

**SUBMITTAL TO THE FLOOD CONTROL AND
WATER CONSERVATION DISTRICT BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

610B



FISCAL PROCEDURES APPROVED
JEANINE J. REY, FINANCE DIRECTOR
BY: *[Signature]*
REGINA L. NEAL

FROM: General Manager-Chief Engineer

SUBMITTAL DATE:
January 6, 2015

SUBJECT: Authorize Addendum #1/Work Order to the Master Cultural Resources Treatment and Tribal Monitoring Agreement for Murrieta Creek Phase II, 3rd District [\$170,000] District Funds 100%

RECOMMENDED MOTION: That the Board of Supervisors:

1. Authorize the General Manager-Chief Engineer to sign Addendum #1/Work Order to the Master Cultural Resources Treatment and Tribal Monitoring Agreement (Master Agreement) between Pechanga Band of Luiseño Indians and the District for the Murrieta Creek Phase II Project (Project); and
2. Authorize the General Manager-Chief Engineer to sign amendment(s) to Addendum #1 that does not increase the cost to the District by more than 10% of Addendum #1 and do not materially change the scope of Addendum #1.

BACKGROUND:

Summary
See Page 2.

[Signature]
WARREN D. WILLIAMS
General Manager-Chief Engineer

RS:mcv
P8\166686

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost:	POLICY/CONSENT (per Exec. Office)
COST	\$ 85,000	\$ 85,000	\$ 170,000	\$ N/A	Consent <input type="checkbox"/> Policy <input type="checkbox"/>
NET DISTRICT COST	\$ 85,000	\$ 85,000	\$ 170,000	\$ N/A	
SOURCE OF FUNDS: 527980 25170 947520 Zone 7 Construction/Maintenance Contracts				Budget Adjustment: No	
				For Fiscal Year: 14/15-15/16	

C.E.O. RECOMMENDATION:

APPROVE

BY: *[Signature]*
Imelda Delos Santos

County Executive Office Signature

MINUTES OF THE BOARD OF SUPERVISORS

FORM APPROVED COUNTY COUNSEL
BY: *[Signature]* ANITA C. WILLIS
DATE: 12-23-14

Departmental Concurrence

- A-30
- 4/5 Vote
- Positions Added
- Change Order

Prev. Agn. Ref.: 11-5 of 12/18/12 | District: 3rd | Agenda Number:

11-1

**SUBMITTAL TO THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT
BOARD OF SUPERVISORS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

FORM 11: Authorize Addendum #1/Work Order to the Master Cultural Resources Treatment and Tribal Monitoring Agreement for Murrieta Creek Phase II, 3rd District [\$170,000] District Funds 100%

DATE: January 6, 2015

PAGE: Page 2 of 2

BACKGROUND:

Summary (continued)

The Master Agreement (December 18, 2012, Agenda Item No. 11-5) between the Pechanga Band of Luiseño Indians and the District formalized procedures for the treatment of Native American human remains, grave goods, ceremonial items and any cultural artifacts in the event that any are discovered during the construction of certain District capital improvement projects.

Addendum #1 to the Master Agreement finalizes the area and estimated costs for the Pechanga Band of Luiseño Indians to monitor grading and ground-disturbing activities associated with the construction of the Project. The cost of tribal monitoring associated with the Project construction is not expected to exceed a total sum of \$170,000.

Impact on Residents and Businesses

Not Applicable.

SUPPLEMENTAL

Additional Fiscal Information

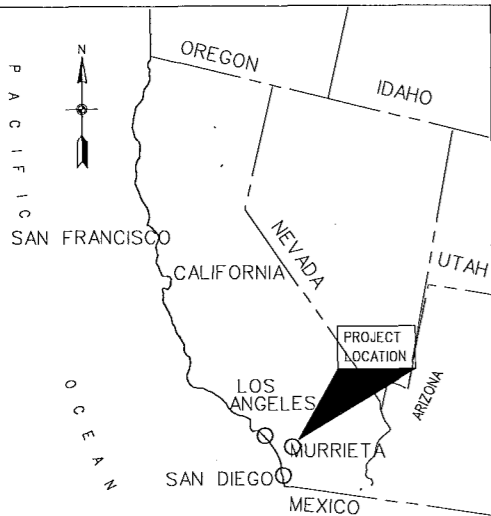
Sufficient funding is available in the District's Zone 7 Budget for Fiscal Year 2014-2015 and will be included in the proposed budget for Fiscal Year 2015-2016, as appropriate. Addendum #1 shall remain in effect until construction of the Project is complete.

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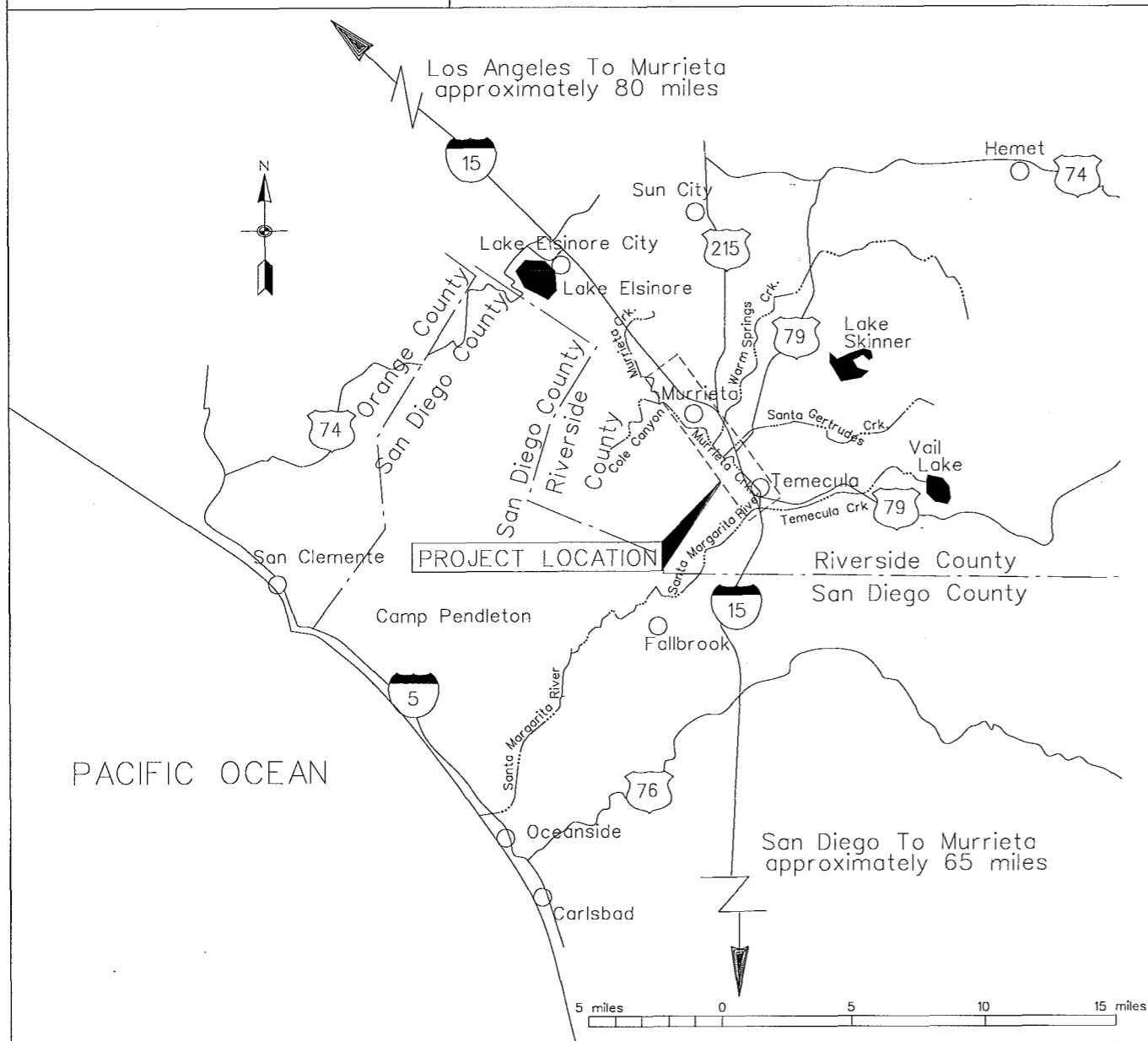
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA

MURRIETA CREEK - PHASE 2

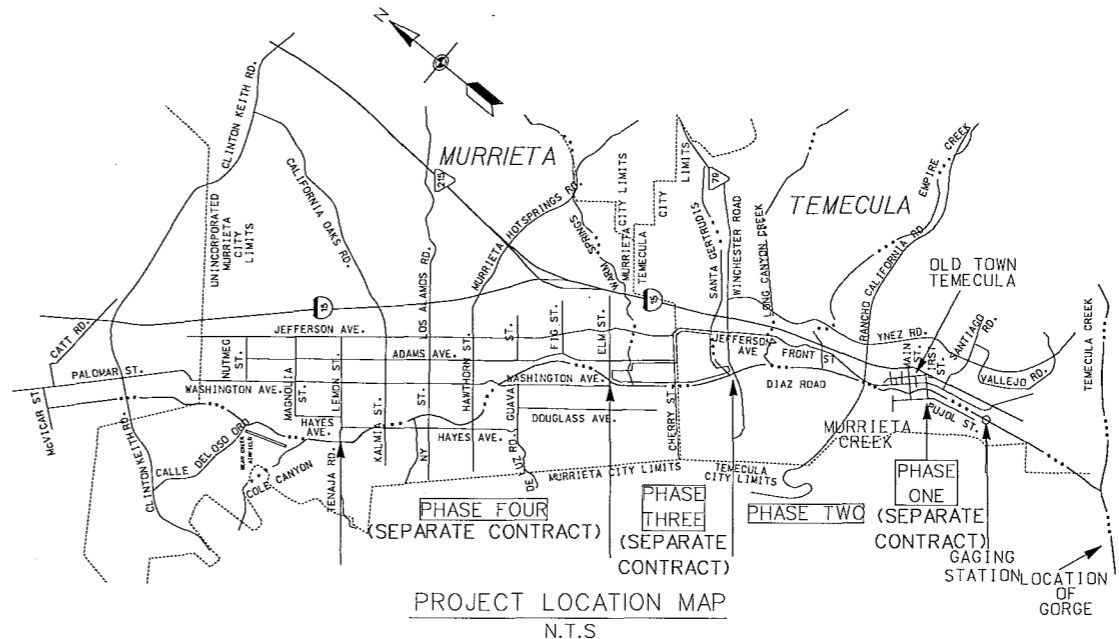
STA. 59+00 TO STA. 189+00



VICINITY MAP
NOT TO SCALE



GENERAL PROJECT LOCATION



PROJECT LOCATION MAP
N.T.S.

LEGEND

- INTERSTATE HIGHWAY
- US HIGHWAY
- PROJECT AREA
- COUNTY BOUNDARY
- EXISTING RIVERS AND LAKES

THIS PROJECT WAS DESIGNED BY THE LOS ANGELES DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY E.R. 1110-1-8152. SIGNATURES AFFIXED HEREON INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL THE DRAWINGS IN THIS SET.

DESIGNED BY: U.S.G.R. LOS ANGELES CORPS OF ENGINEERS	DATE: 10/24/14
DRAWN BY: T.C.	CHECKED BY: S.H.V.
PREPARED UNDER THE DIRECTION OF: SUBMITTED BY: [Signature]	DATE: 10/24/14
DISTRICT ENGINEER: M. COLLOTON	CHEF, DESIGN DIVISION
DISTRICT FILE NO. 22B/240	SPEC. NO. W812PL-15B-0001
FILE NAME: T-1DGN	

Scale: SHEET T-1

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SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2									
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DESIGNED BY:	J.G.R.	DRAWN BY:	T.C.	CHECKED BY:	S.H.V.	FILE NAME:	T2.DGN		
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH									
DISTRICT FILE NO. 226/241 SPEC. NO. W912PL-15-B-0001									
Scale: SHEET T-2									

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SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

INDEX TO CONTRACT DRAWINGS
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DESIGNED BY: _____
DRAWN BY: _____
CHECKED BY: _____
FILE NAME: _____

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/

Scale: _____
SHEET
T-3

GENERAL NOTES:

1. CONTOUR INTERVAL IS 1.0 FT.
2. CONTRACTOR SHALL PROTECT ALL UTILITIES CROSSING OR PARALLELING THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED.
3. VERTICAL DATUM IS BASED ON NAVD 1988.
4. COORDINATES ARE BASED ON (CALIFORNIA LAMBERT ZONE VI, (NAD 83) 2000.35
5. ALL DIMENSIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED.

ABBREVIATIONS AND SYMBOLS FOR TYPICAL CONTRACT

ABAND.	ABANDONED	GALV.	GALVANIZED	RH	RIGHT WALL HEIGHT
A.B.C.	AGGREGATE BASE COURSE	HORIZ./H	HORIZONTAL	RR	RAILROAD
ABT.	ABOUT	HP	HIGH PRESSURE	RT.	RIGHT
ABUT.	ABUTMENT	HT/H	HEIGHT	R/W	RIGHT-OF-WAY
A.C.	ASPHALTIC CONCRETE	IN.	INCH/INCHES	S=	SLOPE EQUALS
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	I/Δ	INTERIOR ANGLE (DELTA)	S	SOUTH
ASPH	ASPHALT	INV.	INVERT	S.C.	SPIRAL TO CURVE
APPROX.	APPROXIMATELY	INT.	INTERMEDIATE	SD	SIDE OR STORM DRAIN
AVE.	AVENUE	JUNC.	JUNCTION	SE	SOUTHEAST
BC	BEGINNING-OF-CURVE	L	LENGTH-OF-CURVE	SEC.	SECTION
BLDG	BUILDING	LF	LINEAR FOOT	SHT.	SHEET
BLVD.	BOULEVARD	LH	LEFT WALL HEIGHT	SP	STEEL PIPE
BOT.	BOTTOM	LN	LANE	SHTS.	SHEETS
BVC	BEGINNING OF VERTICAL CURVE	LT.	LEFT	SPECS.	SPECIFICATIONS
CB	CATCH BASIN	MAINT.	MAINTENANCE	SQ	SQUARE
☐	CENTERLINE	MAT'L	MATERIAL	SS	SANITARY SEWER
C.C.	CENTER TO CENTER	MAX.	MAXIMUM	S.T.	SPIRAL TO TANGENT
C.J.	CONSTRUCTION JOINT	MIN.	MINIMUM	ST	STREET
C.T.J.	CONTRACTION JOINT	MISC.	MISCELLANEOUS	STA.	STATION
C.L.	CHAIN LINK	MOD	METHOD	STD.	STANDARD
CLR.	CLEARANCE	MSL	MEAN SEA LEVEL	STL.	STEEL
CO.	COMPANY	N.	NORTH	SW	SOUTHWEST
COMP.	COMPACTED	NE	NORTHEAST	SYMM.	SYMMETRICAL
CONC.	CONCRETE	NO.	NUMBER	T	TANGENT
CONST.	CONSTRUCT	N.T.S.	NOT TO SCALE	T.C.	TOP OF CURB
C.S.	CURVE TO SPIRAL	NW	NORTHWEST	T.C.E.	TEMPORARY CONSTRUCTION EASEMENT
CSD	COUNTY SANITATION DISTRICT	DIA. or Ø	DIAMETER	T.F.	TOP OF FOOTING
DG	DECOMPOSED GRANITE	O.C.	ON CENTERS	T.H.	TEST HOLE
DH	DRILL HOLE	OH	OVERHEAD	T.L.	TOP OF LEVEE
DIA.	DIAMETER	OZ.	OUNCE	T.O.C.	TOP OF CONCRETE
DIM.	DIMENSION	PCC	PORTLAND CONCRETE CEMENT	T.O.F.	TOP OF FOOTING
DR.	DRIVE	POC	POINT ON CURVE	T.P.G.	THROUGH PLATE GIRDER
E	EAST	P.I.	POINT-OF-INTERSECTION	T.R.M.	TURF REINFORCEMENT MAT
EA.	EACH	P.I.P.	PROTECT IN PLACE	T.W. or T.O.W.	TOP OF WALL
EC	END-OF-CURVE	PED.	PEDESTRIAN	TRANS.	TRANSITION
E.F.	EACH FACE	PERF.	PERFORATED	TRAP.	TRAPAZOIDAL
EL./ELEV.	ELEVATION	PL.	PLACE	T.S.	TANGENT TO SPIRAL
E.O.C.	EAST OUTLET CHANNEL	PRVC	POINT OF REVERSE VERTICAL CURVE	TYP.	TYPICAL
EQ.	EQUATION	PT.	POINT	UG	UNDERGROUND
ES	EDGE OF SHOULDER	PL	PLATE	VERT./V	VERTICAL
ETW	EDGE OF TRAVELED WAY	P/W	PARAPET WALL	VAR.	VARIES
EVC	END OF VERTICAL CURVE	R	RADIUS		
E.W.	EACH WAY	RCP	REINFORCED CONCRETE PIPE		
EXIST.	EXISTING	RECT.	RECTANGULAR		
FWY	FREEWAY	RD.	ROAD		
FT.	FOOT/FEET				
FTG.	FOOTING				

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRETA CREEK - PHASE 2
GENERAL NOTES, LEGEND, LIST OF
ABBREVIATIONS AND UTILITY CONTACTS

DESIGNED BY: J.C.R.
DRAWN BY: T.C.
CHECKED BY: S.H.V.
FILE NAME: T4.DGN

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS
SUBMITTED BY:
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/243

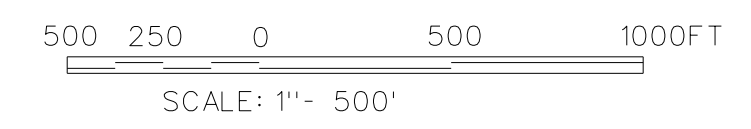
Scale:
SHEET
T-4

UTILITY CONTACTS

DISPOSAL SITE: RIVERSIDE COUNTY	POC	
CONTACT POC FOR EXACT LOCATION.....	ALBERTO MARTINEZ.....	(951) 955-1299
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT.....	ALBERTO MARTINEZ.....	(951) 955-1299
CITY OF TEMECULA.....	GREG BUTLER.....	
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD.....	MEGAN FISHER.....	(858) 268-6363
SOUTHERN CALIFORNIA GAS COMPANY.....	DAN ORR.....	(909) 335-77828
RANCHO CALIFORNIA WATER DISTRICT.....	ANDREW WEBSTER.....	(909) 296-6900
UNDERGROUND SERVICE ALERT (USA).....		800) 422-4133
SOUTHERN CALIFORNIA EDISON (SCE).....	PAUL Mc DONNELL.....	(909) 928-8334
ADELPHIA CABLE.....	NANCY BELTRAN.....	(909) 766-4270
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT.....		(909) 396-2000
STATE WATER RESOURCES CONTROL BOARD.....		(916) 341-5536

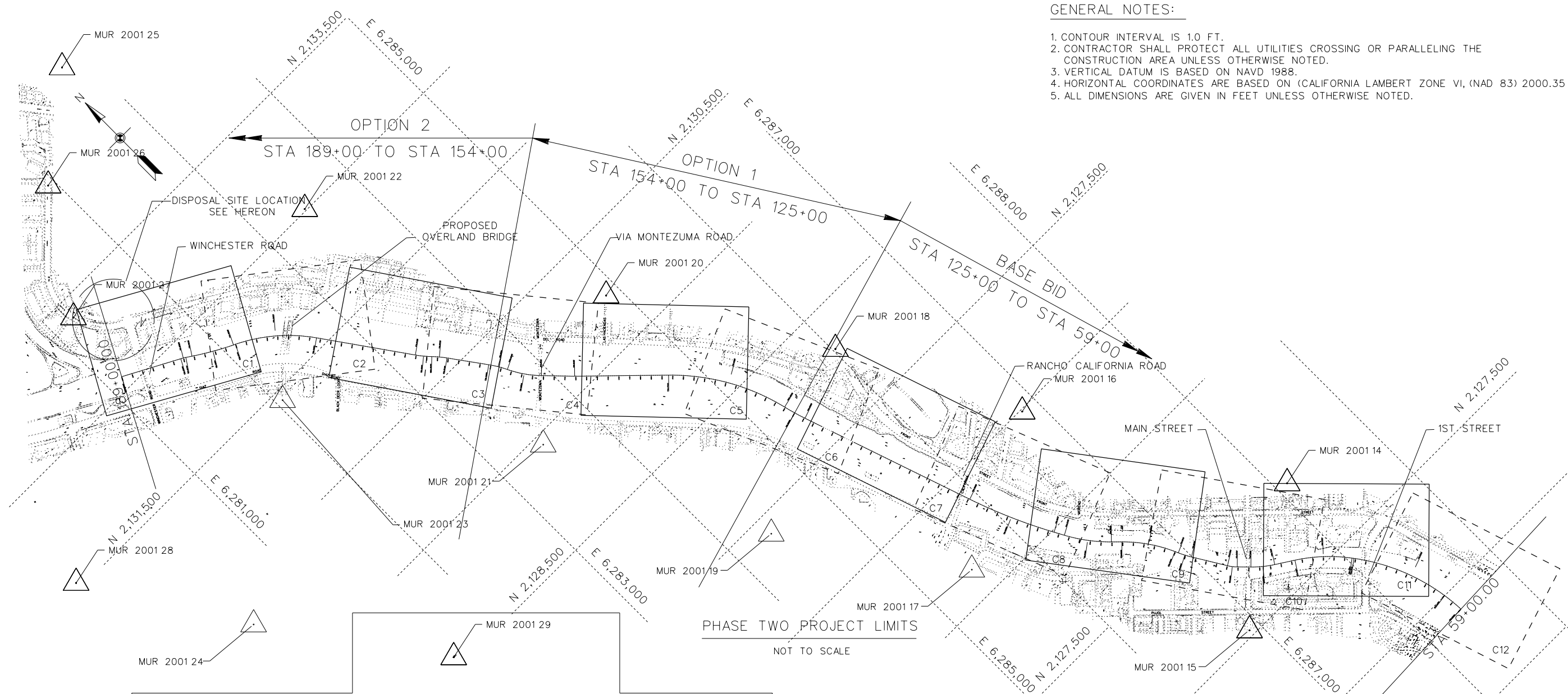
GENERAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
EXISTING FEATURES			
●	POWER POLES	DESIGN FEATURES	
○	STREET LIGHT	R/W	RIGHT-OF-WAY
○ MH	MANHOLE	---	CENTERLINE
3635.3	EXIST. ELEVATION	▲	TOP OF SLOPE
—SD—	SIDE OR STORM DRAIN	▲	TOE OF SLOPE
—S—	SANITARY SEWER	1V:2H	SLOPE INDICATOR
—W—	WATER LINE	▨	ASPHALT MAINTENANCE/ BIKE ROAD
—X—X—	FENCE	▩	DECOMPOSED GRANITE MAINTENANCE ROAD
—E—	UNDERGROUND ELECTRIC LINE	⊕	SURVEY MONUMENTS
—G—	GAS LINE OR PETROLEUM LINE		
—T—	OVER HEAD POWER LINE		
—UT—	UNDERGROUND TELEPHONE		
	RAILROAD		

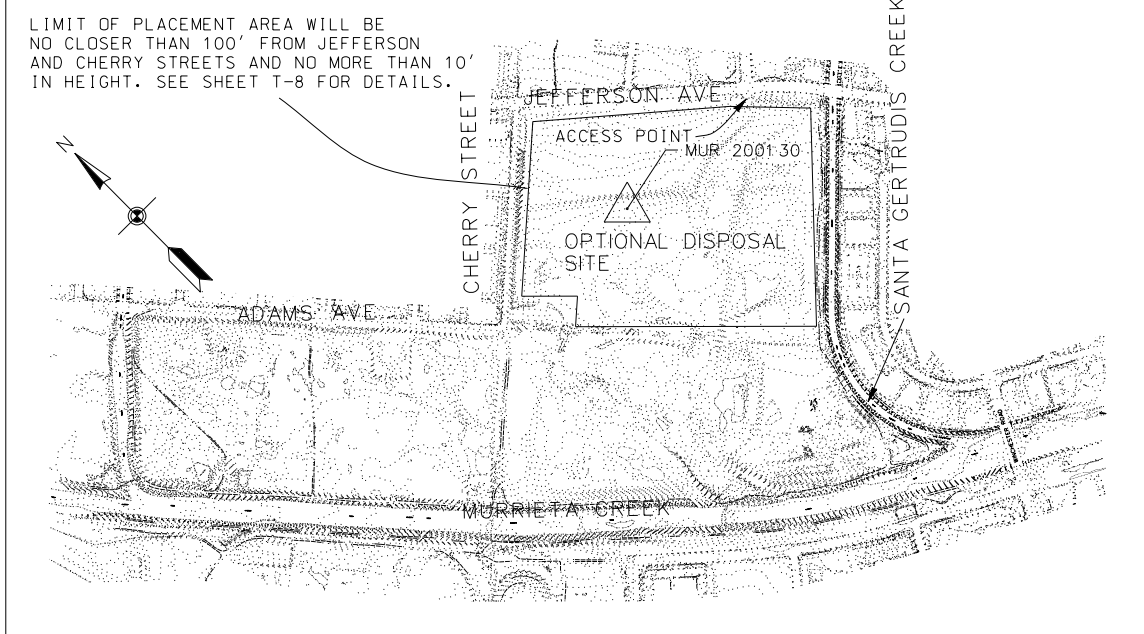


GENERAL NOTES:

1. CONTOUR INTERVAL IS 1.0 FT.
2. CONTRACTOR SHALL PROTECT ALL UTILITIES CROSSING OR PARALLELING THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED.
3. VERTICAL DATUM IS BASED ON NAVD 1988.
4. HORIZONTAL COORDINATES ARE BASED ON (CALIFORNIA LAMBERT ZONE VI, (NAD 83) 2000.35
5. ALL DIMENSIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED.



PHASE TWO PROJECT LIMITS
NOT TO SCALE



LIMIT OF PLACEMENT AREA WILL BE NO CLOSER THAN 100' FROM JEFFERSON AND CHERRY STREETS AND NO MORE THAN 10' IN HEIGHT. SEE SHEET T-8 FOR DETAILS.

DISPOSAL SITE
NOT TO SCALE

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
GENERAL PLAN SHEETS LAYOUT
AND SURVEY CONTROL

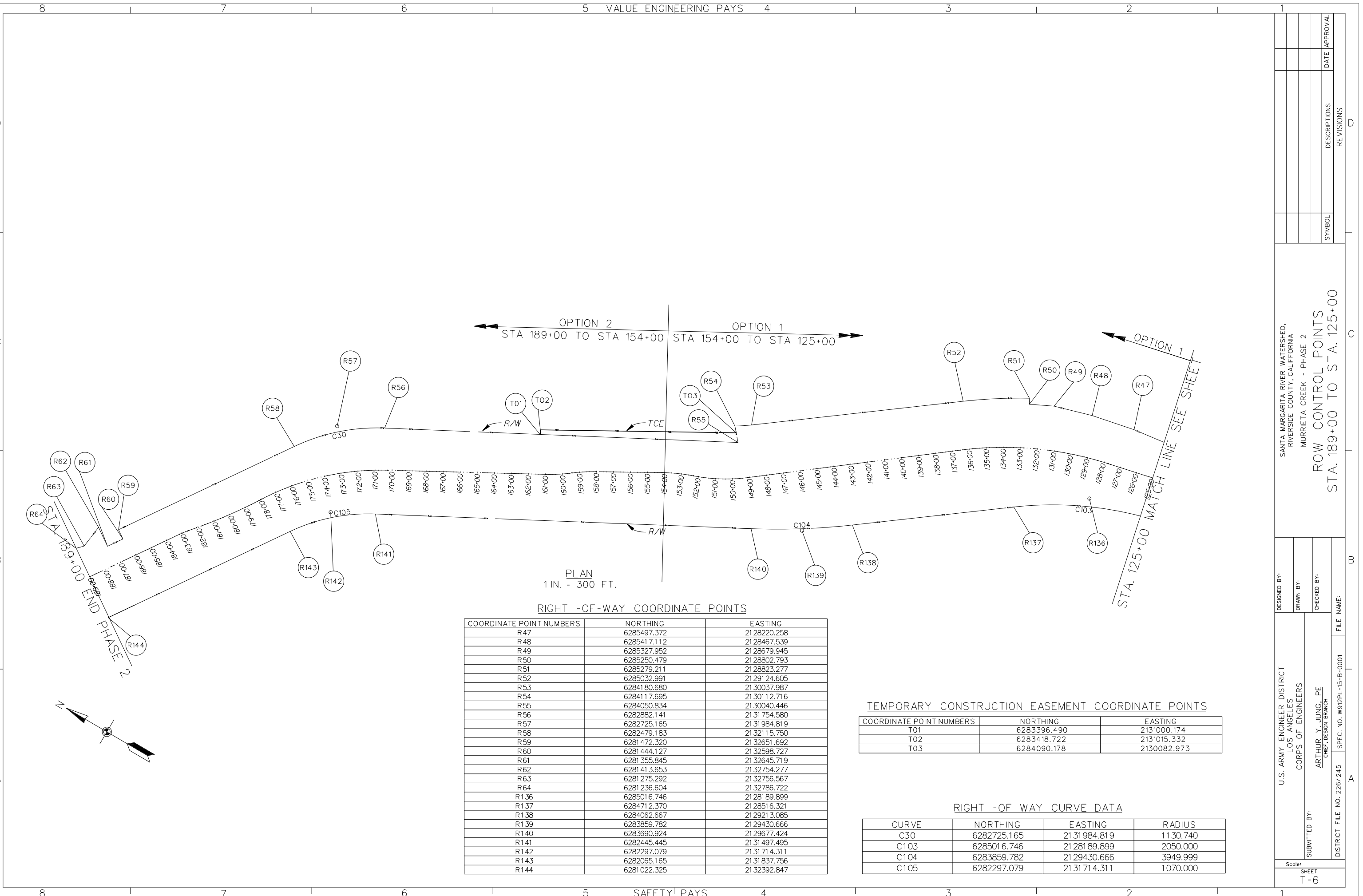
DESIGNED BY: J.C.R.
DRAWN BY: T.C.
CHECKED BY: S.H.V.
FILE NAME: T5.DGN

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

SUBMITTED BY:
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/244 SPEC. NO. W912PL-15-B-0001

Scale:
SHEET
T-5



PLAN
1 IN. = 300 FT.

RIGHT -OF-WAY COORDINATE POINTS

COORDINATE POINT NUMBERS	NORTHING	EASTING
R47	6285497.372	2128220.258
R48	6285417.112	2128467.539
R49	6285327.952	2128679.945
R50	6285250.479	2128802.793
R51	6285279.211	2128823.277
R52	6285032.991	2129124.605
R53	6284180.680	2130037.987
R54	6284117.695	2130112.716
R55	6284050.834	2130040.446
R56	6282882.141	2131754.580
R57	6282725.165	2131984.819
R58	6282479.183	2132115.750
R59	6281472.320	2132651.692
R60	6281444.127	2132598.727
R61	6281355.845	2132645.719
R62	6281413.653	2132754.277
R63	6281275.292	2132756.567
R64	6281236.604	2132786.722
R136	6285016.746	2128189.899
R137	6284712.370	2128516.321
R138	6284062.667	2129213.085
R139	6283859.782	2129430.666
R140	6283690.924	2129677.424
R141	6282445.445	2131497.495
R142	6282297.079	2131714.311
R143	6282065.165	2131837.756
R144	6281022.325	2132392.847

TEMPORARY CONSTRUCTION EASEMENT COORDINATE POINTS

COORDINATE POINT NUMBERS	NORTHING	EASTING
T01	6283396.490	2131000.174
T02	6283418.722	2131015.332
T03	6284090.178	2130082.973

RIGHT -OF WAY CURVE DATA

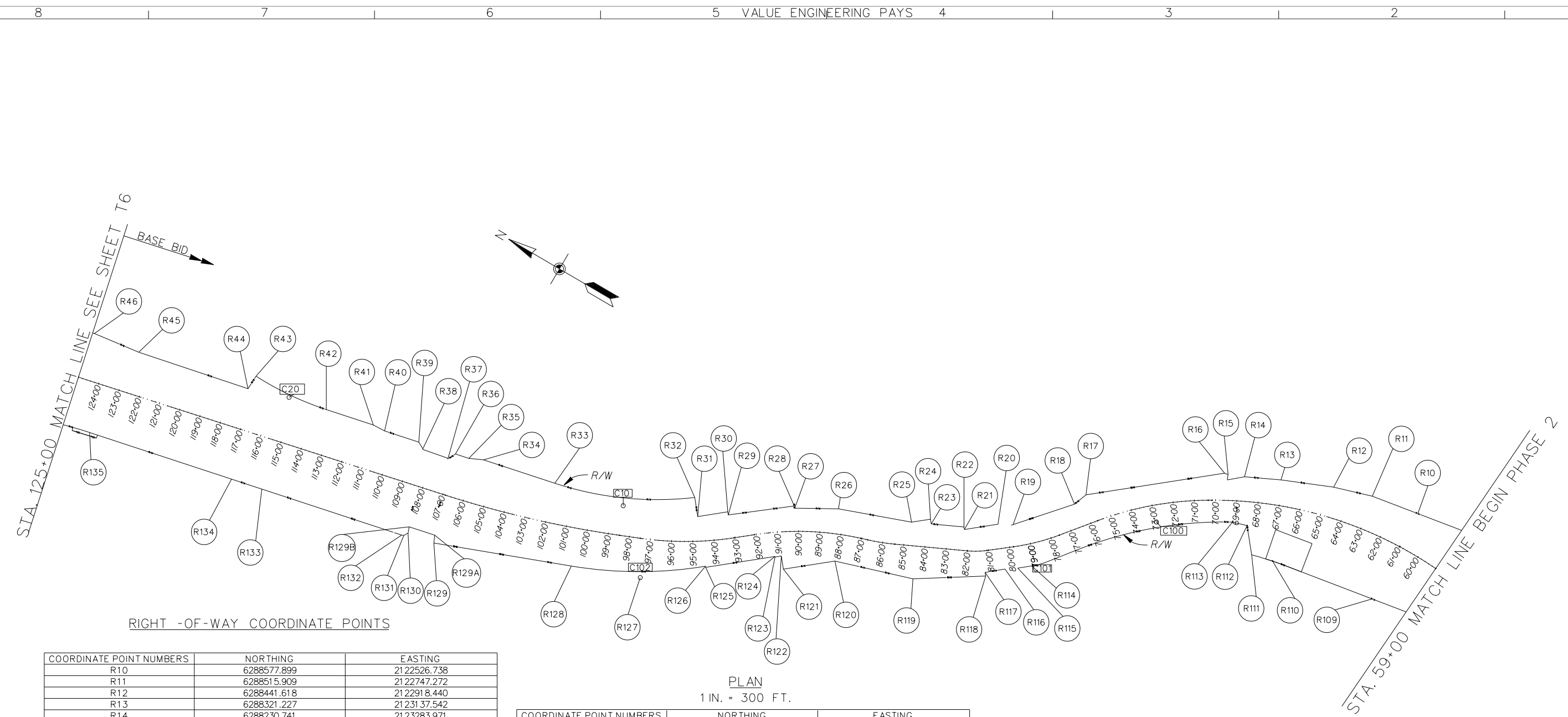
CURVE	NORTHING	EASTING	RADIUS
C30	6282725.165	2131984.819	1130.740
C103	6285016.746	2128189.899	2050.000
C104	6283859.782	2129430.666	3949.999
C105	6282297.079	2131714.311	1070.000

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
ROW CONTROL POINTS
STA. 189+00 TO STA. 125+00

DESIGNED BY:
DRAWN BY:
CHECKED BY:
FILE NAME:
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/245

SYMBOL	DESCRIPTIONS	DATE	APPROVAL

Scale:
SHEET
T-6



RIGHT -OF-WAY COORDINATE POINTS

COORDINATE POINT NUMBERS	NORTHING	EASTING
R10	6288577.899	2122526.738
R11	6288515.909	2122747.272
R12	6288441.618	2122918.440
R13	6288321.227	2123137.542
R14	6288230.741	2123283.971
R15	6288193.895	2123352.691
R16	6288188.493	2123369.236
R17	6287717.862	2123831.616
R18	6287650.535	2123848.695
R19	6287401.207	2124023.102
R20	6287360.285	2124081.359
R21	6287245.982	2124193.272
R22	6287254.494	2124201.934
R23	6287173.968	2124333.984
R24	6287189.874	2124350.163
R25	6287125.652	2124413.215
R26	6286970.819	2124726.361
R27	6286850.605	2124893.353
R28	6286857.769	2124901.164
R29	6286638.678	2125125.218
R30	6286649.029	2125135.851
R31	6286546.616	2125235.847
R32	6286610.391	2125300.730
R33	6286271.515	2125868.783
R34	6286159.988	2126203.091
R35	6286124.158	2126263.098
R36	6286103.237	2126325.810
R37	6286061.659	2126339.869
R38	6286031.146	2126463.297
R39	6286045.002	2126497.218
R40	6285991.384	2126657.941
R41	6285982.150	2126717.216
R42	6285908.541	2126937.740
R43	6285837.485	2127296.629
R44	6285767.393	2127291.789
R45	6285598.658	2127806.412
R46	6285544.868	2128026.192

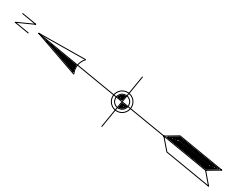
PLAN
1 IN. = 300 FT.

COORDINATE POINT NUMBERS	NORTHING	EASTING
R109	6288127.957	2122459.952
R110	6287991.15	2122941.43
R111	6287956.426	2123038.270
R112	6288053.692	2123137.21
R113	6288026.464	2123202.018
R114	6287297.331	2123837.071
R115	6287250.044	2123883.537
R116	6287210.779	2123929.183
R117	6287142.300	2123994.781
R118	6287130.248	2123982.518
R119	6286915.560	2124249.079
R120	6286763.760	2124593.342
R121	6286588.665	2124765.249
R122	6286632.473	2124809.826
R123	6286611.066	2124830.844
R124	6286612.818	2124832.627
R125	6286377.432	2125063.727
R126	6286381.124	2125067.483
R127	6286155.206	2125281.906
R128	6286005.415	2125574.362
R129	6285706.718	2126157.544
R129A	6285738.71	2126176.76
R129B	6285698.45	2126296.22
R130	6285671.911	2126282.891
R131	6285651.211	2126292.246
R132	6285646.523	2126301.314
R133	6285427.505	2126958.109
R134	6285380.057	2127100.396
R135	6285157.882	2127766.654
R133	6285427.505	2126958.109
R134	6285380.057	2127100.396

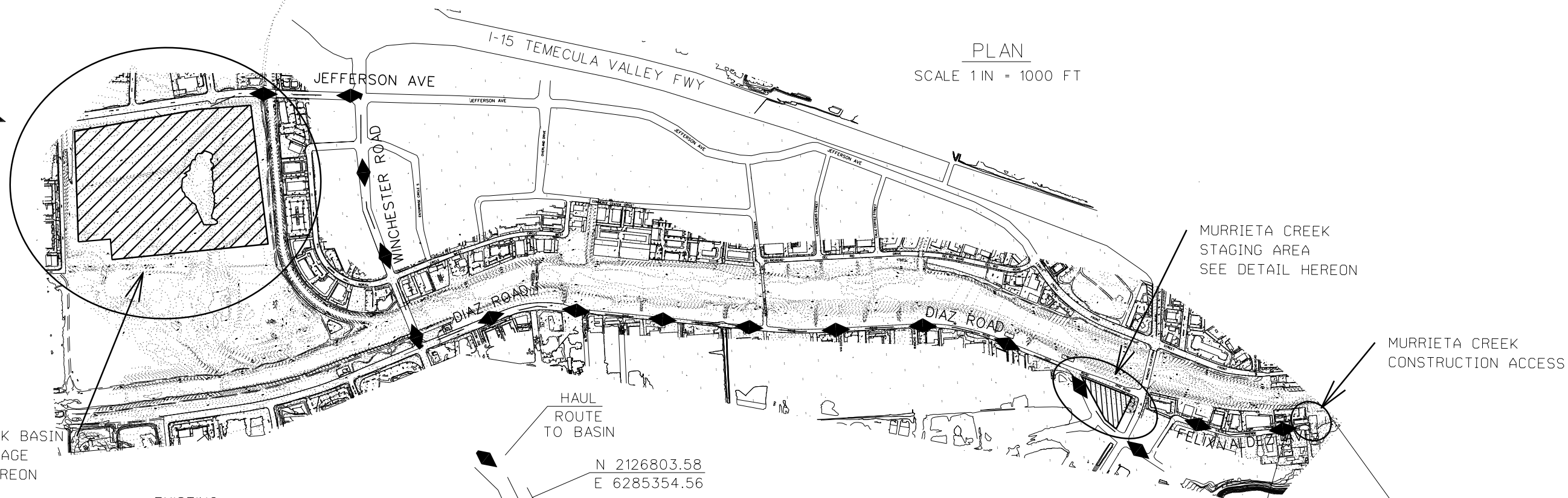
RIGHT -OF WAY CURVE DATA

CURVE	NORTHING	EASTING	RADIUS
C10	6286378.66	2125547.60	1543.87
C20	6285850.19	2127112.67	1450.00
C100	6287812.93	2123490.38	1866.84
C101	6287334.73	2123803.82	333.00
C102	6286155.206	2125281.906	1924.84

DESIGNED BY: J.G.R.		DRAWN BY: T.C.		CHECKED BY: S.H.V.		FILE NAME: T7.DGN	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/246		SPEC. NO. W912PL-15-B-0001	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 ROW CONTROL POINTS STA. 125+00 TO STA. 59+00				SYMBOL		REVISIONS	
				DATE		APPROVAL	



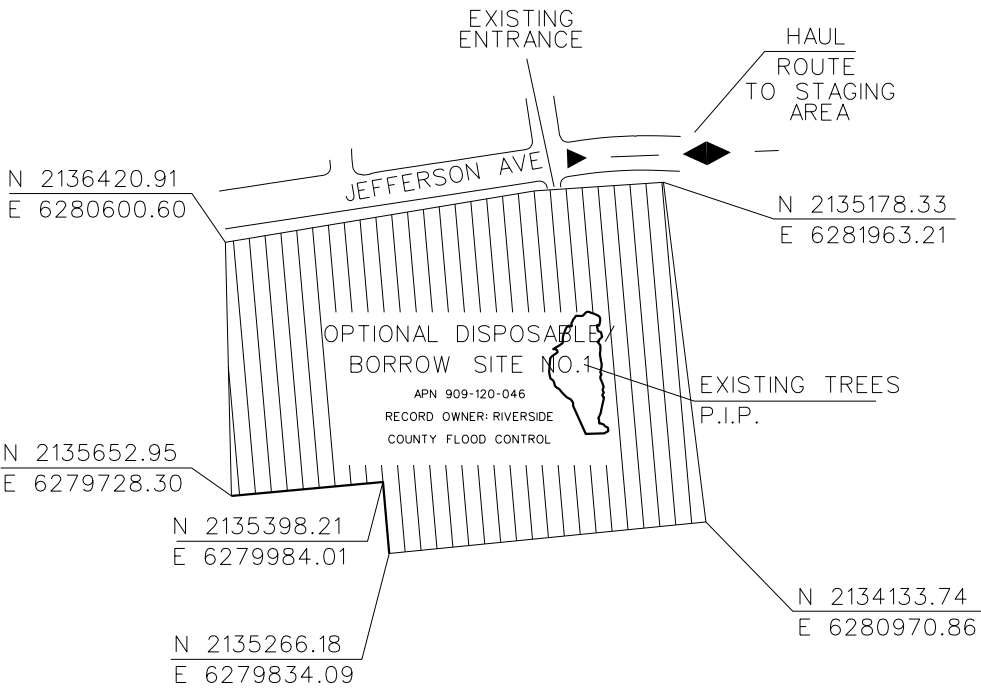
PLAN
SCALE 1 IN = 1000 FT



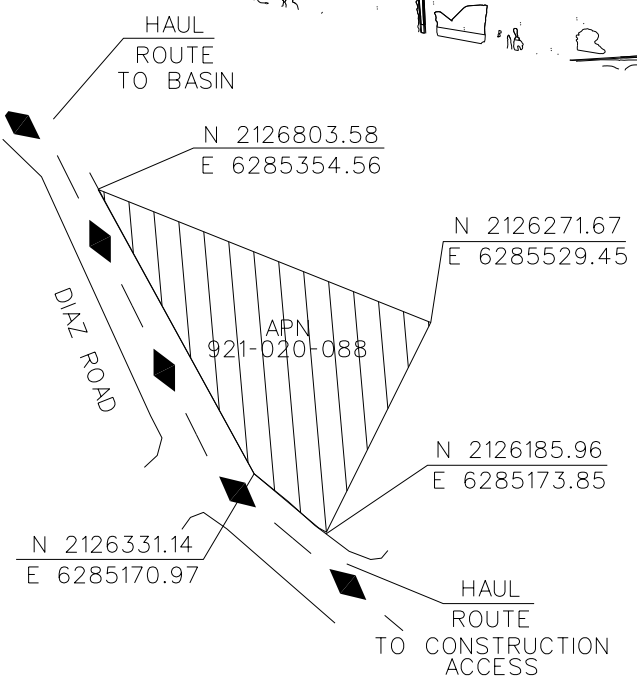
MURRIETA CREEK BASIN MATERIAL STORAGE
SEE DETAIL HEREON

MURRIETA CREEK STAGING AREA
SEE DETAIL HEREON

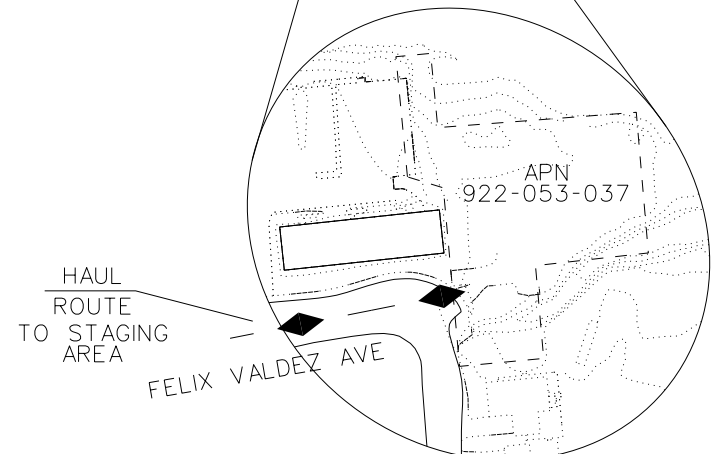
MURRIETA CREEK CONSTRUCTION ACCESS



BASIN DETAIL
NOT TO SCALE



STAGING AREA DETAIL
NOT TO SCALE



SITE ACCESS
NOT TO SCALE

LEGEND



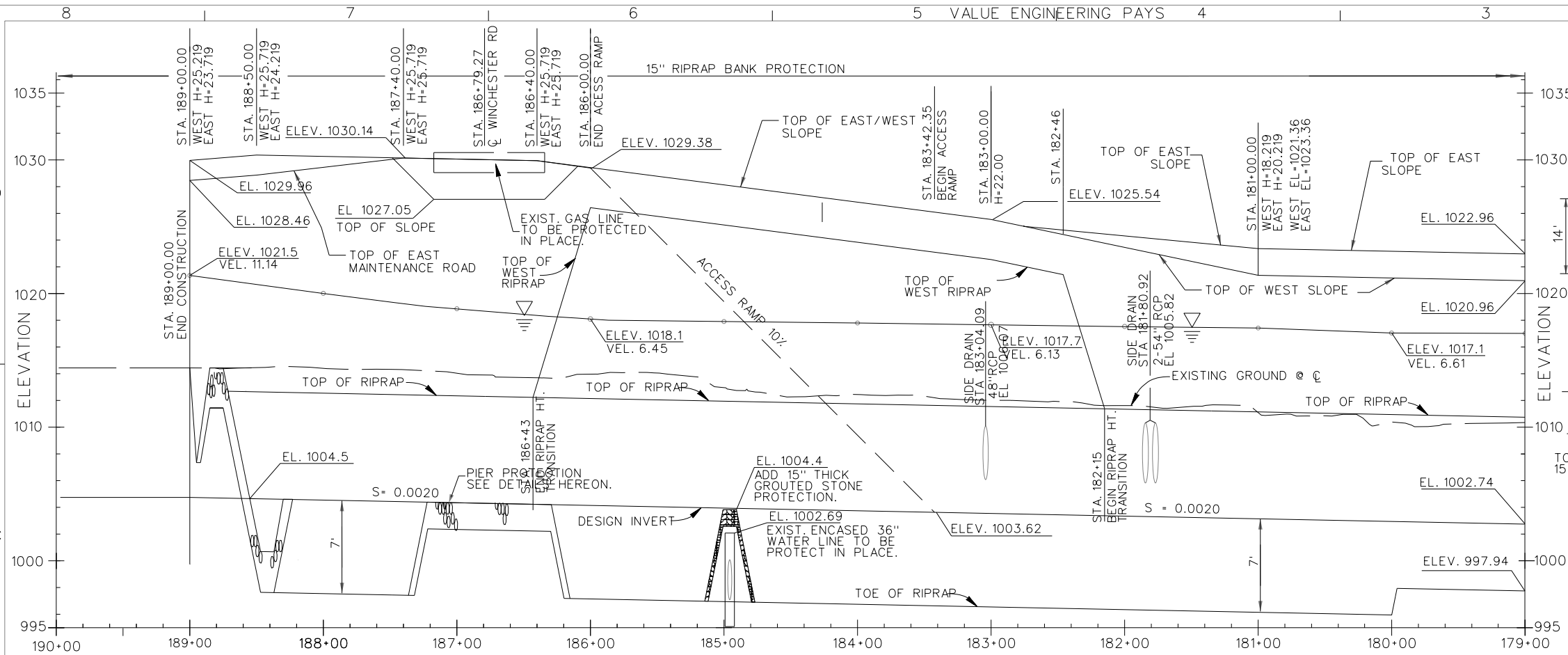
NOTES

1. HORIZONTAL DATUM IS NAD 1983, VERTICAL DATUM IS NAVD 1988.
2. GRADING REQUIREMENTS SHALL CONFORM TO SPECIFICATIONS.
3. SEE SHEETS G3 THRU G13 FOR LOGS OF EXPLORATION.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL

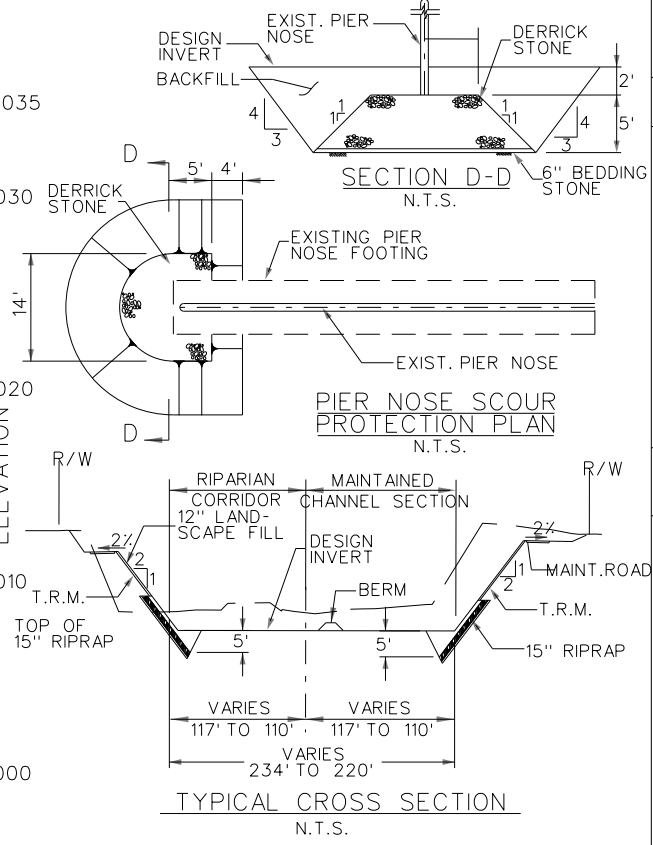
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
HAUL ROUTE, STAGING AREA, OPTIONAL STORAGE BASIN & SITE ACCESS

DESIGNED BY:	DRAWN BY:	CHECKED BY:	FILE NAME:
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		
SUBMITTED BY:	SPEC. NO. W912PL-15-B-0001	DISTRICT FILE NO. 226/	
Scale:	SHEET	T-8	



PROFILE

VERT. SCALE: 1IN. = 5FT.
HORIZ. SCALE: 1IN. = 50FT.



LEGEND

- ① REMOVE
- ② PROTECT IN PLACE
- ⑤ JOIN EXISTING WORK
- ⑥ EXISTING LANDSCAPE IMPROVEMENTS (IRRIGATION SYSTEM, TRAILS, PLANTINGS) PROTECT IN PLACE, SEE L SHEETS.

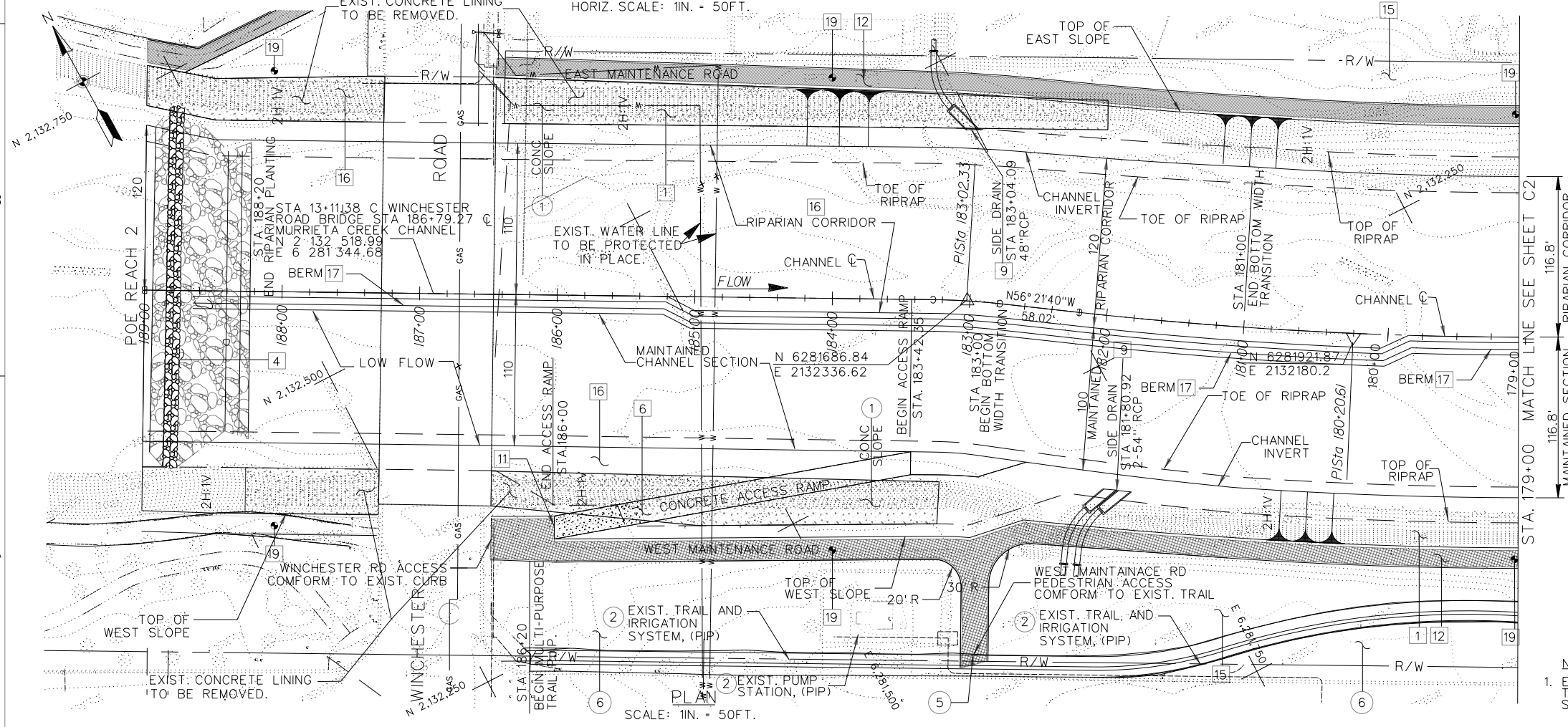
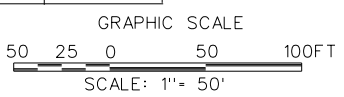
CONSTRUCTION NOTES

- 1 CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYP. SECTIONS.
- 4 CONSTRUCT END PROTECTION, SEE SHEET C34 FOR DETAILS.
- 6 CONSTRUCT RAMP TO INVERT, SEE SHEET C38 FOR DETAILS.
- 9 CONSTRUCT SIDE DRAIN FEATURE, SEE SHEETS C65-C69 FOR DETAILS.
- 11 INSTALL PIPE GATE, SEE SHEET C38.
- 12 CONSTRUCT MAINTENANCE ROAD- DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST ASIDE, SEE SHEET C13.
- 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
- 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
- 17 TEMPORARY BERM
- 19 SETTLEMENT MONUMENT, STA. 184+00 AND STA. 179+00 EAST AND WEST MAINTENANCE ROAD

REFERENCE NOTE:

1. FOR CROSS SECTIONS, SEE SHEET C15 & C16.
2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

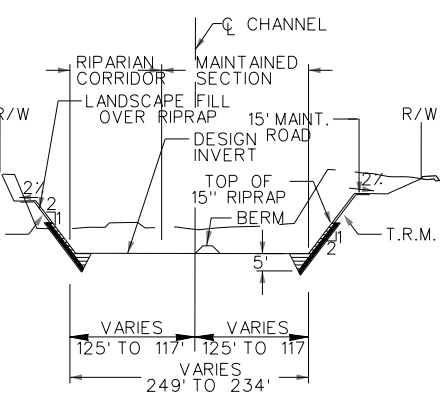
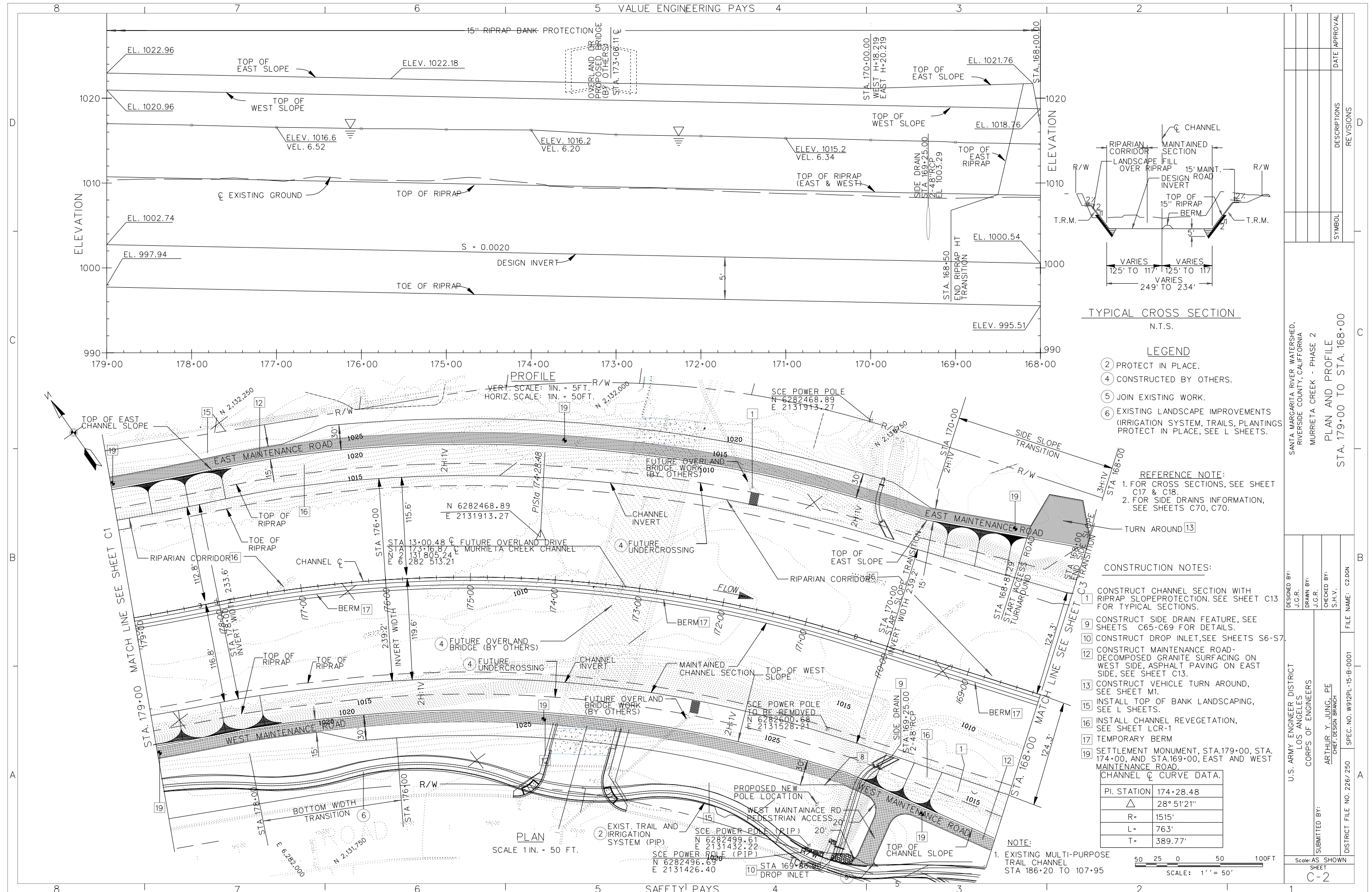
CHANNEL C CURVE DATA.		
PI. STATION	183+02.33	180+20.61
Δ	5° 34' 49"	7° 37' 31"
R	500'	3,000'
L	48.70'	399.26'
T	24.37'	199.92'



PLAN

SCALE: 1IN. = 50FT.

DESIGNED BY: J.G.R.	DRAWN BY: J.G.R.	CHECKED BY: S.H.V.	FILE NAME: C1.DGN	DATE APPROVAL
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS				SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2				SYMBOL
PLAN & PROFILE STA 189+00 TO 179+00				REVISIONS
DISTRICT FILE NO. 226/249				D
Scale: AS SHOWN				C
SHEET				C
C-1				C



TYPICAL CROSS SECTION
N.T.S.

- LEGEND**
- ② PROTECT IN PLACE.
 - ④ CONSTRUCTED BY OTHERS.
 - ⑤ JOIN EXISTING WORK.
 - ⑥ EXISTING LANDSCAPE IMPROVEMENTS (IRRIGATION SYSTEM, TRAILS, PLANTINGS) PROTECT IN PLACE, SEE L SHEETS.

- REFERENCE NOTE:**
- 1. FOR CROSS SECTIONS, SEE SHEET C17 & C18.
 - 2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

CONSTRUCTION NOTES:

- 1. CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYPICAL SECTIONS.
- 9. CONSTRUCT SIDE DRAIN FEATURE, SEE SHEETS C65-C69 FOR DETAILS.
- 10. CONSTRUCT DROP INLET, SEE SHEETS S6-S7.
- 12. CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C13.
- 13. CONSTRUCT VEHICLE TURN AROUND, SEE SHEET M1.
- 15. INSTALL TOP OF BANK LANDSCAPING, SEE SHEET M1.
- 16. INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
- 17. TEMPORARY BERM
- 19. SETTLEMENT MONUMENT, STA. 179+00, STA. 174+00, AND STA. 169+00, EAST AND WEST MAINTENANCE ROAD.

CHANNEL C CURVE DATA.

PI. STATION	174+28.48
△	28° 51' 21"
R=	1515'
L=	763'
T=	389.77'

NOTE:
1. EXISTING MULTI-PURPOSE TRAIL CHANNEL STA 186+20 TO 107+95

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 179+00 TO STA. 168+00

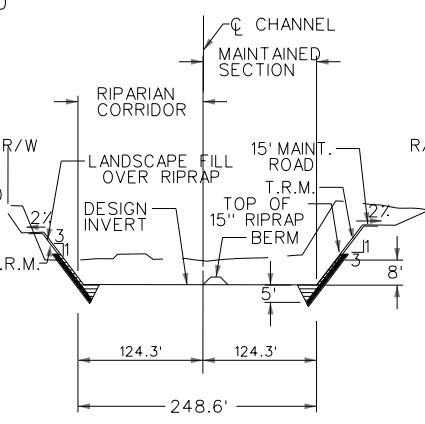
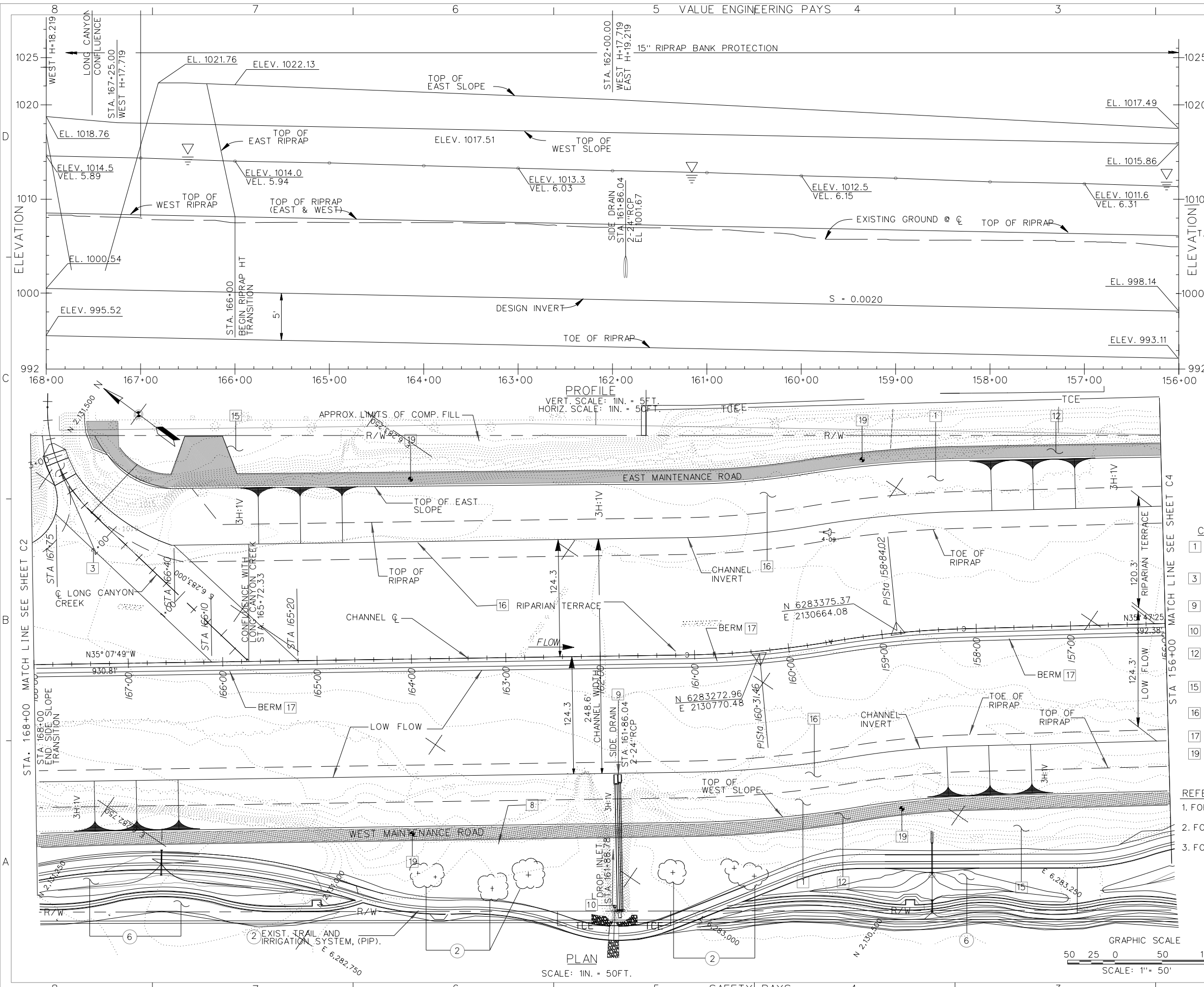
DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C2.DGN

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/250
SPEC. NO. W912PL-15-B-0001
Scale: AS SHOWN
SHEET C-2

SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

Plot Date: 25-JULY-2014



TYPICAL CROSS SECTION
N.T.S.

- LEGEND**
- ② PROTECT IN PLACE
 - ⑥ EXISTING LANDSCAPE IMPROVEMENTS (IRRIGATION SYSTEM, TRAILS, PLANTINGS) PROTECT IN PLACE, SEE L SHEETS.

NOTE:
1. EXISTING MULTI-PURPOSE TRAIL CHANNEL STA 186+20 TO 107+95

- CONSTRUCTION NOTES:**
- 1 CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYPICAL SECTIONS.
 - 3 CONSTRUCT GROUTED STONE STABILIZER. SEE SHEET C33 FOR DETAILS.
 - 9 CONSTRUCT SIDE DRAIN FEATURE. SEE SHEETS C65-C69 FOR DETAILS.
 - 10 CONSTRUCT DROP INLET, SEE SHEET S6&S7.
 - 12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C13.
 - 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
 - 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1
 - 17 TEMPORARY BERM
 - 19 SETTLEMENT MONUMENT, STA. 164+00 AND STA. 159+00 EAST AND WEST MAINTENANCE ROAD.

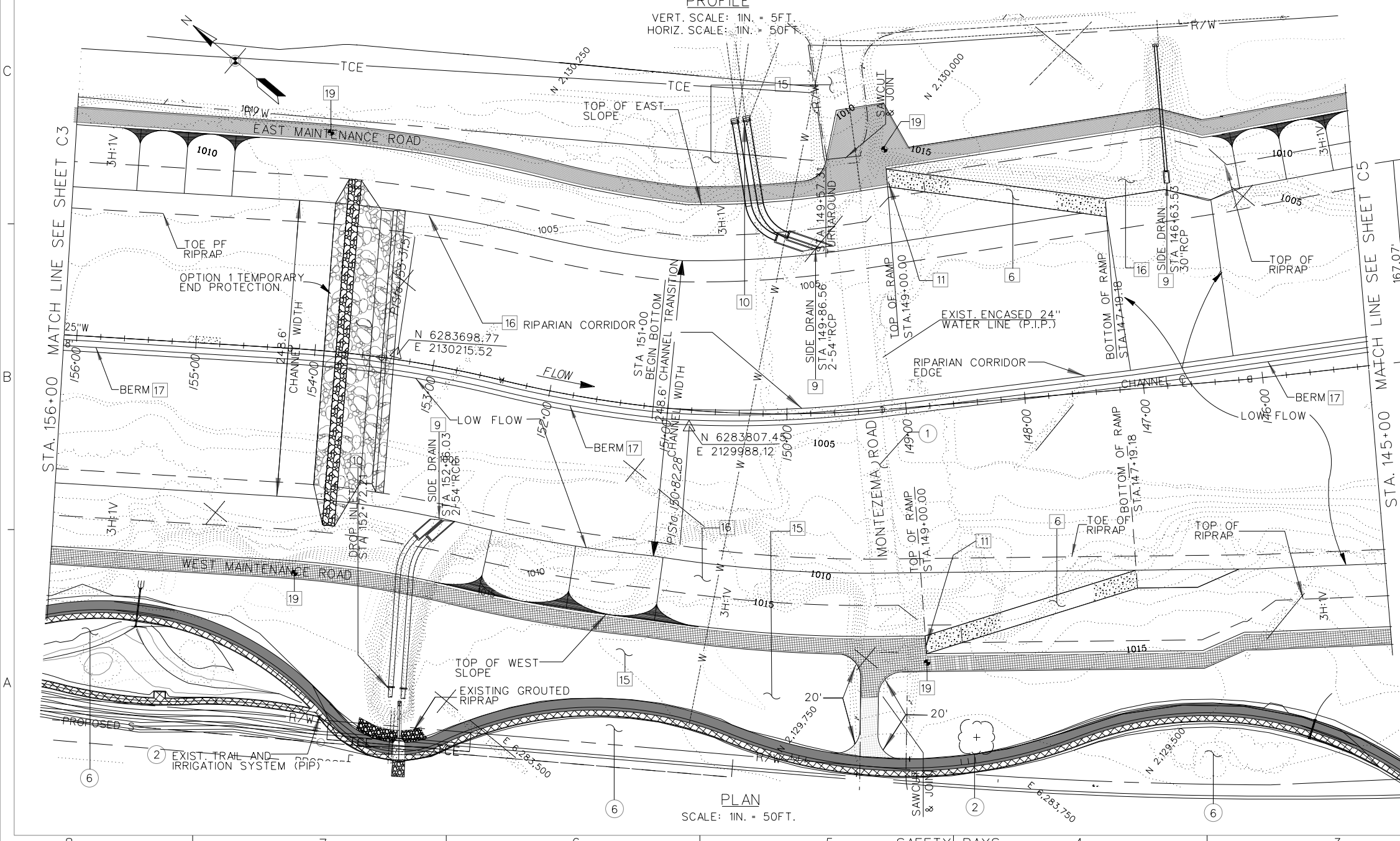
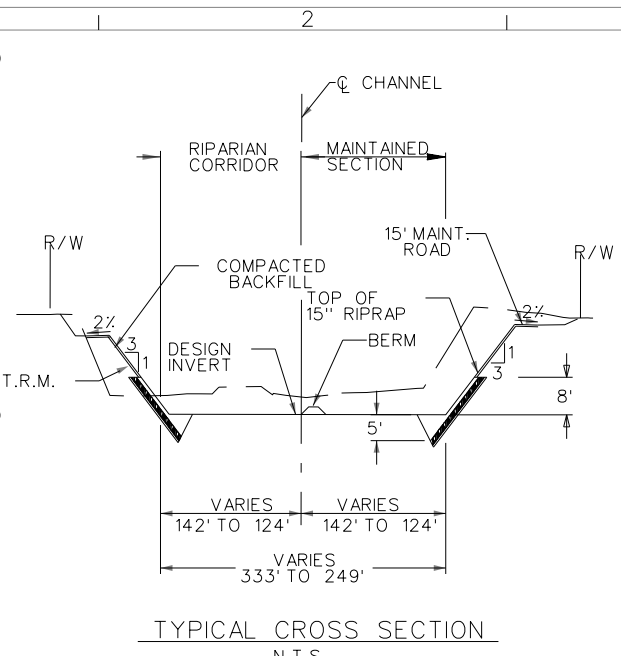
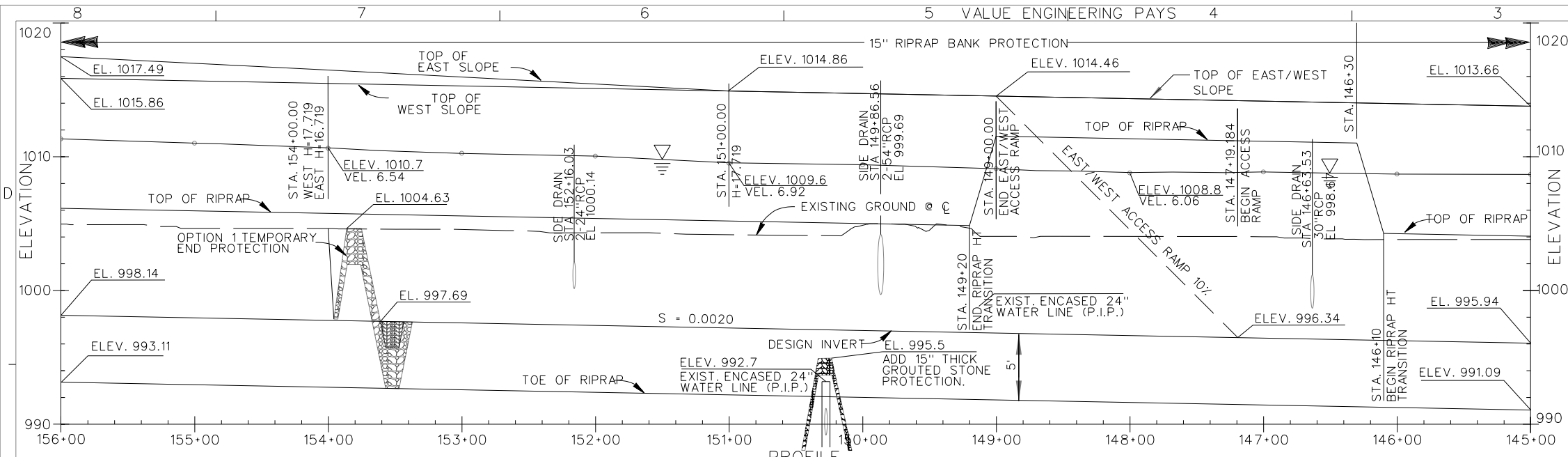
- REFERENCE NOTE:**
- 1. FOR CROSS SECTIONS, SEE SHEET C18 & C19.
 - 2. FOR CONFLUENCE PLAN, SEE SHEET C32.
 - 3. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

CHANNEL C CURVE DATA.		
PI. STATION	158+84.02	160+31.46
Δ	8° 06' 57"	8° 46' 32"
R=	1000'	1000'
L=	141.65'	153.16'
T=	70.94'	76.73'

PLAN AND PROFILE
STA. 168+00 TO STA. 156+00

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

DESIGNED BY: J.G.R.	DRAWN BY: J.G.R.	CHECKED BY: S.H.V.	FILE NAME: C306N
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/251	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SPEC. NO. W912PL-15-B-0001	
Scale: AS SHOWN		SHEET C-3	

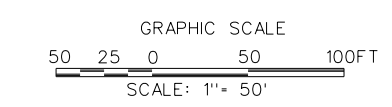


- LEGEND**
- ① REMOVE
 - ② PROTECT IN PLACE
 - ③ EXISTING LANDSCAPE IMPROVEMENTS (IRRIGATION SYSTEM, TRAILS, PLANTINGS) PROTECT IN PLACE, SEE L SHEETS.
- CONSTRUCTION NOTES:**
- ⑥ CONSTRUCT RAMP TO INVERT. SEE SHEET C39 FOR DETAILS.
 - ⑨ CONSTRUCT SIDE DRAIN FEATURE, SEE SHEETS C65-C69 FOR DETAILS.
 - ⑩ CONSTRUCT DROP INLET, SEE SHEET S6 & S7.
 - ⑪ INSTALL PIPE GATE. SEE SHEET C38.
 - ⑮ INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS..
 - ⑯ INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
 - ⑰ TEMPORARY BERM
 - ⑲ SETTLEMENT MONUMENT, STA. 154+00 AND STA. 149+00 EAST AND WEST MAINTENANCE ROAD

- REFERENCE NOTE:**
- 1. FOR CROSS SECTIONS, SEE SHEET C20 & C21.
 - 2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.
- NOTE:**
- 1. EXISTING MULTI-PURPOSE TRAIL CHANNEL STA 186+20 TO 107+95

CHANNEL ϕ CURVE DATA.

PI. STATION	153+31.51	150+82.28
Δ	10° 14' 49"	18° 26' 46"
R=	1000'	1000'
L=	178.84'	321.95'
T=	89.66'	162.38'



SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2
 PLAN AND PROFILE
 STA. 156+00 TO 145+00

DESIGNED BY: J.G.R.
 DRAWN BY: J.G.R.
 CHECKED BY: S.H.V.
 FILE NAME: C4.DGN

U.S. ARMY ENGINEER DISTRICT
 LOS ANGELES
 CORPS OF ENGINEERS
 SUBMITTED BY: ARTHUR Y. JUNG, PE
 CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/252
 SHEET C-4

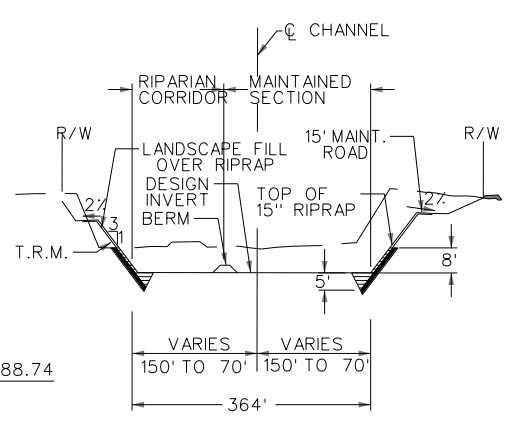
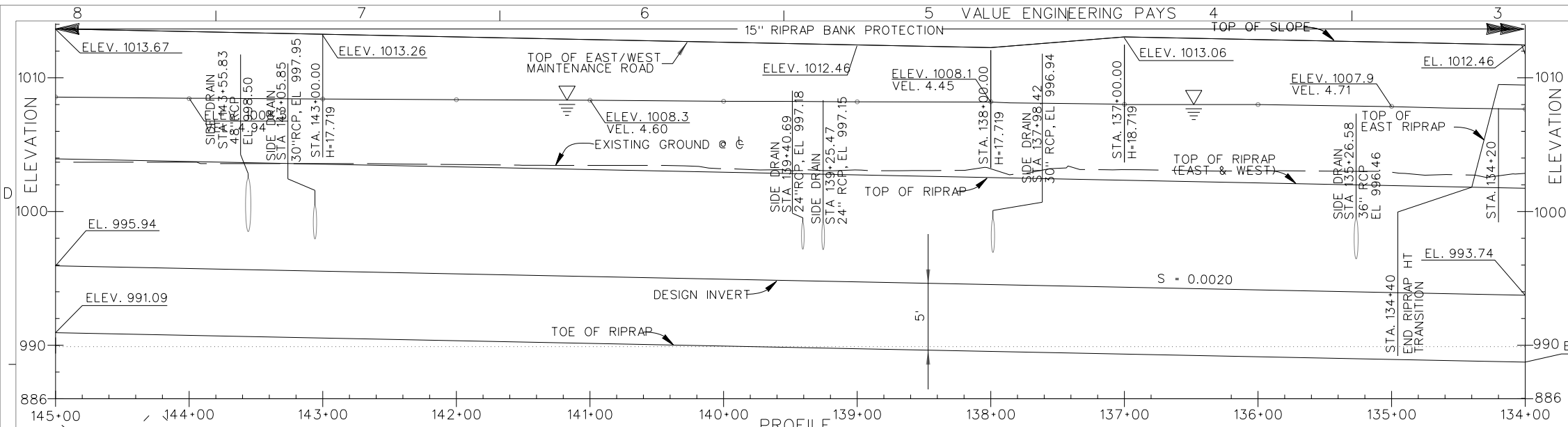
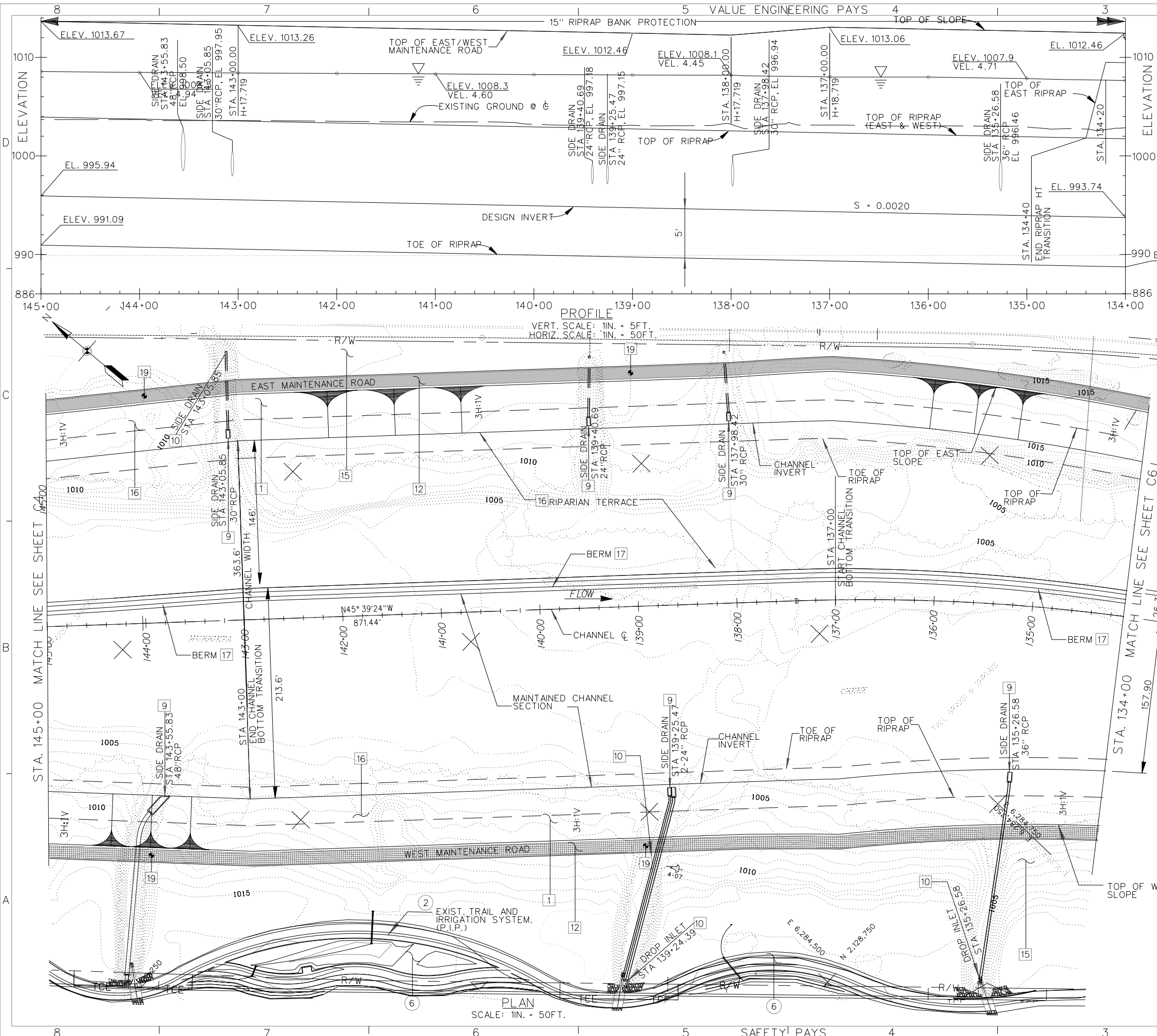
Scale: AS SHOWN

DATE APPROVAL

REVISIONS

SYMBOL

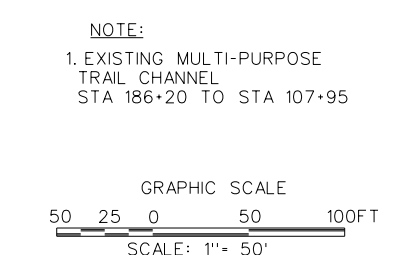
SAFETY PAYS



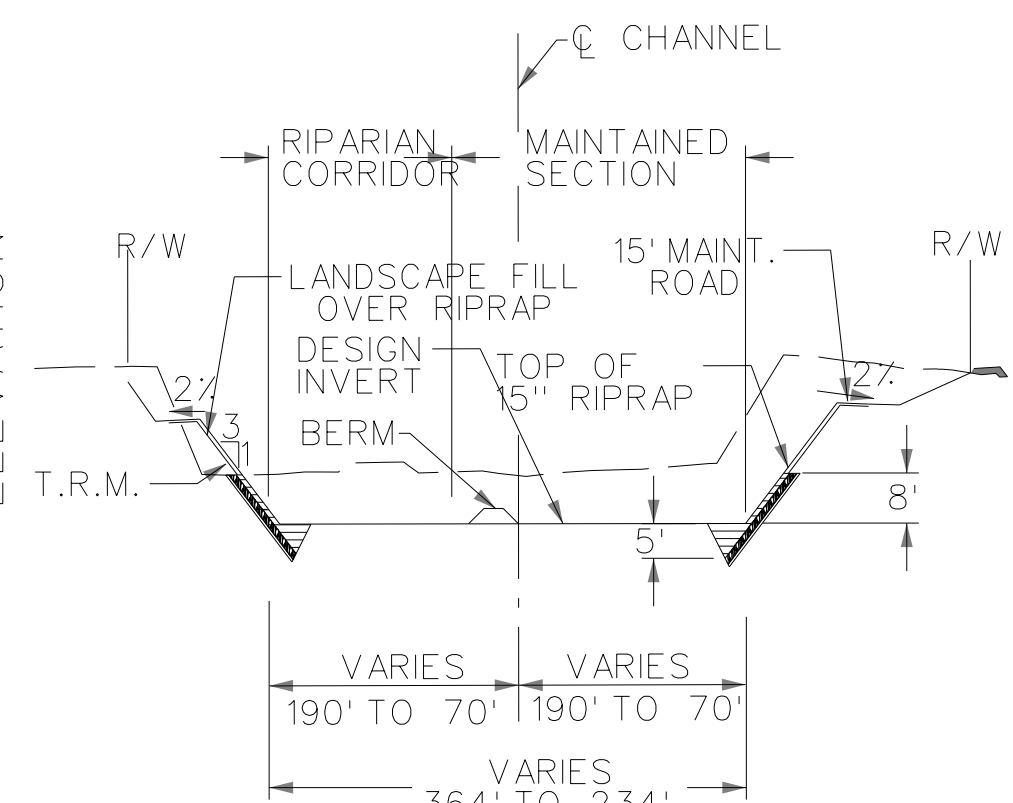
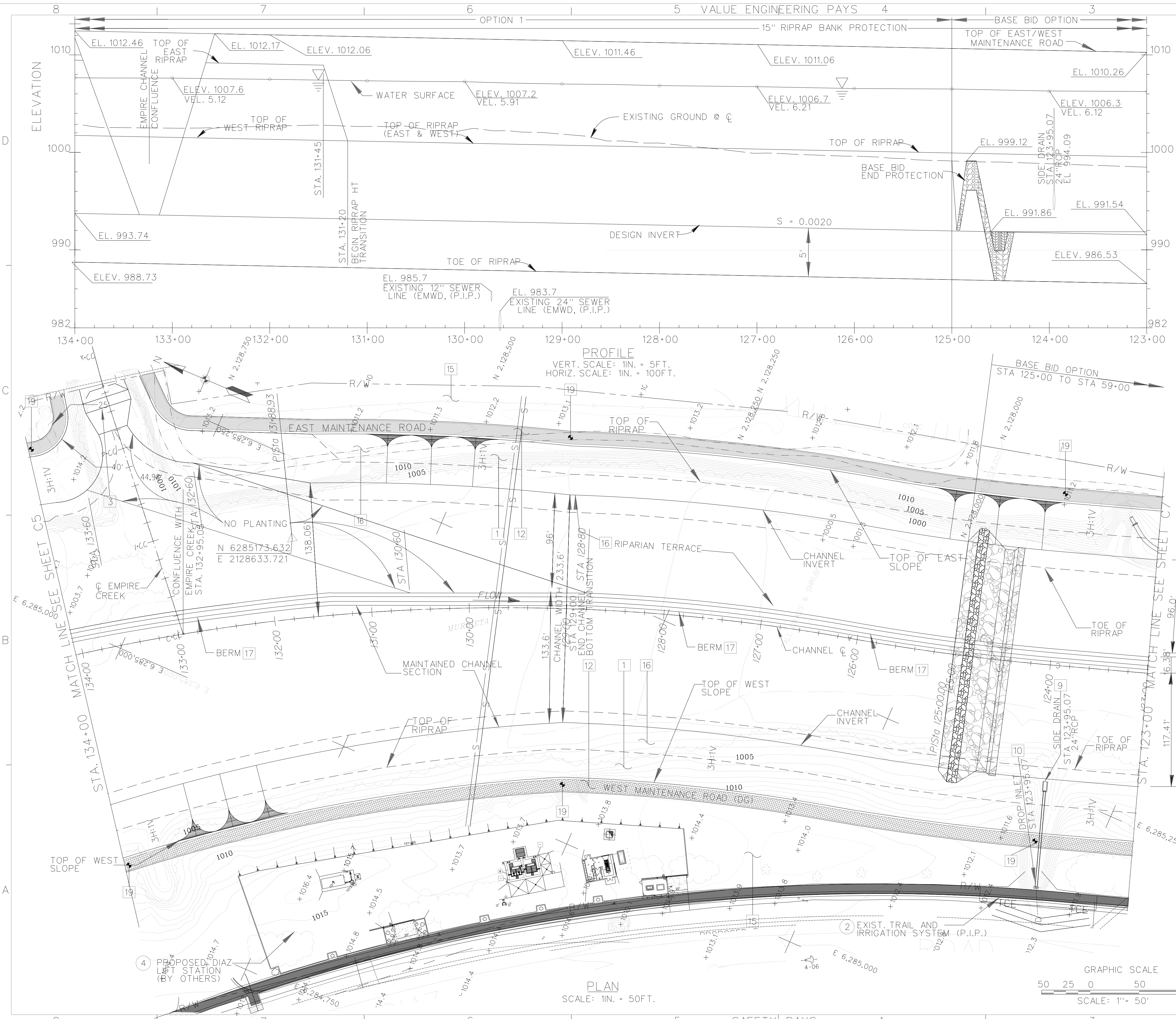
- LEGEND**
- ② PROTECT IN PLACE.
 - ⑥ EXISTING LANDSCAPE IMPROVEMENTS (IRRIGATION SYSTEM, TRAILS, PLANTINGS) PROTECT IN PLACE, SEE L SHEETS.

- CONSTRUCTION NOTES:**
- 1 CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYPICAL SECTIONS.
 - 9 CONSTRUCT SIDE DRAIN FEATURE, SEE SHEETS C65-C69 FOR DETAILS.
 - 10 CONSTRUCT DROP INLET, SEE SHEET S6 & S7.
 - 12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C13 & C14.
 - 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
 - 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
 - 17 TEMPORARY BERM
 - 19 SETTLEMENT MONUMENT, STA. 144+00 AND STA. 139+00 EAST AND WEST MAINTENANCE ROAD

- REFERENCE NOTE:**
1. FOR CROSS SECTIONS, SEE SHEET C21 & C22.
 2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.



DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: CS.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/253		SPEC. NO. W92PL-15-B-0001		Scale: AS SHOWN SHEET C-5	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA		MURRIETA CREEK - PHASE 2		PLAN AND PROFILE STA. 145+00 TO STA. 134+00		REVISIONS	
SYMBOL		DESCRIPTIONS		DATE		APPROVAL	



TYPICAL CROSS SECTION
N.T.S.

LEGEND

- ② PROTECT IN PLACE
- ④ CONSTRUCTED BY OTHERS

CONSTRUCTION NOTES:

- 1 CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYPICAL SECTIONS.
- 3 CONSTRUCT GROUTED STONE STABILIZER. SEE SHEET C33 FOR DETAILS.
- 9 CONSTRUCT SIDE DRAIN FEATURE. SEE SHEET C65-C69 FOR DETAILS.
- 10 CONSTRUCT DROP INLET, SEE SHEET S6 & S7.
- 12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE ASPHALT PAVING ON EAST SIDE, SEE SHEET C13 & C14.
- 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
- 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1
- 17 TEMPORARY BERM
- 19 SETTLEMENT MONUMENT, STA. 134+00 STA. 129+00 AND STA. 124+00 EAST AND WEST MAINTENANCE ROAD

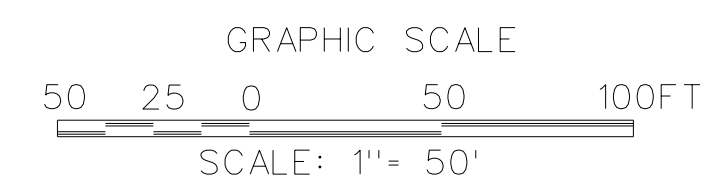
REFERENCE NOTE:

1. FOR CROSS SECTIONS, SEE SHEET C22 & C23.
2. FOR CONFLUENCE WITH EMPIRE CREEK PLAN, SEE SHEET C33.
3. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

NOTE:

1. EXISTING MULTI-PURPOSE TRAIL CHANNEL STA 186+20 TO STA 107+95

CHANNEL @ CURVE DATA.		
PI. STATION	131+88.93	125+00.00
Δ	32° 05' 50"	5° 15' 20"
R=	2,020'	2353.1'
L=	1131.61'	215.77'
T=	581.08'	108.00'



PLAN AND PROFILE
STA. 134+00 TO STA. 123+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: c6.dgn

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

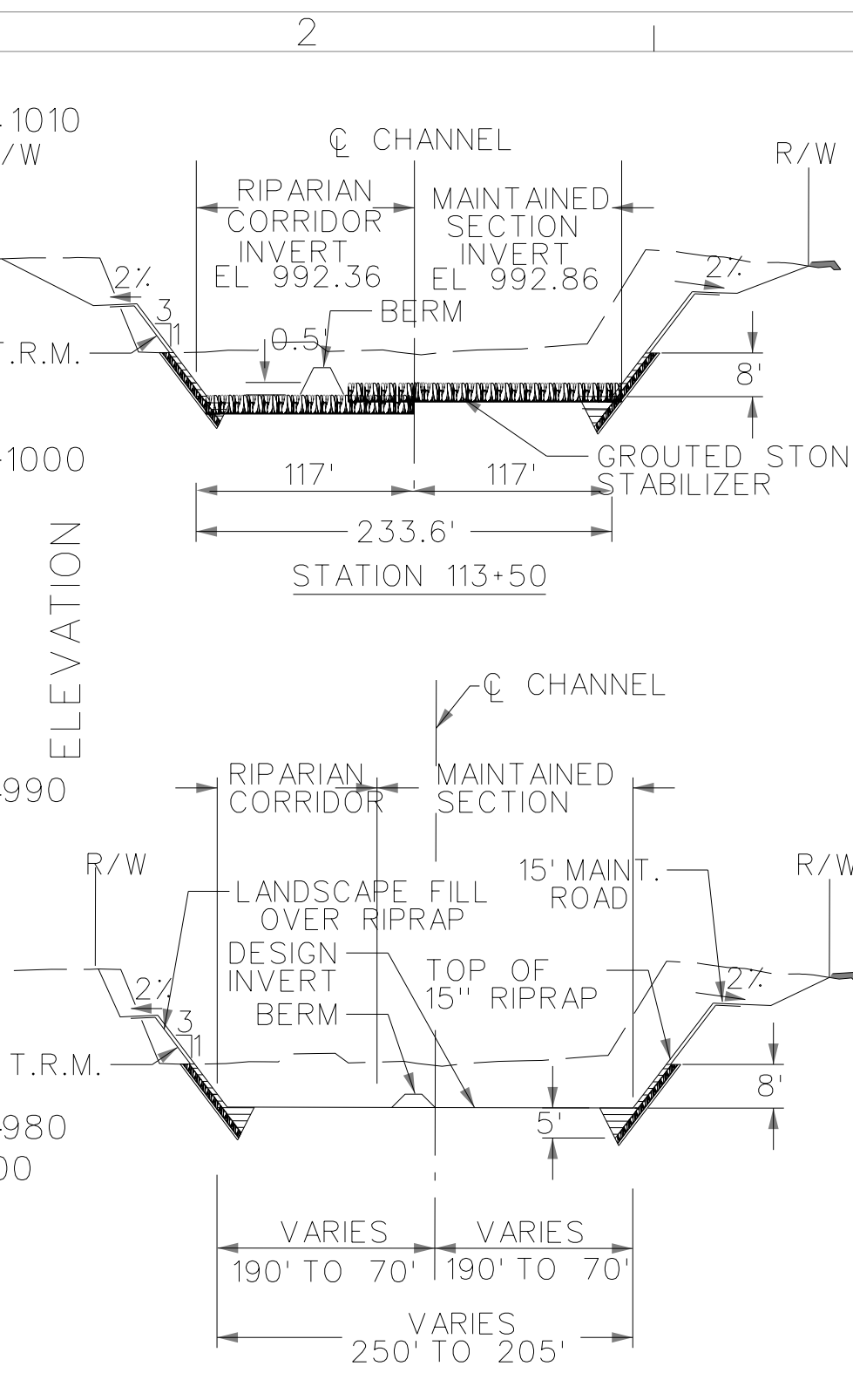
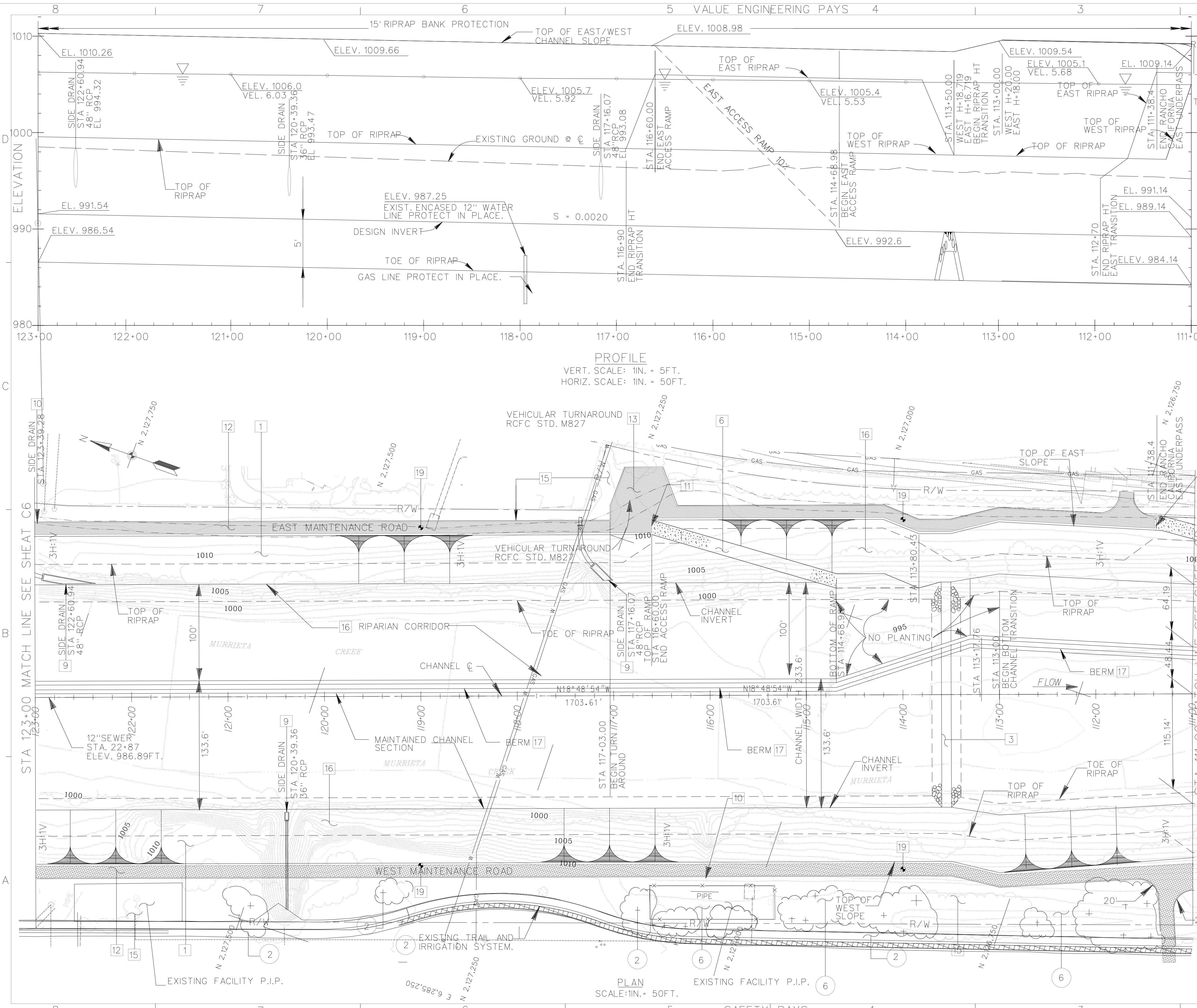
SUBMITTED BY:
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/254
SPEC. NO. W912PL-15-B-0001

SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

Scale: SHEET
C-6

Plot Date: 25-JULY-2014



TYPICAL CROSS SECTION
N.T.S.

LEGEND

- ② PROTECT IN PLACE
- ⑥ EXISTING LANDSCAPE IMPROVEMENTS (IRRIGATION SYSTEM, TRAILS, PLANTINGS) PROTECT IN PLACE, SEE L SHEETS.

- CONSTRUCTION NOTES:**
- 1 CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYP. DETAILS.
 - 3 CONSTRUCT GROUDED STONE STABILIZER. SEE SHEET C34 FOR DETAILS.
 - 6 CONSTRUCT RAMP TO INVERT. SEE SHEET C40 FOR DETAILS.
 - 9 CONSTRUCT SIDE DRAIN FEATURE. SEE SHEETS C65-C69 FOR DETAILS.
 - 10 CONSTRUCT DROP INLET, SEE SHEET S6 & S7.
 - 11 INSTALL PIPE GATE. SEE SHEET C38.
 - 12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C13-C14.
 - 13 CONSTRUCT VEHICLE TURN AROUND, SEE SHEET M1.
 - 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
 - 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
 - 17 TEMPORARY BERM
 - 19 SETTLEMENT MONUMENT, STA. 119+00 AND STA. 114+00 EAST AND WEST MAINTENANCE ROAD

REFERENCE NOTE:

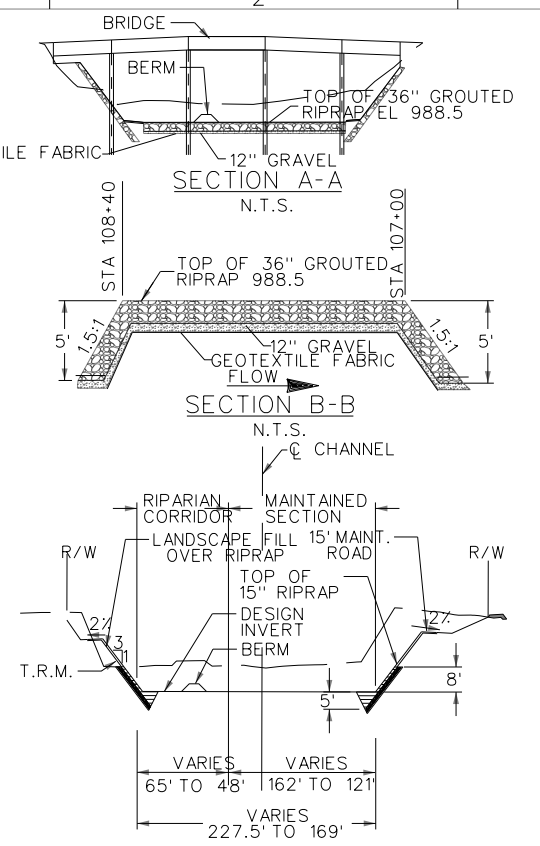
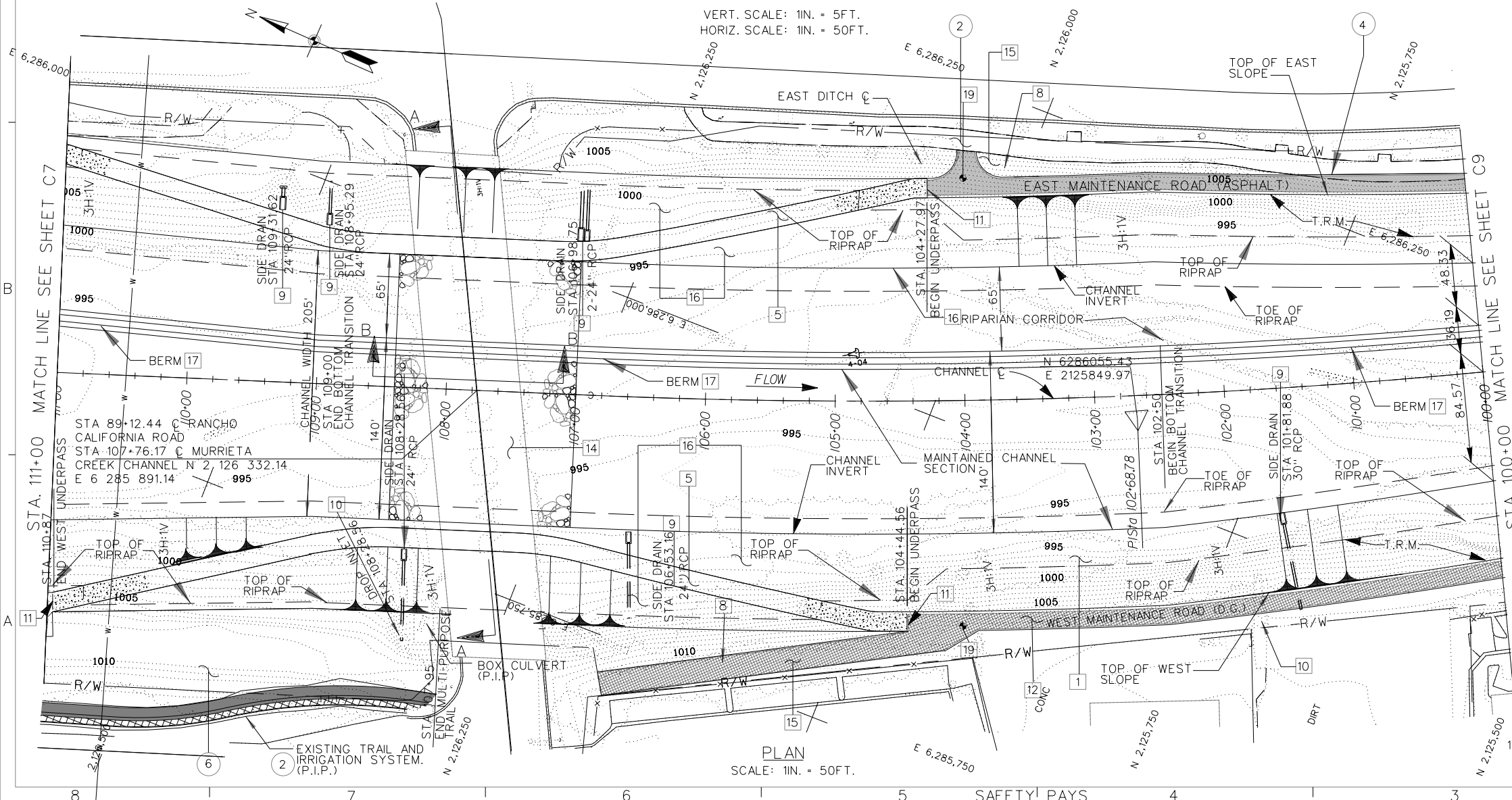
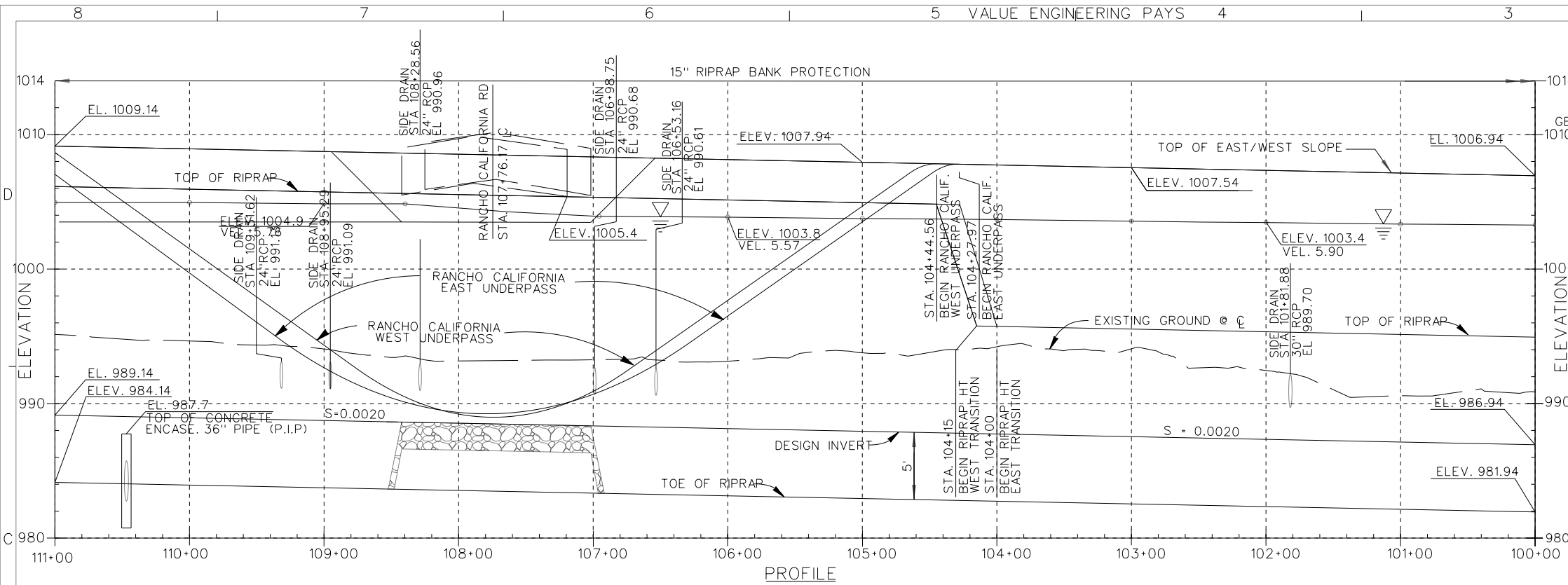
1. FOR CROSS SECTION, SEE SHEET C24 & C25.
2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

NOTE:

201. EXISTING MULTI-PURPOSE TRAIL CHANNEL STA 186+20 TO STA 107+95

GRAPHIC SCALE
SCALE: 1" = 50'

DESIGNED BY: J.G.R.	DRAWN BY: J.G.R.	CHECKED BY: S.H.V.	FILE NAME: C7.DGN
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/255	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SPEC. NO. W912PL-15-B-0001	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		DATE APPROVAL	
PLAN AND PROFILE STA. 123+00 TO STA. 111+00		REVISIONS	
SYMBOL		DESCRIPTIONS	



TYPICAL CROSS SECTION
N.T.S.

LEGEND

- ② PROTECT IN PLACE
- ④ CONSTRUCTED BY OTHERS
- ⑥ EXISTING LANDSCAPE IMPROVEMENTS (IRRIGATION SYSTEM, TRAILS, PLANTINGS) PROTECT IN PLACE, SEE L SHEETS.

CONSTRUCTION NOTES:

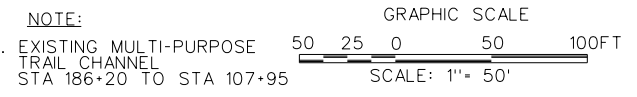
- 1 CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYPICAL DETAILS.
- 5 CONSTRUCT ACCESS ROAD UNDERPASSING. SEE SHEET C35 FOR DETAILS.
- 9 CONSTRUCT SIDE DRAIN FEATURE. SEE SHEETS C65-C69 FOR DETAILS.
- 10 CONSTRUCT DROP INLET, SEE SHEET S6 AND S7.
- 11 INSTALL PIPE GATE. SEE SHEET C38.
- 12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE. SEE SHEET C13-C14.
- 14 CONSTRUCT INVERT PROTECTION BLANKET. SEE DETAILS HEREON.
- 15 INSTALL TOP OF BANK LANDSCAPING. SEE L SHEETS.
- 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
- 17 TEMPORARY BERM
- 19 SETTLEMENT MONUMENT, STA. 104+00 EAST AND WEST MAINTENANCE ROAD.

REFERENCE NOTE:

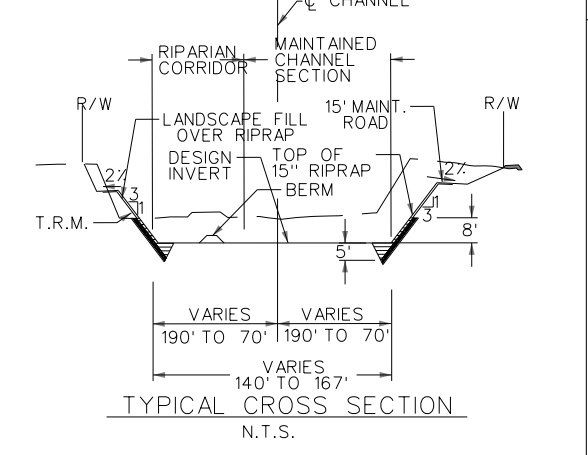
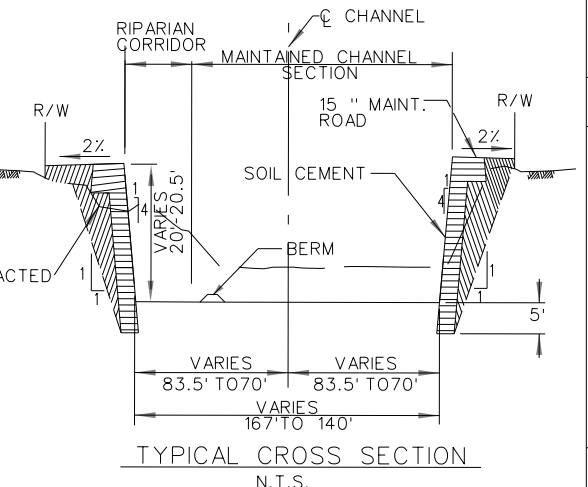
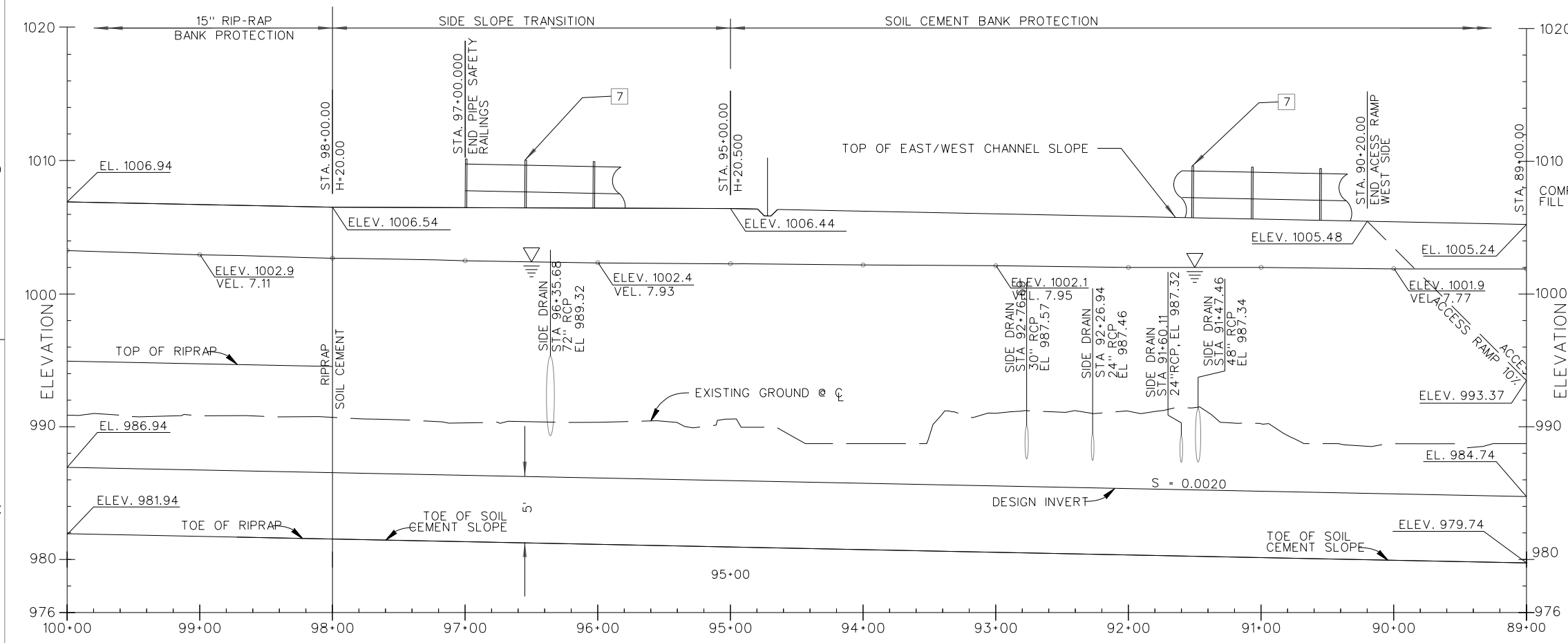
1. FOR CROSS SECTIONS, SEE SHEET C25-C26.
2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

CHANNEL CURVE DATA.

PI. STATION	102+68.78
Δ	9° 38' 23"
R=	5,000'
L=	841.22'
T=	421.61'



SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA									
MURRIETA CREEK - PHASE 2									
PLAN AND PROFILE STA. 111+00 TO STA. 100+00									
DESIGNED BY:	J.G.R.	DRAWN BY:	J.G.R.	CHECKED BY:	S.H.V.	FILE NAME:	CB.DGN	SUBMITTED BY:	ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS									
DISTRICT FILE NO. 226/256									
Scale: AS SHOWN SHEET C-8									



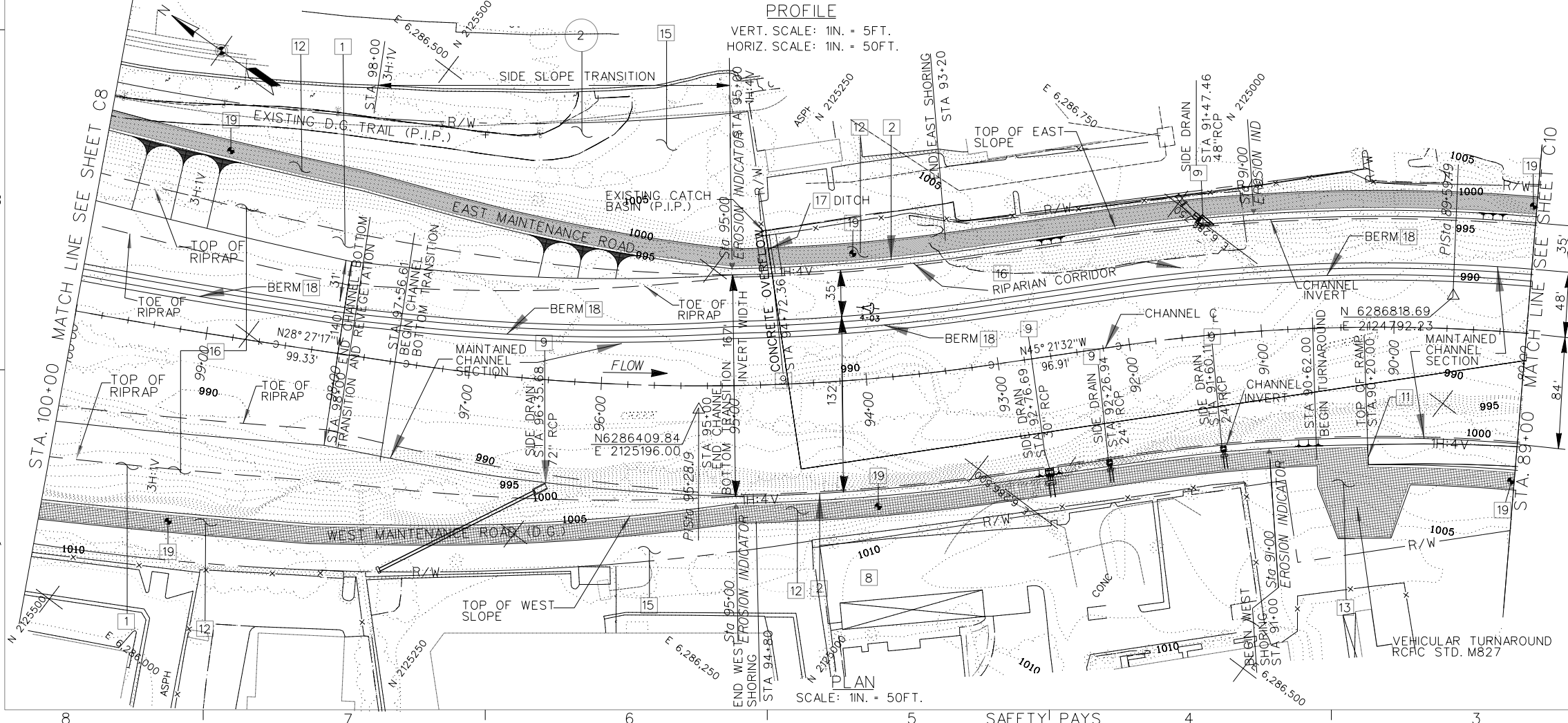
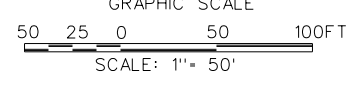
LEGEND
 2 PROTECT IN PLACE.

CONSTRUCTION NOTES:

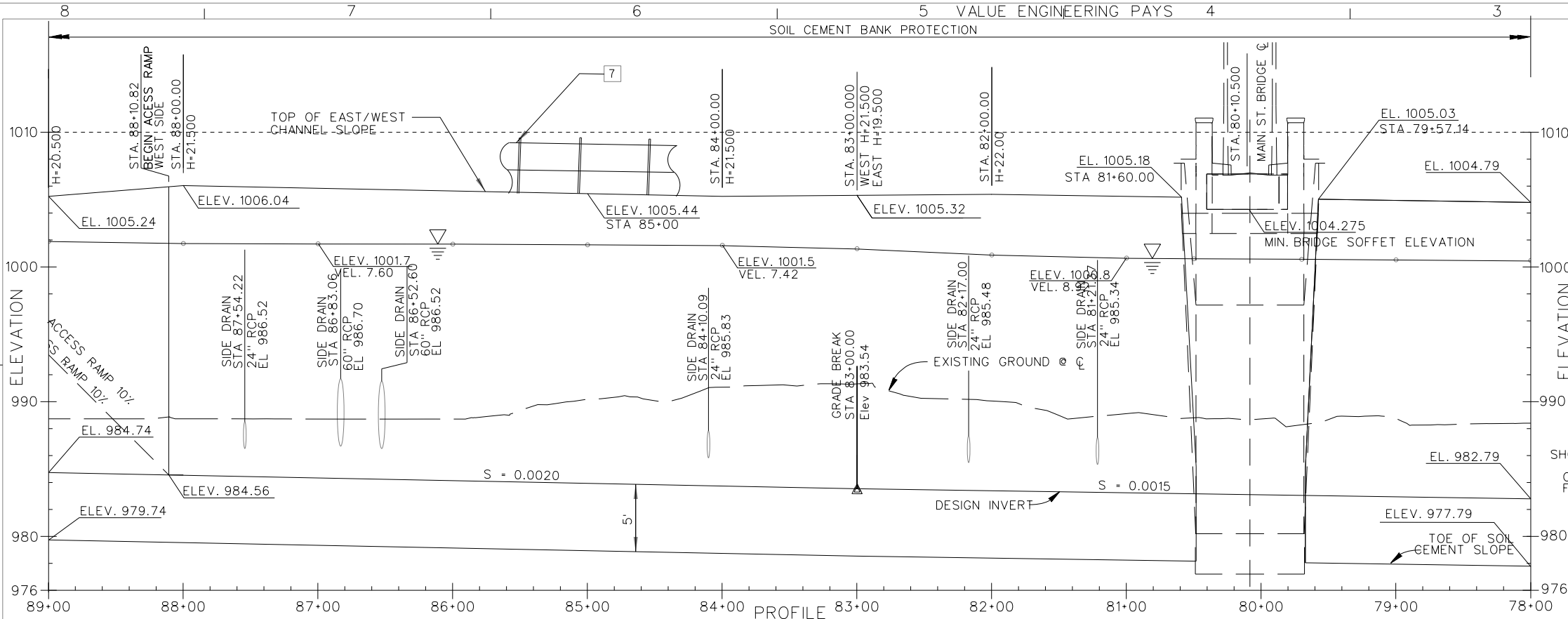
- 1 CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPE PROTECTION. SEE SHEET C13 FOR TYPICAL SECTIONS.
- 2 CONSTRUCT CHANNEL SECTION WITH SOIL CEMENT EMBANKMENT. SEE SHEET C14 FOR TYPICAL SECTIONS.
- 7 POST AND CABLE FENCE, SEE SHEET C14 FOR DETAILS.
- 9 CONSTRUCT SIDE DRAIN FEATURE. SEE SHEETS C65-C69 FOR DETAILS.
- 11 INSTALL PIPE GATE. SEE SHEET C38.
- 12 CONSTRUCT MAINTENANCE ROAD- DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C13-C14.
- 13 CONSTRUCT VEHICLE TURN AROUND, SEE SHEET M1.
- 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
- 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
- 17 INSTALL CONCRETE OVERFLOW, SEE SHEET M-2.
- 18 TEMPORARY BERM
- 19 SETTLEMENT MONUMENT, STA. 99+00, STA. 94+00, AND STA. 89+00 EAST AND WEST MAINTENANCE ROAD

REFERENCE NOTE:
 1. FOR CROSS SECTIONS, SEE SHEET C26, C27 AND C28.
 2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

CHANNEL Q CURVE DATA.		
PI. STATION	95+28.19	89+59.49
Δ	16° 54' 15"	21° 22' 41"
R=	1,500'	1,350'
L=	442.55'	503.71'
T=	222.9'	254.82'

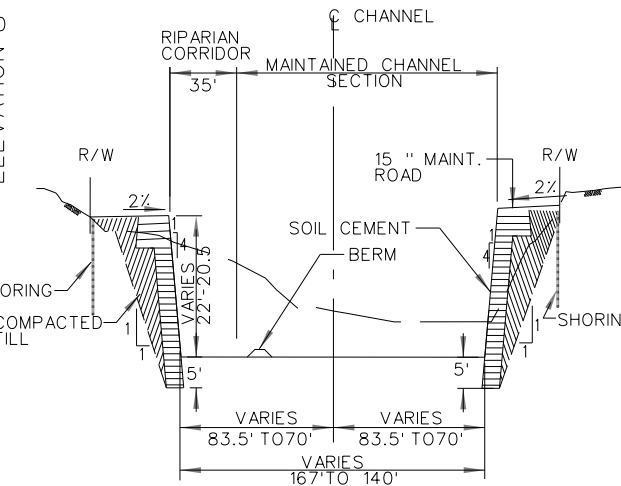


DESIGNED BY: J.G.R.	DRAWN BY: J.G.R.	CHECKED BY: S.H.V.	FILE NAME: C9.DGN	C09.DGN
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	DISTRICT FILE NO. 226/257	SPEC. NO. W912PL-15-B-0001	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2
C-9	Scale: AS SHOWN SHEET	DATE APPROVAL	REVISIONS	SYMBOL

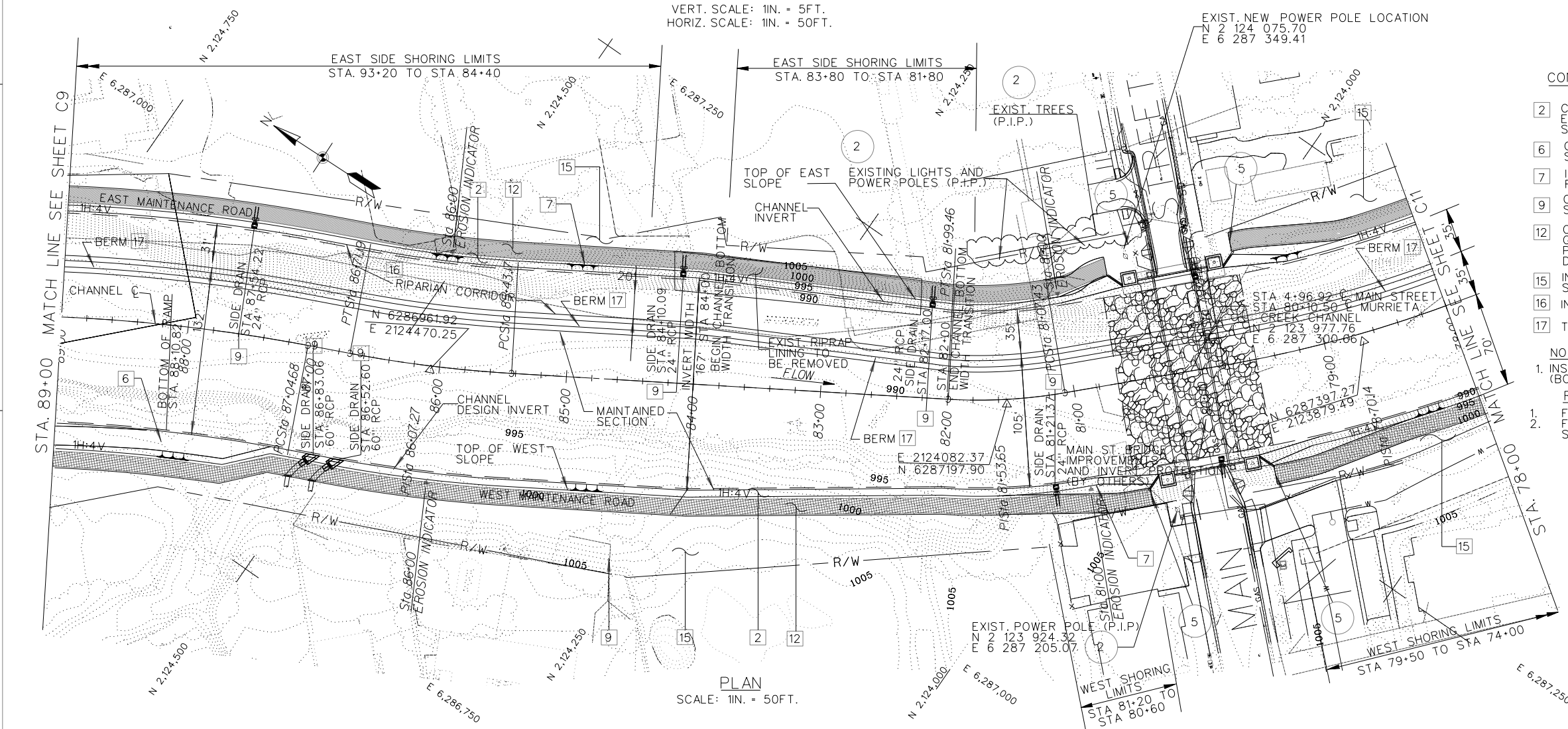


PROFILE
VERT. SCALE: 1"IN. = 5FT.
HORIZ. SCALE: 1"IN. = 50FT.

- LEGEND**
- 2 PROTECT IN PLACE
 - 5 JOIN EXISTING WORK.



TYPICAL CROSS SECTION
N.T.S.



PLAN
SCALE: 1"IN. = 50FT.

CONSTRUCTION NOTES:

- 2 CONSTRUCT CHANNEL SECTION WITH SOIL CEMENT EMBANKMENT. SEE SHEET C14 FOR TYPICAL SECTIONS.
- 6 CONSTRUCT RAMP TO INVERT. SEE SHEET C41 FOR DETAILS.
- 7 INSTALL POST AND CABLE FENCE, SEE SHEET C14 FOR DETAIL.
- 9 CONSTRUCT SIDE DRAIN FEATURE. SEE SHEETS C65-C69 FOR DETAILS.
- 12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C14 FOR DETAILS.
- 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
- 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
- 17 TEMPORARY BERM

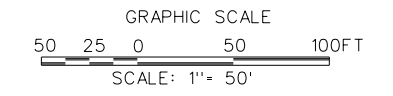
NOTE:

- 1. INSTALL POST AND CABLE FENCE ATOP CHANNEL WALL (BOTH SIDES) AT STA 59+00 TO 97+00.

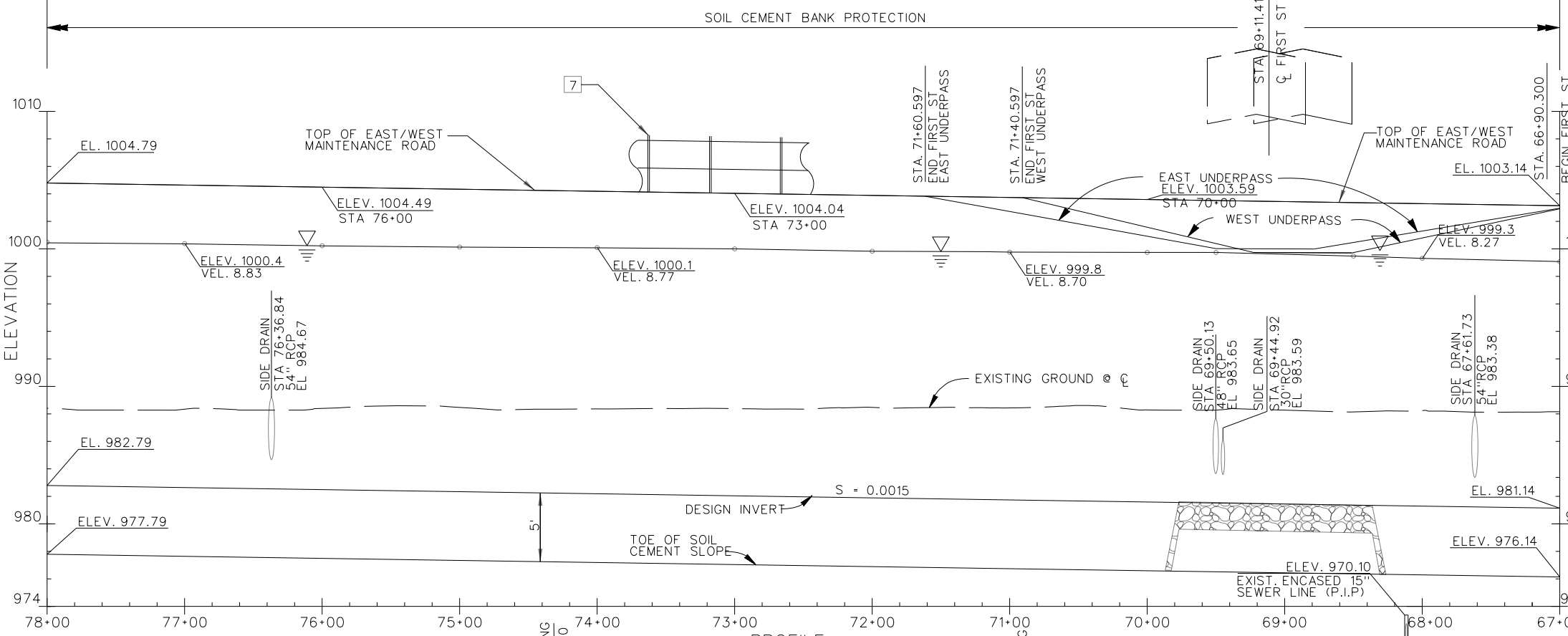
REFERENCE NOTE:

- 1. FOR CROSS SECTIONS, SEE SHEET C28 AND C29.
- 2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

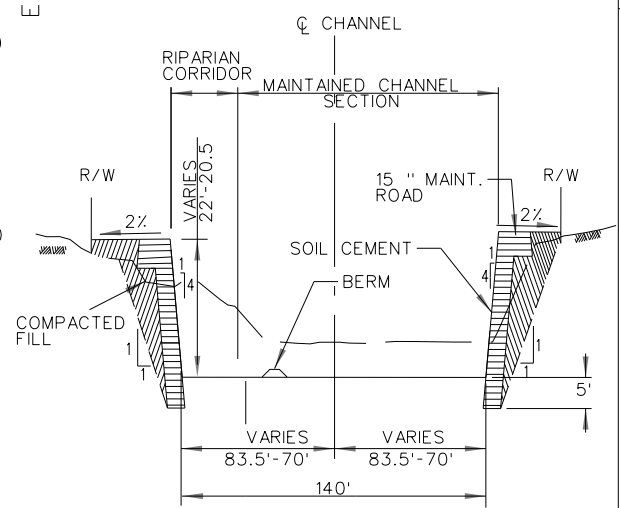
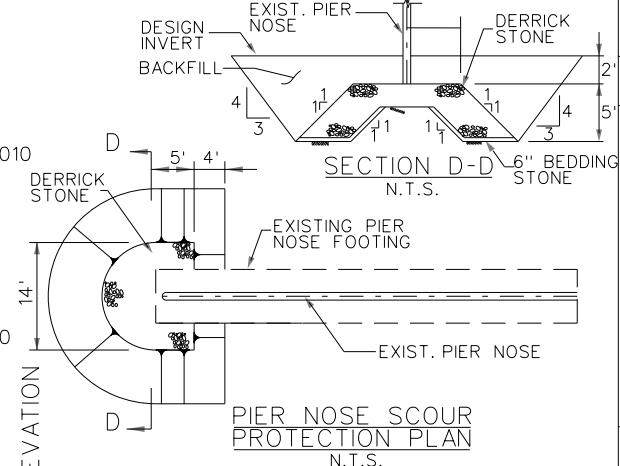
CHANNEL C CURVE DATA.			
PI. STATION	86+07.27	81+53.65	78+70.14
Δ	7° 20'05"	13° 11'00"	12° 46'47"
R=	1,000'	400'	1,000'
L=	128.01'	92.04'	223.05'
T=	64.09.9'	46.22	111.99'



DESIGNED BY: J.C.R.	DRAWN BY: J.C.R.	CHECKED BY: S.H.V.	FILE NAME: C10.DGN	DATE APPROVAL
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH				REVISIONS SYMBOL DESCRIPTIONS DATE APPROVAL
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 PLAN AND PROFILE STA. 89+00 TO STA. 78+00				DISTRICT FILE NO. 226/258 SPEC. NO. W912PL-15-B-001 SHEET C-10



PROFILE
VERT. SCALE: 1IN. = 5FT.
HORIZ. SCALE: 1IN. = 50FT.



TYPICAL CROSS SECTION
N.T.S.

CONSTRUCTION NOTES:

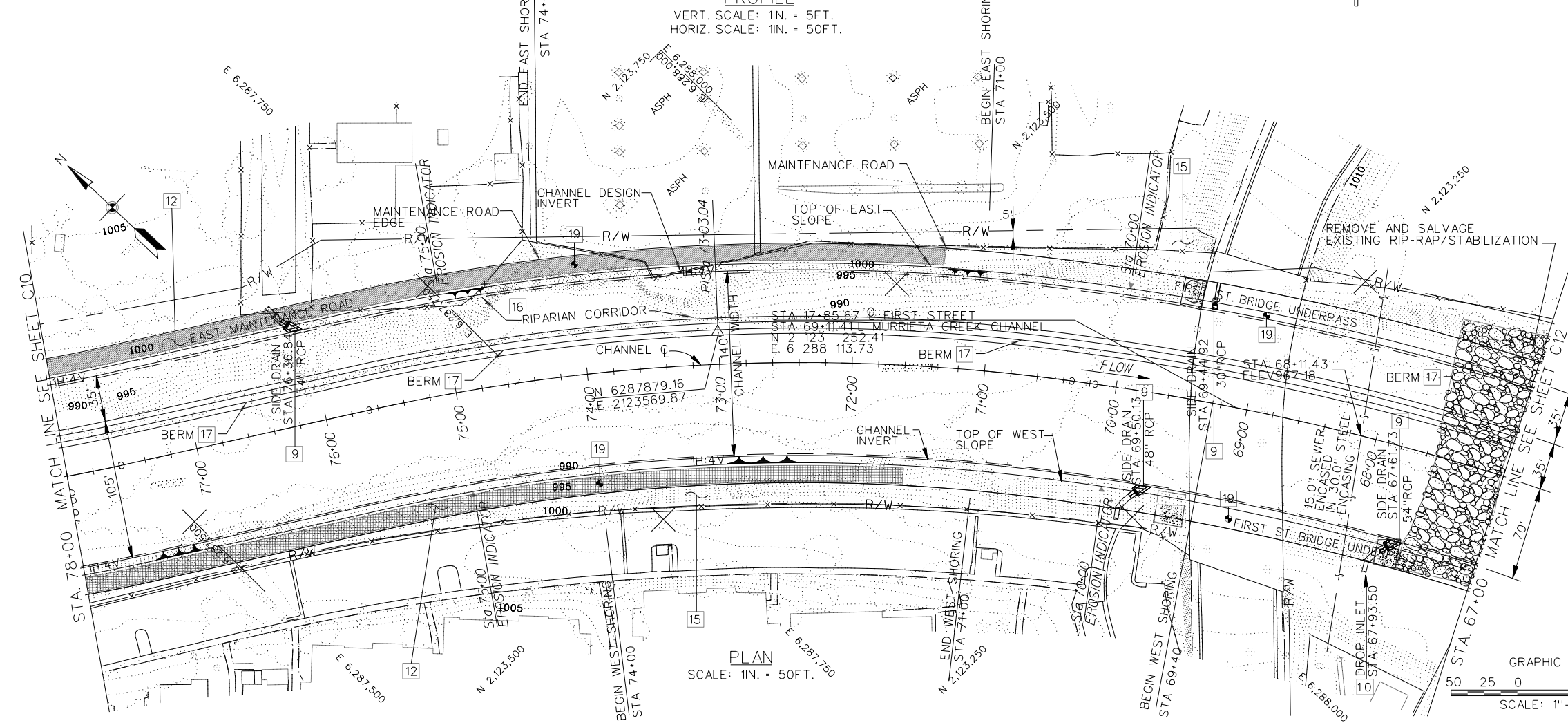
- 7 INSTALL POST AND CABLE FENCE, SEE SHEET C14 FOR DETAIL.
- 9 CONSTRUCT SIDE DRAIN FEATURE, SEE SHEETS C65-C69 FOR DETAILS.
- 10 CONSTRUCT DROP INLET, SEE SHEET S6 AND S7.
- 12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C13-C14.
- 15 INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
- 16 INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
- 17 TEMPORARY BERM
- 19 SETTLEMENT MONUMENT, STA. 74+00 AND STA. 69+00 EAST AND WEST MAINTENANCE ROAD.

REFERENCE NOTE:

- 1. FOR CROSS SECTIONS, SEE SHEET C29 & C30.
- 2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

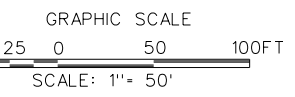
NOTE:

- 1. INSTALL POST AND CABLE FENCE ATOP CHANNEL WALL (BOTH SIDE) AT STA 59+00 TO 97+00

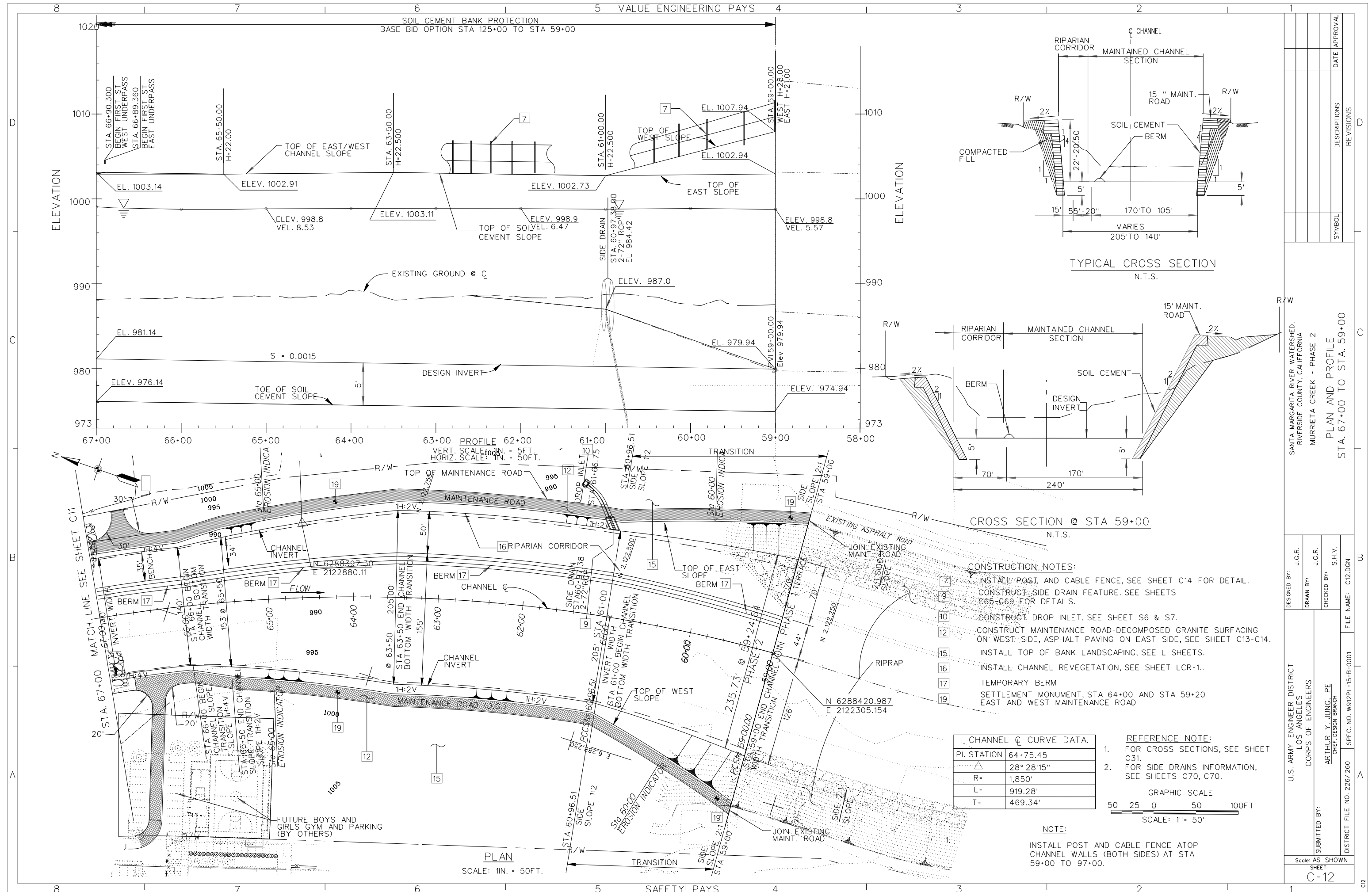


PLAN
SCALE: 1IN. = 50FT.

CHANNEL C CURVE DATA.	
PI. STATION	73+03.04
Δ	20° 21'55"
R=	1,500'
L=	533.16'
T=	269.42'



DESIGNED BY:	J.C.R.	DRAWN BY:	J.C.R.	CHECKED BY:	S.H.V.	FILE NAME:	C11.DGN
SUBMITTED BY:				DISTRICT FILE NO. 226/259			
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS				SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2			
ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH				PLAN AND PROFILE STA. 78+00 TO STA. 67+00			
Scale: AS SHOWN				DATE APPROVAL			
SHEET				REVISIONS			
C-11				SYMBOL			



SOIL CEMENT BANK PROTECTION
BASE BID OPTION STA 125+00 TO STA 59+00

TYPICAL CROSS SECTION
N.T.S.

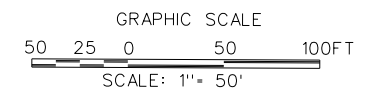
CROSS SECTION @ STA 59+00
N.T.S.

- CONSTRUCTION NOTES:**
- 7. INSTALL POST AND CABLE FENCE, SEE SHEET C14 FOR DETAIL.
 - 8. CONSTRUCT SIDE DRAIN FEATURE. SEE SHEETS C65-C69 FOR DETAILS.
 - 10. CONSTRUCT DROP INLET, SEE SHEET S6 & S7.
 - 12. CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE, SEE SHEET C13-C14.
 - 15. INSTALL TOP OF BANK LANDSCAPING, SEE L SHEETS.
 - 16. INSTALL CHANNEL REVEGETATION, SEE SHEET LCR-1.
 - 17. TEMPORARY BERM
 - 19. SETTLEMENT MONUMENT, STA 64+00 AND STA 59+20 EAST AND WEST MAINTENANCE ROAD

CHANNEL C CURVE DATA.

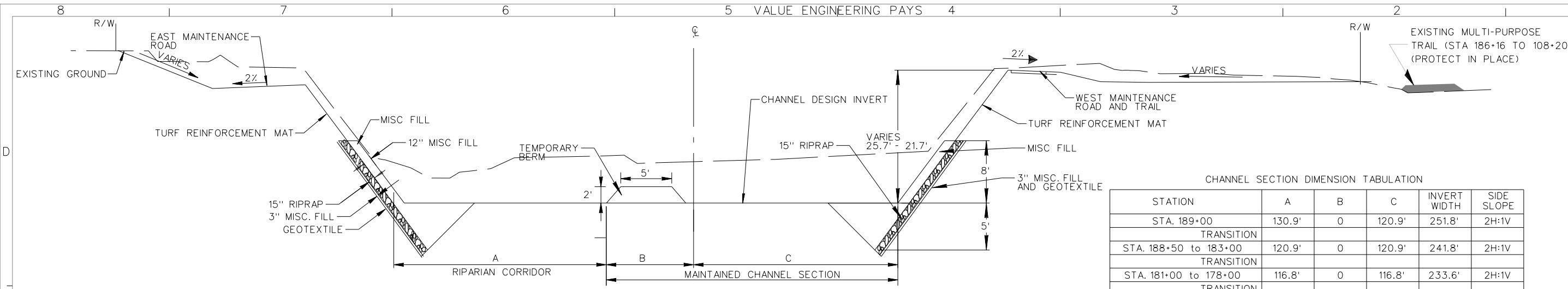
PI. STATION	64+75.45
Δ	28° 28' 15"
R=	1,850'
L=	919.28'
T=	469.34'

- REFERENCE NOTE:**
- 1. FOR CROSS SECTIONS, SEE SHEET C31.
 - 2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.



NOTE:
INSTALL POST AND CABLE FENCE ATOP CHANNEL WALLS (BOTH SIDES) AT STA 59+00 TO 97+00.

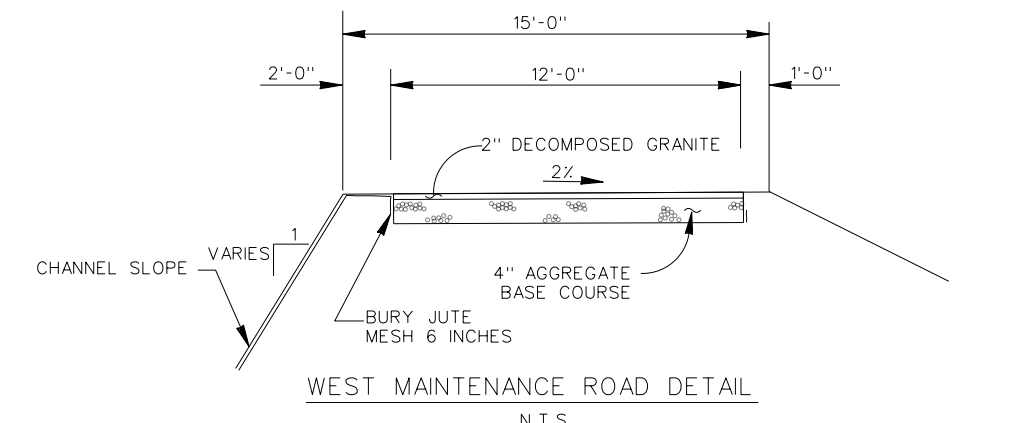
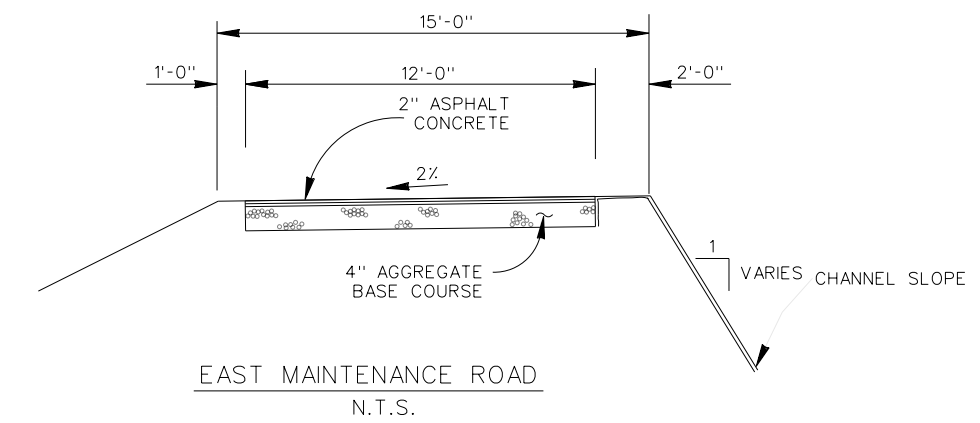
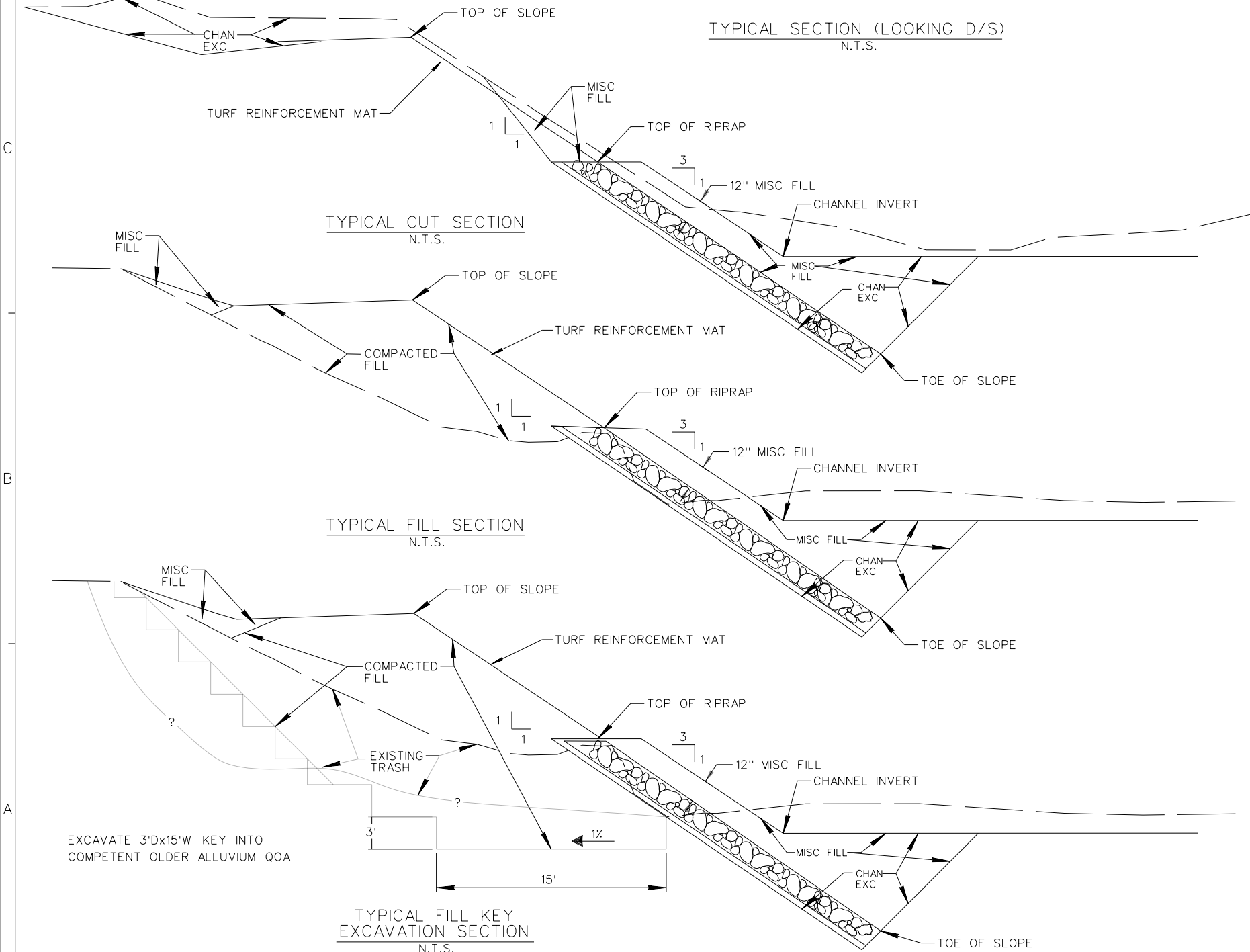
DESIGNED BY:	J.G.R.	DATE:		APPROVAL:
DRAWN BY:	J.G.R.	REVISIONS:		
CHECKED BY:	S.H.V.	SYMBOL:		
FILE NAME:	C12.DGN	DESCRIPTIONS:		
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2				
PLAN AND PROFILE STA. 67+00 TO STA. 59+00				
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS				
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH				
Scale: AS SHOWN SHEET C-12				



CHANNEL SECTION DIMENSION TABULATION

STATION	A	B	C	INVERT WIDTH	SIDE SLOPE
STA. 189+00	130.9'	0	120.9'	251.8'	2H:1V
TRANSITION					
STA. 188+50 to 183+00	120.9'	0	120.9'	241.8'	2H:1V
TRANSITION					
STA. 181+00 to 178+00	116.8'	0	116.8'	233.6'	2H:1V
TRANSITION					
STA. 176+00 to 170+00	119.6'	0	119.6'	239.2'	2H:1V
TRANSITION					
STA. 168+00 to 151+00	124.3'	0	124.3'	248.6'	3H:1V
TRANSITION					
STA. 143+00 to 137+00	150'	31.8'	181.8'	363.6'	3H:1V
TRANSITION					
STA. 129+00 to 113+50	100'	16.8'	116.8'	233.6'	3H:1V
TRANSITION					
STA. 113+00	65'	60'	125'	250'	3H:1V
TRANSITION					
STA. 109+00 to 102+50	65'	37.5'	102.5'	205'	3H:1V
TRANSITION					
STA. 98+00	35'	35'	70'	140'	3H:1V

TYPICAL SECTION (LOOKING D/S)
N.T.S.



SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

DESIGNED BY: J.C.R.
DRAWN BY: J.C.R.
CHECKED BY: S.H.V.
FILE NAME: C13.DGN

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/261
SPEC. NO. W912PL-15-B-0001

Scale: SHEET C-13

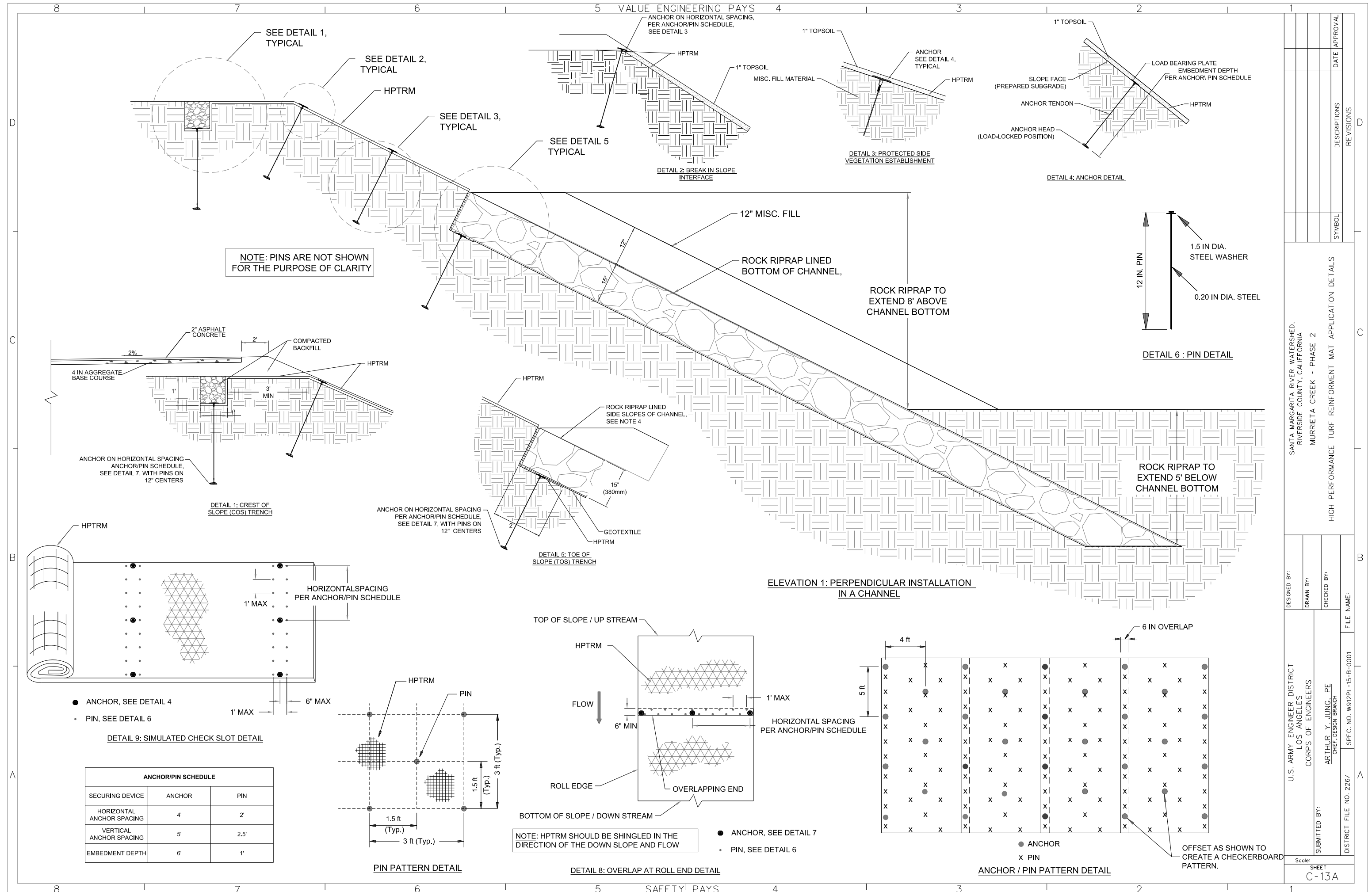
DATE APPROVAL

REVISIONS

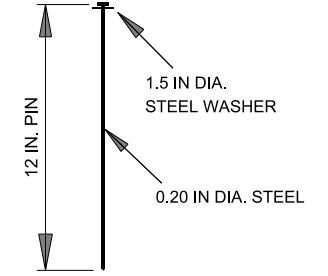
SYMBOL

DESCRIPTIONS

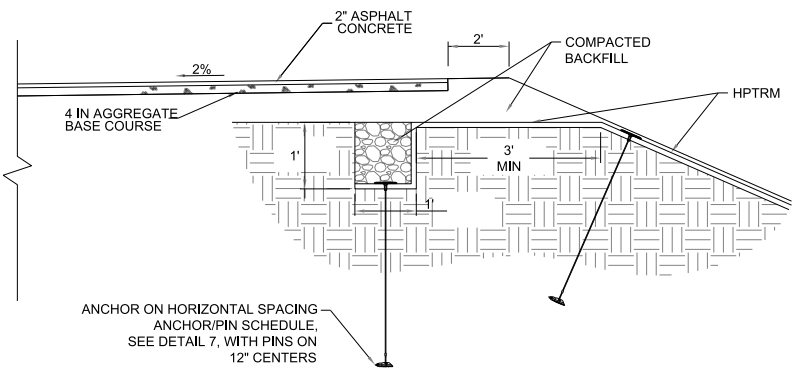
CHANNEL TYPICAL SECTIONS



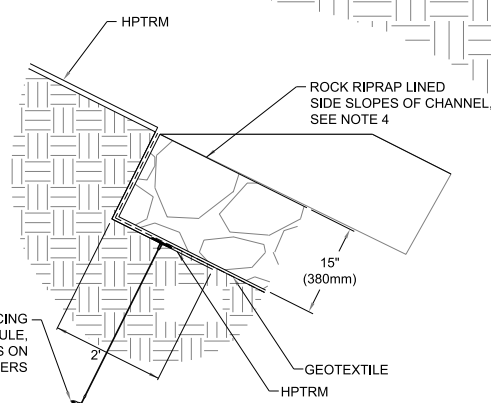
NOTE: PINS ARE NOT SHOWN FOR THE PURPOSE OF CLARITY



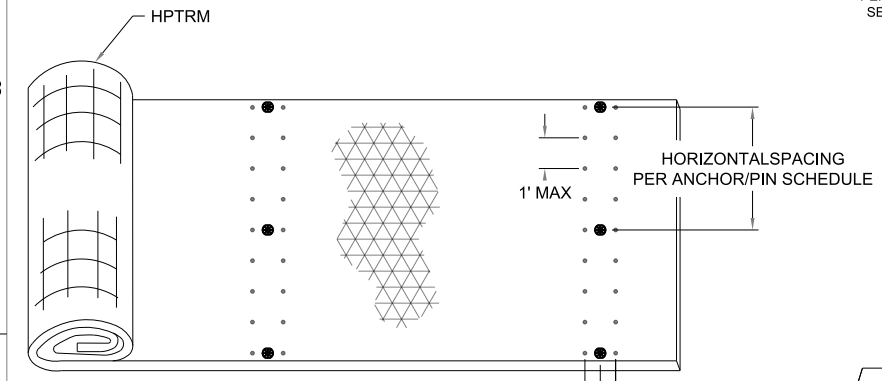
DETAIL 6 : PIN DETAIL



DETAIL 1: CREST OF SLOPE (COS) TRENCH

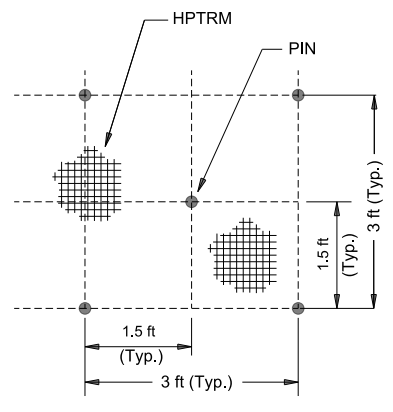


DETAIL 5: TOE OF SLOPE (TOS) TRENCH

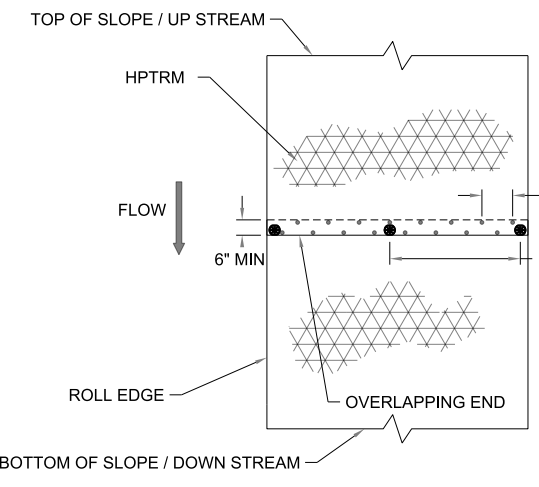


DETAIL 9: SIMULATED CHECK SLOT DETAIL

ANCHOR/PIN SCHEDULE		
SECURING DEVICE	ANCHOR	PIN
HORIZONTAL ANCHOR SPACING	4'	2'
VERTICAL ANCHOR SPACING	5'	2.5'
EMBEDMENT DEPTH	6'	1'



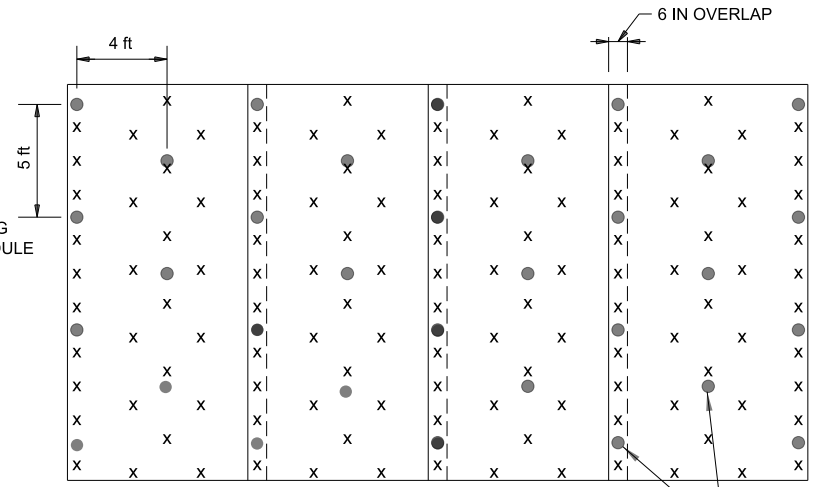
PIN PATTERN DETAIL



DETAIL 8: OVERLAP AT ROLL END DETAIL

NOTE: HPTRM SHOULD BE SHINGLED IN THE DIRECTION OF THE DOWN SLOPE AND FLOW

ELEVATION 1: PERPENDICULAR INSTALLATION IN A CHANNEL



ANCHOR / PIN PATTERN DETAIL

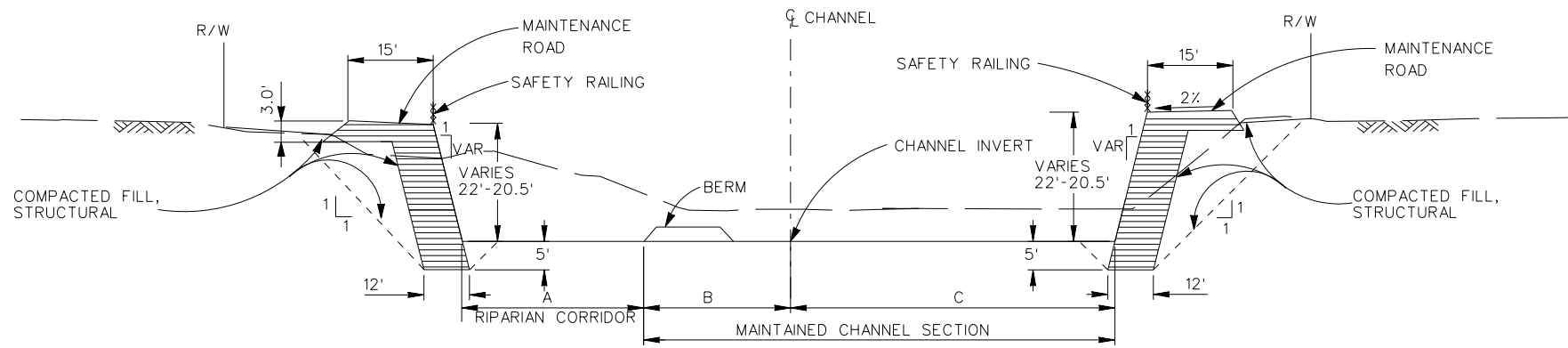
OFFSET AS SHOWN TO CREATE A CHECKERBOARD PATTERN.

DESIGNED BY: U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DRAWN BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	CHECKED BY:	FILE NAME: SPEC. NO. W912PL-15-B-0001
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		HIGH PERFORMANCE TURF REINFORCEMENT MAT APPLICATION DETAILS	
SYMBOL		REVISIONS	DATE APPROVAL

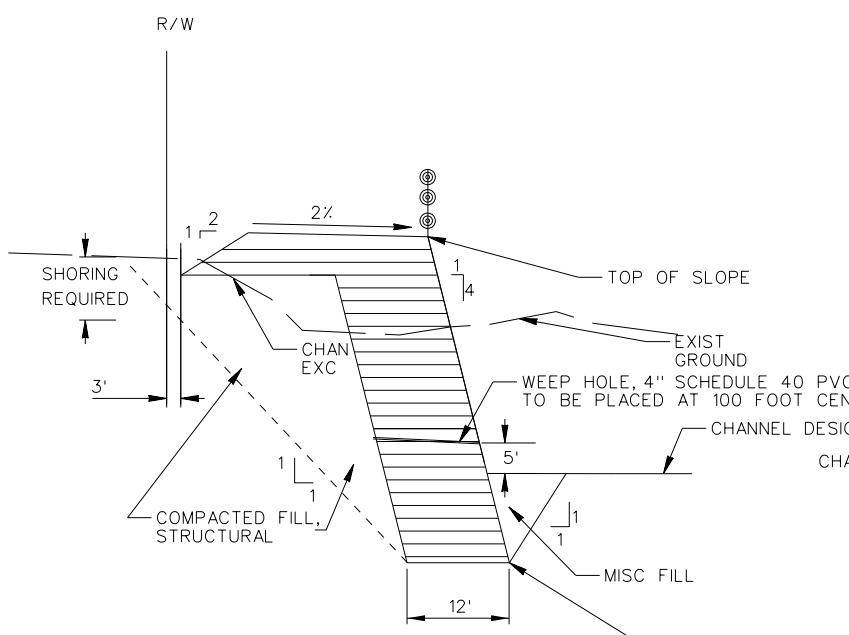
Scale: SHEET C-13A

STATION	A	B	C	INVERT WIDTH	SIDE SLOPE
STA. 98+00	35'	35'	70'	140'	3H:1V
TRANSITION					
STA. 95+00 to 84+00	35'	48.5'	83.5'	167'	1H:4V
TRANSITION					
STA. 82+00 to 66+00	35'	35'	70'	140'	1H:4V
TRANSITION					
STA. 65+50	38'	38.5'	76.5'	153'	1H:2V
TRANSITION					
STA. 63+50 to 61+00	50'	52.5'	102.5'	205'	1H:2V
TRANSITION					
STA. 59+00	70'	44'	126'	240'	2H:1V

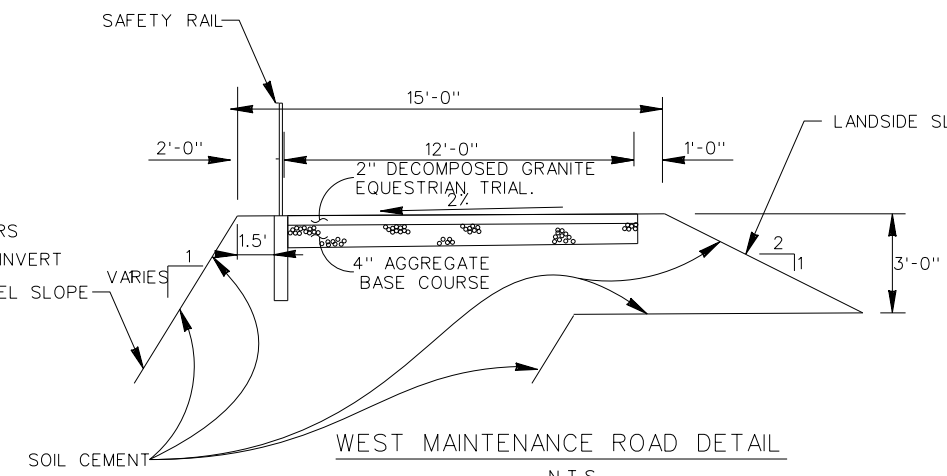
EAST SIDE STATIONING
STA. 93+20 to 84+40
STA. 83+80 to 81+80
STA. 74+40 to 71+00
WEST SIDE STATIONING
STA. 94+80 to 91+00
STA. 81+20 to 80+60
STA. 79+50 to 74+00
STA. 71+00 to 69+60



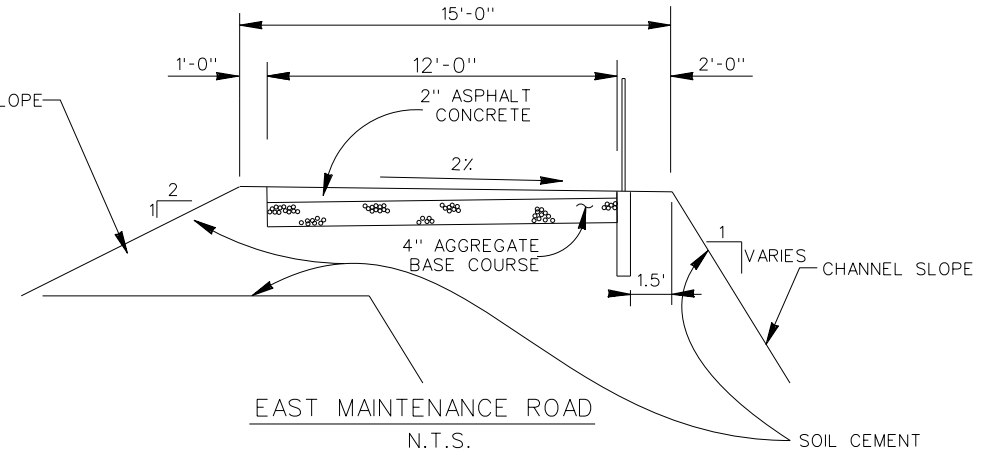
TYPICAL SOIL CEMENT CHANNEL SECTION (LOOKING D/S) N.T.S.



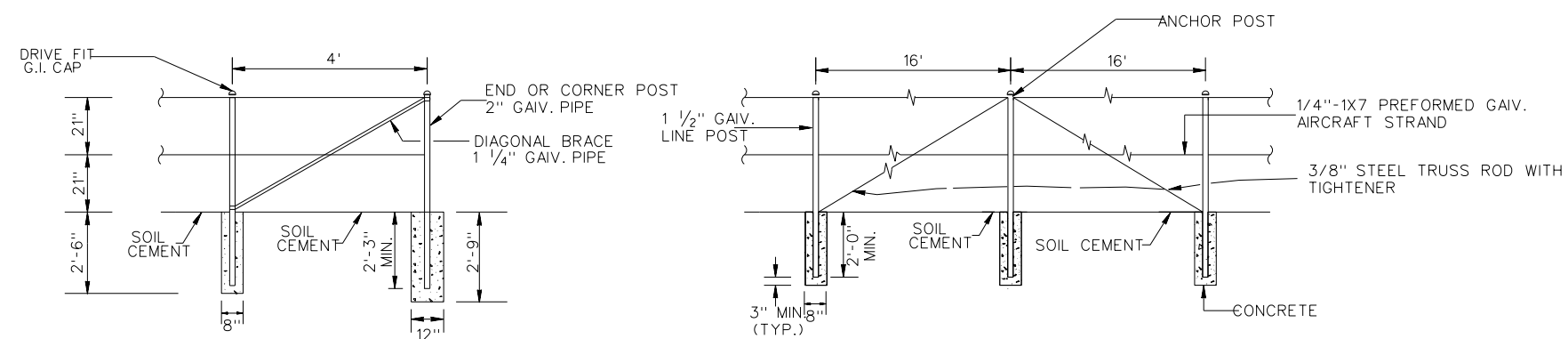
TYPICAL SOIL CEMENT CUT SECTION N.T.S.



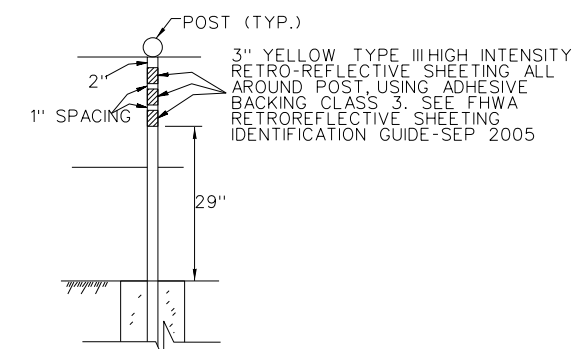
WEST MAINTENANCE ROAD DETAIL N.T.S.



EAST MAINTENANCE ROAD N.T.S.



POST AND CABLE FENCE NOT TO SCALE



RETRO-REFLECTIVE MARKER NOT TO SCALE

DESIGNED BY: J.C.R.
 DRAWN BY: J.C.R.
 CHECKED BY: S.H.V.
 FILE NAME: C14.DGN

U.S. ARMY ENGINEER DISTRICT
 LOS ANGELES
 CORPS OF ENGINEERS

ARTHUR Y. JUNG, PE
 CHIEF, DESIGN BRANCH

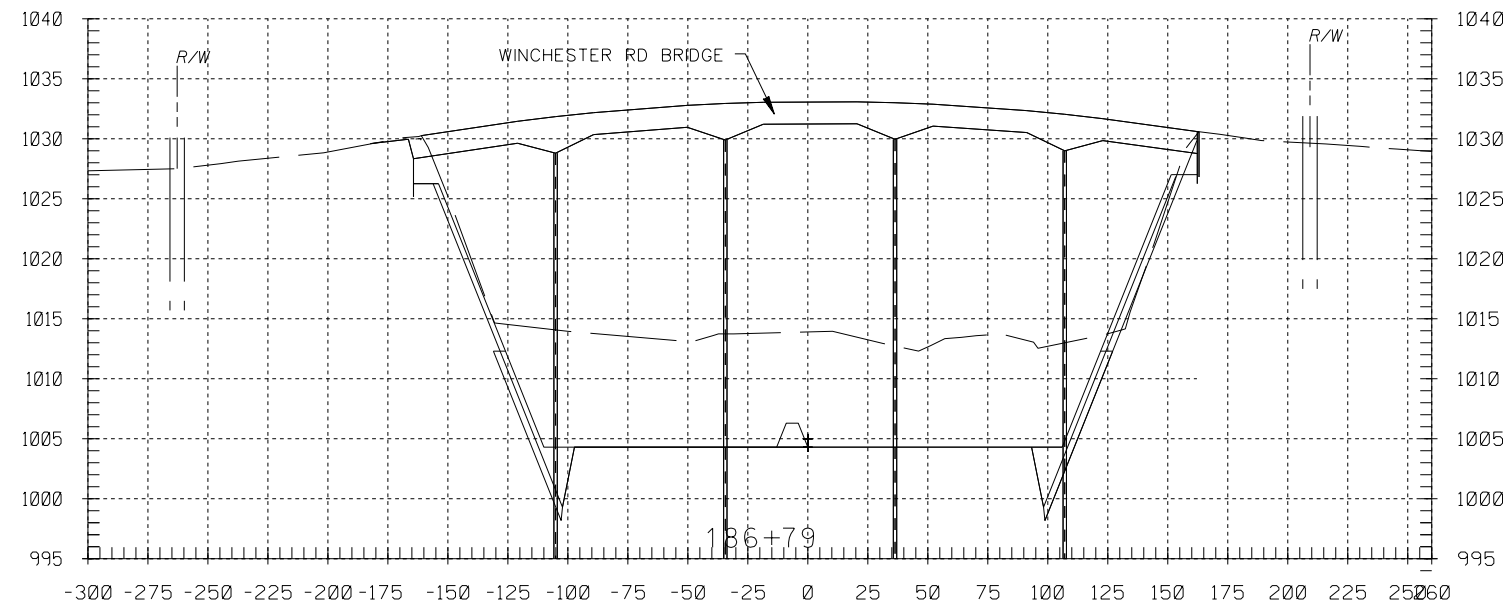
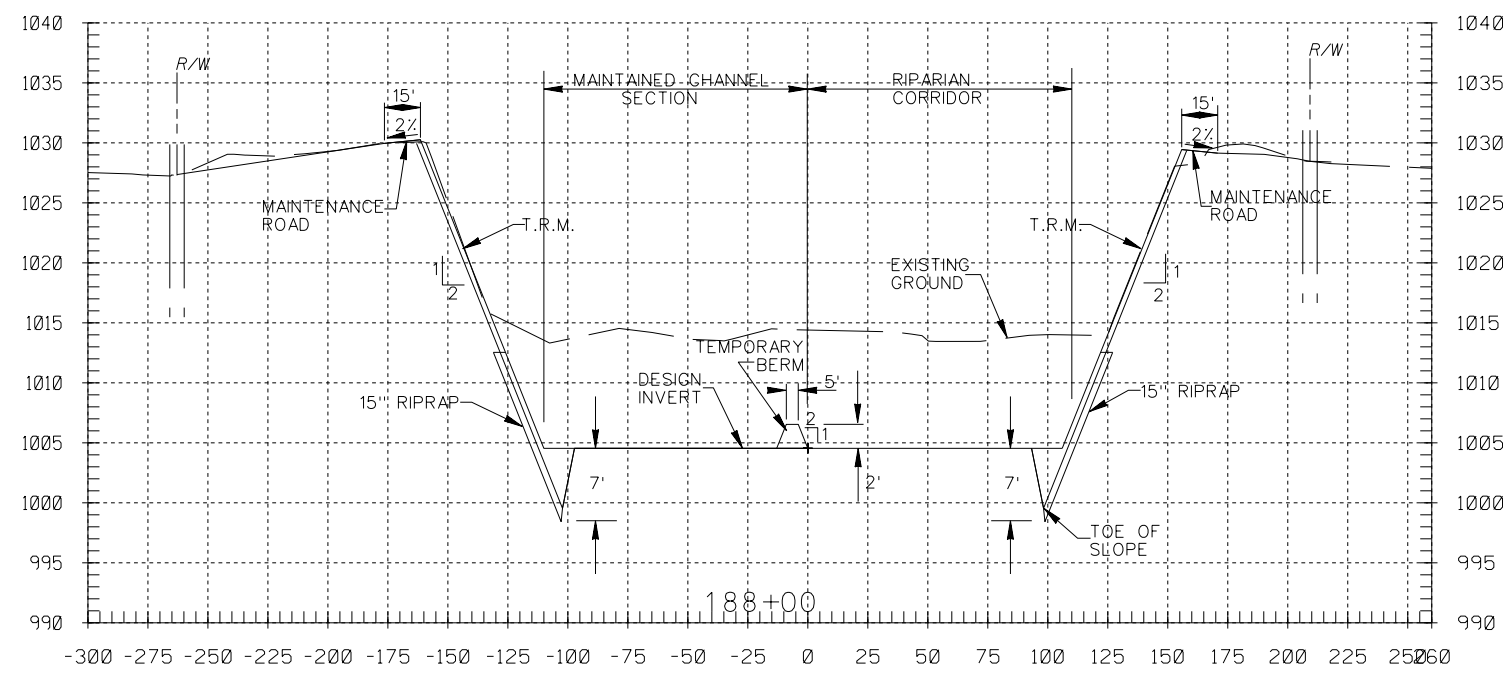
DISTRICT FILE NO. 226/262
 SPEC. NO. W912PL-15-B-0001

SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2

TYPICAL SOIL CEMENT CHANNEL SECTIONS
 AND
 POST AND CABLE FENCE DETAILS

SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

Scale:
 SHEET
 C-14



GENERAL NOTES:

- 1. ALL DIMENSIONS SHOWN ARE IN FEET.
- 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
- 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

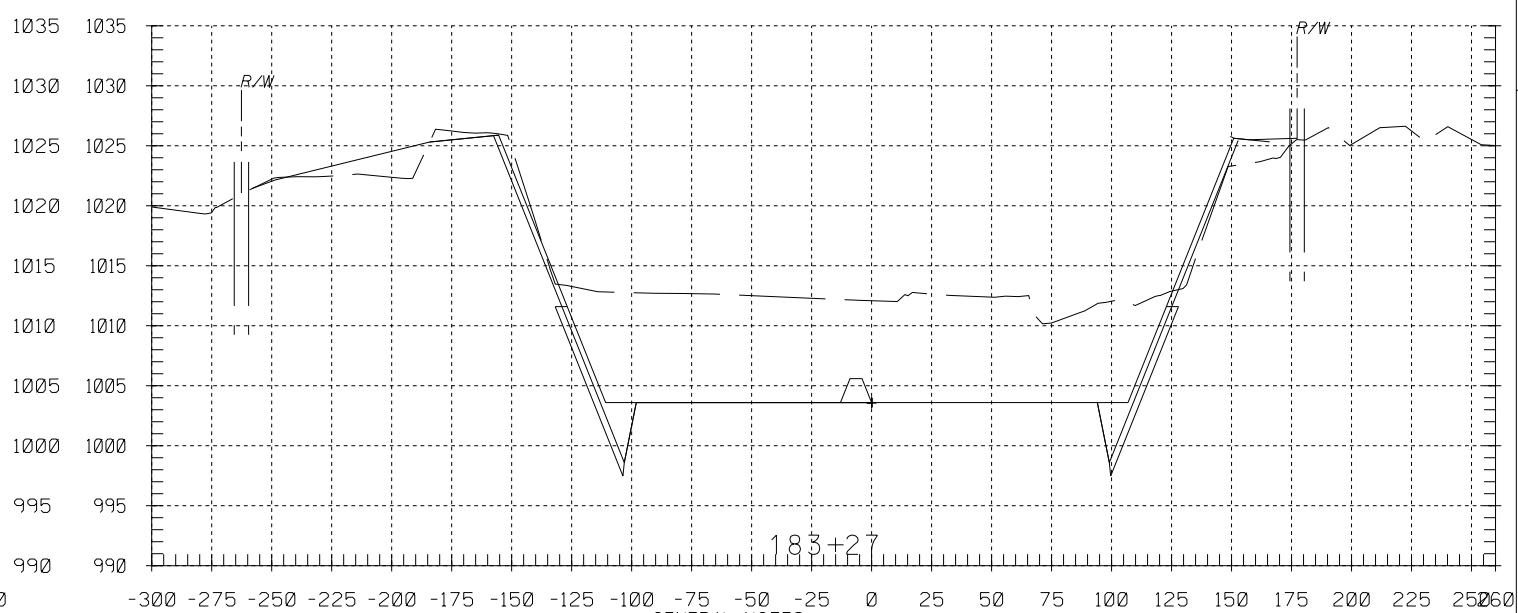
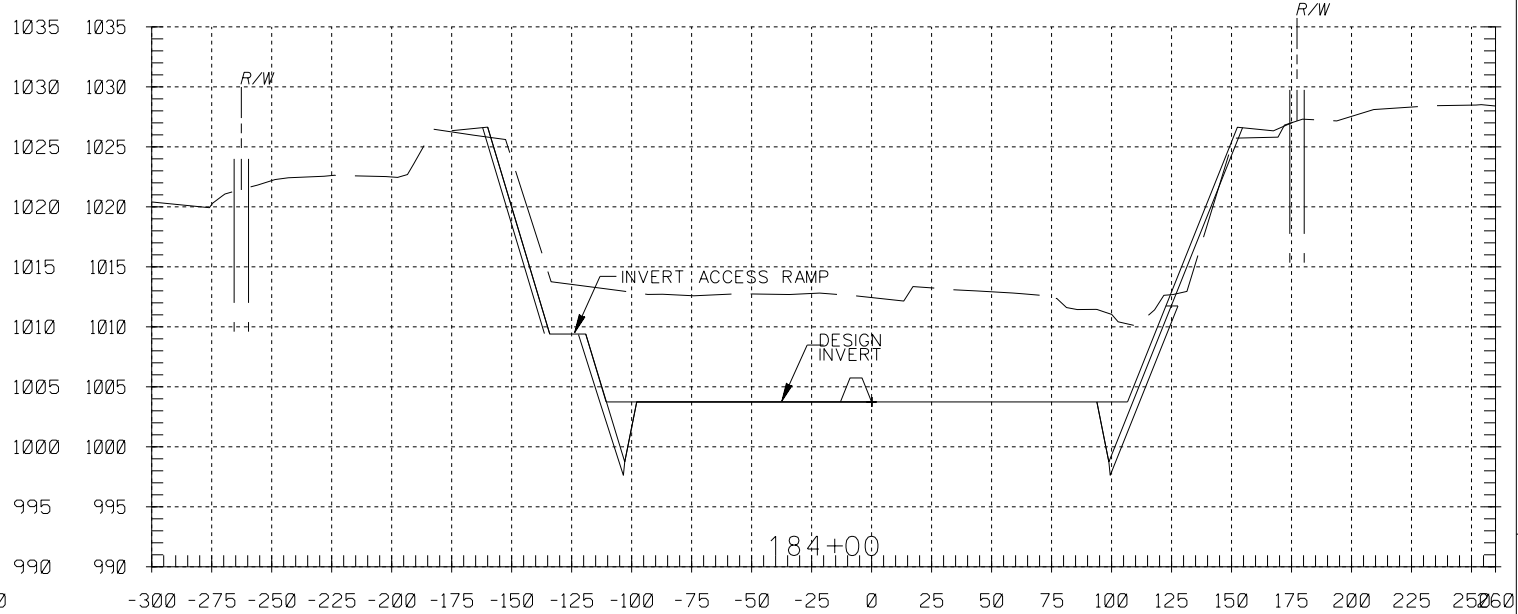
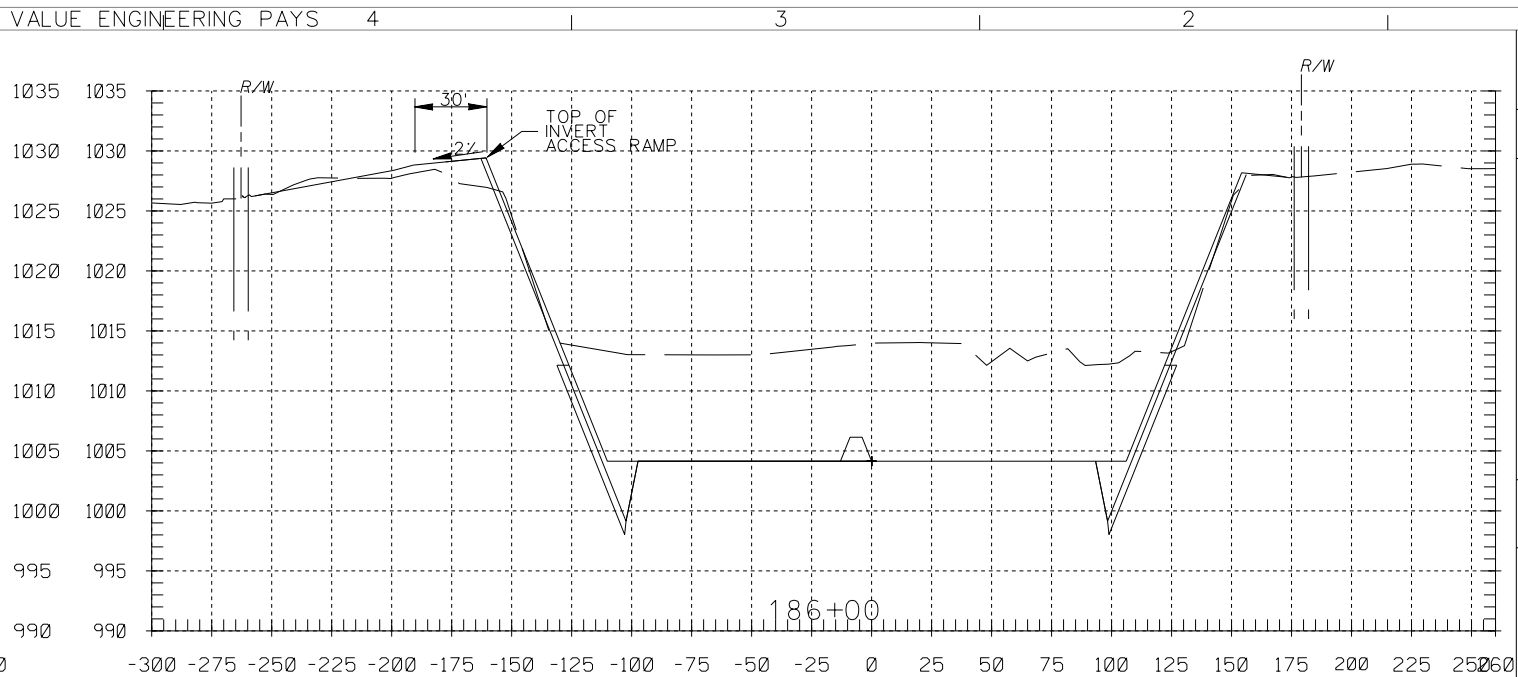
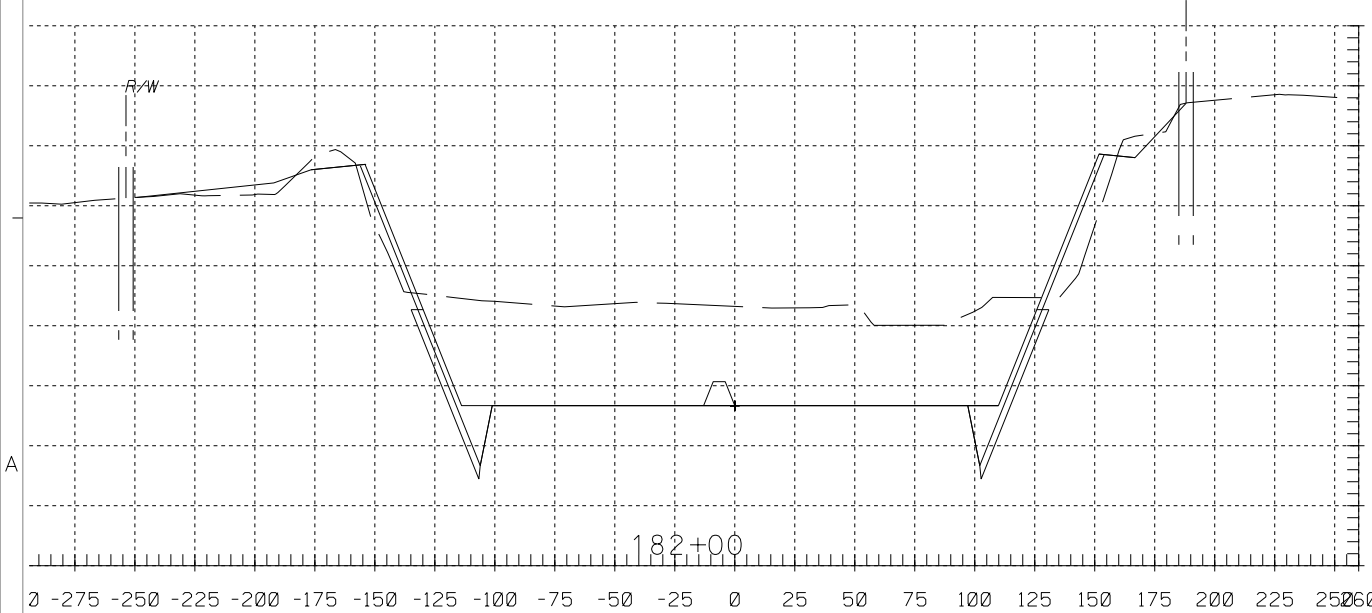
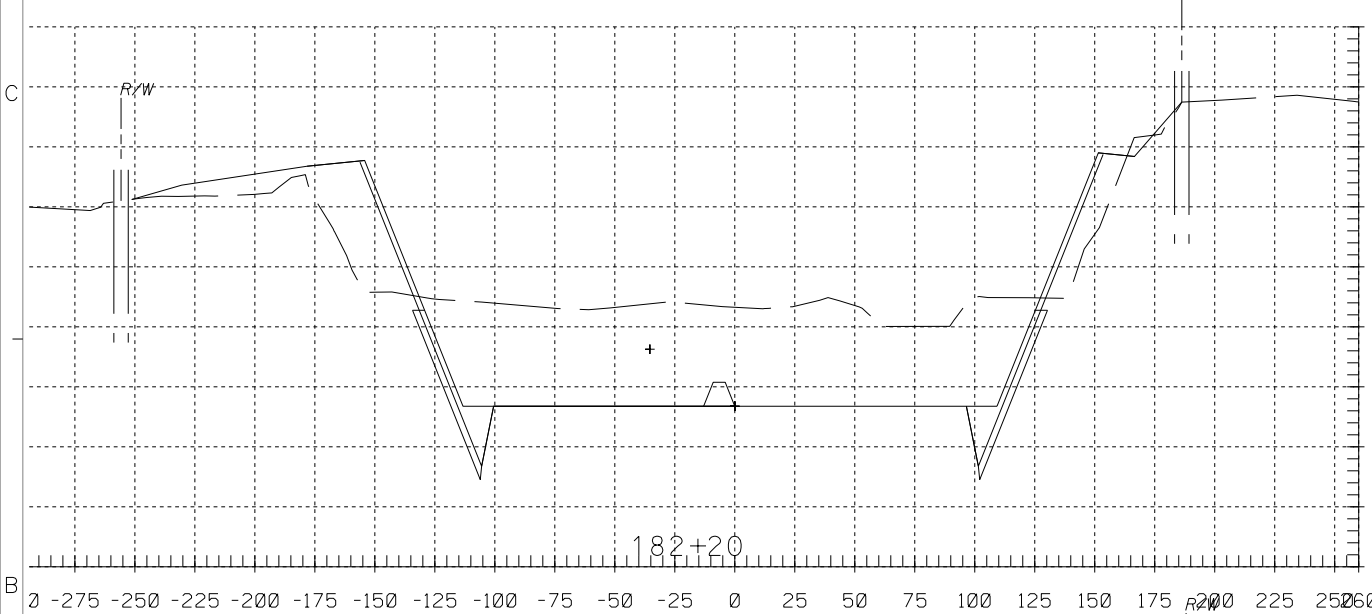
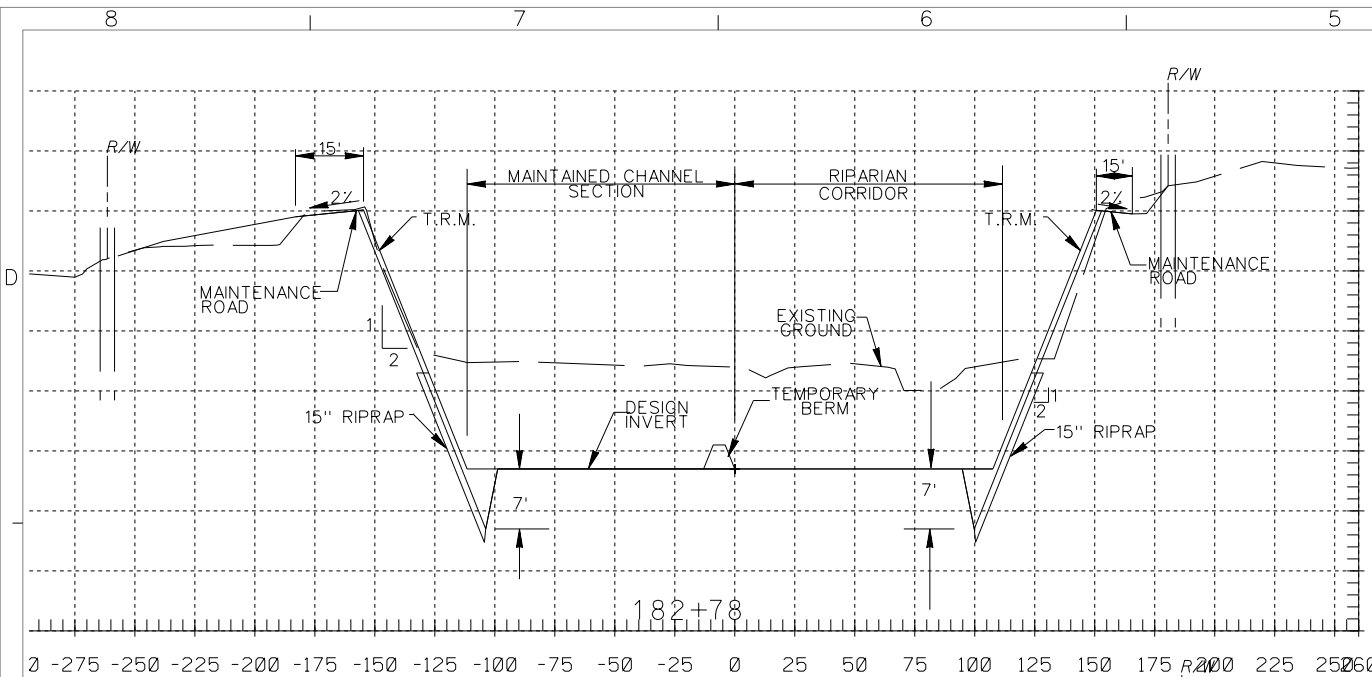
SYMBOL	DESCRIPTIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2
CROSS SECTIONS
 STA 189+00 TO 186+00

DESIGNED BY: J.G.R.
 DRAWN BY: J.G.R.
 CHECKED BY: S.H.V.
 FILE NAME: C15.DGN

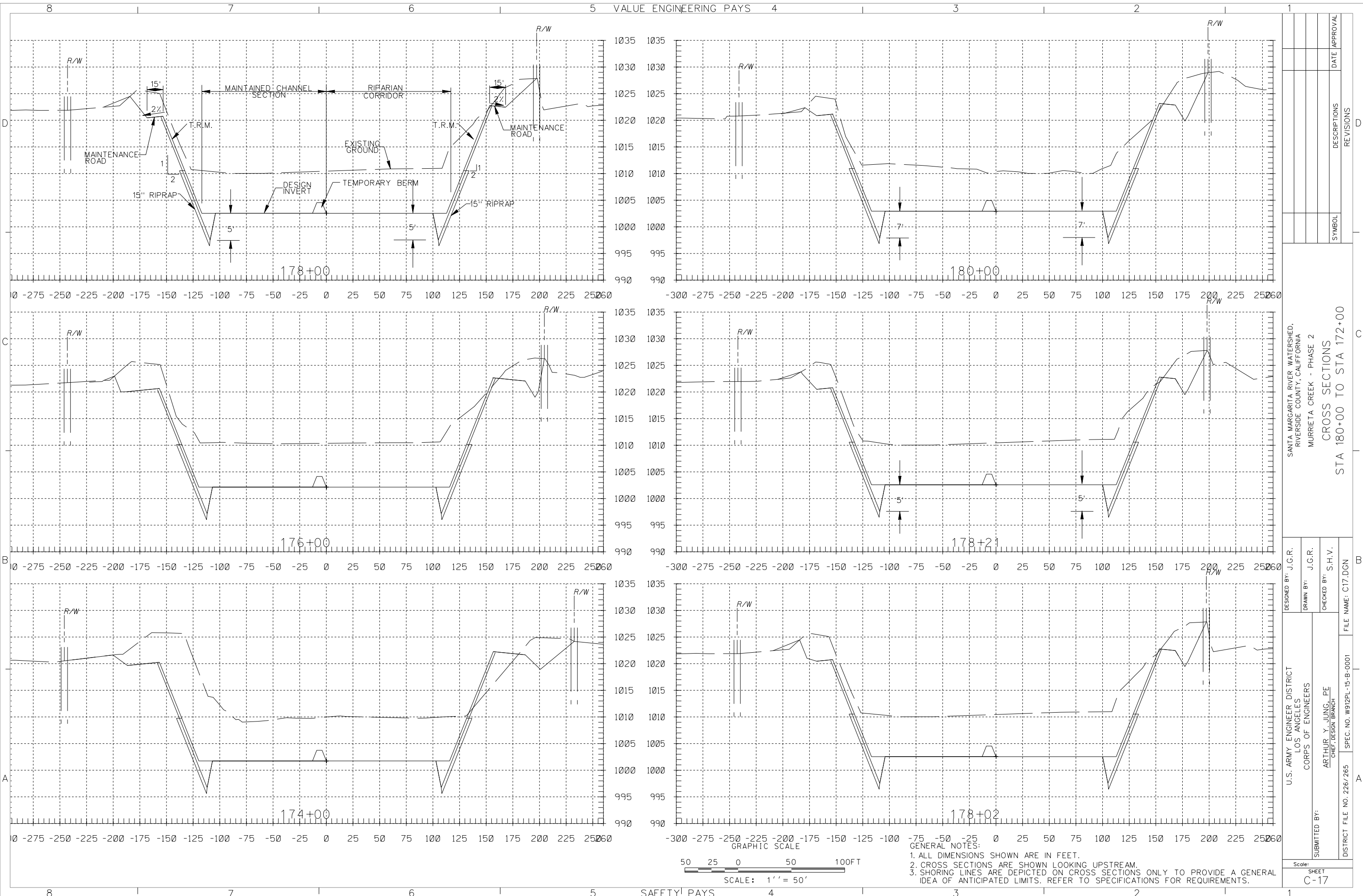
U.S. ARMY ENGINEER DISTRICT
 LOS ANGELES
 CORPS OF ENGINEERS
 SUBMITTED BY:
 ARTHUR Y. JUNG, PE
 CHIEF, DESIGN BRANCH
 DISTRICT FILE NO. 226/

Scale:
 SHEET
 C-15

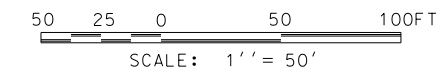


GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

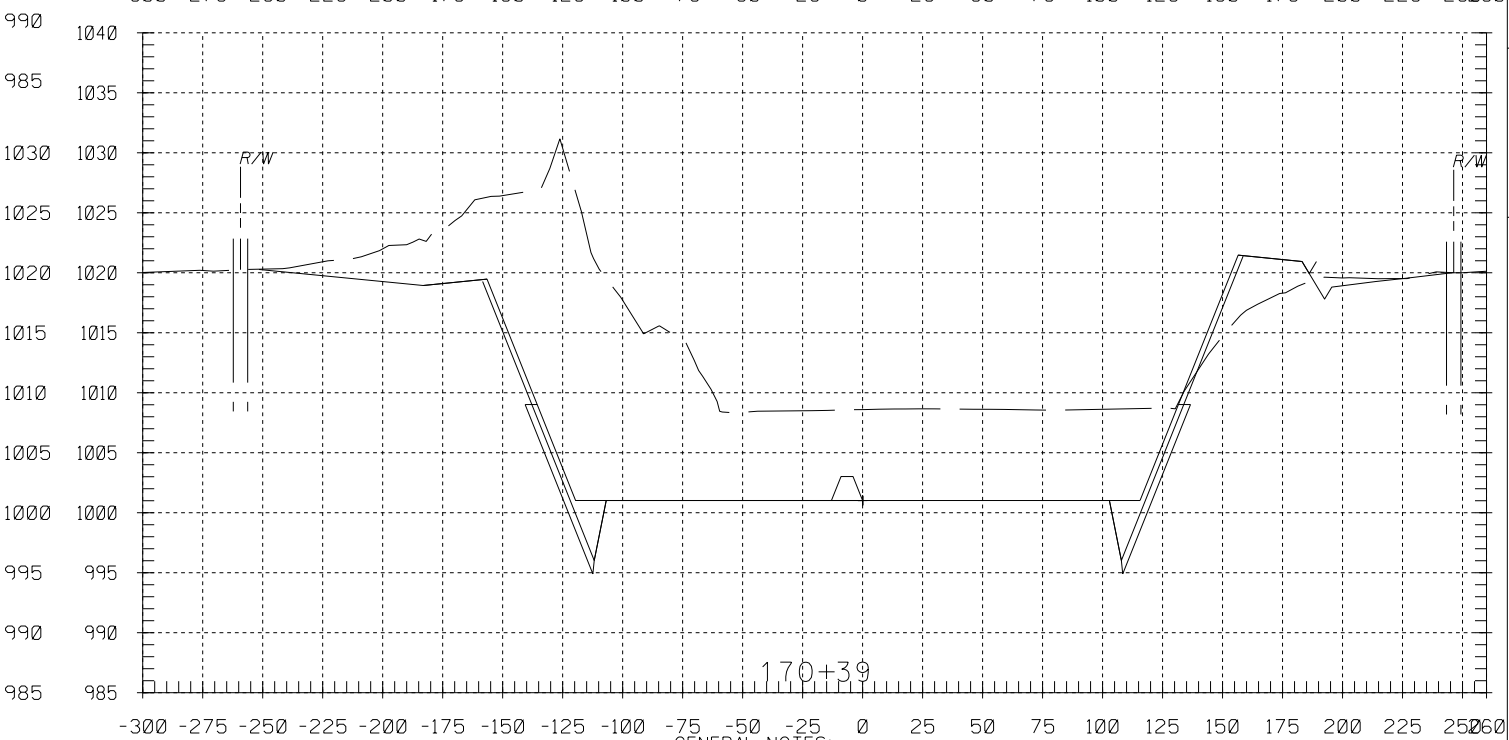
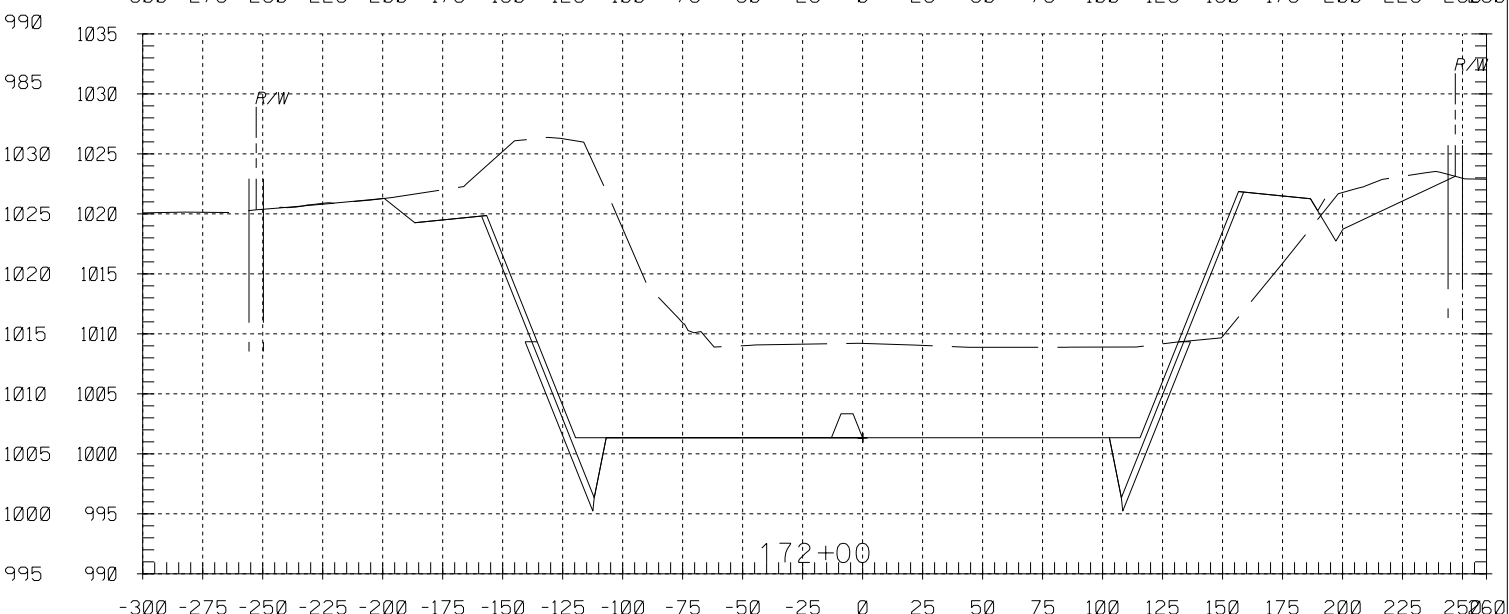
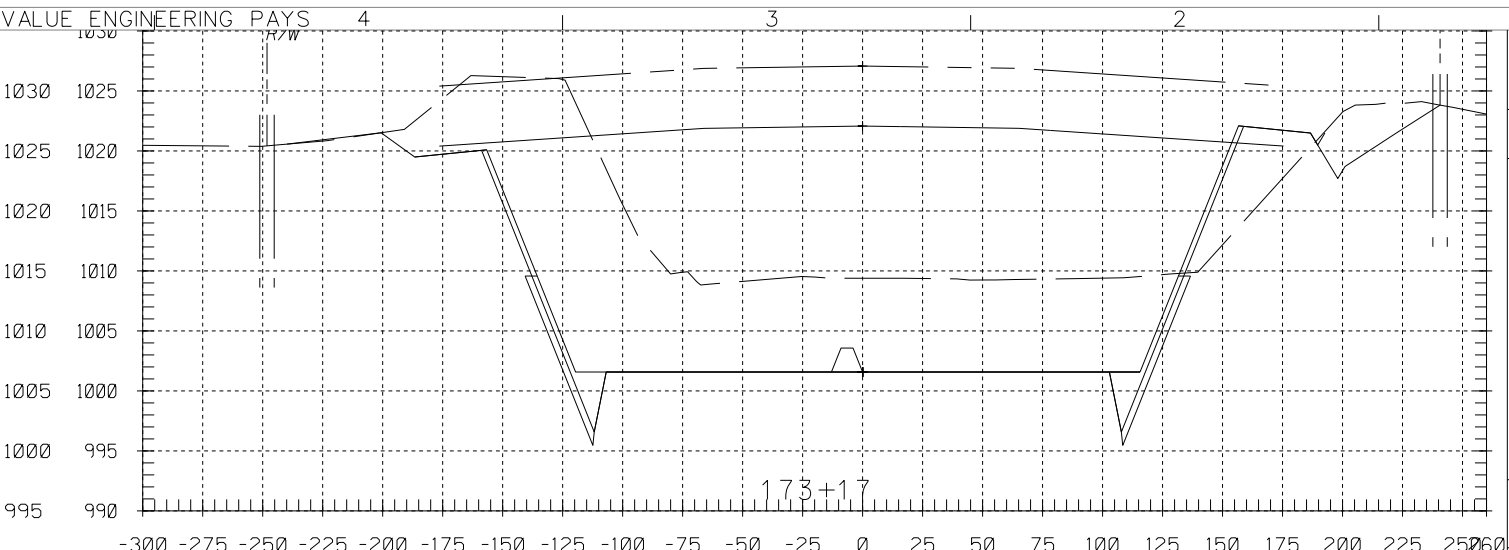
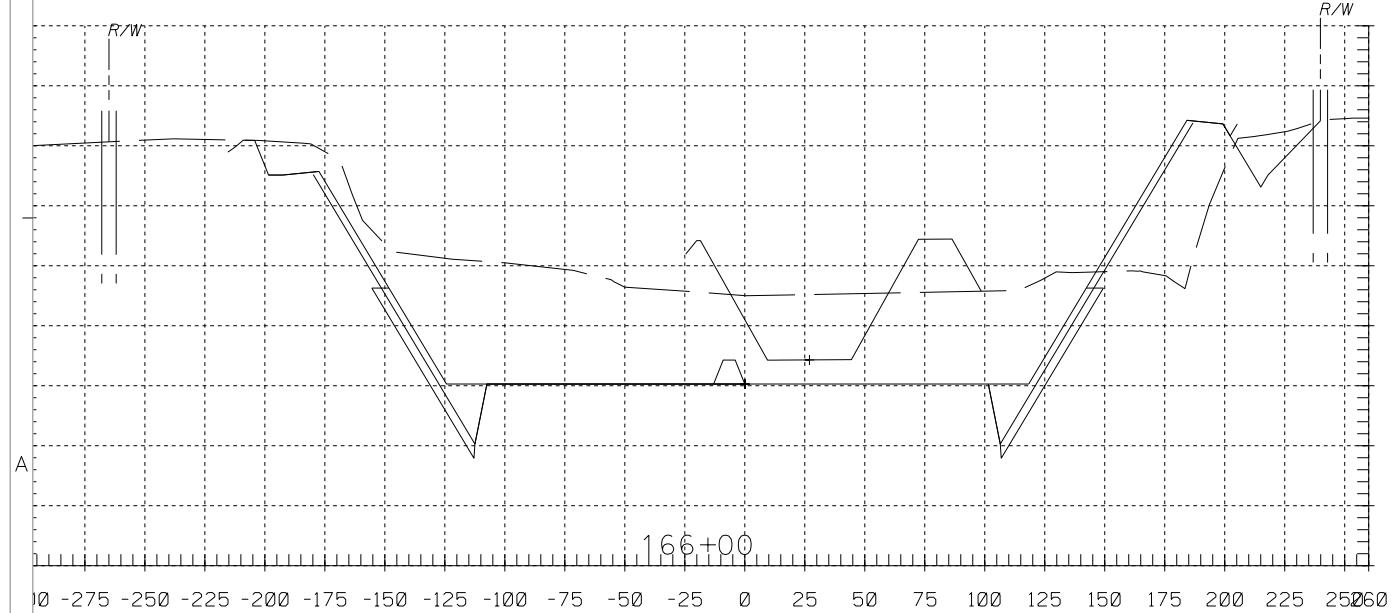
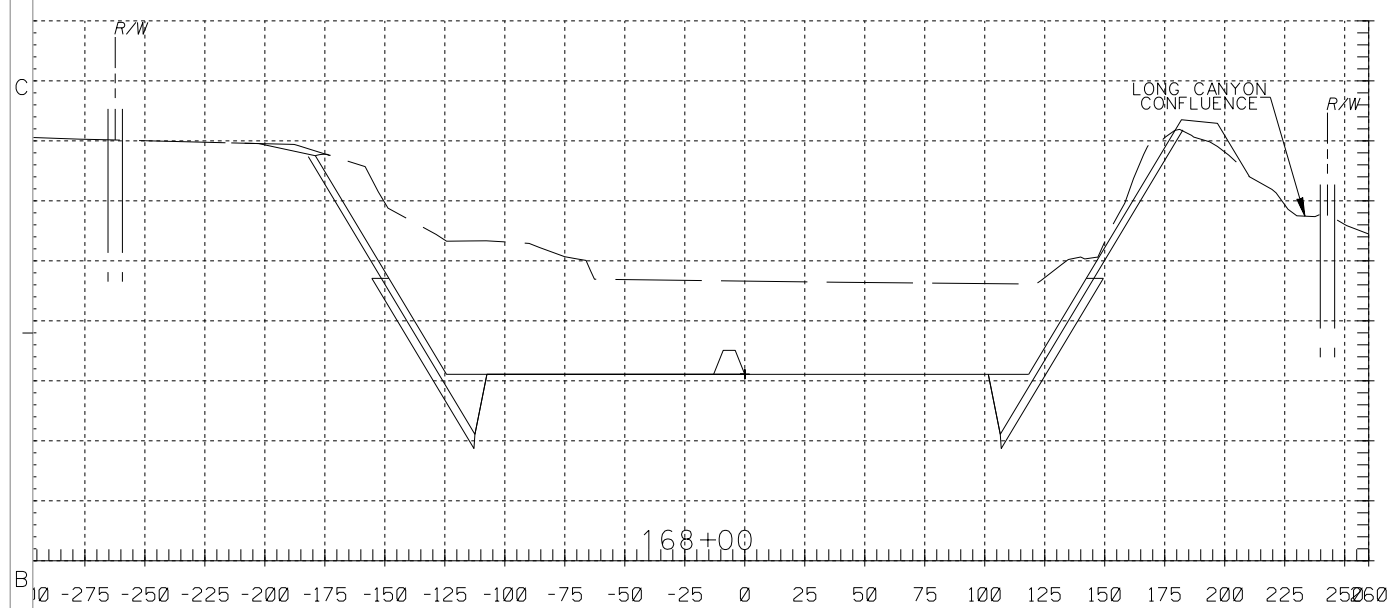
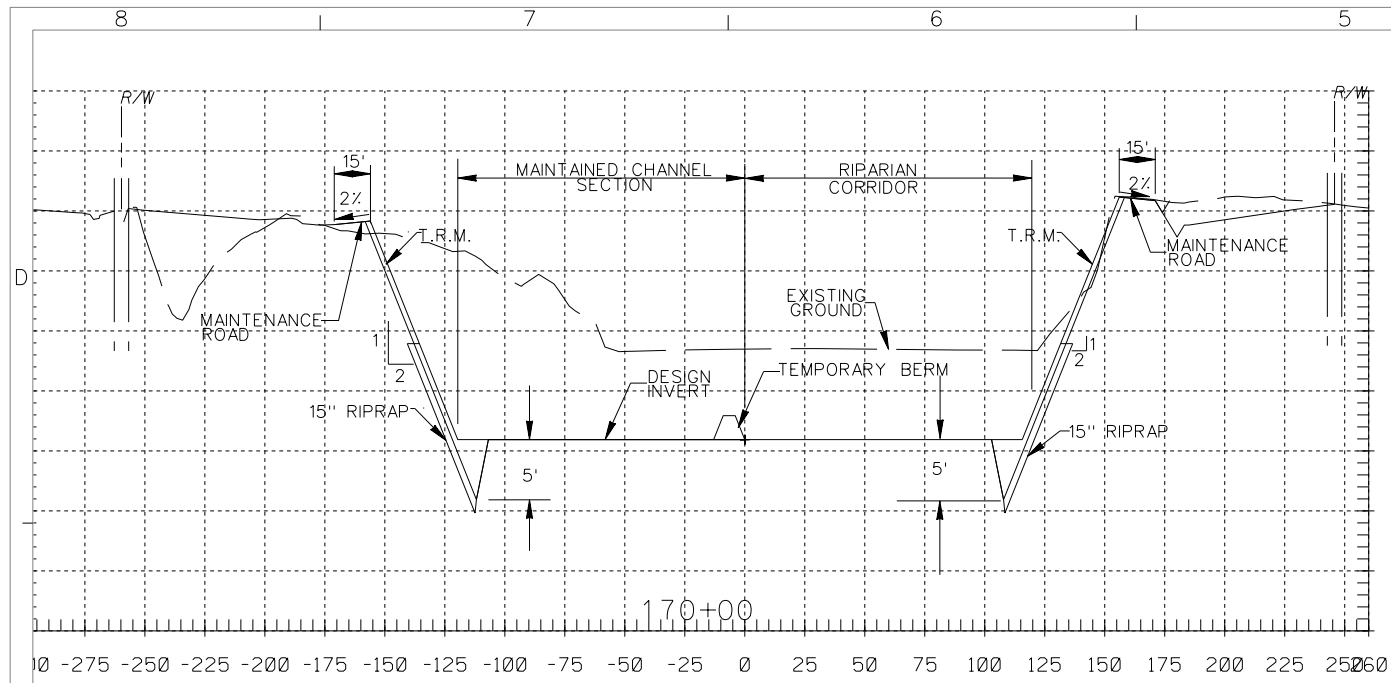
DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C16.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 186+00 TO 180+00	
DISTRICT FILE NO. 226/264		SPEC. NO. W912PL-15-B-0001		SYMBOL		REVISIONS	
Scale: SHEET C-16				DATE		APPROVAL	



DESIGNED BY: J.G.R.	DESIGNER'S SYMBOL	DATE	APPROVAL
DRAWN BY: J.G.R.	DESCRIPTIONS	REVISIONS	
CHECKED BY: S.H.V.	SYMBOL		
FILE NAME: C17.DGN			
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 CROSS SECTIONS STA 180+00 TO STA 172+00			
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		
DISTRICT FILE NO. 226/265	FILE NO. W912PL-15-B-0001	SHEET C-17	

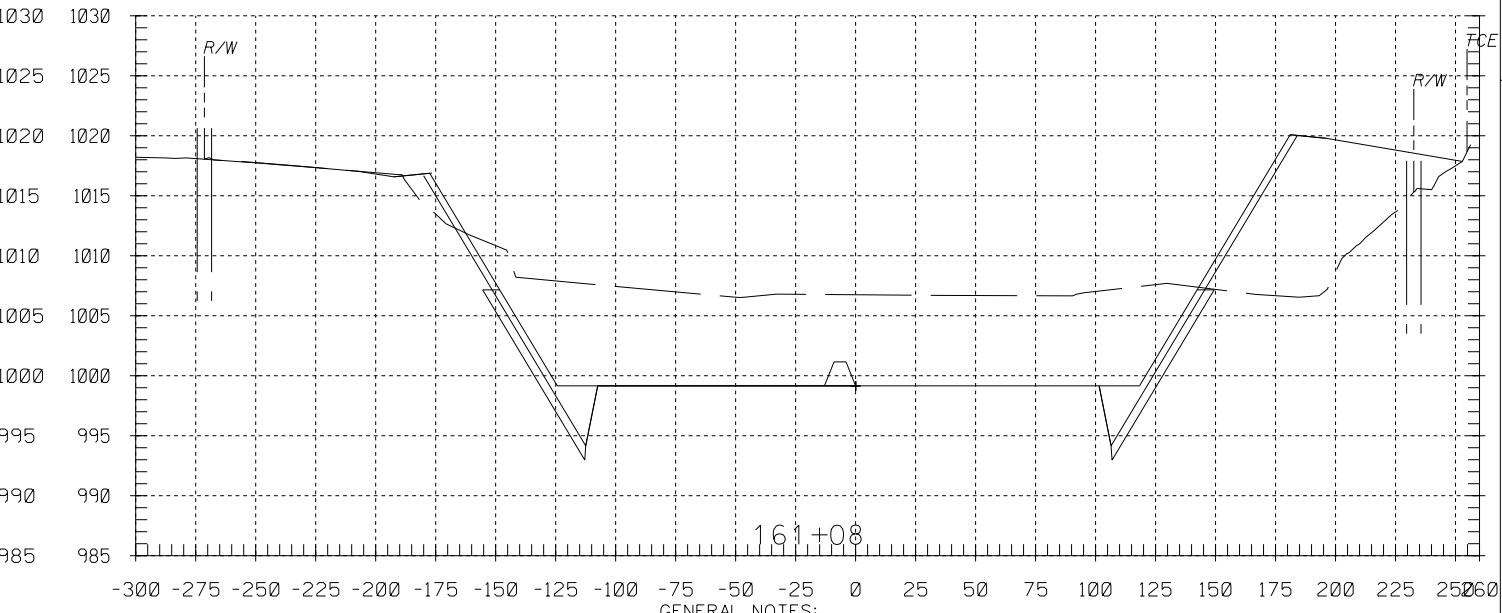
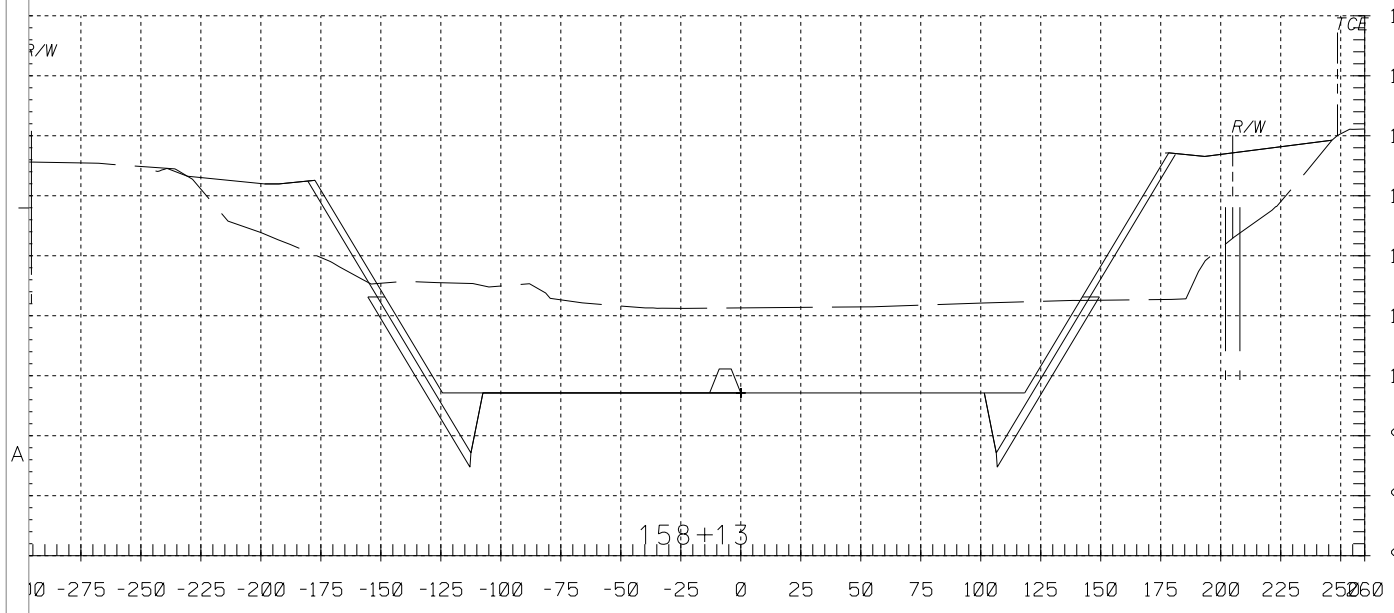
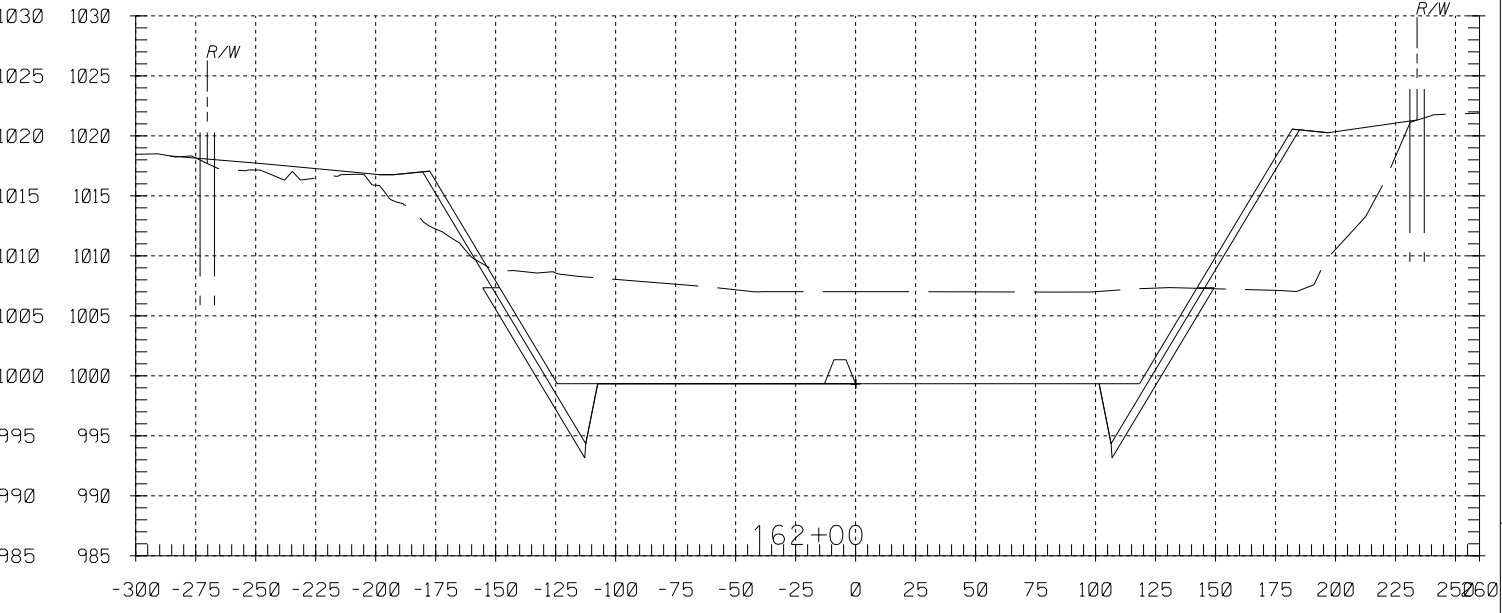
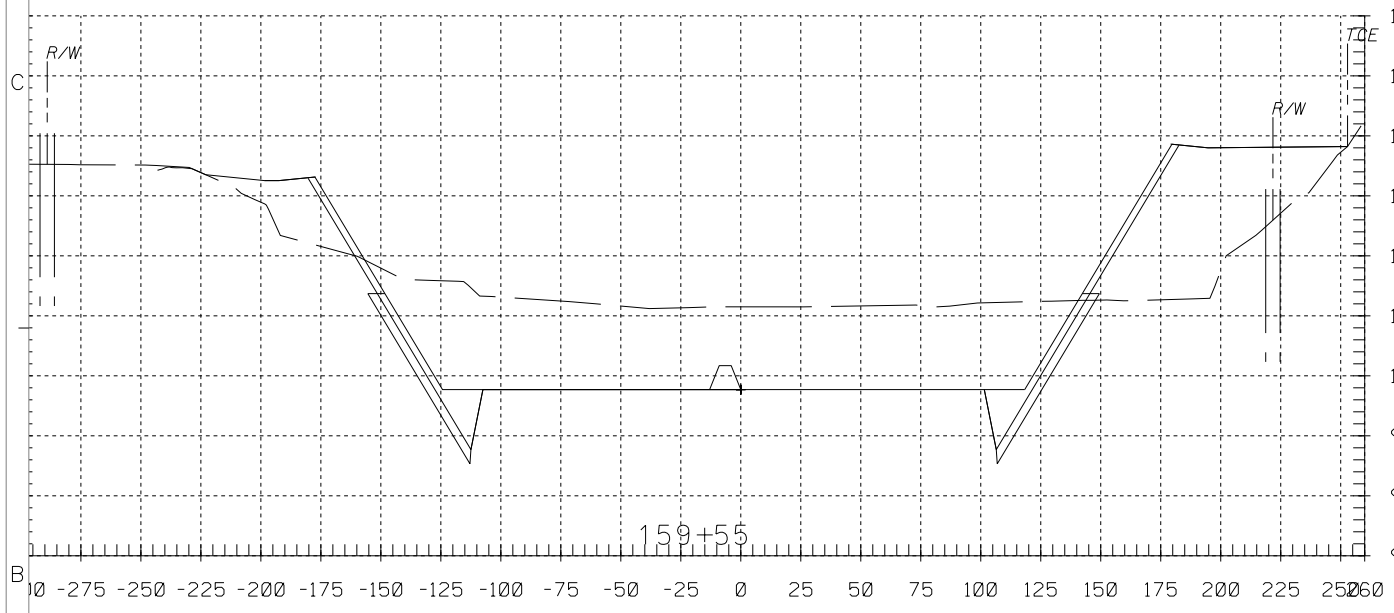
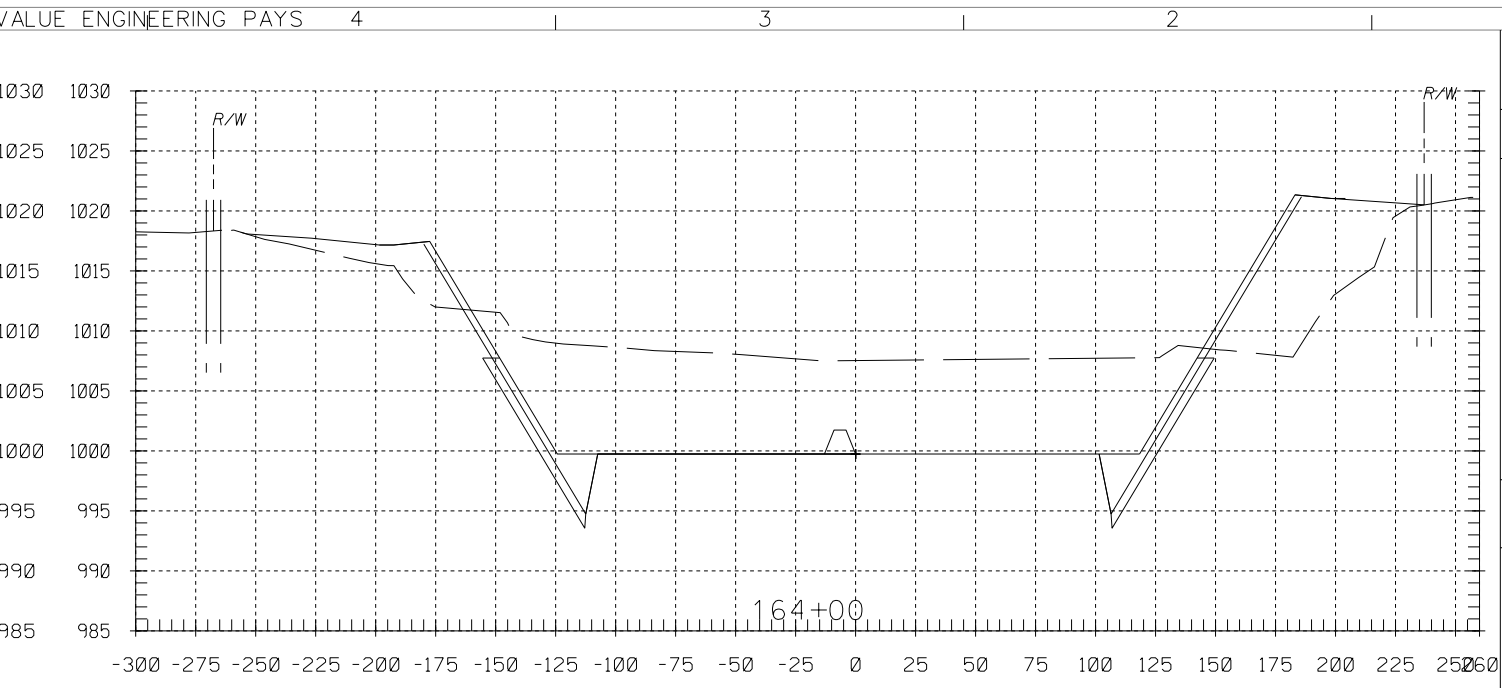
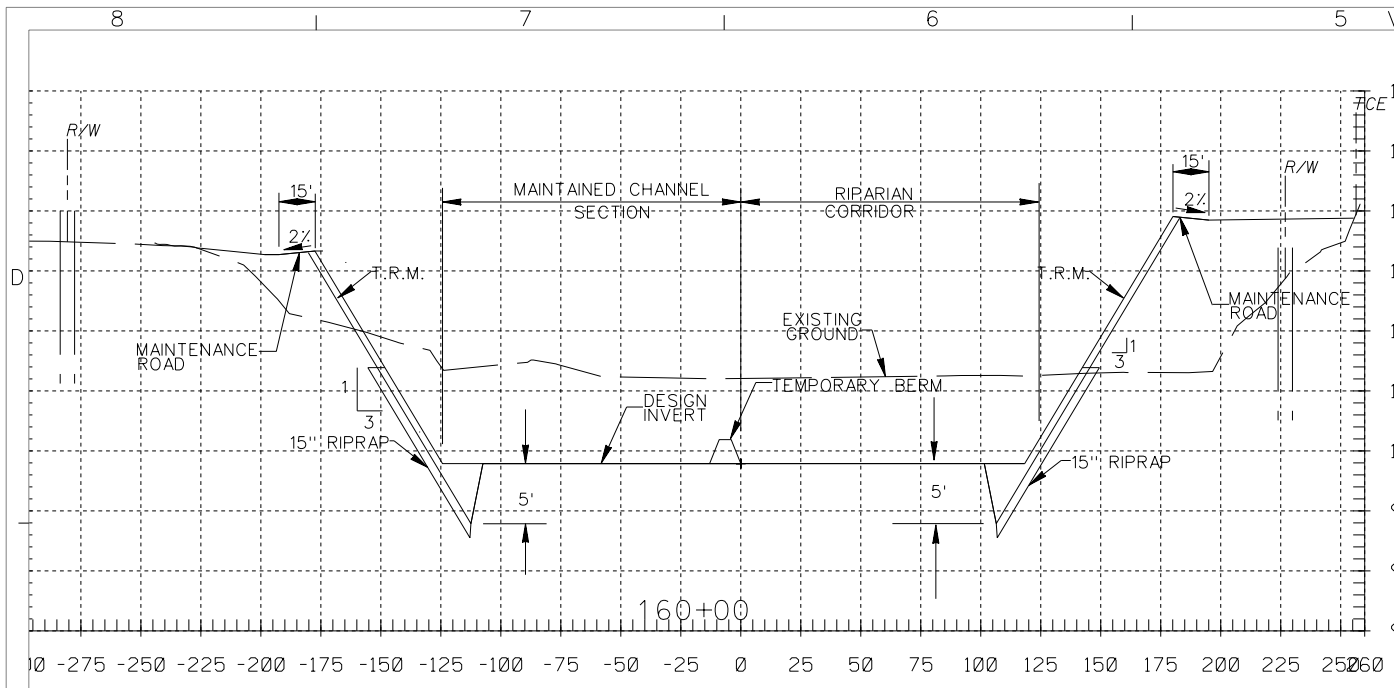


- GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.



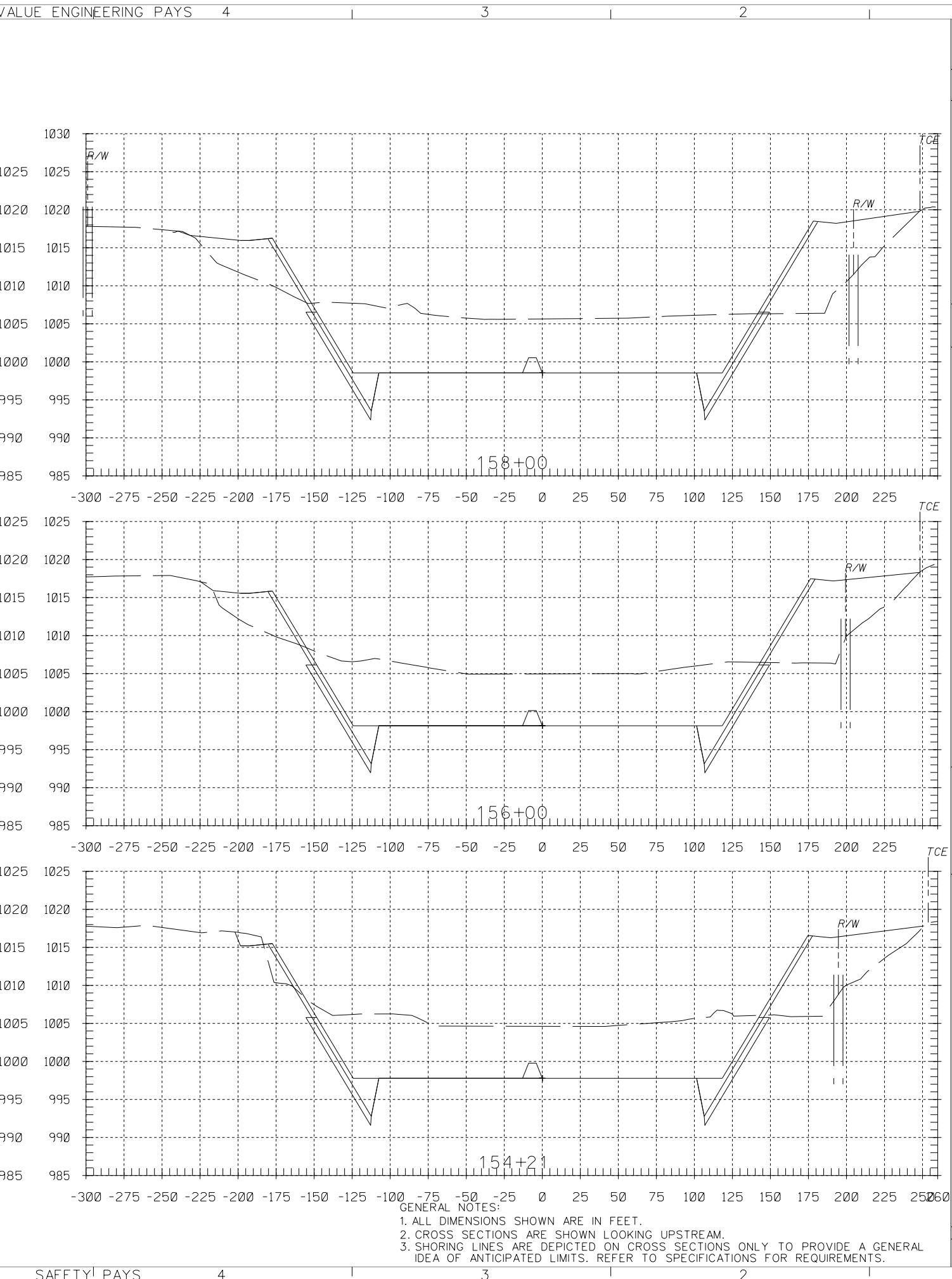
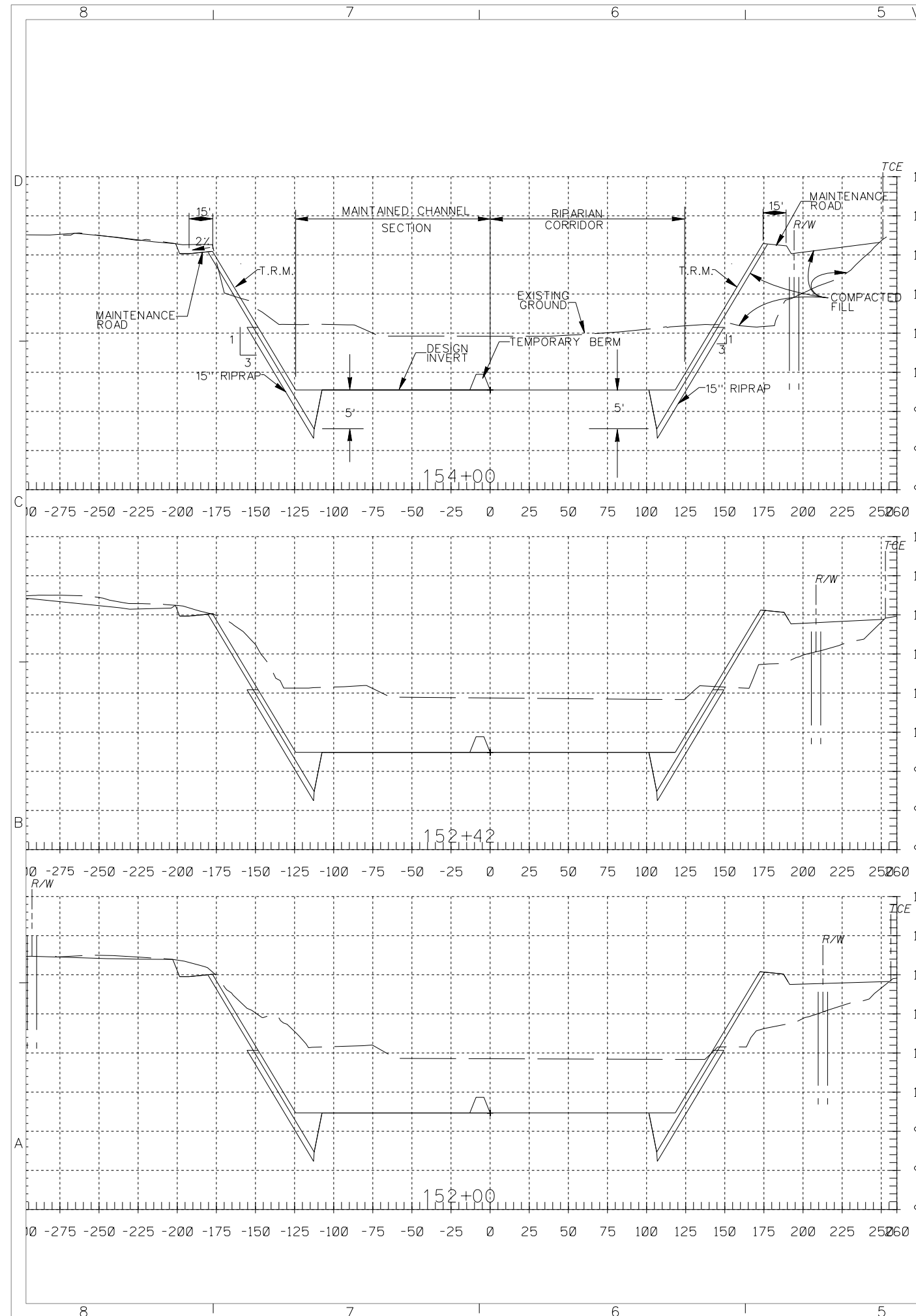
GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C18.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 172+00 TO STA 164+00	
DISTRICT FILE NO. 226/266		SPEC. NO. W912PL-15-B-0001		SYMBOL		REVISIONS	
DATE		APPROVAL		DATE		APPROVAL	



GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

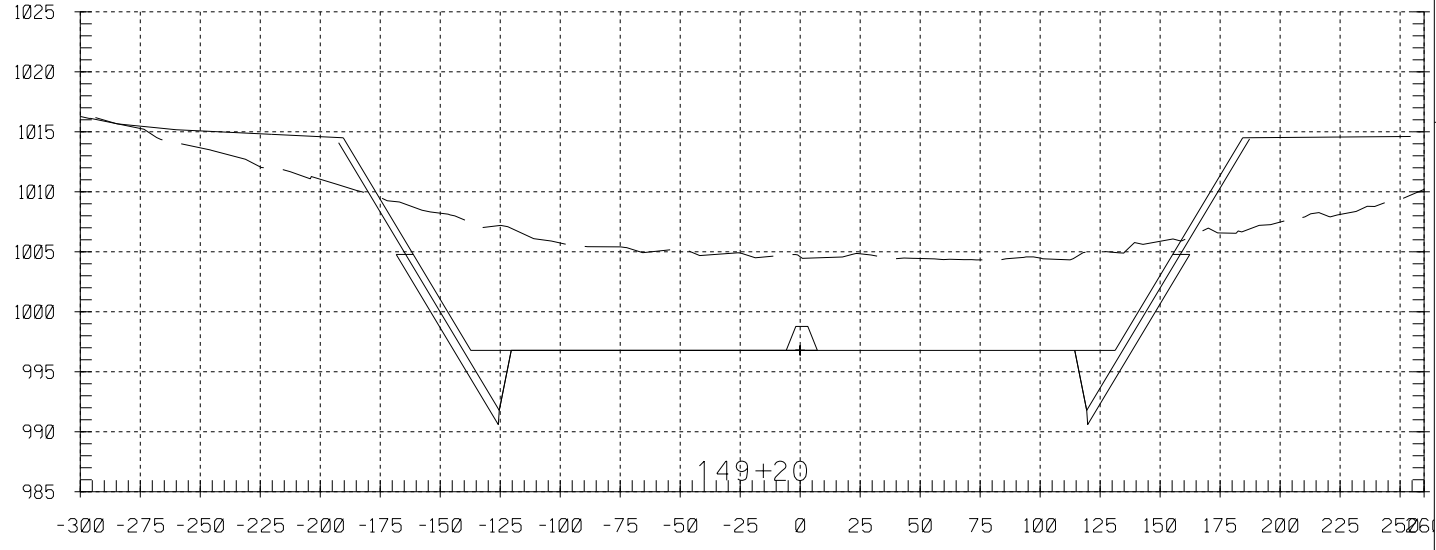
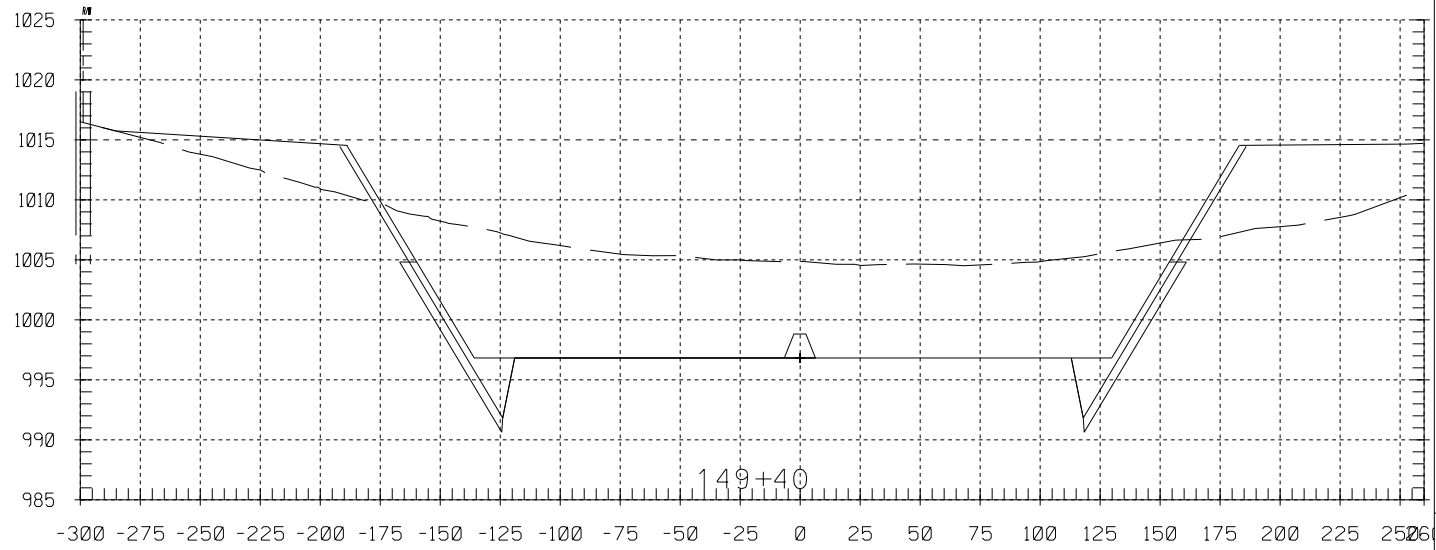
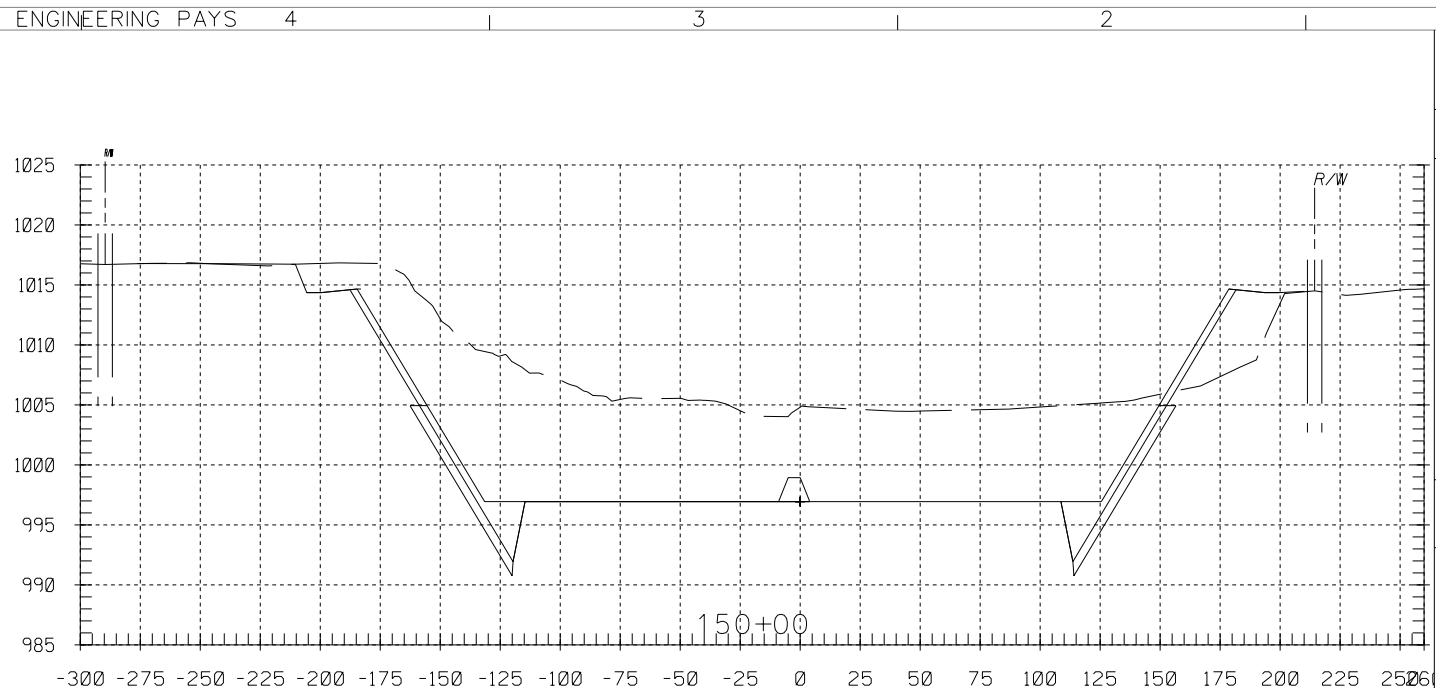
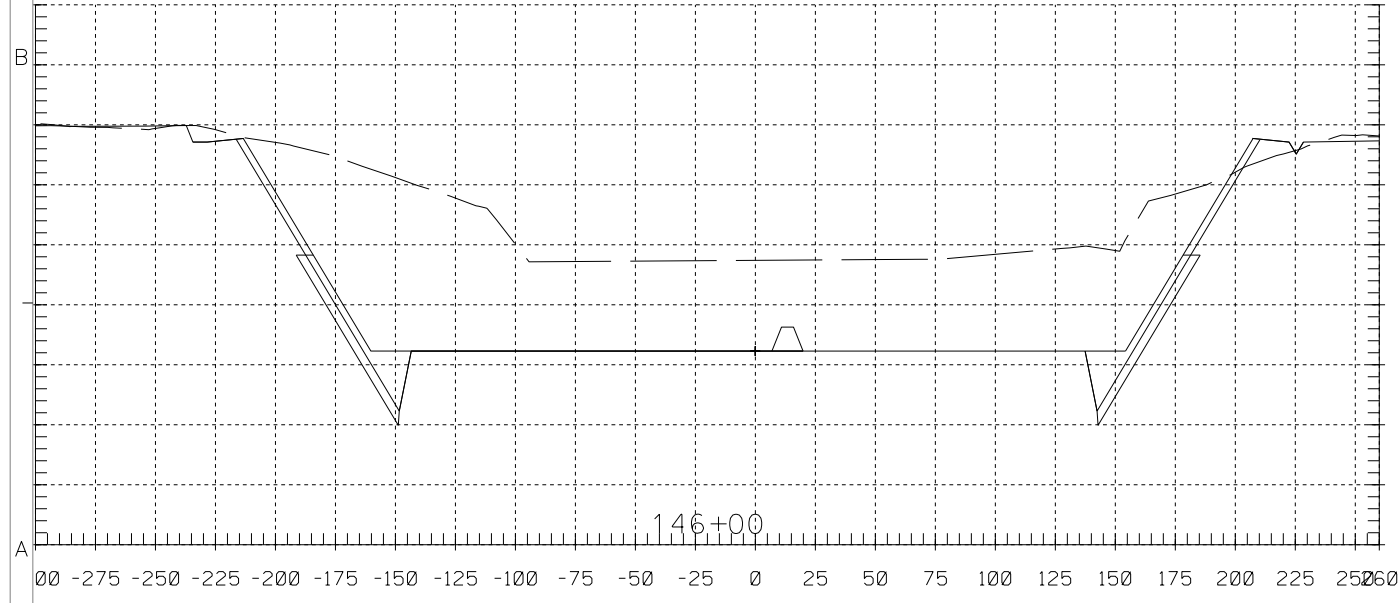
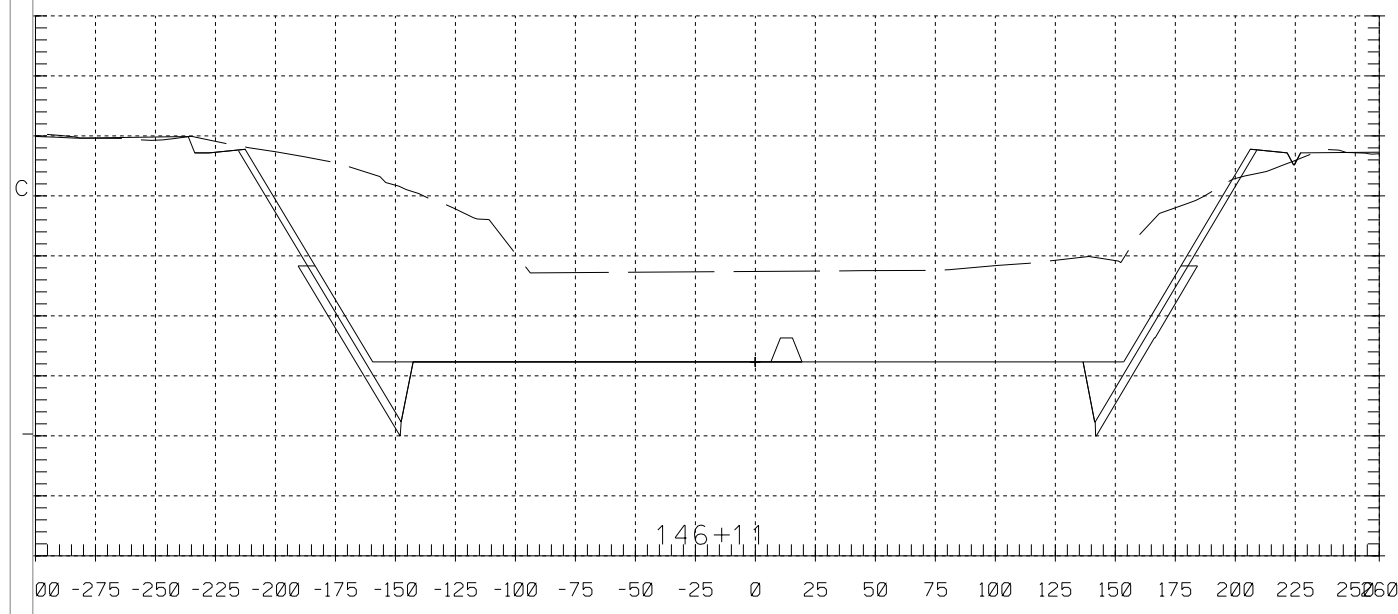
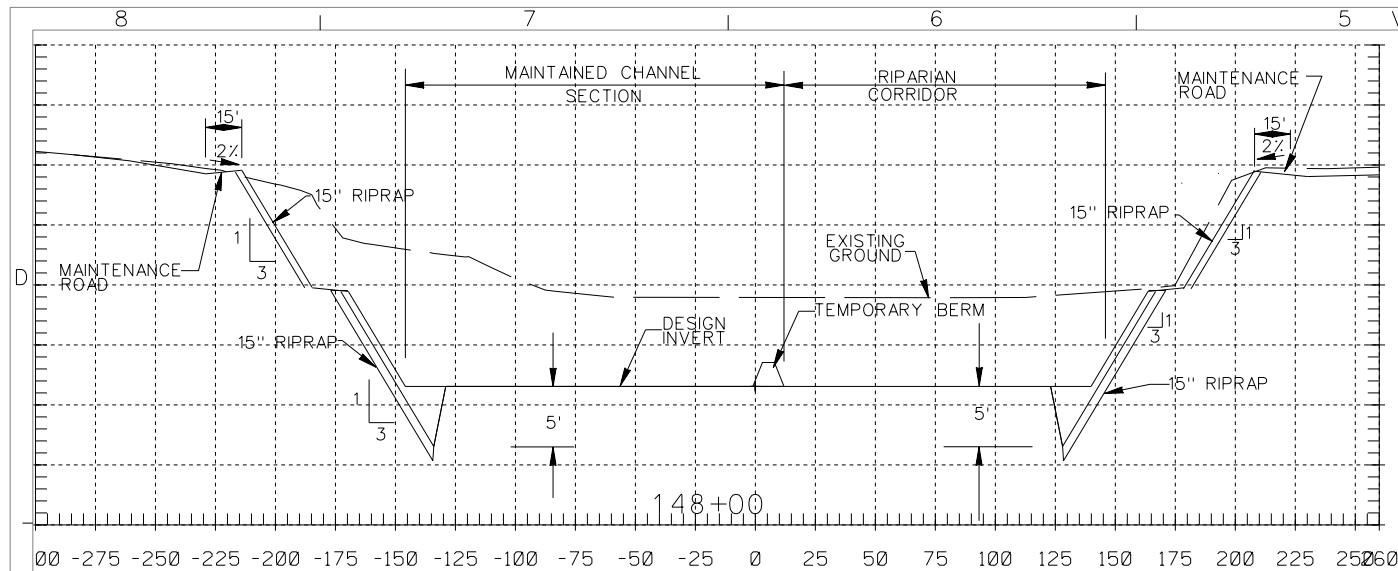
DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C19.DGN	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-15-B-0001		DISTRICT FILE NO. 226/267	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 164+00 TO 158+00		REVISIONS		DATE APPROVAL	
SYMBOL		DESCRIPTIONS		DATE APPROVAL		REVISIONS	



GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

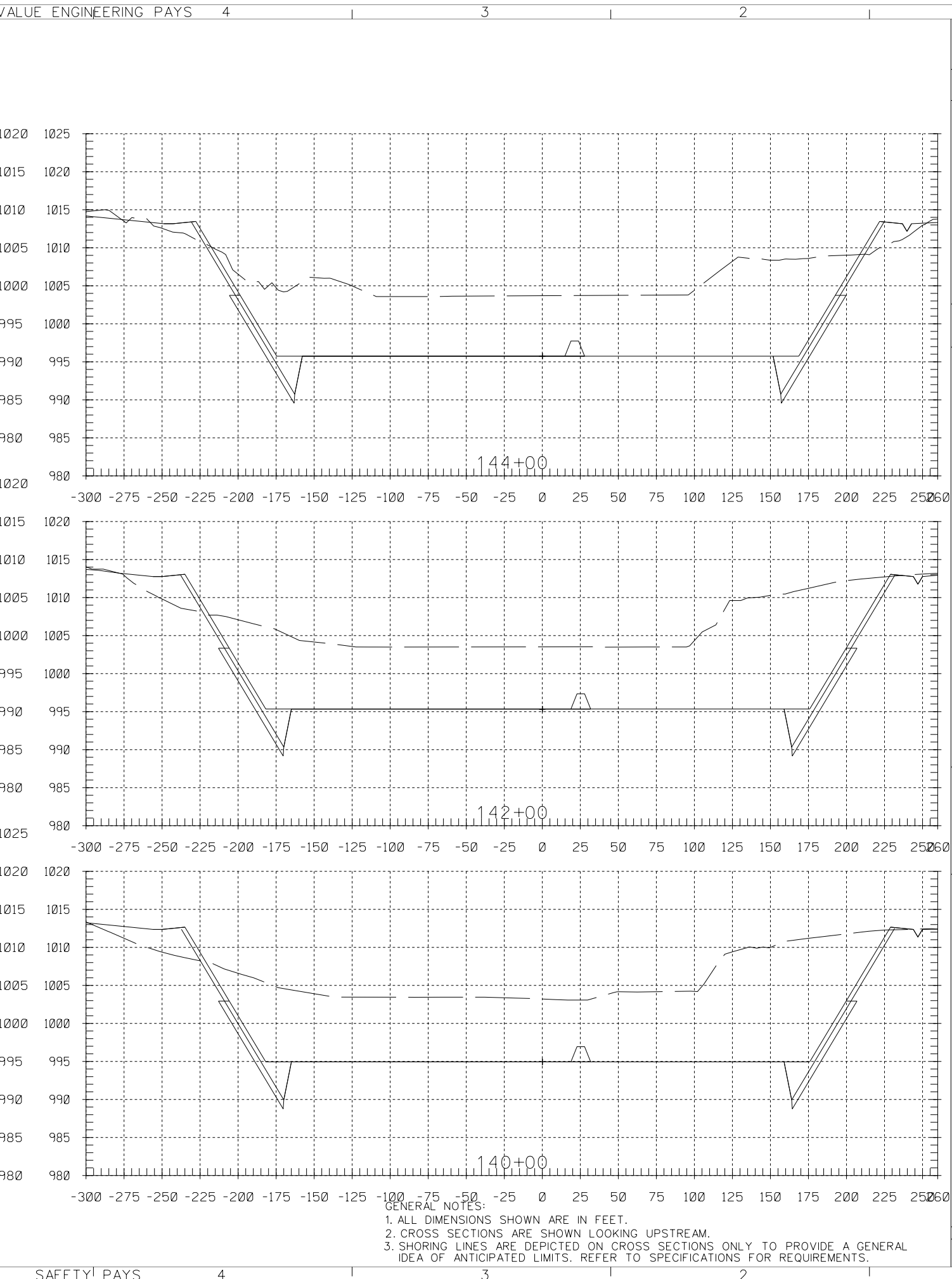
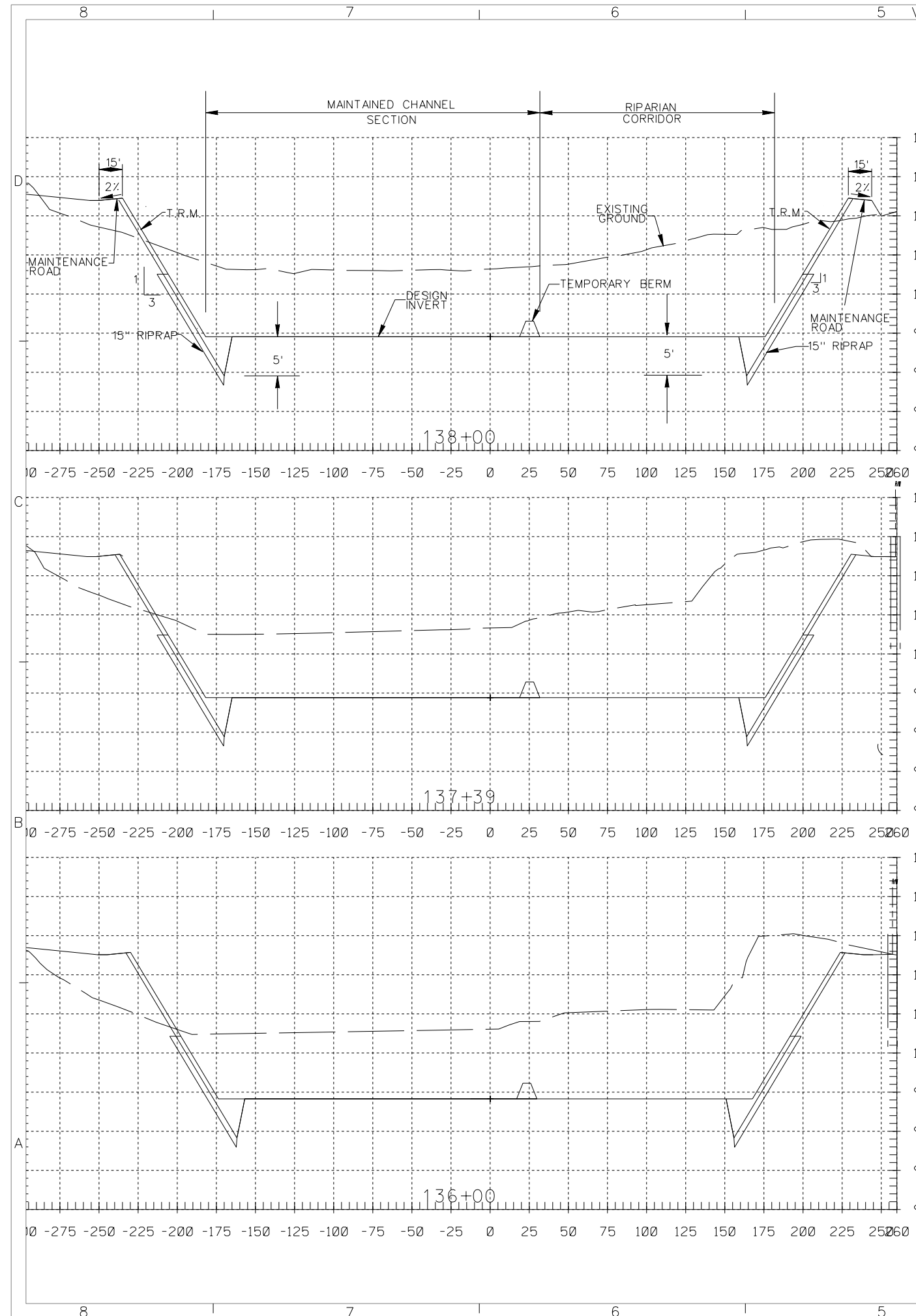
DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-15-B-0001	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 158+00 TO STA 150+00		FILE NAME: C20.DGN	
SYMBOL		DESCRIPTIONS		REVISIONS	
DATE		APPROVAL			

NOT
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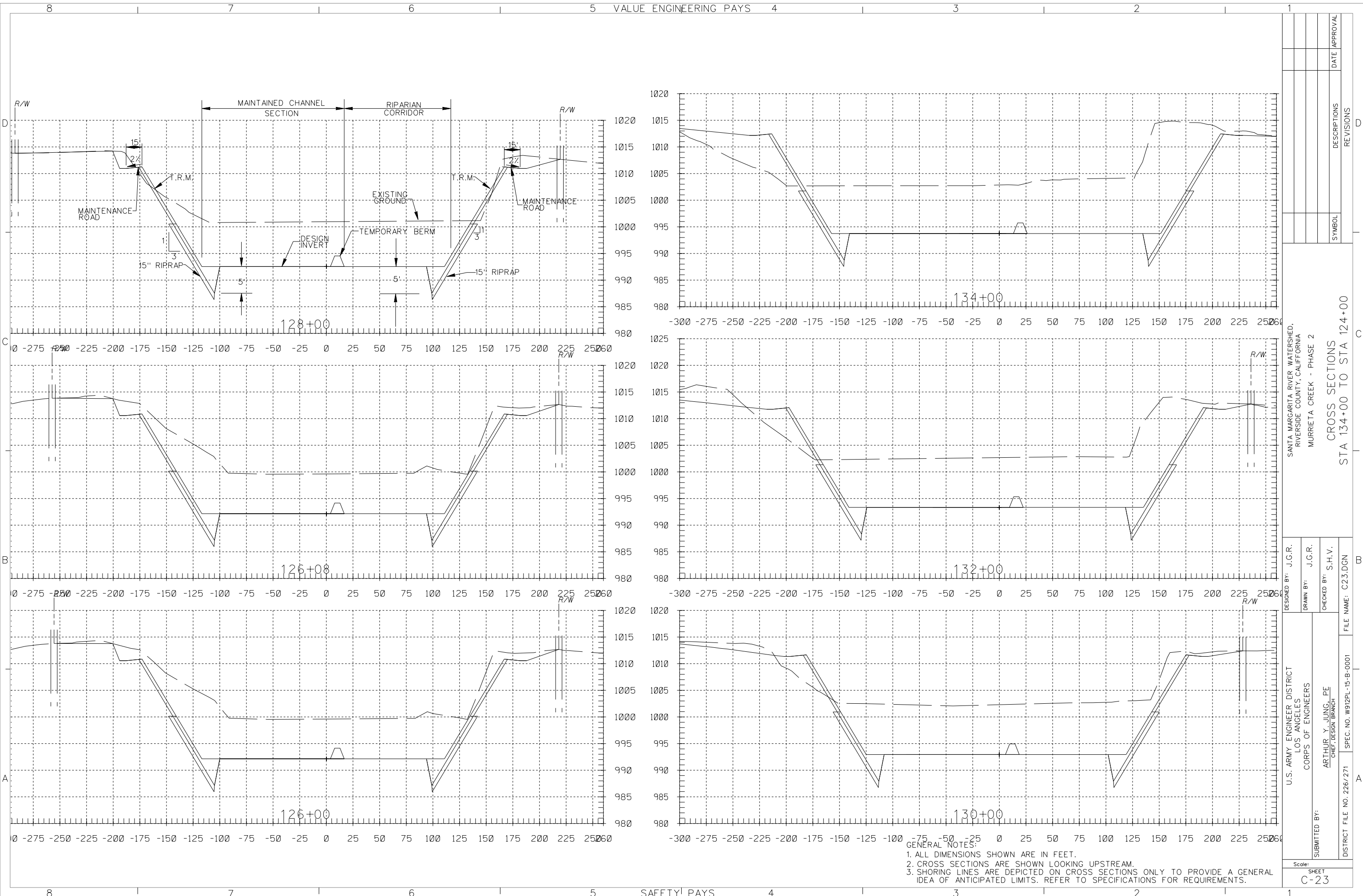
GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-15-B-0001	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA		MURRIETA CREEK - PHASE 2		FILE NAME: C21.DGN	
CROSS SECTIONS STA 150+00 TO 144+00		REVISIONS		DATE APPROVAL	
SYMBOL		DESCRIPTIONS		DATE APPROVAL	



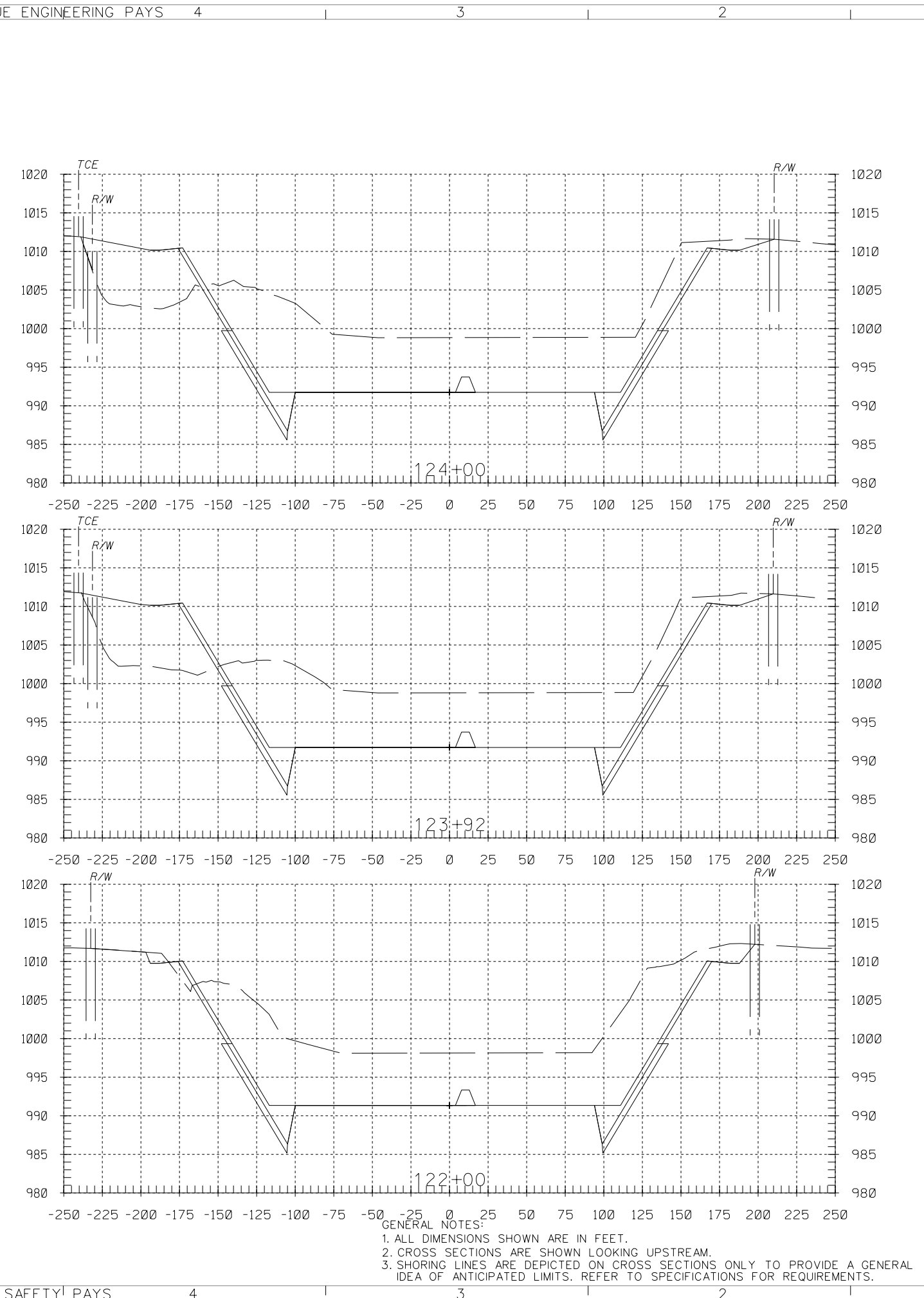
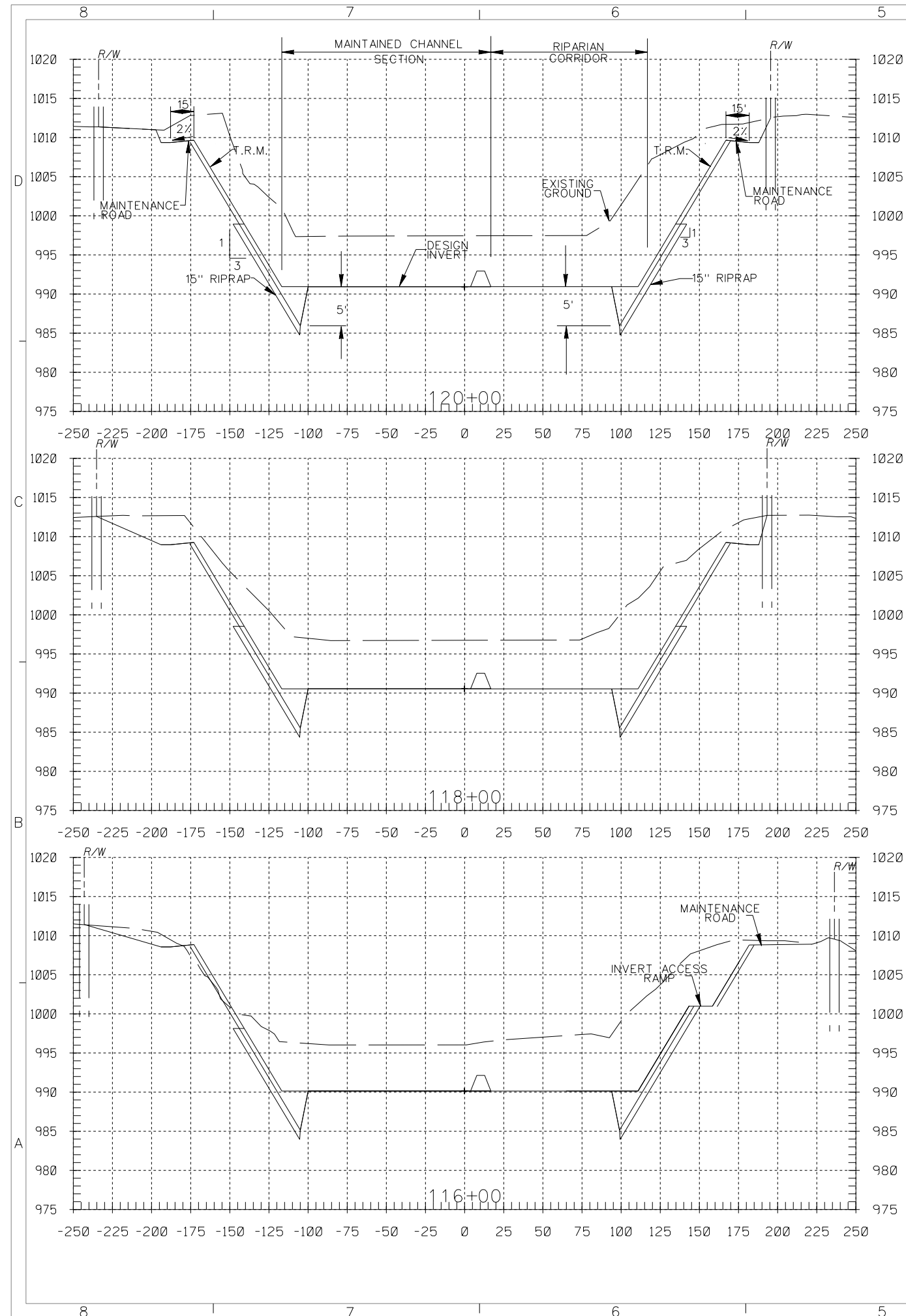
GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-15-B-0001	
SUBMITTED BY:		FILE NAME: C22.DGN		DISTRICT FILE NO. 226/270	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 144+00 TO 134+00		SYMBOL	
DATE		APPROVAL		REVISIONS	



GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.C.R.		DRAWN BY: J.C.R.		CHECKED BY: S.H.V.		FILE NAME: C23.DGN	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/271		SPEC. NO. W912PL-15-B-0001	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA		MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 134+00 TO STA 124+00		REVISIONS	
SYMBOL		DESCRIPTIONS		DATE		APPROVAL	

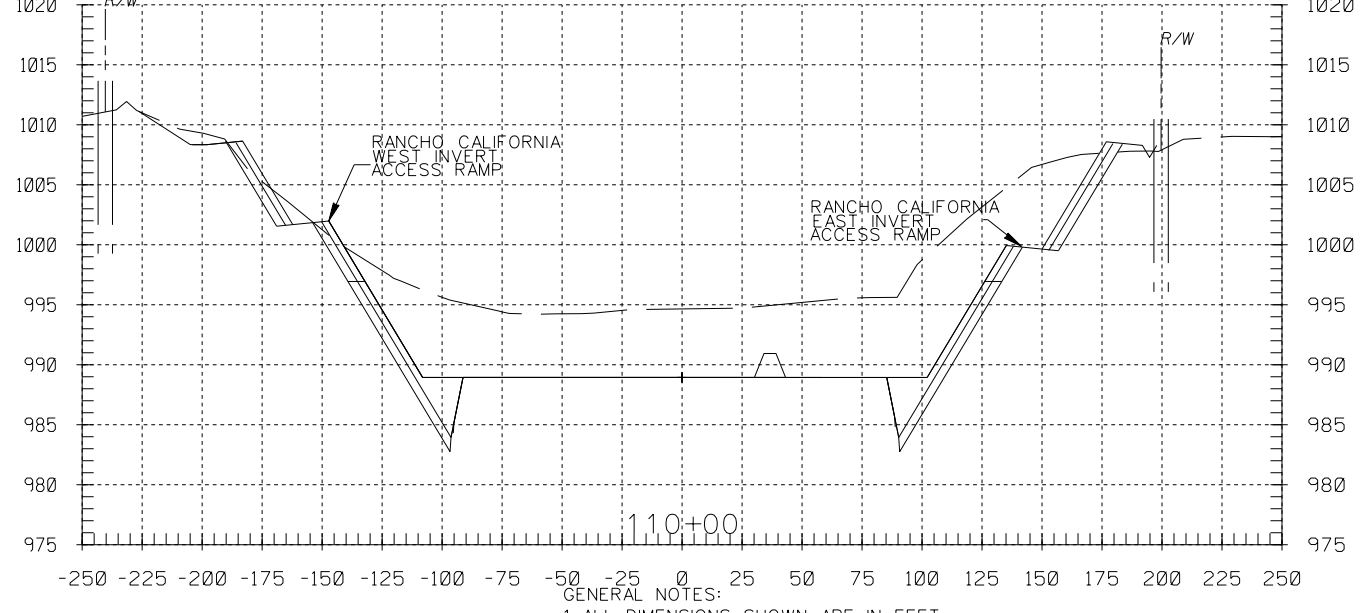
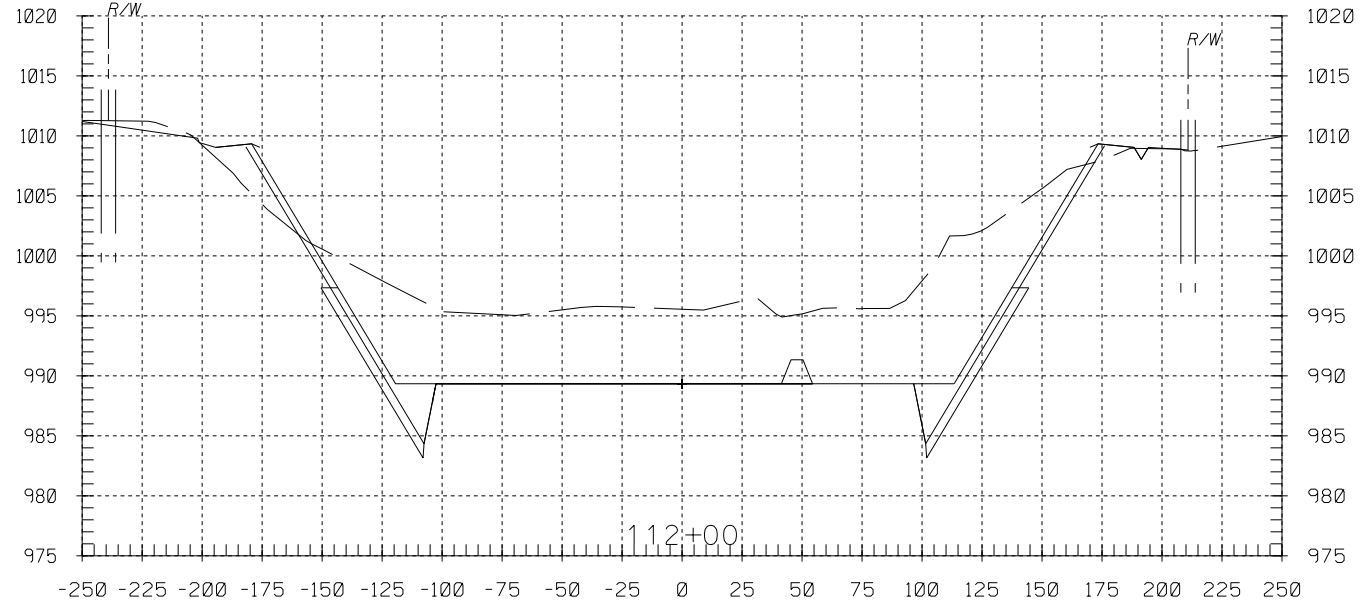
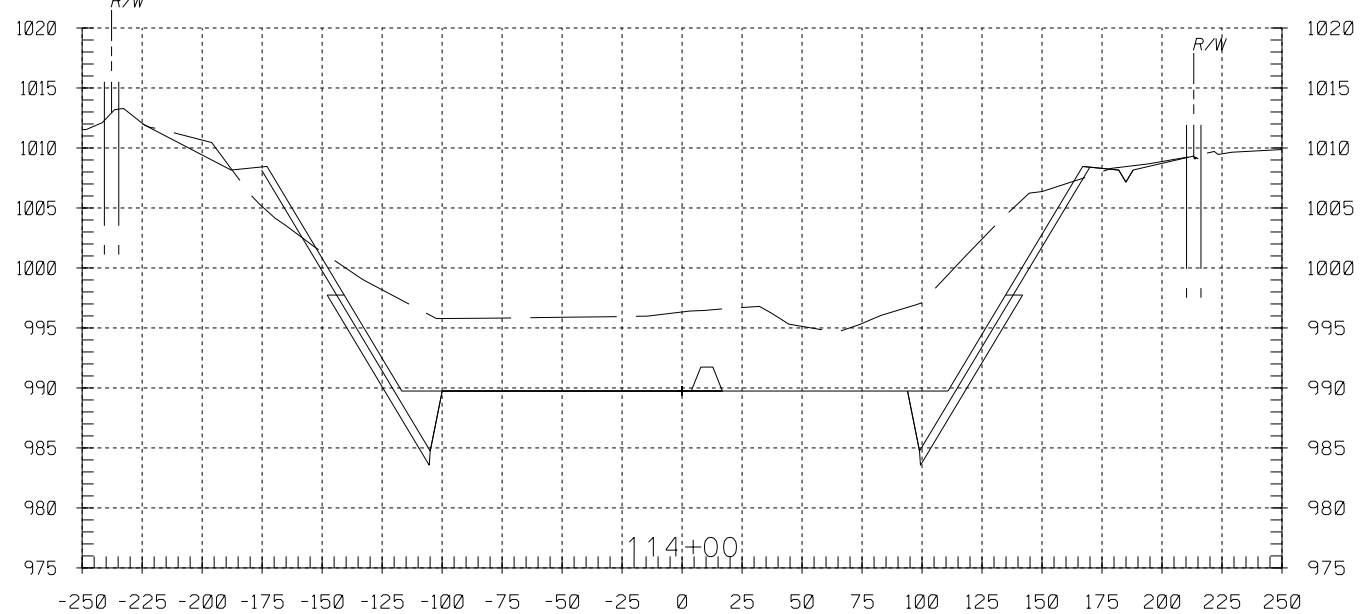
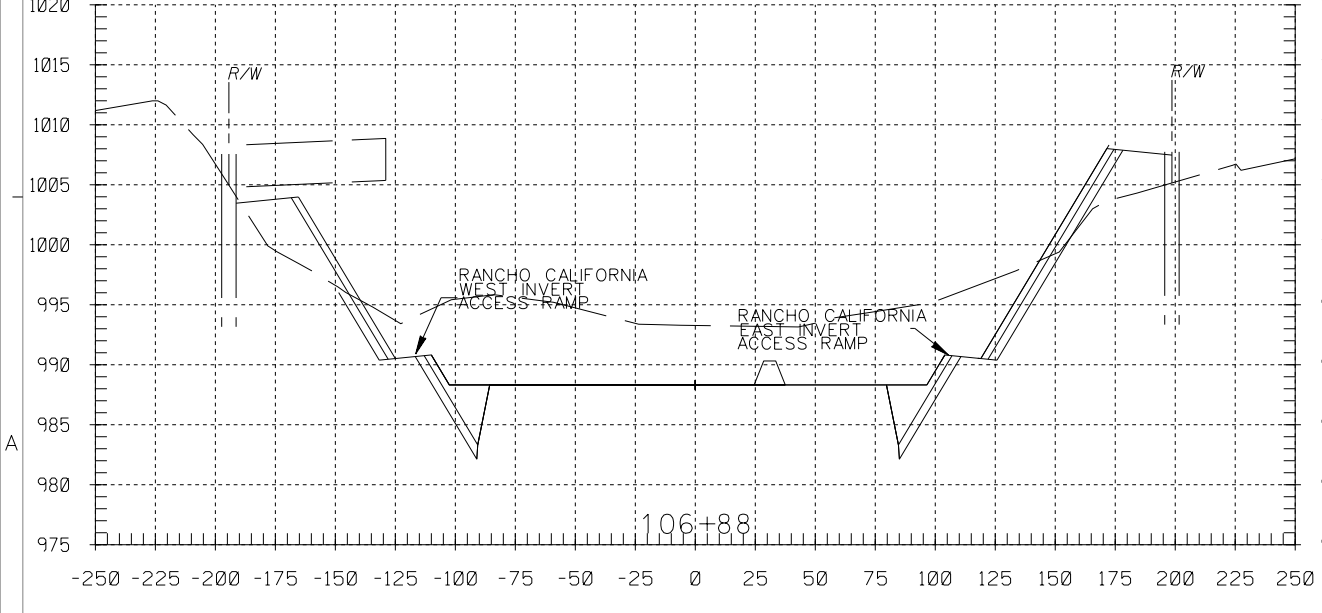
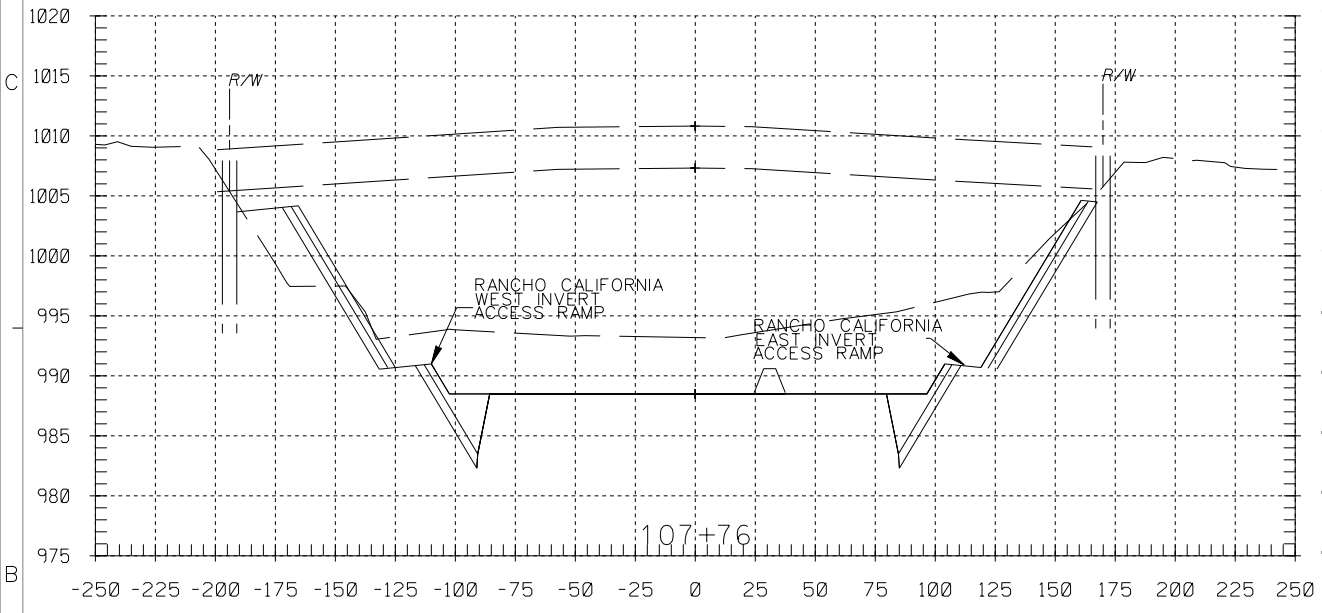
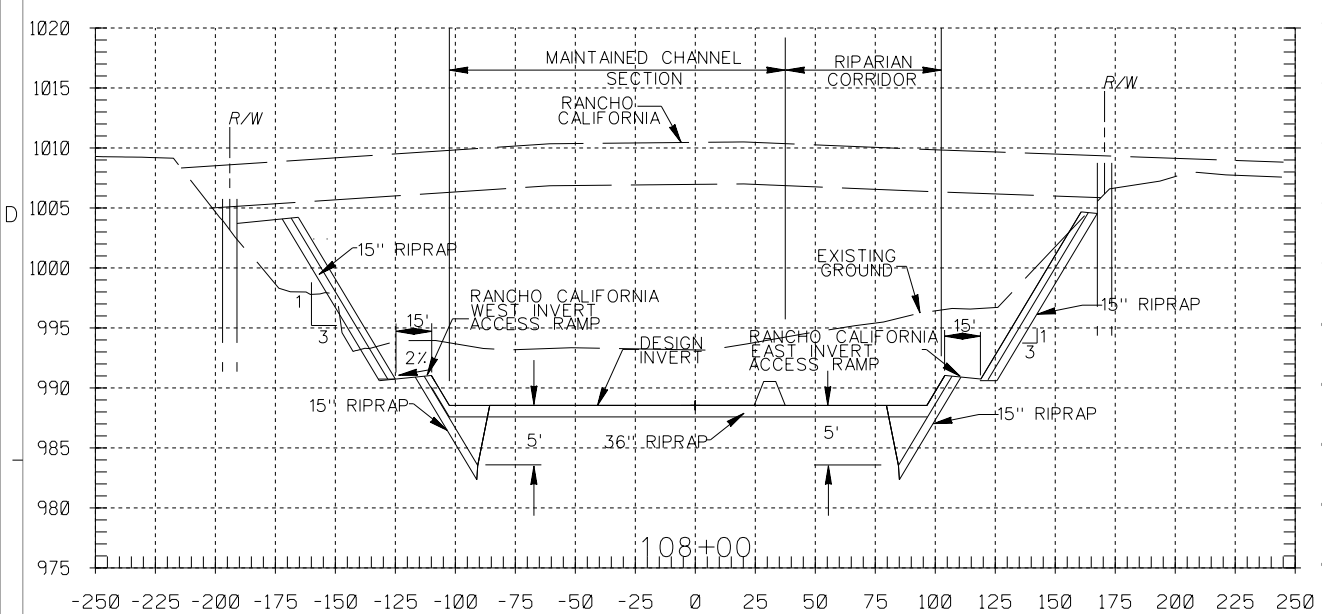


GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C24.DGN	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/272		SPEC. NO. W912PL-15-B-0001	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 124+00 TO STA 114+00		SYMBOL		DESCRIPTIONS REVISIONS	
				DATE		APPROVAL	

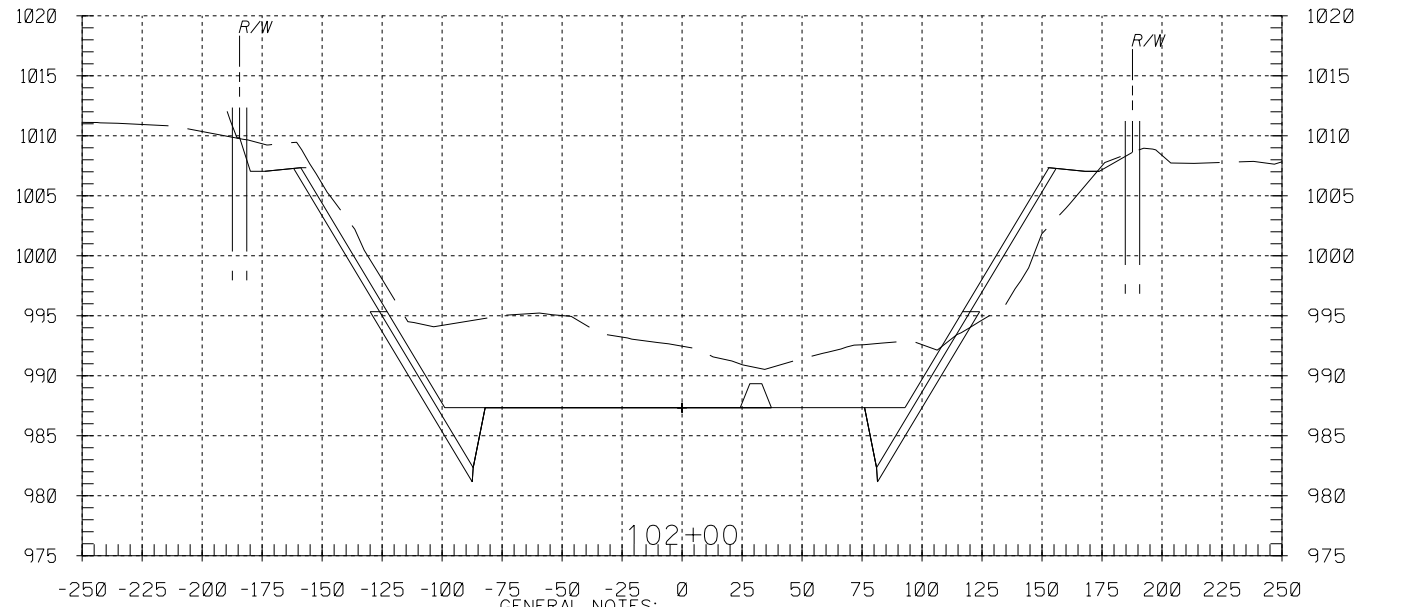
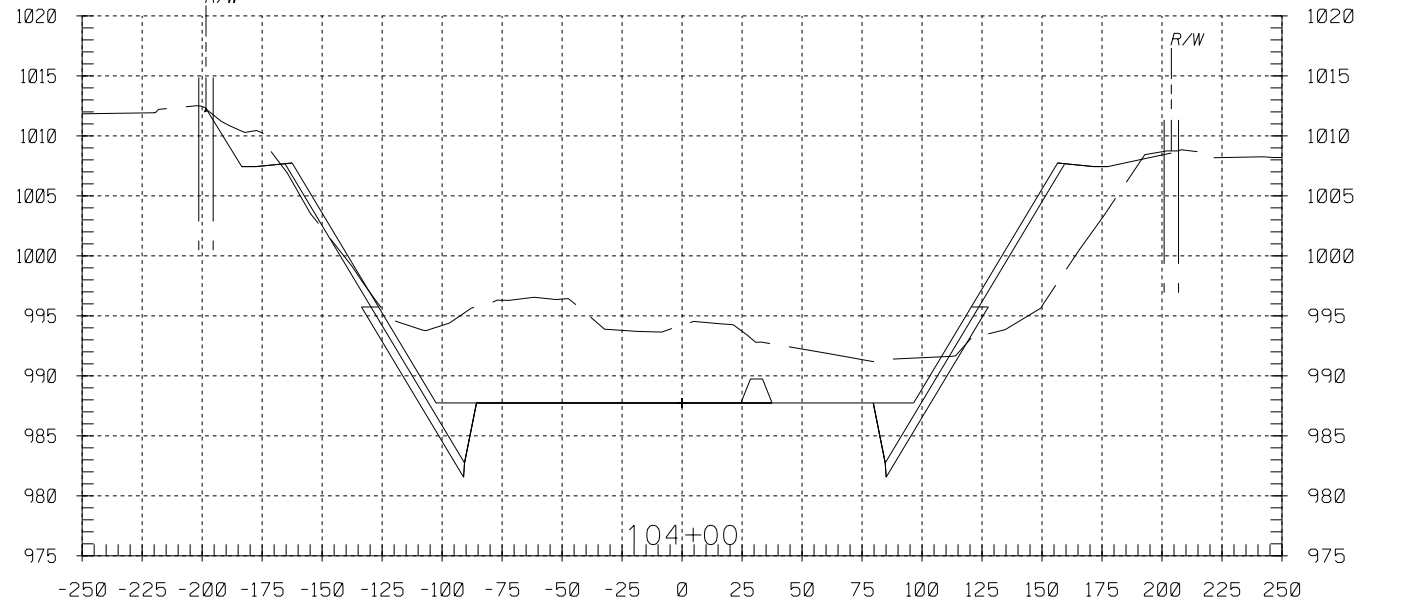
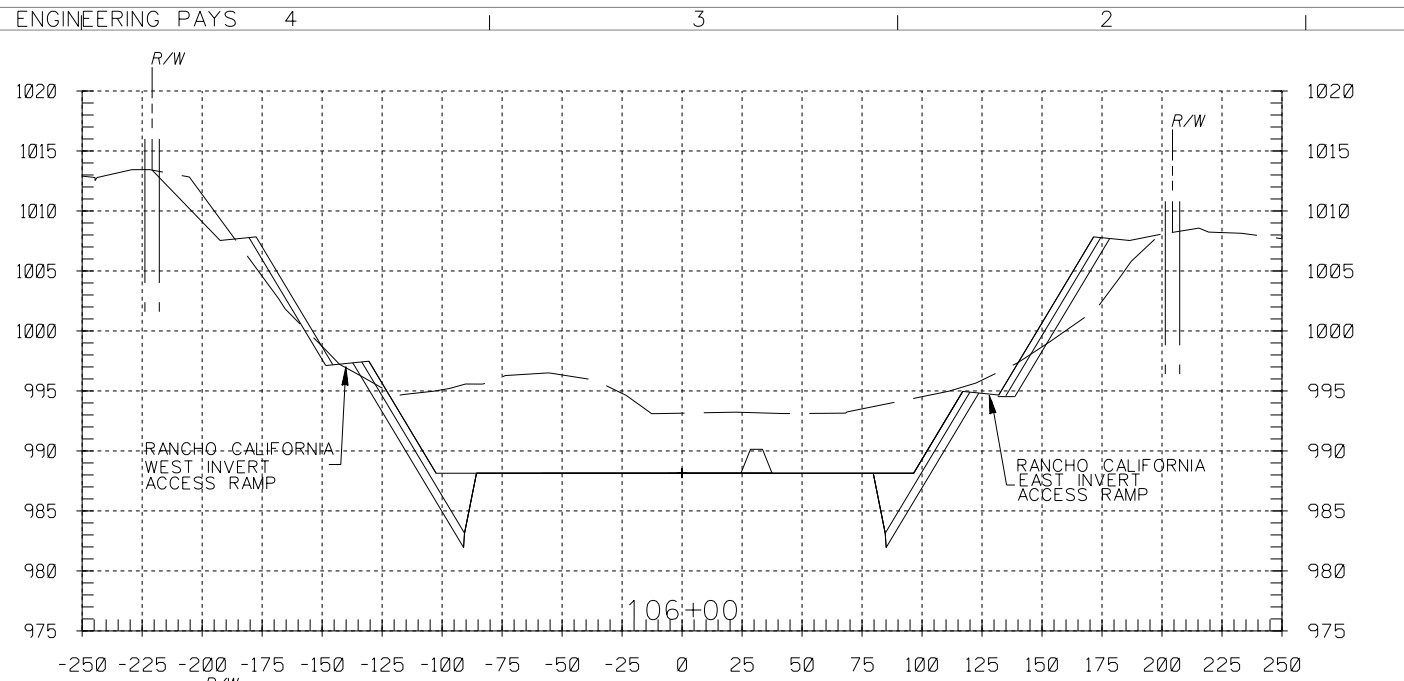
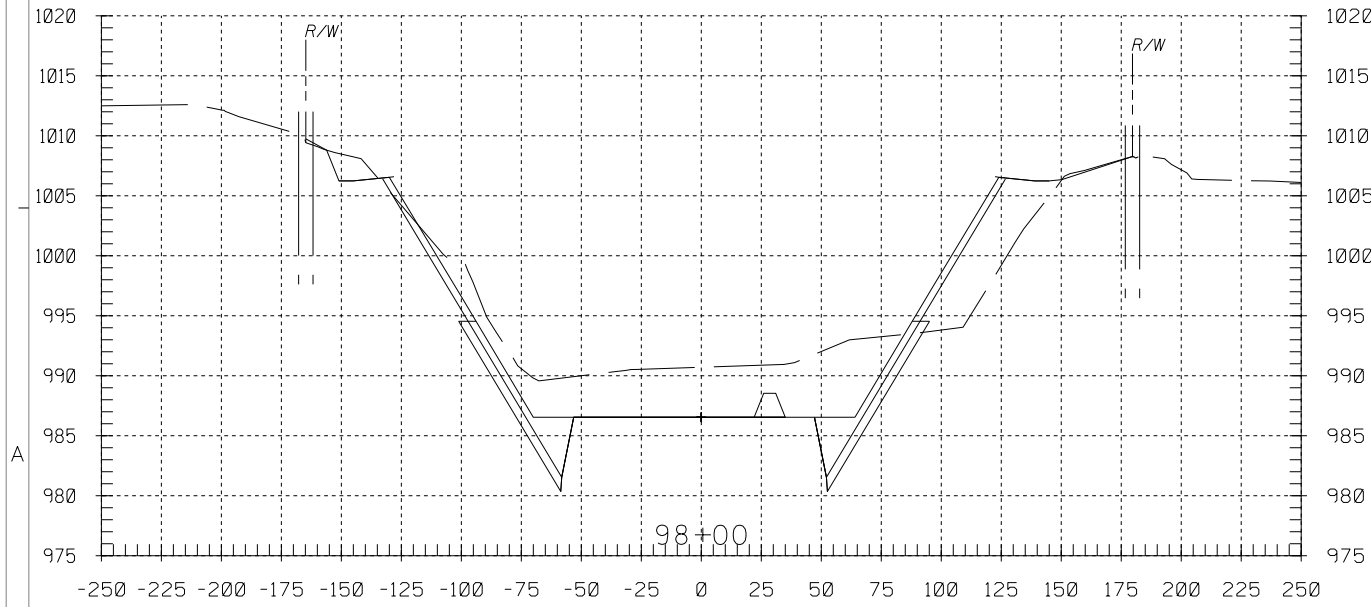
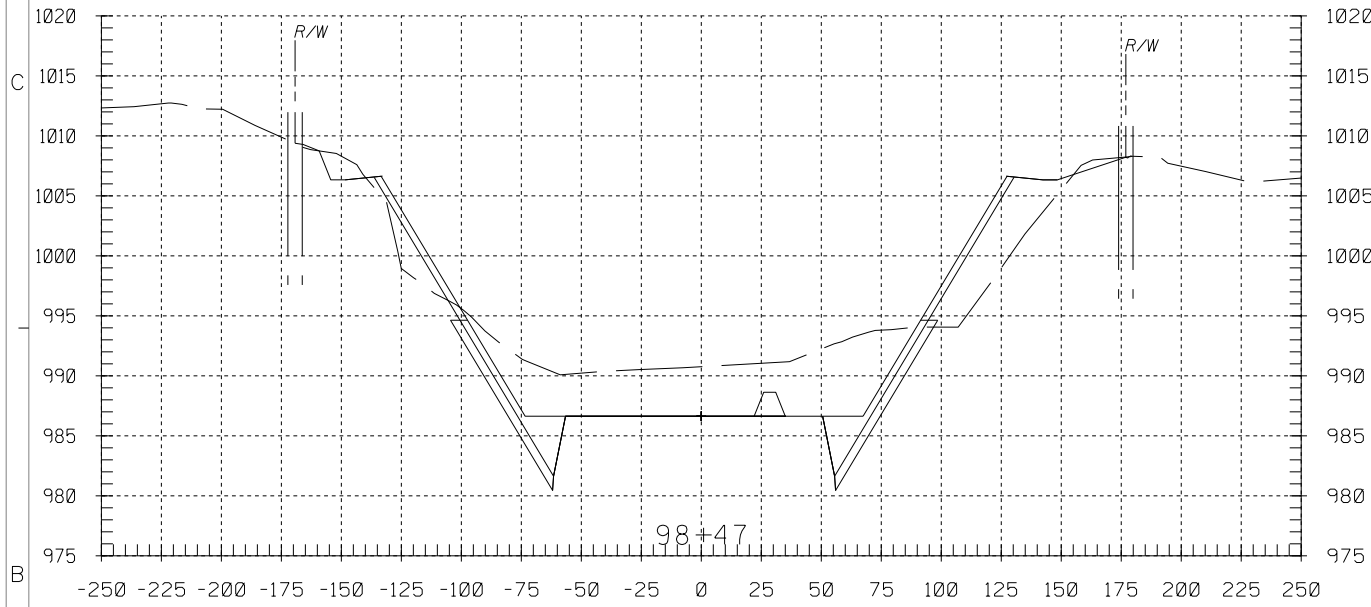
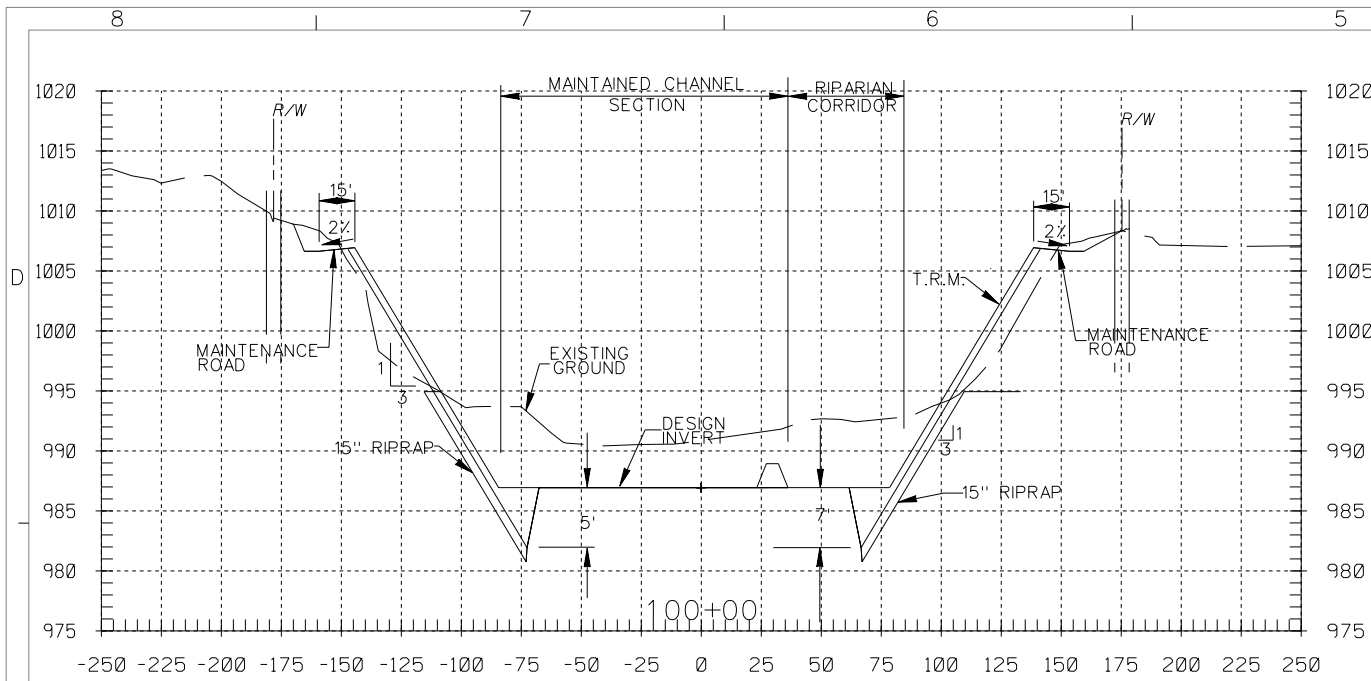
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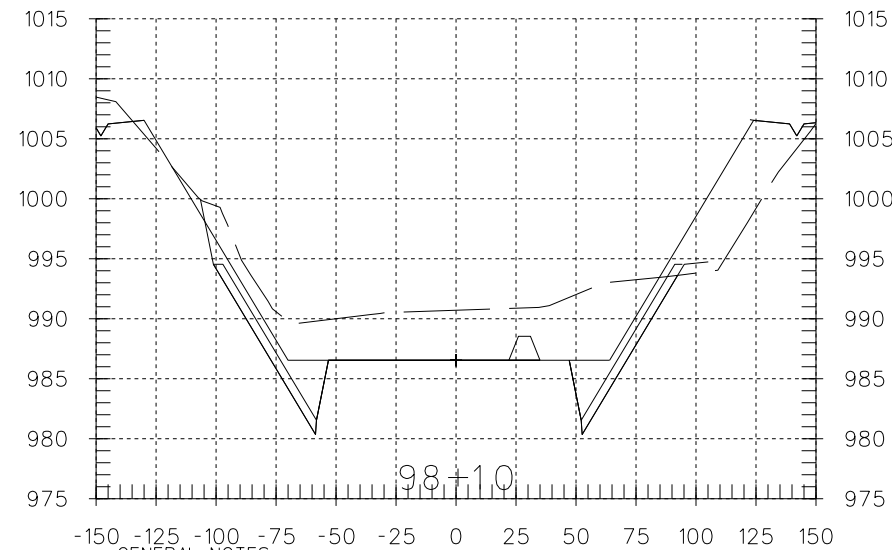
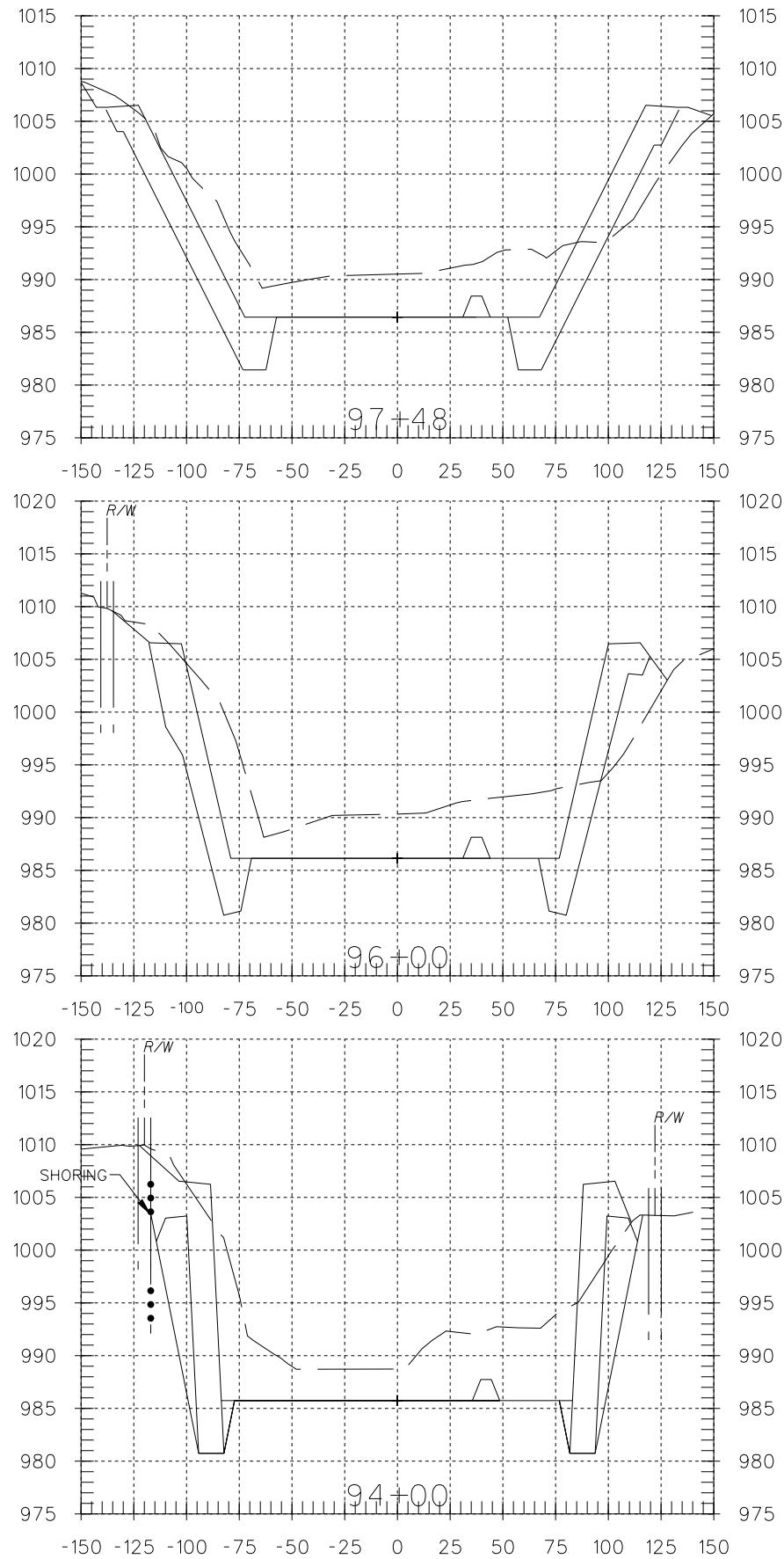
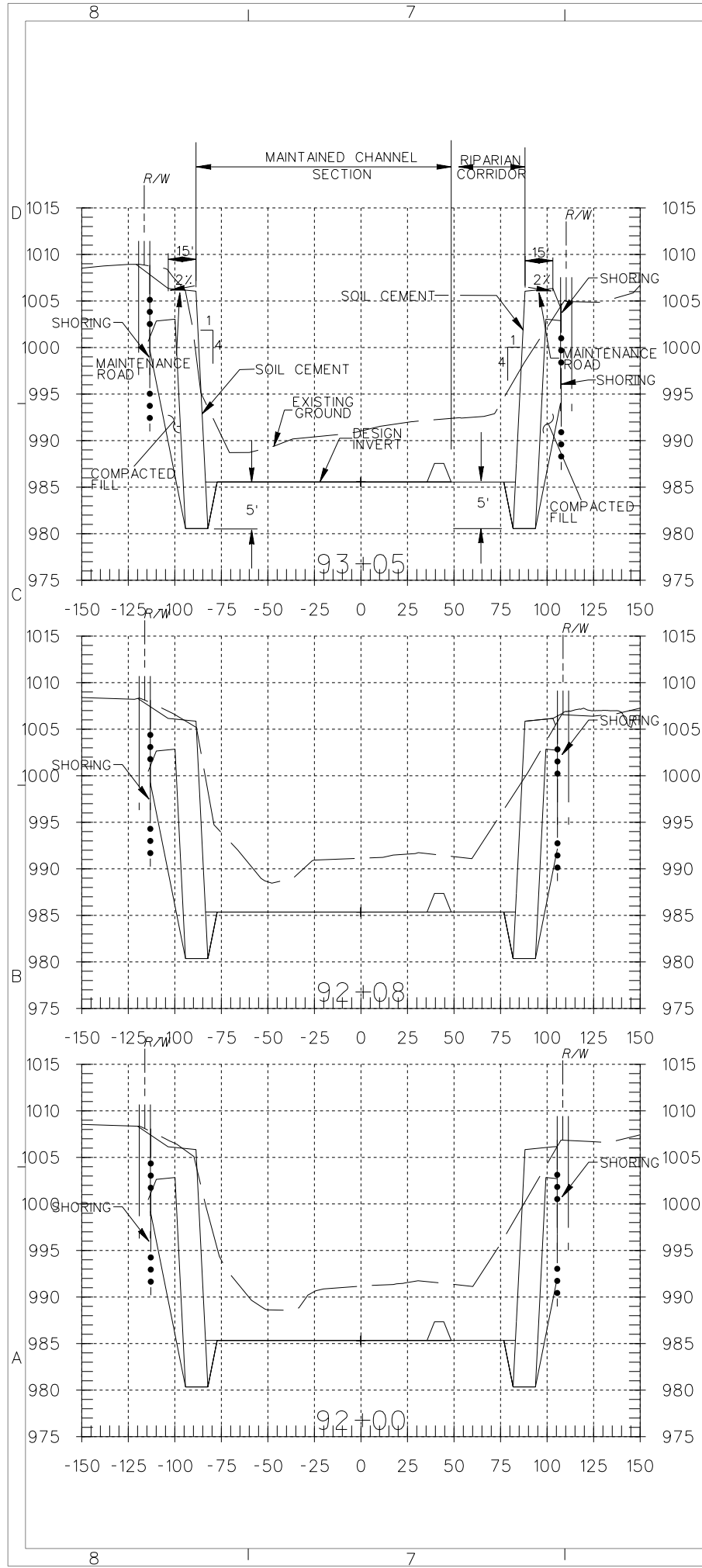
- GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	FILE NAME: C25.DGN
DRAWN BY: J.G.R.	SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	DISTRICT FILE NO. 226/273
CHECKED BY: S.H.V.		SPEC. NO. W912PL-15-B-0001
DATE APPROVAL	REVISIONS	CROSS SECTIONS STA 114+00 TO STA 106+00
SYMBOL		
DESCRIPTIONS		



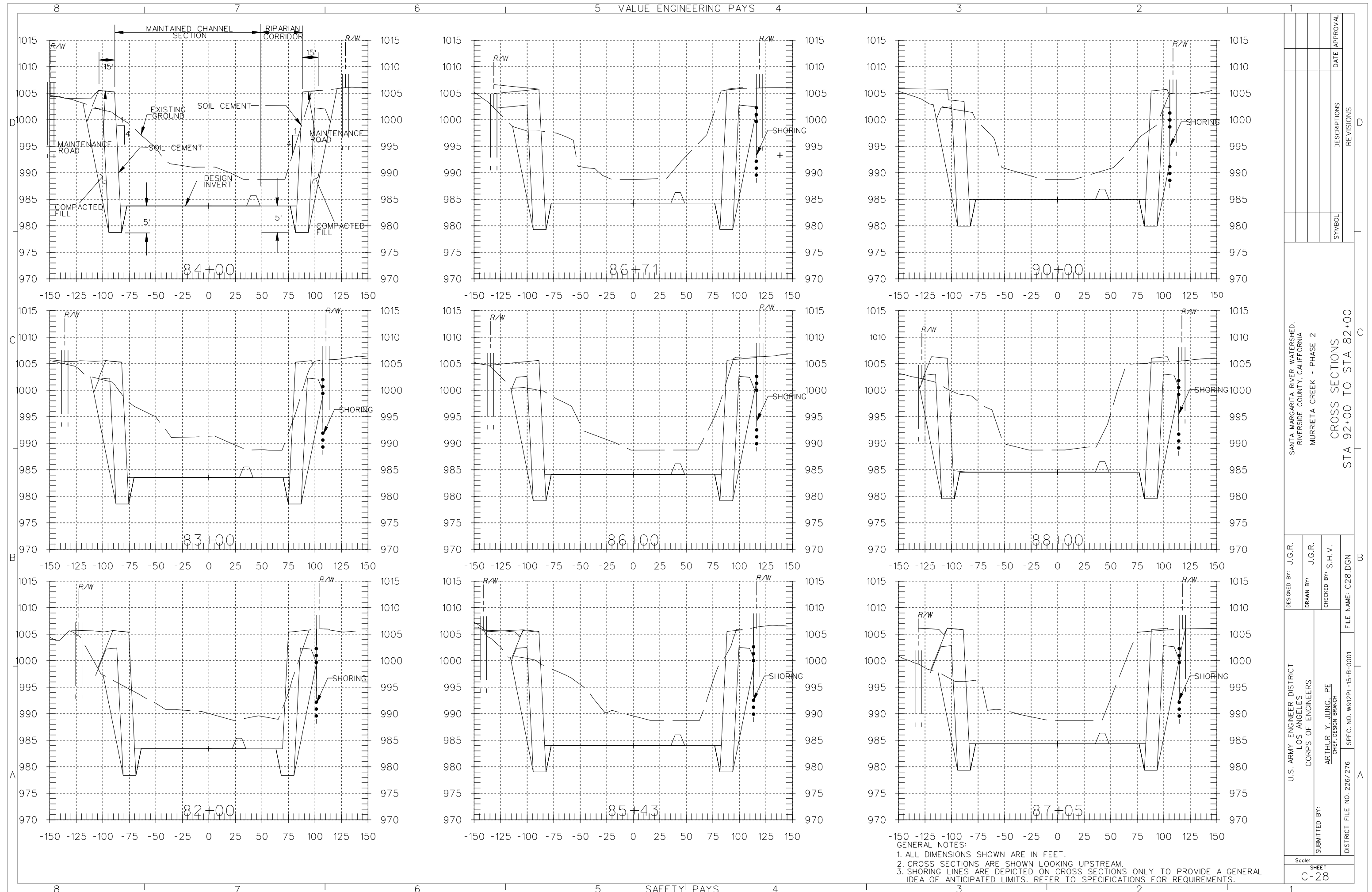
GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C26.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 106+00 TO STA 98+00	
DISTRICT FILE NO. 226/274		SPEC. NO. W912PL-15-B-0001		SYMBOL		REVISIONS	
Scale: SHEET C-26		DATE		APPROVAL		D	



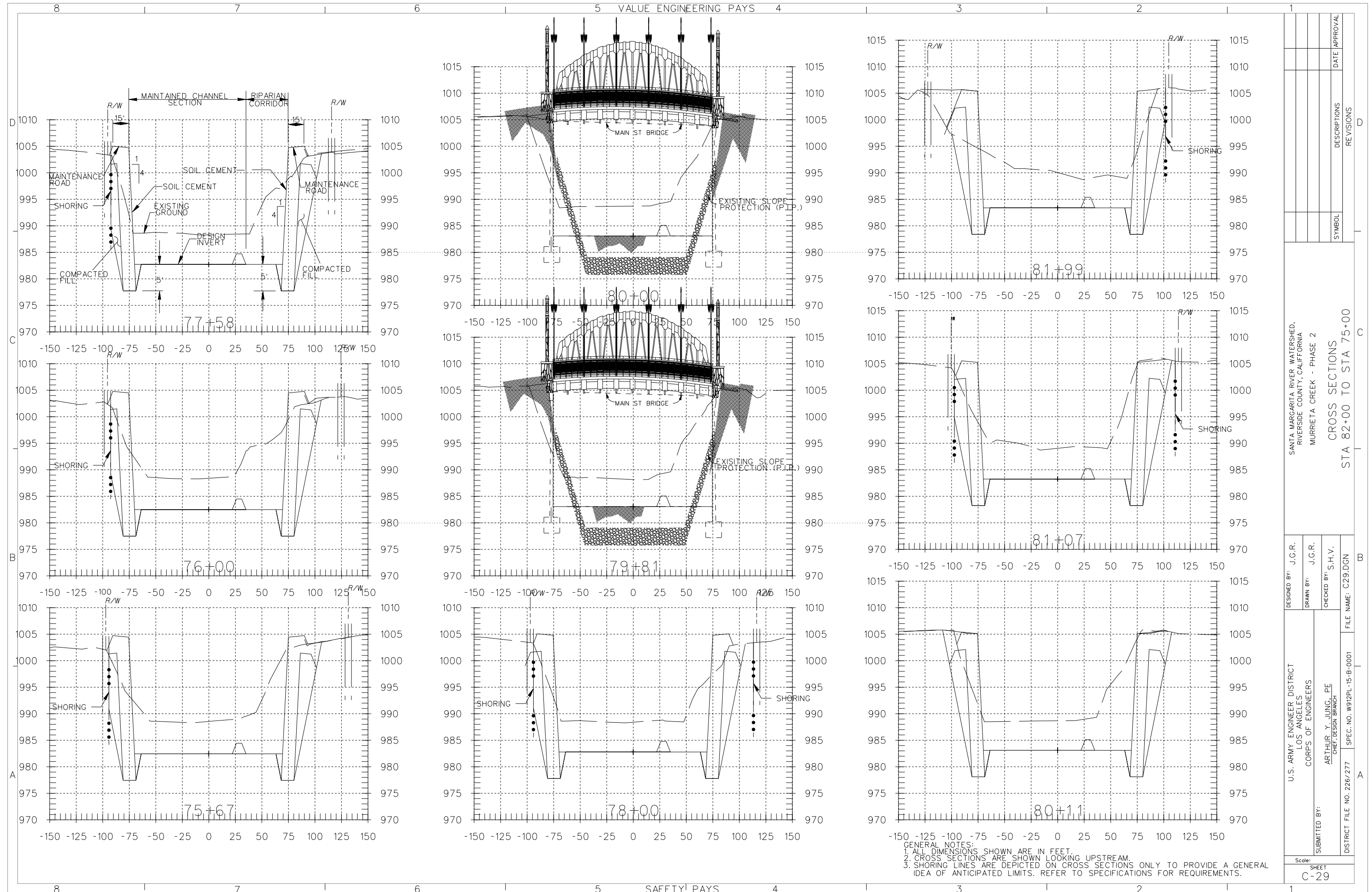
GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C27.DGN	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/275		SPEC. NO. W912PL-15-B-0001	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA		MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 98+00 TO STA 92+00		REVISIONS	
SYMBOL		DATE		APPROVAL			



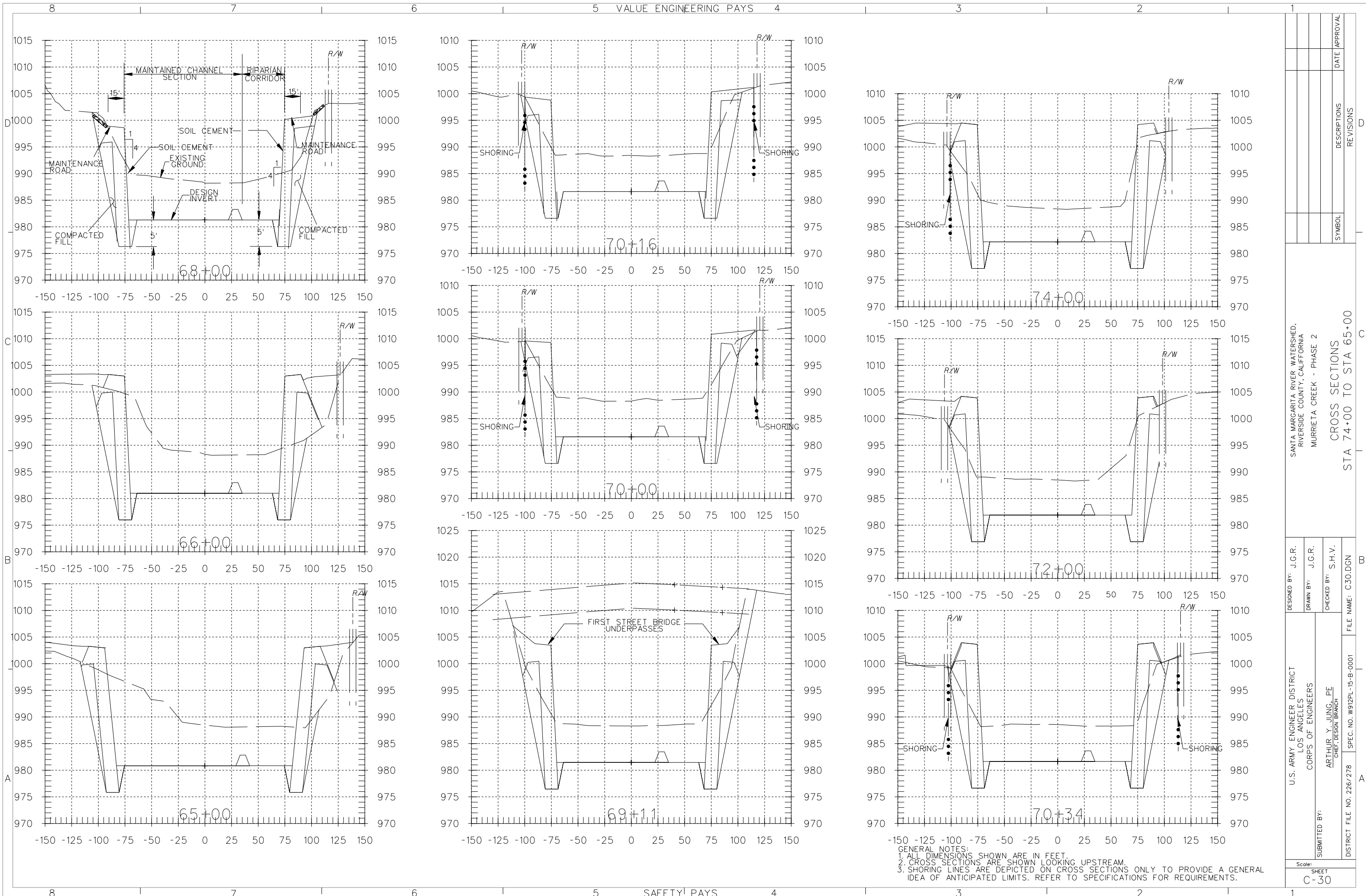
GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C28.DGN	
SUBMITTED BY: U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-15-B-0001		DISTRICT FILE NO. 226/276	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 92+00 TO STA 82+00		REVISIONS		DATE APPROVAL	
Scale:		SHEET		C-28			

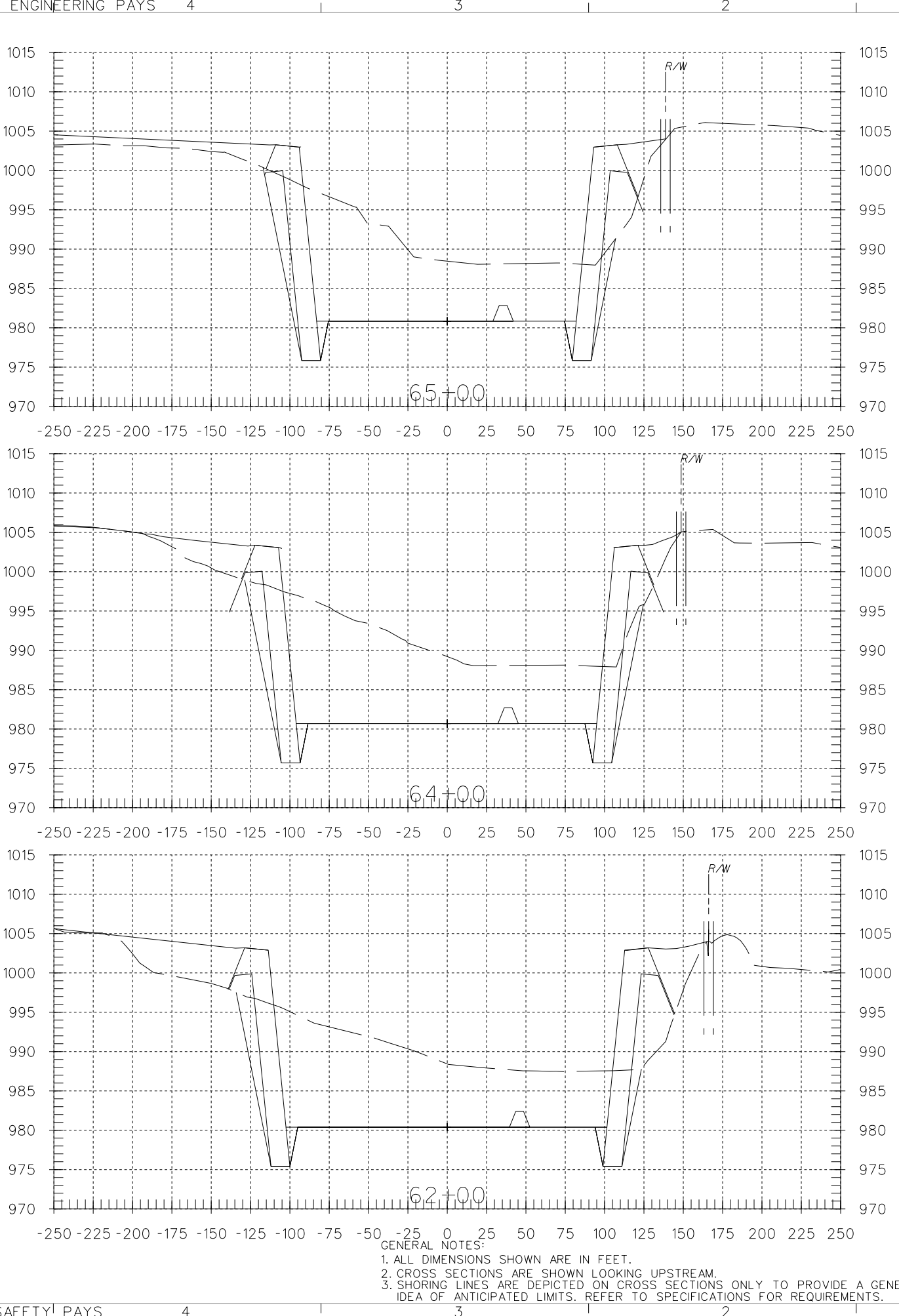
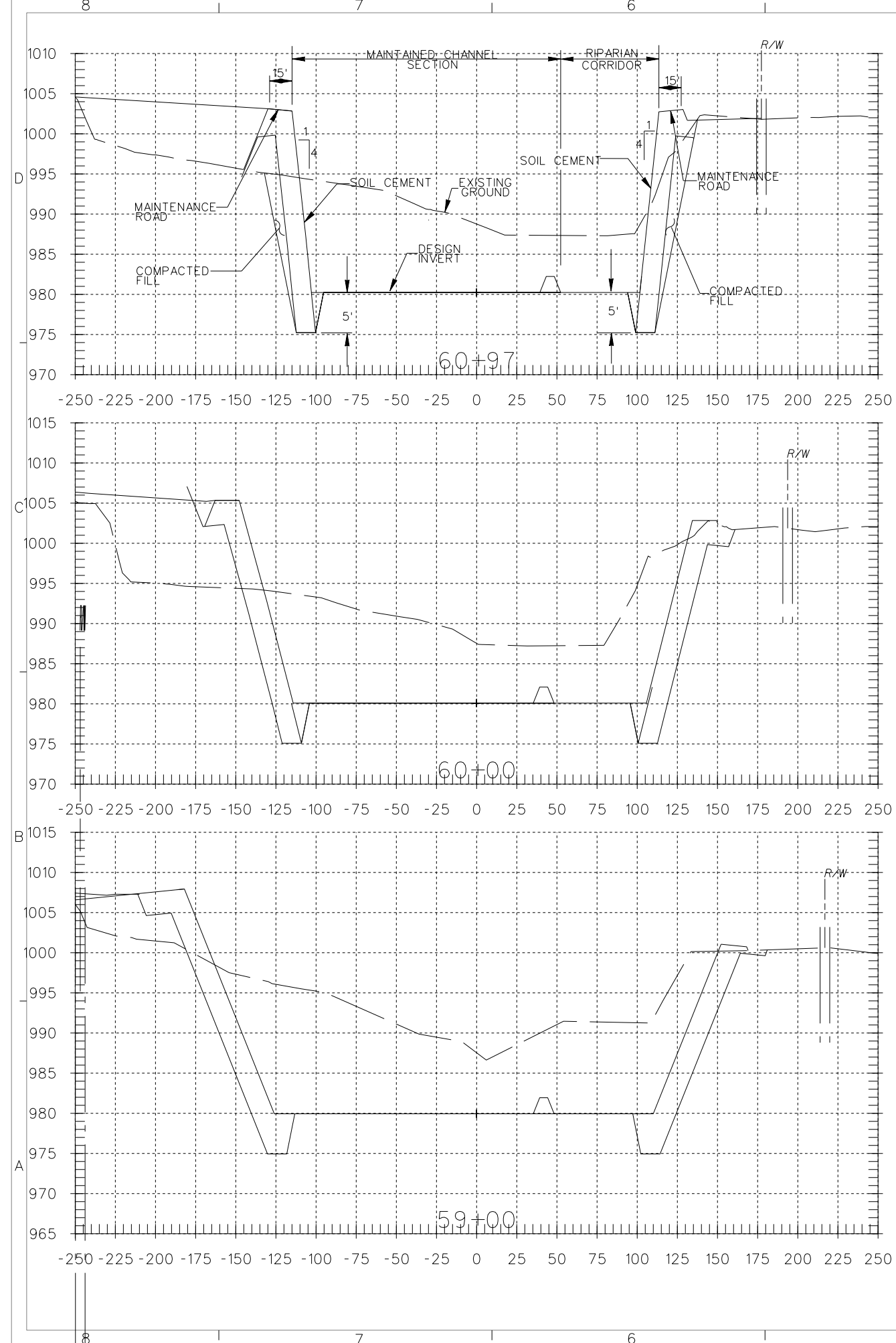


GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C29.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		CROSS SECTIONS STA 82+00 TO STA 75+00	
DISTRICT FILE NO. 226/277		SPEC. NO. W92PL-15-B-0001		SYMBOL		REVISIONS	
				DATE		APPROVAL	
				D			
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Scale:		SHEET		C-29			

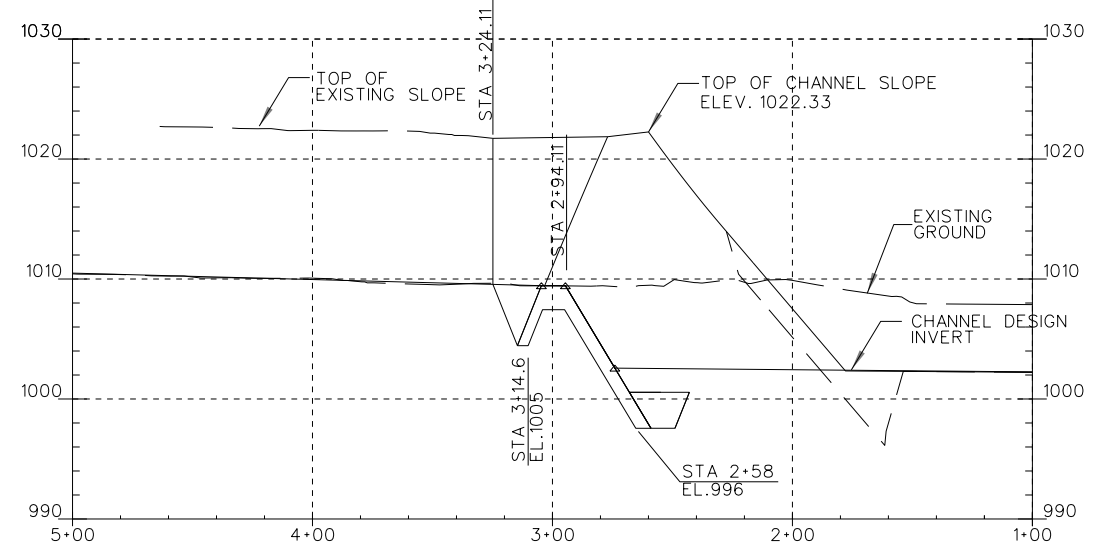


DESIGNED BY: J.G.R.	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	FILE NAME: C30.DGN
DRAWN BY: J.G.R.	SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	SPEC. NO. W912PL-15-B-0001
CHECKED BY: S.H.V.		DISTRICT FILE NO. 226/278
DATE APPROVAL	REVISIONS	CROSS SECTIONS STA 74+00 TO STA 65+00
SYMBOL	DESCRIPTIONS	

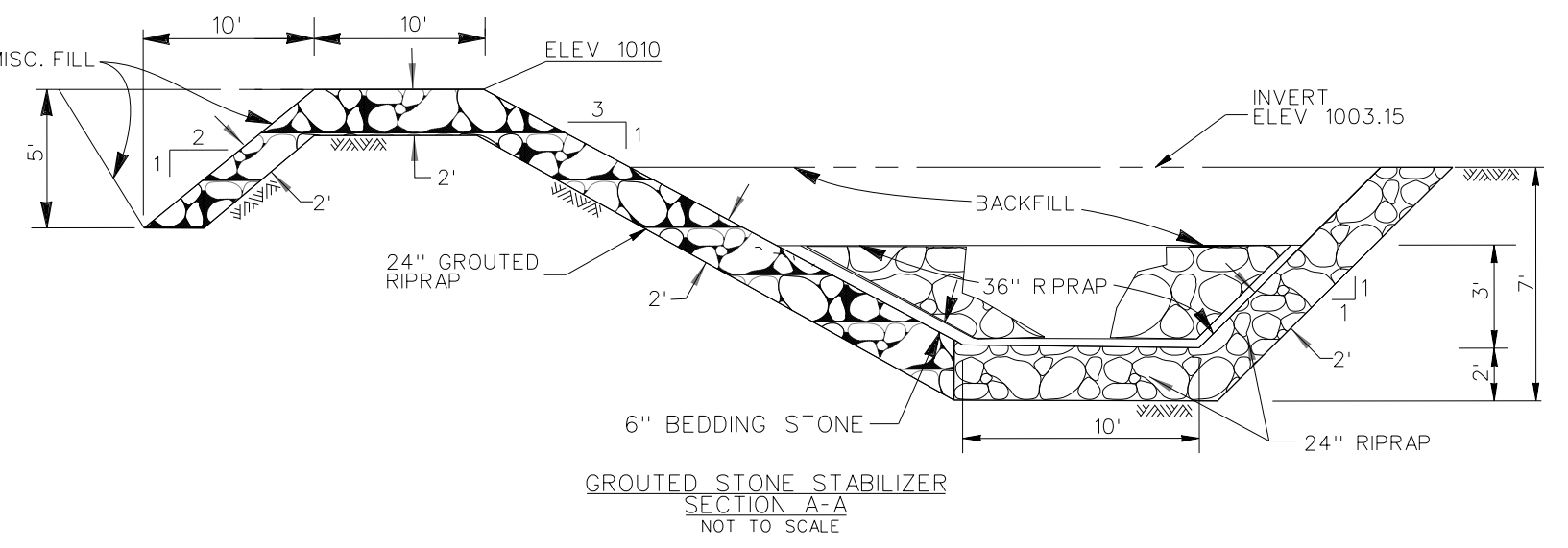


GENERAL NOTES:
 1. ALL DIMENSIONS SHOWN ARE IN FEET.
 2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
 3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

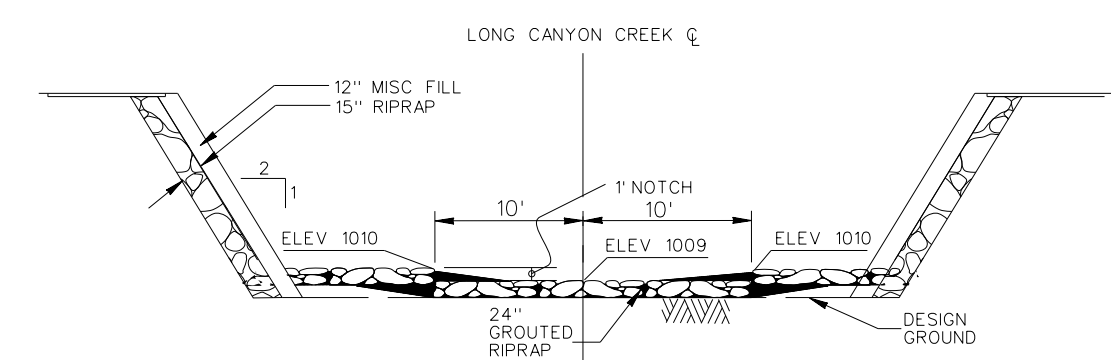
DESIGNED BY: J.G.R.	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DISTRICT FILE NO. 226/279	FILE NAME: C31.DGN
DRAWN BY: J.G.R.	SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	SPEC. NO. W912PL-15-B-0001	SHEET C-31
CHECKED BY: S.H.V.			
DATE APPROVAL	REVISIONS	CROSS SECTIONS STA 65+00 TO STA 59+00	
SYMBOL	DESCRIPTIONS	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	



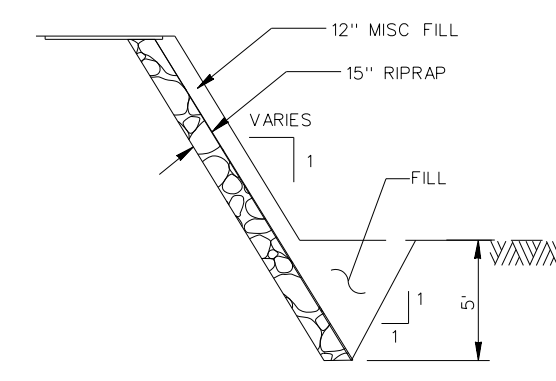
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 HORIZ. SCALE: 1IN. = 40FT.



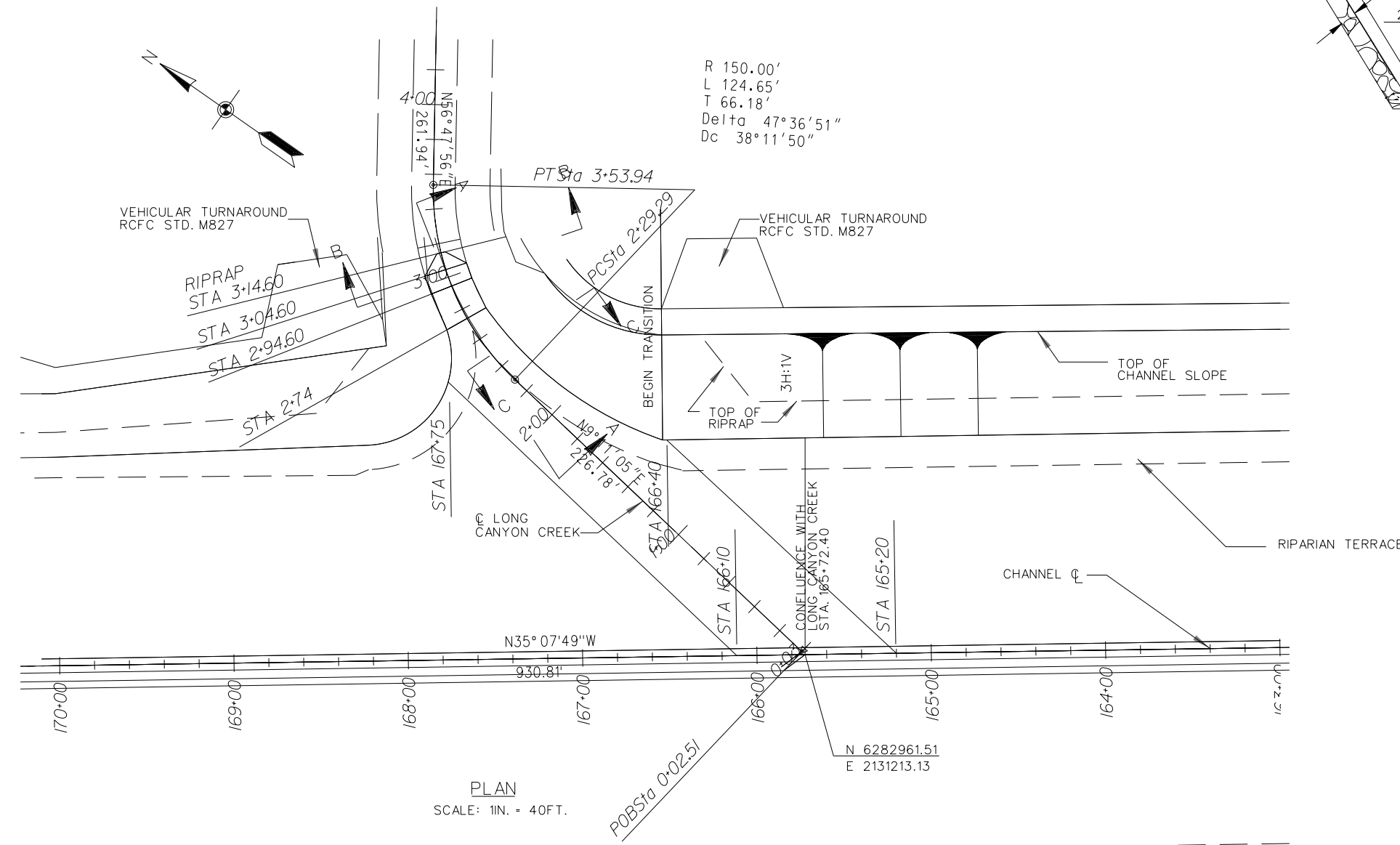
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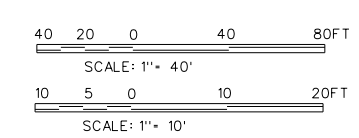
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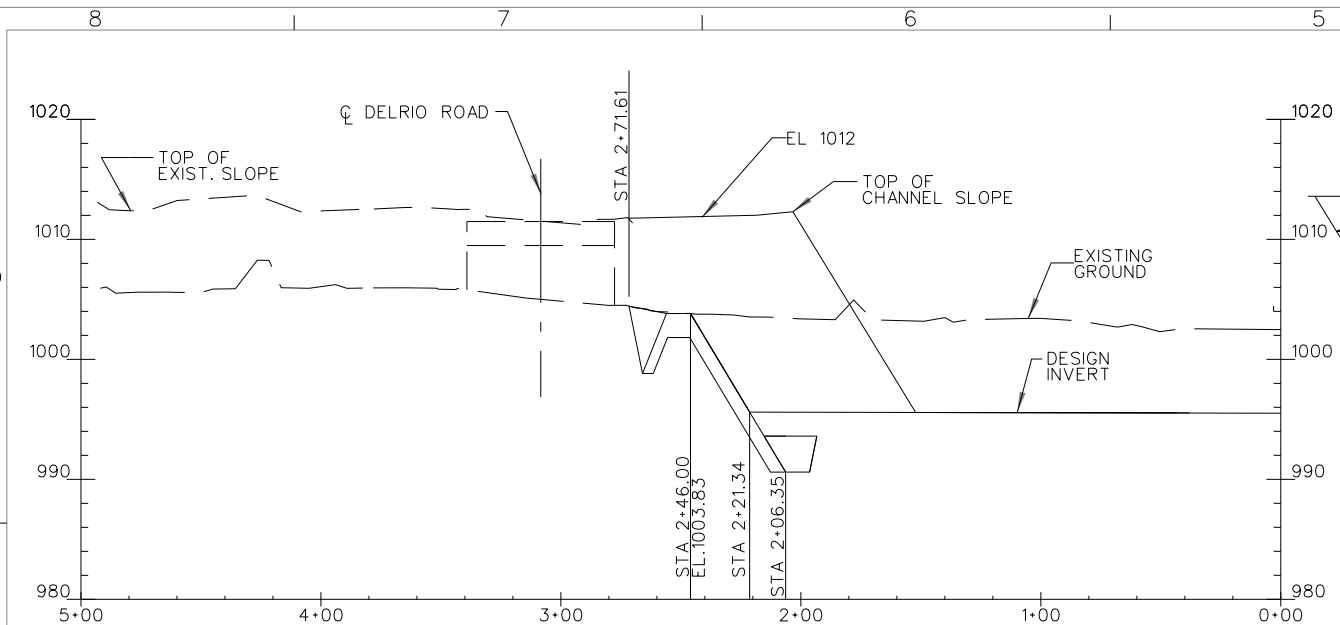
SECTION C-C
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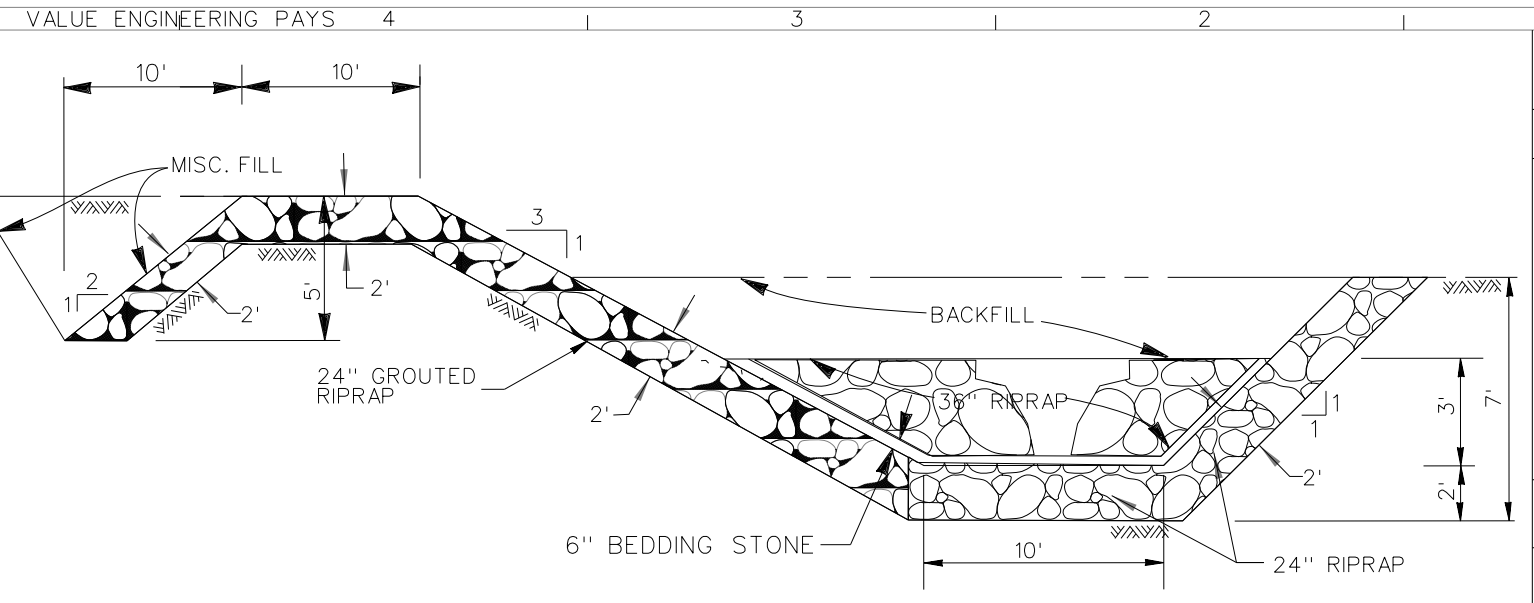
PLAN
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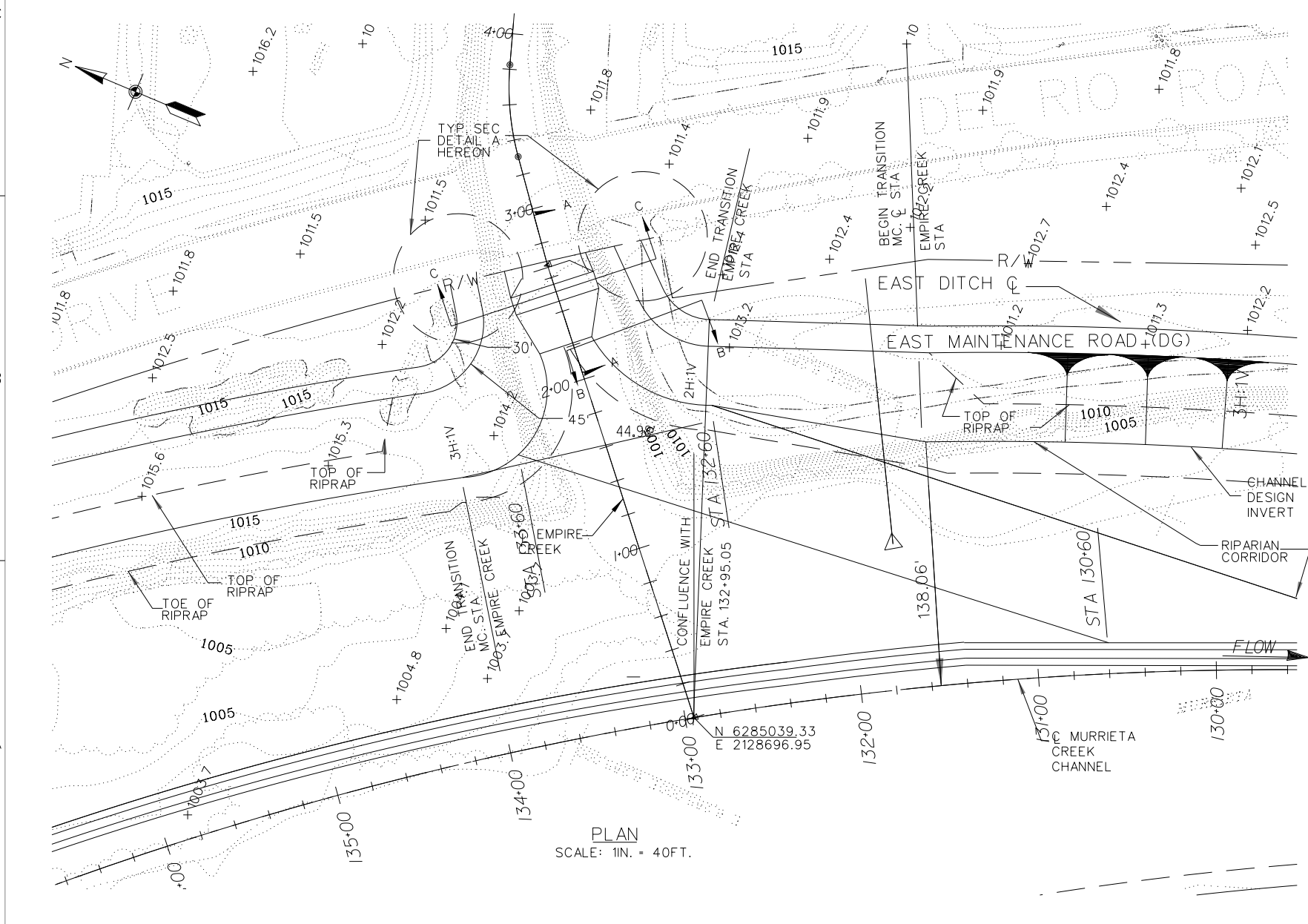
DESIGNED BY: S.H.V.	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DISTRICT FILE NO. 226/280
DRAWN BY: A.M.	ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	SPEC. NO. W912PL-15-B-0001
CHECKED BY: S.H.V.	FILE NAME: C32.DGN	
DATE APPROVAL		
REVISIONS		
SYMBOL		
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 LONG CANYON CONFLUENCE PLAN, PROFILE, & DETAILS		
SUBMITTED BY: Scale: AS SHOWN SHEET C-32		



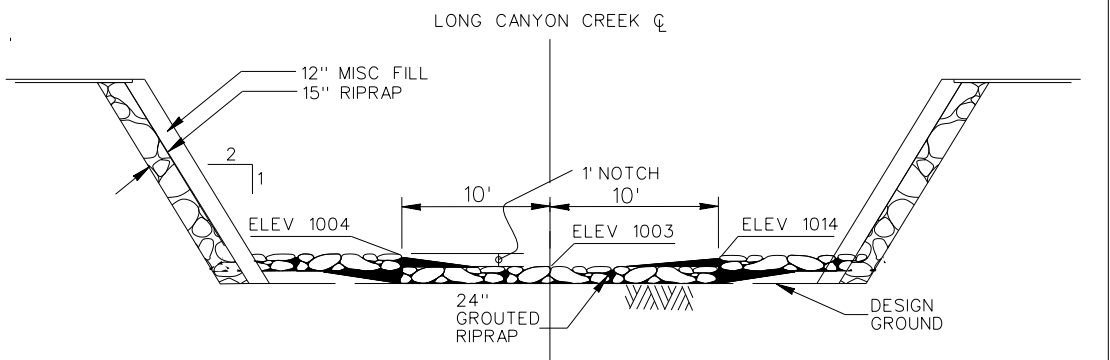
PROFILE
 VERT. SCALE: 1 IN = 10 FT
 HORIZ. SCALE: 1 IN = 40 FT



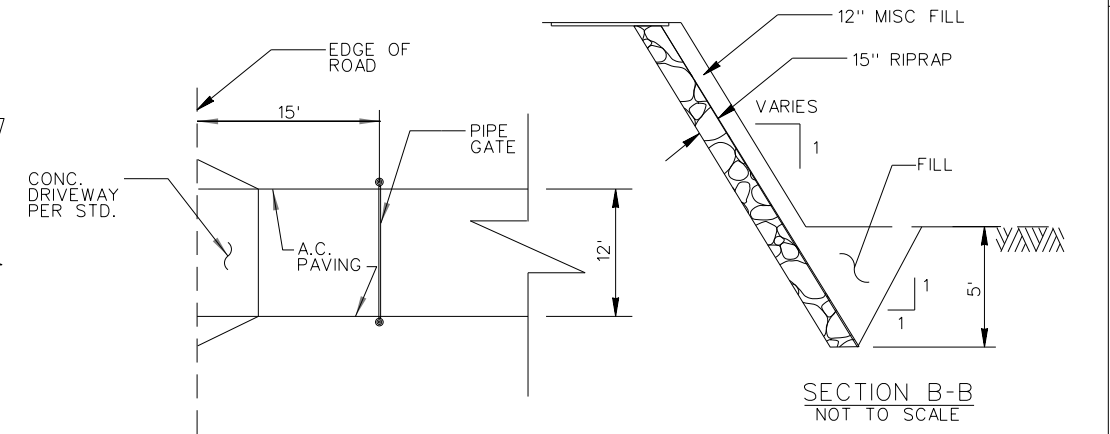
GRouted STONE INVERT STABILIZER
 SECTION A-A
 NOT TO SCALE



PLAN
 SCALE: 1 IN = 40 FT.

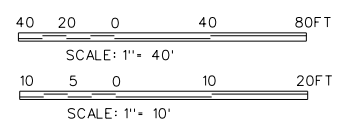


SECTION C-C
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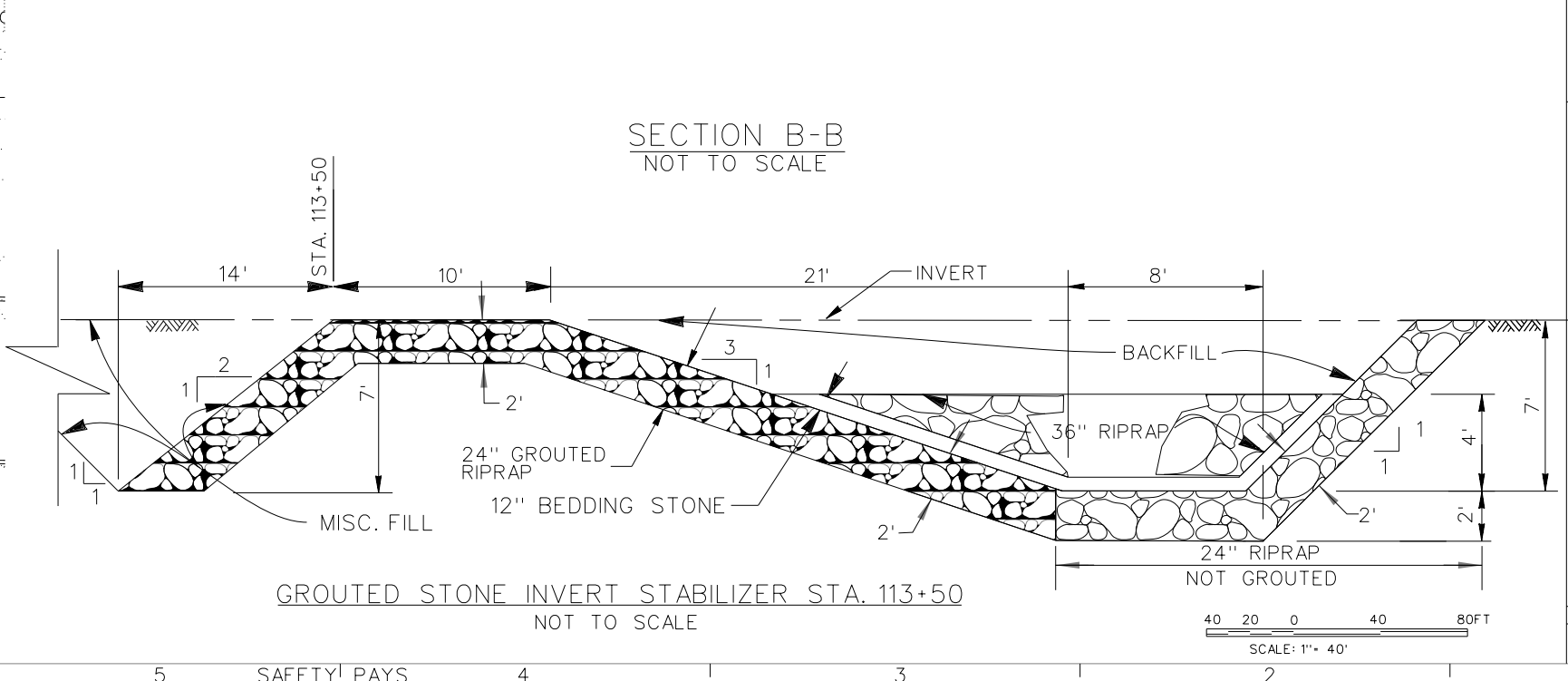
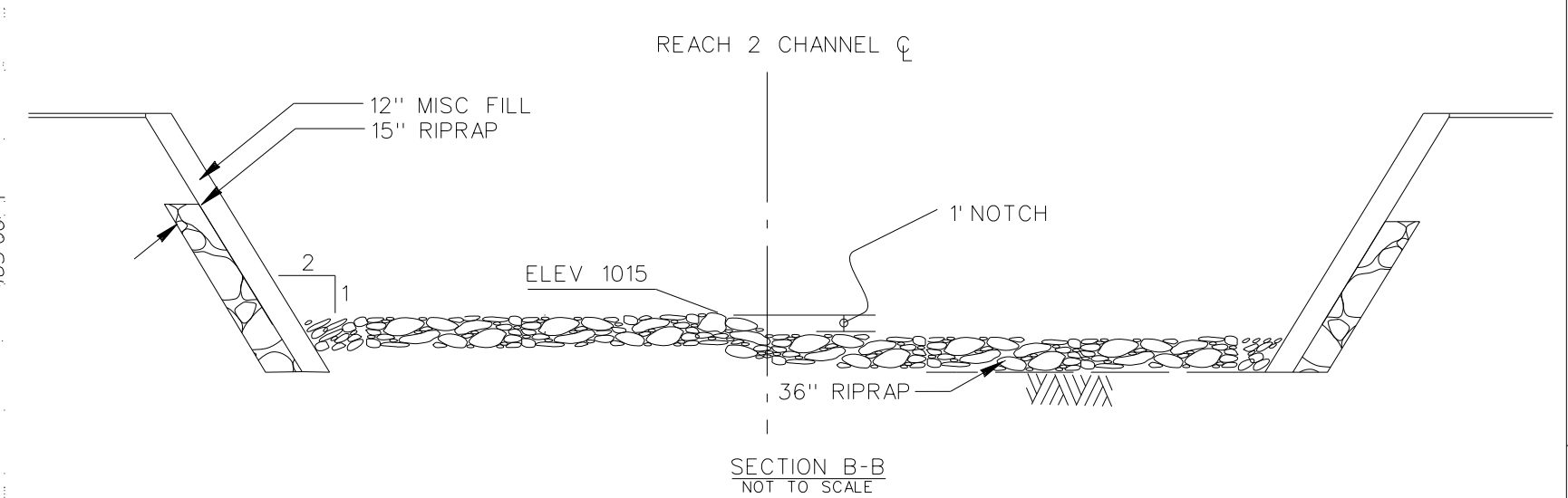
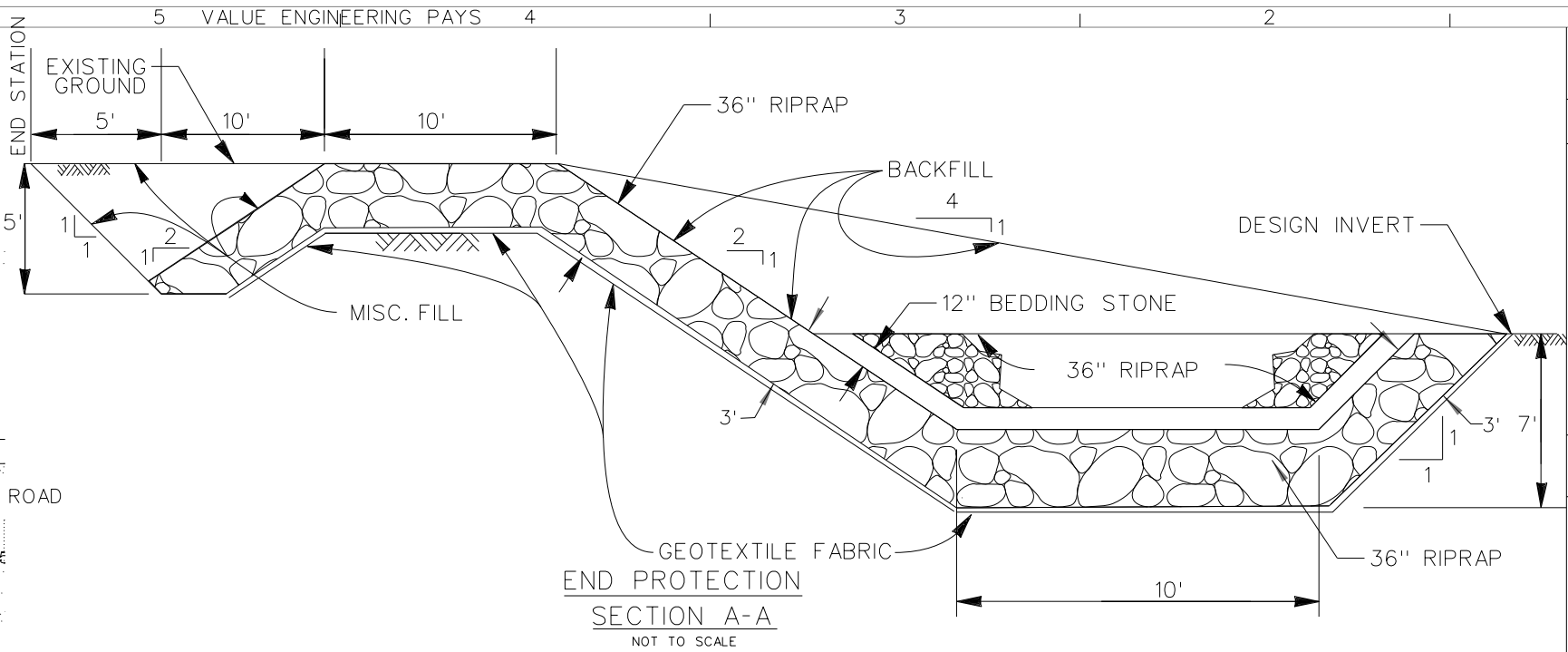
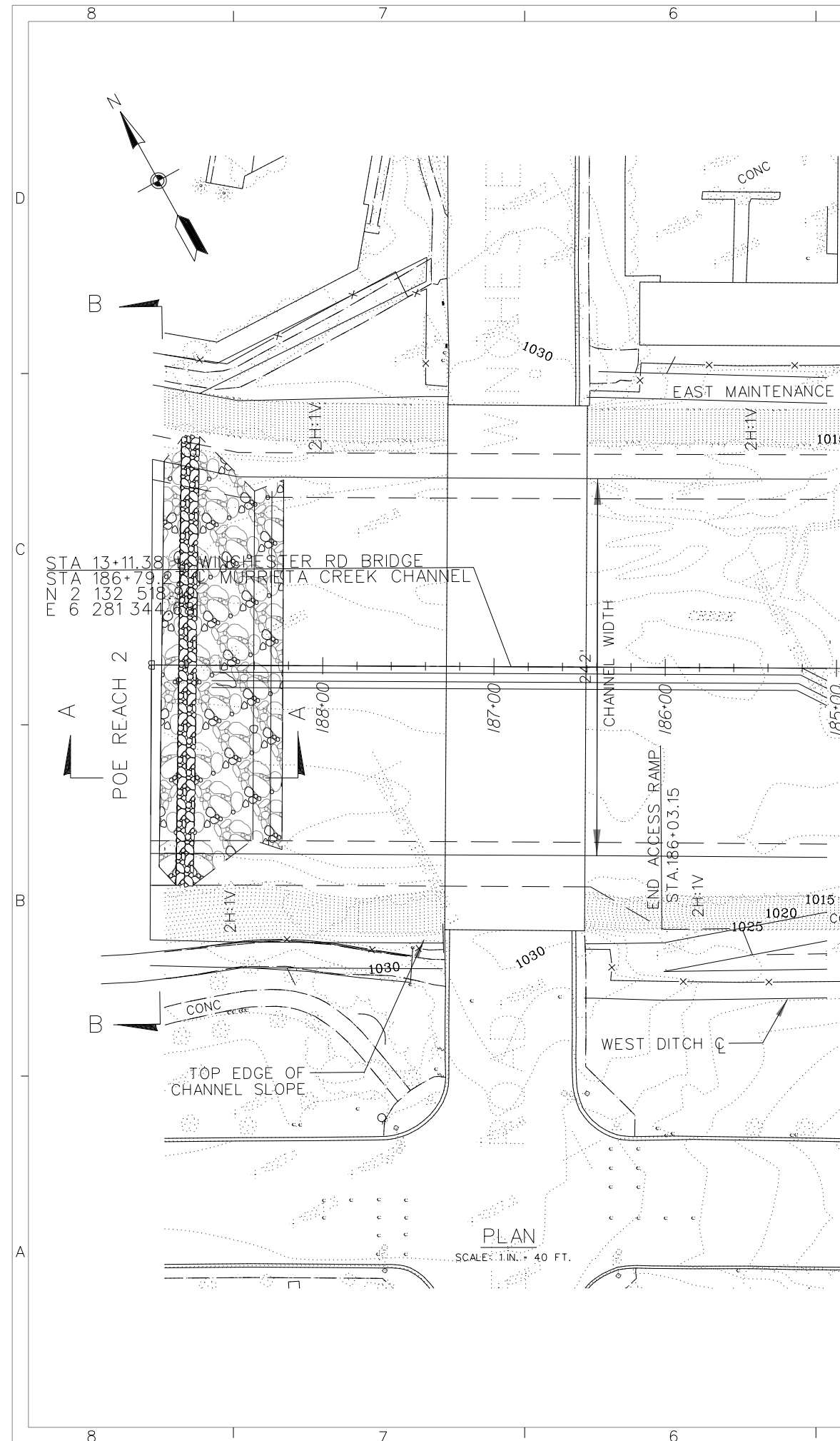


DETAIL A
 NOT TO SCALE

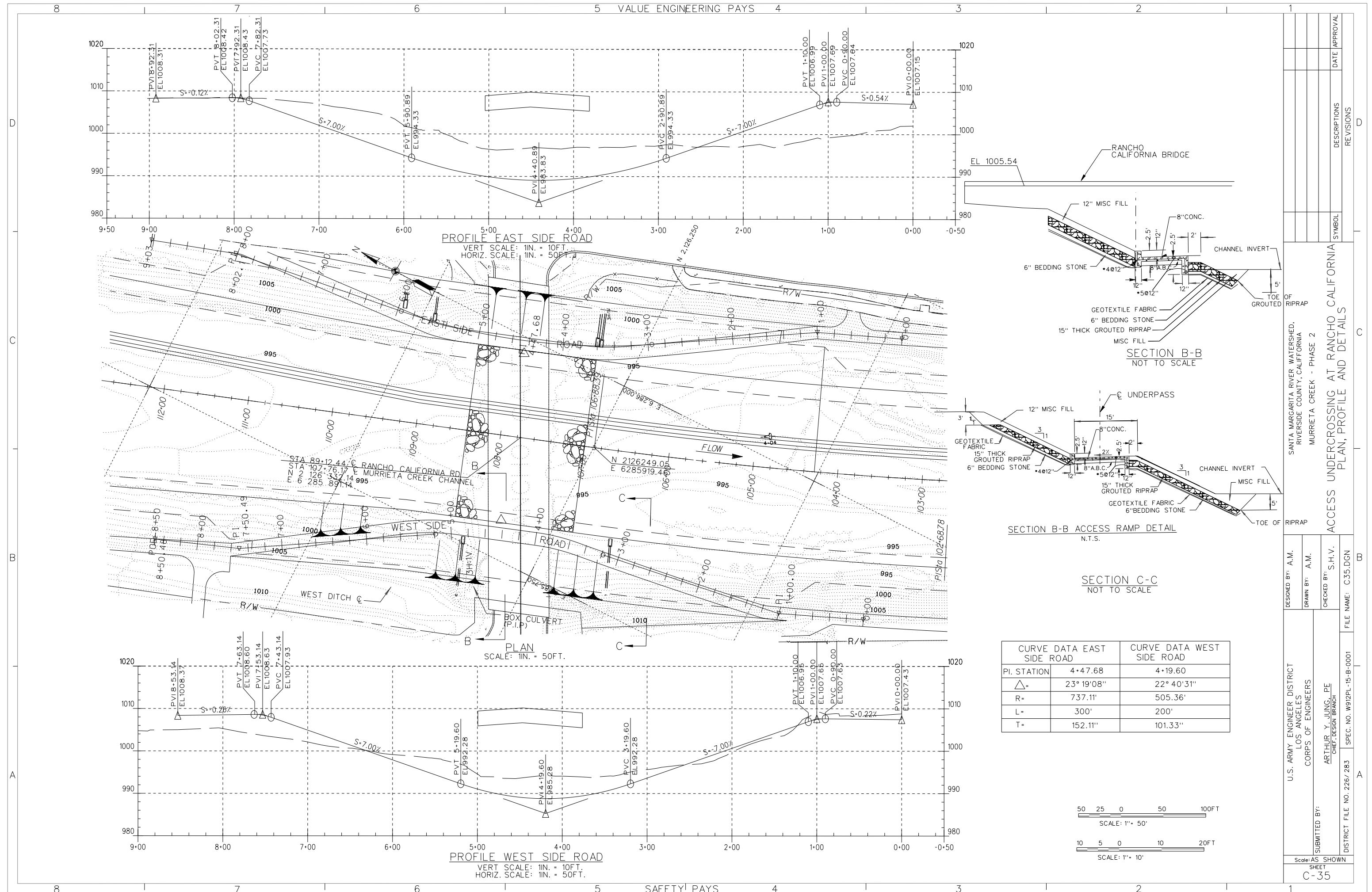
SECTION B-B
 NOT TO SCALE



DESIGNED BY: S.H.V.	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DISTRICT FILE NO. 226/281	FILE NAME: C33.DGN
DRAWN BY: J.G.R.	SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	Scale: AS SHOWN SHEET C-33	SHEET
CHECKED BY: S.H.V.			
DESIGNED BY: S.H.V.	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	EMPIRE CREEK CONFLUENCE PLAN, PROFILE, & DETAILS	
DATE APPROVAL	SYMBOL	DESCRIPTIONS	REVISIONS



DESIGNED BY: J.G.R.	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DISTRICT FILE NO. 226/282
DRAWN BY: J.G.R.	SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	FILE NAME: W912PL-15-B-0001
CHECKED BY: S.H.V.	Scale: AS SHOWN SHEET	
FILE NAME: C34.DGN	C-34	



PROFILE EAST SIDE ROAD

VERT. SCALE: 1IN. = 10FT.
HORIZ. SCALE: 1IN. = 50FT.

PLAN SCALE: 1IN. = 50FT.

PROFILE WEST SIDE ROAD

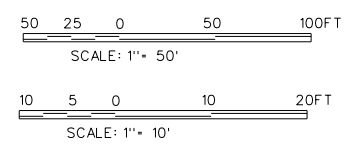
VERT. SCALE: 1IN. = 10FT.
HORIZ. SCALE: 1IN. = 50FT.

SECTION B-B NOT TO SCALE

SECTION B-B ACCESS RAMP DETAIL N.T.S.

SECTION C-C NOT TO SCALE

	CURVE DATA EAST SIDE ROAD	CURVE DATA WEST SIDE ROAD
PI. STATION	4+47.68	4+19.60
Δ	23° 19' 08"	22° 40' 31"
R	737.11'	505.36'
L	300'	200'
T	152.11"	101.33"



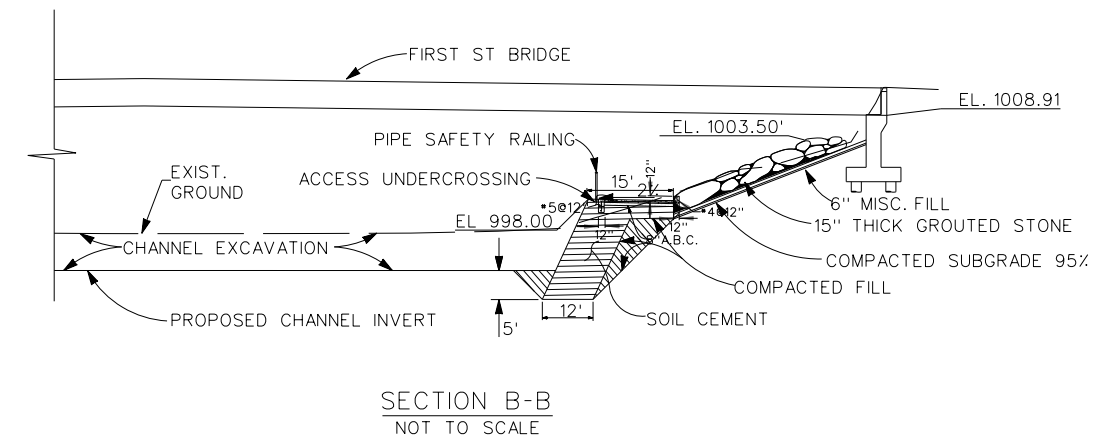
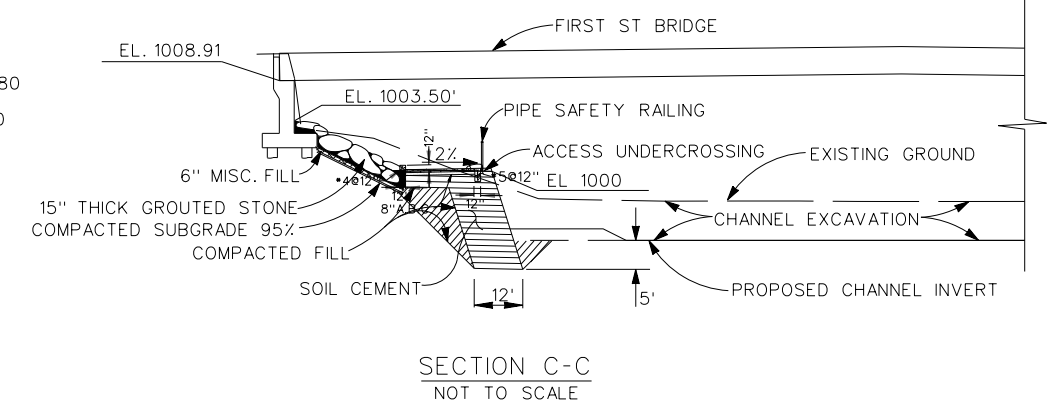
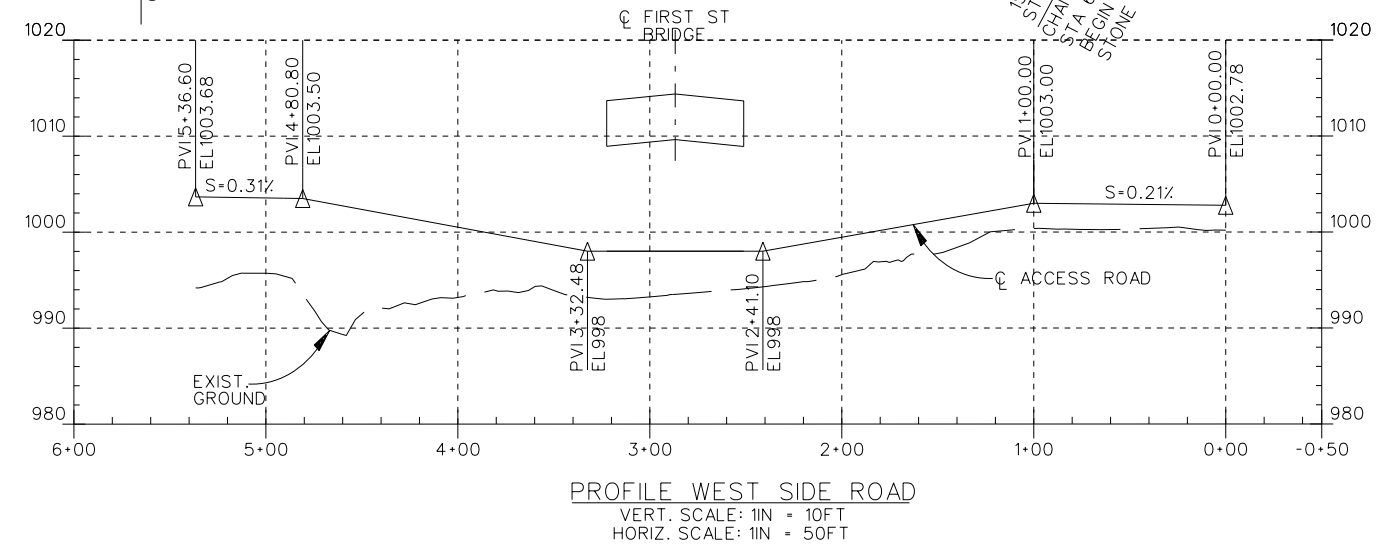
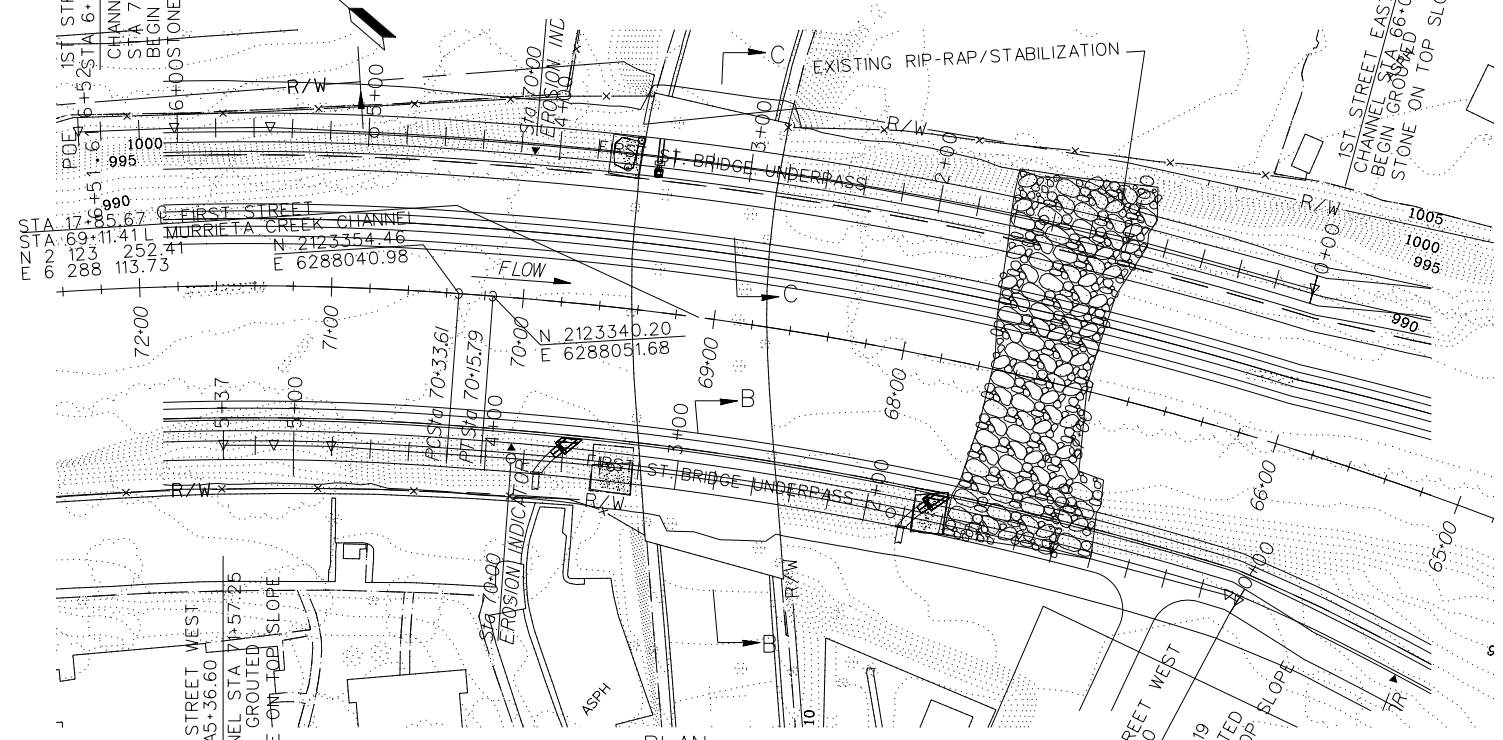
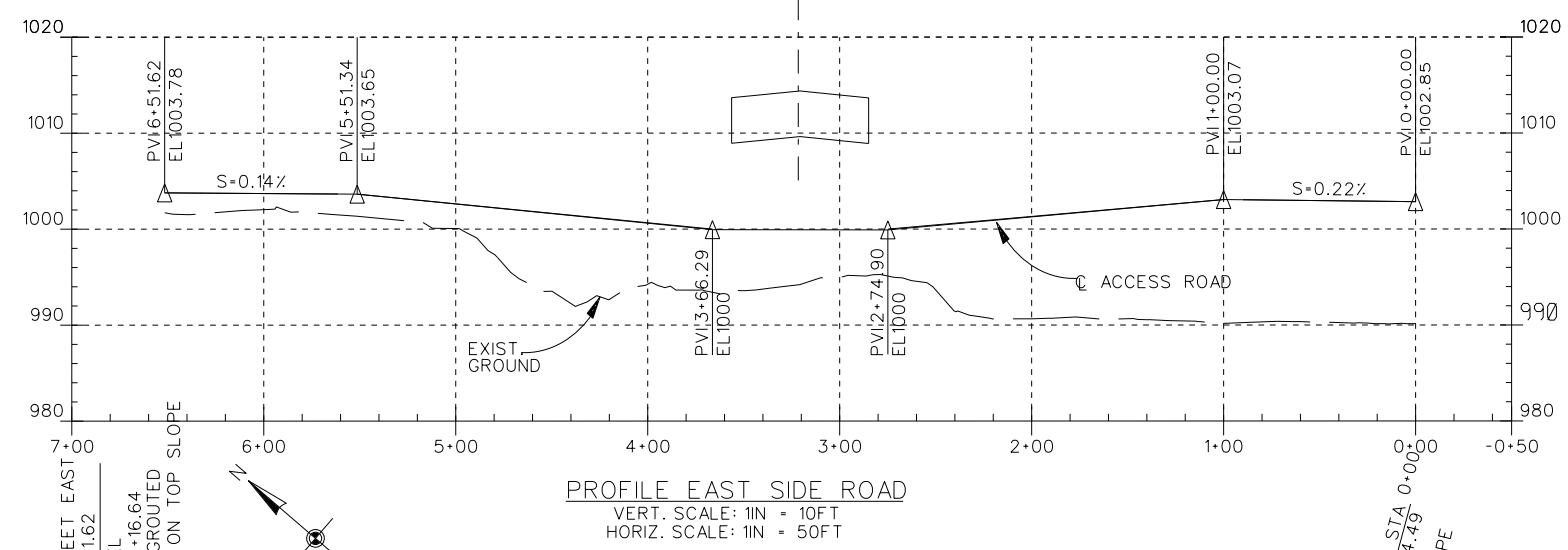
DESIGNED BY: A.M.	U.S. ARMY ENGINEER DISTRICT	SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	DISTRICT FILE NO. 226/283	SPEC. NO. W912PL-15-B-0001	FILE NAME: C35.DGN
DRAWN BY: A.M.	LOS ANGELES CORPS OF ENGINEERS				
CHECKED BY: S.H.V.					
DATE	APPROVAL				
SYMBOL	DESCRIPTIONS				
	REVISIONS				

ACCESS UNDERCROSSING AT RANCHO CALIFORNIA
PLAN, PROFILE AND DETAILS

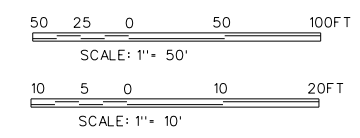
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

Scale: AS SHOWN
SHEET
C-35

Plot Date: 25-JULY-2014



	CURVE DATA EAST SIDE ROAD	CURVE DATA WEST SIDE ROAD
PI. STATION	3+21.57	2+86.77
Δ	9° 23' 04"	8° 38' 20"
R=	2150.77'	1326.48'
L=	352.27'	200'
T=	176.53'	100.19'



SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2

DESIGNED BY: A.M.
 DRAWN BY: A.M.
 CHECKED BY: S.H.V.
 FILE NAME: C36.DGN

U.S. ARMY ENGINEER DISTRICT
 LOS ANGELES
 CORPS OF ENGINEERS

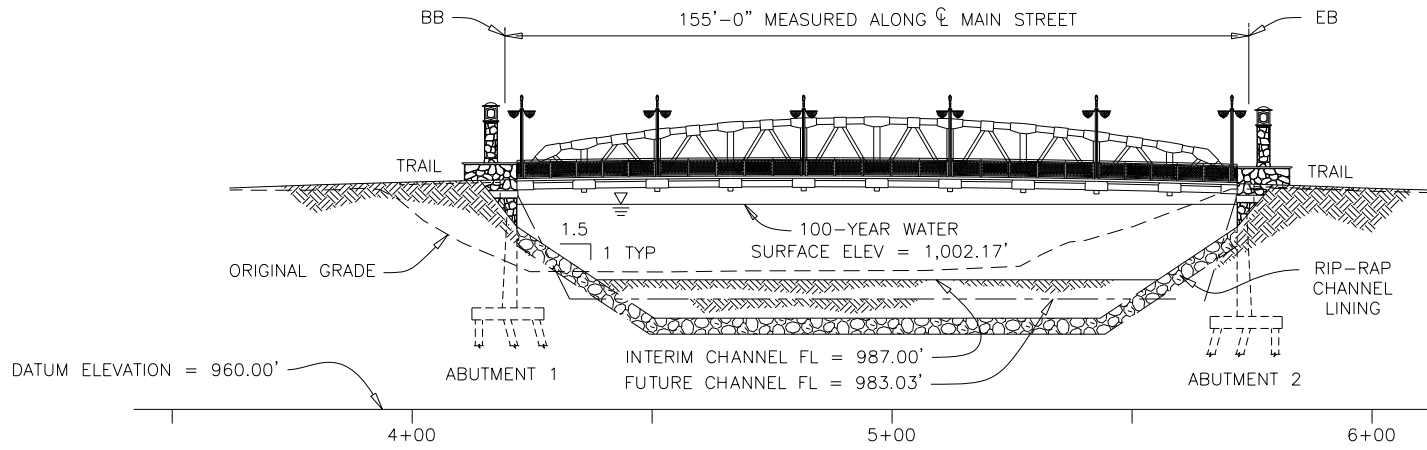
ARTHUR Y. JUNG, PE
 CHIEF, DESIGN BRANCH

SUBMITTED BY:
 DISTRICT FILE NO. 226/284
 SPEC. NO. W912PL-15-B-0001

ACCESS UNDERCROSSING AT 1ST STREET
 PLAN, PROFILE, AND DETAILS

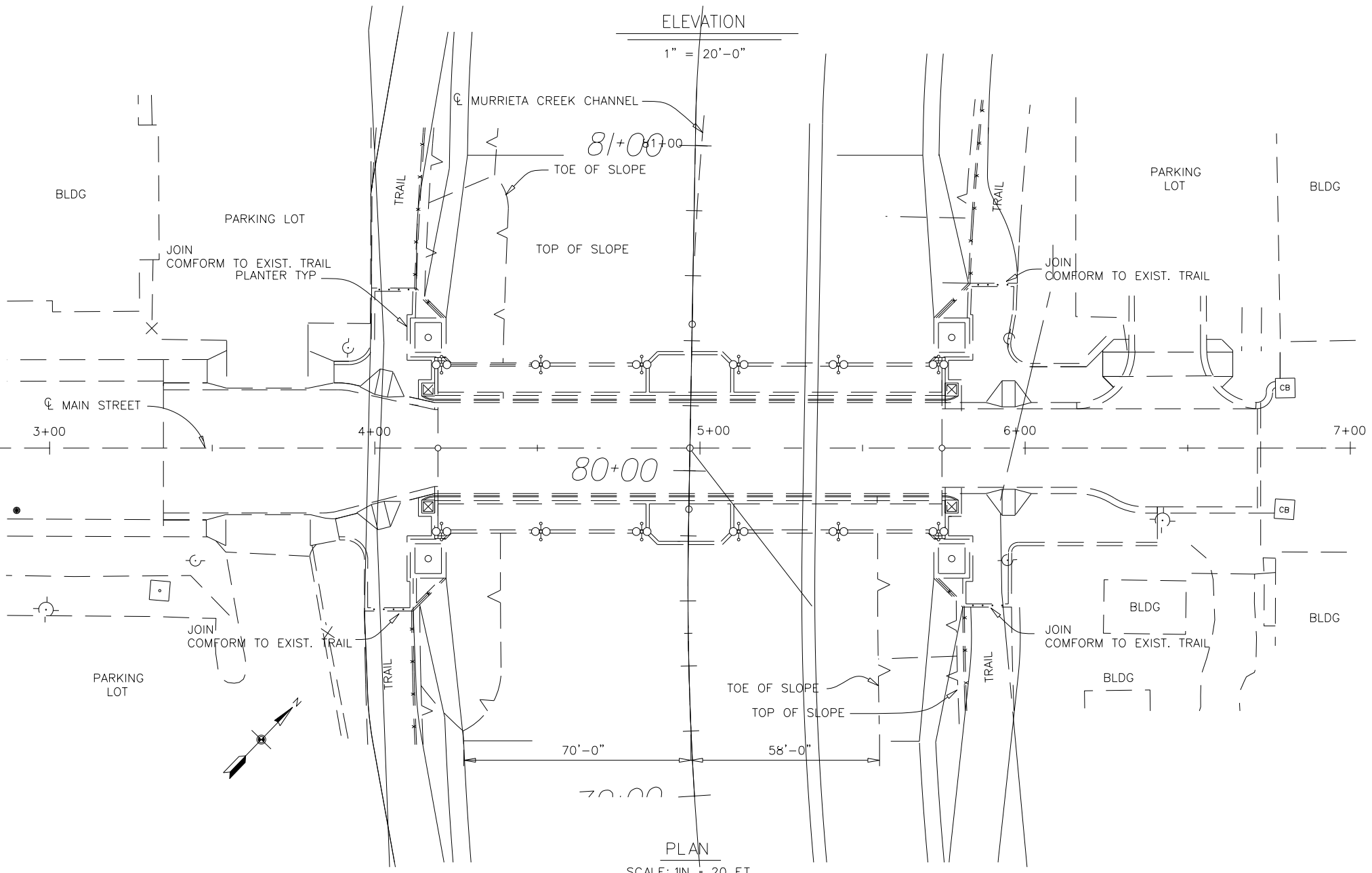
SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

Scale:
 SHEET
 C-36

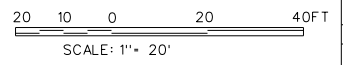


ELEVATION

1" = 20'-0"



NOTES:
 MAIN ST. BRIDGE TO BE CONSTRUCTED BY OTHERS.



SYMBOL	DESCRIPTIONS	DATE	APPROVAL

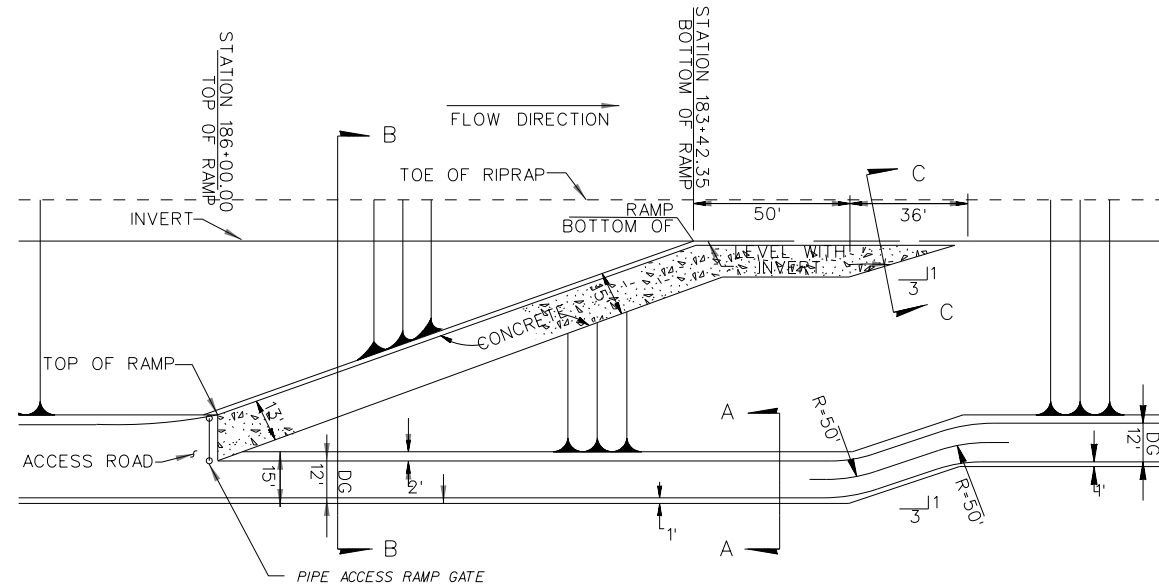
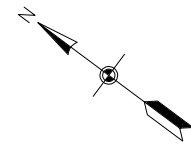
SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2
 MAIN STREET BRIDGE
 TIE-IN DETAILS

DESIGNED BY: J.G.R.
 DRAWN BY: J.G.R.
 CHECKED BY: S.H.V.

U.S. ARMY ENGINEER DISTRICT
 LOS ANGELES
 CORPS OF ENGINEERS
 SUBMITTED BY:
 ARTHUR Y. JUNG, PE
 CHIEF, DESIGN BRANCH

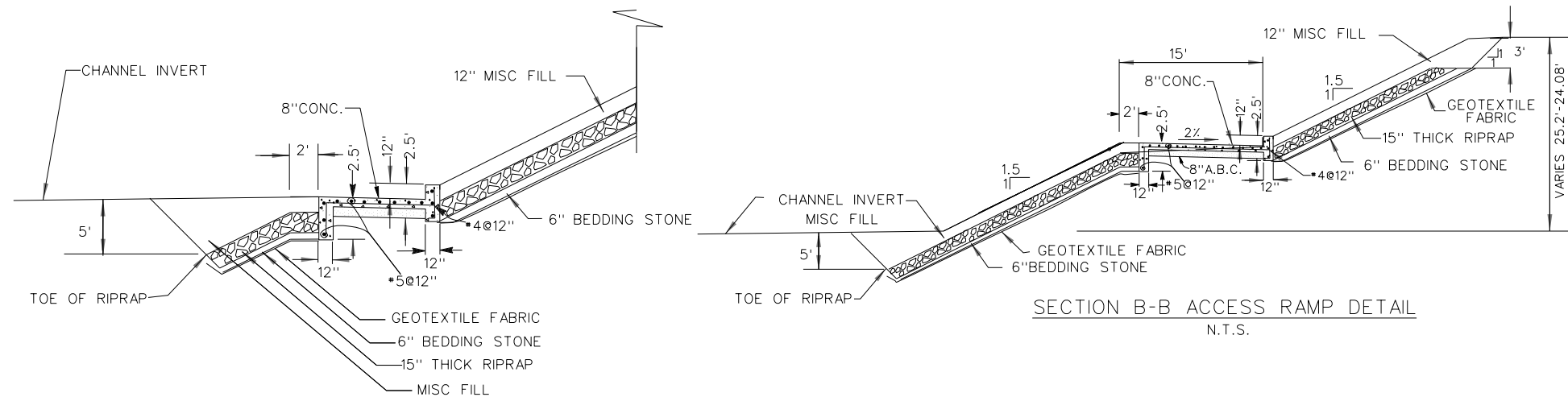
FILE NAME: C37.DGN
 SPEC. NO. W912PL-15-B-0001
 DISTRICT FILE NO. 226/285

SHEET
 C-37



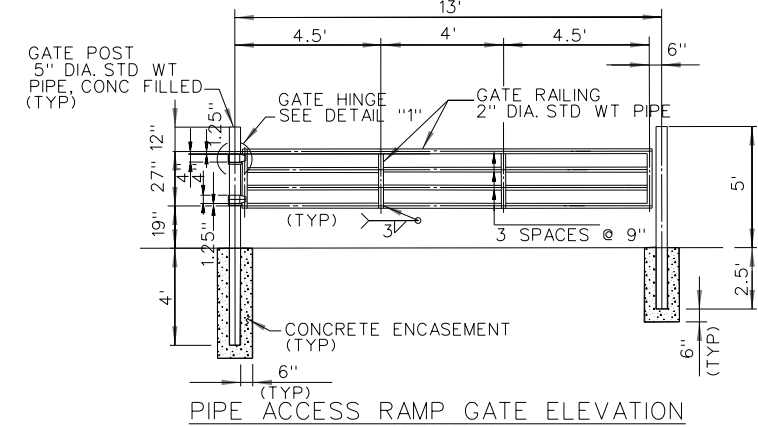
TOP OF RAMP		BOTTOM OF RAMP		CHANNEL SIDE
STATION	ELEVATION	STATION	ELEVATION	
186+00.00	1029.39	183+42.35	1003.63	WEST

WEST ACCESS RAMP - 186+00.00
PLAN VIEW
N.T.S.



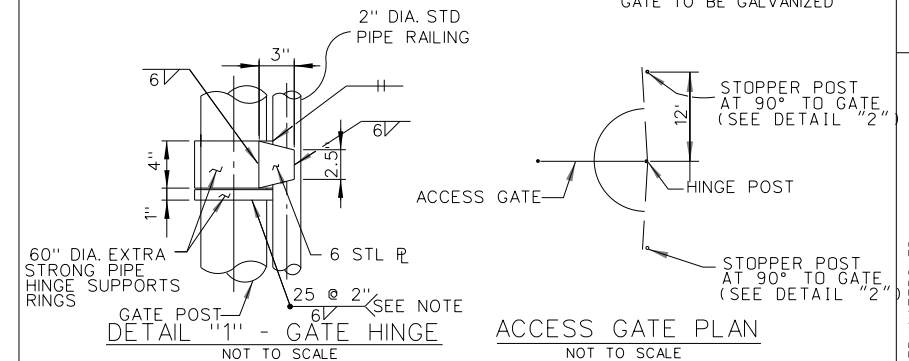
SECTION C-C ACCESS RAMP DETAIL
N.T.S.

SECTION B-B ACCESS RAMP DETAIL
N.T.S.



PIPE ACCESS RAMP GATE ELEVATION
NOT TO SCALE

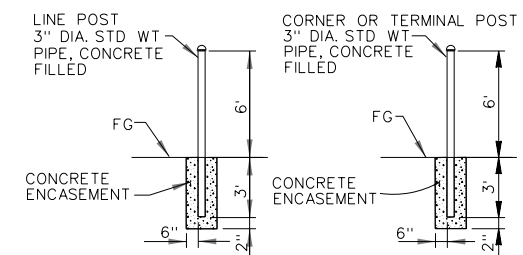
NOTES:
ALL METAL PARTS OF PIPE
GATE TO BE GALVANIZED



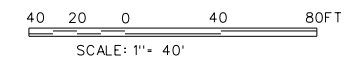
DETAIL "1" - GATE HINGE
NOT TO SCALE

ACCESS GATE PLAN
NOT TO SCALE

NOTE:
BOTTOM HINGE SUPPORT RING SHOP
WELDED; TOP HINGE SUPPORT RING
SHALL BE FIELD WELDED FOLLOWING
GATE INSTALLATION.



NOTE: ONLY POSTS SHOWN.
DETAIL "2"
NOT TO SCALE



SCALE: 1" = 40'

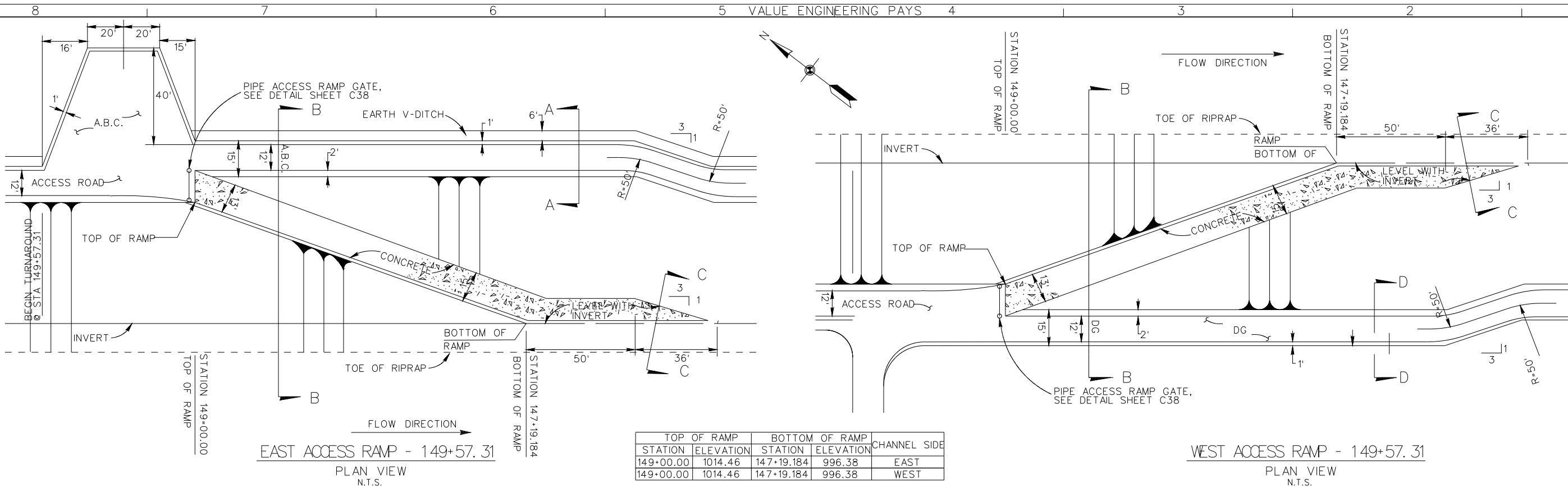
SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
WEST ACCESS RAMP
PLAN AND SECTIONS - STA. 186+00

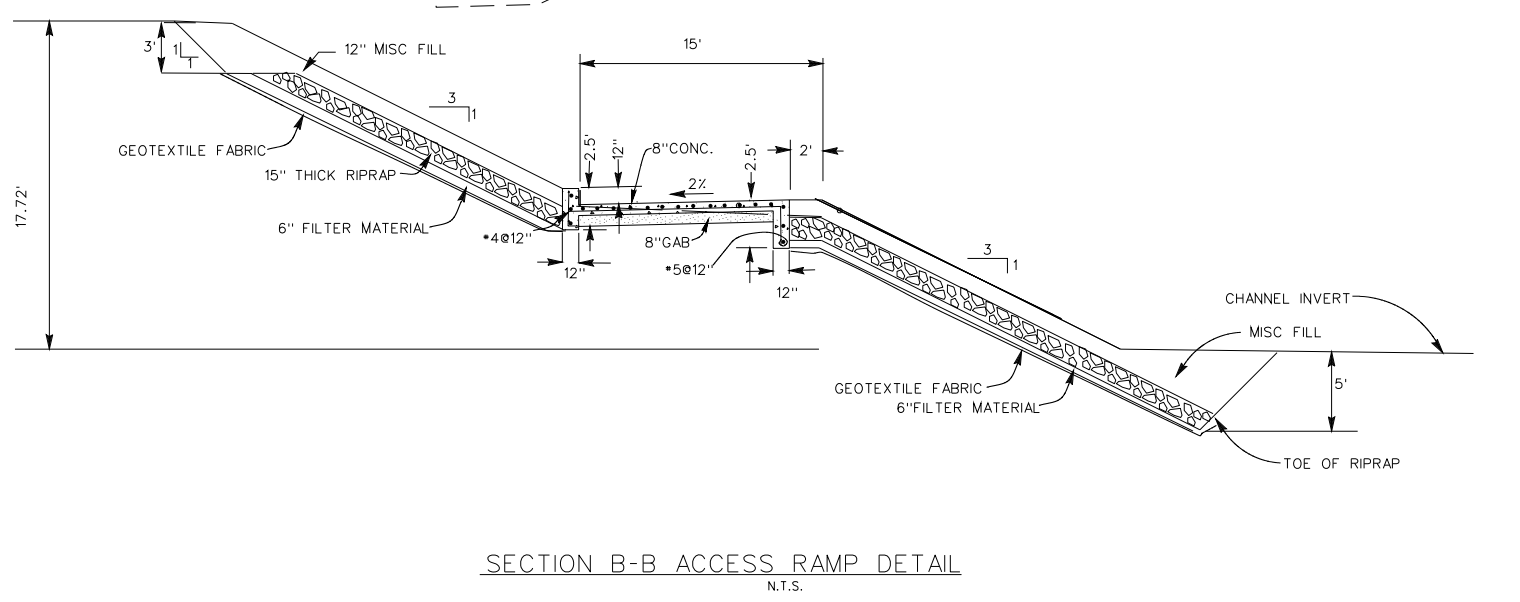
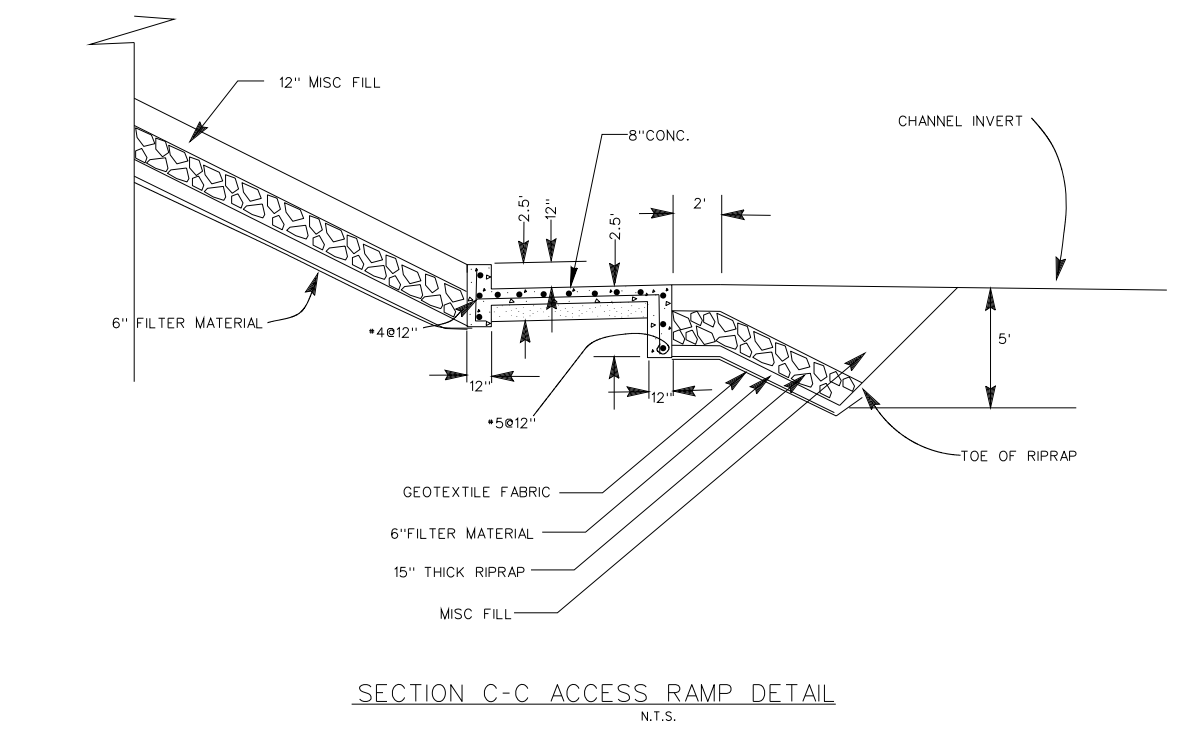
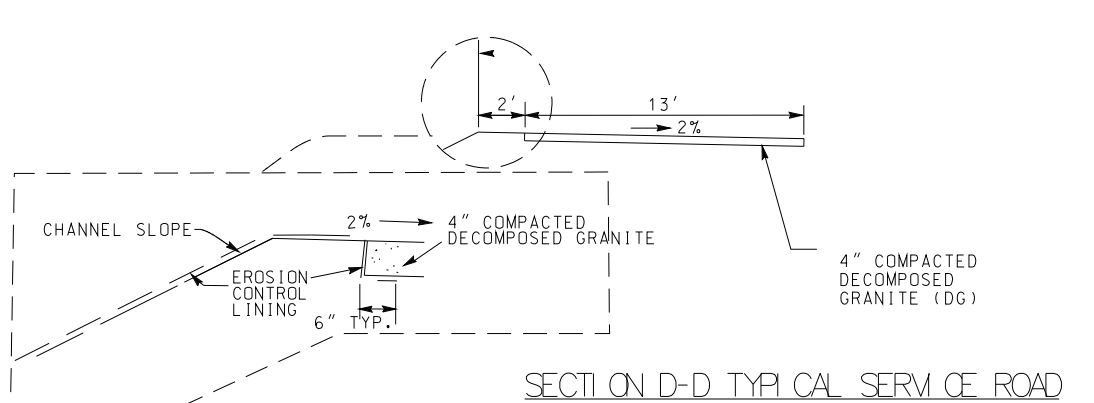
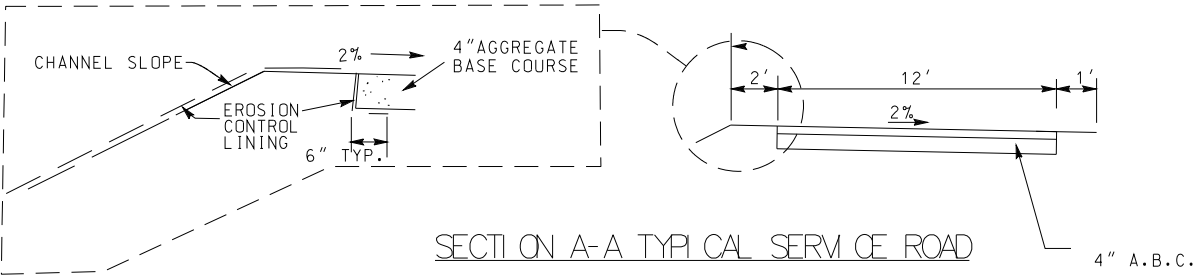
DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C38.DGN

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS
SUBMITTED BY:
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
DISTRICT FILE NO. 226/286
SPEC. NO. W912PL-15-B-0001

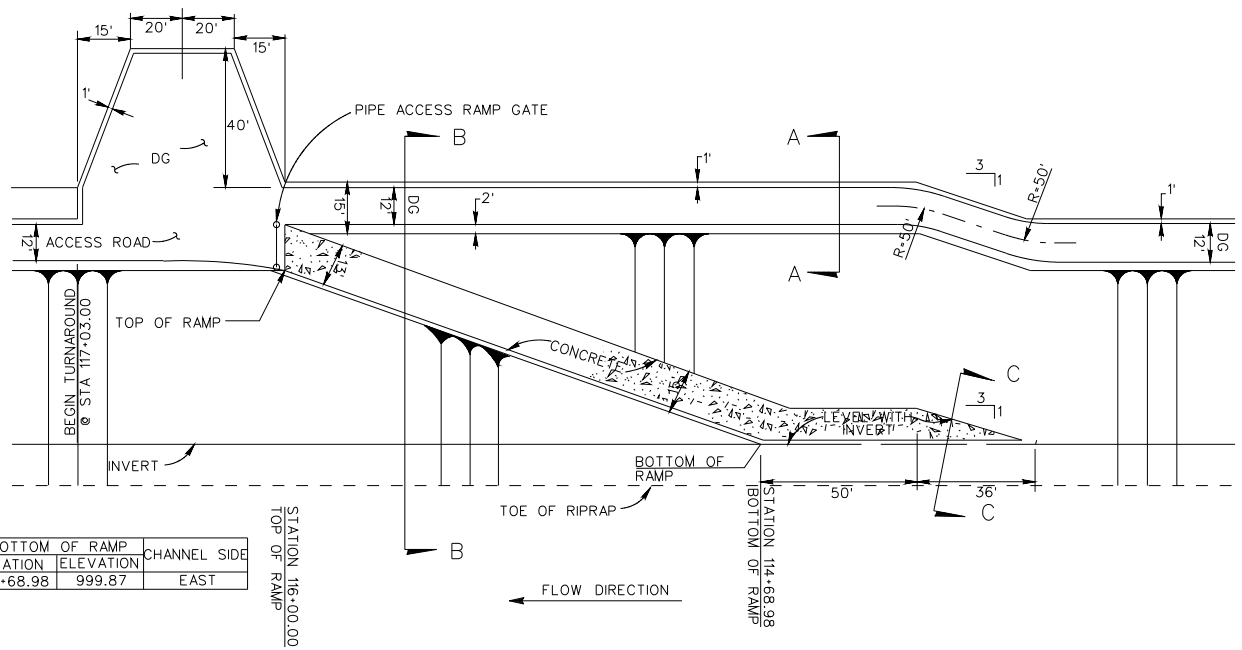
Scale:
SHEET
C-38



STATION	ELEVATION	STATION	ELEVATION	CHANNEL SIDE
149+00.00	1014.46	147+19.184	996.38	EAST
149+00.00	1014.46	147+19.184	996.38	WEST

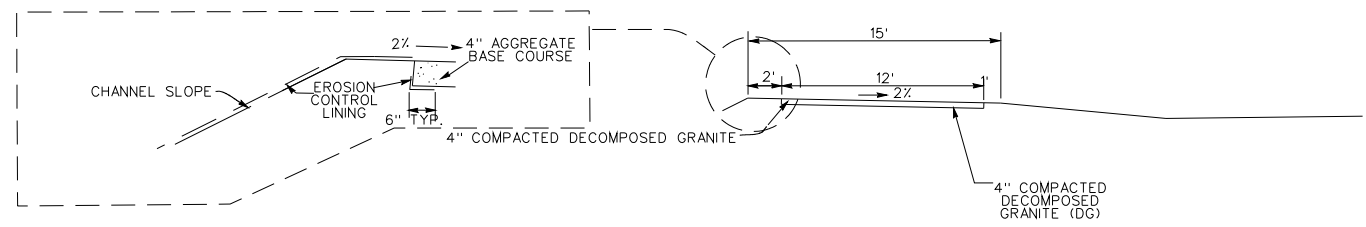


DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: C39.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		EAST ACCESS RAMP	
DISTRICT FILE NO. 226/287		SPEC. NO. W912PL-14-B-0003		PLAN AND SECTIONS - STA. 149+00		REVISIONS	
SYMBOL		DESCRIPTIONS		DATE		APPROVAL	

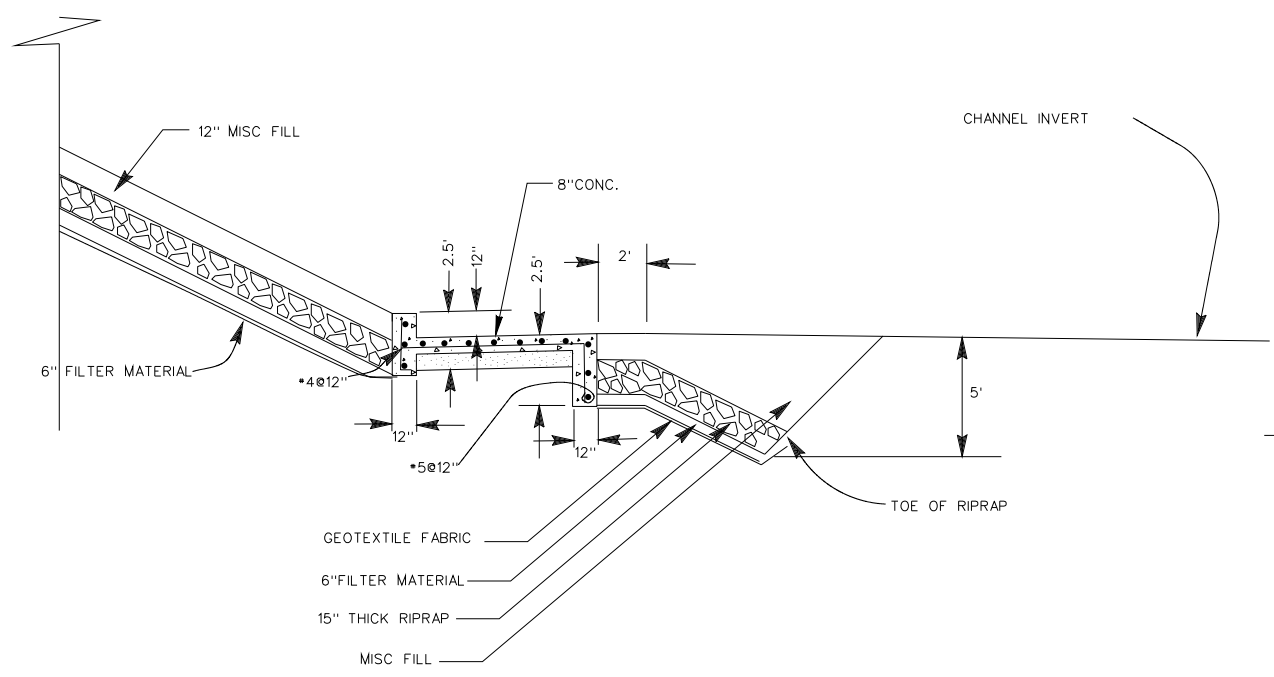


TOP OF RAMP STATION	ELEVATION	BOTTOM OF RAMP STATION	ELEVATION	CHANNEL SIDE
116+00.00	1008.98	114+68.98	999.87	EAST

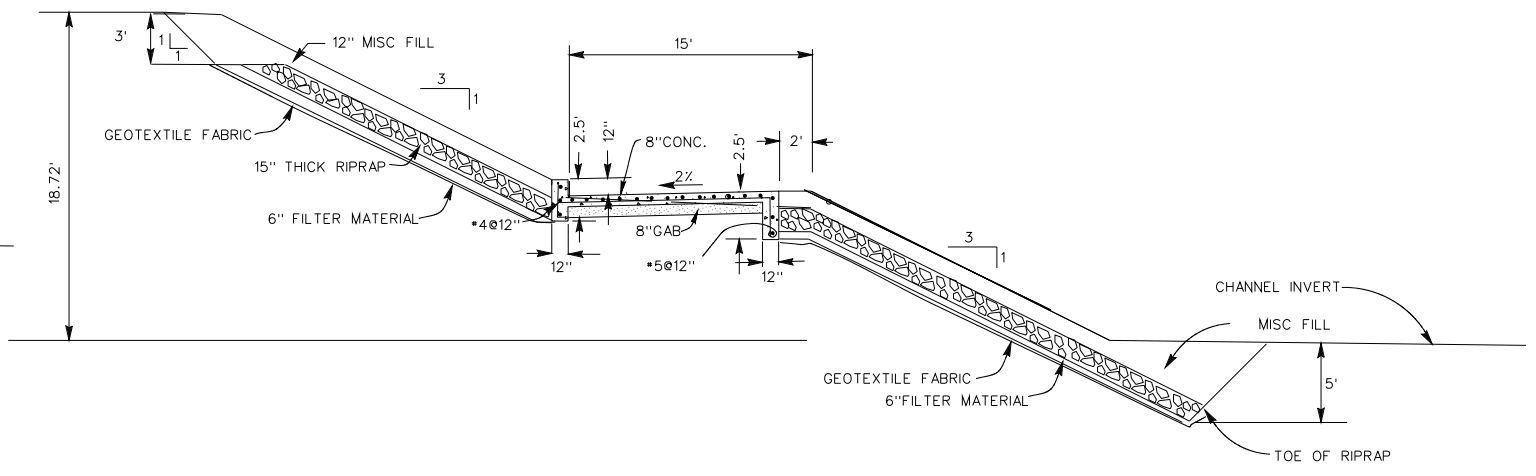
EAST ACCESS RAMP - 116+00.00
PLAN VIEW
N.T.S.



SECTION A-A TYPICAL SERVICE ROAD
N.T.S.

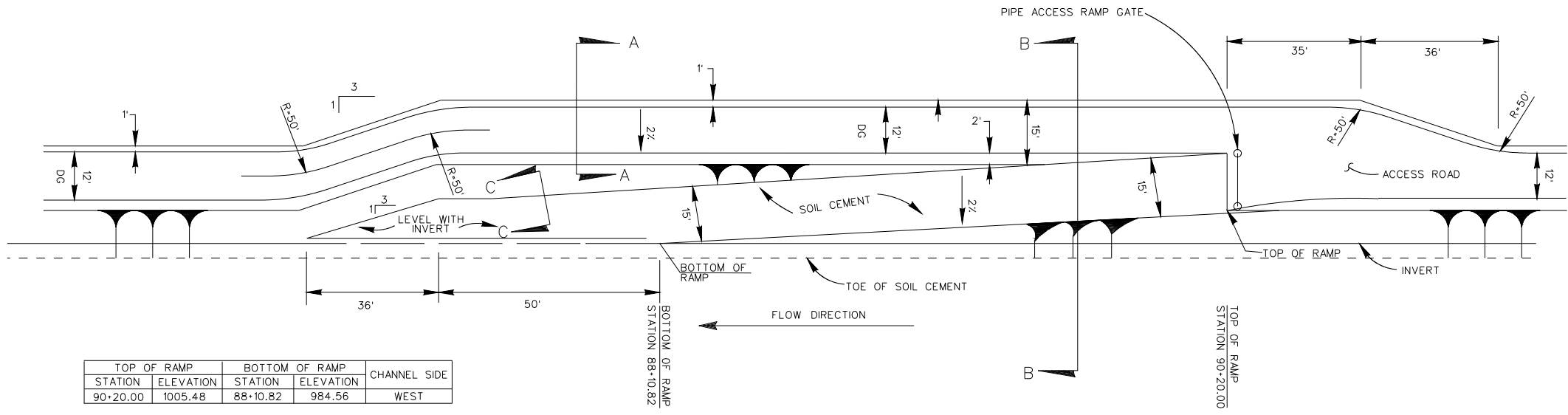
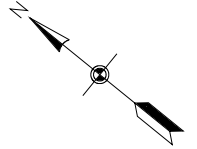


SECTION C-C ACCESS RAMP DETAIL
N.T.S.



SECTION B-B ACCESS RAMP DETAIL
N.T.S.

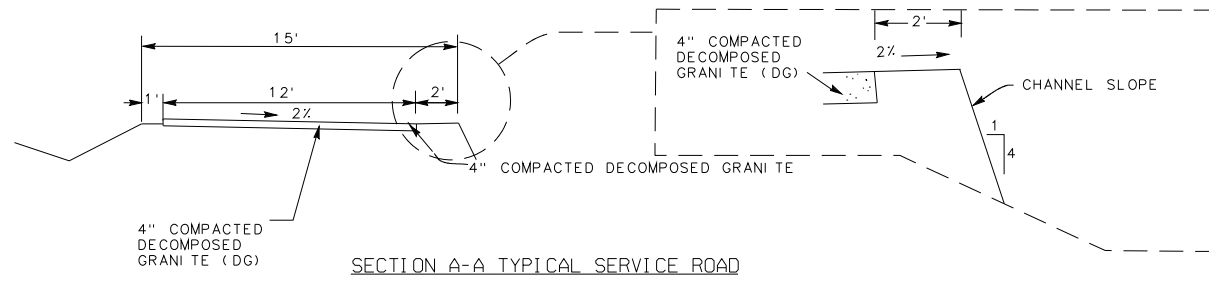
DESIGNED BY: J.G.R.		DRAWN BY: J.C.R.		CHECKED BY: S.H.V.	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		FILE NAME: C40.DGN	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		EAST ACCESS RAMP PLAN AND SECTIONS - STA. 116+00		DISTRICT FILE NO. 226/288	
SYMBOL		DESCRIPTIONS		REVISIONS	
DATE		APPROVAL			



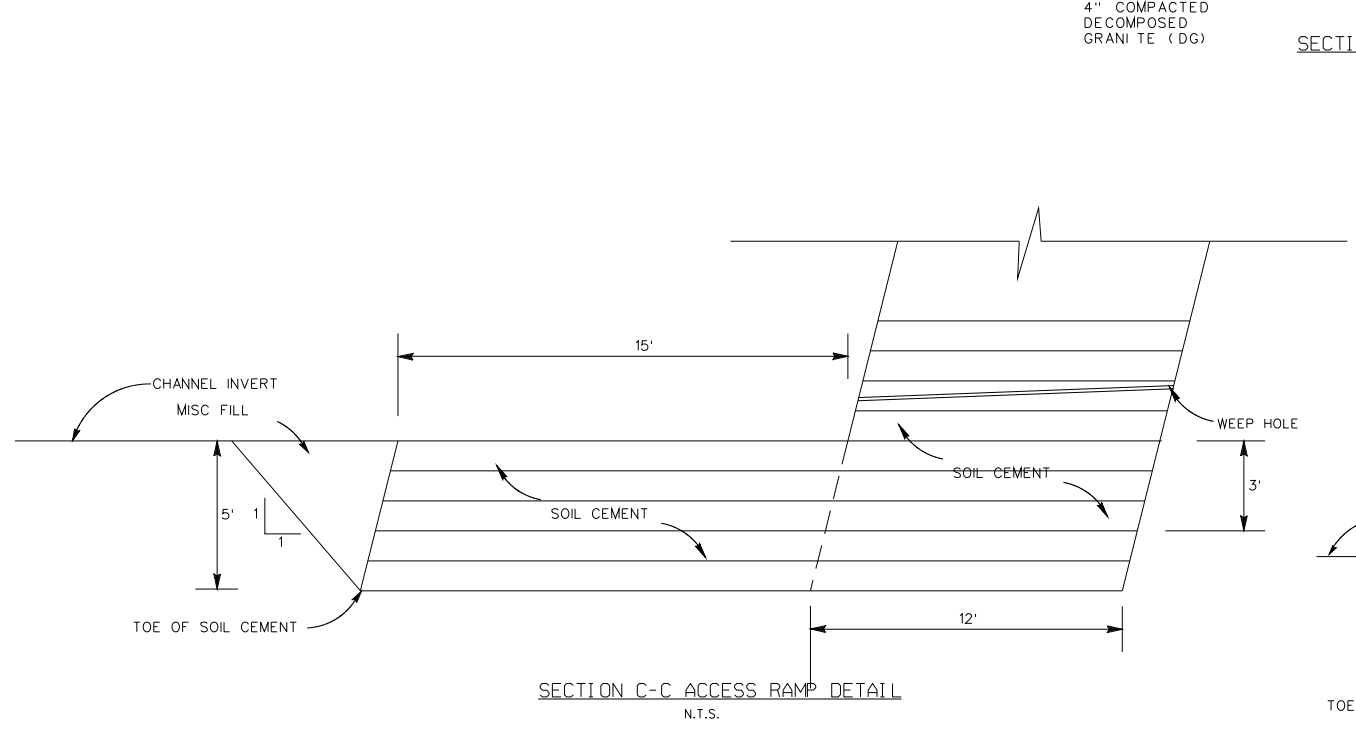
TOP OF RAMP STATION	ELEVATION	BOTTOM OF RAMP STATION	ELEVATION	CHANNEL SIDE
90+20.00	1005.48	88+10.82	984.56	WEST

WEST ACCESS RAMP - 90+20.00

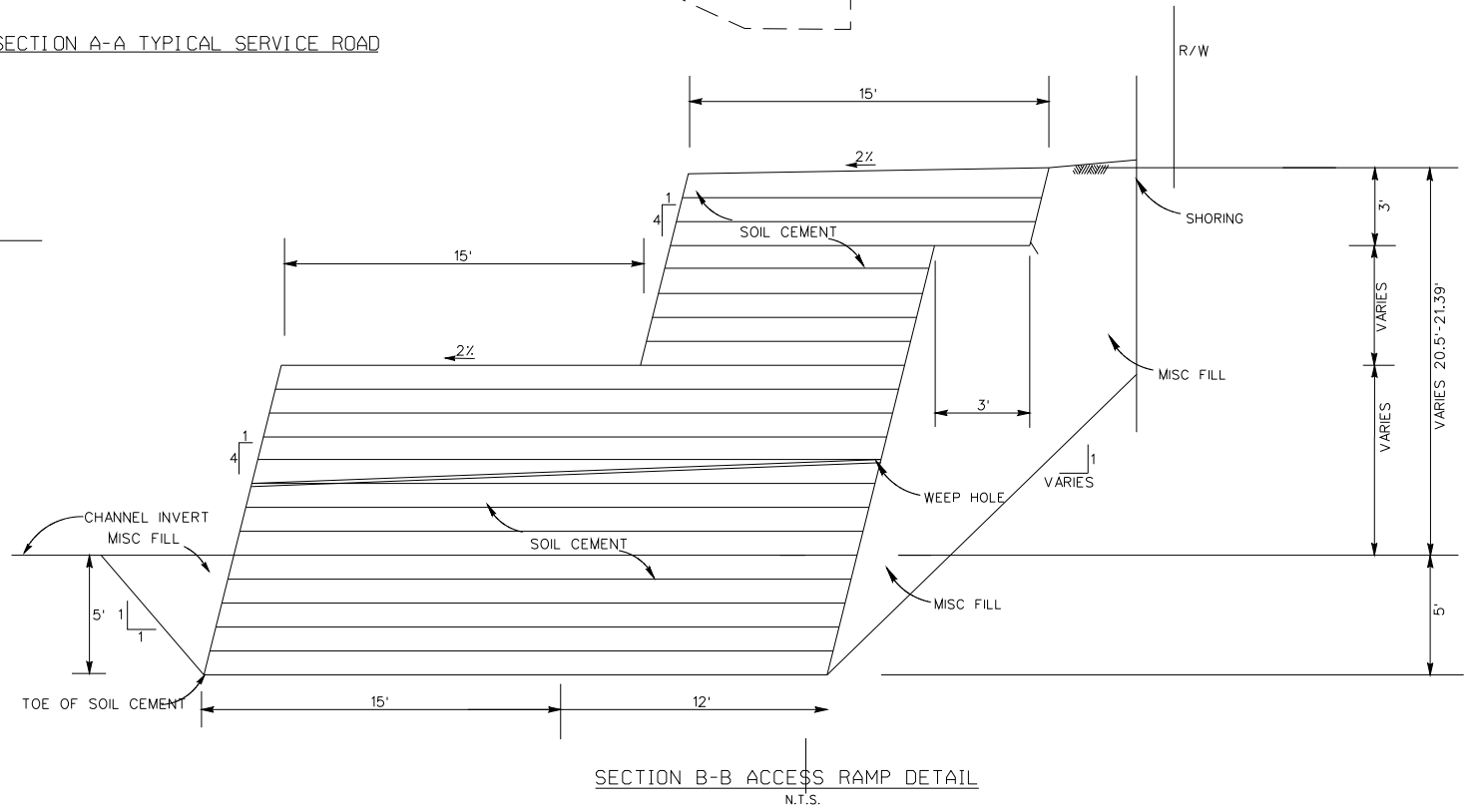
PLAN VIEW
N.T.S.



SECTION A-A TYPICAL SERVICE ROAD



SECTION C-C ACCESS RAMP DETAIL
N.T.S.



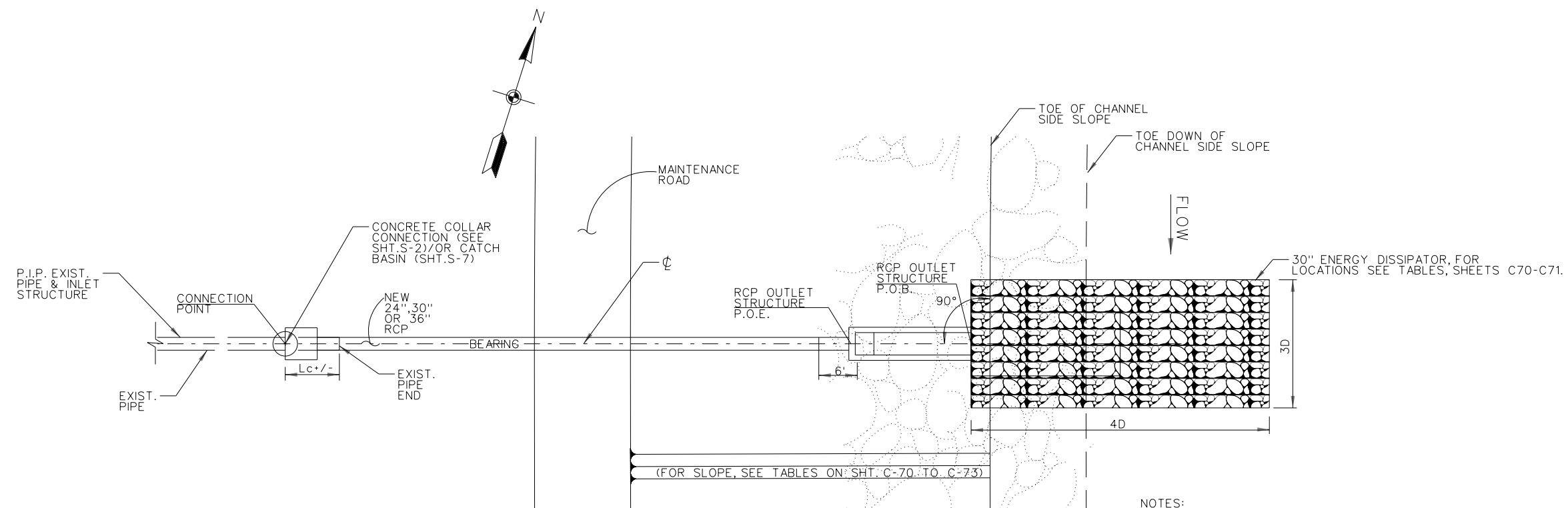
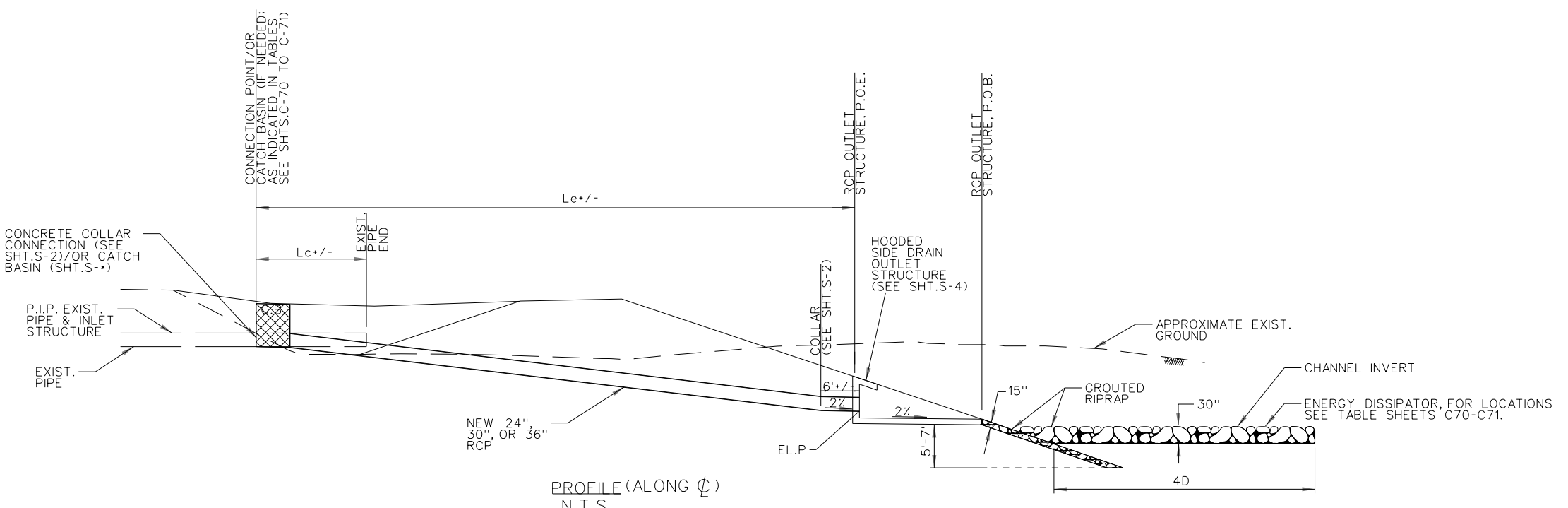
SECTION B-B ACCESS RAMP DETAIL
N.T.S.

SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
WEST ACCESS RAMP
PLAN AND SECTIONS - STA. 90+20

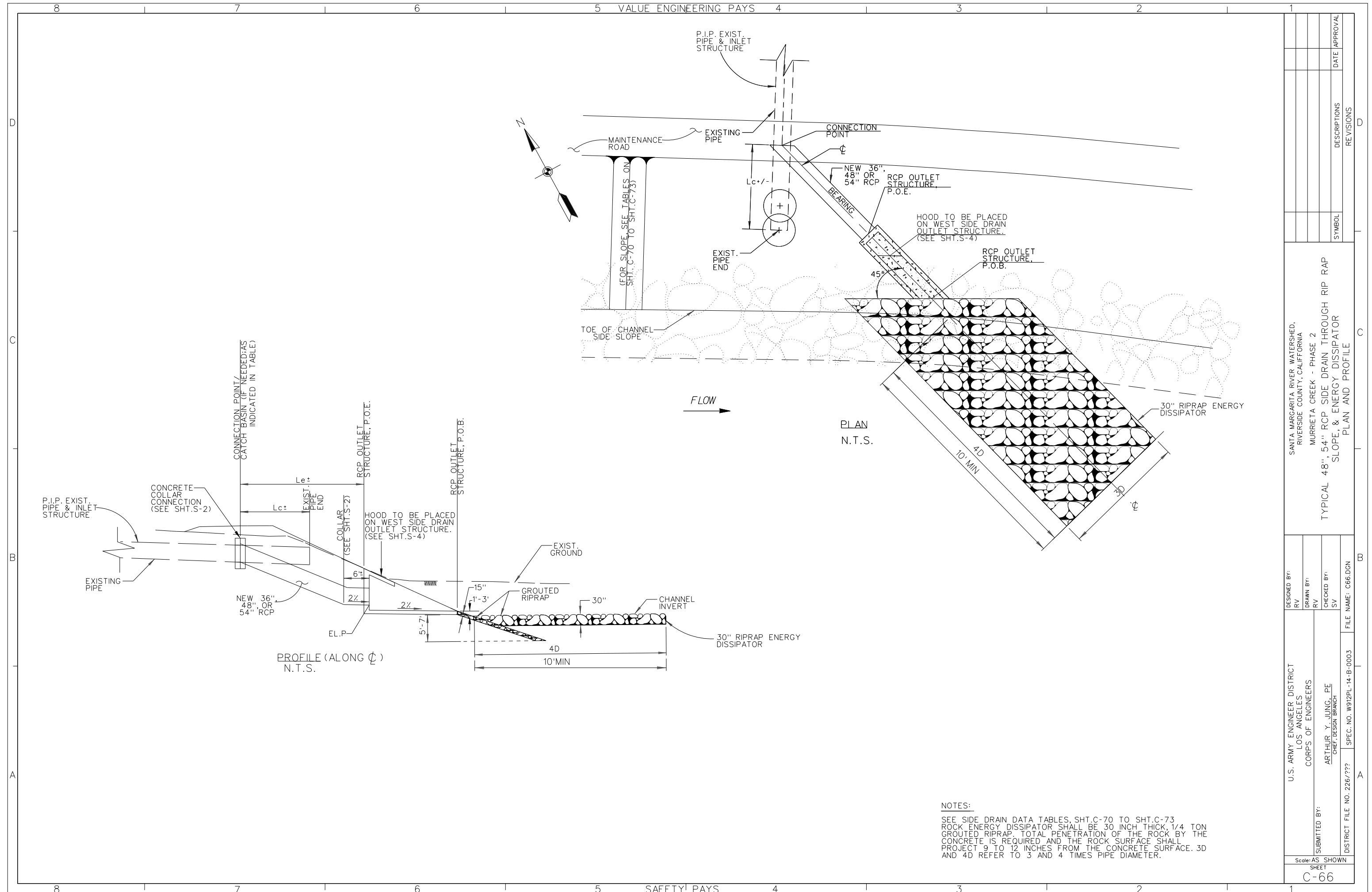
DESIGNED BY: J.G.R.
DRAWN BY: J.C.R.
CHECKED BY: S.H.V.
FILE NAME: C41.DGN
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
DISTRICT FILE NO. 226/289
SPEC. NO. W912PL-14-B-0003

Scale:
SHEET
C-41



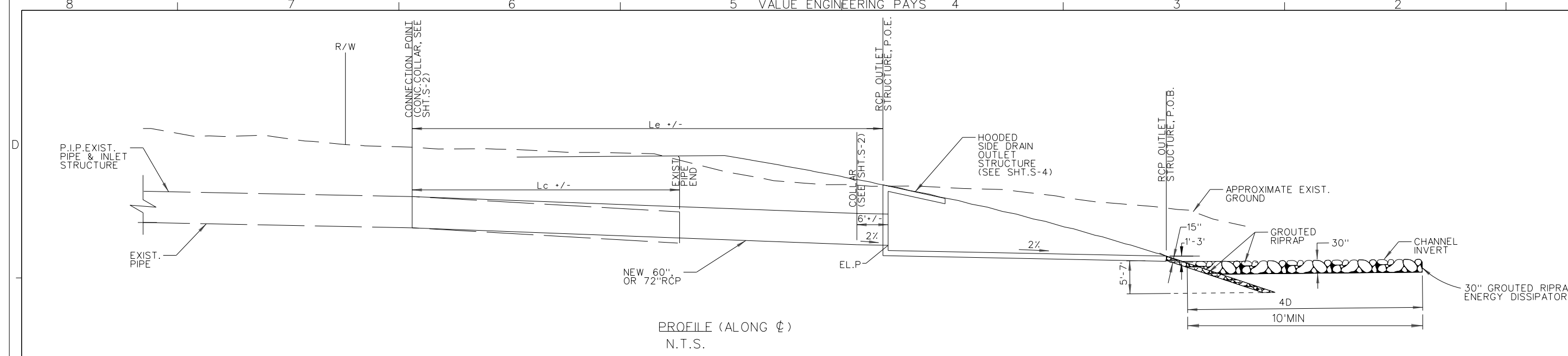
NOTES:
 SEE SIDE DRAIN DATA TABLES, SHT.C-70 AND SHT.C-71
 ROCK ENERGY DISSIPATOR SHALL BE 30 INCH THICK, 1/4 TON
 GROUTED RIPRAP. TOTAL PENETRATION OF THE ROCK BY THE
 CONCRETE IS REQUIRED AND THE ROCK SURFACE SHALL
 PROJECT 9 TO 12 INCHES FROM THE CONCRETE SURFACE. 3D
 AND 4D REFER TO 3 AND 4 TIMES PIPE DIAMETER.

DESIGNED BY: RV		DRAWN BY: RV		CHECKED BY: SV		FILE NAME: C65.DGN	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-14-B-0003		DISTRICT FILE NO. 226/???	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		TYPICAL 24", 30", OR 36" RCP SIDE DRAIN THROUGH RIP RAP SLOPE PLAN AND PROFILE		SYMBOL		REVISIONS	
				DATE		APPROVAL	
Scale: AS SHOWN		SHEET		C-65			

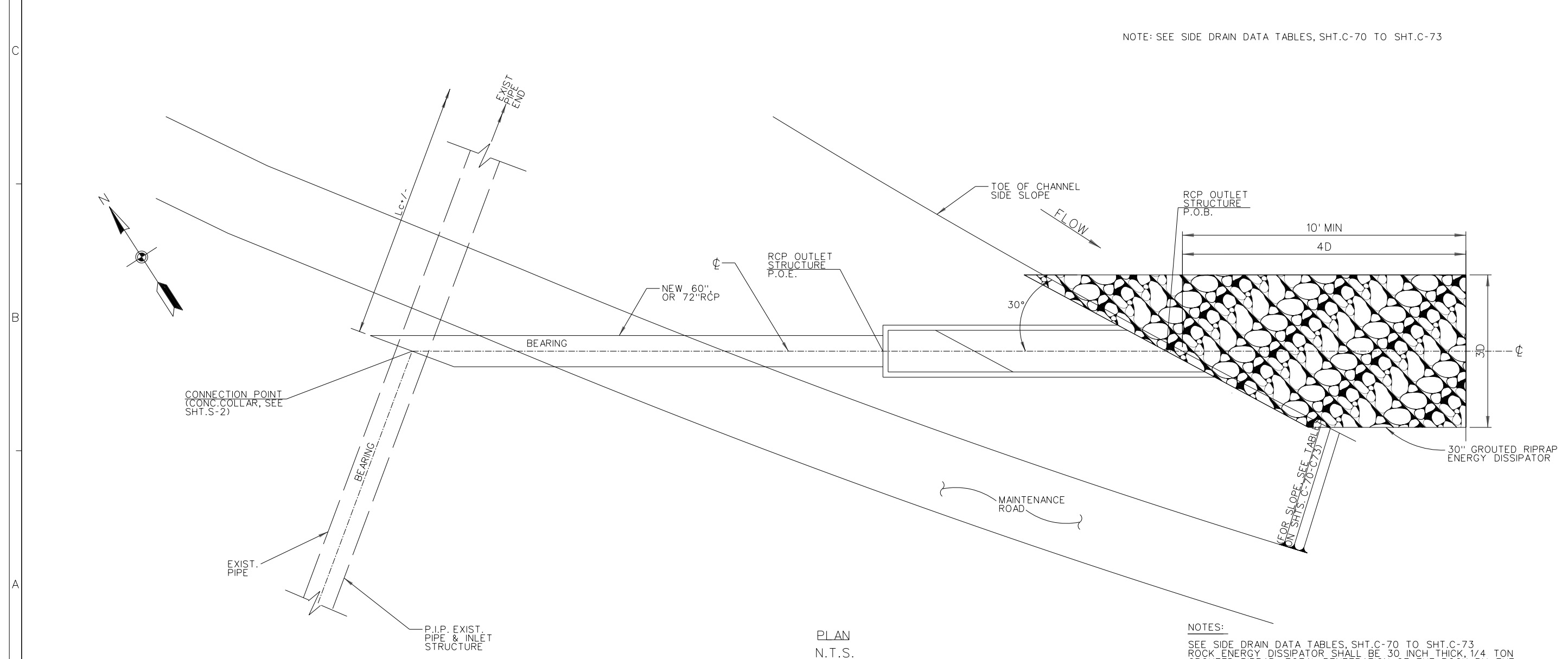


NOTES:
 SEE SIDE DRAIN DATA TABLES, SHT.C-70 TO SHT.C-73
 ROCK ENERGY DISSIPATOR SHALL BE 30 INCH THICK, 1/4 TON
 GROUDED RIPRAP. TOTAL PENETRATION OF THE ROCK BY THE
 CONCRETE IS REQUIRED AND THE ROCK SURFACE SHALL
 PROJECT 9 TO 12 INCHES FROM THE CONCRETE SURFACE. 3D
 AND 4D REFER TO 3 AND 4 TIMES PIPE DIAMETER.

DESIGNED BY: RV	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DISTRICT FILE NO. 226/???	FILE NAME: C66.DGN
DRAWN BY: RV	ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	SPEC. NO. W912PL-14-B-0003	
CHECKED BY: SV			
Scale: AS SHOWN SHEET C-66			
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 TYPICAL 48", 54" RCP SIDE DRAIN THROUGH RIP RAP SLOPE, & ENERGY DISSIPATOR PLAN AND PROFILE		REVISIONS SYMBOL DESCRIPTIONS DATE APPROVAL	



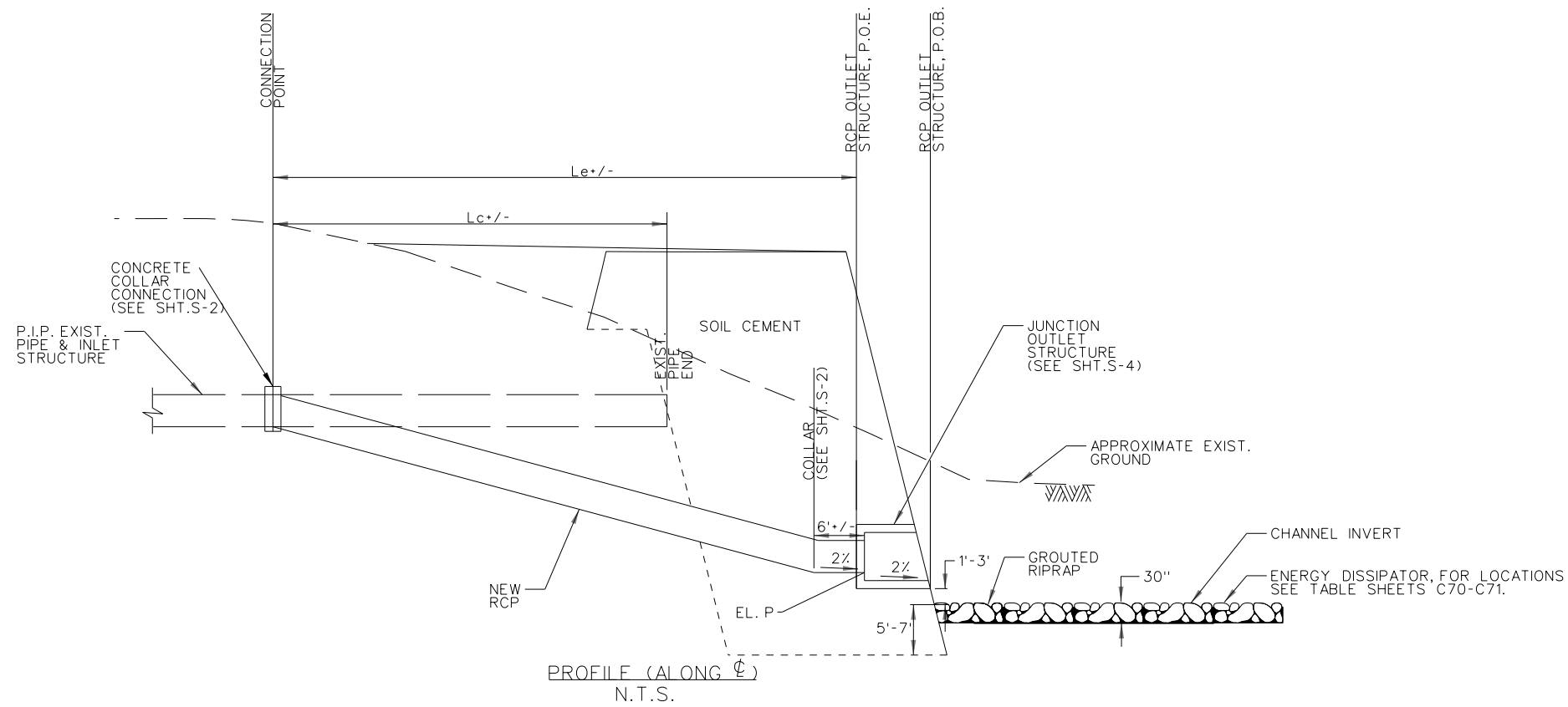
NOTE: SEE SIDE DRAIN DATA TABLES, SHT.C-70 TO SHT.C-73



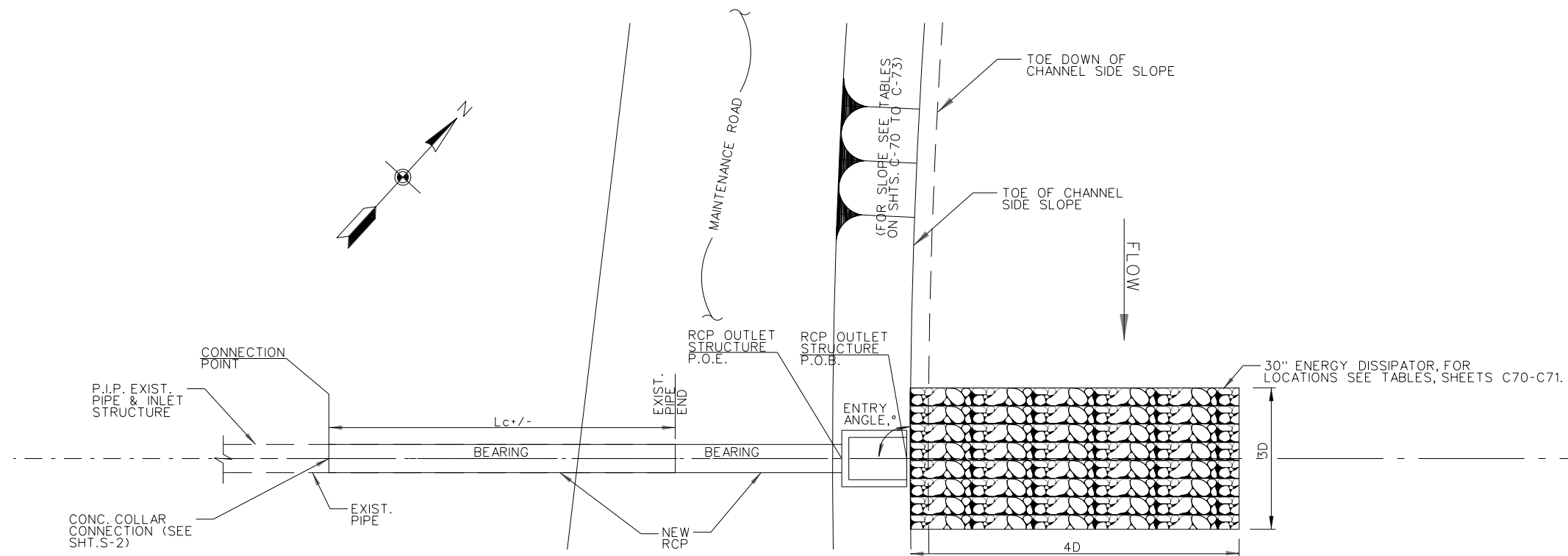
NOTES:
SEE SIDE DRAIN DATA TABLES, SHT.C-70 TO SHT.C-73
ROCK ENERGY DISSIPATOR SHALL BE 30 INCH THICK, 1/4 TON GROUDED RIPRAP. TOTAL PENETRATION OF THE ROCK BY THE CONCRETE IS REQUIRED AND THE ROCK SURFACE SHALL PROJECT 9 TO 12 INCHES FROM THE CONCRETE SURFACE. 3D AND 4D REFER TO 3 AND 4 TIMES THE PIPE DIAMETER.

DESIGNED BY: RV		DRAWN BY: RV		CHECKED BY: SV		FILE NAME: C67.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		DISTRICT FILE NO. 226/???		SPEC. NO. W912PL-14-B-0003	
Scale: AS SHOWN SHEET		C-67		SYMBOL		REVISIONS	
				DATE		APPROVAL	

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
TYPICAL 60", 72" SIDE DRAIN
THROUGH RIP RAP SLOPE
PLAN AND PROFILE



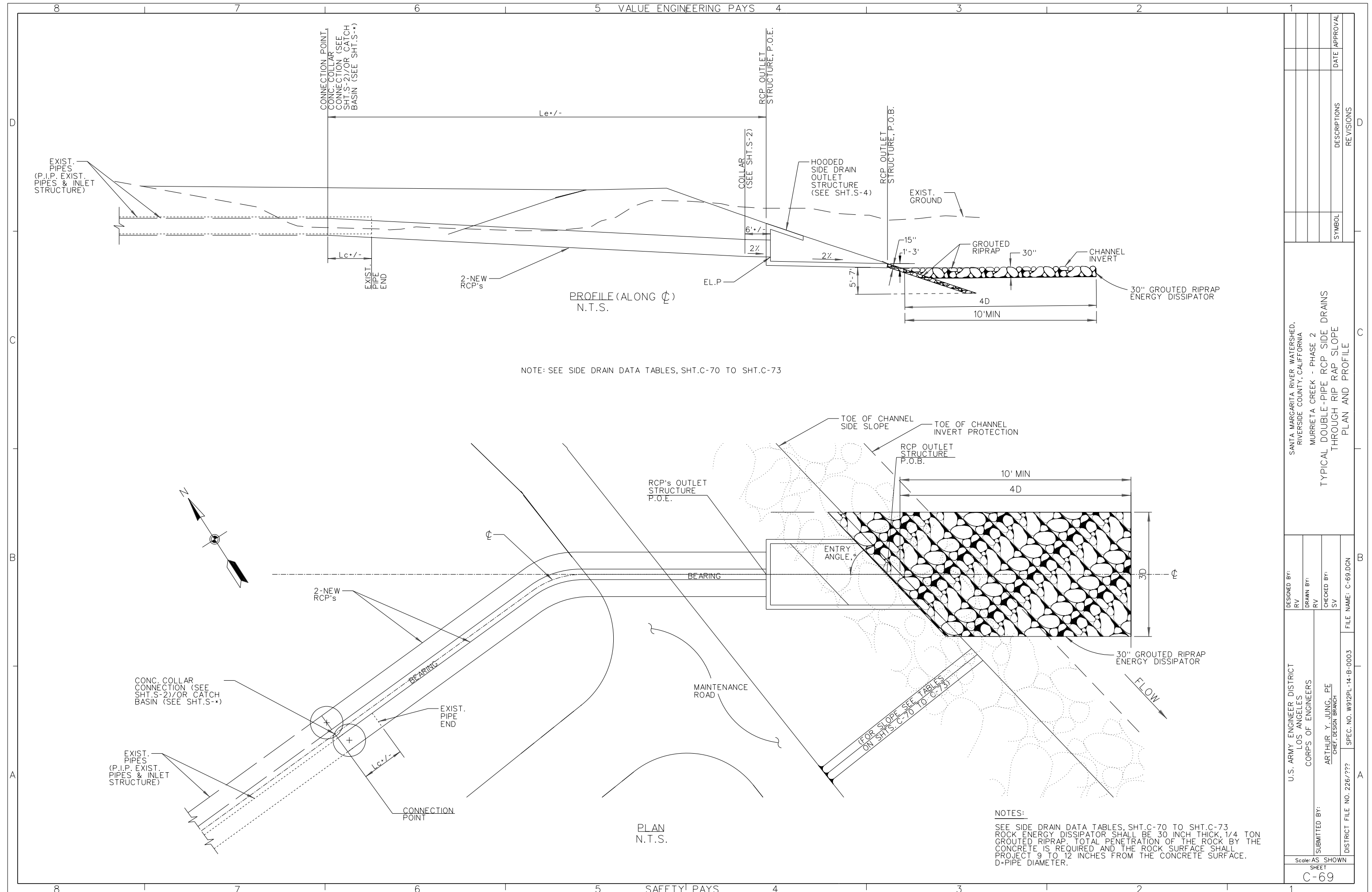
NOTE: SEE SIDE DRAIN DATA TABLES, SHT.C-70 TO SHT.C-73



NOTES:

SEE SIDE DRAIN DATA TABLES, SHT.C-70 AND SHT.C-71. ROCK ENERGY DISSIPATOR SHALL BE 30 INCH THICK, 1/4 TON GROUTED RIPRAP. TOTAL PENETRATION OF THE ROCK BY THE CONCRETE IS REQUIRED AND THE ROCK SURFACE SHALL PROJECT 9 TO 12 INCHES FROM THE CONCRETE SURFACE. 3D AND 4D REFER TO 3 AND 4 TIMES THE PIPE DIAMETER.

DESIGNED BY: RV		DRAWN BY: RV		CHECKED BY: SV		FILE NAME: C68.DGN	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		TYPICAL 24", 30", 48", 54", 60", 72", RCP SIDE DRAIN THROUGH SOIL CEMENT SLOPE		PLAN AND PROFILE	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/???		SYMBOL		REVISIONS	
Scale: AS SHOWN SHEET		C-68		DATE		APPROVAL	



DESIGNED BY: RV		DRAWN BY: RV		CHECKED BY: SV		FILE NAME: C-69.DGN
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DISTRICT FILE NO. 226/???		SPEC. NO. W912PL-14-B-0003
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRETA CREEK - PHASE 2		TYPICAL DOUBLE-PIPE RCP SIDE DRAINS THROUGH RIP RAP SLOPE		PLAN AND PROFILE		
SYMBOL		DESCRIPTIONS		REVISIONS		DATE APPROVAL

SIDE DRAIN TABULATION

REFERENCE STA FOR BID ITEMS	CHANNEL STA.	OUTLET STRUCTURE P.O.B. STA.	ELEVATION PIPE (EL. P)	BEARING	CUT-BACK LENGTH (OF EXIST.PE) (Lc)	CONNECTION PT. STA.	LENGTH EXTENSION (NEW PIPE), (Le)	ENTRY ANGLE	CHANNEL SLOPE, (S)/ & MATERIAL	NUMBER/SIZE/TY (EXISTING) PIPES	NUMBER/SIZE/TY (NEW) CONNECTING PIPE/S	CATCH BASIN	ENERGY DISSIPATOR	REMARKS
60+97 LT	61+60.33	60+97.38	984.42	S19°30'58"W		61+66.75	77.75 LF +/-	30°	0.5H:1V SOIL CEMENT	48" PIPE	72" RCP	YES	YES	SEE NOTES 1,3,4,5,9
	61+72.55	60+97.38	984.42	S 19°30'58"W		61+66.75	74.65 LF +/-	30°	0.5H:1V SOIL CEMENT	48" PIPE	72" RCP			
67+62 RT	67+67.31	67+61.73	983.38	S74°11'17"E	35 LF +/-	67+93.50	35.60 LF +/-	45°	0.25H:1V SOIL CEMENT	48" RCP	54" RCP	YES	YES	SEE NOTES 1,2,3,5,9
69+45 LT	69+44.92	69+44.92	983.59	N55°16'52"E	12 LF +/-	69+44.92	21.16 LF +/-	90°	0.25H:1V SOIL CEMENT	30" RCP	30" RCP	NO	YES	SEE NOTES 1,2,3,9
69+50 RT	69+52.99	69+50.13	983.65	S10°01'53"W	24.09 LF +/-	69+69.23	21.96 LF +/-	45°	0.25H:1V SOIL CEMENT	48" RCP	48" RCP	NO	YES	SEE NOTES 1,2,3,5,9
76+37 LT	76+23.53	76+36.84	984.67	S12°16'44"E	45 LF +/-	76+55.35	19.18 LF +/-	45°	0.25H:1V SOIL CEMENT	40" RCP	54" RCP	NO	YES	SEE NOTES 1,2,3,5,9
NO BID ITEM RT	79+80.99								0.25H:1V SOIL CEMENT	15" RCP				TO BE REPLACED WITH BRIDGE CONSTRUCTION BY OTHERS.
NO BID ITEM LT	79+87.34								0.25H:1V SOIL CEMENT	24" RCP				TO BE REPLACED WITH BRIDGE CONSTRUCTION BY OTHERS.
81+21 RT	81+21.37	81+21.37	985.34	N47°29'53"E	13 LF	81+21.37	26.11 LF +/-	90°	0.25H:1V SOIL CEMENT	12" CMP	24" RCP	NO	NO	SEE NOTES 1,2,3,9
82+17 LT	82+17.00	82+17.00	985.48	S58°41'04"W	22 LF +/-	82+17.00	17.70 LF +/-	90°	0.25H:1V SOIL CEMENT	24" RCP	24" RCP	NO	NO	SEE NOTES 1,2,3,9
84+10 LT	84+10.09	84+10.09	985.83	S58°41'04"W	23 LF +/-	84+10.09	22.83 LF +/-	90°	0.25H:1V SOIL CEMENT	18" RCP	24" RCP	NO	NO	SEE NOTES 1,2,3,9
NO BID ITEM RT	84+70.70								0.25H:1V SOIL CEMENT	9" CONC				DRAIN INTO DITCH.
86+53 RT	86+90.62	86+52.60	986.52	N67°04'21"E S53°58'51"E	50 LF +/-	86+91.54	36.94 LF +/-	30°	0.25H:1V SOIL CEMENT	48" CMP	60" RCP	YES	YES	SEE NOTES 1,2,3,5,9
87+54 LT	87+54.22	87+54.22	986.52	S63°54'59"W	44 LF +/-	87+54.22	22.61 LF +/-	90°	0.25H:1V SOIL CEMENT	24" RCP	24" RCP	NO	NO	SEE NOTES 1,2,3,9
86+83 RT	87+78.63	86+83.06	986.70	S83°40'04"E	--	87+78.63	130.29 LF +/-	30°	0.25H:1V SOIL CEMENT	48" RCP	60" RCP	NO	YES	SEE NOTES 1,2,3,5,9
91+47 LT	91+34.77	91+47.46	987.34	S2°45'55"W	42.71 LF +/-	91+62.87	17.32 LF +/-	45°	0.25H:1V SOIL CEMENT	40" RCP	48" RCP	NO	YES	SEE NOTES 1,2,3,5,9
91+60 RT	91+60.11	91+60.11	987.32	N46°41'22"E	32 LF +/-	91+60.11	22.08 LF +/-	90°	0.25H:1V SOIL CEMENT	18" CMP	24" RCP	NO	NO	SEE NOTES 1,2,3,9
92+27 RT	92+26.94	92+26.94	987.46	N44°38'28"E	45 LF +/-	92+26.94	31.18 LF +/-	90°	0.25H:1V SOIL CEMENT	18" CMP	24" RCP	NO	NO	SEE NOTES 1,2,3,9
92+77 RT	92+76.69	92+76.69	987.57	N44°38'28"E	20 LF +/-	92+76.69	23.48 LF +/-	90°	0.25H:1V SOIL CEMENT	30" CMP	30" RCP	NO	NO	SEE NOTES 1,2,3,9
NO BID ITEM RT	94+72.36		987.94						0.25H:1V SOIL CEMENT	6" PVC				PLUG EXIST. 6" PVC
96+36 RT	97+72.03	96+35.68	989.32	N52°00'47"E S58°27'17"E	84.26 LF	97+58.08	130 LF	30°	2H:1V RIPRAP	72" RCP	72" RCP	NO	YES	SEE NOTES 1,2,3,5,9
101+82 RT	101+81.88	101+81.88	989.70	N65°22'51"E	30 LF	101+81.88	22.96 LF	90°	3H:1V RIPRAP	30" RCP	30" RCP	NO	YES	SEE NOTES 1,2,3,6
106+53 RT	106+53.16	106+53.16	990.61	N70°46'53"E	--	106+53.16	48.21 LF	90°	3H:1V RIPRAP	18" RCP	24" RCP	NO	YES	SEE NOTES 1,2,3,6
106+99 LT	106+92.21	106+98.75	990.68	S71°11'06"W	--	106+92.21	34.70 LF +/-	90°	3H:1V RIPRAP	18" RCP	24" RCP	NO	NO	SEE NOTES 1,2,3,10
	107+05.29		990.71	S71°11'06"W	1.46 LF +/-	107+05.29	34.70 LF +/-	90°	3H:1V RIPRAP	24" RCP	24" RCP	NO	NO	

NOTES:

- PROTECT IN PLACE EXISTING PIPE/S AND EXIST. INLET STRUCTURE.
- ADD NEW RCP EXTENSION AT CONNECTION POINT, AT ENTRY ANGLE.
- SEE SHT. S-2, & S-4, FOR CONNECTION & OUTLET DETAILS.
- ADD NEW CATCH BASIN AT CONNECTION POINT. CONNECT NEW RCP EXTENSION TO NEW CATCH BASIN, AT ENTRY ANGLE. SEE SHT. S-7 & S-9 FOR CATCH BASIN DETAILS
- SEE SHT. C-66 FOR ENERGY DISSIPATOR
- SEE SHT.C-65 FOR TYPICAL 24", 30", 36" RCP SIDE DRAIN THROUGH RIPRAP SLOPE- PLAN & PROFILE.
- SEE SHT.C-66 FOR TYPICAL 48", 54" RCP SIDE DRAIN THROUGH RIPRAP SLOPE- PLAN & PROFILE.
- SEE SHT.C-67 FOR TYPICAL 60", 72" RCP SIDE DRAIN THROUGH RIPRAP SLOPE- PLAN & PROFILE.
- SEE SHT.C-68 FOR TYPICAL 24", 30", 48", 54", 60" RCP SIDE DRAIN THROUGH SOIL CEMENT SLOPE- PLAN & PROFILE.
- SEE SHT.C-69 FOR TYPICAL DOUBLE PIPE RCP SIDE DRAINS THROUGH RIPRAP SLOPE- PLAN & PROFILE.

DESIGNED BY: RV	DRAWN BY: RV	CHECKED BY: SV	FILE NAME: C70.DGN
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	SPEC. NO. W912PL-14-B-0003
SUBMITTED BY:		DISTRICT FILE NO. 226/310	SHEET
Scale: AS SHOWN		C-70	

SIDE DRAIN TABULATION (CONT.)

REFERENCE STA FOR BID ITEMS	CHANNEL STA.	OUTLET STRUCTURE P.O.B. STA.	ELEVATION PIPE (E.L. P)	BEARING	CUT-BACK LENGTH (OF EXIST. PIPE) (Lc)	CONNECTION PT STA.	LENGTH EXTENSION (NEW PIPE), (Le)	ENTRY ANGLE	CHANNEL SIDE SLOPE, (S) / & MATERIAL	NUMBER/SIZE/TYPE (EXISTING) PIPES	NUMBER/SIZE/TYPE (NEW) CONNECTING PIPE/S	CATCH BASIN	ENERGY DISSIPATOR	REMARKS
108+11 RT	108+10.91							90°	3H:1V RIPRAP	7' X 14' RCB		NO	YES	P.I.P. EXIST RCB. ADJUST WING WALLS TO MATCH NEW SIDE SLOPE.
108+29 RT	108+28.56	108+28.56	990.96	S71°11'06"E	--	108+28.56	62.56 LF	90°	3H:1V RIPRAP	24" RCP	24" RCP	YES	YES	SEE NOTES 1,2,3,6
108+95 LT	108+95.29	108+95.29	991.09	S71°11'06"W	20 LF	108+95.29	32.54 LF	90°	3H:1V RIPRAP	18" RCP	24" RCP	NO	NO	SEE NOTES 1,2,3,6
109+32 LT	109+31.62	109+31.62	991.13	S71°11'06"W	--	109+31.62	26.73 LF	90°	3H:1V RIPRAP	24" CMP	24" RCP	NO	NO	SEE NOTES 1,2,3,6
NO BID ITEM	116+04.99		992.51						3H:1V RIPRAP	8" PIPE				PLUG EXIST. 8" PIPE
117+16 LT	117+26.35	117+16.07	993.08	S26°11'06"W	60 LF	117+68.77	34.35 LF	45°	3H:1V RIPRAP	48" CMP	48" RCP	NO	YES	SEE NOTES 1,2,3,5,7
120+39 RT	120+39.36	120+39.36	993.47	N71°11'06"E	--	120+39.36	82.04 LF	90°	3H:1V RIPRAP	18" RCP	36" RCP	NO	YES	SEE NOTES 1,2,3,6
122+61 LT	123+39.29	122+60.94	994.32	S26°11'06"W	38 LF	123+39.28	71 LF +	45°	3H:1V RIPRAP	24" CMP	48" RCP	YES	YES	SEE NOTES 1,3,5,7. ADD NEW MANHOLE AT CONNECTION PT.
123+95 RT	123+95.07	123+95.07	994.09	N71°15'35"E	--	123+95.07	83.04 LF +	90°	3H:1V RIPRAP	24" RCP	24" RCP	YES	YES	SEE NOTES 1,3,4,6
134+25 RT	135+26.58	135+26.58	996.46	N50°22'53"E	--	135+26.58	186.51 LF +	90°	3H:1V RIPRAP	24" RCP	36" RCP	YES	YES	SEE NOTES 1,3,4,6
137+98 LT	137+98.42	137+98.42	996.94	S44°20'36"W	--	137+98.42	51.20 LF	90°	3H:1V RIPRAP	18" CMP	30" RCP	YES	NO	SEE NOTES 1,2,3,6
139+25 RT	139+24.39	139+25.47	997.15	N44°20'36"E	--	139+24.39	196.5 LF +	90°	3H:1V RIPRAP	18" RCP	24" RCP	YES	YES	SEE NOTES 1,3,4,10
	139+26.80		997.15	N44°20'36"E	0.43 LF	139+26.80	196.2 LF +	90°	3H:1V RIPRAP	24" RCP	24" RCP			
139+41 LT	139+40.69	139+40.69	997.18	S44°20'36"W	--	139+40.69	51.66 LF	90°	3H:1V RIPRAP	18" CMP	24" RCP	NO	NO	SEE NOTES 1,2,3,6
143+06 LT	143+05.85	143+05.85	997.95	S44°20'36"W	--	143+05.85	63.85 LF +	90°	3H:1V RIPRAP	18" CMP	30" RCP	YES	NO	SEE NOTES 1,3,4,6
143+56 RT	144+29.28	143+55.83	998.50	N44°20'36"E N89°20'36"E	--	144+29.29	160.35 LF +/-	45°	3H:1V RIPRAP	42" RCP	48" RCP	YES	YES	SEE NOTES 1,3,4,5,7
146+64 LT	146+63.53	146+63.53	998.67	S46°00'38"W	--	146+63.53	106.86 LF +	90°	3H:1V RIPRAP	24" CMP	30" RCP	NO	NO	SEE NOTES 1,2,3,6
149+87 LT	150+43.50	149+86.56	999.69	S45°27'08"W S8°22'51"W	1.61 LF +	150+43.77	79.24 LF +/-	45°	3H:1V RIPRAP	2- 54" RCP's	2- 54" RCP's	YES	YES	SEE NOTES 1,2,3,5,10
	150+53.57		999.71		--	150+53.57	84.27 LF +/-	45°	3H:1V RIPRAP					
152+16 RT	152+72.21	152+16.03	1000.14	N58°59'45"E S76°00'15"E	--	152+72.21	130.89 LF +	45°	3H:1V RIPRAP	2- 24" RCP's	2- 54" RCP's	YES	YES	SEE NOTES 1,3,4,5,10
	152+75.54		1000.15		--	152+75.54	134.94 LF +	45°	3H:1V RIPRAP					
161+86 RT	161+84.97	161+86.04	1001.67	N54°52'11"E	--	161+84.97	116.81 LF +	90°	3H:1V RIPRAP	18" RCP	24" RCP	YES	YES	SEE NOTES 1,3,4,10
	161+87.12		1001.67		0.42 LF +	161+87.12	116.81 LF +	90°	3H:1V RIPRAP	24" RCP	24" RCP			
169+25 RT	169+86.90	169+25.00	1003.29	N63°55'49"E S80°07'49"E	1.88 LF	169+86.90	106.76 LF +	45°	2H:1V RIPRAP	2- 48" RCP's	2- 48" RCP's	YES	YES	SEE NOTES 1,3,4,5,10
	169+93.61		1003.31		--	169+93.61	110.85 LF +	45°	2H:1V RIPRAP					
181+81 RT	182+30.74	181+80.92	1005.82	N78°50'02"E	6.47 LF +	182+.35.34	50.64 LF +/-	45°	2H:1V RIPRAP	48" RCP	54" RCP	NO	YES	SEE NOTES 1,2,3,5,10
	182+39.22		1005.84		--	182+.39.22	50.64 LF +/-	45°	2H:1V RIPRAP	48" RCP	54" RCP			
183+04 LT	183+35.25	183+04.09	1006.07	S16°55'56"E	20'	183+34.79	22.29 LF	45°	2H:1V RIPRAP	48" RCP	48" RCP	NO	YES	SEE NOTES 1,2,3,5,7

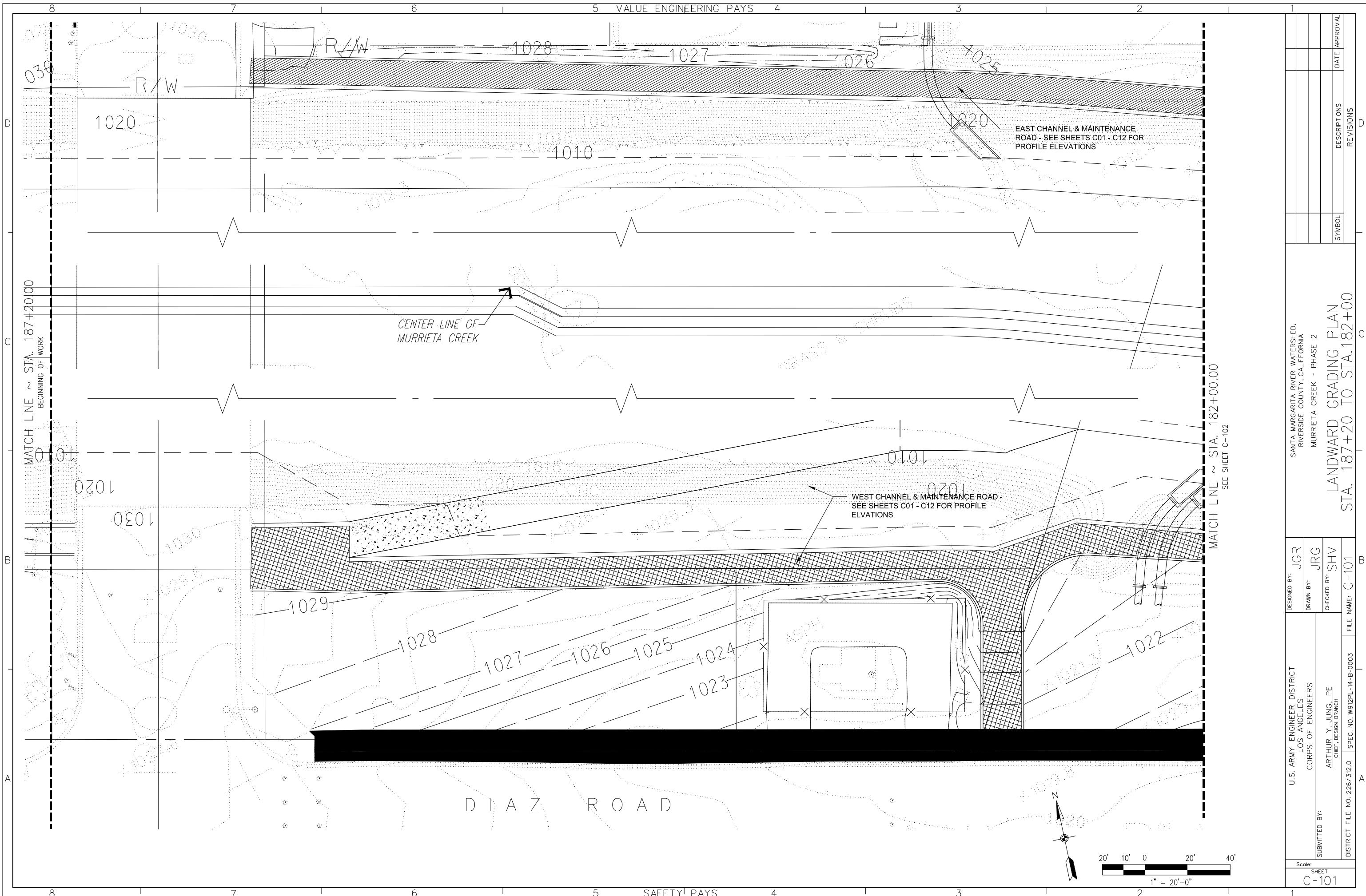
NOTES:

1. PROTECT IN PLACE EXISTING PIPE/S AND EXIST. INLET STRUCTURE.
2. ADD NEW RCP EXTENSION AT CONNECTION POINT, AT ENTRY ANGLE.
3. SEE SHT. S-2, & S-4, FOR CONNECTION & OUTLET DETAILS.
4. ADD NEW CATCH BASIN AT CONNECTION POINT. CONNECT NEW RCP EXTENSION TO NEW CATCH BASIN, AT ENTRY ANGLE. SEE SHT. S-7 & S-9 FOR CATCH BASIN DETAILS
5. SEE SHT. C-66 FOR ENERGY DISSIPATOR
6. SEE SHT. C-65 FOR TYPICAL 24", 30", 36" RCP SIDE DRAIN THROUGH RIPRAP SLOPE- PLAN & PROFILE.
7. SEE SHT. C-66 FOR TYPICAL 48", 54" RCP SIDE DRAIN THROUGH RIPRAP SLOPE- PLAN & PROFILE.
8. SEE SHT. C-67 FOR TYPICAL 60", 72" RCP SIDE DRAIN THROUGH RIPRAP SLOPE- PLAN & PROFILE.
9. SEE SHT. C-68 FOR TYPICAL 24", 30", 48", 54", 60", 72" RCP SIDE DRAIN THROUGH SOIL CEMENT SLOPE- PLAN & PROFILE.
10. SEE SHT. C-69 FOR TYPICAL DOUBLE PIPE RCP SIDE DRAINS THROUGH RIPRAP SLOPE- PLAN & PROFILE.

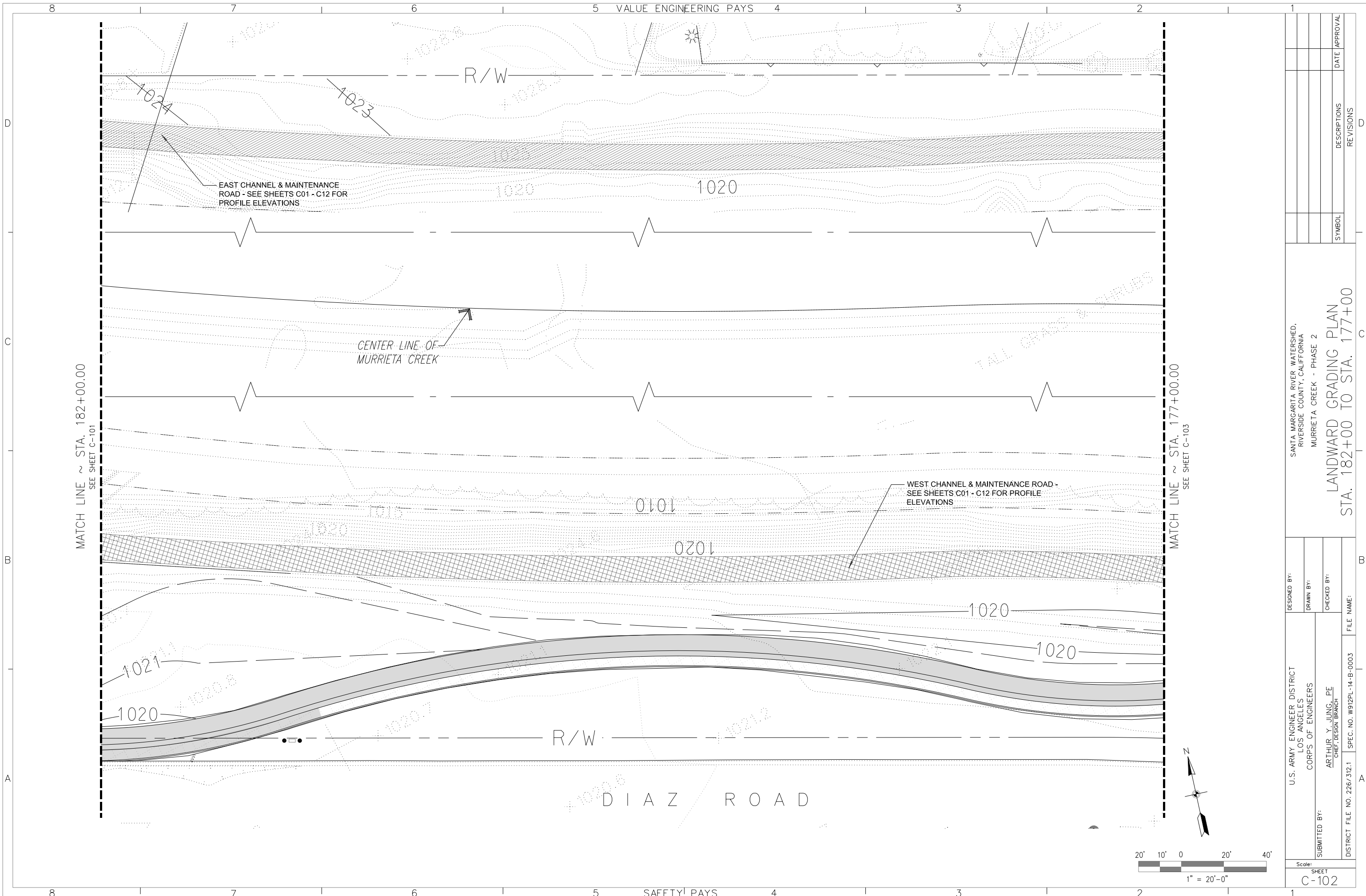
APPROVAL	DATE
REVISIONS	DESCRIPTIONS
SYMBOL	

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
SIDE DRAIN DATA TABLE
STA. 108+28 TO SAT. 183+04

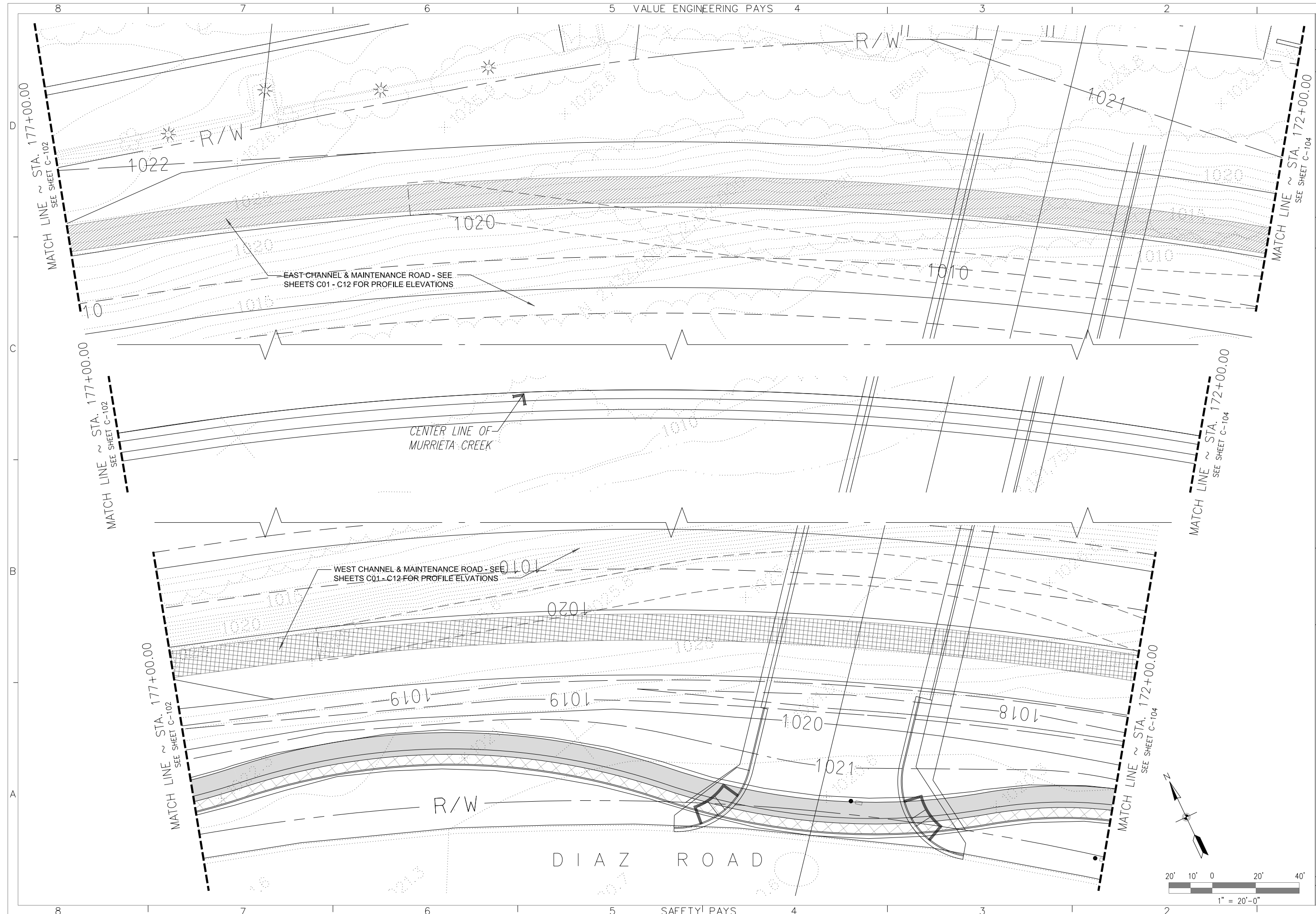
DESIGNED BY: RV
DRAWN BY: RV
CHECKED BY: SV
FILE NAME: .DGN
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
SPEC. NO. W92PL-14-B-0003
DISTRICT FILE NO. 226/311



DESIGNED BY: JGR	FILE NAME: C-101
DRAWN BY: JRG	SPEC. NO. W912PL-14-B-0003
CHECKED BY: SHV	DISTRICT FILE NO. 226/312.0
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	CHIEF, DESIGN BRANCH
ARTHUR Y. JUNG, PE	
SUBMITTED BY:	
DESIGNED BY: JGR	
DRAWN BY: JRG	
CHECKED BY: SHV	
FILE NAME: C-101	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA	
MURRIETA CREEK - PHASE 2	
LANDWARD GRADING PLAN	
STA. 187+20 TO STA. 182+00	
SYMBOL	REVISIONS
DATE	APPROVAL



DESIGNED BY:		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA	
DRAWN BY:		MURRIETA CREEK - PHASE 2	
CHECKED BY:			
FILE NAME:			
SUBMITTED BY:		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DISTRICT FILE NO. 226/312.1		SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY:		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	
SHEET		C-102	
REVISIONS		DATE APPROVAL	
SYMBOL			



VALUE ENGINEERING PAYS

SAFETY PAYS

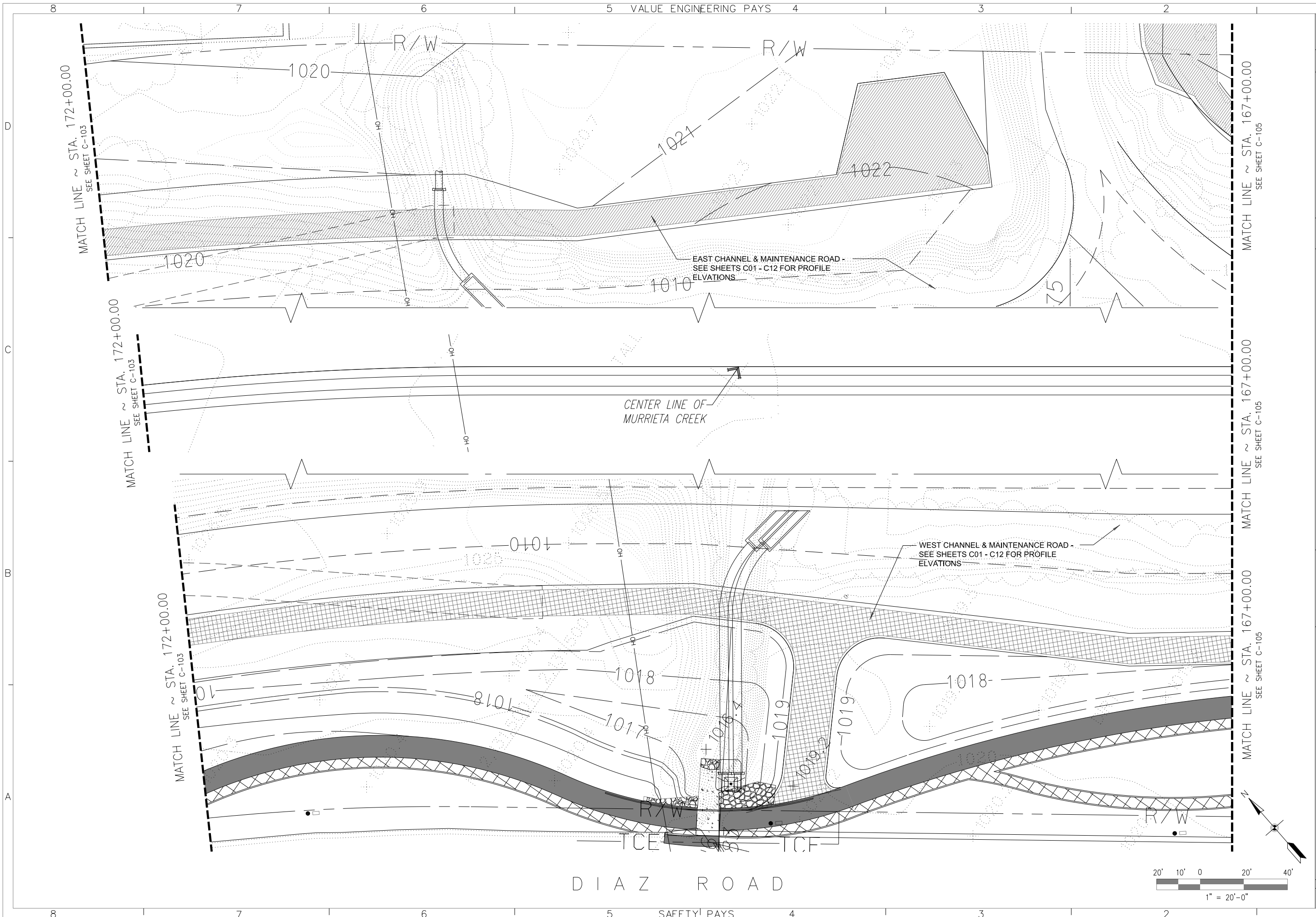
SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2

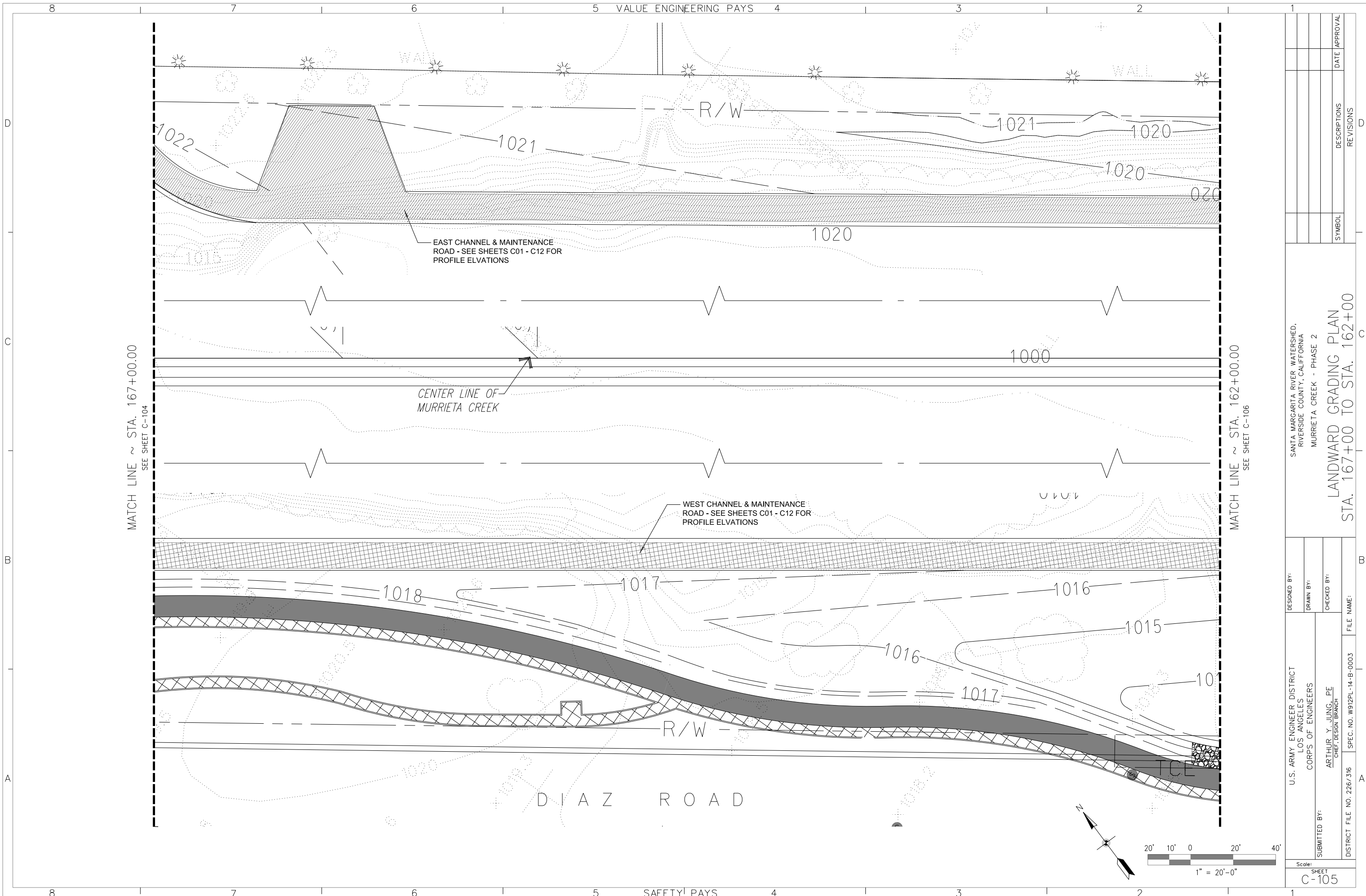
LANDWARD GRADING PLAN
 STA. 177+00 TO STA. 172+00

DESIGNED BY:	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS
DRAWN BY:	ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH
CHECKED BY:	
FILE NAME:	SPEC. NO. W912PL-14-B-0003
DISTRICT FILE NO. 226/314	

Scale:
 SHEET
C-103



DESIGNED BY:		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA	
DRAWN BY:		MURRIETA CREEK - PHASE 2	
CHECKED BY:		LANDWARD GRADING PLAN	
FILE NAME:		STA. 172+00 TO STA. 167+00	
SUBMITTED BY:		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DISTRICT FILE NO. 226/315		SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY:		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	
Scale:		1" = 20'-0"	
SHEET		C-104	
SYMBOL		REVISIONS	
DATE		APPROVAL	



MATCH LINE ~ STA. 167+00.00
SEE SHEET C-104

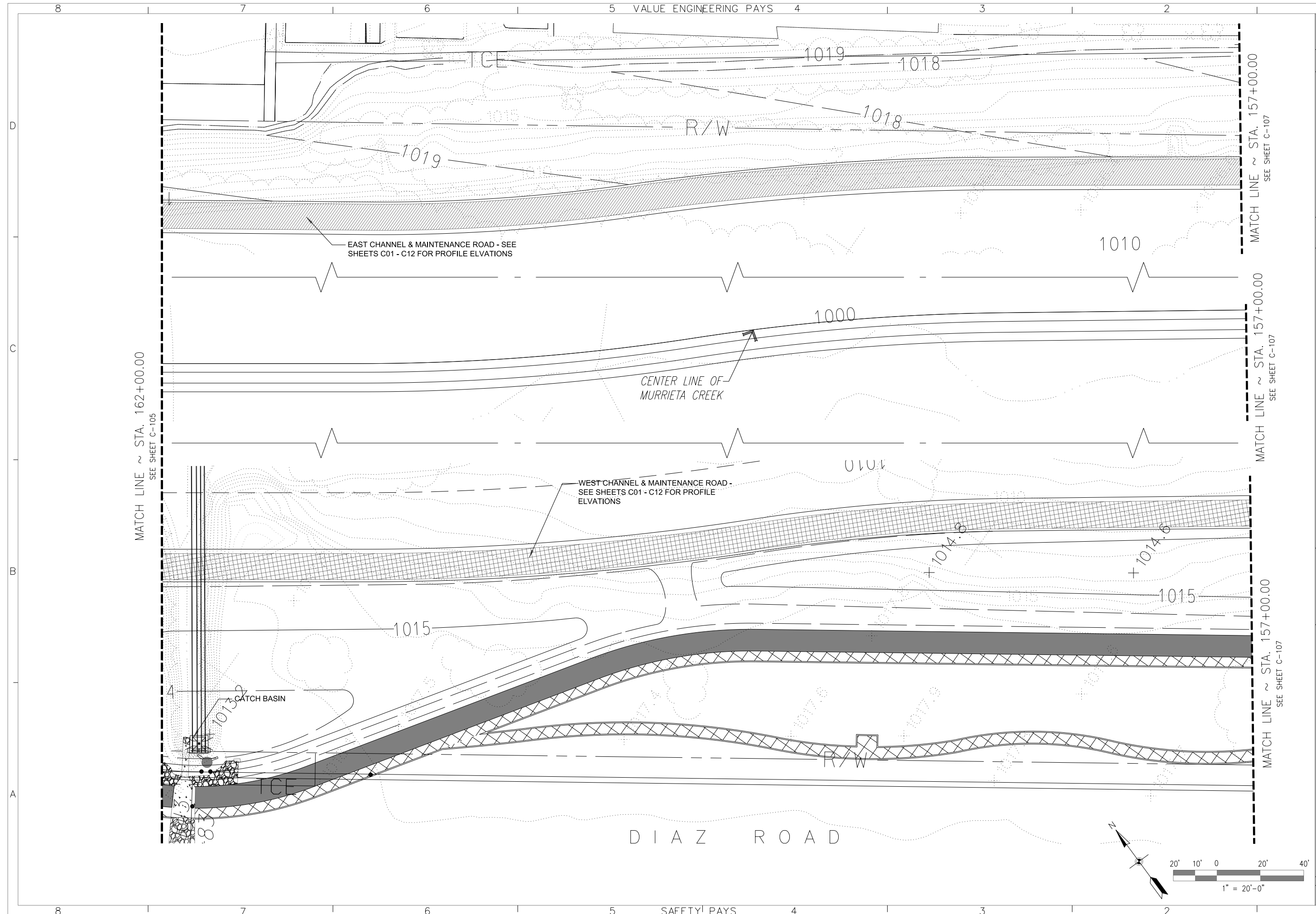
MATCH LINE ~ STA. 162+00.00
SEE SHEET C-106

SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

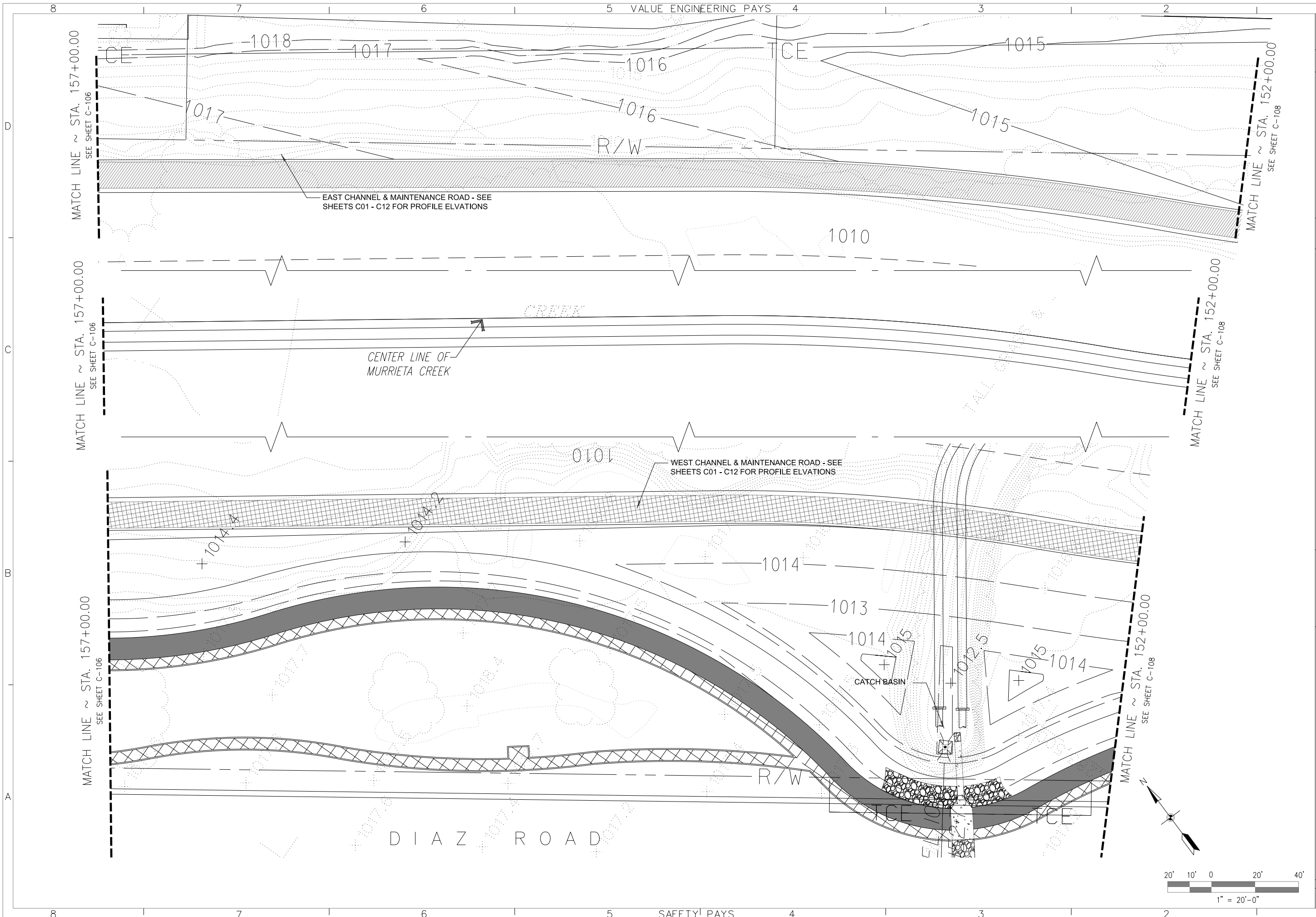
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

LANDWARD GRADING PLAN
STA. 167+00 TO STA. 162+00

DESIGNED BY:	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	FILE NAME:	
DRAWN BY:		DISTRICT FILE NO. 226/316	
CHECKED BY:	ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY:			



DESIGNED BY:		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA	
DRAWN BY:		MURRIETA CREEK - PHASE 2	
CHECKED BY:			
FILE NAME:			
SUBMITTED BY:		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DISTRICT FILE NO. 226/317		SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY:		ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	
SHEET		C-106	
DATE APPROVAL			
REVISIONS			
SYMBOL			



MATCH LINE ~ STA. 157+00.00
SEE SHEET C-106

MATCH LINE ~ STA. 157+00.00
SEE SHEET C-106

MATCH LINE ~ STA. 157+00.00
SEE SHEET C-106

MATCH LINE ~ STA. 152+00.00
SEE SHEET C-108

MATCH LINE ~ STA. 152+00.00
SEE SHEET C-108

MATCH LINE ~ STA. 152+00.00
SEE SHEET C-108

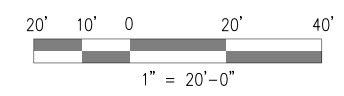
EAST CHANNEL & MAINTENANCE ROAD - SEE SHEETS C01 - C12 FOR PROFILE ELEVATIONS

WEST CHANNEL & MAINTENANCE ROAD - SEE SHEETS C01 - C12 FOR PROFILE ELEVATIONS

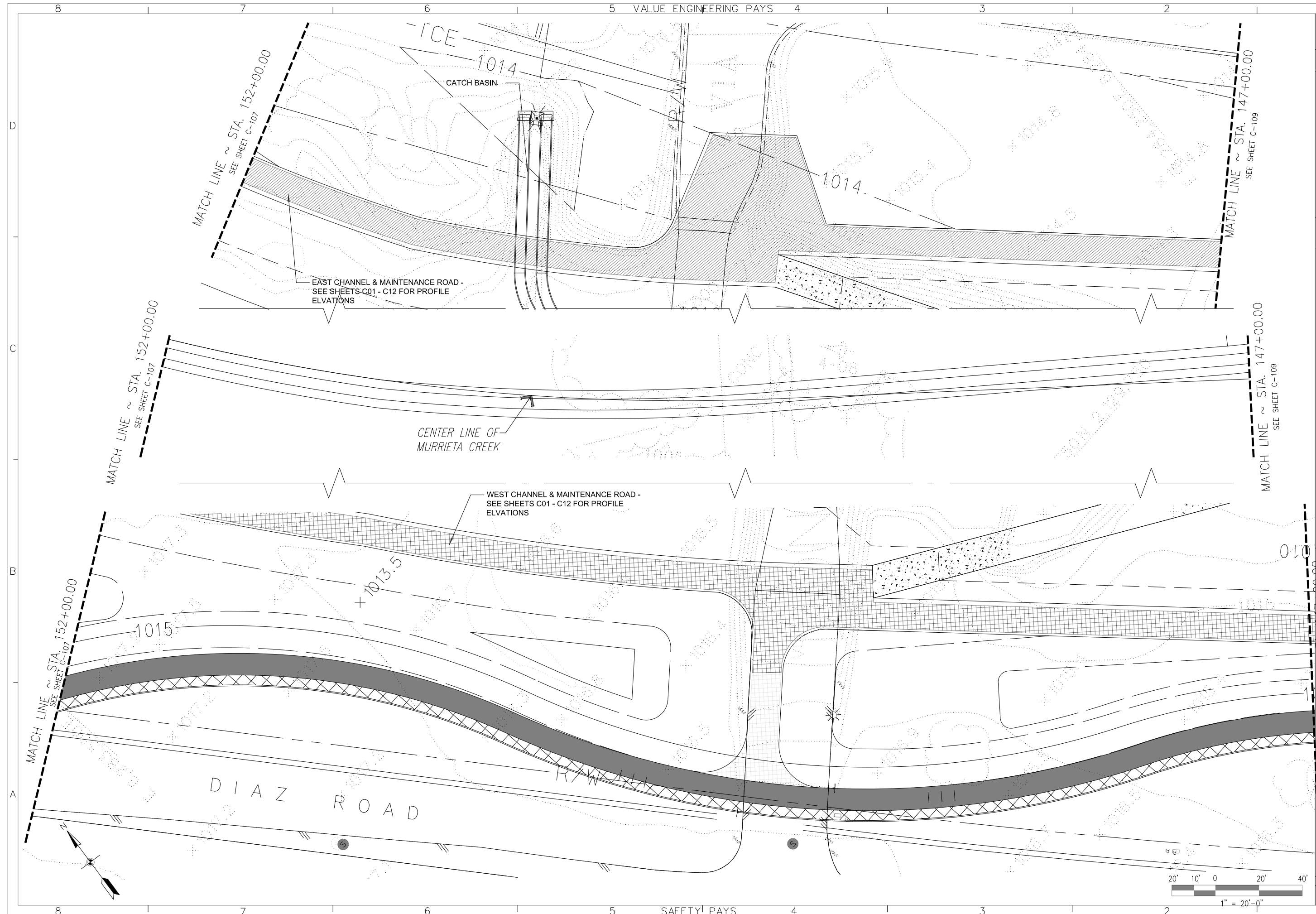
CENTER LINE OF MURRIETA CREEK

CATCH BASIN

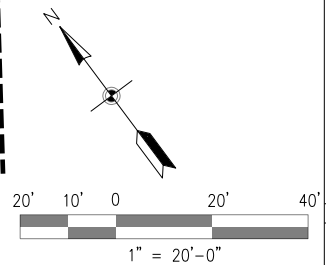
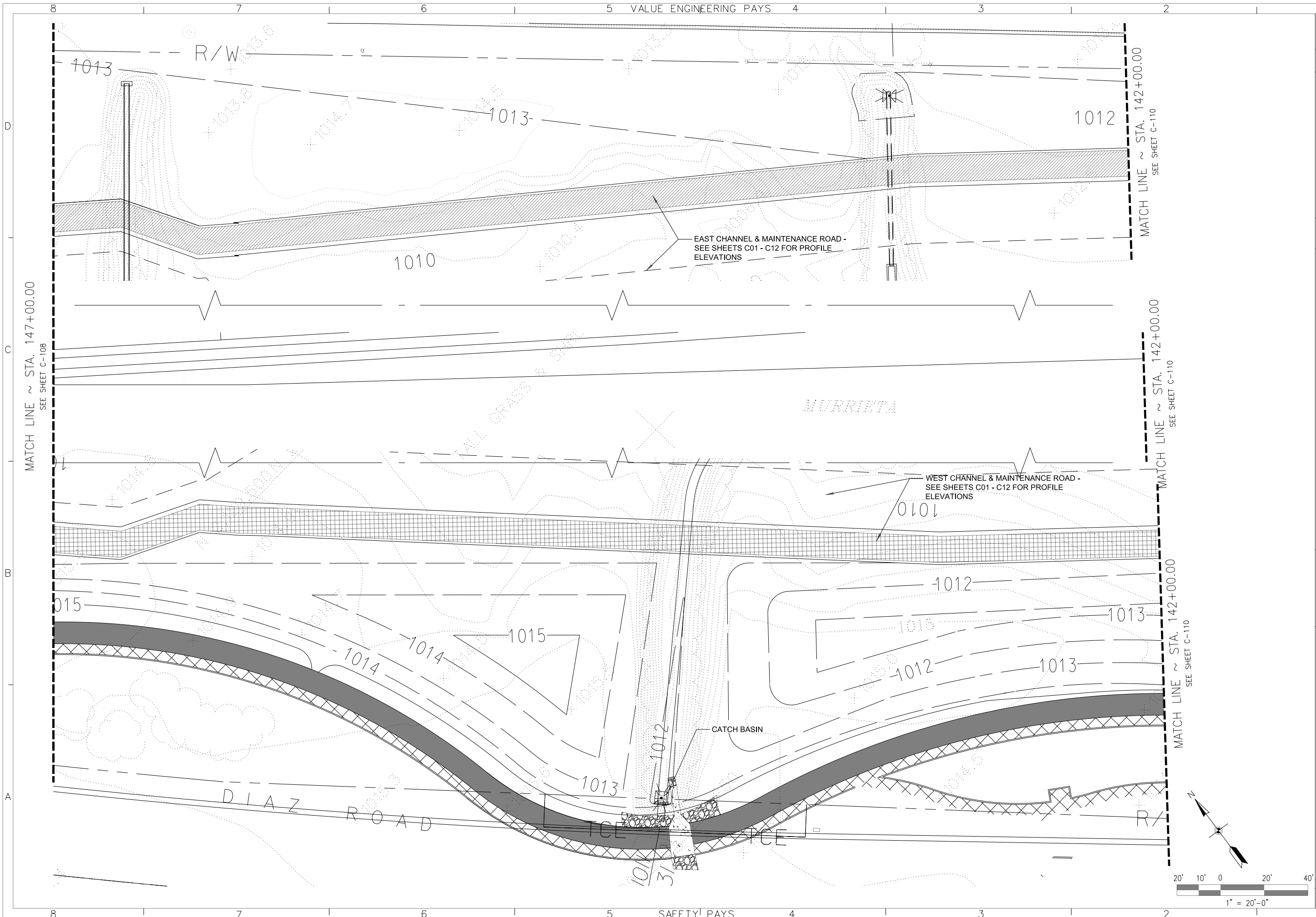
DIAZ ROAD



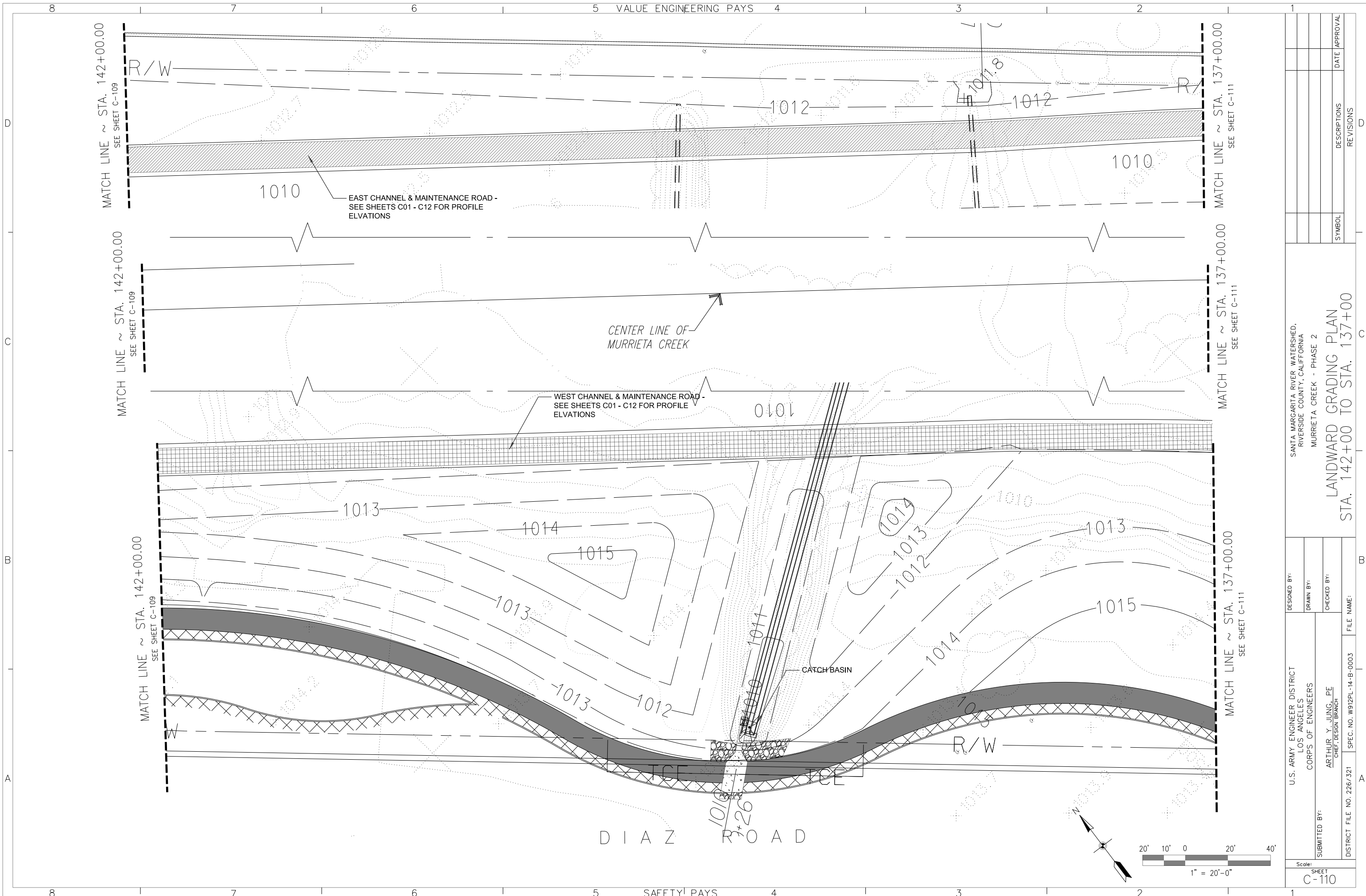
DESIGNED BY:		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA	
DRAWN BY:		MURRIETA CREEK - PHASE 2	
CHECKED BY:			
FILE NAME:			
SUBMITTED BY:		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DISTRICT FILE NO. 226/318		SPEC. NO. W912PL-14-B-0003	
DATE APPROVAL			
REVISIONS			
SYMBOL			
LANDWARD GRADING PLAN STA. 157+00 TO STA. 152+00			
SHEET C-107			



SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
LANDWARD GRADING PLAN STA. 152+00 TO STA. 147+00	
U.S. ARMY ENGINEERS DISTRICT OF CALIFORNIA LOS ANGELES CORPS OF ENGINEERS	DRAWN BY: CHECKED BY: FILE NAME:
SUBMITTED BY: DISTRICT FILE NO. 226/319	PROJECT NO. W912PL-14-B-0003 SPEC. NO.
Scale: 1" = 20'-0"	
SHEET C-108	
REVISIONS SYMBOL DESCRIPTIONS DATE APPROVAL	



DESIGNED BY:		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA	
DRAWN BY:		MURRIETA CREEK - PHASE 2	
CHECKED BY:		LANDWARD GRADING PLAN	
FILE NAME:		STA. 147+00 TO STA. 142+00	
SUBMITTED BY:		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DISTRICT FILE NO. 226/320		SPEC. NO. W912PL-14-B-0003	
ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		DATE APPROVAL	
SYMBOL		REVISIONS	

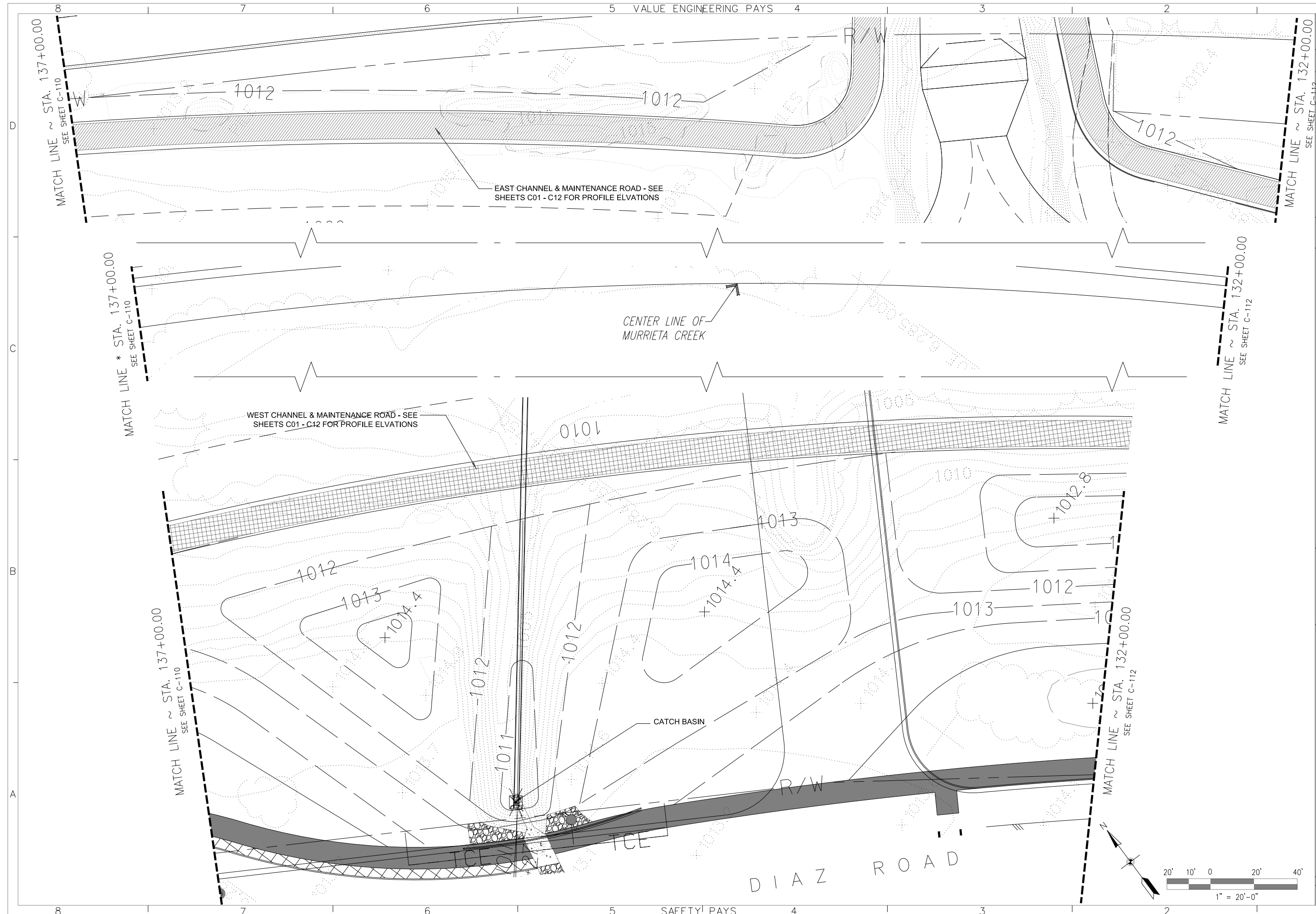


SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2

LANDWARD GRADING PLAN
 STA. 142+00 TO STA. 137+00

DESIGNED BY:	U.S. ARMY ENGINEER DISTRICT
DRAWN BY:	LOS ANGELES
CHECKED BY:	CORPS OF ENGINEERS
FILE NAME:	W912PL-14-B-0003
DISTRICT FILE NO.	226/321
SUBMITTED BY:	ARTHUR Y. JUNG, PE
	CHIEF, DESIGN BRANCH
SHEET	C-110



VALUE ENGINEERING PAYS

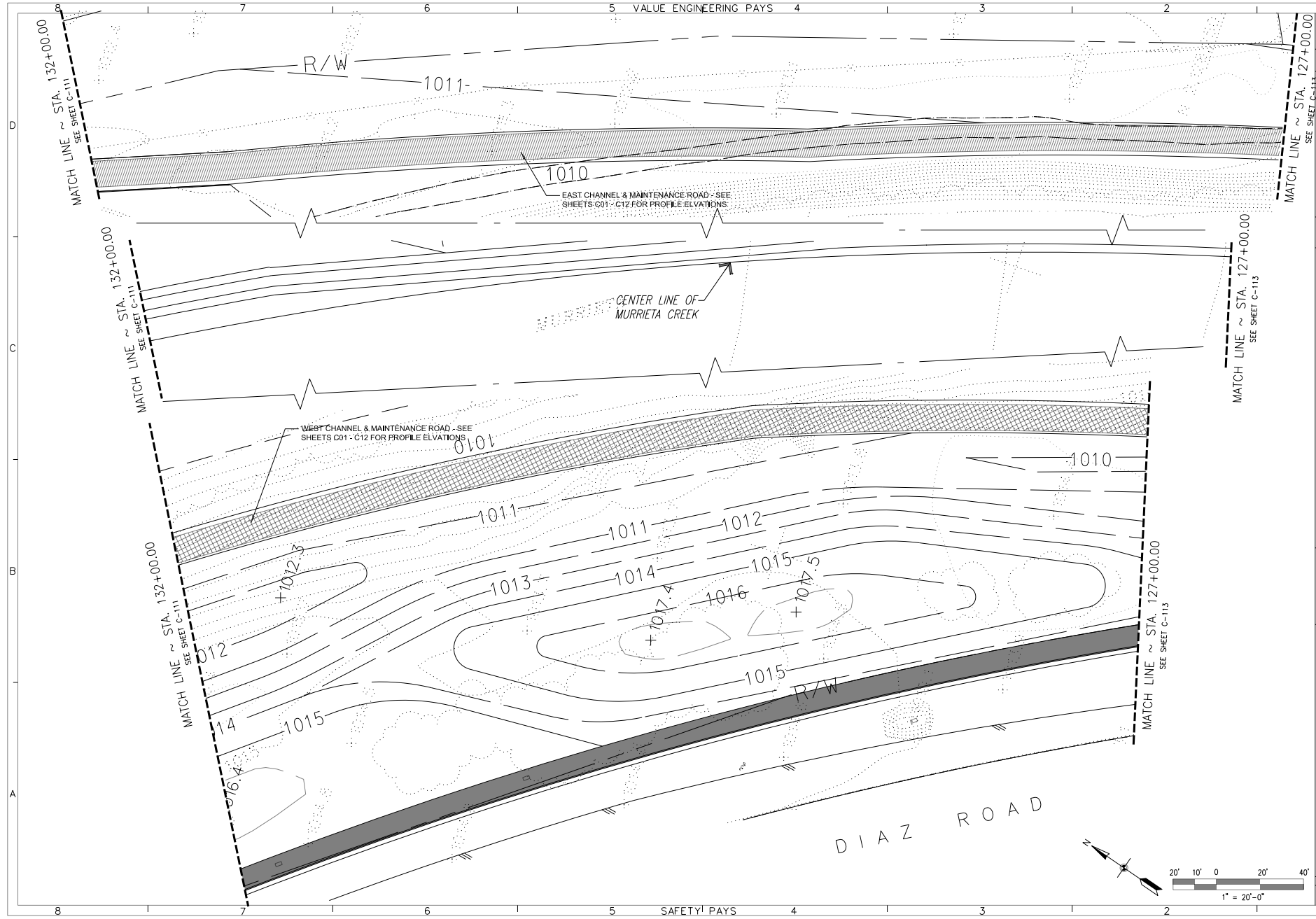
SAFETY PAYS

SYMBOL	DESCRIPTIONS	REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED,
 RIVERSIDE COUNTY, CALIFORNIA
 MURRIETA CREEK - PHASE 2

LANDWARD GRADING PLAN
 STA. 137+00 TO STA. 132+00

DESIGNED BY:	U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS
DRAWN BY:	ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH
CHECKED BY:	
FILE NAME:	
DISTRICT FILE NO. 226/322	SPEC. NO. W912PL-14-B-0003
Scale: 1" = 20'-0"	
SHEET C-111	

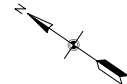
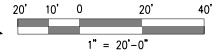


EAST CHANNEL & MAINTENANCE ROAD - SEE SHEETS C01 - C12 FOR PROFILE ELEVATIONS

CENTER LINE OF MURRIETA CREEK

WEST CHANNEL & MAINTENANCE ROAD - SEE SHEETS C01 - C12 FOR PROFILE ELEVATIONS

DIAZ ROAD

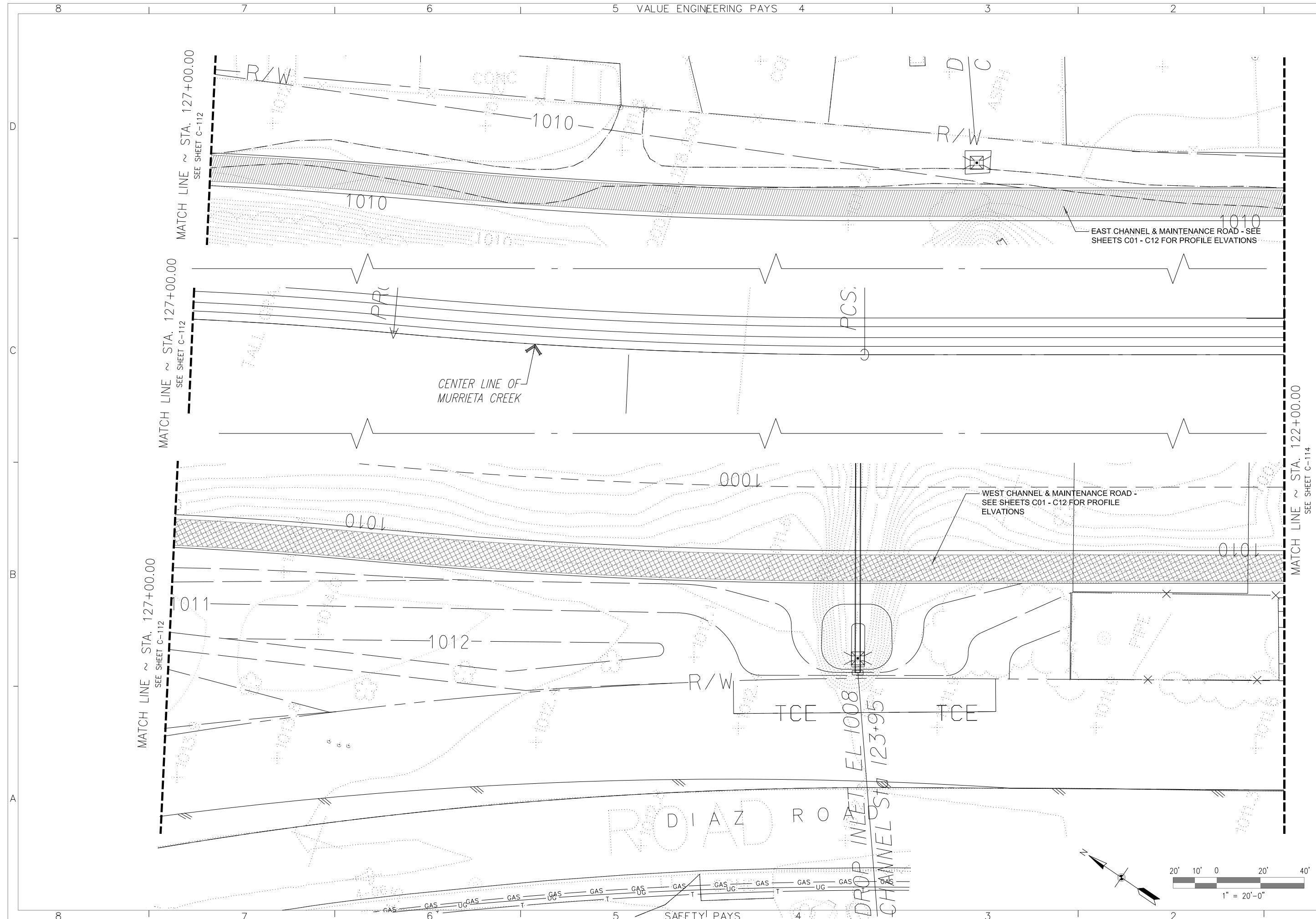


NO.	SYMBOL	DESCRIPTIONS	DATE	APPROVAL

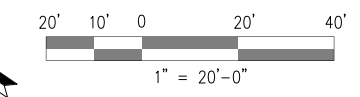
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
LANDWARD GRADING PLAN
STA. 132+00 TO STA. 127+00

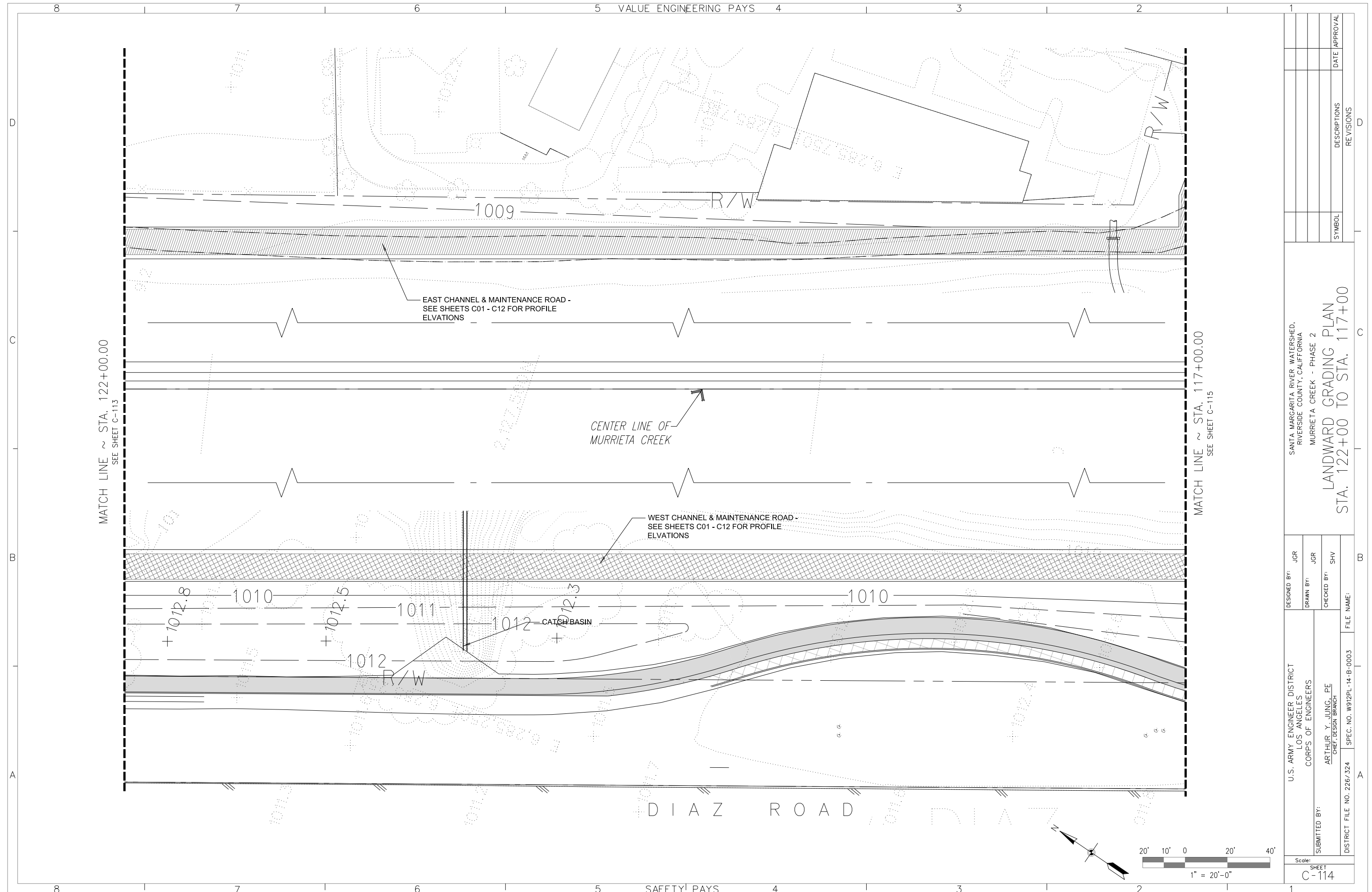
DESIGNED BY: JGR	FILE NAME:
DRAWN BY: JGR	
CHECKED BY: SHV	
DISTRICT FILE NO. 226/322 SPEC. NO. W919PL-14-B-0003	

Scale
SHEET
C-112



DESIGNED BY: JGR		DRAWN BY: JGR		CHECKED BY: SHV	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		LANDWARD GRADING PLAN STA. 127+00 TO STA. 122+00	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-14-B-0003		FILE NAME:	
DISTRICT FILE NO. 226/323					
DATE APPROVAL		REVISIONS		SYMBOL	





MATCH LINE ~ STA. 122+00.00
SEE SHEET C-113

MATCH LINE ~ STA. 117+00.00
SEE SHEET C-115

EAST CHANNEL & MAINTENANCE ROAD -
SEE SHEETS C01 - C12 FOR PROFILE
ELEVATIONS

CENTER LINE OF
MURRIETA CREEK

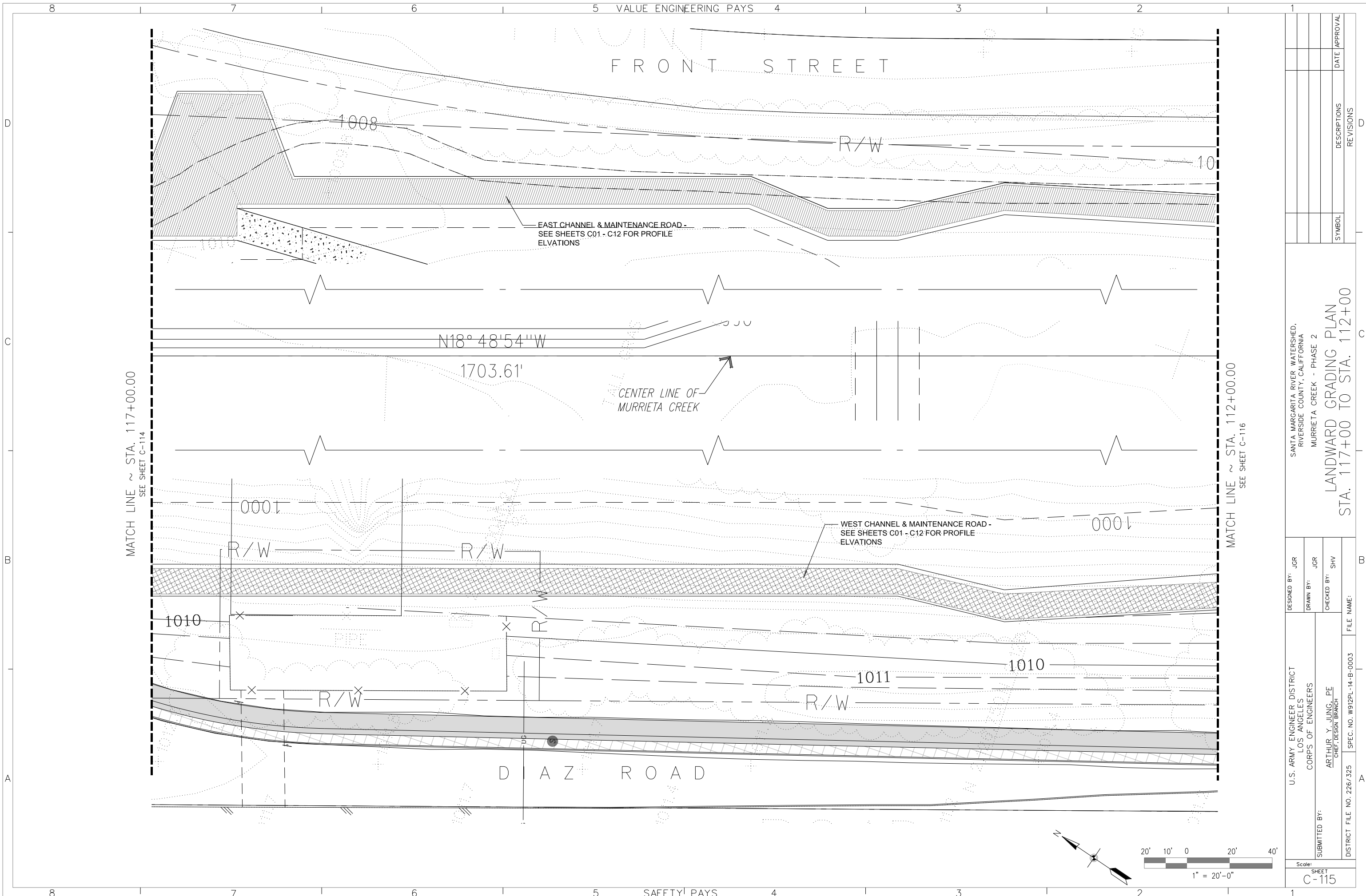
WEST CHANNEL & MAINTENANCE ROAD -
SEE SHEETS C01 - C12 FOR PROFILE
ELEVATIONS

CATCH BASIN

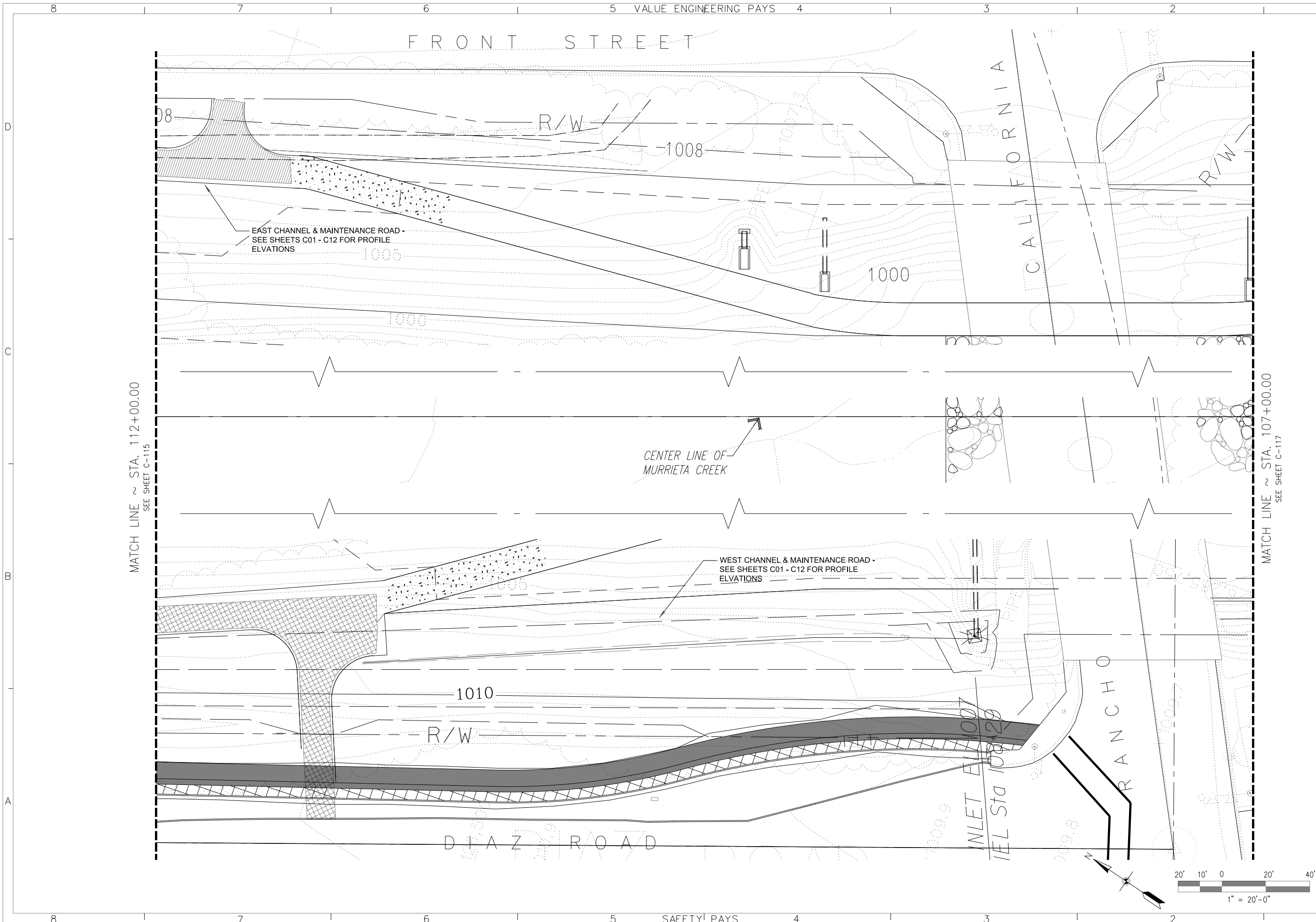
D I A Z R O A D

DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		DISTRICT FILE NO. 226/324	
CHECKED BY: SHV		SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		REVISIONS	
DATE		APPROVAL	

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
LANDWARD GRADING PLAN
STA. 122+00 TO STA. 117+00

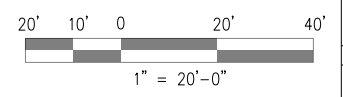


DESIGNED BY: JCR	FILE NAME:
DRAWN BY: JCR	SPEC. NO. W912PL-14-B-0003
CHECKED BY: SHV	DISTRICT FILE NO. 226/325
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 LANDWARD GRADING PLAN STA. 117+00 TO STA. 112+00	
SYMBOL	REVISIONS
DATE	APPROVAL

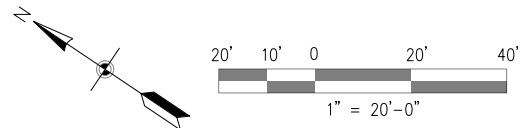
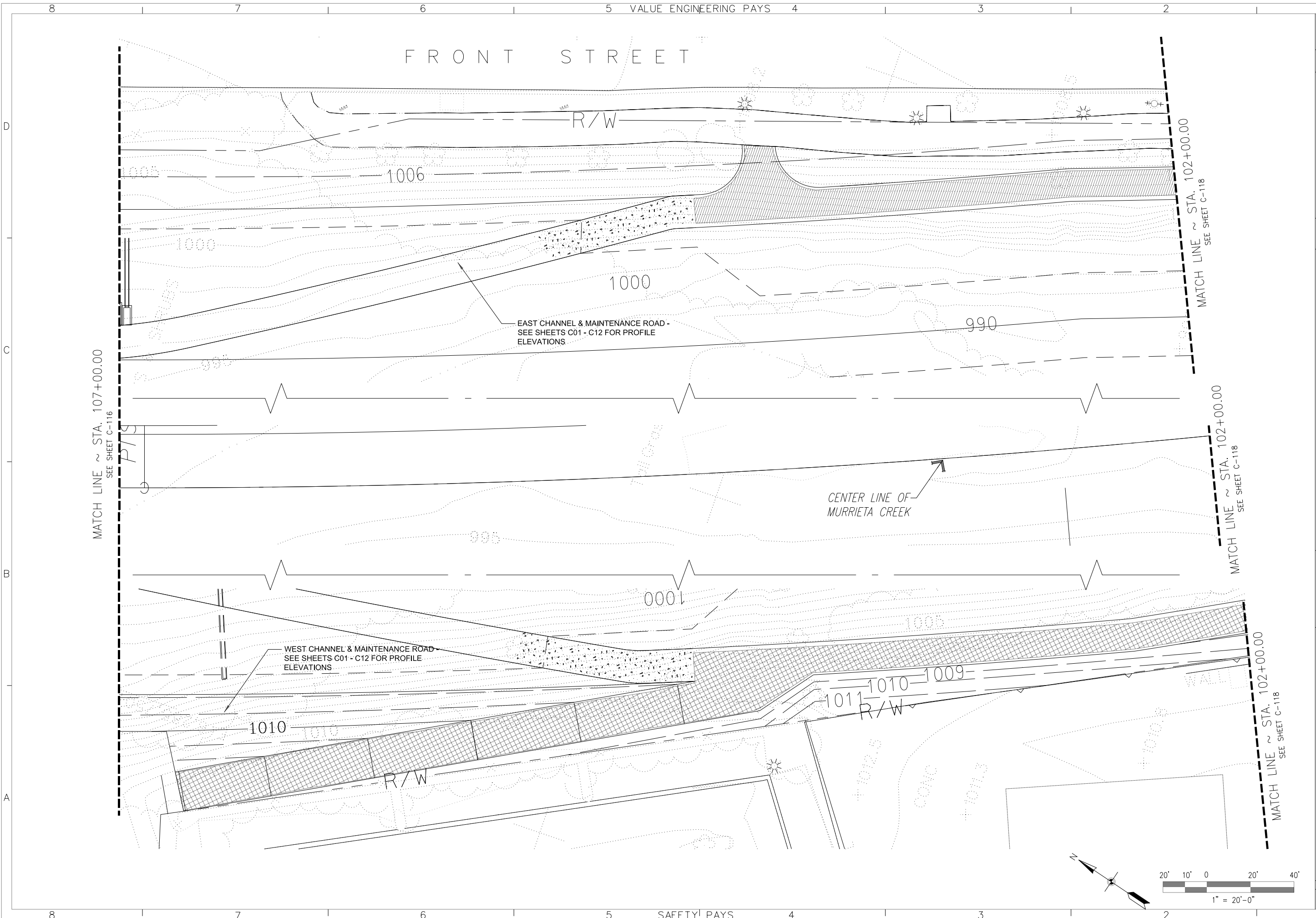


MATCH LINE ~ STA. 112+00.00
SEE SHEET C-115

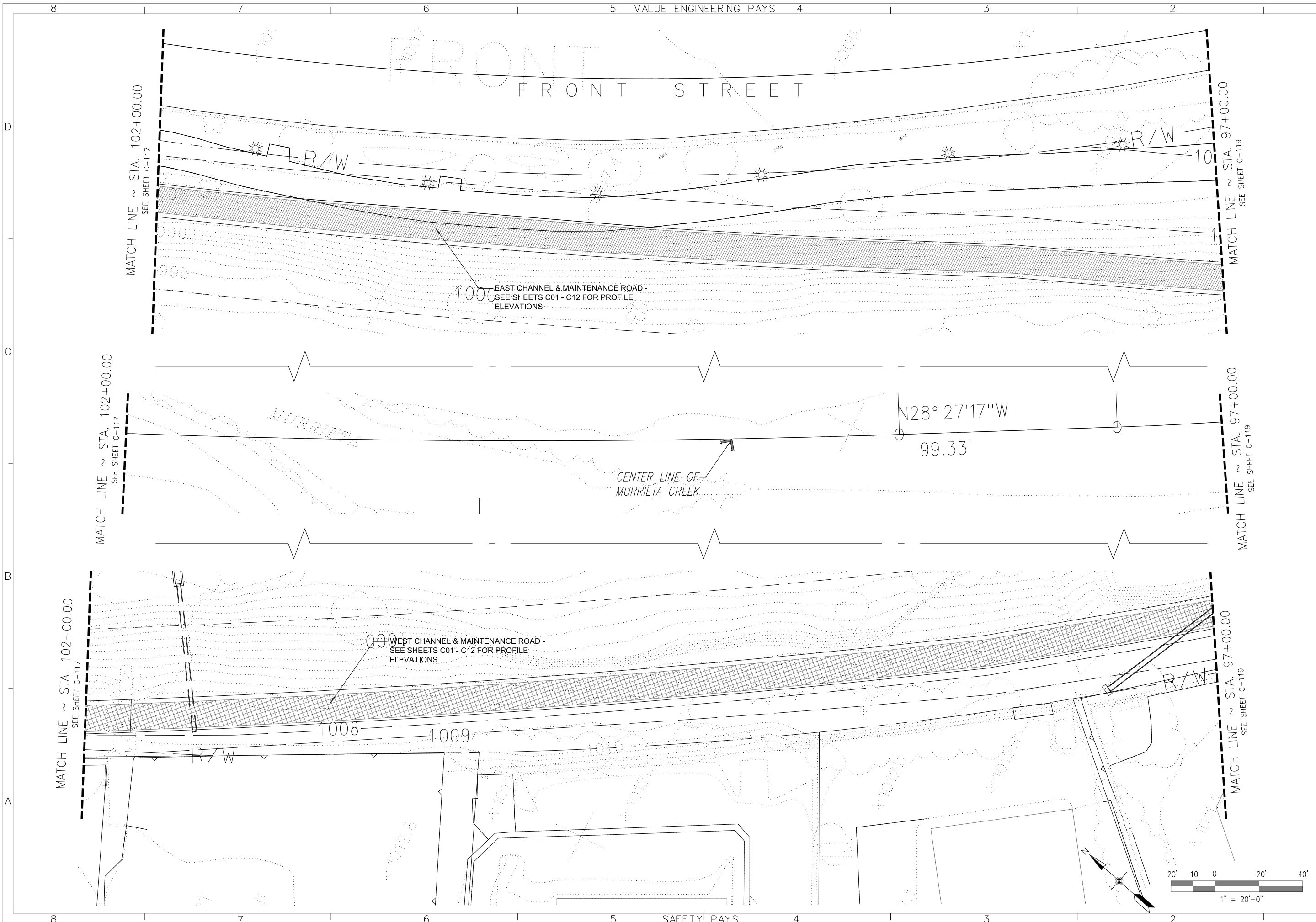
MATCH LINE ~ STA. 107+00.00
SEE SHEET C-117



DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		DISTRICT FILE NO. 226/326	
CHECKED BY: SHV		SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		REVISIONS	
DATE		APPROVAL	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 LANDWARD GRADING PLAN STA. 112+00 TO STA. 107+00			
SHEET C-116			



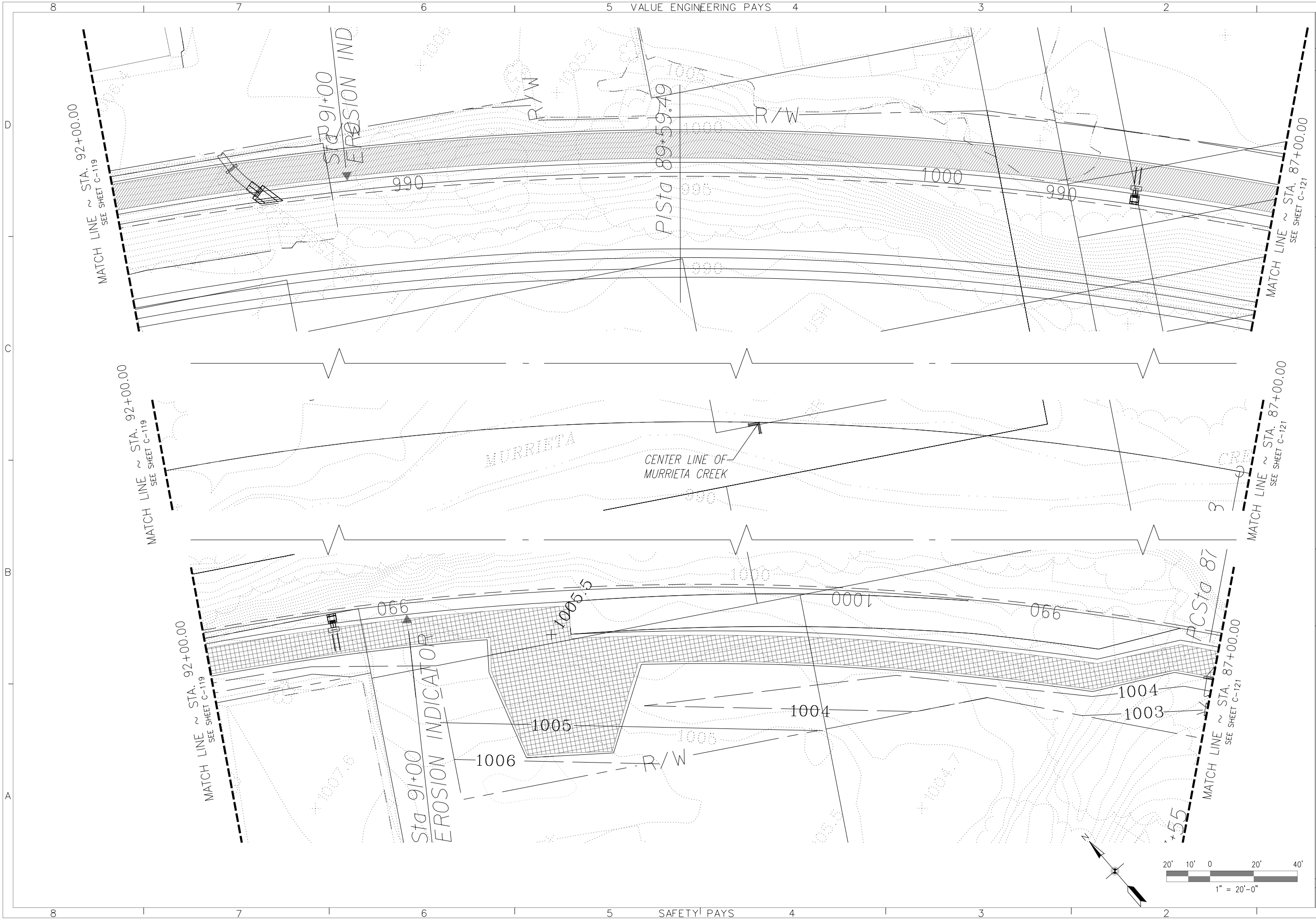
DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		DISTRICT FILE NO. 226/327	
CHECKED BY: SHV		SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		REVISIONS	
DATE		APPROVAL	
REVISED		DATE	
DESCRIPTIONS		REVISIONS	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 LANDWARD GRADING PLAN STA. 107+00 TO STA. 102+00			



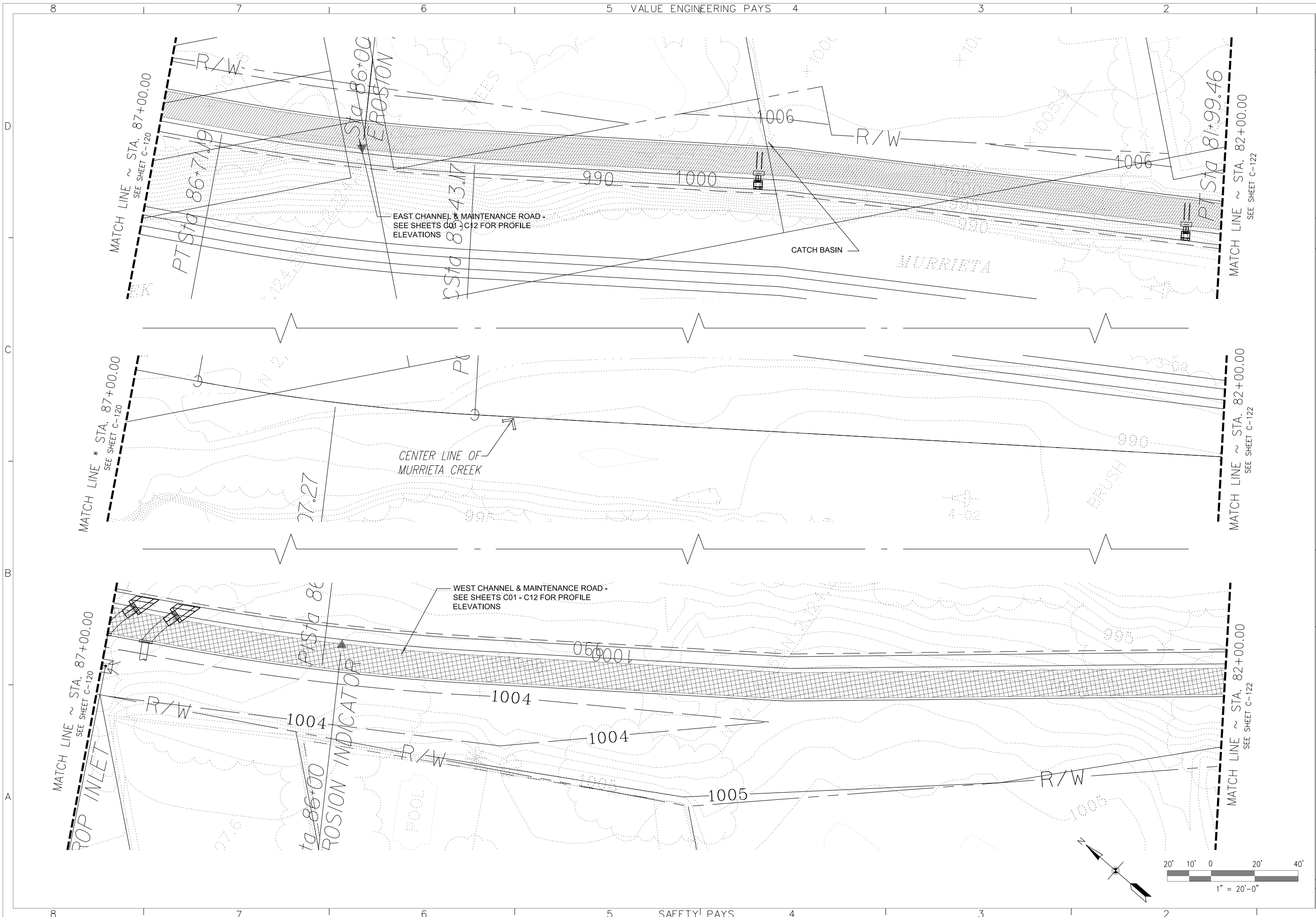
DESIGNED BY: JGR		DRAWN BY: JGR		CHECKED BY: SHV	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		FILE NAME:	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		SPEC. NO. W912PL-14-B-0003		DISTRICT FILE NO. 226/328	
Scale: SHEET C-118		1" = 20'-0"		Plot Date: 25-JULY-2014	
SYMBOL		DESCRIPTIONS		REVISIONS	
DATE		APPROVAL			



DESIGNED BY: JCR		FILE NAME:	
DRAWN BY: JCR		DISTRICT FILE NO. 226/329	
CHECKED BY: SHV		SPEC. NO. W912PL-14-B-0003	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
REVISIONS		LANDWARD GRADING PLAN STA. 97+00 TO STA. 92+00	
DATE APPROVAL		SHEET C-119	



DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		SPEC. NO. W912PL-14-B-0003	
CHECKED BY: SHV		DISTRICT FILE NO. 226/330	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DATE APPROVAL		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
REVISIONS		LANDWARD GRADING PLAN STA. 92+00 TO STA. 87+00	
SYMBOL			



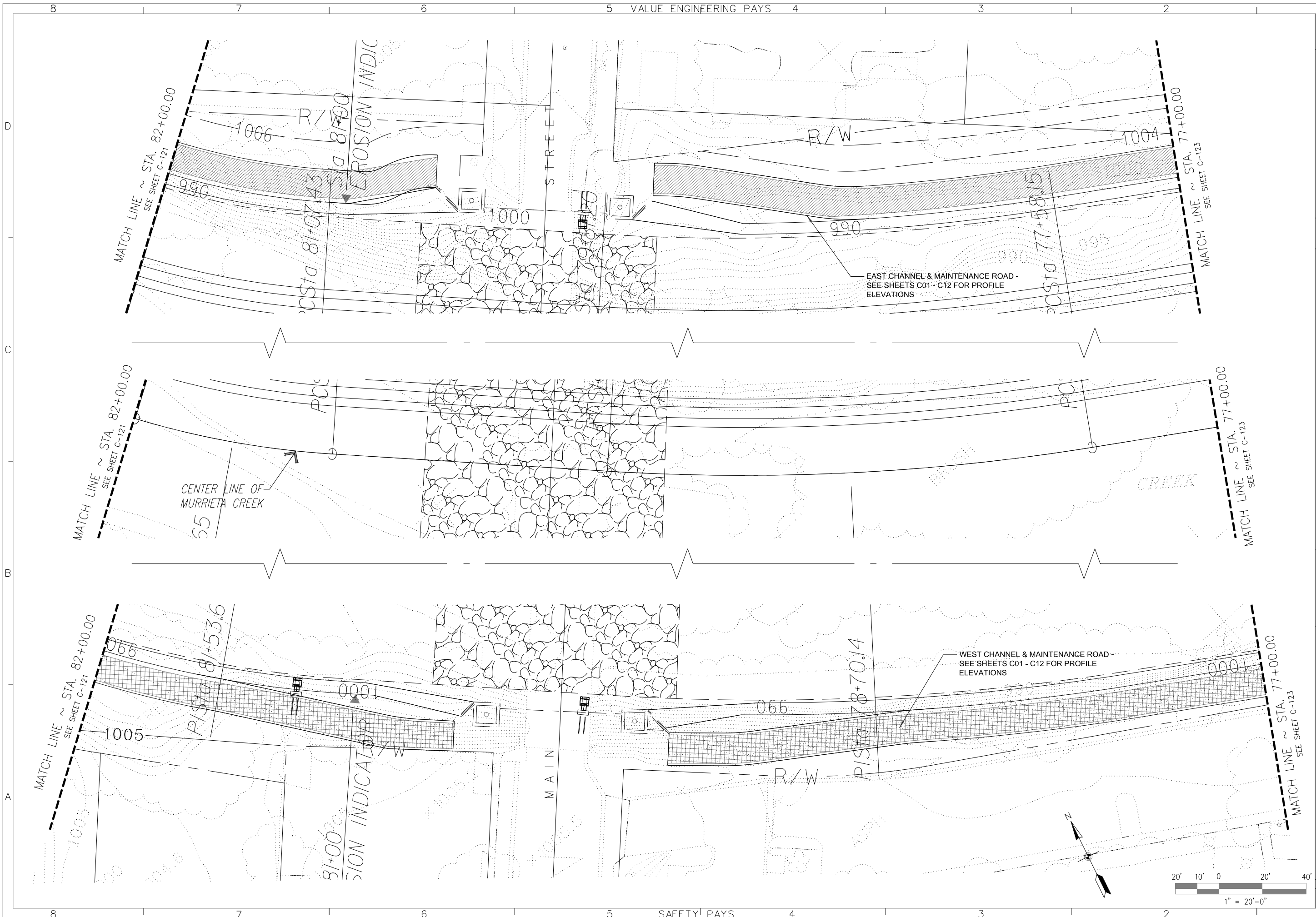
DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		SPEC. NO. W912PL-14-B-0003	
CHECKED BY: SHV		DISTRICT FILE NO. 226/331	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		REVISIONS	
DATE APPROVAL		REVIEWS	

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

LANDWARD GRADING PLAN
STA. 87+00 TO STA. 82+00

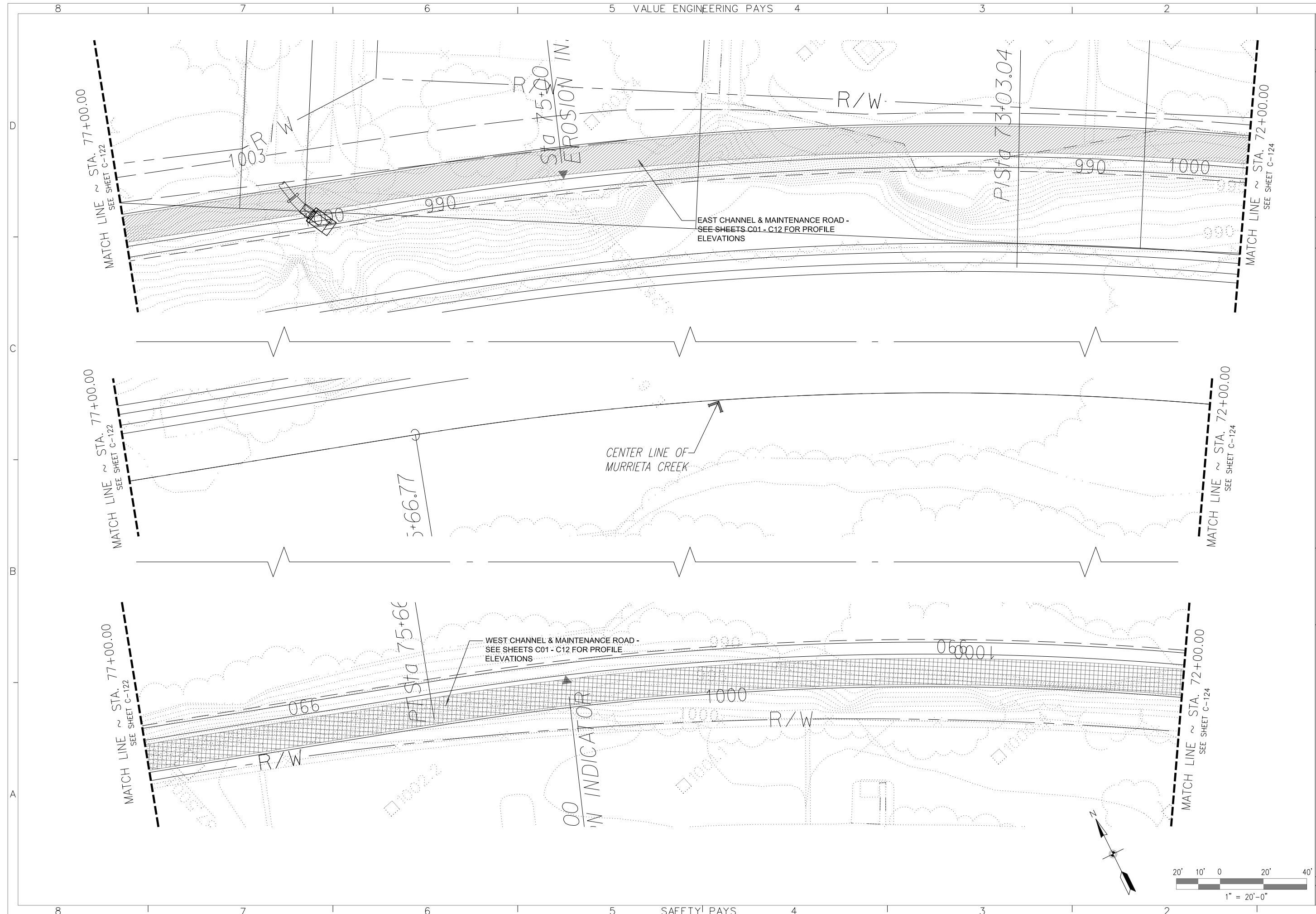
Scale: SHEET C-121

Plot Date: 25-JULY-2014

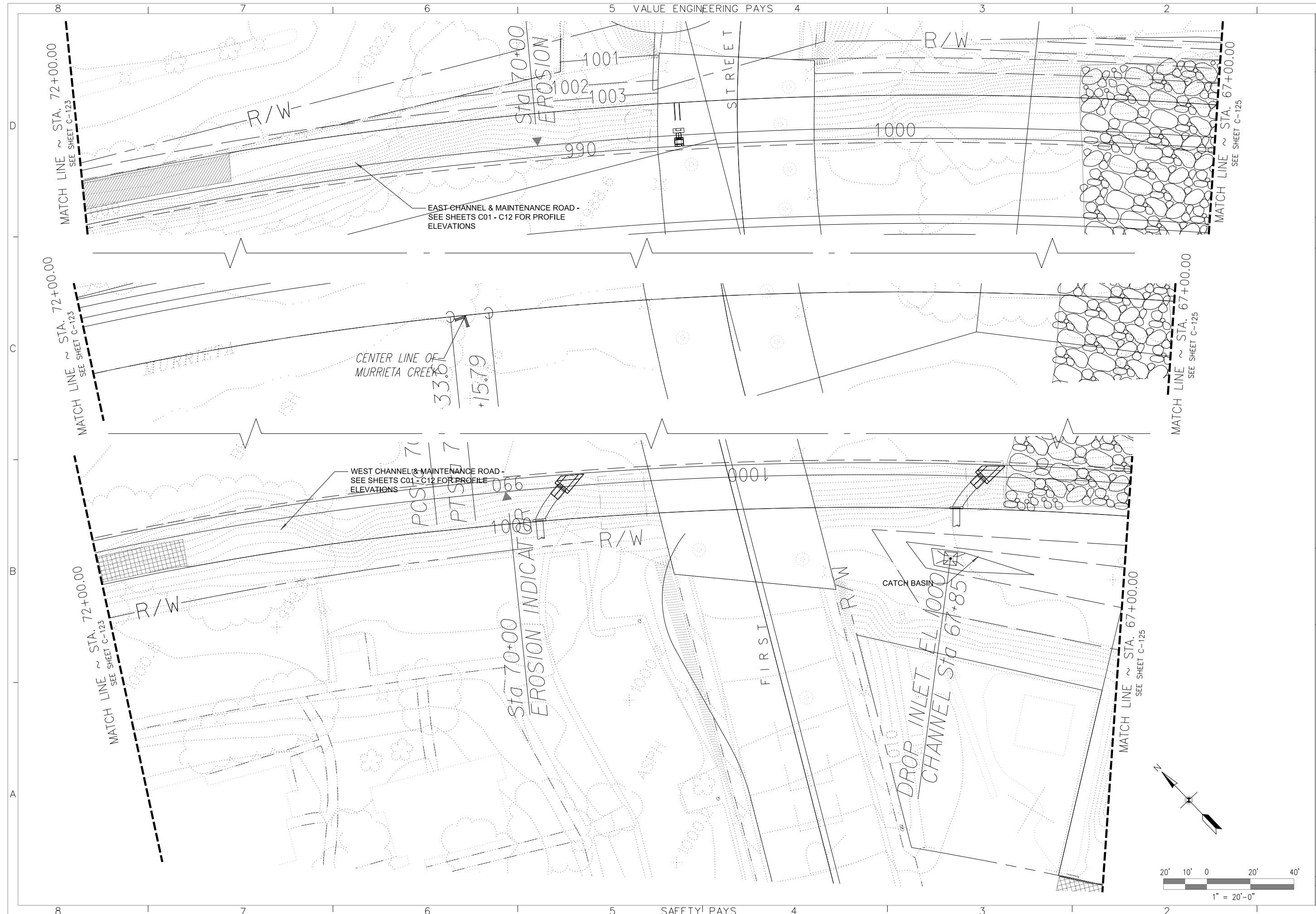


DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		DISTRICT FILE NO. 226/332	
CHECKED BY: SHV		SPEC. NO. W912PL-15-B-0001	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		REVISIONS	
DATE		APPROVAL	

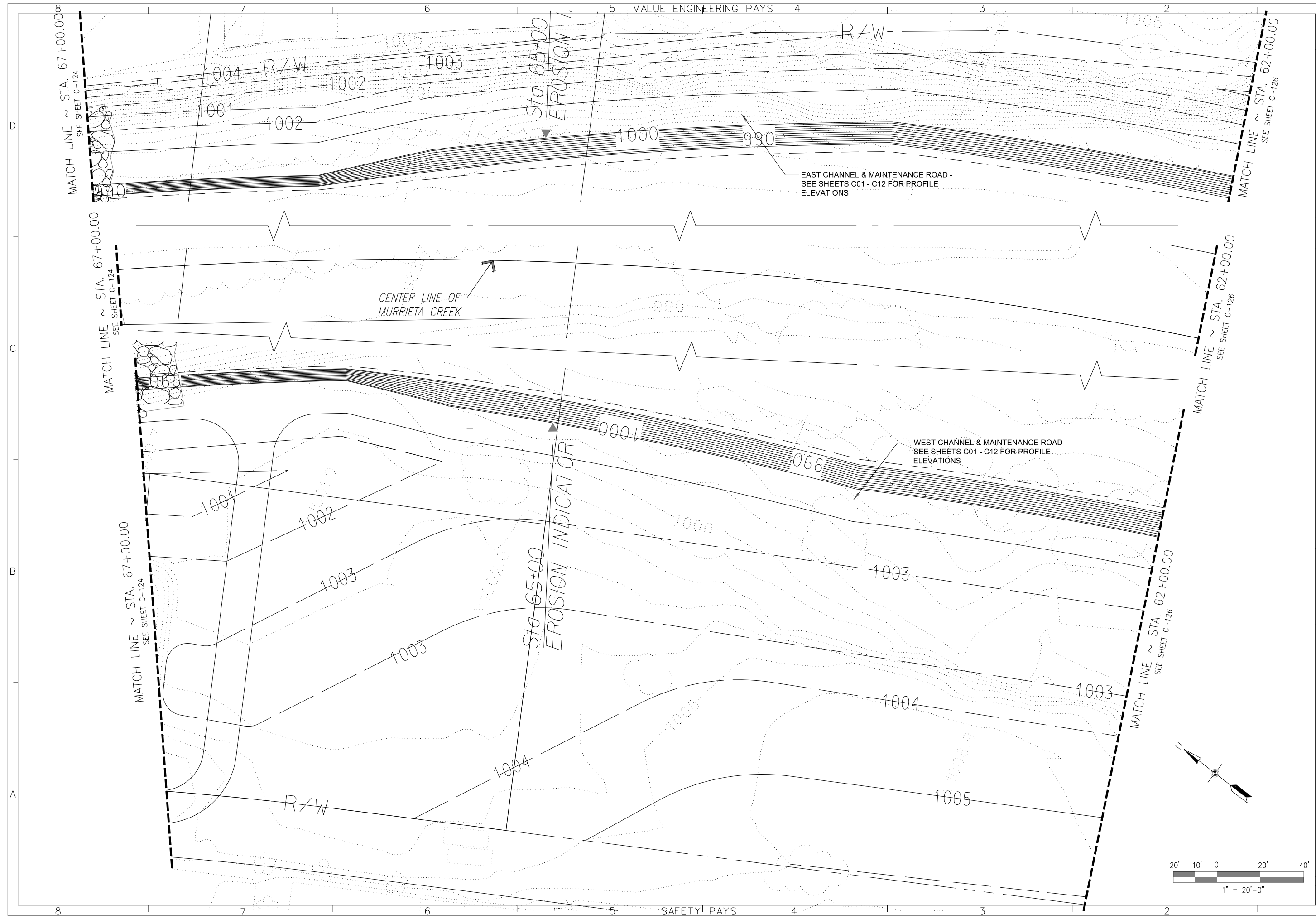
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
LANDWARD GRADING PLAN
STA. 82+00 TO STA. 77+00



DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		DISTRICT FILE NO. 226/333	
CHECKED BY: SHV		SPEC. NO. W912PL-15-B-0001	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		REVISIONS	
DATE		APPROVAL	
DESCRIPTIONS		REVISIONS	
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 LANDWARD GRADING PLAN STA. 77+00 TO STA. 72+00			



DESIGNED BY: JGR		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DRAWN BY: JGR		SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	
CHECKED BY: SHV		DISTRICT FILE NO. 226/334	
FILE NAME:		SPEC. NO. W912PL-15-B-0001	
DATE APPROVAL		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
REVISIONS		LANDWARD GRADING PLAN STA. 72+00 TO STA. 67+00	
SYMBOL		C	

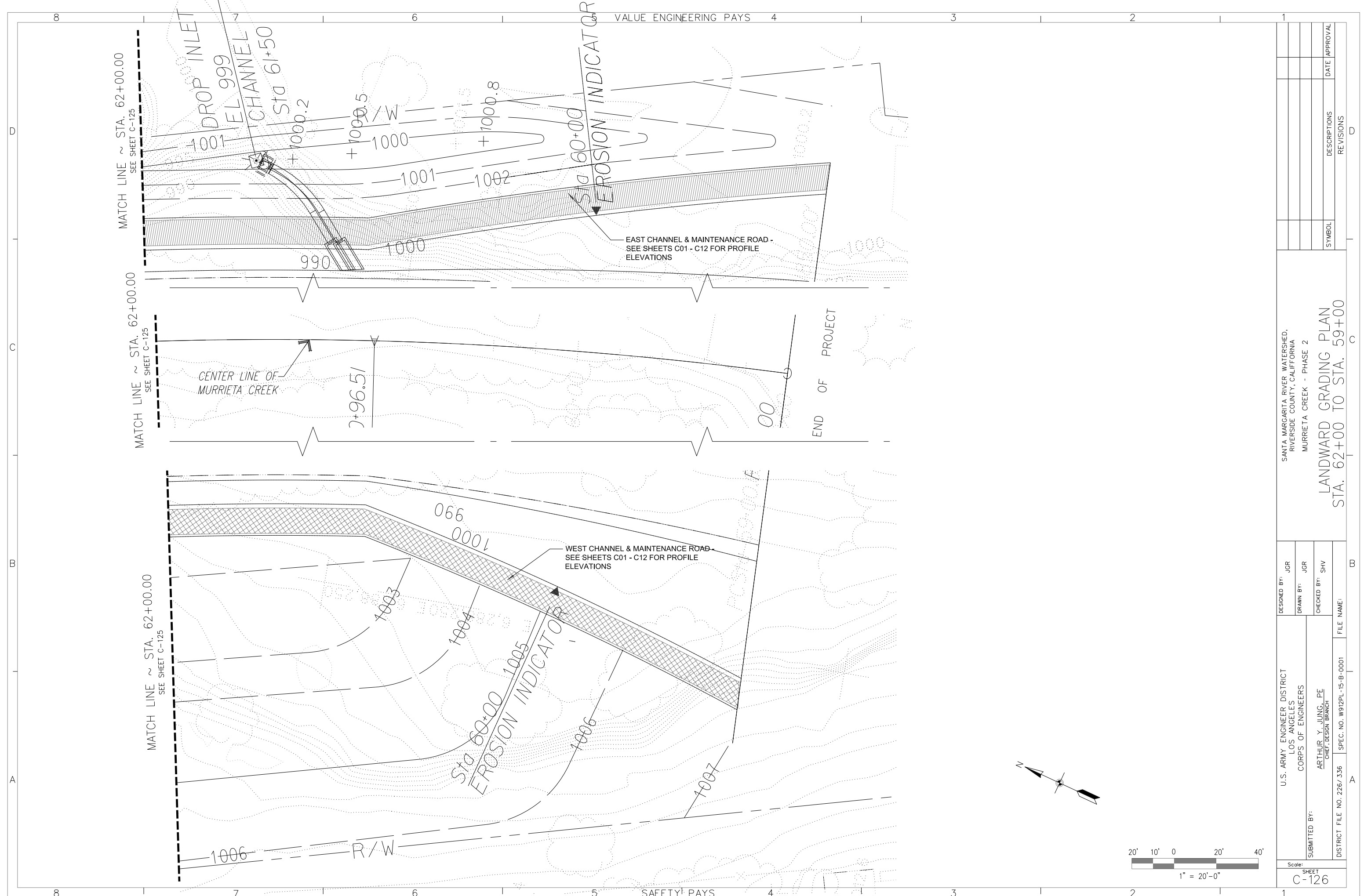


DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		DISTRICT FILE NO. 226/335	
CHECKED BY: SHV		SPEC. NO. W912PL-15-B-0001	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		REVISIONS	
DATE APPROVAL		REVISIONS	

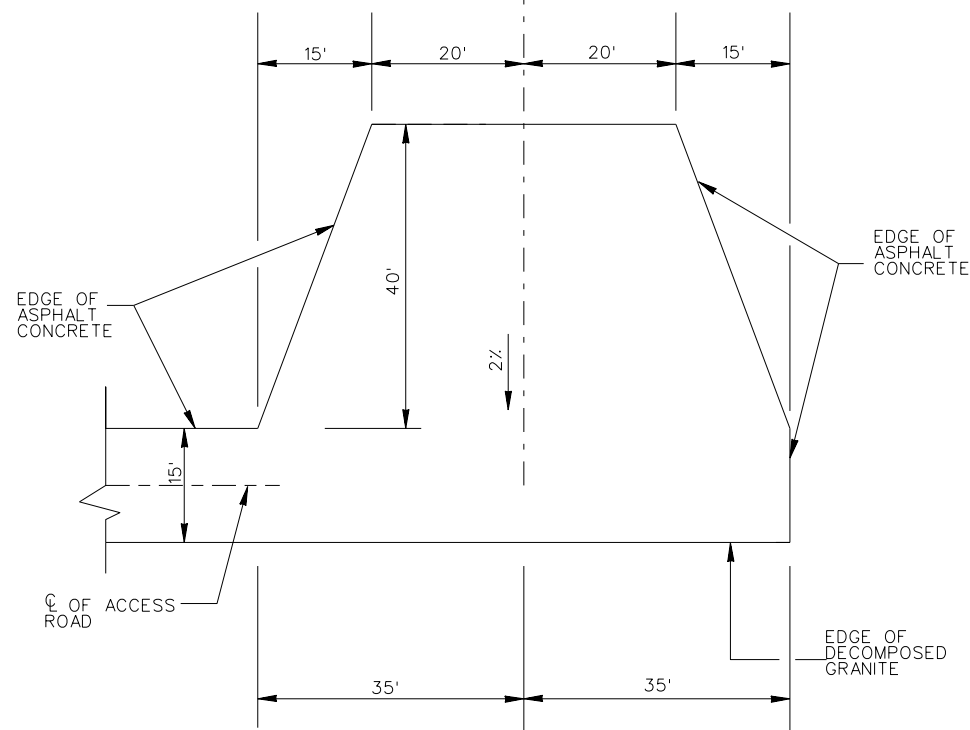
Plot Date: 25-JULY-2014

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
LANDWARD GRADING PLAN
STA. 67+00 TO STA. 62+00

Scale: 1" = 20'-0"
SHEET C-125

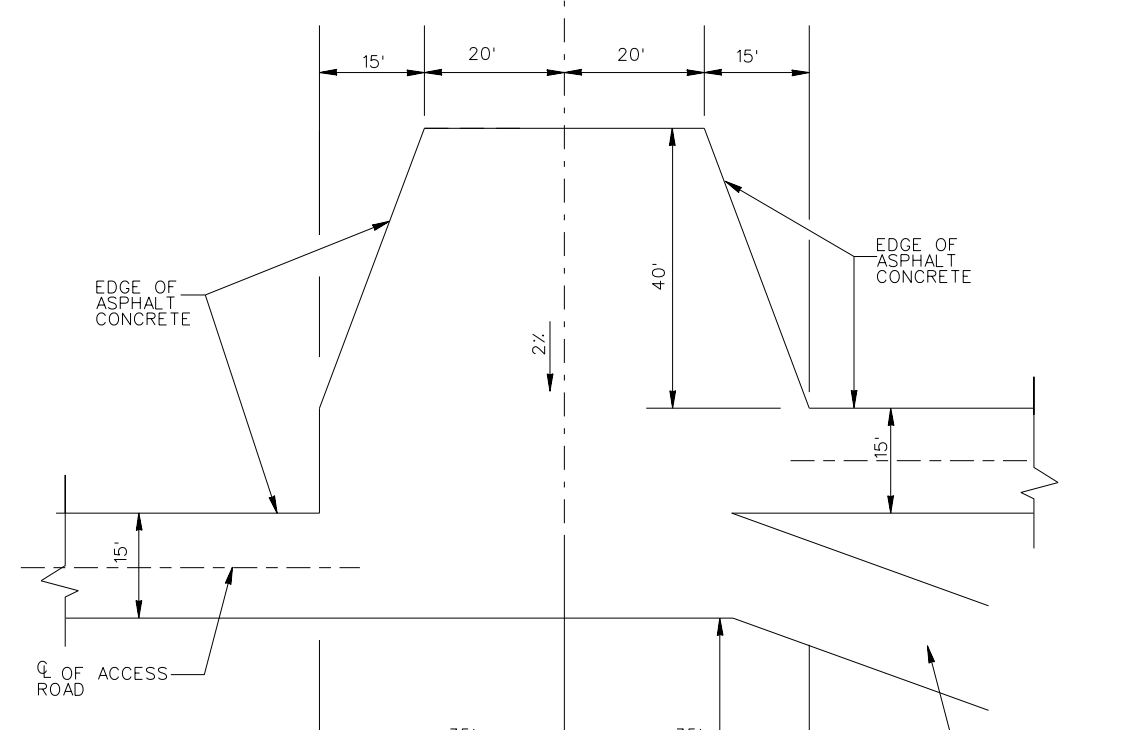


DESIGNED BY: JGR		FILE NAME:	
DRAWN BY: JGR		DISTRICT FILE NO. 226/336	
CHECKED BY: SHV		SPEC. NO. W912PL-15-B-0001	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
SYMBOL		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
REVISIONS		LANDWARD GRADING PLAN STA. 62+00 TO STA. 59+00	
DATE APPROVAL			



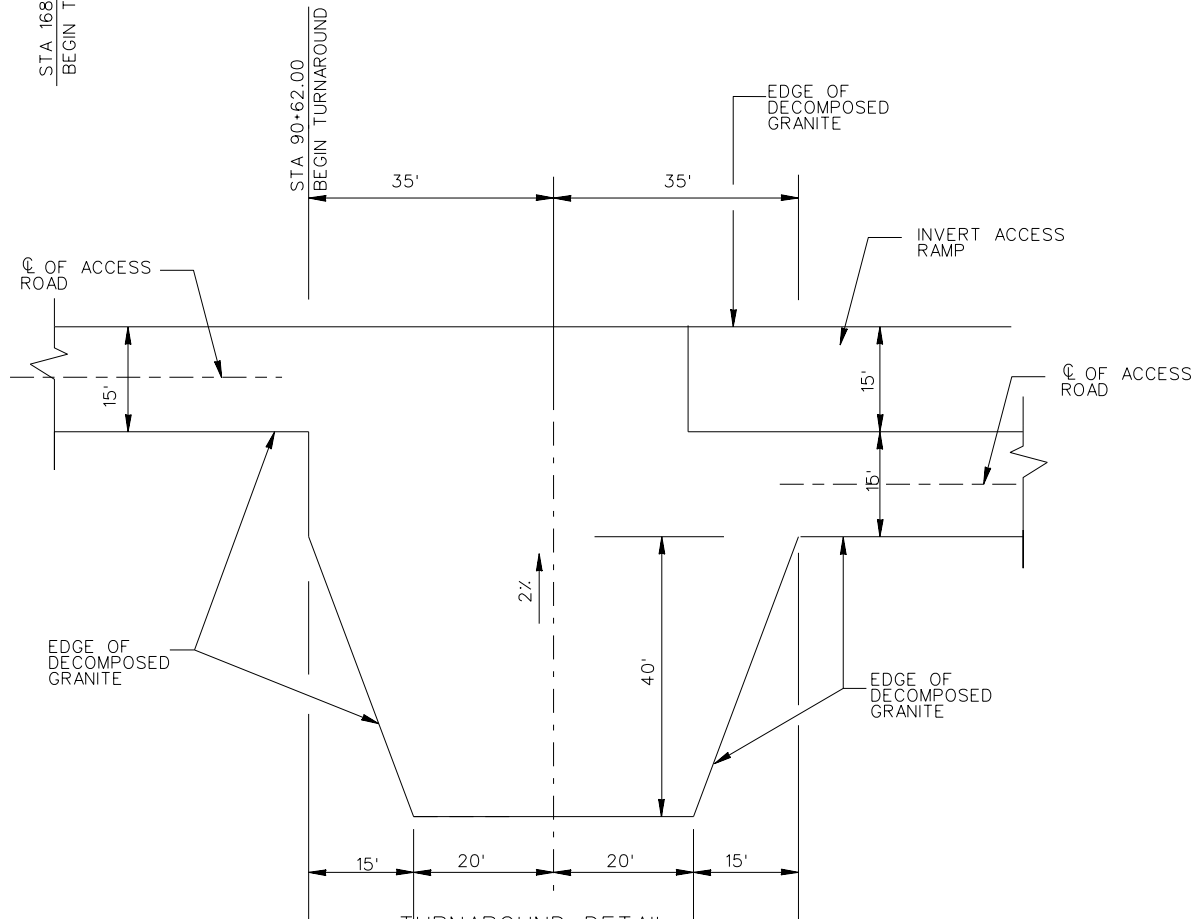
TURNAROUND DETAIL
BEGIN STA 168+81.29
NOT TO SCALE

STA 168+81.29
BEGIN TURNAROUND



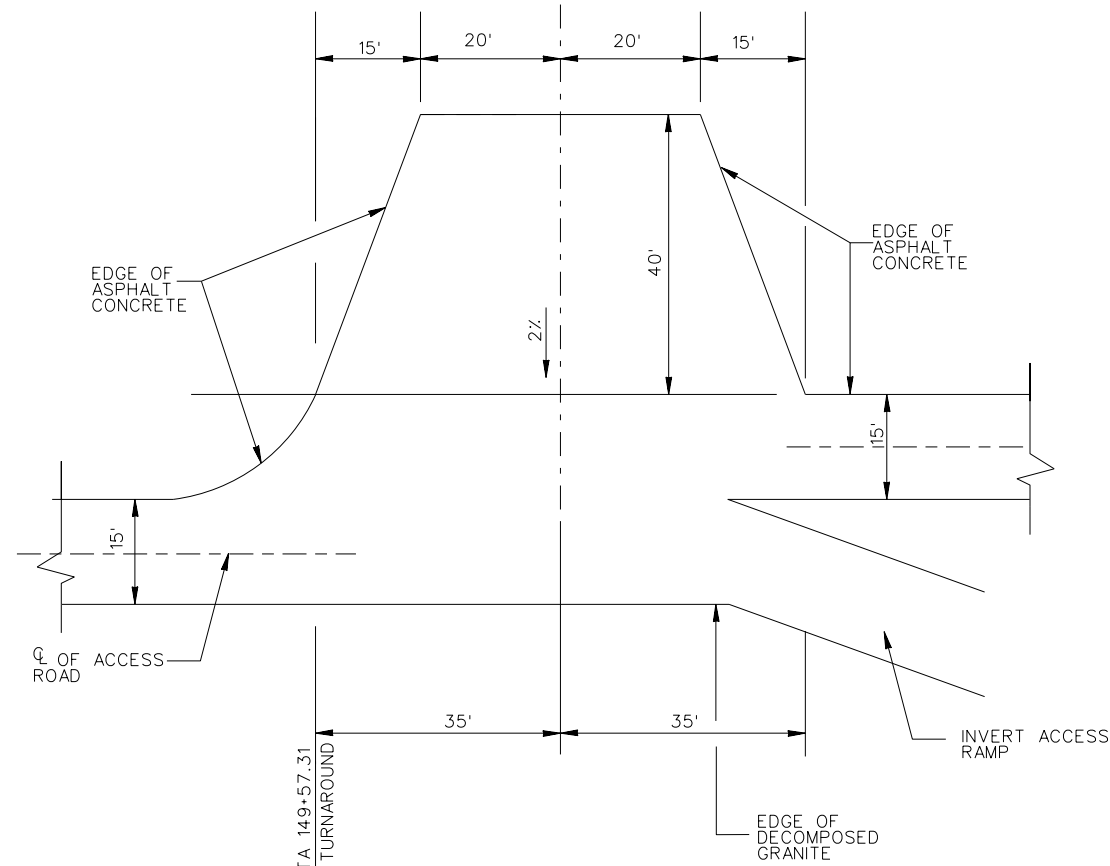
TURNAROUND DETAIL
BEGIN STA 117+03.00
NOT TO SCALE

STA 117+03.00
BEGIN TURNAROUND



TURNAROUND DETAIL
BEGIN STA 90+62.00
NOT TO SCALE

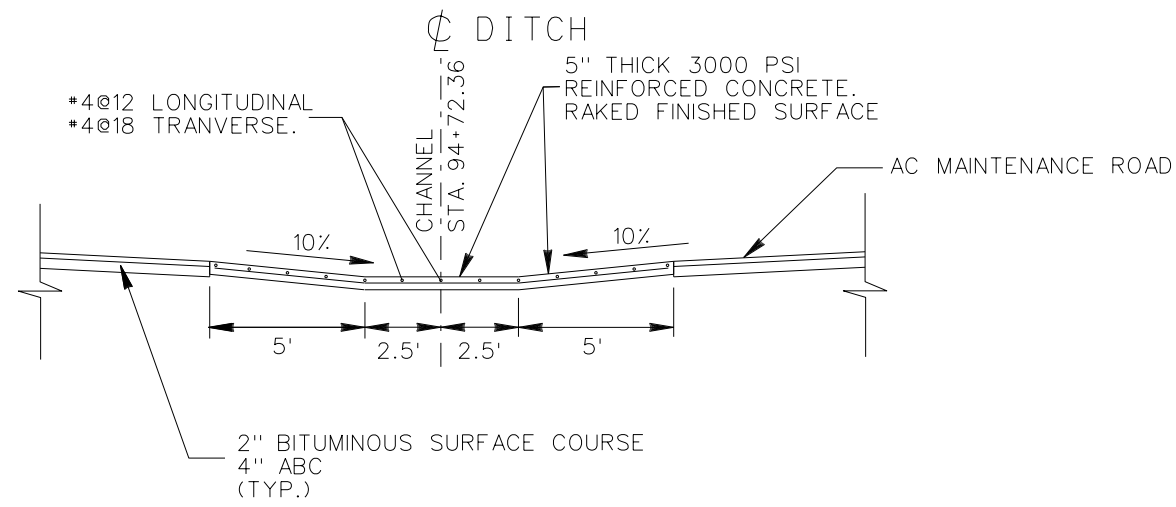
STA 90+62.00
BEGIN TURNAROUND



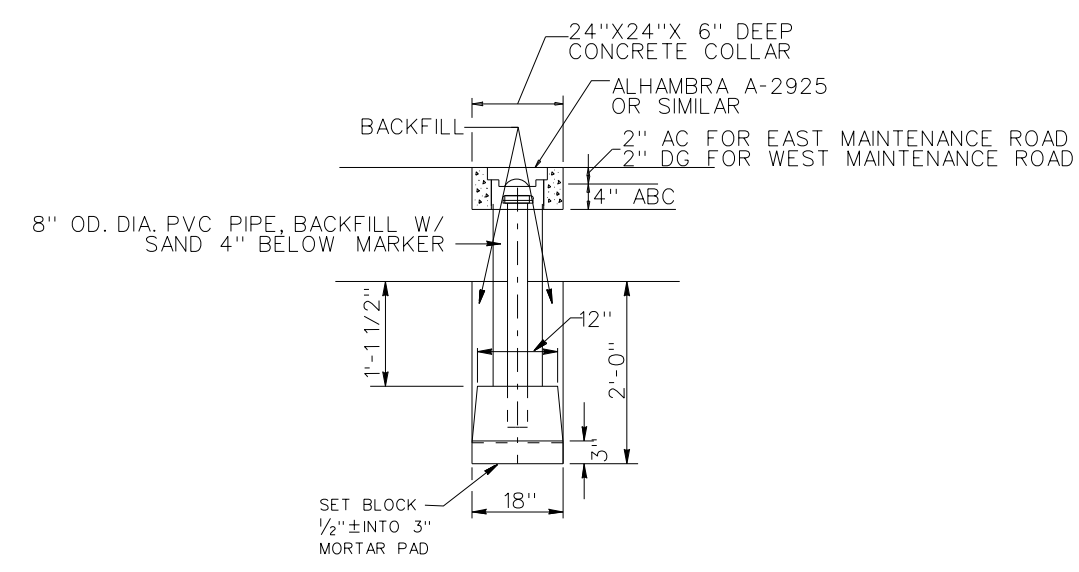
TURNAROUND DETAIL
BEGIN STA 149+57.31
NOT TO SCALE

STA 149+57.31
BEGIN TURNAROUND

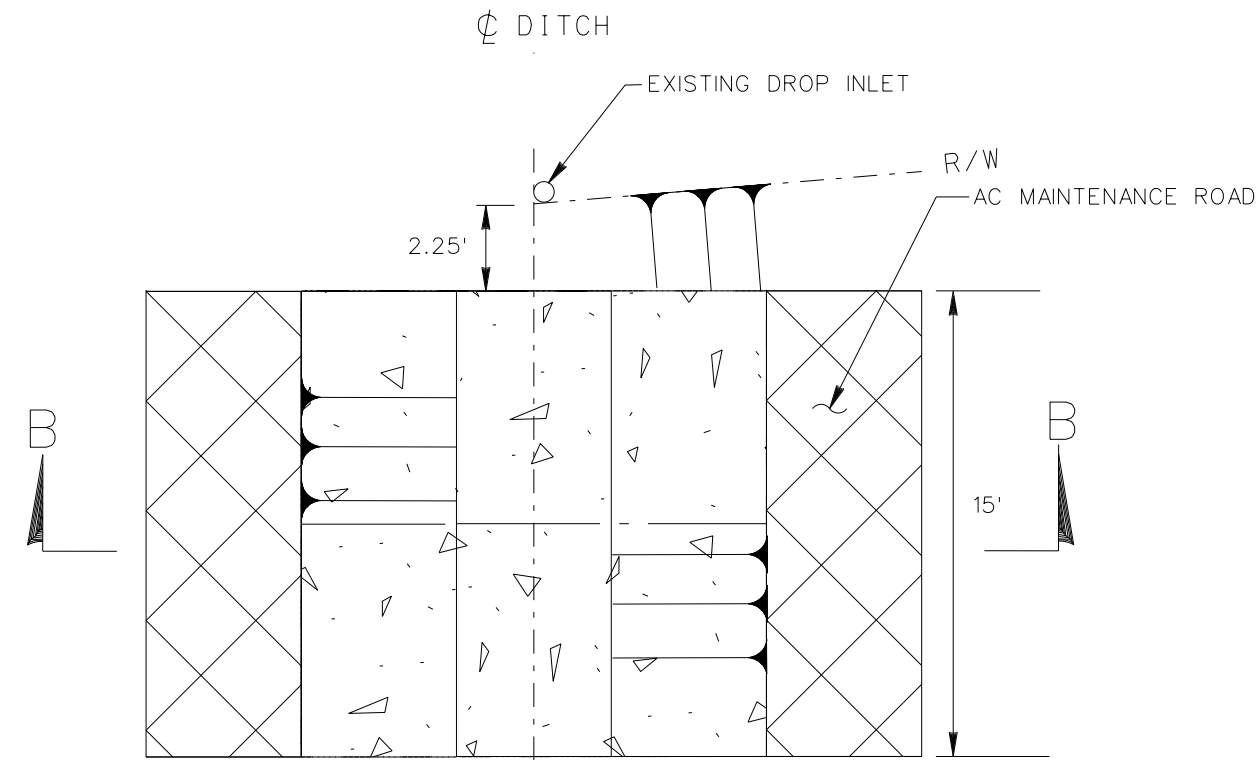
DESIGNED BY: J.G.R.		DRAWN BY: J.G.R.		CHECKED BY: S.H.V.		FILE NAME: M1.DGN	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2		TURNAROUND DETAILS	
DISTRICT FILE NO. 226/		SPEC. NO. W912PL-15-B-0001		SYMBOL		REVISIONS	
Scale: SHEET M1		DATE		APPROVAL			



CONCRETE DITCH CROSSING SECTION B-B



SETTLEMENT MONUMENT NTS



CONCRETE DITCH CROSSING PLAN

NOTES:

1. ALL CONCRETE SURVEY MARKERS WILL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

DESIGNED BY: J.G.R.	FILE NAME: M2.DGN
DRAWN BY: J.G.R.	
CHECKED BY: S.H.V.	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DISTRICT FILE NO. 226/
ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	SPEC. NO. W912PL-15-B-0001
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	CONCRETE OVERFLOW & SETTLEMENT MONUMENT DETAILS
SYMBOL	REVISIONS
DATE	APPROVAL

Scale: SHEET M2