINEER'S INC. **2301 NAPA-VALLEJO HIGHWAY** **NAPA, CALIFORNIA 94558**	RUSSIAN RIVER ALEXANDER VALLEY S-13	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.









LEGEND

PROPERTY LINE	— —
EXISTING GROUND	
PROPOSED GRADING	———
SUMMER LOW FLOW	S.L.F.

0 200' 1" 600' 3"

YOLANO ENGINEER'S INC. 2301 NAPA-VALLEJO HIGHWAY NAPA, CALIFORNIA 94558	RUSSIAN RIVER ALEXANDER VALLEY S-14	BAR MINING PLAN	SHT. NO. 1 of 1	YOLANO ENGINEER'S INC.