SUBMITTAL TO THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD OF SUPERVISORS COUNTY OF RIVERSIDE, STATE OF CALIFORNIA 610B

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.

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 ☐ Policy ☐
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: Imelda Delos Santos

County Executive Office Signature

FISCAL PROCEDURES APPROVED
JEANINE J. REY, FINANCE DIRECTOR
BY REGINA L. NEAL

Departmental Concurrence

FORM APPROVED COUNTY COUNSEL
BY: ANITA C. WILLIS DATE 12-22-14

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

MINUTES OF THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT

On motion of Supervisor Benoit, seconded by Supervisor Tavaglione and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Tavaglione, Benoit and Ashley
Nays: None
Absent: None
Date: January 6, 2015
xc: Flood

Kecia Harper-Ihem
Clerk of the Board
By: Deputy

Prev. Agn. Ref.: 11-5 of 12/18/12 | **District:** 3rd | **Agenda Number:** 11-1

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.

P8\166686

ADDENDUM #1/WORK ORDER
MASTER CULTURAL RESOURCE TREATMENT AND TRIBAL MONITORING AGREEMENT

Work Order No.:	**1**
Company/Project Contractor:	**Riverside County Flood Control and Water Conservation District ("District")**
Tribe:	**The Pechanga Band of Luiseño Indians, a federally recognized Indian tribe ("Pechanga Tribe")**
Project:	**Murrieta Creek Phase II**

This Work Order is made for the procurement of services in connection with the excavation of Murrieta Creek Phase II from approximately 1st Street to Winchester Road located within the city of Temecula.

The District and Pechanga Tribe entered into a Master Cultural Resources Treatment and Tribal Monitoring Agreement (MSA) for Work Order services. Except as otherwise specified herein, the terms and conditions of that Agreement are incorporated in this Work Order by reference.

1. **Scope of Work:** The Pechanga Tribe shall furnish qualified personnel, equipment, materials and supplies necessary to perform services as described herein on a **Time and Materials** basis. The Pechanga Tribe shall provide up to two (2) Tribal Monitor(s) as directed by the District for the purposes of observing and inspecting excavations and any ground-disturbing activities associated with the United States Army Corps of Engineers' (Corps) construction of Murrieta Creek Phase II project. The Corps' project construction plans detailing the excavation limits are included. Should any finds be discovered, Tribal Monitors(s) shall immediately notify the Corps Contracting Officer via Albert Martinez of the District's Special Projects Section (951.955.1299) so that the Corps may determine the need for Corps archaeologist to evaluate the finds.

2. **Period of Performance:** The period of performance of this task order shall be from **January 1, 2015 to completion of project,** unless otherwise modified or extended.

3. **Compensation:** The Pechanga Tribe shall be compensated in accordance with the terms of the MSA in an amount not to exceed a total of **$170,000** for the work required by this Work Order unless agreed upon by a modification to this Work Order. Fees associated with the required work shall be in accordance with the compensation provisions set forth in the MSA.

4. **Communications:** The Pechanga Tribe's contact for this Work Order shall be Anna Hoover, 951.770.8104. District's contact for this Work Order shall be Mike Wong at 951.955.1233.

5. **Invoices:** All invoices shall be sent via electronic mail to the following address: rcfcap@rcflood.org.

6. **Location:** The services to meet the Scope of Work for this Work Order shall be performed at the locations specified above and as depicted on the Corps' project construction plans dated October 2014 attached hereto.

7. **Work Order Modifications:** Modifications or change orders to this Work Order will be agreed upon between District and the Pechanga Tribe pursuant to the terms of the MSA.

TRIBE:
PECHANGA BAND OF LUISEÑO INDIANS

By:_____
MARK MACARRO
Tribal Chairman

Date:_____

DISTRICT:
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By:_____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Date:_____

FORM APPROVED COUNTY COUNSEL
BY: NEAL R. KIPNIS 12/8/14
DATE

ADDENDUM #1/WORK ORDER
MASTER CULTURAL RESOURCE TREATMENT AND TRIBAL MONITORING AGREEMENT

Work Order No.:	**1**
Company/Project Contractor:	**Riverside County Flood Control and Water Conservation District ("District")**
Tribe:	**The Pechanga Band of Luiseño Indians, a federally recognized Indian tribe ("Pechanga Tribe")**
Project:	**Murrieta Creek Phase II**

This Work Order is made for the procurement of services in connection with the excavation of Murrieta Creek Phase II from approximately 1st Street to Winchester Road located within the city of Temecula.

The District and Pechanga Tribe entered into a Master Cultural Resources Treatment and Tribal Monitoring Agreement (MSA) for Work Order services. Except as otherwise specified herein, the terms and conditions of that Agreement are incorporated in this Work Order by reference.

1. **Scope of Work:** The Pechanga Tribe shall furnish qualified personnel, equipment, materials and supplies necessary to perform services as described herein on a **Time and Materials** basis. The Pechanga Tribe shall provide up to two (2) Tribal Monitor(s) as directed by the District for the purposes of observing and inspecting excavations and any ground-disturbing activities associated with the United States Army Corps of Engineers' (Corps) construction of Murrieta Creek Phase II project. The Corps' project construction plans detailing the excavation limits are included. Should any finds be discovered, Tribal Monitors(s) shall immediately notify the Corps Contracting Officer via Albert Martinez of the District's Special Projects Section (951.955.1299) so that the Corps may determine the need for Corps archaeologist to evaluate the finds.

2. **Period of Performance:** The period of performance of this task order shall be from **January 1, 2015 to completion of project,** unless otherwise modified or extended.

3. **Compensation:** The Pechanga Tribe shall be compensated in accordance with the terms of the MSA in an amount not to exceed a total of **$170,000** for the work required by this Work Order unless agreed upon by a modification to this Work Order. Fees associated with the required work shall be in accordance with the compensation provisions set forth in the MSA.

4. **Communications:** The Pechanga Tribe's contact for this Work Order shall be Anna Hoover, 951.770.8104. District's contact for this Work Order shall be Mike Wong at 951.955.1233.

5. **Invoices:** All invoices shall be sent via electronic mail to the following address: rcfcap@rcflood.org.

6. **Location:** The services to meet the Scope of Work for this Work Order shall be performed at the locations specified above and as depicted on the Corps' project construction plans dated October 2014 attached hereto.

7. **Work Order Modifications:** Modifications or change orders to this Work Order will be agreed upon between District and the Pechanga Tribe pursuant to the terms of the MSA.

TRIBE:
PECHANGA BAND OF LUISEÑO INDIANS

By:_____
MARK MACARRO
Tribal Chairman

Date:_____

DISTRICT:
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By:_____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Date:_____

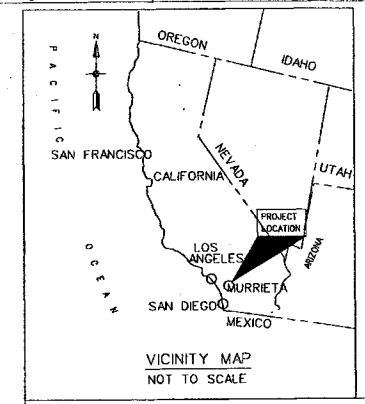
FOR APPROVED COUNTY COUNSEL
BY: NEAL R. KIPNIS
DATE

P8\166688

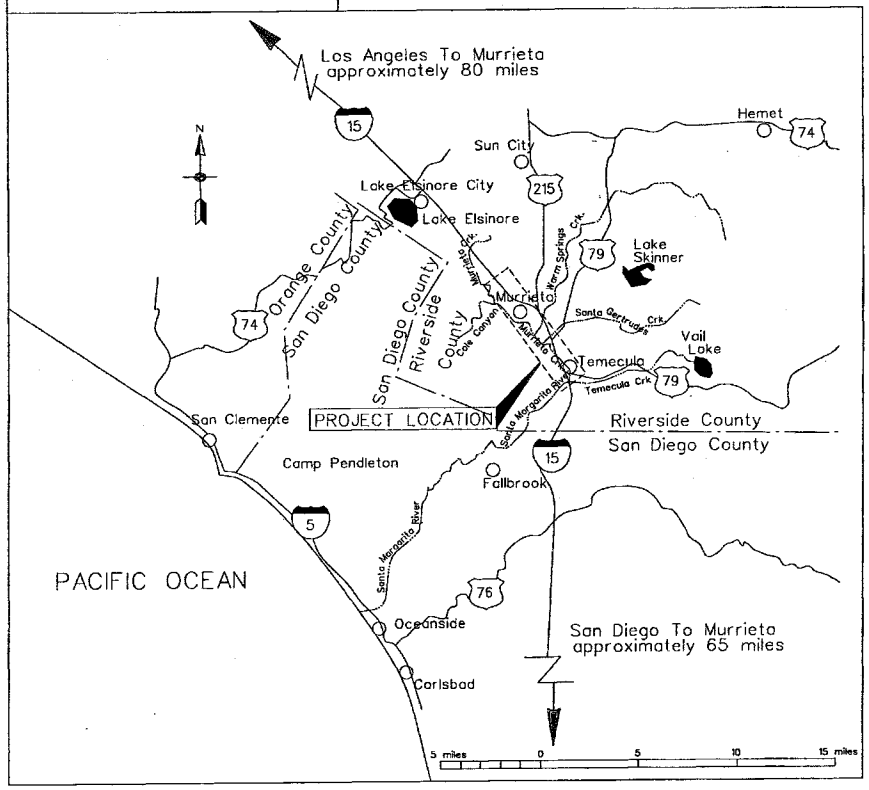
VALUE ENGINEERING PAYS

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA

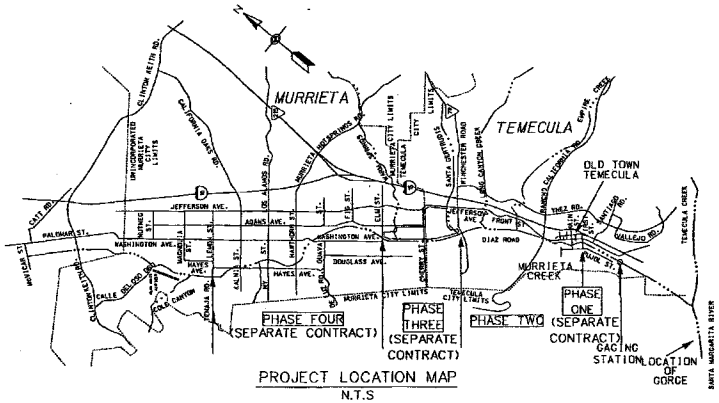
MURRIETA CREEK – PHASE 2
STA. 59+00 TO STA. 189+00



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 RECUSTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DRAWINGS WITHIN THE CORPS OF ENGINEERS DOCUMENTS AS REQUIRED BY E.R. 1110-1-8152. SIGNATURES AFFIXED HEREON INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL THE DRAWINGS IN THIS SET.

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

DESIGNED BY: J.G.R.
DRAWN BY: T.C.
CHECKED BY: T.C.
DATE:

PREPARED UNDER THE DIRECTION OF: COL. KIMBERLY M. COLLOTON, DISTRICT ENGINEER
SUBMITTED BY: CHIEF, ENGINEERING DIVISION
DATE APPROVED: 10/2/14
CHIEF, ENGINEERING DIVISION
DISTRICT FILE NO. 226/240
SPEC. NO. W912PL-15-B-0001
FILE NAME: T-1.DGN

Scale:
SHEET
T-1

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

VICINITY MAP AND PROJECT LOCATION

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

SAFETY! PAYS

Plot Date: 2-OCTOBER-2014

INDEX TO CONTRACT DRAWINGS

FILE NO.	TITLE	SHEET NO.
226/240	PROJECT LOCATION AND VICINITY MAP	T-1
226/241	INDEX TO CONTRACT DRAWINGS	T-2
226/242	INDEX TO CONTRACT DRAWINGS	T-3
226/243	GENERAL NOTES, LEGEND, LIST OF ABBREVIATIONS AND UTILITY CONTACTS	T-4
226/244	GENERAL PLAN SHEETS LAYOUT AND SURVEY CONTROL	T-5
226/245	ROW CONTROL POINTS STA. 189+00 TO STA. 125+00	T-6
226/246	ROW CONTROL POINTS STA. 125+00 TO STA. 59+00	T-7
226/247	HAUL ROUTE, STAGING AREA, STORAGE BASIN, & SITE ACCESS	T-8
	CIVIL/GENERAL	
226/248	PLAN AND PROFILE -STA 189+0	C-0
226/249	PLAN AND PROFILE - STA. 189+00 TO STA. 179+00	C-1
226/250	PLAN AND PROFILE - STA. 179+00 TO STA. 168+00	C-2
226/251	PLAN AND PROFILE - STA. 168+00 TO STA. 156+00	C-3
226/252	PLAN AND PROFILE - STA. 156+00 TO STA. 145+00	C-4
226/253	PLAN AND PROFILE - STA. 145+00 TO STA. 134+00	C-5
226/254	PLAN AND PROFILE - STA. 134+00 TO STA. 123+00	C-6
226/255	PLAN AND PROFILE - STA. 123+00 TO STA. 111+00	C-7
226/256	PLAN AND PROFILE - STA. 111+00 TO STA. 100+00	C-8
226/257	PLAN AND PROFILE - STA. 100+00 TO STA. 89+00	C-9
226/258	PLAN AND PROFILE - STA. 89+00 TO STA. 78+00	C-10
226/259	PLAN AND PROFILE - STA. 78+00 TO STA. 67+00	C-11
226/260	PLAN AND PROFILE - STA. 67+00 TO STA. 59+00	C-12
226/261	CHANNEL TYPICAL SECTIONS	C-13
226/261A	HIGH PERFORMANCE TURF REIFORCEMENT MAT DETAILS	C-13A
226/262	TYPICAL SOIL CEMENT CHANNEL SECTIONS AND POST AND CABLE FENCE DETAILS	C-14
226/263	CROSS SECTIONS - STA. 189+00 TO STA. 186+00	C-15
226/264	CROSS SECTIONS - STA. 186+00 TO STA. 180+00	C-16
226/265	CROSS SECTIONS - STA. 180+00 TO STA. 172+00	C-17
226/266	CROSS SECTIONS - STA. 172+00 TO STA. 164+00	C-18
226/267	CROSS SECTIONS - STA. 164+00 TO STA. 158+00	C-19
226/268	CROSS SECTIONS - STA. 158+00 TO STA. 150+00	C-20
226/269	CROSS SECTIONS - STA. 150+00 TO STA. 144+00	C-21
226/270	CROSS SECTIONS - STA. 144+00 TO STA. 134+00	C-22
226/271	CROSS SECTIONS - STA. 134+00 TO STA. 124+00	C-23
226/272	CROSS SECTIONS - STA. 124+00 TO STA. 114+00	C-24
226/273	CROSS SECTIONS - STA. 114+00 TO STA. 106+00	C-25
226/274	CROSS SECTIONS - STA. 106+00 TO STA. 98+00	C-26
226/275	CROSS SECTIONS - STA. 98+00 TO STA. 92+00	C-27
226/276	CROSS SECTIONS - STA. 92+00 TO STA. 82+00	C-28
226/277	CROSS SECTIONS - STA. 82+00 TO STA. 75+00	C-29
226/278	CROSS SECTIONS - STA. 74+00 TO STA. 65+00	C-30
226/279	CROSS SECTIONS - STA. 65+00 TO STA. 59+00	C-31
226/280	LONG CANYON CONFLUENCE - PLAN, PROFILE, AND DETAILS	C-32
226/281	EMPIRE CREEK CONFLUENCE - PLAN, PROFILE, AND DETAILS	C-33
226/282	GROUTED STONE INVERT STABILIZER AND END PROTECTION DETAILS	C-34
226/283	ACCESS UNDERCROSSING AT RANCHO CALIFORNIA - PLAN, PROFILE, AND DETAILS..ROAD	C-35
226/284	ACCESS UNDERCROSSING AT 1ST STREET - PLAN, PROFILE, AND..DETAILS	C-36
226/285	MAIN STREET BRIDGE TIE-IN DETAILS	C-37
226/286	WEST ACCESS RAMP PLAN AND SECTIONS - STA. 186+00	C-38
226/287	EAST ACCESS RAMP PLAN AND SECTIONS - STA. 149+00	C-39
226/288	EAST ACCESS RAMP PLAN AND SECTIONS - STA. 116+00	C-40
226/289	WEST ACCESS RAMP PLAN AND SECTIONS - STA. 90+20	C-41
226/305	TYPICAL 24",30",36" RCP SIDE DRAIN AT RIPRAP SLOPE	C-65
226/306	TYPICAL 48",54" RCP SIDE DRAIN AT RIPRAP SLOPE	C-66
226/307	TYPICAL 60",72" RCP SIDE DRAIN AT RIPRAP SLOPE	C-67
226/308	TYPICAL 24",30",36",48",54",60",72" RCP SIDE DRAIN AT SOIL CEMENT SLOPE	C-68
226/309	TYPICAL DOUBLE-PIPE RCP SIDE DRAIN	C-69
226/310	SIDE DRAIN DATA TABLE - STA. 60+97 TO STA. 106+99	C-70
226/311	SIDE DRAIN DATA TABLE - STA. 108+28 TO STA. 183+04	C-71
	LANDWARD GRADING PLAN	
226/312	LANDWARD GRADING PLAN - STA. 187+20 TO STA. 182+00	C-101
226/313	LANDWARD GRADING PLAN - STA. 182+00 TO STA. 177+00	C-102
226/314	LANDWARD GRADING PLAN - STA. 177+00 TO STA. 172+00	C-103
226/315	LANDWARD GRADING PLAN - STA. 172+00 TO STA. 167+00	C-104
226/316	LANDWARD GRADING PLAN - STA. 167+00 TO STA. 162+00	C-105
226/317	LANDWARD GRADING PLAN - STA. 162+00 TO STA. 157+00	C-106
226/318	LANDWARD GRADING PLAN - STA. 157+00 TO STA. 152+00	C-107
226/319	LANDWARD GRADING PLAN - STA. 152+00 TO STA. 147+00	C-108
226/320	LANDWARD GRADING PLAN - STA. 147+00 TO STA. 142+00	C-109
226/321	LANDWARD GRADING PLAN - STA. 142+00 TO STA. 137+00	C-110
226/322	LANDWARD GRADING PLAN - STA. 137+00 TO STA. 132+00	C-111
226/322	LANDWARD GRADING PLAN - STA. 132+00 TO STA. 127+00	C-112
226/323	LANDWARD GRADING PLAN - STA. 127+00 TO STA. 122+00	C-113
226/324	LANDWARD GRADING PLAN - STA. 122+00 TO STA. 117+00	C-114
226/325	LANDWARD GRADING PLAN - STA. 117+00 TO STA. 112+00	C-115
226/326	LANDWARD GRADING PLAN - STA. 112+00 TO STA. 107+00	C-116
226/327	LANDWARD GRADING PLAN - STA. 107+00 TO STA. 102+00	C-117
226/328	LANDWARD GRADING PLAN - STA. 102+00 TO STA. 97+00	C-118
226/329	LANDWARD GRADING PLAN - STA. 97+00 TO STA. 92+00	C-119
226/330	LANDWARD GRADING PLAN - STA. 92+00 TO STA. 87+00	C-120
226/331	LANDWARD GRADING PLAN - STA. 87+00 TO STA. 82+00	C-121
226/332	LANDWARD GRADING PLAN - STA. 82+00 TO STA. 77+00	C-122
226/333	LANDWARD GRADING PLAN - STA. 77+00 TO STA. 72+00	C-123
226/334	LANDWARD GRADING PLAN - STA. 72+00 TO STA. 67+00	C-124
226/335	LANDWARD GRADING PLAN - STA. 67+00 TO STA. 62+00	C-125
226/336	LANDWARD GRADING PLAN - STA. 62+00 TO STA. 59+00	C-126
	MISCELLANEOUS	
226/336.1	TURNAROUND DETAILS	M-1
226/336.2	CONCRETE OVERFLOW AND SETTLEMENT MONUMENT DETAILS	M-2
	STRUCTURAL	
226/337	GENERAL STRUCTURAL NOTES AND DETAILS	S-1
226/338	JUNCTION STRUCTURE DETAILS AND TABULATION	S-2
226/339	TABULATION OF SIDE DRAINS	S-3
226/340	SINGLE PIPE SIDE DRAIN AND OUTLET STRUCTURAL DETAILS, WEST SIDE	S-4
226/341	DOUBLE PIPE SIDE DRAIN AND OUTLET STRUCTURAL DETAILS, WEST SIDE	S-5
226/342	SINGLE & DOUBLE PIPE SIDE DRAIN & OUTLET STRUCTURAL DETAILS, EAST SIDE	S-6
226/343	CATCH BASIN REINFORCEMENT SCHEDULE, PLAN AND SECTION	S-7
226/344	SINGLE & DOUBLE PIPE INLET & OUTLET ELEVATION AND DETAILS	S-8
226/345	CATCH BASIN DETAILS AND SECTION	S-9
226/345.1	FRAME AND CRATING DETAILS FOR CATCH BASIN	S-10

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

INDEX TO CONTRACT DRAWINGS
SHEET 1 OF 2

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

Plot Date: 25-JULY-2014

INDEX TO CONTRACT DRAWINGS (CONTINUED)

GEOTECHNICAL

FILE NO.	TITLE	SHEET NO.
226/346	PLAN OF EXPLORATION STA. 189+00 TO STA. 160+00	G-01
226/347	PLAN OF EXPLORATION STA. 160+00 TO STA. 135+00	G-02
226/348	PLAN OF EXPLORATION STA. 135+00 TO STA. 111+00	G-03
226/349	PLAN OF EXPLORATION STA. 111+00 TO STA. 86+00	G-04
226/350	PLAN OF EXPLORATION STA. 86+00 TO STA. 59+00	G-05
226/351	LEGENDS GENERAL NOTES AND UNIFIED SOIL CLASSIFICATION SYSTEM	G-06
226/352	LOGS OF EXPLORATION CPT10-01 AND CPT10-02	G-07
226/353	LOGS OF EXPLORATION CPT10-03 AND CPT10-04	G-08
226/354	LOGS OF EXPLORATION CPT10-05 AND CPT10-06	G-09
226/355	LOGS OF EXPLORATION CPT10-07 AND CPT10-08	G-10
226/356	LOGS OF EXPLORATION CPT10-09 AND CPT10-10	G-11
226/357	LOGS OF EXPLORATION CPT10-11 AND CPT10-12	G-12
226/358	LOGS OF EXPLORATION CPT10-13 AND CPT10-14	G-13
226/359	LOGS OF EXPLORATION CPT10-15 AND CPT10-16	G-14
226/360	LOGS OF EXPLORATION TT03-02 AND TT03-02A	G-15
226/361	LOGS OF EXPLORATION TT03-03 AND TT03-05	G-16
226/362	LOGS OF EXPLORATION TT03-06 AND TT03-07	G-17
226/363	LOGS OF EXPLORATION TT03-08 AND TT03-09	G-18
226/364	LOG OF EXPLORATION TT03-10	G-19
226/365	LOGS OF EXPLORATION TH01-02, TH01-03, TH01-04 AND TH01-15	G-20
226/366	LOGS OF EXPLORATION TT01-03, TT01-06, TT01-07, TT01-8 AND TT01-09	G-21
226/367	LOGS OF EXPLORATION TH98-2, TT98-1 AND TT98-2	G-22
226/368	LOGS OF EXPLORATION SD-BH-1 AND SD-BH-2	G-23
226/369	LOGS OF EXPLORATION SD-BH-3 AND SD-BH-7	G-24
226/370	LOG OF EXPLORATION SD-BH-8	G-25
226/371	LOG OF EXPLORATION SD-BH-12	G-26
226/372	LOG OF EXPLORATION SD-BH-13	G-27
226/373	LOG OF EXPLORATION SD-BH-14	G-28
226/374	LOG OF EXPLORATION TT03-10	G-29
226/375	LOGS OF EXPLORATION TH01-02, TH01-03, TH01-04 AND TH01-15	G-30
226/376	LOGS OF EXPLORATION TT01-03, TT01-07, TT01-08 AND TT01-09	G-31
226/377	LOGS OF EXPLORATION TH98-2, TH98-1 AND TT98-2	G-32
226/378	LOGS OF EXPLORATION SD-BH-1 AND SD-BH-2	G-33
226/379	LOGS OF EXPLORATION SD-BH-3 AND SB-BH-7	G-34
226/380	LOG OF EXPLORATION SD-BH-8	G-35
226/381	LOG OF EXPLORATION SD-BH-12	G-36
226/382	LOG OF EXPLORATION SD-BH-13	G-37
226/383	LOG OF EXPLORATION SD-BH-14	G-38
226/384	LOGS OF EXPLORATION C-BH-1 AND C-BH-2	G-39
226/385	LOGS OF EXPLORATION K-B-1 PAGE 1 AND 2 OF 3	G-40
226/386	LOG OF EXPLORATION K-B-1 PAGE 3 OF 3	G-41
226/387	LOGS OF EXPLORATION K-B-2 PAGE 1 AND 2 OF 3	G-42
226/388	LOG OF EXPLORATION K-B-2 PAGE 3 OF 3	G-43
226/389	LOGS OF EXPLORATION K-B-3 PAGE 1 AND 2 OF 3	G-44
226/390	LOG OF EXPLORATION K-B-3 PAGE 3 OF 3	G-45
226/391	LOGS OF EXPLORATION K-B-4 PAGE 1 AND 2 OF 3	G-46
226/392	LOG OF EXPLORATION K-B-4 PAGE 3 OF 3	G-47
226/393	LOG OF EXPLORATION K-B-5	G-48
226/394	LOG OF EXPLORATION K-B-6	G-49
226/395	LOGS OF EXPLORATION G-B-1 AND G-B-2	G-50
226/396	LOG OF EXPLORATION A-B-8	G-51
226/397	LOG OF EXPLORATION A-B-9	G-52
226/398	LOG OF EXPLORATION A-B-10	G-53
226/399	LOG OF EXPLORATION A-B-11	G-54

LANDSCAPE
TOP OF BANK LANDSCAPING

FILE NO.	TITLE	SHEET NO.
226/400	LANDSCAPE INDEX SHEET	L-T1
226/401	IRRIGATION LEGEND AND NOTES	L-100
226/402	IRRIGATION PLAN - STA 187+20 TO STA 182+00	L-101
226/403	IRRIGATION PLAN - STA 182+00 TO STA 177+00	L-102
226/404	IRRIGATION PLAN - STA 177+00 TO STA 172+00	L-103
226/405	IRRIGATION PLAN - STA 172+00 TO STA 167+00	L-104
226/406	IRRIGATION PLAN - STA 167+00 TO STA 162+00	L-105
226/407	IRRIGATION PLAN - STA 162+00 TO STA 157+00	L-106
226/408	IRRIGATION PLAN - STA 157+00 TO STA 152+00	L-107
226/409	IRRIGATION PLAN - STA 152+00 TO STA 147+00	L-108
226/410	IRRIGATION PLAN - STA 147+00 TO STA 142+00	L-109
226/411	IRRIGATION PLAN - STA 142+00 TO STA 137+00	L-110
226/412	IRRIGATION PLAN - STA 137+00 TO STA 132+00	L-111
226/413	IRRIGATION PLAN - STA 132+00 TO STA 127+00	L-112
226/414	IRRIGATION PLAN - STA 127+00 TO STA 122+00	L-113
226/415	IRRIGATION PLAN - STA 122+00 TO STA 117+00	L-114
226/416	IRRIGATION PLAN - STA 117+00 TO STA 112+00	L-115
226/417	IRRIGATION PLAN - STA 112+00 TO STA 107+00	L-116
226/418	IRRIGATION PLAN - STA 107+00 TO STA 102+00	L-117
226/419	IRRIGATION PLAN - STA 102+00 TO STA 97+00	L-118
226/420	IRRIGATION PLAN - STA 97+00 TO STA 92+00	L-119
226/421	IRRIGATION PLAN - STA 92+00 TO STA 87+00	L-120
226/422	IRRIGATION PLAN - STA 87+00 TO STA 82+00	L-121
226/423	IRRIGATION PLAN - STA 82+00 TO STA 77+00	L-122
226/424	IRRIGATION PLAN - STA 77+00 TO STA 72+00	L-123
226/425	IRRIGATION PLAN - STA 72+00 TO STA 67+00	L-124
226/426	IRRIGATION PLAN - STA 67+00 TO STA 62+00	L-125
226/427	IRRIGATION PLAN - STA 62+00 TO STA 59+00	L-126
226/428	IRRIGATION DETAILS	L-127
226/429	IRRIGATION DETAILS	L-128
226/430	IRRIGATION DETAILS	L-129

LANDSCAPE
TOP OF BANK LANDSCAPING (CONT'D)

FILE NO.	TITLE	SHEET NO.
226/431	PLANTING LEGEND AND NOTES	L-200
226/432	PLANTING PLAN - STA 187+20 TO STA 182+00	L-201
226/433	PLANTING PLAN - STA 182+00 TO STA 177+00	L-202
226/434	PLANTING PLAN - STA 177+00 TO STA 172+00	L-203
226/435	PLANTING PLAN - STA 172+00 TO STA 167+00	L-204
226/436	PLANTING PLAN - STA 167+00 TO STA 162+00	L-205
226/437	PLANTING PLAN - STA 162+00 TO STA 157+00	L-206
226/438	PLANTING PLAN - STA 157+00 TO STA 152+00	L-207
226/439	PLANTING PLAN - STA 152+00 TO STA 147+00	L-208
226/440	PLANTING PLAN - STA 147+00 TO STA 142+00	L-209
226/441	PLANTING PLAN - STA 142+00 TO STA 137+00	L-210
226/442	PLANTING PLAN - STA 137+00 TO STA 132+00	L-211
226/443	PLANTING PLAN - STA 132+00 TO STA 127+00	L-212
226/444	PLANTING PLAN - STA 127+00 TO STA 122+00	L-213
226/445	PLANTING PLAN - STA 122+00 TO STA 117+00	L-214
226/446	PLANTING PLAN - STA 117+00 TO STA 112+00	L-215
226/447	PLANTING PLAN - STA 112+00 TO STA 107+00	L-216
226/448	PLANTING PLAN - STA 107+00 TO STA 102+00	L-217
226/449	PLANTING PLAN - STA 102+00 TO STA 97+00	L-218
226/450	PLANTING PLAN - STA 97+00 TO STA 92+00	L-219
226/451	PLANTING PLAN - STA 92+00 TO STA 87+00	L-220
226/452	PLANTING PLAN - STA 82+00 TO STA 82+00	L-221
226/453	PLANTING PLAN - STA 82+00 TO STA 77+00	L-222
226/454	PLANTING PLAN - STA 77+00 TO STA 72+00	L-223
226/455	PLANTING PLAN - STA 72+00 TO STA 67+00	L-224
226/456	PLANTING PLAN - STA 67+00 TO STA 62+00	L-225
226/457	PLANTING PLAN - STA 62+00 TO STA 59+00	L-226
226/458	PLANTING DETAILS	L-227
226/459	ELECTRICAL SERVICE (IRRIGATION) PLAN - STA 189+00 TO STA 164+00	E-1
226/460	ELECTRICAL SERVICE (IRRIGATION) PLAN - STA 139+00 TO STA 117+00	E-2
226/461	ELECTRICAL SERVICE (IRRIGATION) PLAN - STA 89+00 TO STA 65+00	E-3

CHANNEL REVEGETATION

FILE NO.	TITLE	SHEET NO.
226/462	PLANTING AND IRRIGATION	LCR-1

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
INDEX TO CONTRACT DRAWINGS
SHEET 2 OF 2

DESIGNED BY:
DRAWN BY:
CHECKED BY:
FILE NAME:

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

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

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

Scale:
SHEET
T-3

Plot Date 25-JULY-2014

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

UTILITY CONTACTS

	POC	
DISPOSAL SITE: RIVERSIDE COUNTY 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 MANAGMENT DISTRICT		(909) 396-2000
STATE WATER RESOURCES CONTROL BOARD		(916) 341-5536

GENERAL LEGEND

SYMBOL	DESCRIPTION
EXISTING FEATURES	
	POWER POLES
	STREET LIGHT
MH	MANHOLE
3635.3	EXIST. ELEVATION
—SD—	SIDE OR STORM DRAIN
—S—	SANITARY SEWER
—W—	WATER LINE
—X—X—	FENCE
—E—	UNDERGROUND ELECTRIC LINE
—G—	GAS LINE OR PETROLEUM LINE
—T—	OVER HEAD POWER LINE
—UT—	UNDERGROUND TELEPHONE
	RAILROAD

SYMBOL	DESCRIPTION
DESIGN FEATURES	
R/W	RIGHT-OF-WAY
	CENTERLINE
	TOP OF SLOPE
	TOE OF SLOPE
1V:2H	SLOPE INDICATOR
	ASPHALT MAINTENANCE/ BIKE ROAD
	DECOMPOSED GRANITE MAINTENANCE ROAD
	SURVEY MONUMENTS

500 250 0 500 1000FT
SCALE: 1"= 500'

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

DESIGNED BY: J.B.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

DISTRICT FILE NO. 226/243
SPEC. NO. W912PL-15-B-0001

Scale:

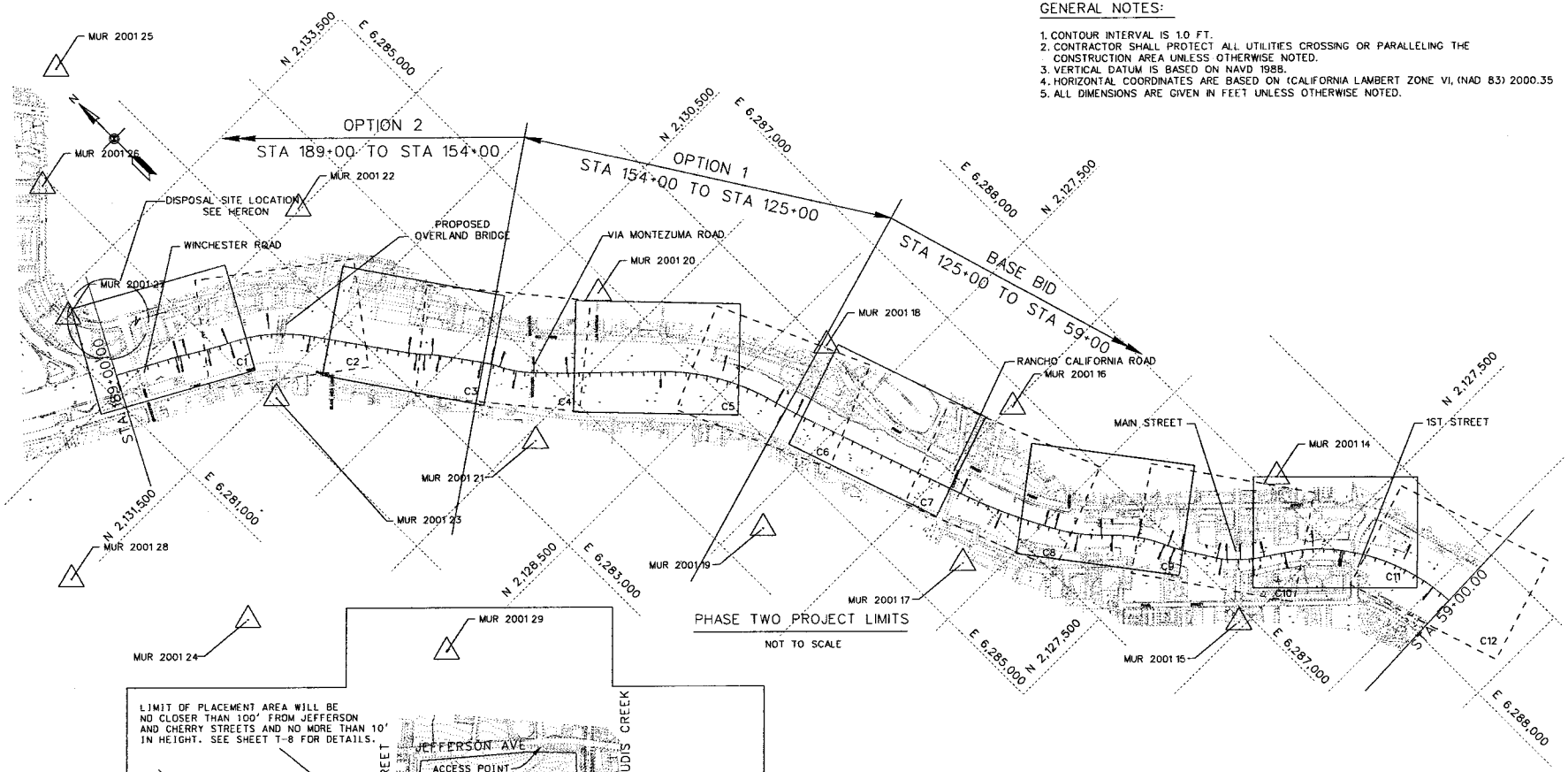
SHEET
T-4

Plot Date 25-JULY-2014

VALUE ENGINEERING PAYS

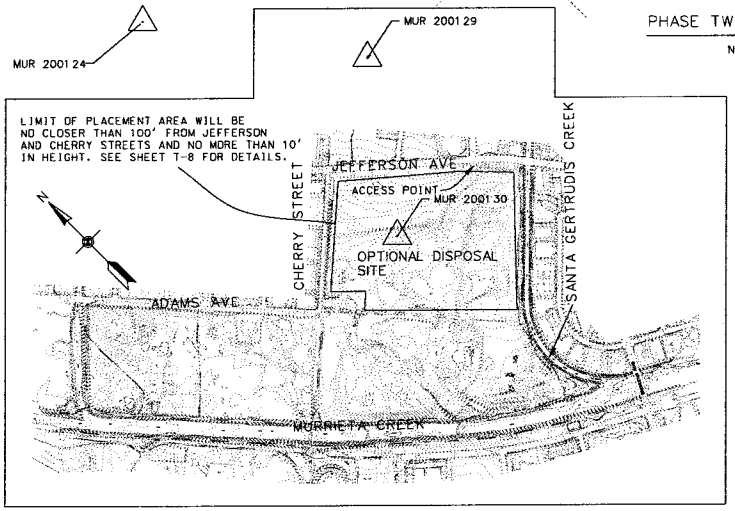
GENERAL NOTES:

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



DISPOSAL SITE

NOT TO SCALE

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

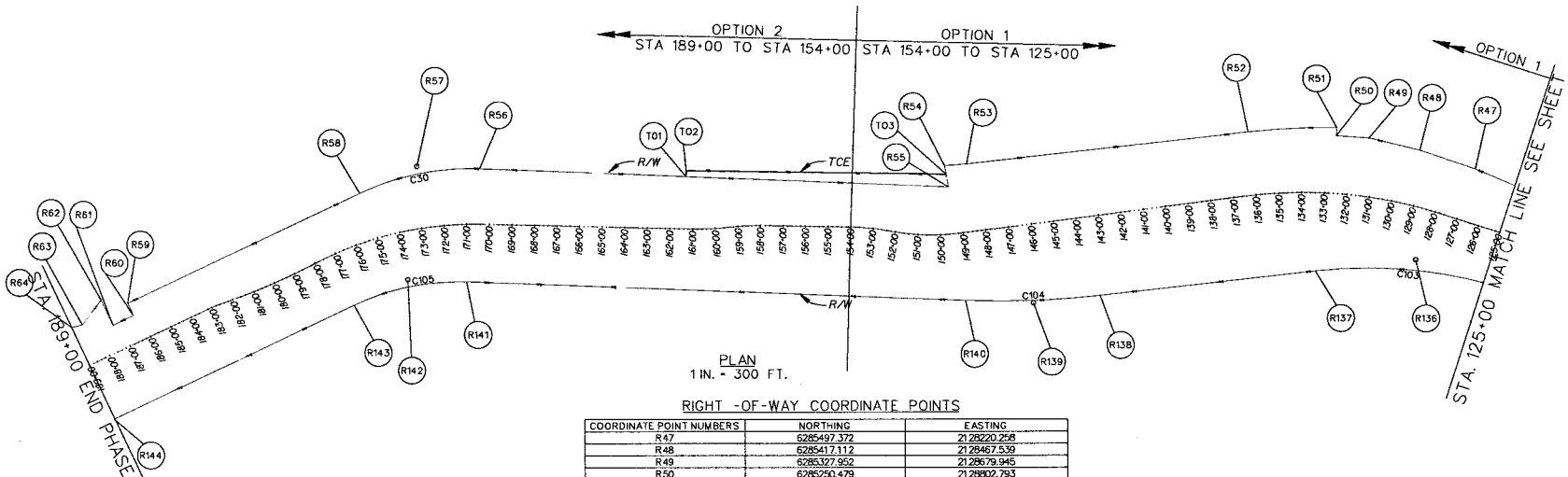
DISTRICT FILE NO. 226/244 | SPEC. NO. W912PL-15-B-0001

Scale:

SHEET T-5

Plot Date 25-JULY-2014

VALUE ENGINEERING PAYS



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	2130037.967
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

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

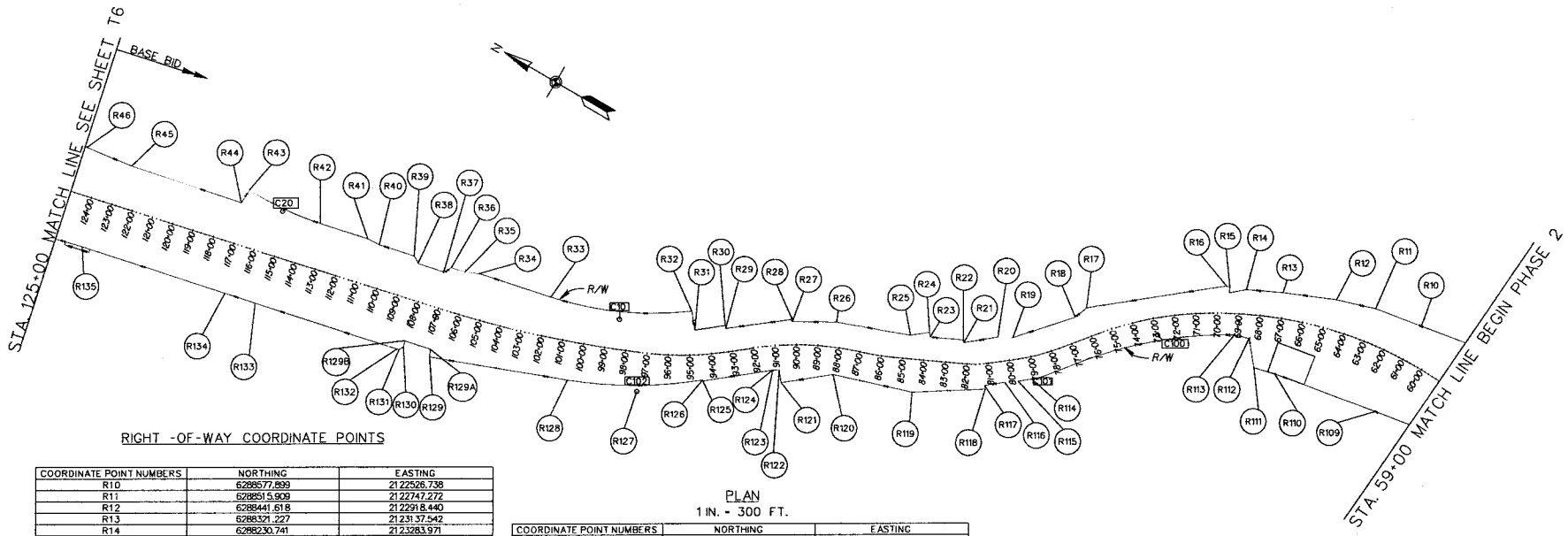
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

ROW CONTROL POINTS
STA. 189+00 TO STA. 125+00

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

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME:
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 228/245
Scale:
SHEET
T-6

Plot Date: 25-JULY-2014



PLAN
1 IN. = 300 FT.

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

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

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
ROW CONTROL POINTS
STA. 125+00 TO STA. 59+00

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

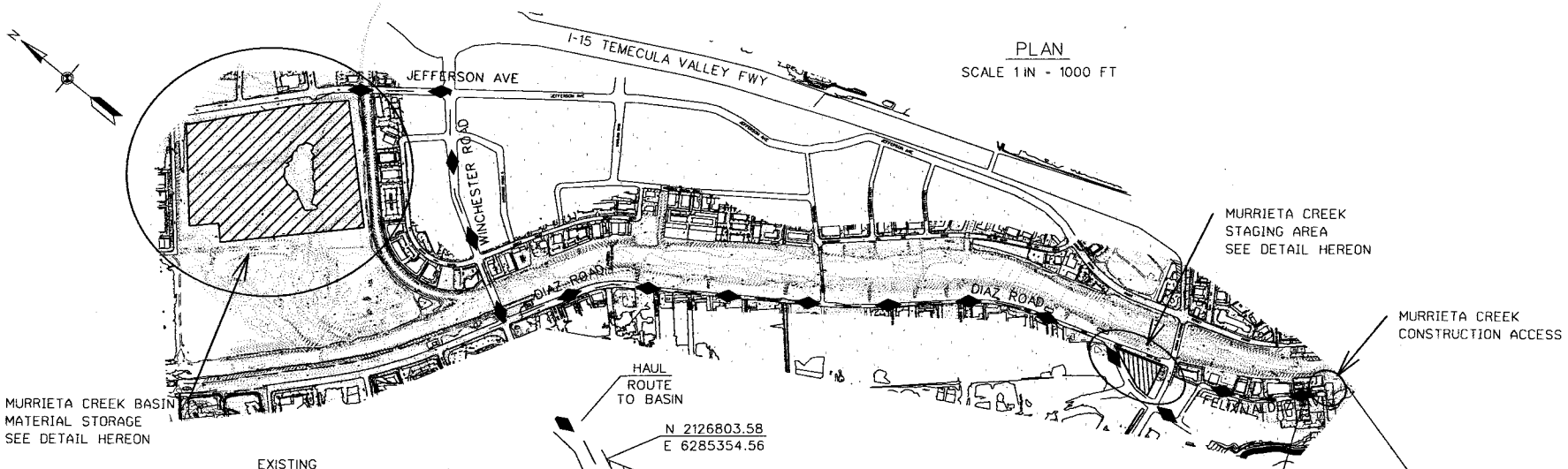
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DESIGNED BY: J.G.R.
DRAWN BY: T.C.
CHECKED BY: S.H.V.
FILE NAME: T7.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/246

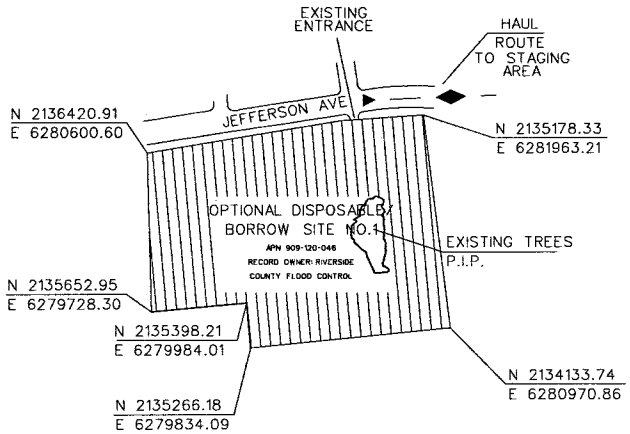
Scale: AS SHOWN
SHEET
T-7

Plot Date: 25-JULY-2014

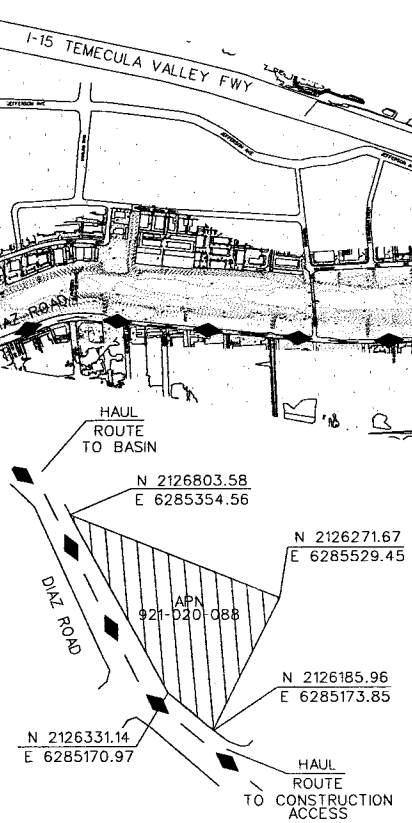
VALUE ENGINEERING PAYS



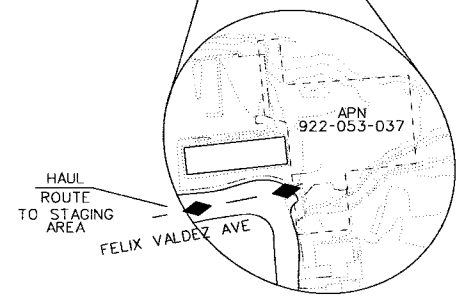
PLAN
SCALE 1 IN - 1000 FT



BASIN DETAIL
NOT TO SCALE



STAGING AREA DETAIL
NOT TO SCALE



SITE ACCESS
NOT TO SCALE

LEGEND

HAUL ROUTE

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
	REVISIONS		

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

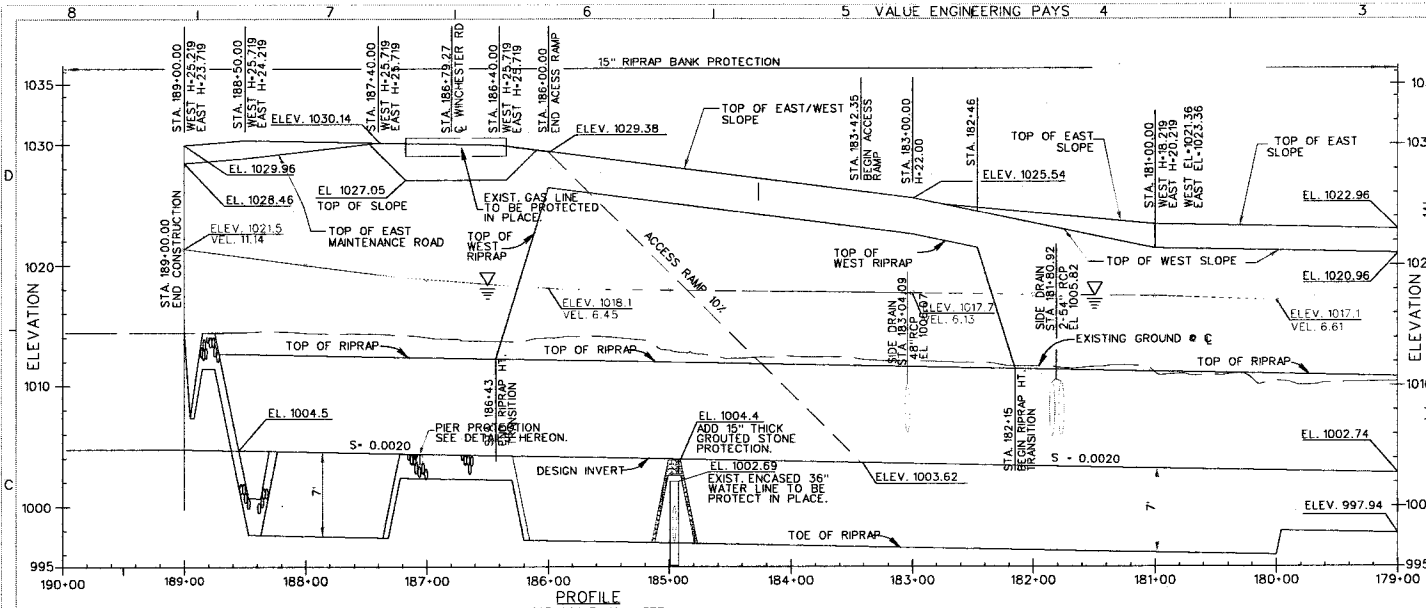
HAUL ROUTE, STAGING AREA, OPTIONAL STORAGE BASIN & SITE ACCESS

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

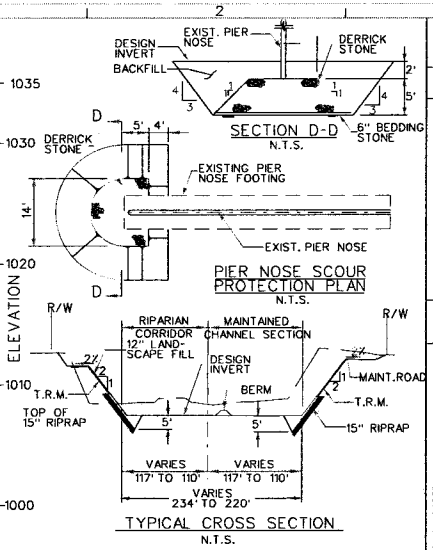
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME:
DISTRICT FILE NO. 226/ SPEC. NO. W912PL-15-B-0001
Scale:
SHEET
T-8

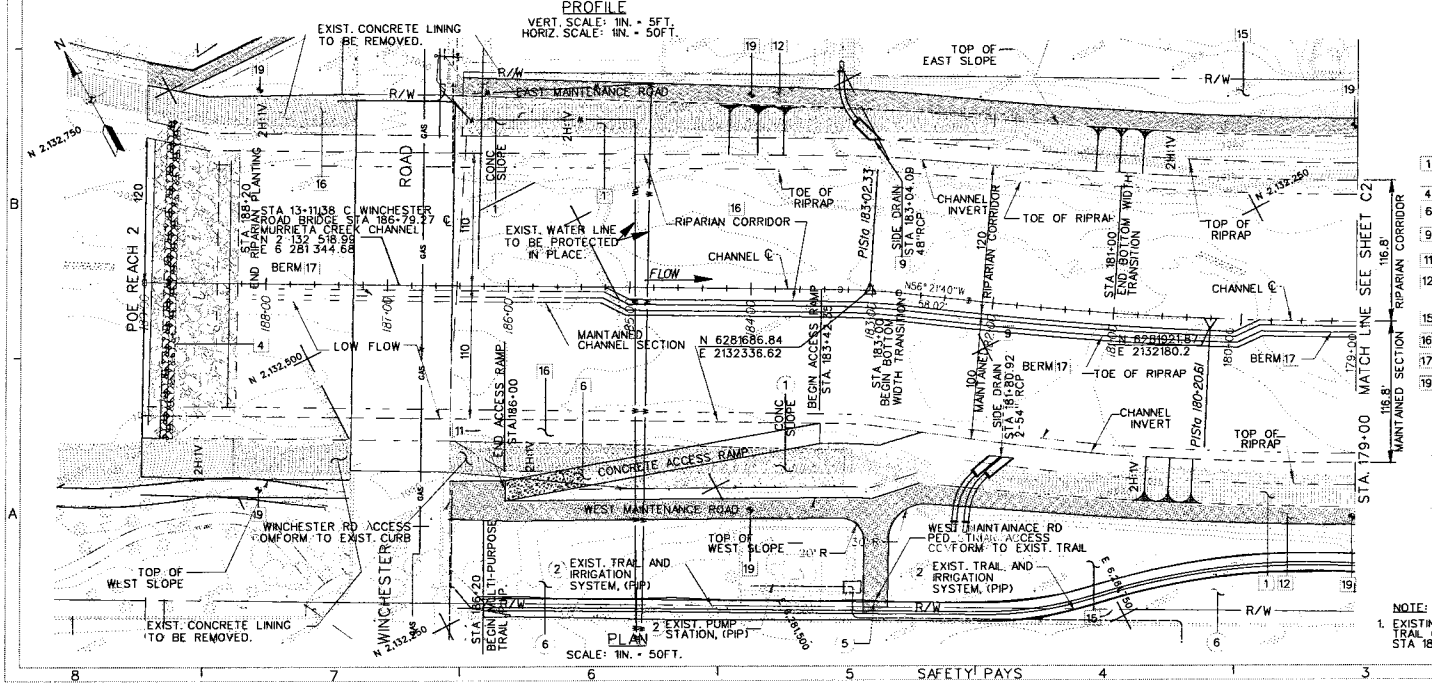
SAFETY PAYS

Plot Date: 25-JULY-2014



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





PLAN
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 ℄ 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'

NOTE:

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

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1"= 50'

SAFETY! PAYS

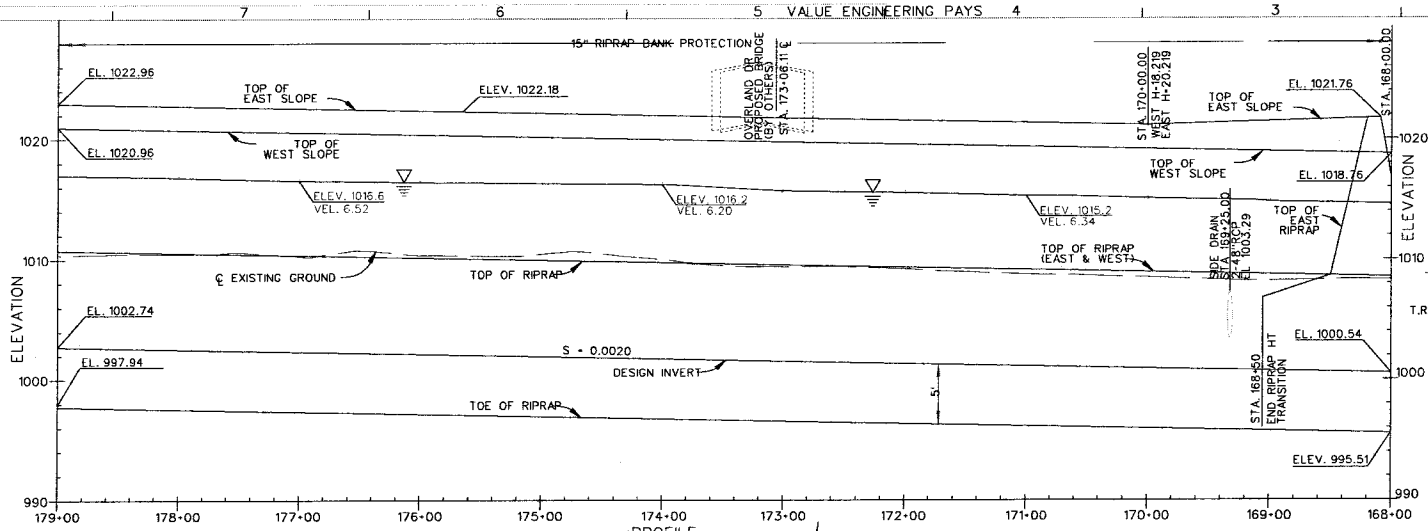
SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN & PROFILE
STA 189+00 TO 179+00

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

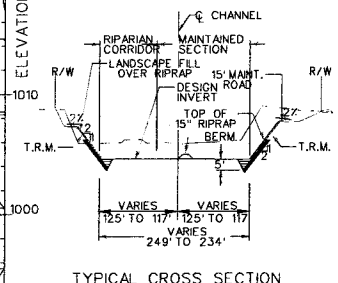
DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH
FILE NAME: C1.DGN
DISTRICT FILE NO. 228/249
SPEC. NO. W912PL-15-B-0001
Scale: AS SHOWN
SHEET C-1

Plot Date: 25-JULY-2014



PROFILE

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



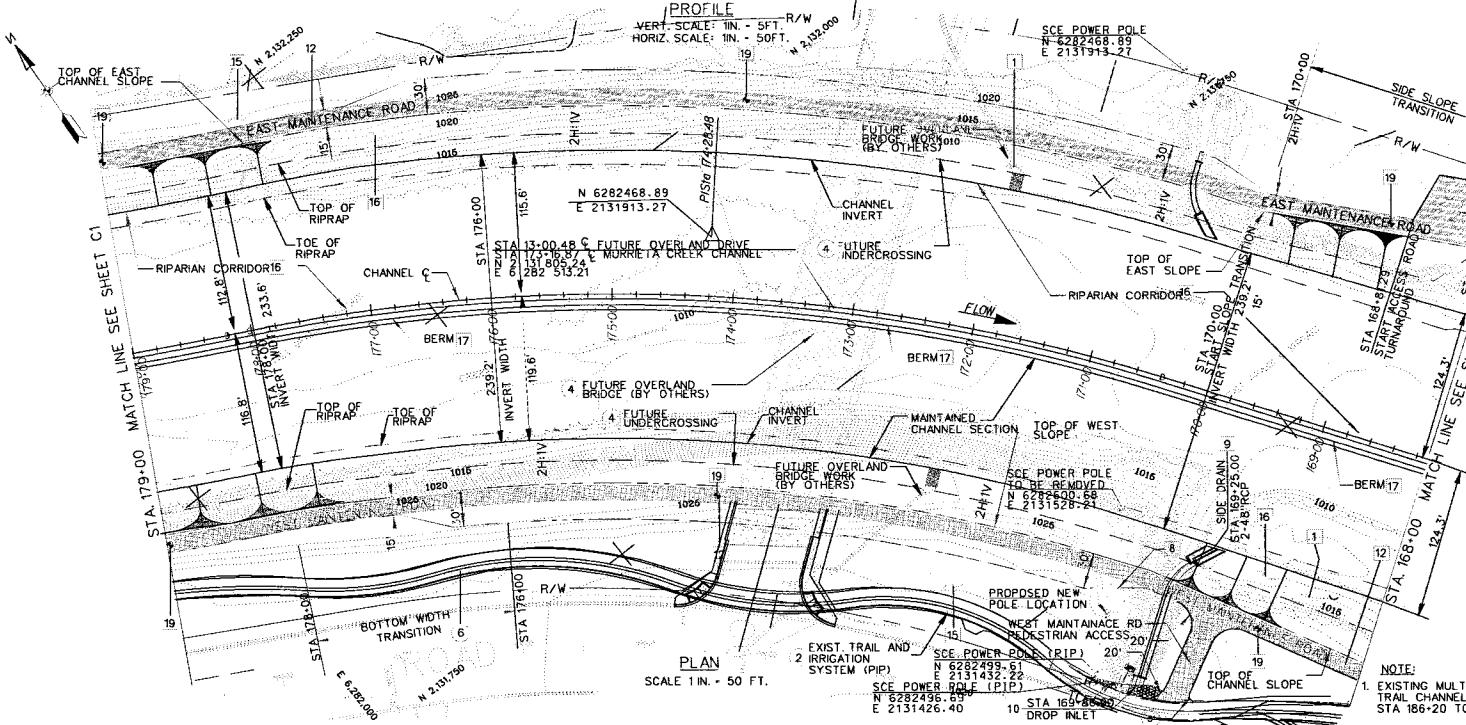
TYPICAL CROSS SECTION

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.



PLAN

SCALE 1 IN. = 50 FT.

CONSTRUCTION NOTES:

1. CONSTRUCT CHANNEL SECTION WITH RIPRAP SLOPEPROTECTION. 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 L SHEETS.
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 ℄ CURVE DATA.	
PI. STATION	174+28.48
Δ	28° 51'21"
R=	1515'
L=	763'
T=	389.77'

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

50 25 0 50 100FT
SCALE: 1'' = 50'

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

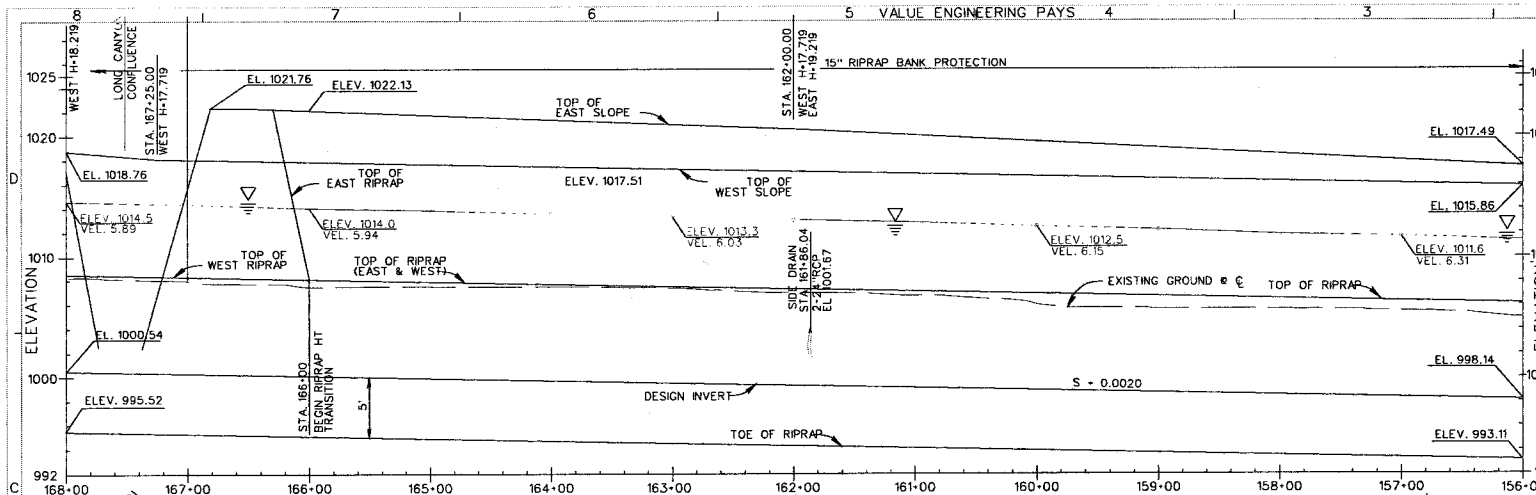
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

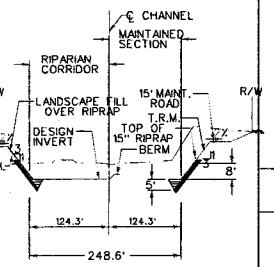
PLAN AND PROFILE
STA. 179+00 TO STA. 168+00

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

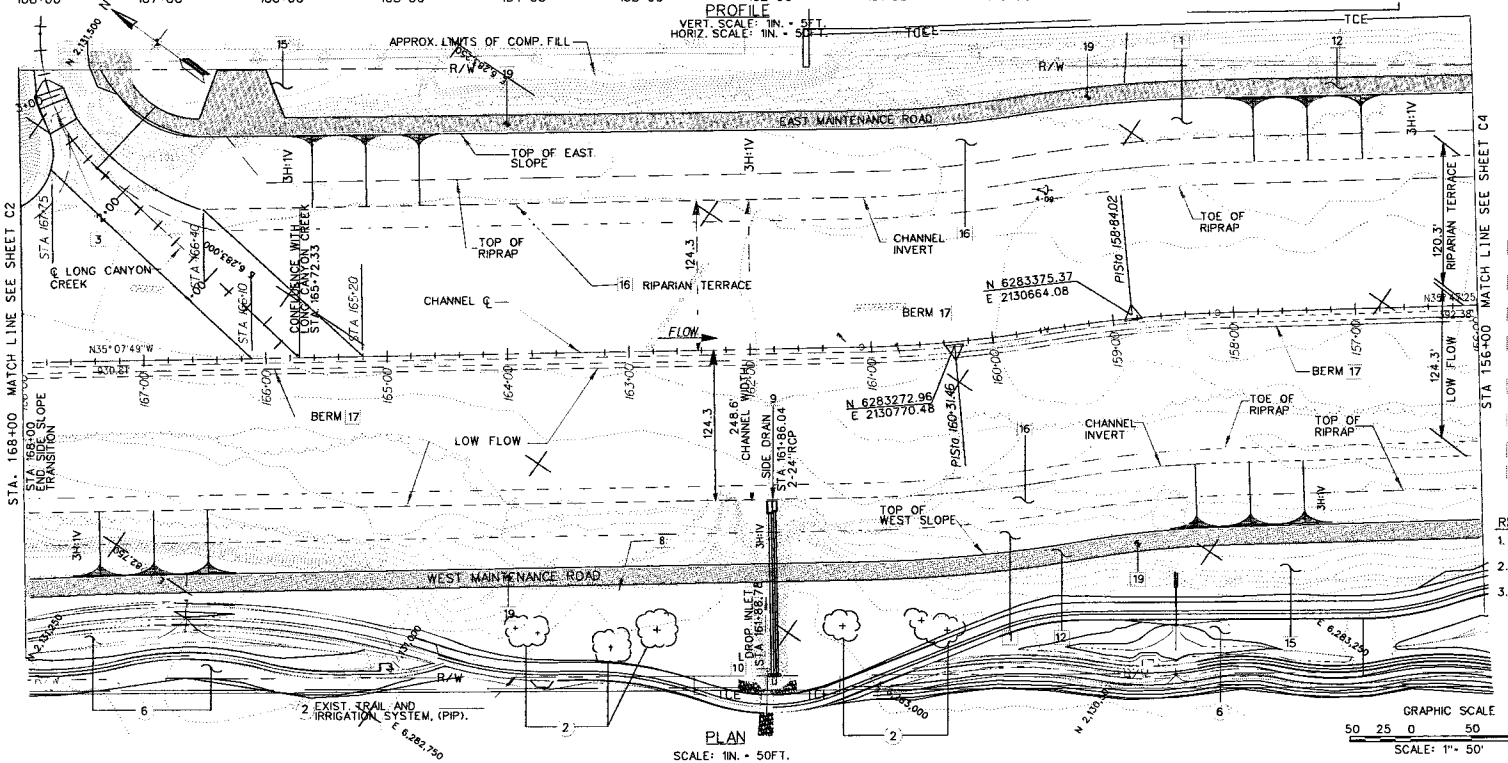
DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
SUBMITTED BY: ARTHUR Y. JUNG, PE, CHIEF, DESIGN BRANCH
FILE NAME: C2.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/250
Scale: AS SHOWN
SHEET C-2

Prtd 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 MAINTENANACE 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 ℄ 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'

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

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

DESIGNED BY: J.G.R. DRAWN BY: J.G.R. CHECKED BY: S.H.V. FILE NAME: C3.DGN

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

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

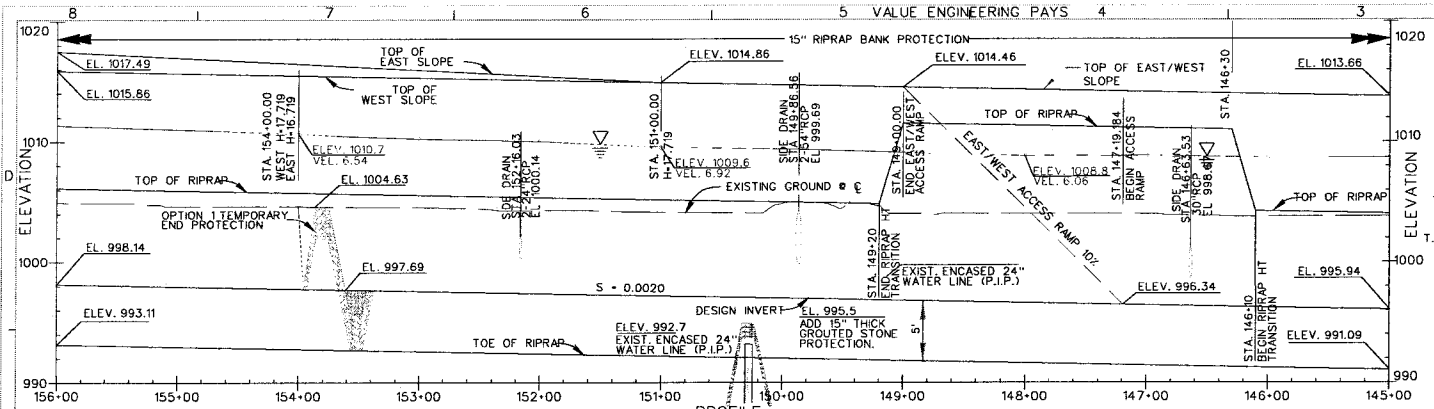
DISTRICT FILE NO. 286/251 SPEC. NO. W912PL-15-B-0001

Scale: AS SHOWN
SHEET C-3

SAFETY! PAYS

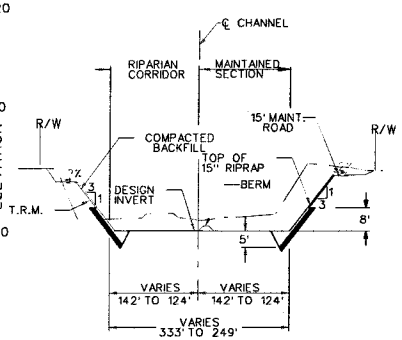
Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS



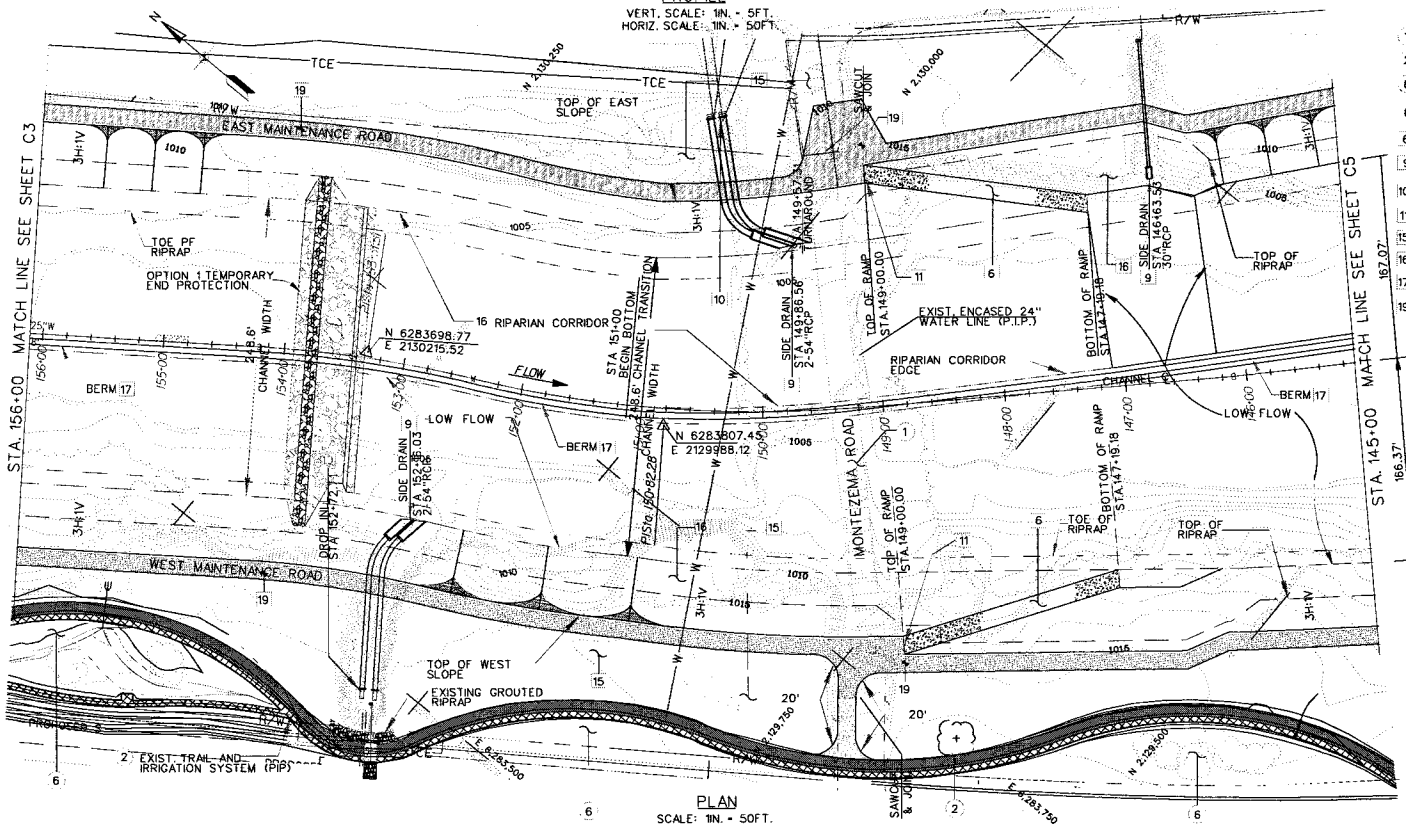
PROFILE

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



TYPICAL CROSS SECTION

N.T.S.



PLAN

SCALE: 1IN. = 50FT.

LEGEND

1 REMOVE

2 PROTECT IN PLACE

6 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 ℄ 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'

GRAPHIC SCALE

50 25 0 50 100FT

SCALE: 1"= 50'

SAFETY! PAYS

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA

MURRIETA CREEK - PHASE 2

PLAN AND PROFILE STA. 156+00 TO 145+00

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

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

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

FILE NAME: C4.DGN

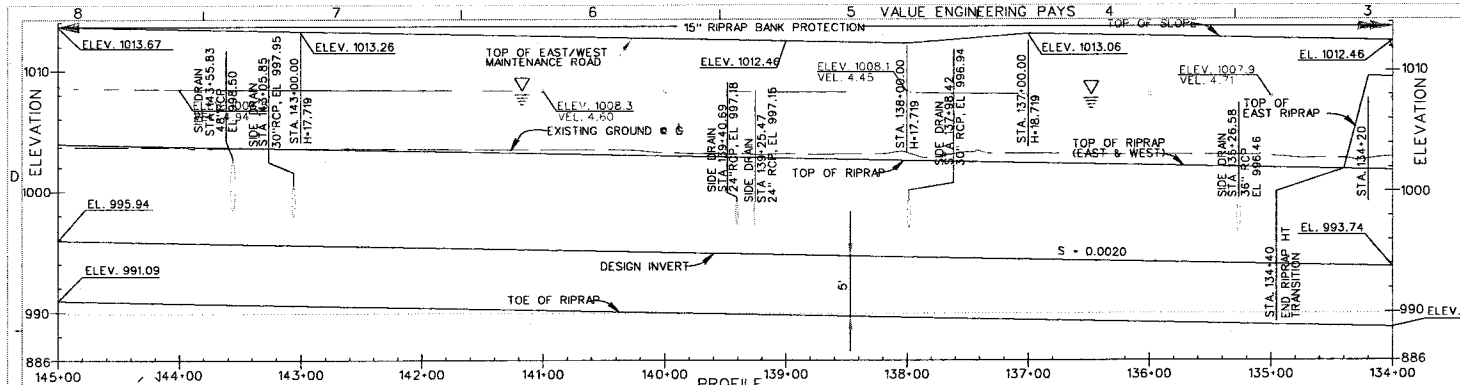
SPEC. NO. W912PL-15-B-0001

DISTRICT FILE NO. 226/252

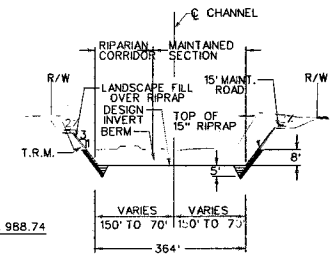
Scale: AS SHOWN

SHEET C-4

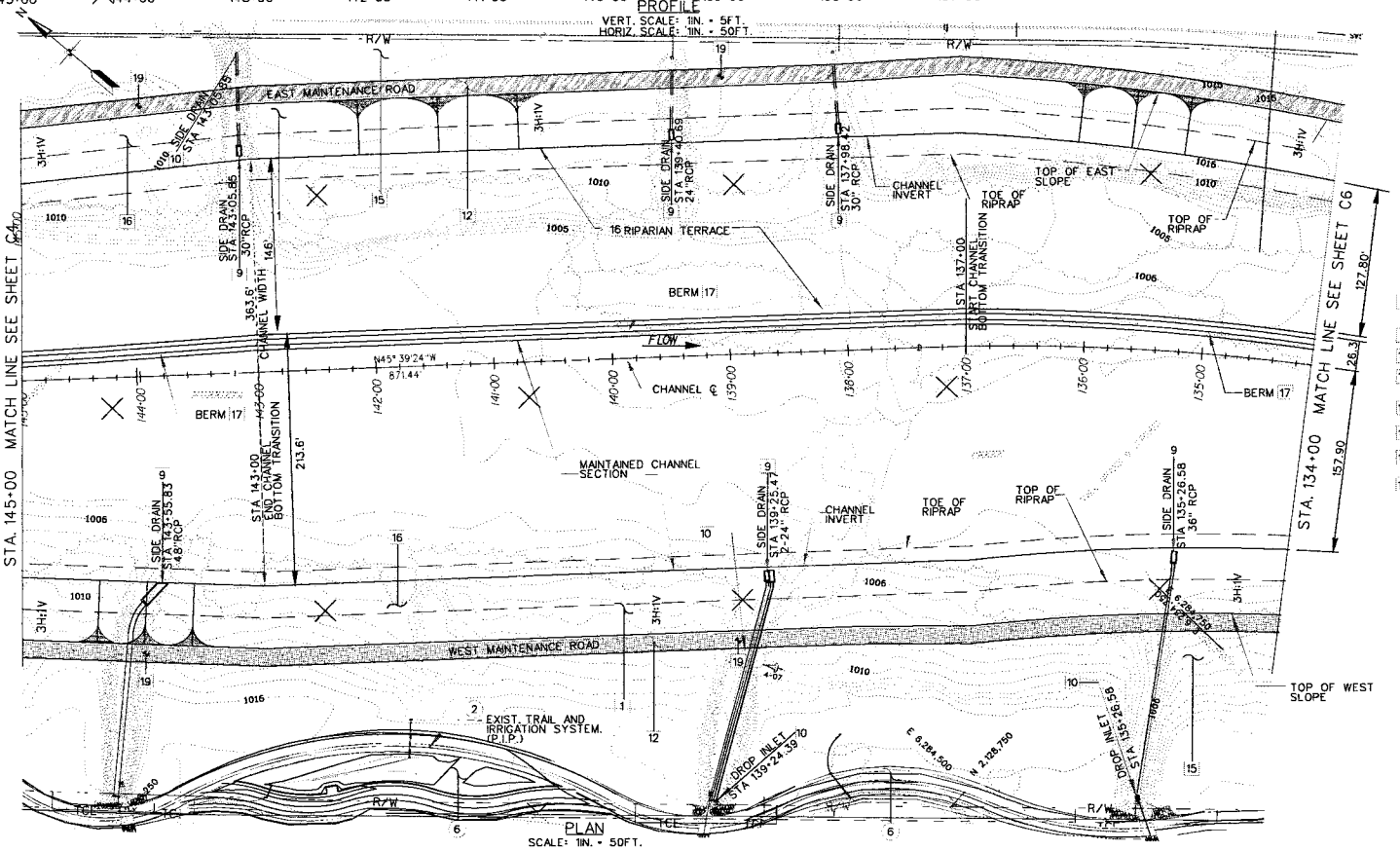
Plot Date 25-JULY-2014



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



TYPICAL CROSS SECTION
N.T.S.



PLAN
SCALE: 1IN. = 50FT.

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.

NOTE:

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

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1"= 50'

SAFETY! PAYS

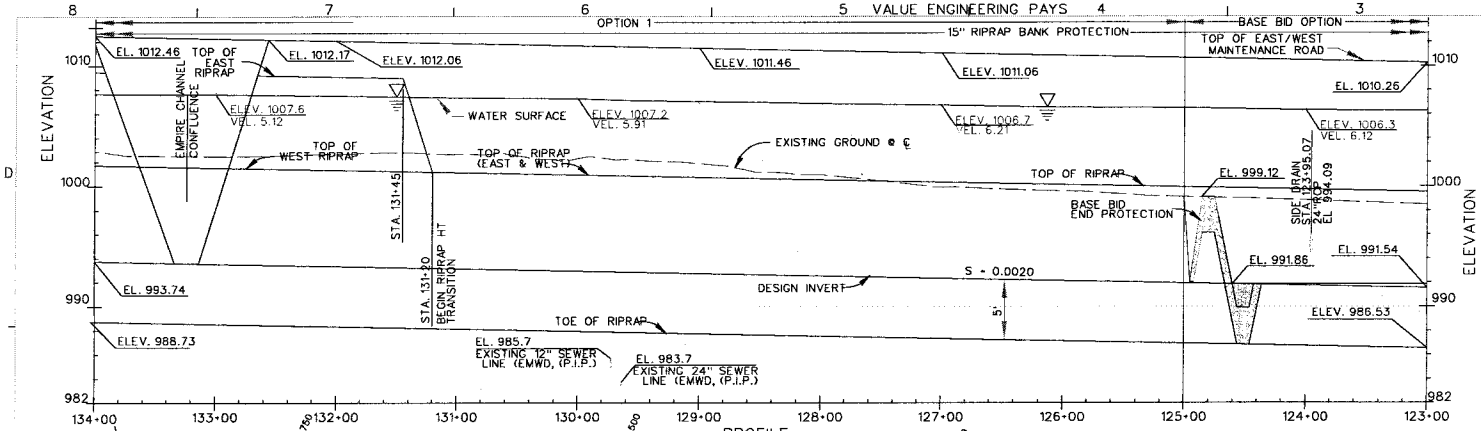
SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 145+00 TO STA. 134+00

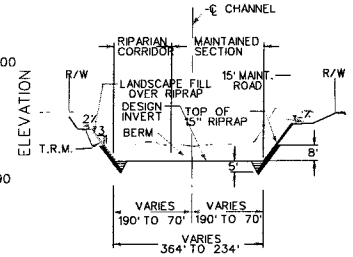
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.M.Y.
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME: C5.DGN
DISTRICT FILE NO. 226/253
SPEC. NO. W912PL-15-B-0001
Scale: AS SHOWN
SHEET C-5

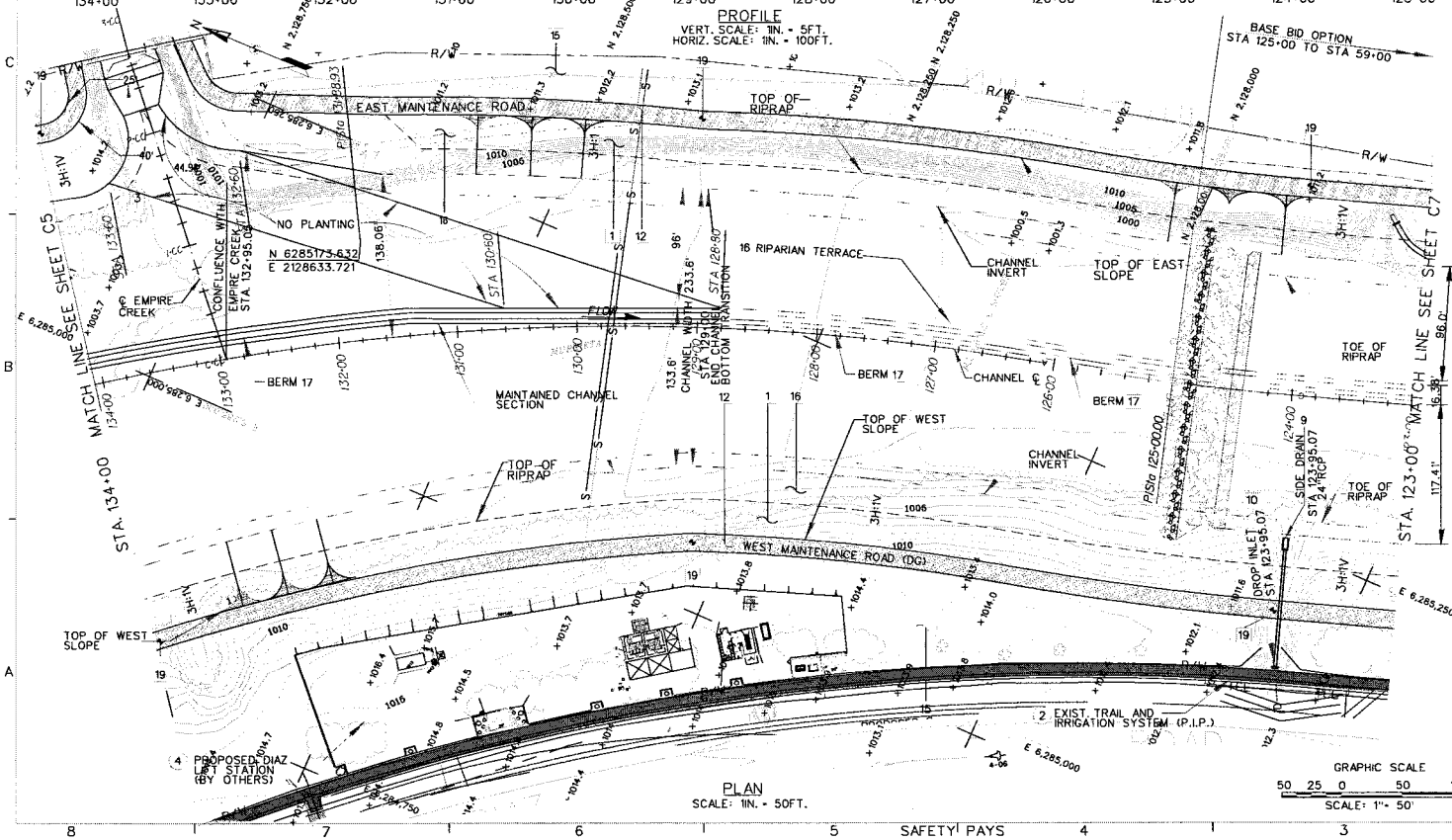
Plot Date: 25-JULY-2014



PROFILE
VERT. SCALE: 1IN. = 5FT.
HORIZ. SCALE: 1IN. = 100FT.



TYPICAL CROSS SECTION
N.T.S.



PLAN
SCALE: 1IN. = 50FT.

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1" = 50'

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
	32° 05'50"	5° 15'20"
R=	2,020'	2353.1'
L=	1131.61'	215.77'
T=	581.08'	108.00'

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 134+00 TO STA. 123+00

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

DESIGNED BY: J.G.R. | DRAWN BY: J.G.R. | CHECKED BY: S.K.V. | FILE NAME: C6.DGN

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

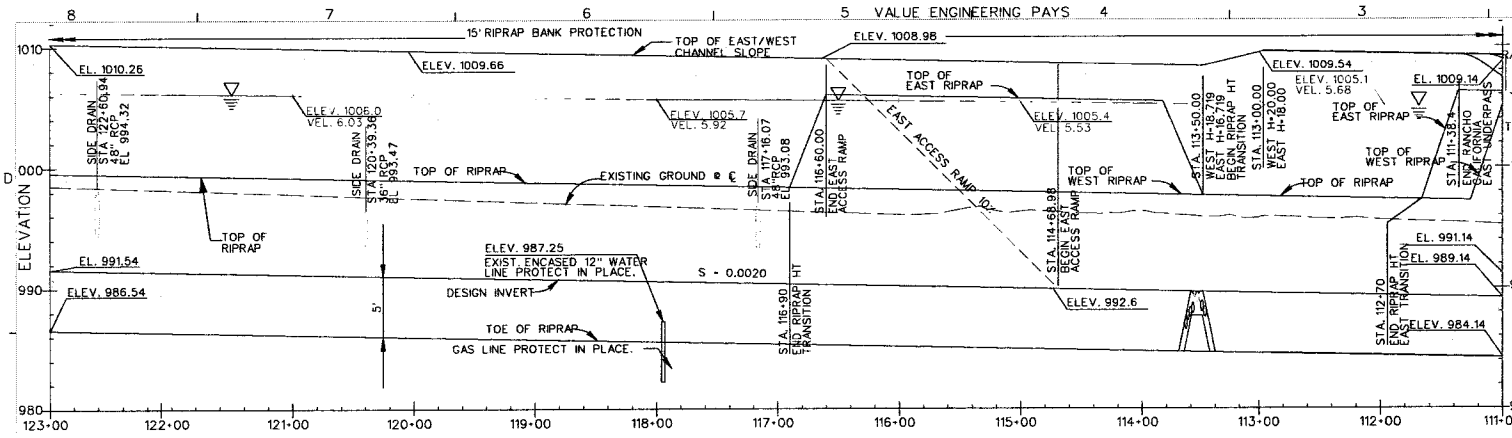
DISTRICT FILE NO. 226/254 | SPEC. NO. W912PL-15-B-0001

Scale:

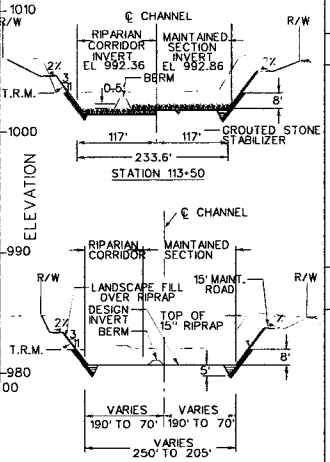
SHEET C-6

Plot Date: 25-JULY-2014

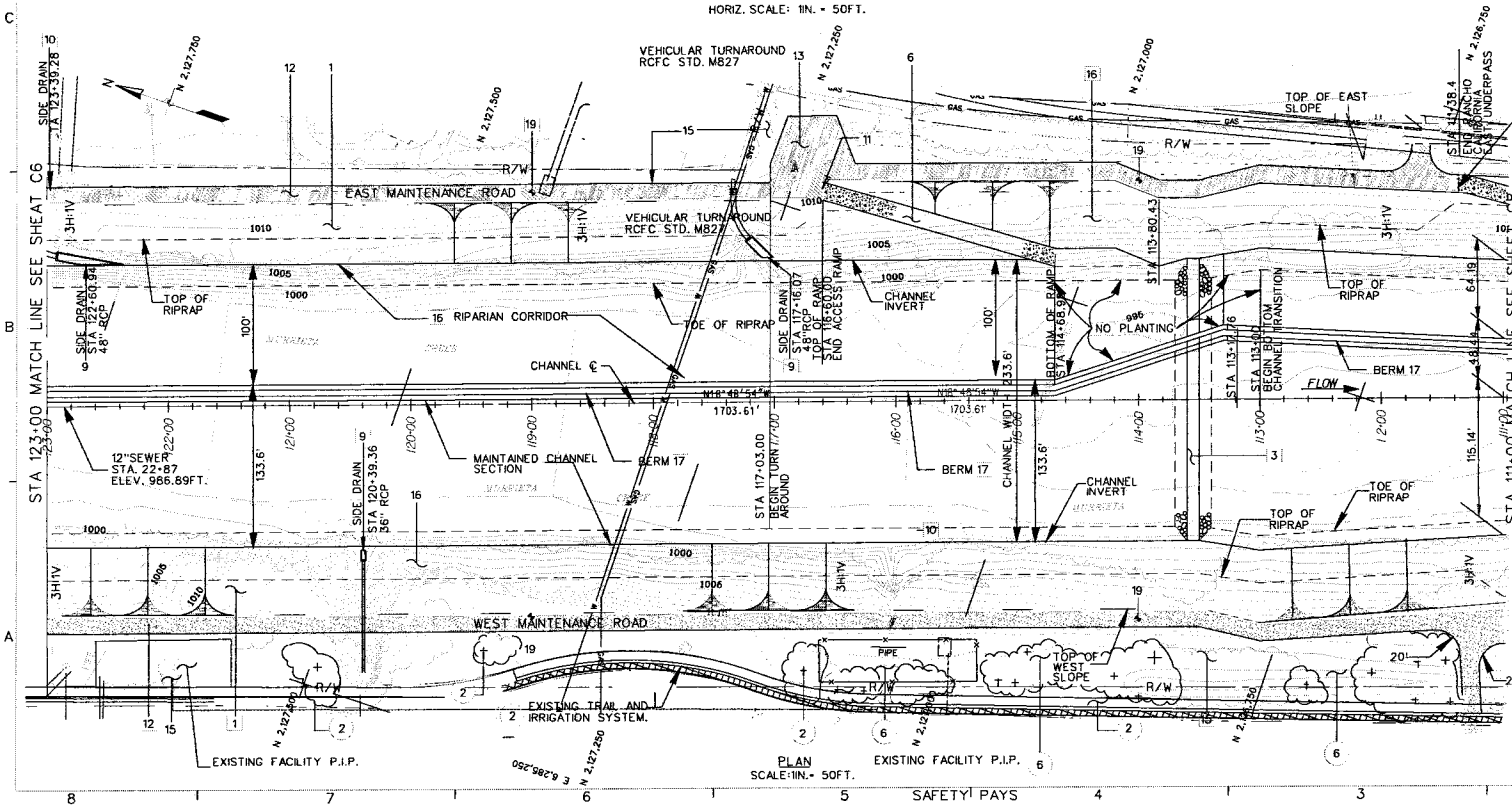
SAFETY PAYS



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



TYPICAL CROSS SECTION
N.T.S.



PLAN
SCALE: 1IN. = 50FT.

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 GROUTED STONE STABILIZER. SEE SHEET C34 FOR DETAILS.
6. CONSTRUCT RAMP TO INVERT. SEE SHEET C40 FOR DETAILS.
9. CONSTRUCT SIDE DRAIN FEATURE SEE SHEETSC65-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:

EXISTING MULTI-PURPOSE TRAIL CHANNEL STA 166+20 TO STA 107+95

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1"= 50'

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 123+00 TO STA. 111+00

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

DESIGNED BY: J.C.R.
DRAWN BY: J.C.R.
CHECKED BY: S.I.Y.
FILE NAME: C7.DGN

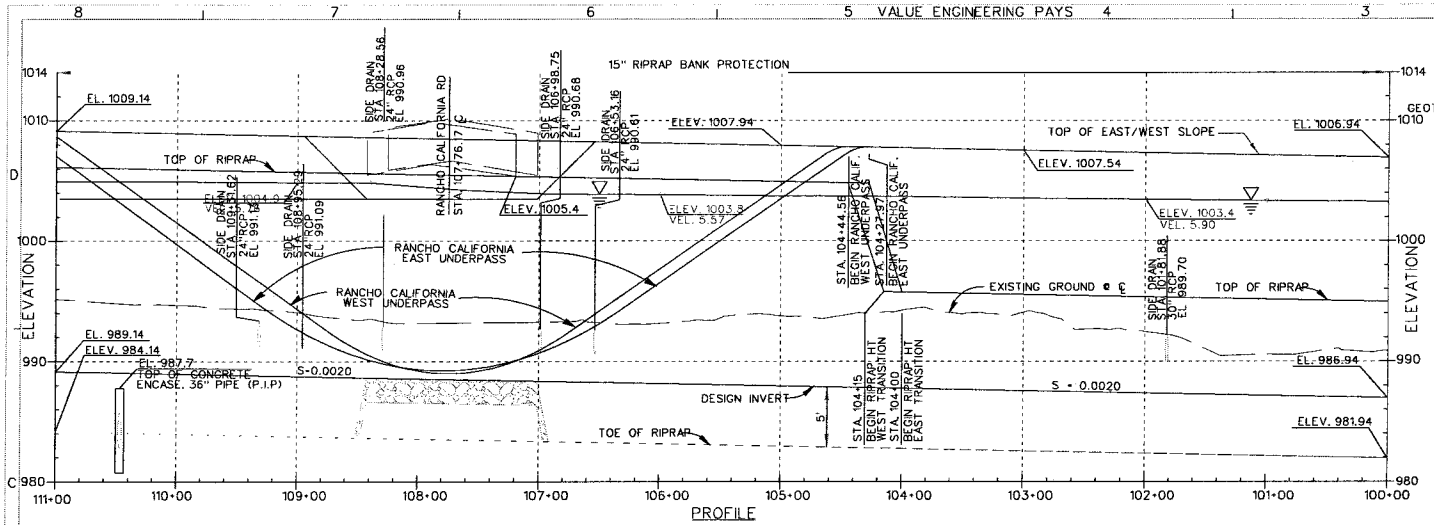
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

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

DISTRICT FILE NO. 226/255 SPEC. NO. W912PL-15-B-0001

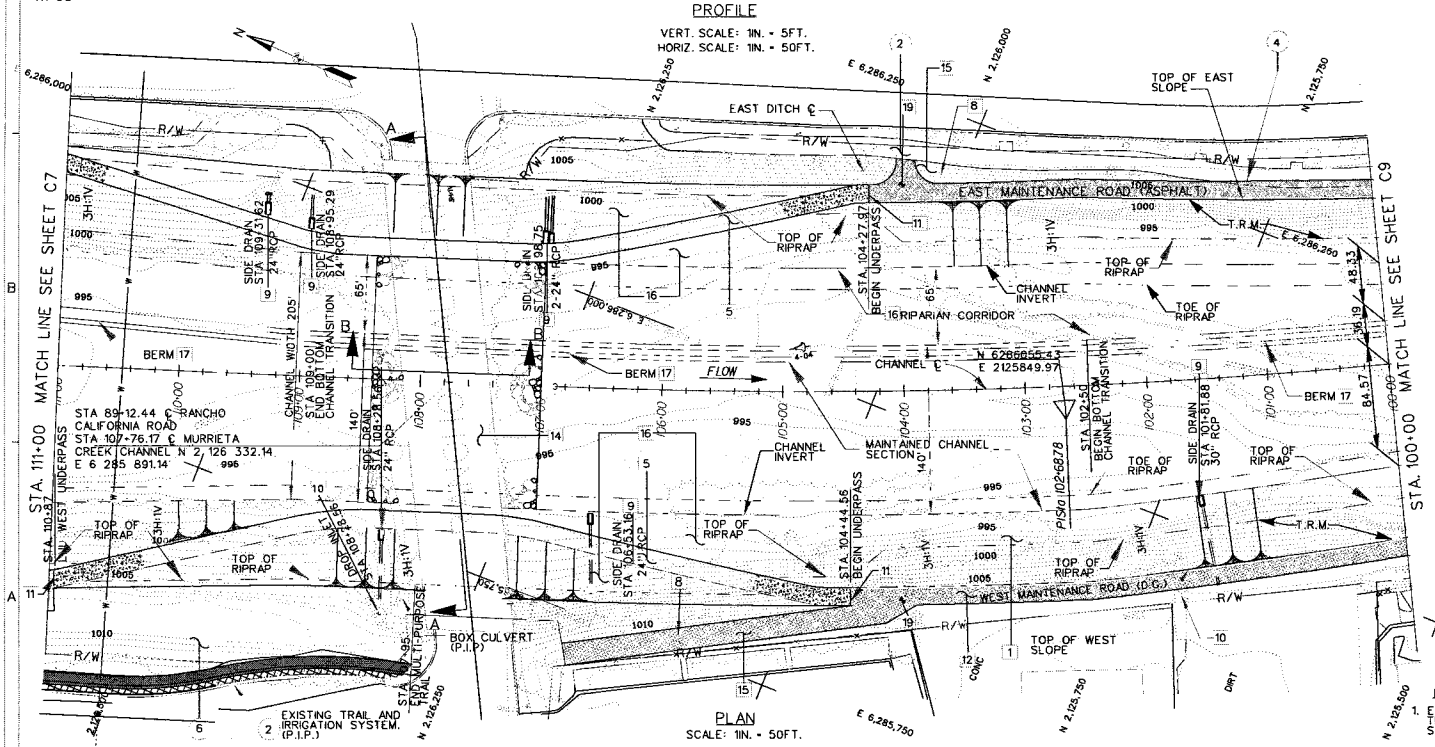
Scale: AS SHOWN
SHEET C-7

Plot Date: 25-JULY-2014

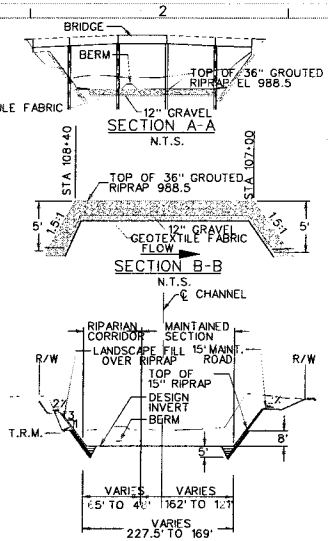


PROFILE

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



PLAN
SCALE: 1IN. = 50FT.



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
△	9° 38'23"
R=	5,000'
L=	841.22'
T=	421.61'

NOTE:

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

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1"= 50'

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 111+00 TO STA. 100+00

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

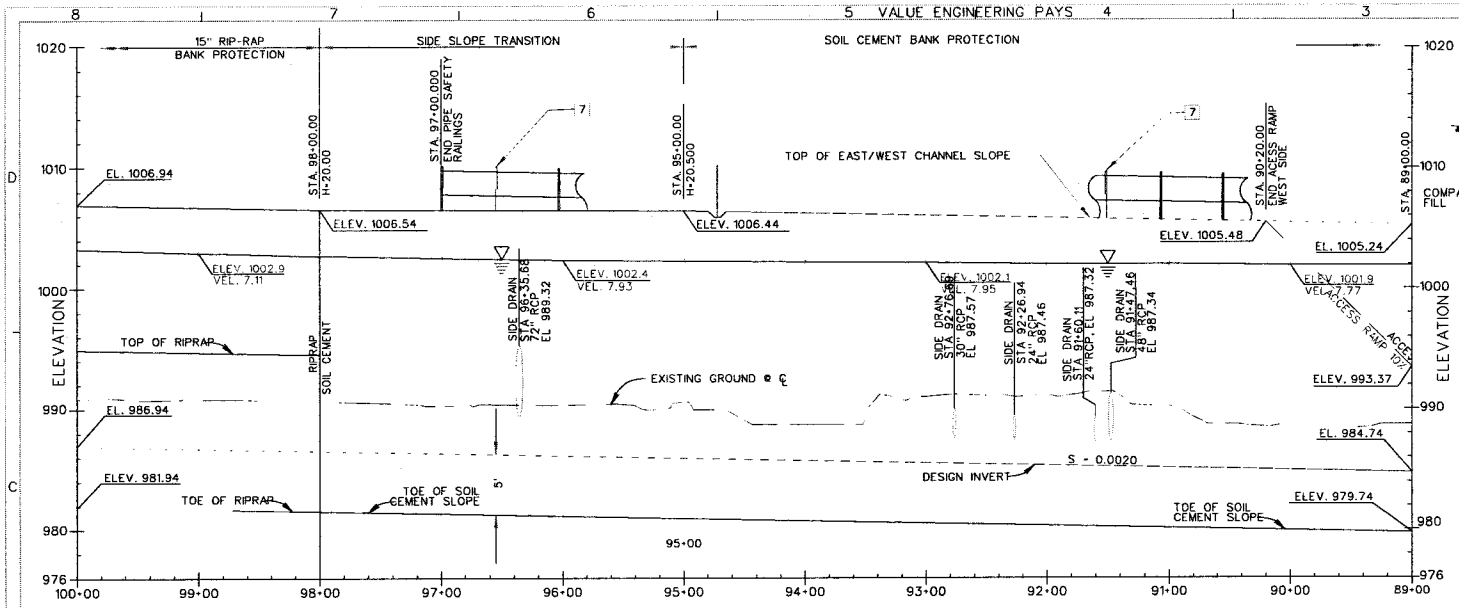
DESIGNED BY: J.A.R.
DRAWN BY: J.C.R.
CHECKED BY: S.H.V.
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH

FILE NAME: C8.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/256

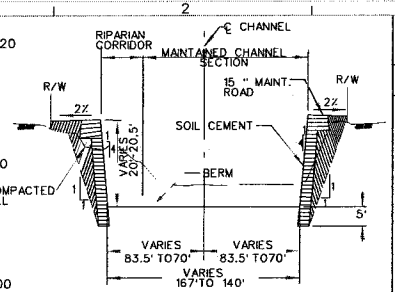
Scale: AS SHOWN
SHEET C-8

Plot Date: 25-JULY-2014

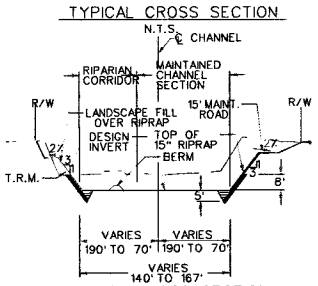
VALUE ENGINEERING PAYS



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



TYPICAL CROSS SECTION
N.T.S.



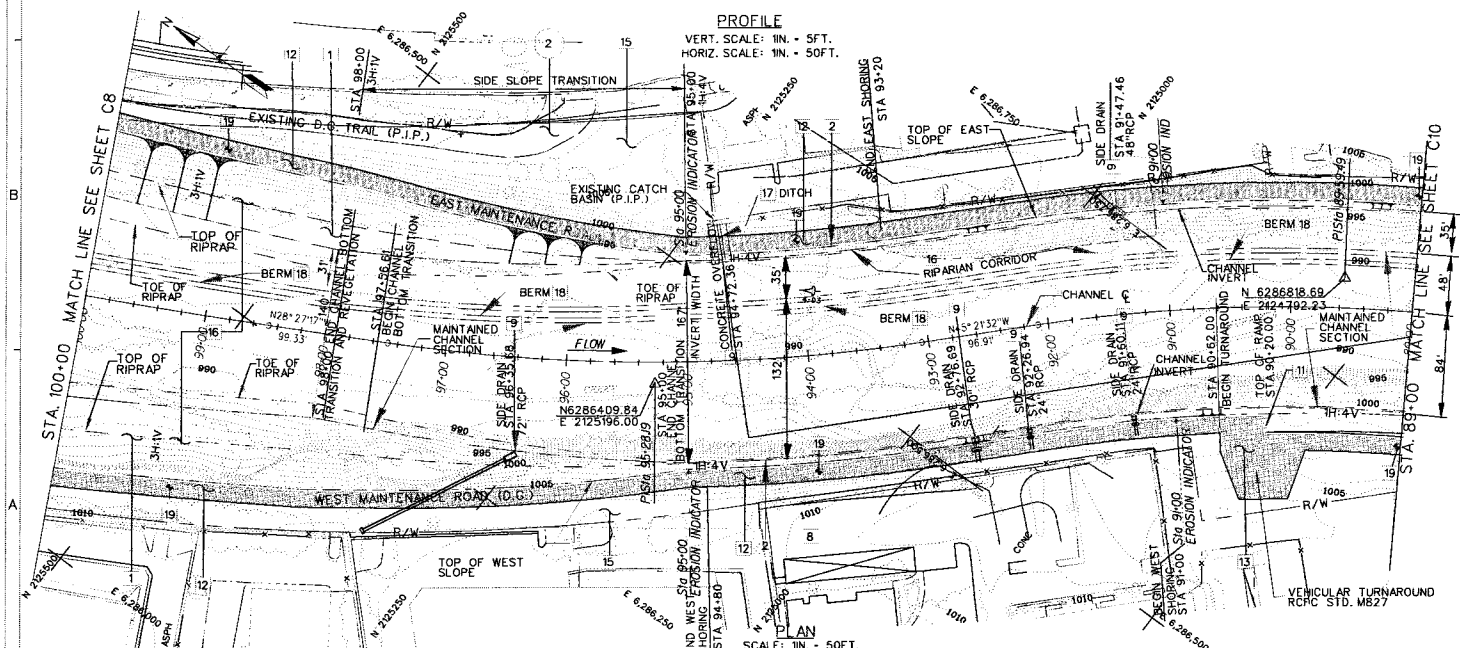
TYPICAL CROSS SECTION
N.T.S.

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 ℄ 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'

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1"= 50'

SAFETY! PAYS

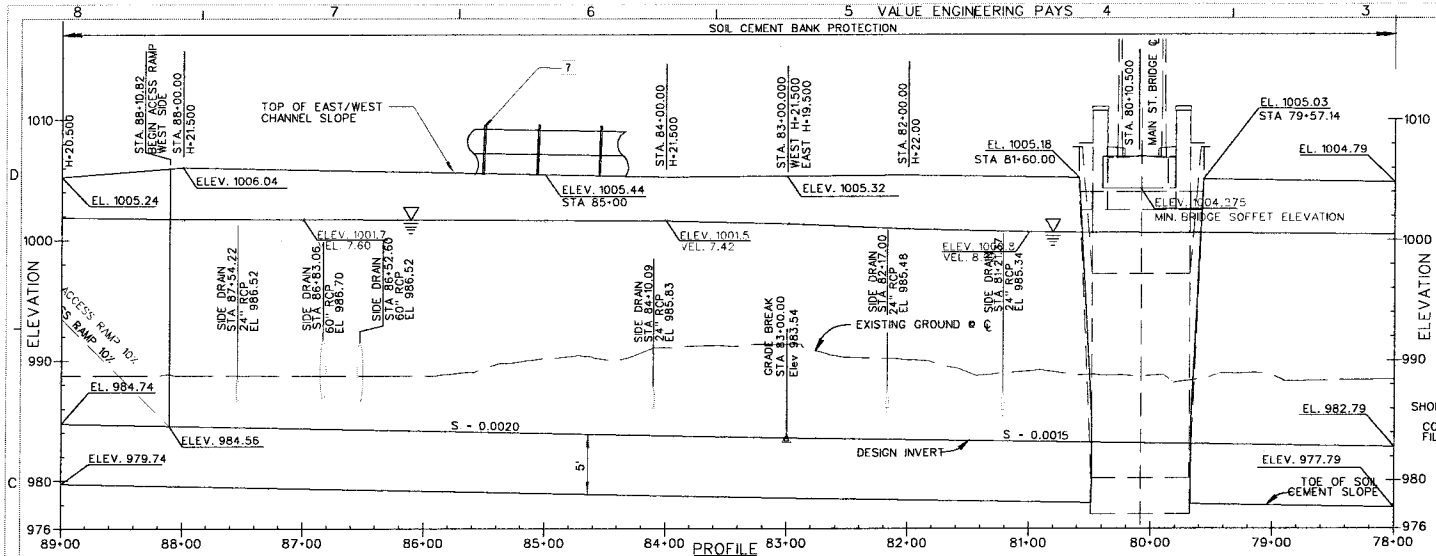
SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 100+00 TO STA. 89+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C9.DGN
COLOCH

U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
DISTRICT FILE NO. 226/257
SPEC. NO. W912PL-15-B-0001
Scale: AS SHOWN
SHEET C-9

Plot Date 25-JULY-2014



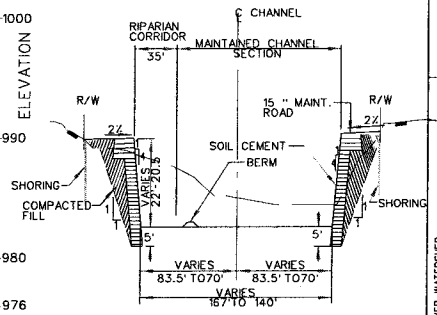
PROFILE
VERT. SCALE: 1IN. = 5FT.
HORIZ. SCALE: 1IN. = 50FT.

EXIST. NEW POWER POLE LOCATION
N 2 124 075.70
E 6 287 349.41

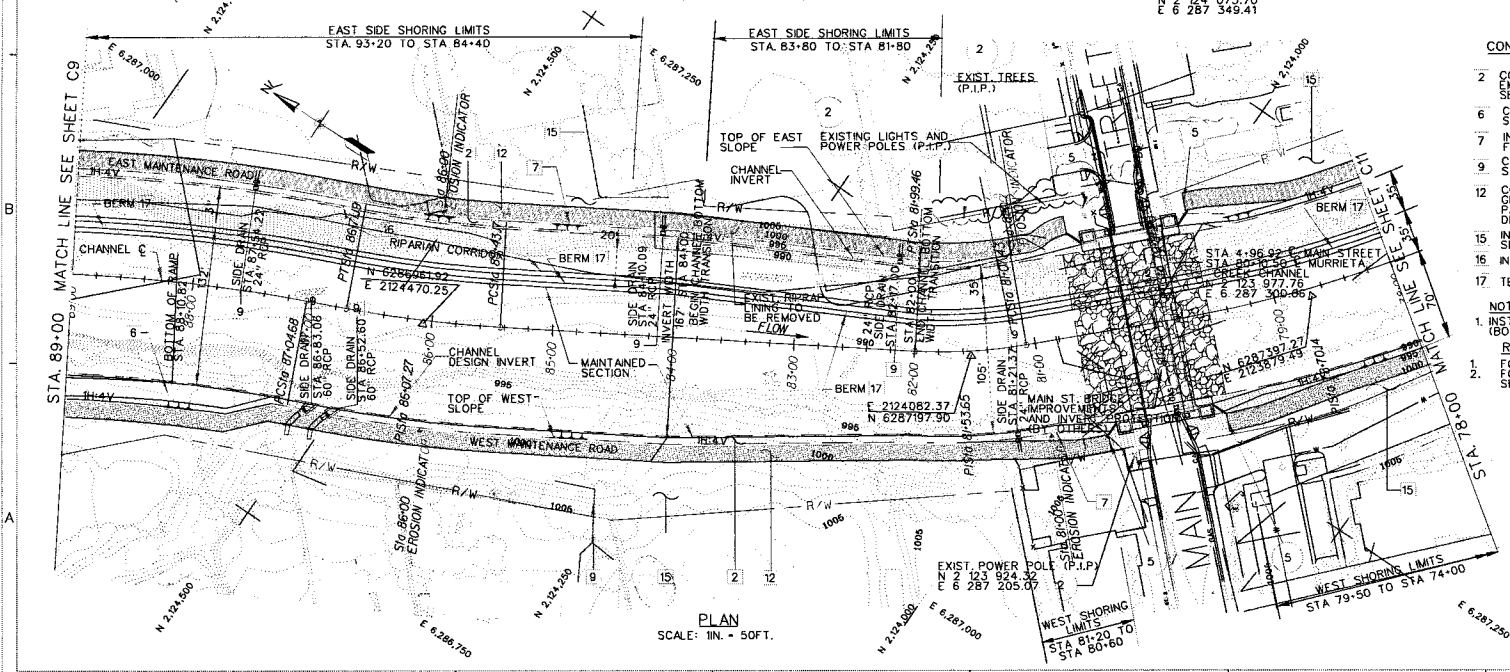
LEGEND

2 PROTECT IN PLACE

5 JOIN EXISTING WORK.



TYPICAL CROSS SECTION
N.T.S.



PLAN
SCALE: 1IN. = 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 ℄ 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'

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1"= 50'

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 89+00 TO STA. 78+00

DESIGNED BY: J.C.R.
DRAWN BY: J.C.R.
CHECKED BY: S.H.V.
FILE NAME: C10.DGN

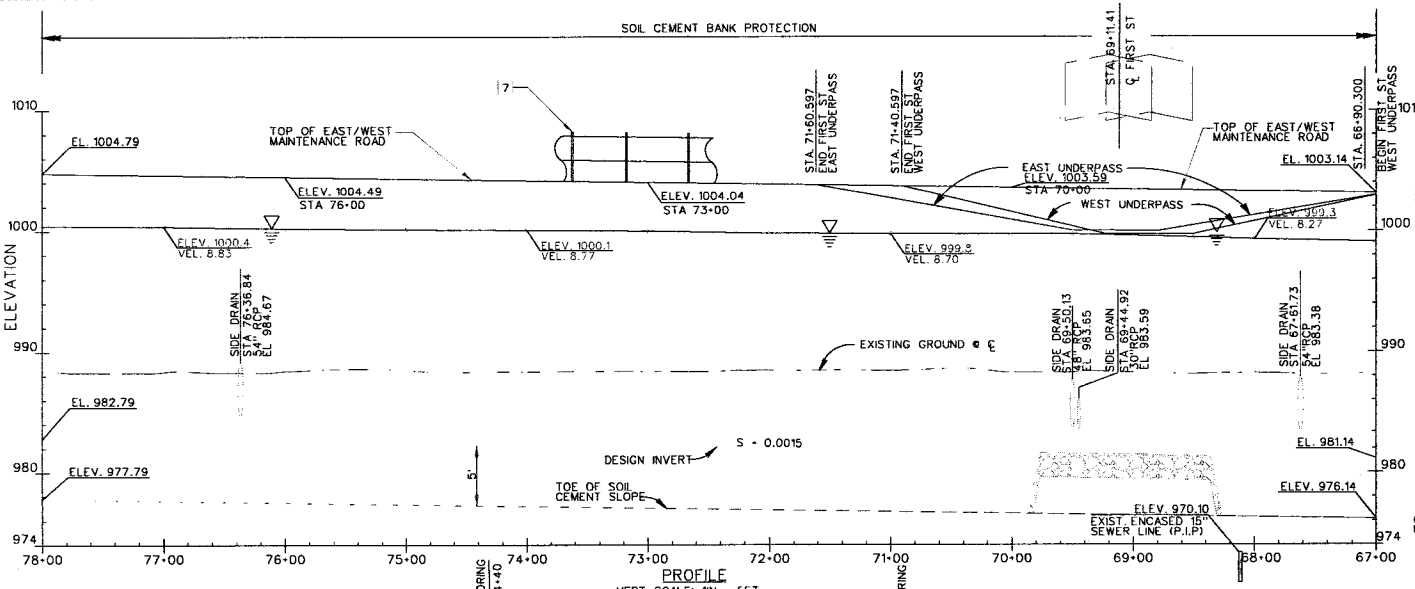
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

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

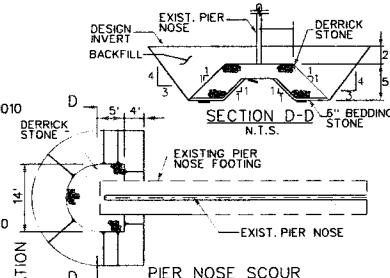
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/258

Scale: AS SHOWN
SHEET C-10

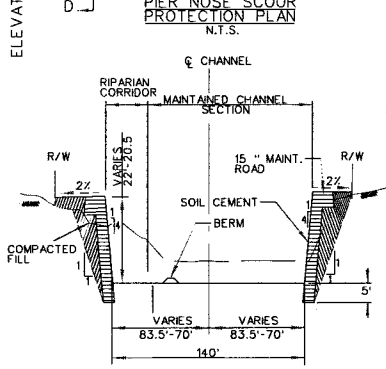
Plot Date: 25-JULY-2014



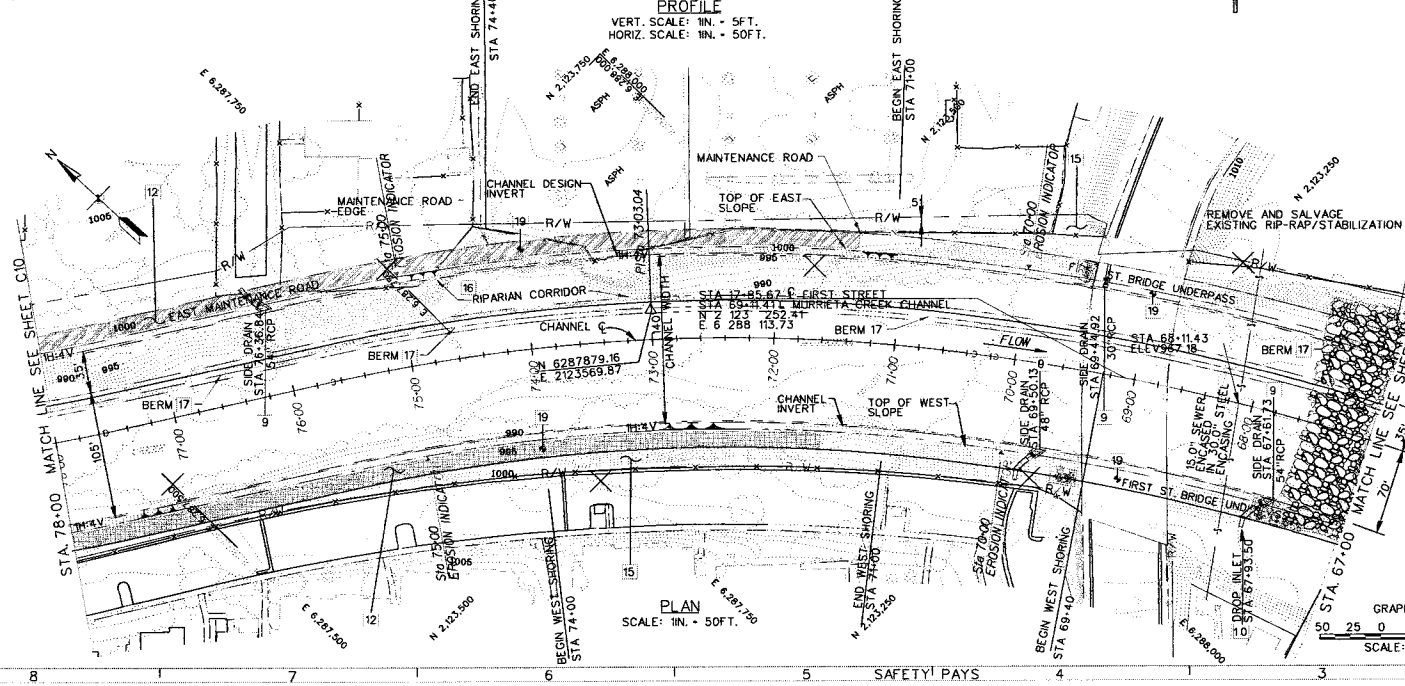
PROFILE
VERT. SCALE: 1IN. = 5FT.
HORIZ. SCALE: 1IN. = 50FT.



PIER NOSE SCOUR PROTECTION PLAN
N.T.S.



TYPICAL CROSS SECTION
N.T.S.



PLAN
SCALE: 1IN. = 50FT.

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

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

SYMBOL | DESCRIPTIONS | DATE | APPROVAL
REVISIONS

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 78+00 TO STA. 67+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C11.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. 226/259

Scale: AS SHOWN
SHEET C-11

Plot Date: 25-JULY-2014

C11.DGN

VALUE ENGINEERING PAYS

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

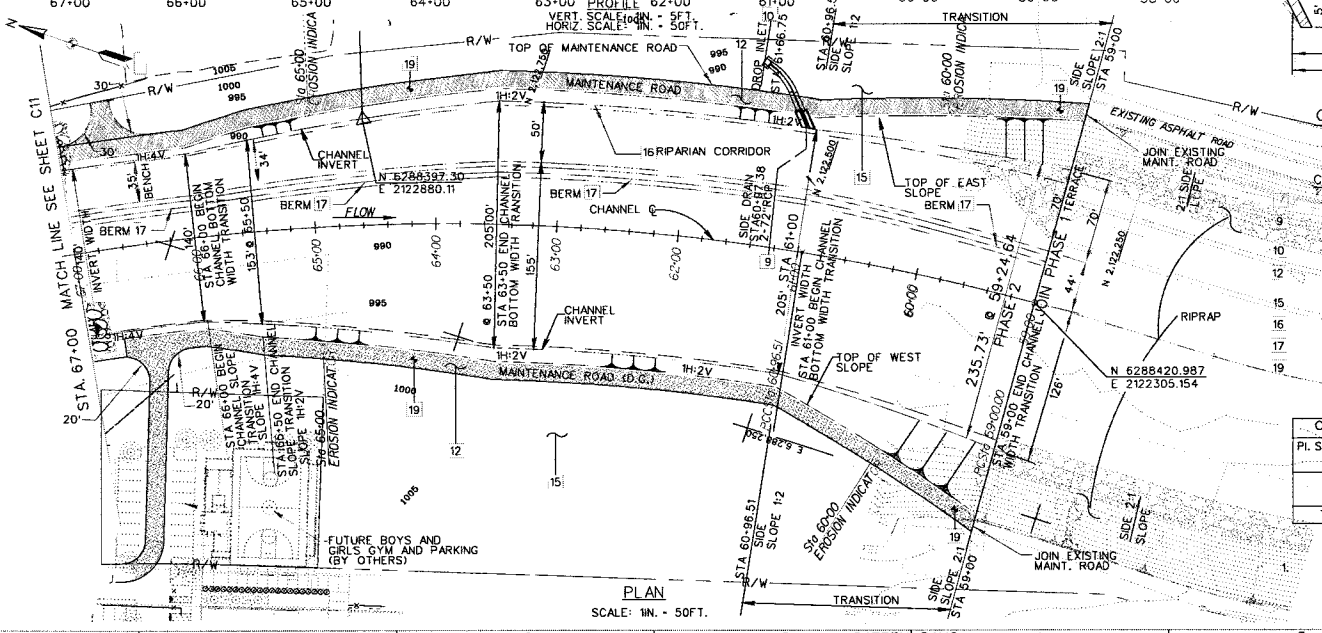
ELEVATION

STA. 66+90.300 BEGIN FIRST ST WEST UNDERPASS
STA. 66+89.360 BEGIN FIRST ST EAST UNDERPASS
STA. 65+50.00 H=22.00
STA. 63+50.00 H=22.500
STA. 61+00.00 H=22.500
STA. 59+00.00 WEST H=28.00 EAST H=21.00

TOP OF EAST/WEST CHANNEL SLOPE
TOP OF WEST SLOPE
TOP OF EAST SLOPE
TOP OF SOIL CEMENT SLOPE
TOE OF SOIL CEMENT SLOPE
SIDE DRAIN STA. 60+97.18 2-72" RCP EL 984.42
EXISTING GROUND @ ℄
DESIGN INVERT
S - 0.0015

EL. 1007.94
EL. 1002.94
EL. 1003.14
ELEV. 1002.91
ELEV. 1002.73
ELEV. 998.8 VEL. 8.53
ELEV. 1003.11
ELEV. 998.9 VEL. 6.47
ELEV. 998.8 VEL. 5.57
ELEV. 987.0
EL. 981.14
ELEV. 976.14
EL. 979.94
STA 59+00.00 Elev 979.94
ELEV. 974.94

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



PLAN
SCALE: 1IN. = 50FT.

CONSTRUCTION NOTES:

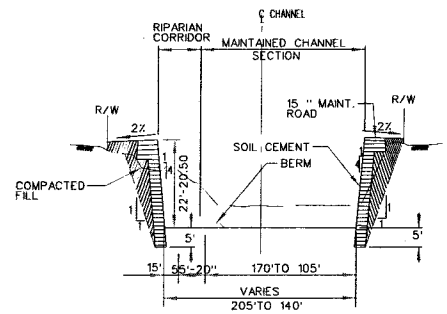
9 INSTALL POST AND CABLE FENCE, SEE SHEET C14 FOR DETAIL.
CONSTRUCT SIDE DRAIN FEATURE. SEE SHEETS C65-C69 FOR DETAILS.
10 CONSTRUCT DROP INLET, SEE SHEET S6 & S7.
12 CONSTRUCT MAINTENANCE ROAD-DECOMPOSED GRANITE SURFACING ON WEST SIDE, ASPHALT PAVING ON EAST SIDE. SEE SHEET C13-C14.
15 INSTALL TOP OF 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 ℄ CURVE DATA	
PI. STATION	64+75.45
Δ	28° 28'15"
R=	1,850'
L=	919.28'
T=	469.34'

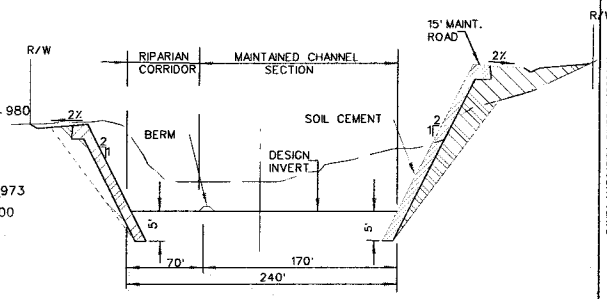
REFERENCE NOTE:
1. FOR CROSS SECTIONS, SEE SHEET C31.
2. FOR SIDE DRAINS INFORMATION, SEE SHEETS C70, C70.

GRAPHIC SCALE
50 25 0 50 100FT
SCALE: 1"= 50'

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



TYPICAL CROSS SECTION
N.T.S.



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

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
PLAN AND PROFILE
STA. 67+00 TO STA. 59+00

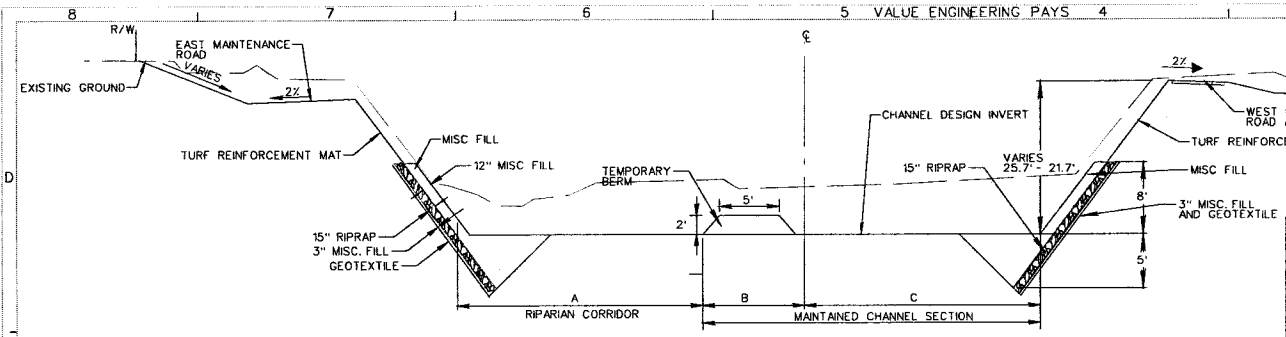
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME: C12.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/260
Scale: AS SHOWN
SHEET C-12

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

SAFETY! PAYS

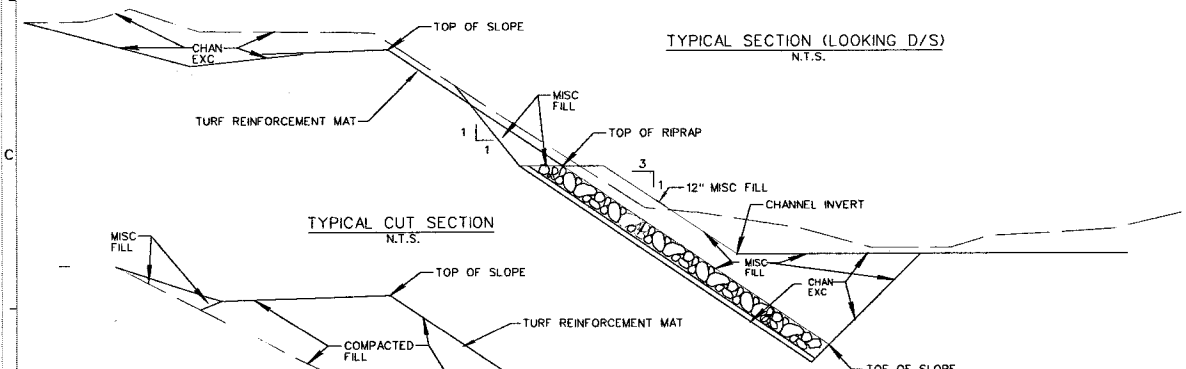
Plot Date: 25-JULY-2014



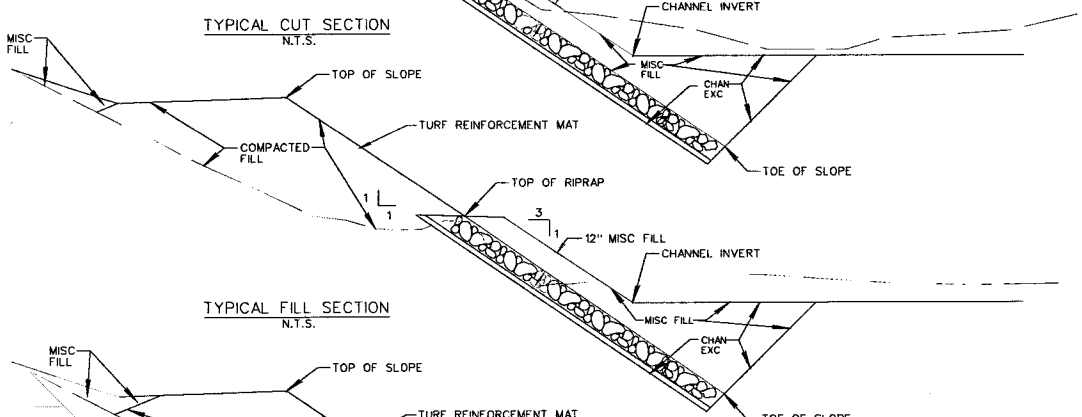
TYPICAL SECTION (LOOKING D/S)
N.T.S.

CHANNEL SECTION DIMENSION TABULATION

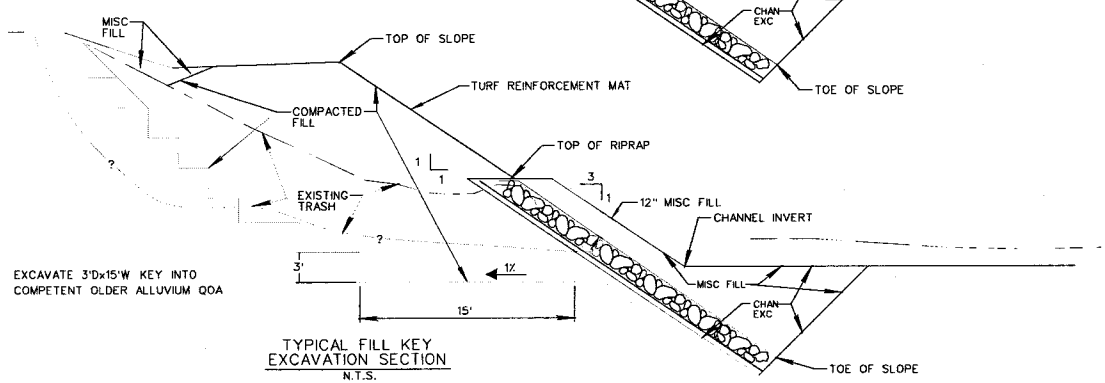
STATION	A	B	C	INVERT WIDTH	SIDE SLOPE
STA. 189+00	130.9'	0	120.9'	251.8'	2H:1V
TRANSITION					
STA. 188+50 to 183+00	120.9'	0	120.9'	241.8'	2H:1V
TRANSITION					
STA. 181+00 to 178+00	116.8'	0	116.8'	233.6'	2H:1V
TRANSITION					
STA. 176+00 to 170+00	119.6'	0	119.6'	239.2'	2H:1V
TRANSITION					
STA. 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 CUT SECTION
N.T.S.

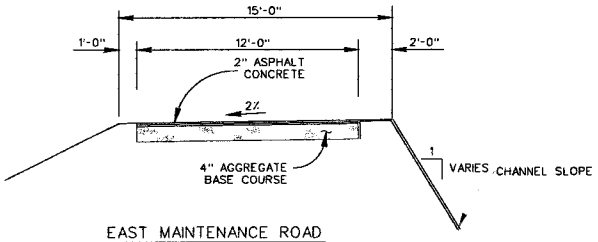


TYPICAL FILL SECTION
N.T.S.

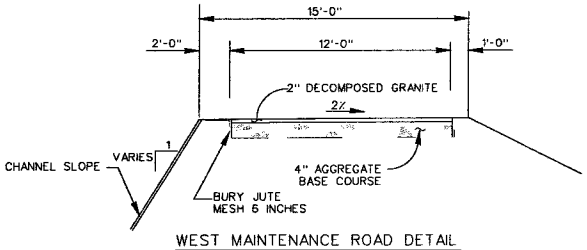


EXCAVATE 3'Dx15'W KEY INTO COMPETENT OLDER ALLUVIUM QOA

TYPICAL FILL KEY EXCAVATION SECTION
N.T.S.



EAST MAINTENANCE ROAD
N.T.S.



WEST MAINTENANCE ROAD DETAIL
N.T.S.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

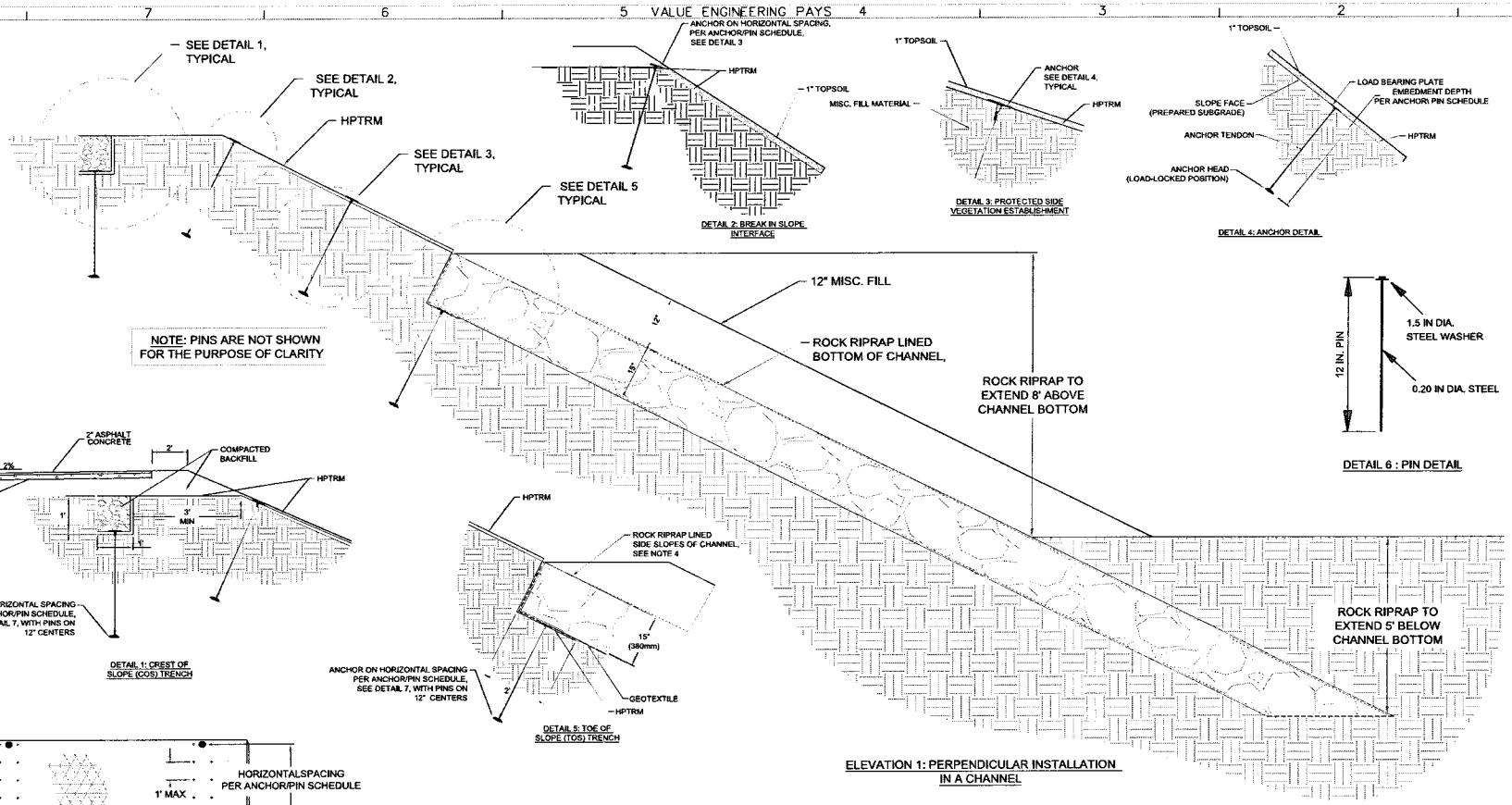
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

CHANNEL TYPICAL SECTIONS

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

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME: C13.DGN
DISTRICT FILE NO. 226/261
SPEC. NO. W912PL-15-B-0001
Scale:
SHEET C-13

Plot Date: 25-JULY-2014



NOTE: PINS ARE NOT SHOWN FOR THE PURPOSE OF CLARITY

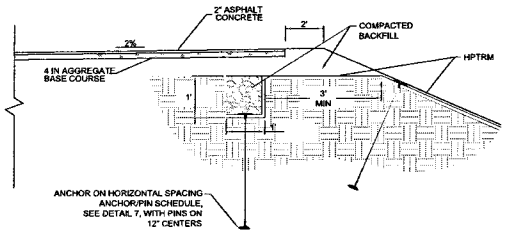
ELEVATION 1: PERPENDICULAR INSTALLATION IN A CHANNEL

DETAIL 2: BREAK IN SLOPE INTERFACE

DETAIL 3: PROTECTED SIDE VEGETATION ESTABLISHMENT

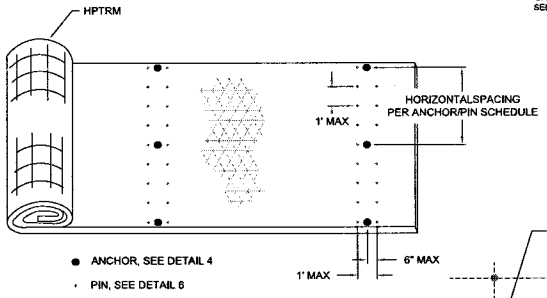
DETAIL 4: ANCHOR DETAIL

DETAIL 6 : PIN DETAIL



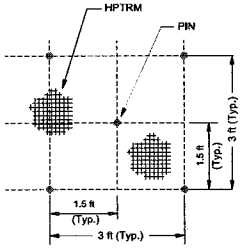
DETAIL 1: CREST OF SLOPE (COS) TRENCH

DETAIL 5: TOE OF SLOPE (TOS) TRENCH

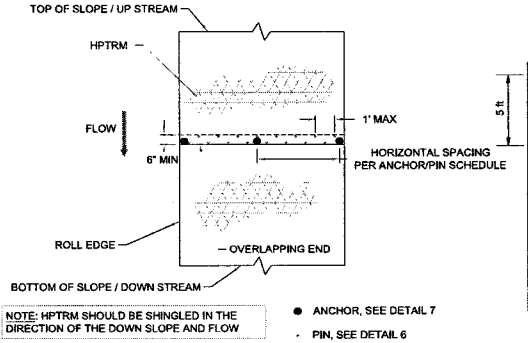


DETAIL 9: SIMULATED CHECK SLOT DETAIL

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

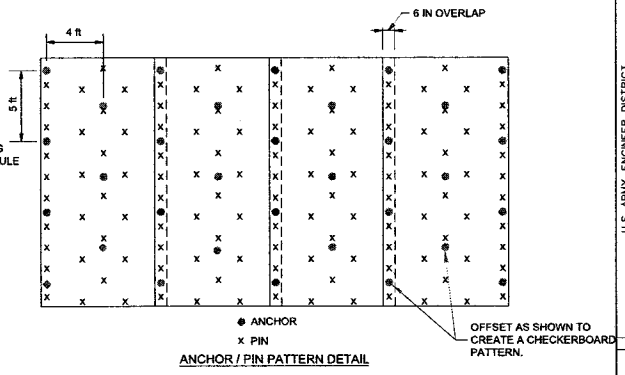


PIN PATTERN DETAIL



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

DETAIL 8: OVERLAP AT ROLL END DETAIL



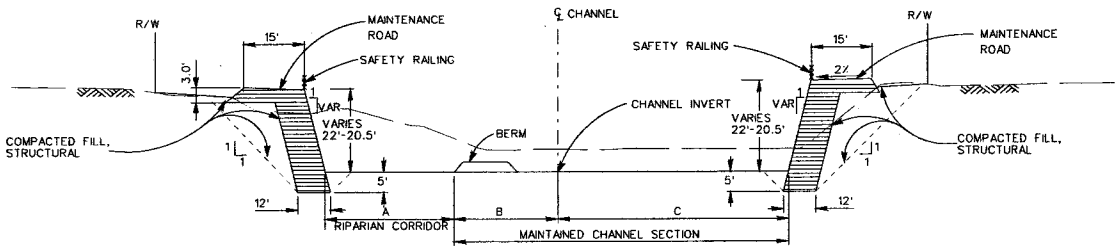
ANCHOR / PIN PATTERN DETAIL

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
HIGH PERFORMANCE TURF REINFORCEMENT MAT APPLICATION DETAILS

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY:
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME:
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 2267
Scale:
SHEET C-13A

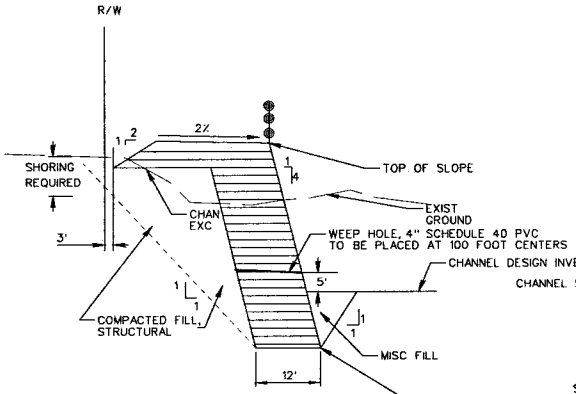
Plot Date 25-JULY-2014



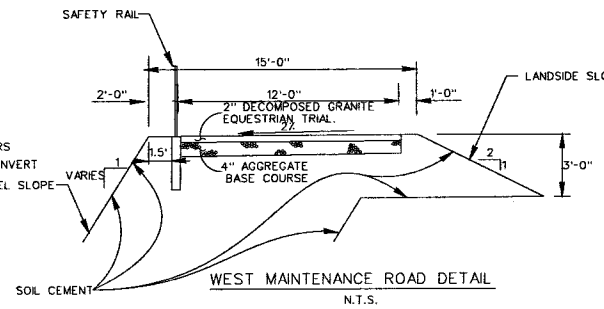
TYPICAL SOIL CEMENT CHANNEL SECTION
(LOOKING D/S)
N.T.S.

CHANNEL SECTION DIMENSION TABULATION					
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

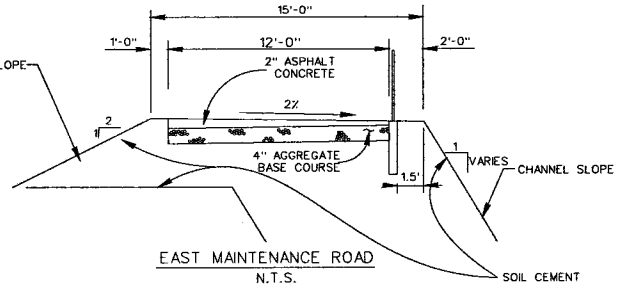
SHORING LIMITS
EAST SIDE STATIONING
STA. 93+20 to 84+40
STA. 83+80 to 81+80
STA. 74+40 to 71+00
WEST SIDE STATIONING
STA. 94+80 to 91+00
STA. 81+20 to 80+60
STA. 79+50 to 74+00
STA. 71+00 to 69+60



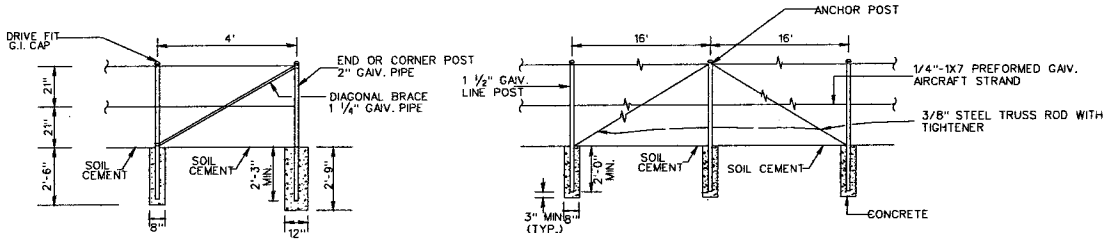
TYPICAL SOIL CEMENT CUT SECTION
N.T.S.



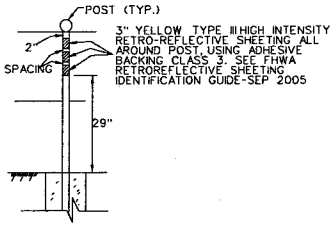
WEST MAINTENANCE ROAD DETAIL
N.T.S.



EAST MAINTENANCE ROAD
N.T.S.



POST AND CABLE FENCE
NOT TO SCALE



RETRO-REFLECTIVE MARKER
NOT TO SCALE

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
TYPICAL SOIL CEMENT CHANNEL SECTIONS AND POST AND CABLE FENCE DETAILS

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

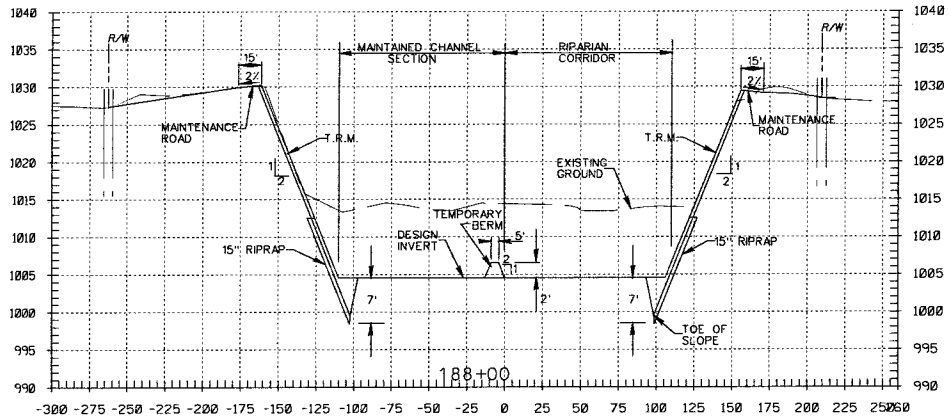
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

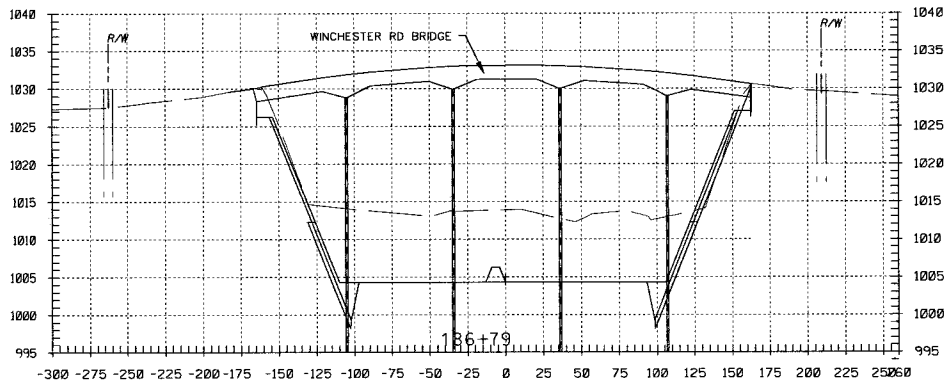
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

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

Scale:
SHEET C-14

Plot Date: 25-JULY-2014





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 REVISIONS	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

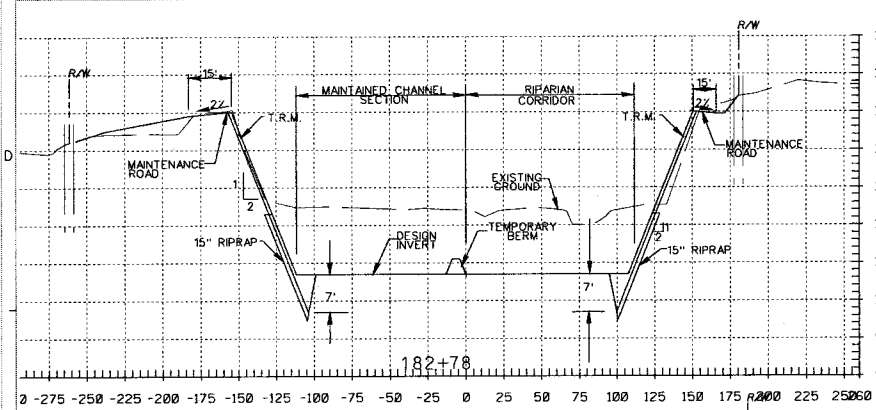
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

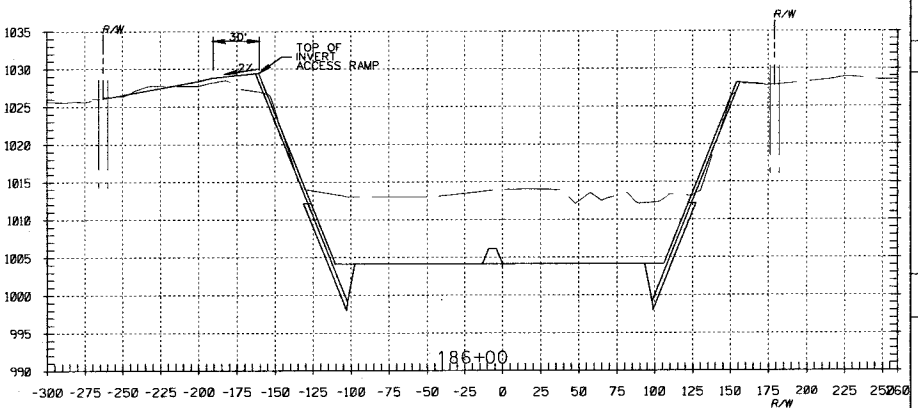
DISTRICT FILE NO. 2267
SPEC. NO. W912PL-15-B-0001

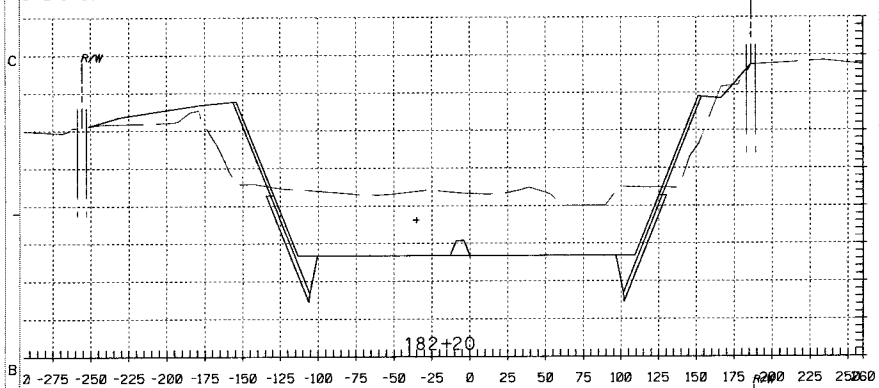
Scale:
SHEET C-15

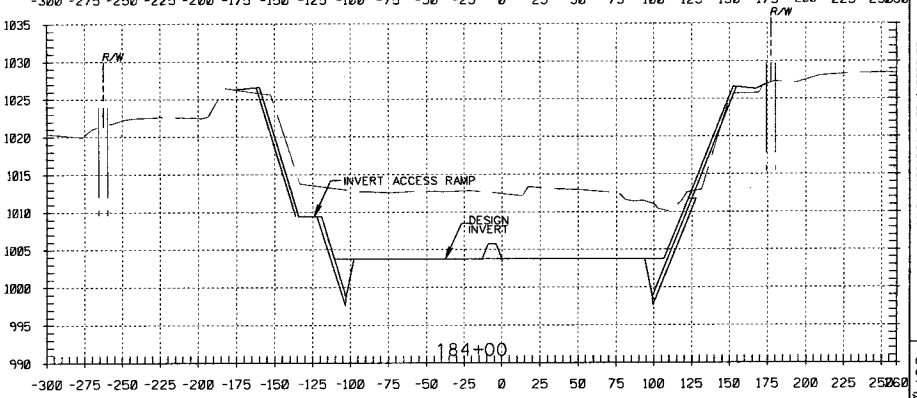
Plot Date: 25-JULY-2014

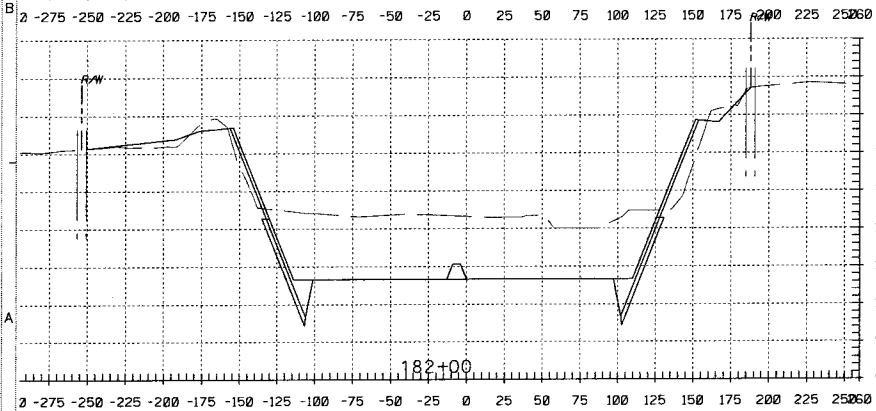
VALUE ENGINEERING PAYS

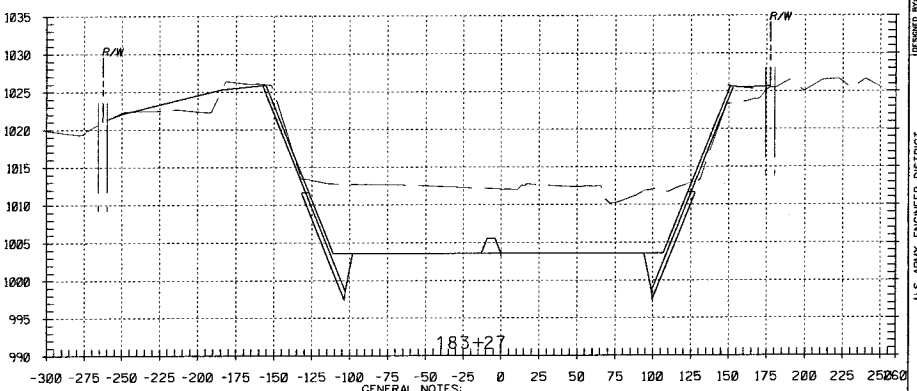












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS STA 186+00 TO 180+00

DESIGNED BY: J.G.R. | DRAWN BY: J.G.R | CHECKED BY: S.H.V | FILE NAME: C16.DGN

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

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

DISTRICT FILE NO. 226/284 | SPEC. NO. W912PL-18-B-0001

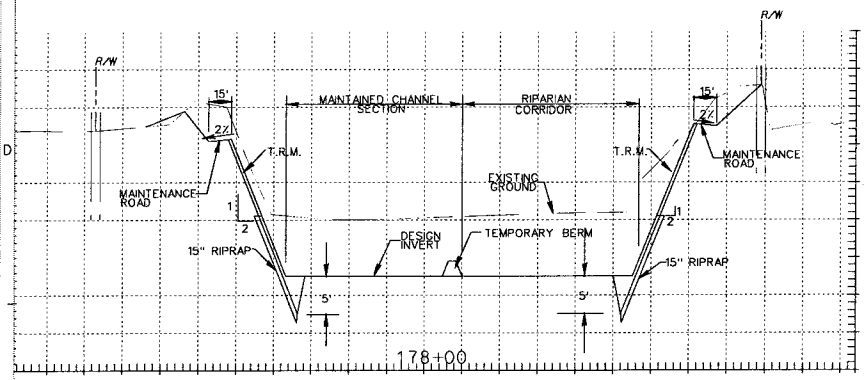
Scale:

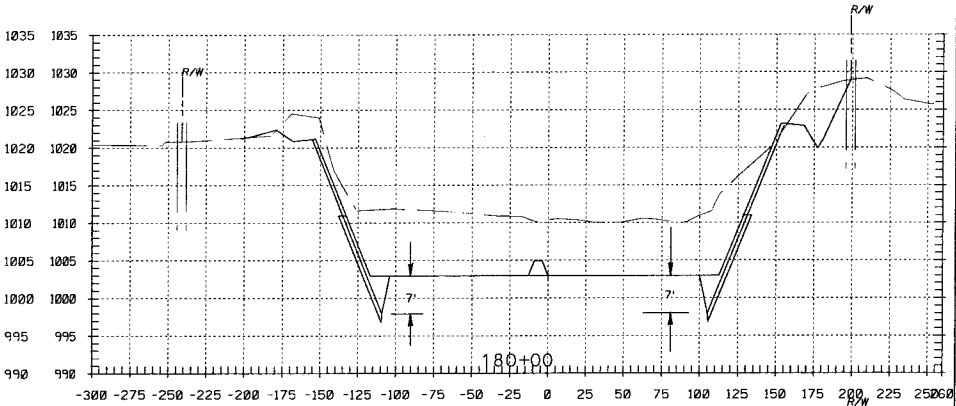
SHEET C-16

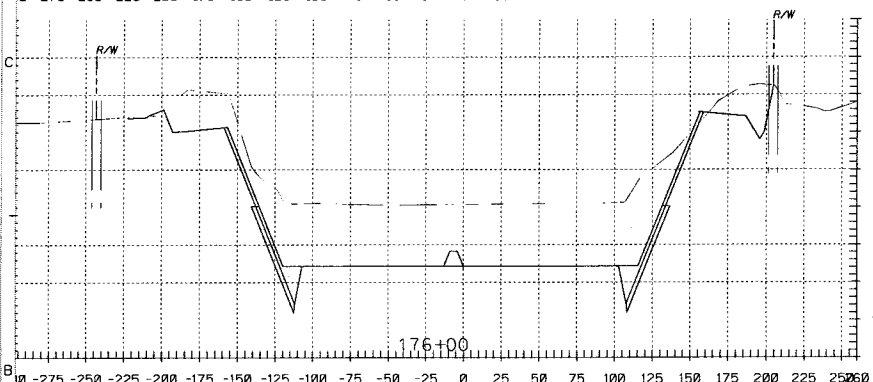
SAFETY! PAYS

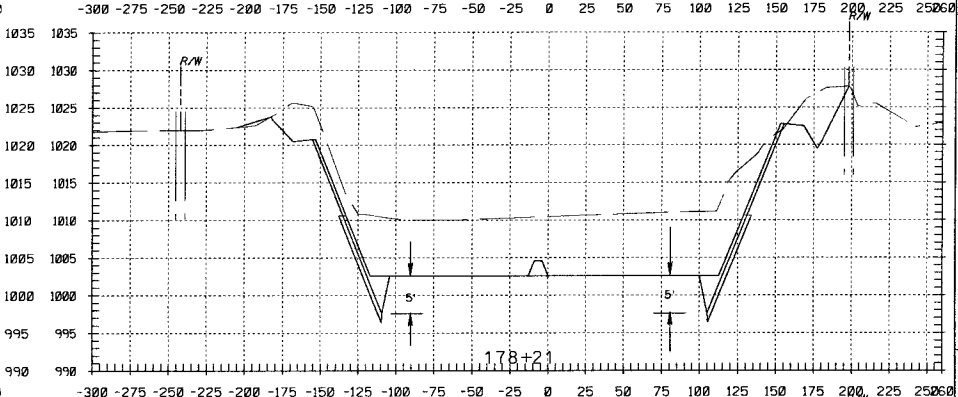
Plot Date: 25-JULY-2014

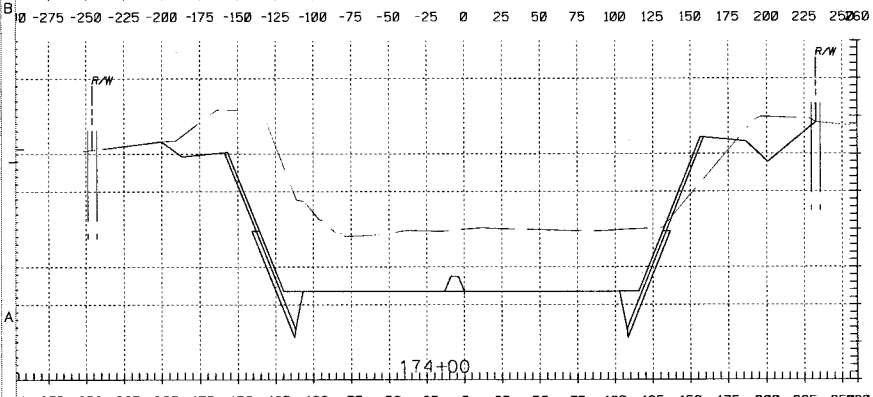
VALUE ENGINEERING PAYS

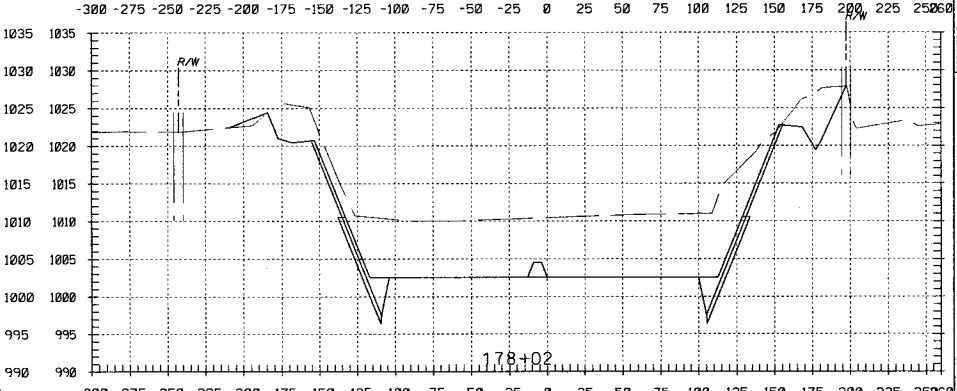












GRAPHIC SCALE

50 25 0 50 100FT

SCALE: 1'' = 50'

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 REVISIONS	DATE	APPROVAL

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

CROSS SECTIONS STA 180+00 TO STA 172+00

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
PROJECT DESIGN MANAGER

DISTRICT FILE NO. 226/265 | SPEC. NO. W912PL-15-B-0001 | FILE NAME: C17.DGN

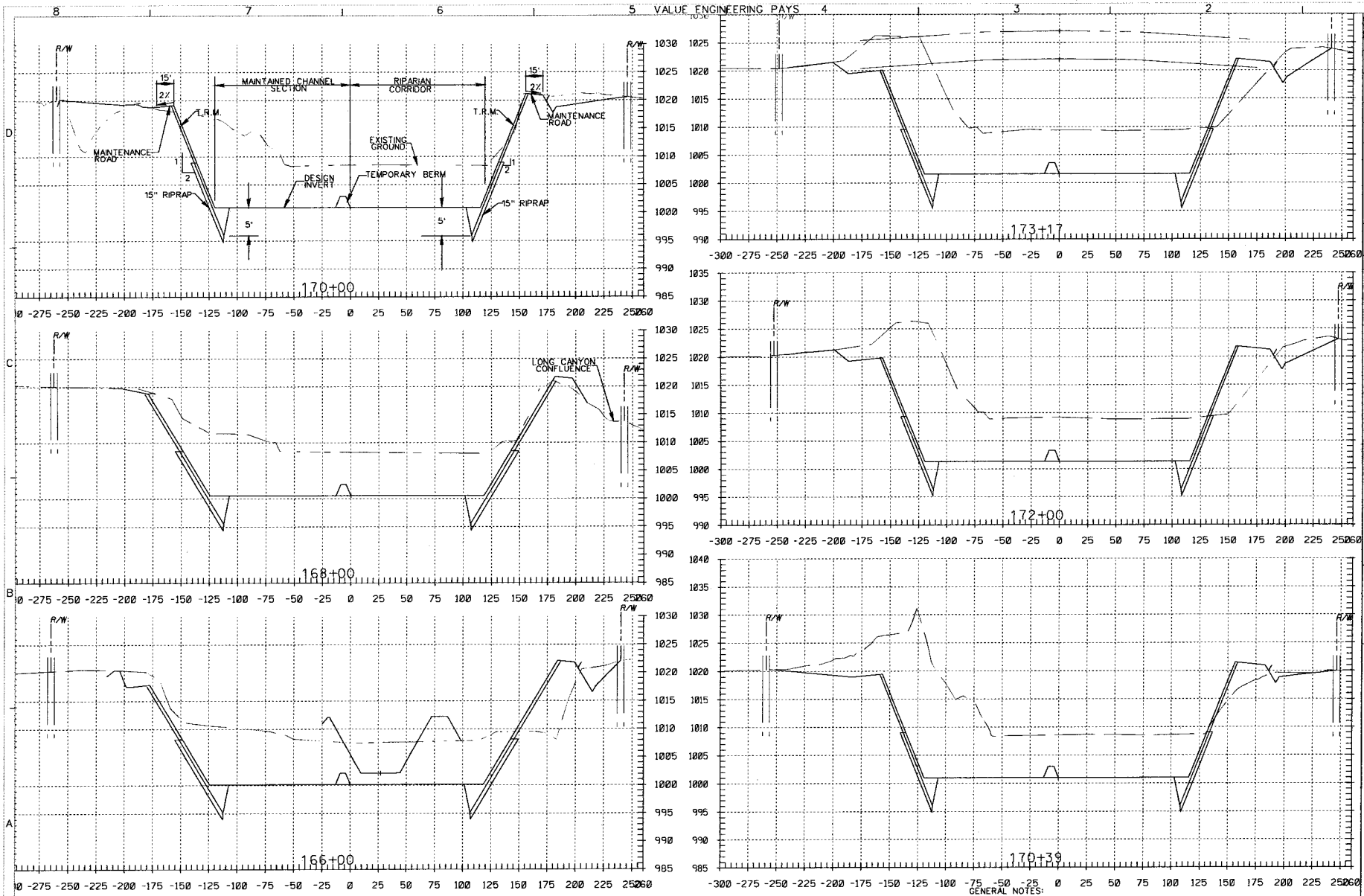
Scale:

SHEET C-17

SAFETY PAYS

Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS



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
	REVISIONS		

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

CROSS SECTIONS
STA 172+00 TO STA 164+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C18.DGN

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

SUBMITTED BY: ARTHUR Y. JUNG, P.E.
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/256 | SPEC. NO. W912PL-15-B-0001

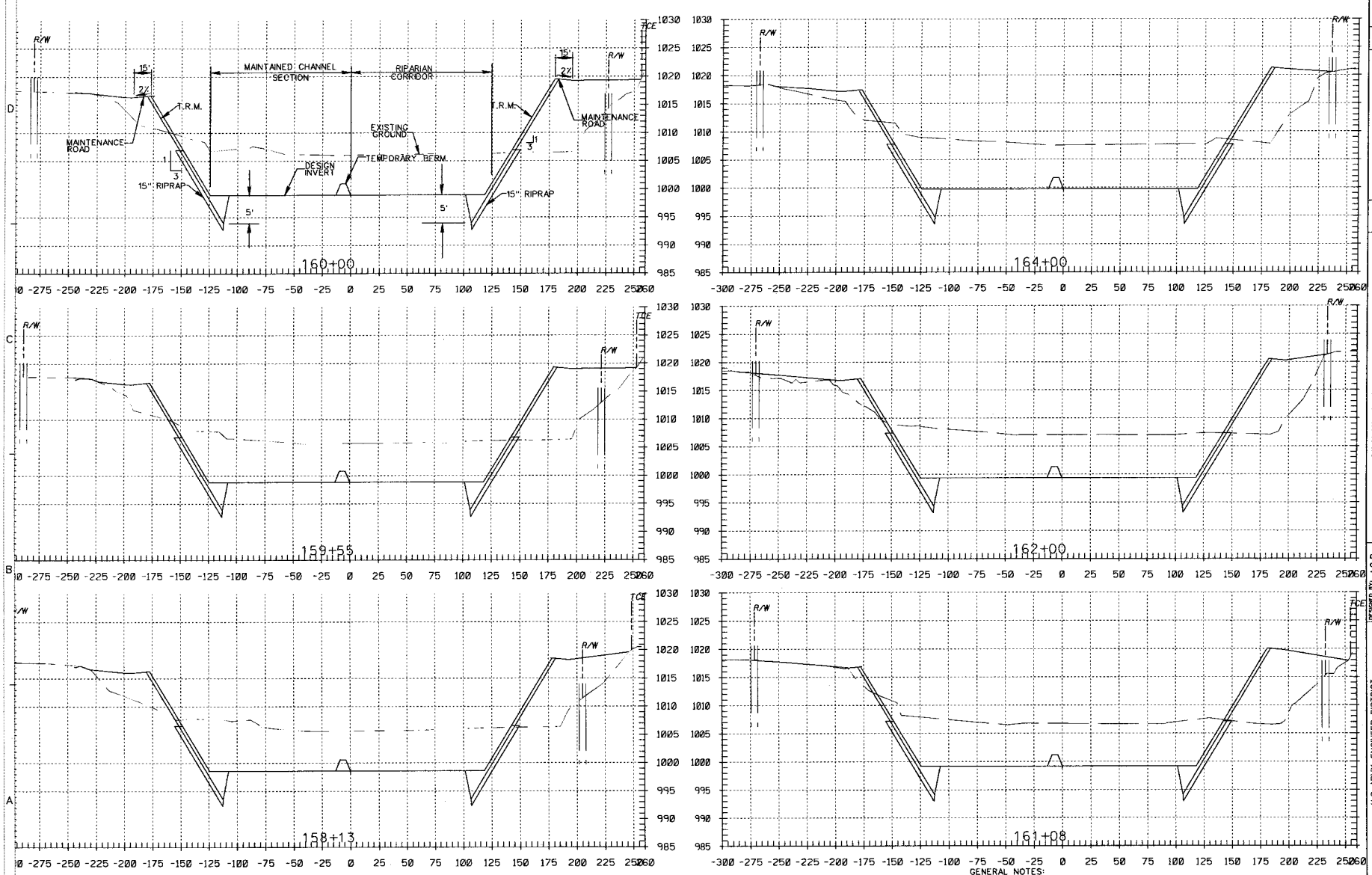
Scale:

SHEET
C-18

SAFETY! PAYS

Plot Date 25-JULY-2014

VALUE ENGINEERING PAYS



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 REVISIONS	DATE	APPROVAL

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

CROSS SECTIONS
STA 164+00 TO 158+00

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

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

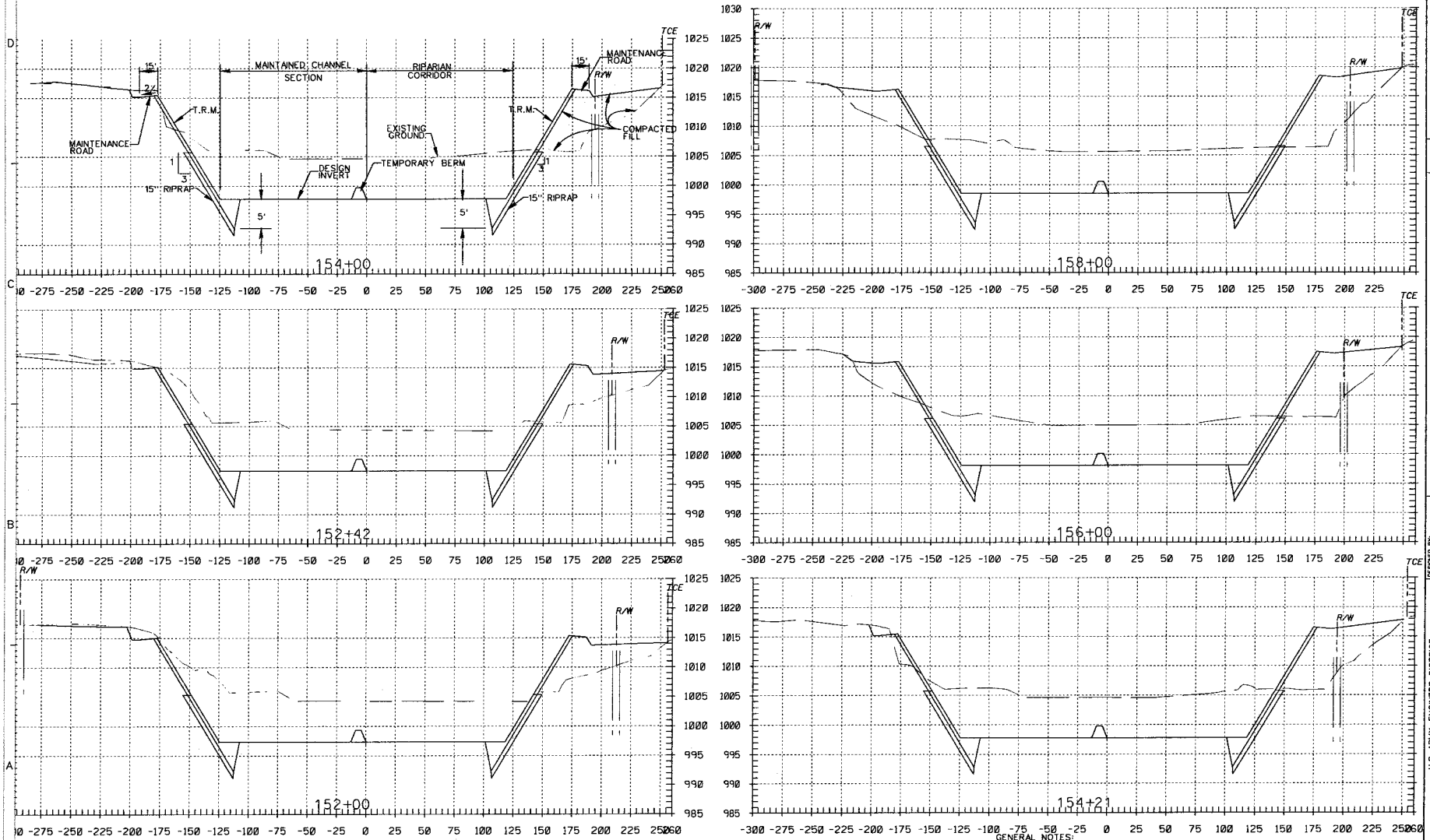
DISTRICT FILE NO. 226/267
SPEC. NO. W912PL-15-B-0001

Scale:
SHEET
C-19

SAFETY! PAYS

Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS



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
	REVISIONS		

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

CROSS SECTIONS
STA 158+00 TO STA 150+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C20.DGN

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

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

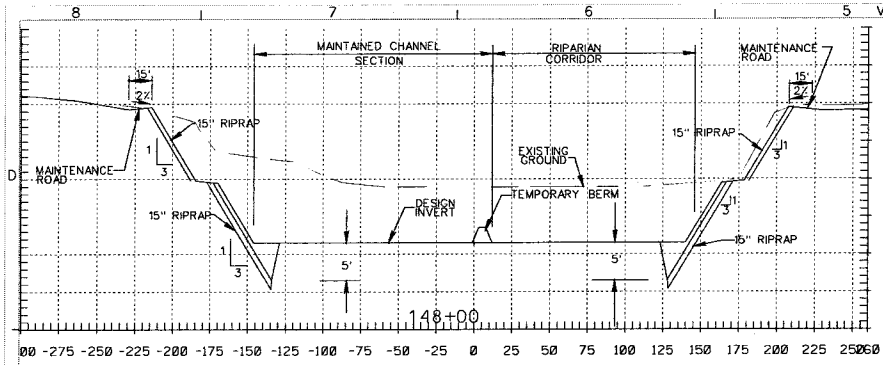
DISTRICT FILE NO. 226/268 | SPEC. NO. W912PL-15-B-0001

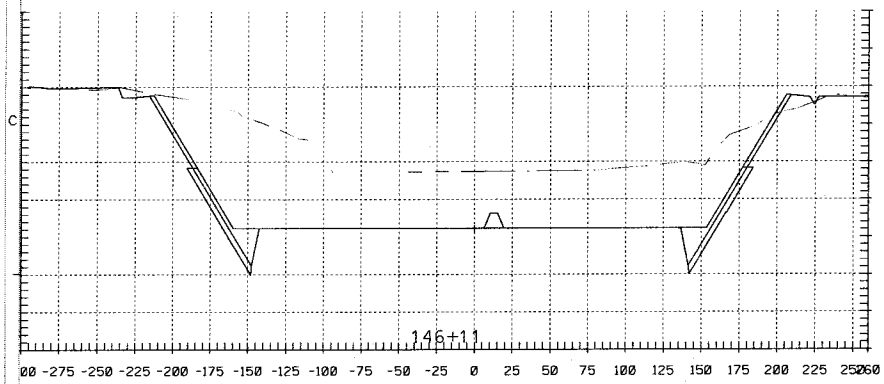
Scale:
SHEET C-20

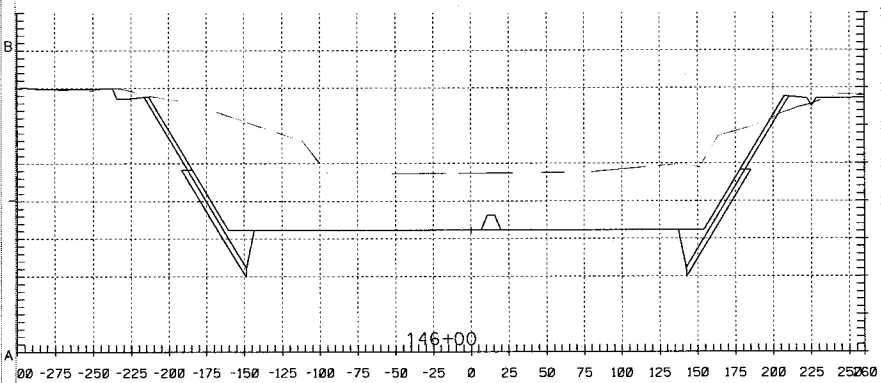
SAFETY PAYS

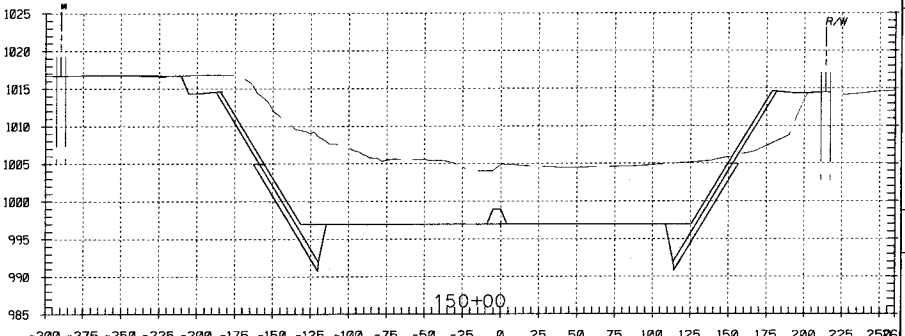
Plot Date 25-JULY-2014

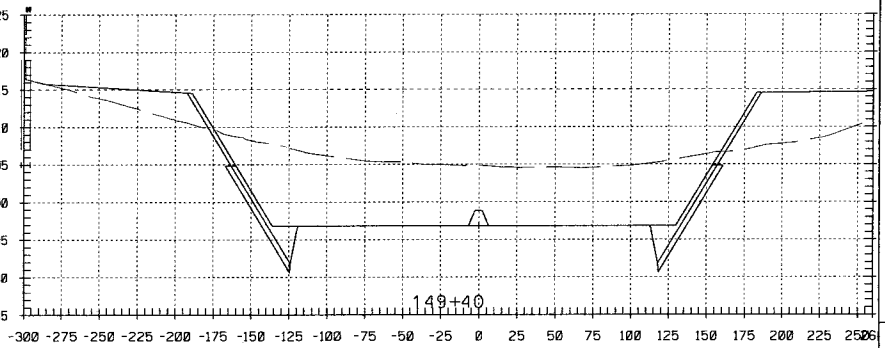
VALUE ENGINEERING PAYS

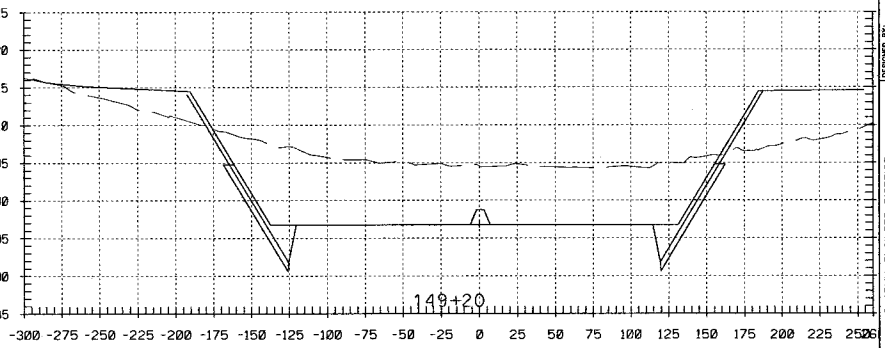












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 150+00 TO 144+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C21.DGN

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

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

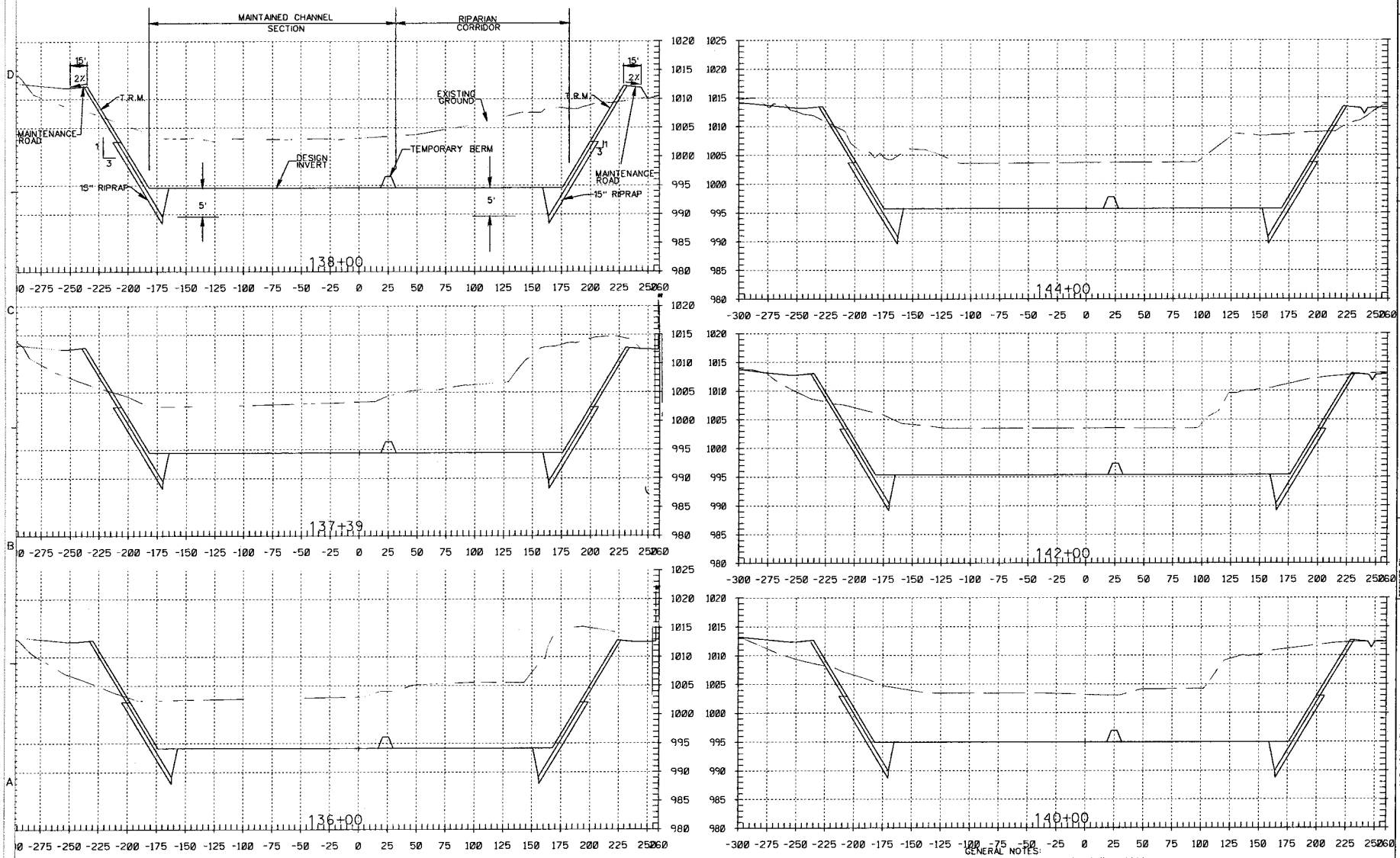
DISTRICT FILE NO. 226/289 | SPEC. NO. W912PL-15-B-0001

Scale:
SHEET
C-21

SAFETY PAYS

Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS



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.

SAFETY PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 144+00 TO 134+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C22.DGN

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

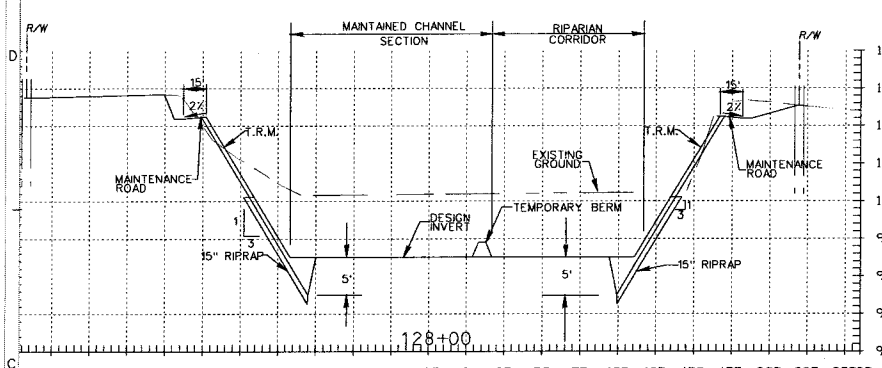
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

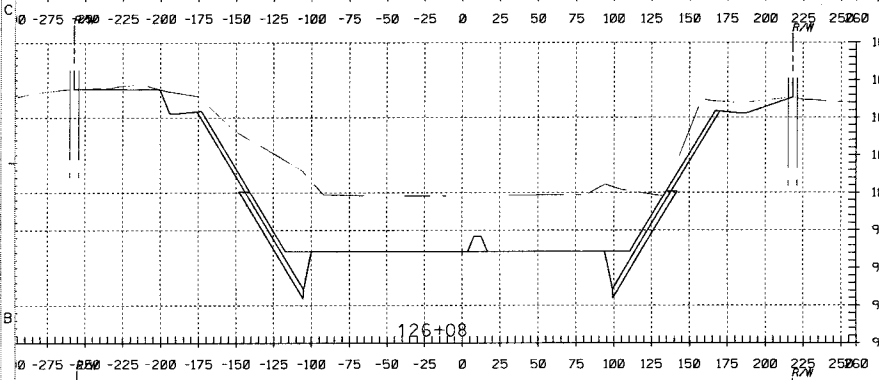
DISTRICT FILE NO. 226/270 SPEC. NO. W912PL-15-B-0001

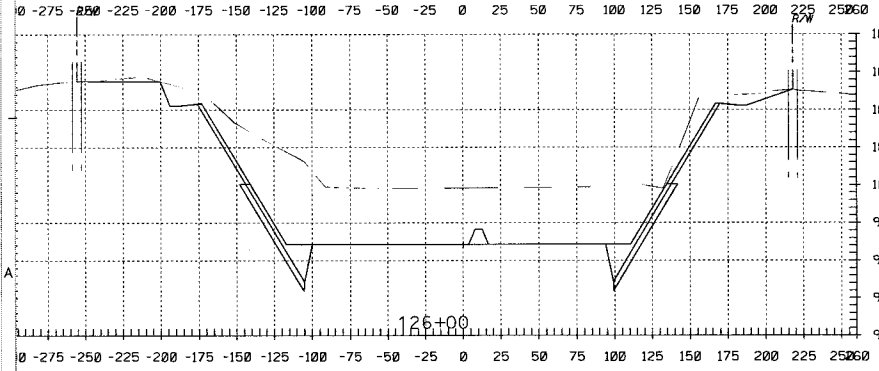
Scale:
SHEET
C-22

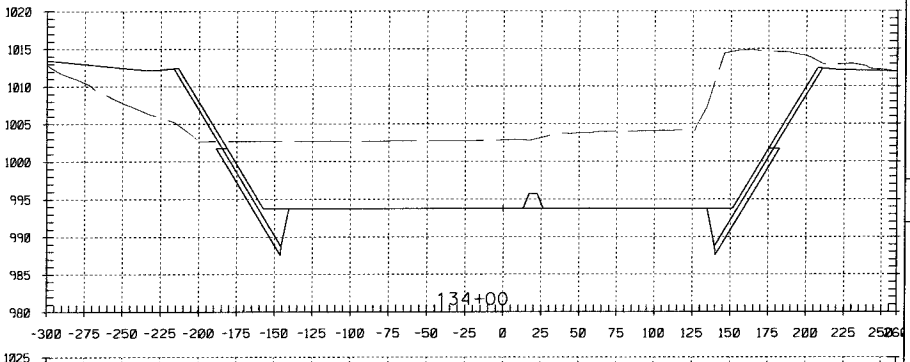
Plot Date: 25-JULY-2014

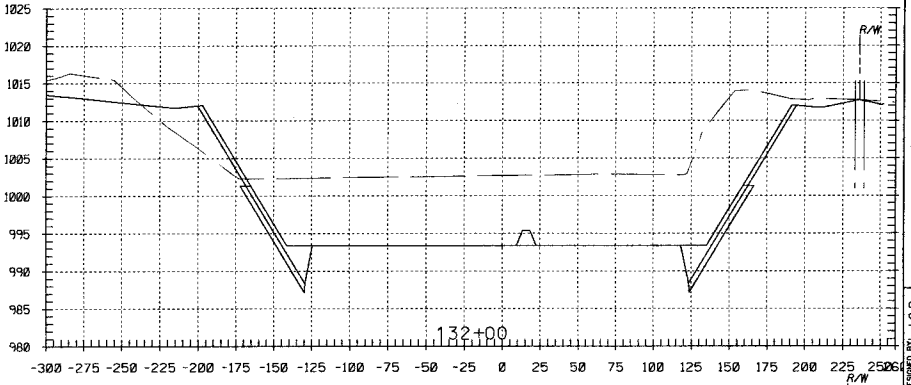
VALUE ENGINEERING PAYS

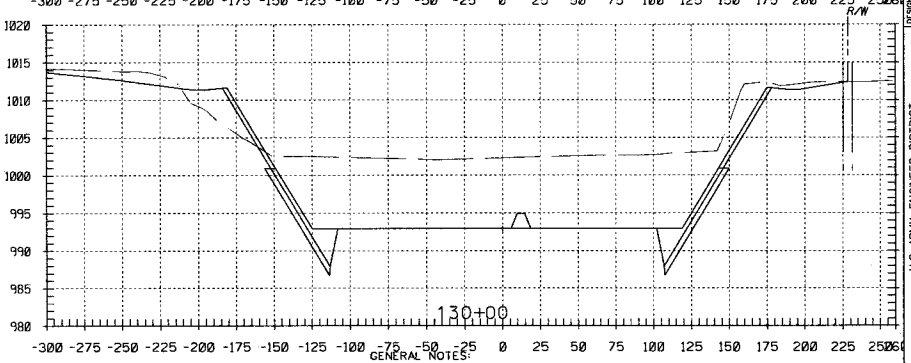












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 134+00 TO STA 124+00

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

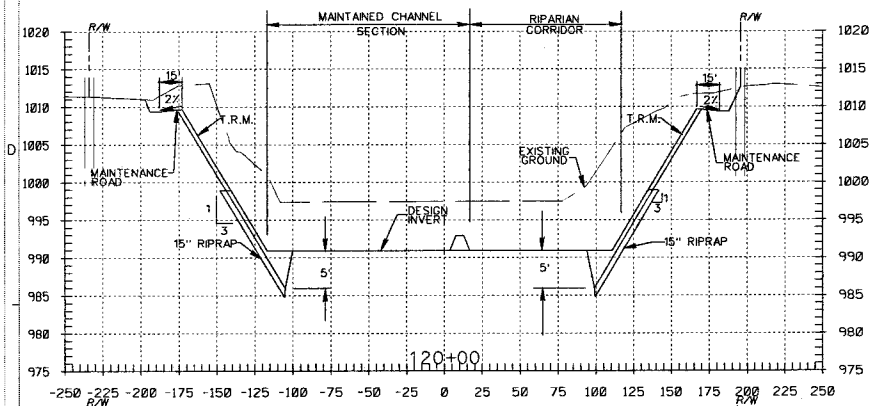
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

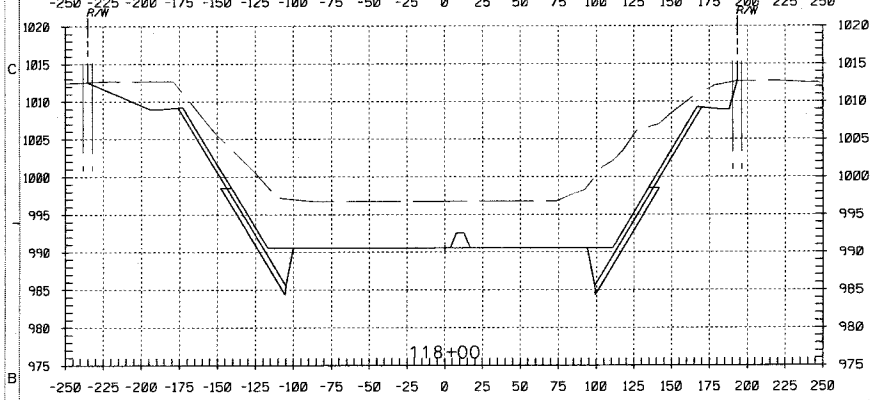
FILE NAME: C23.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/271

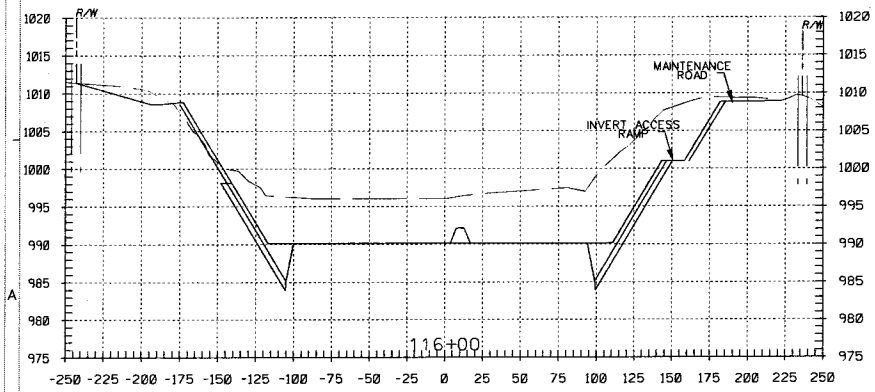
Scale:
SHEET
C-23

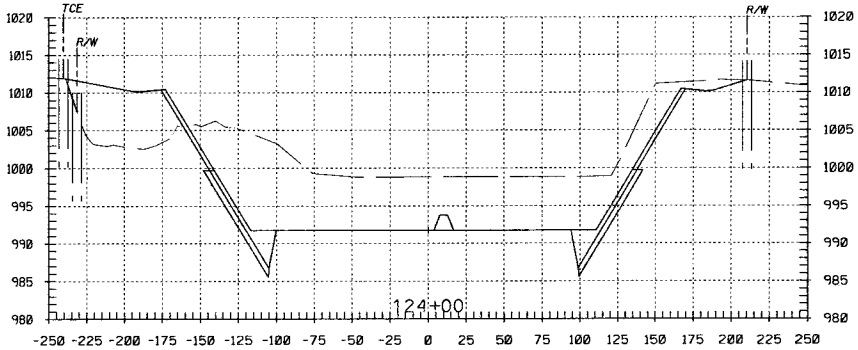
Plot Date: 25-JULY-2014

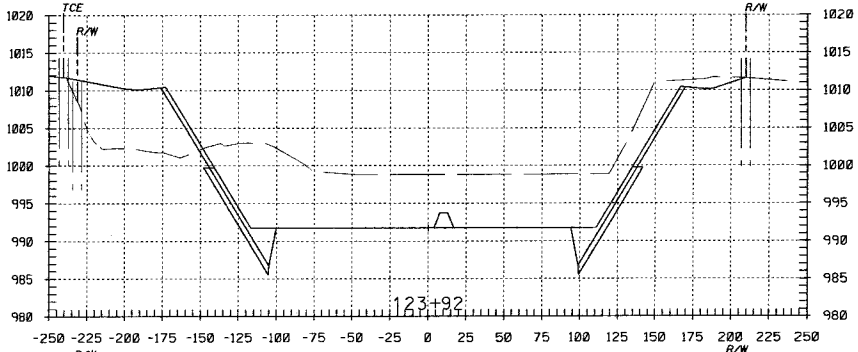
VALUE ENGINEERING PAYS

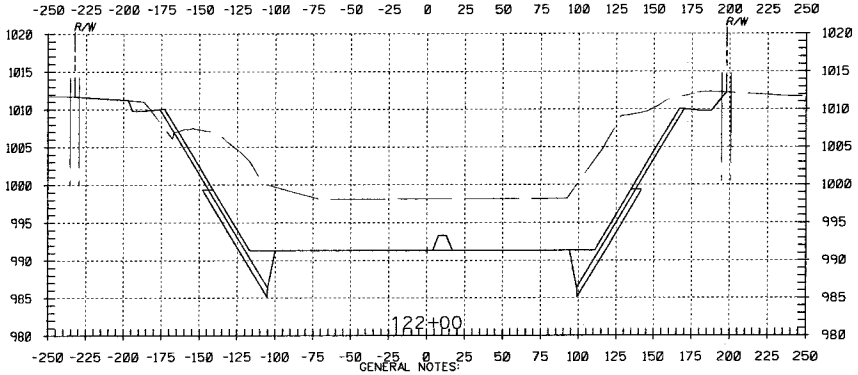












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 124+00 TO STA 114+00

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

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

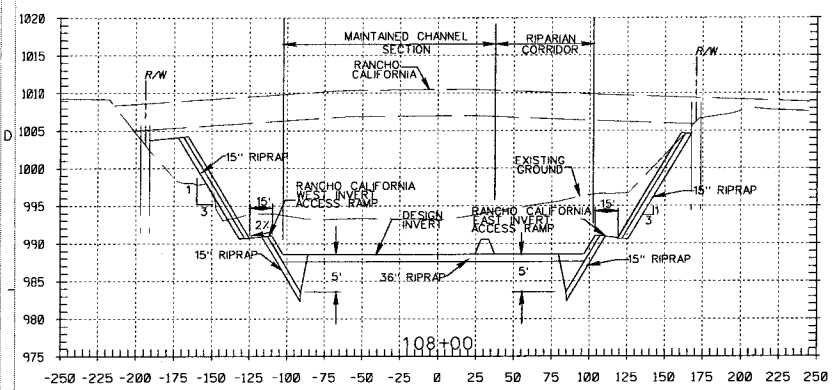
DISTRICT FILE NO. 226/272
SPEC. NO. W912PL-15-B-0001

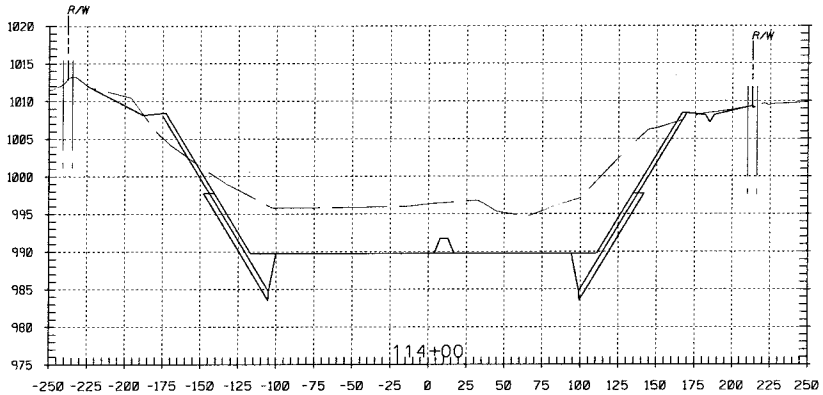
Scale:
SHEET
C-24

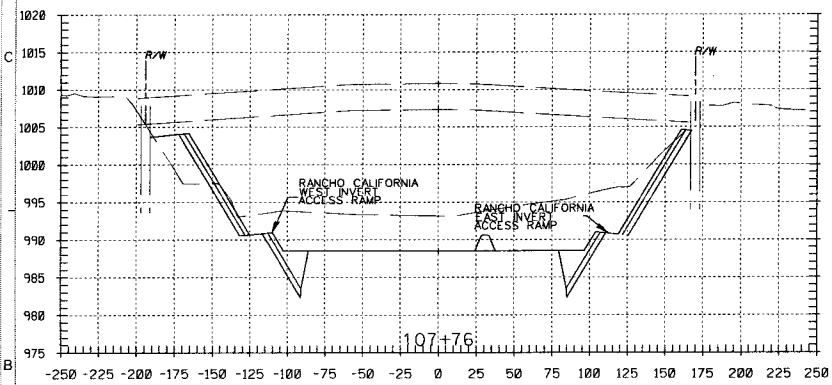
SAFETY PAYS

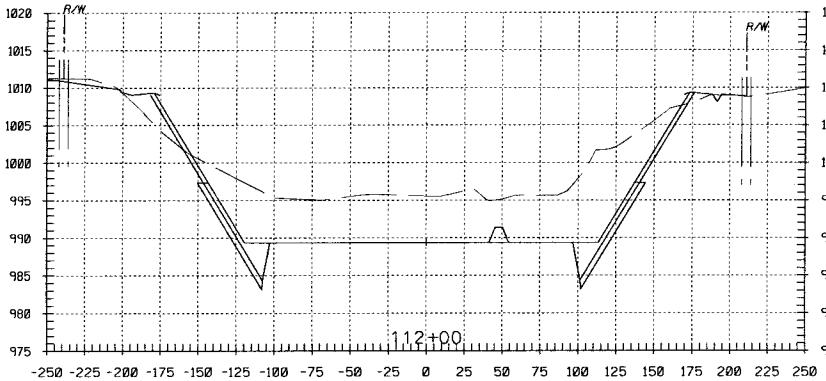
Plot Date 25-JULY-2014

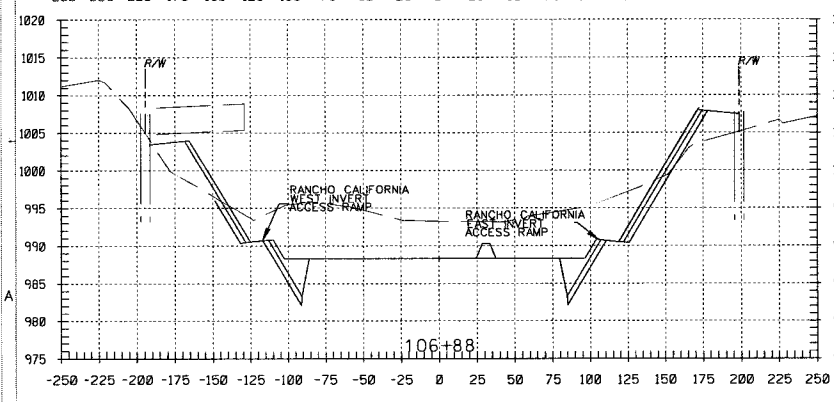
VALUE ENGINEERING PAYS

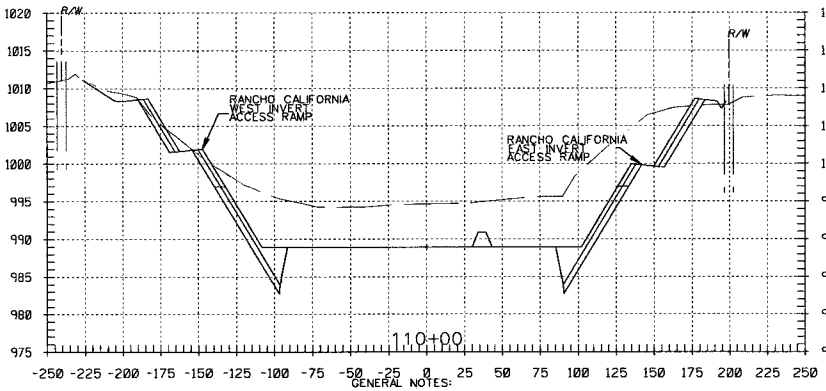












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SAFETY PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

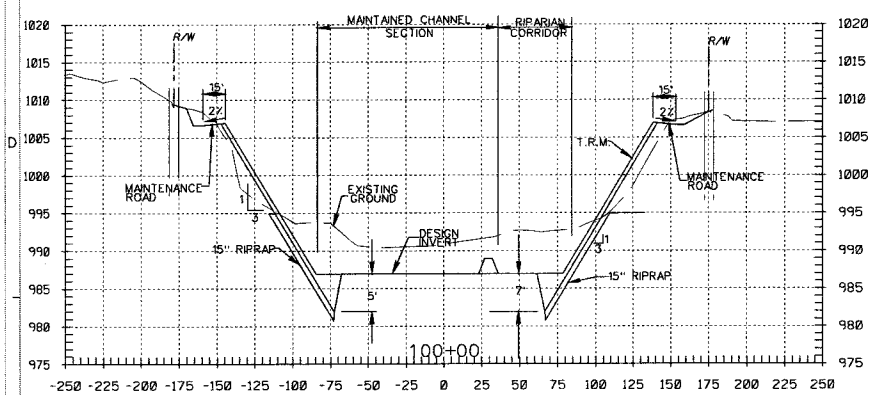
CROSS SECTIONS
STA 114+00 TO STA 106+00

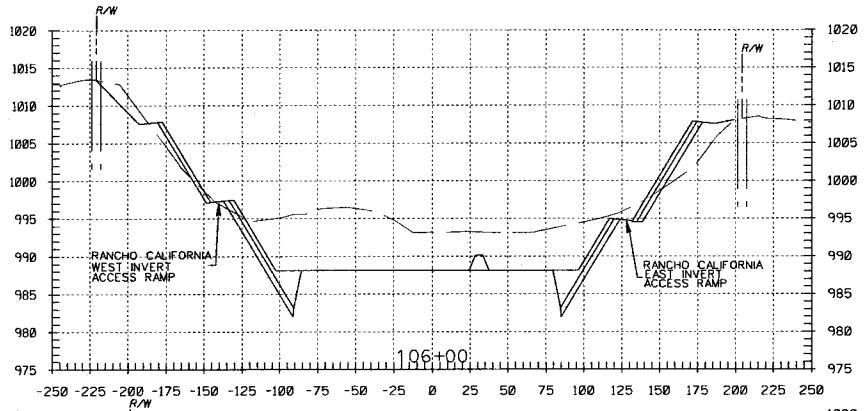
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

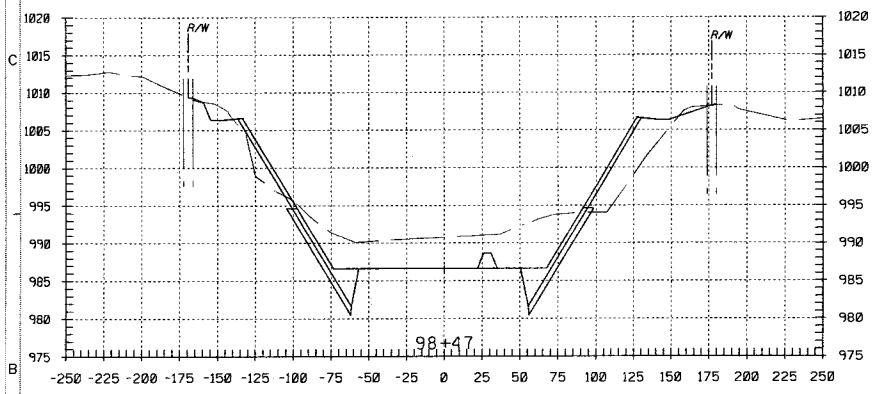
DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C25.DGN
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/273
Scale:
SHEET C-25

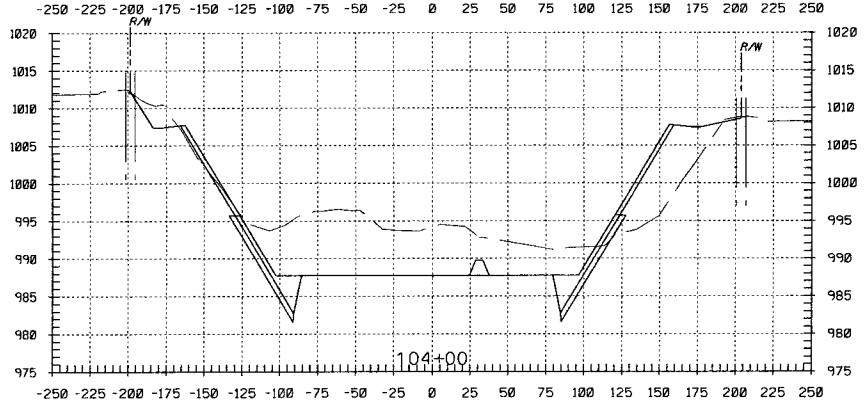
Plot Date: 25-JULY-2014

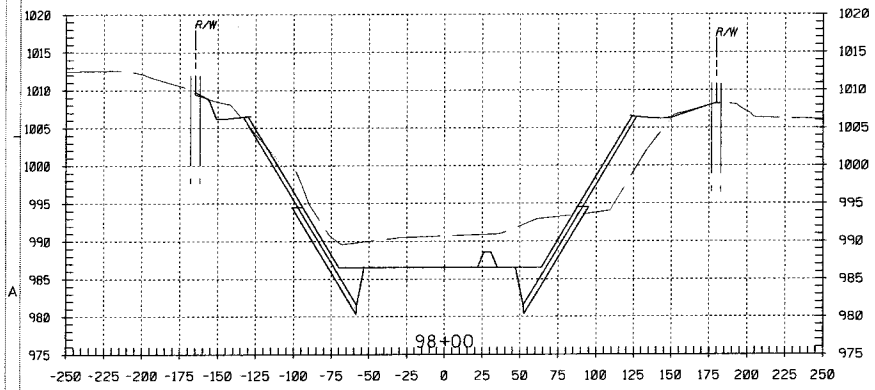
VALUE ENGINEERING PAYS

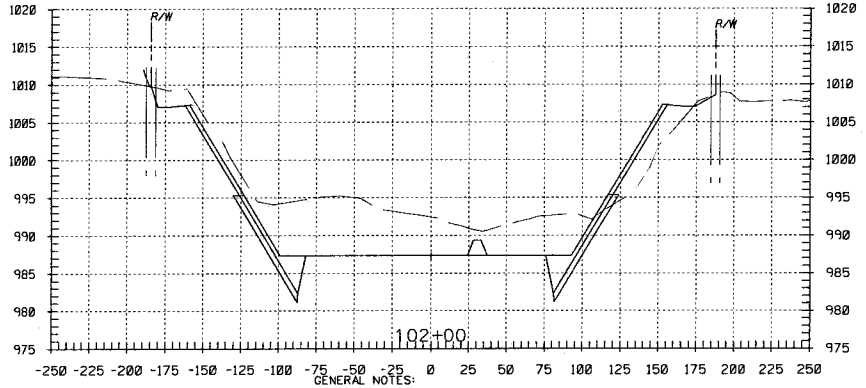












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 106+00 TO STA 98+00

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

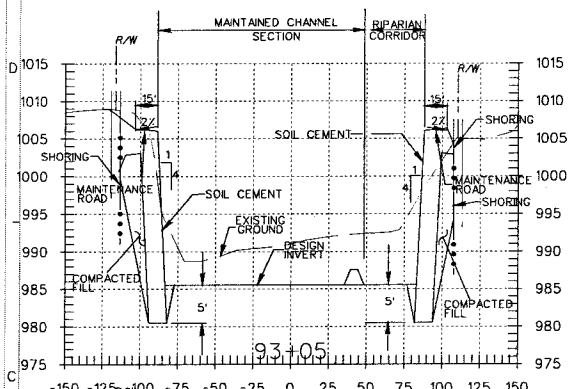
FILE NAME: C26.DGN
DISTRICT FILE NO. 228/274
SPEC. NO. W912PL-15-B-0001

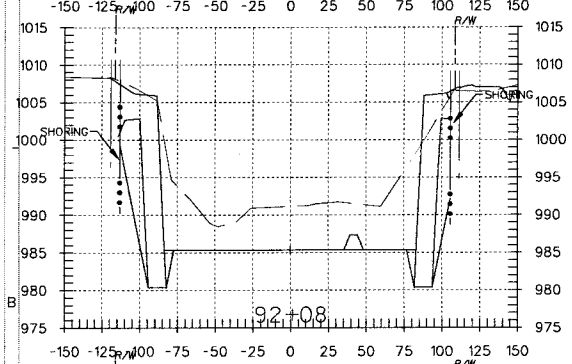
Scale:
SHEET C-26

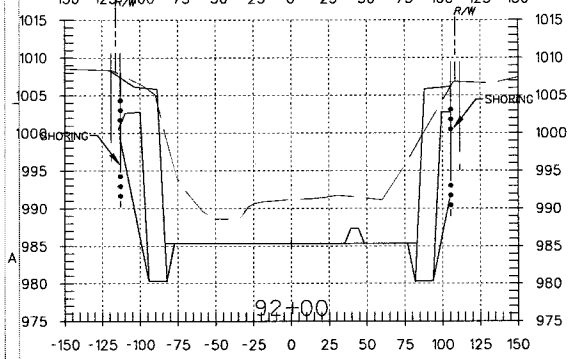
SAFETY PAYS

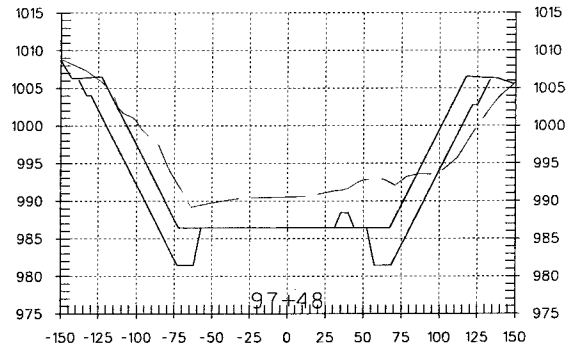
Plot Date 25-JULY-2014

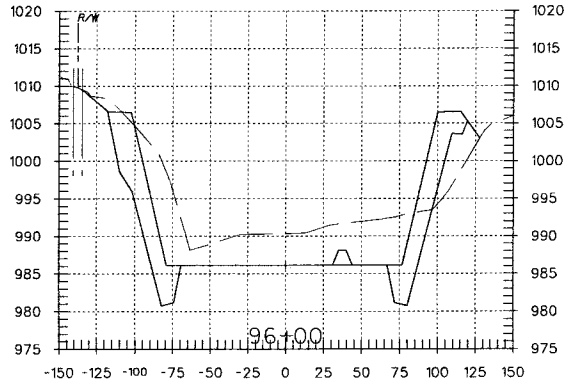
VALUE ENGINEERING PAYS

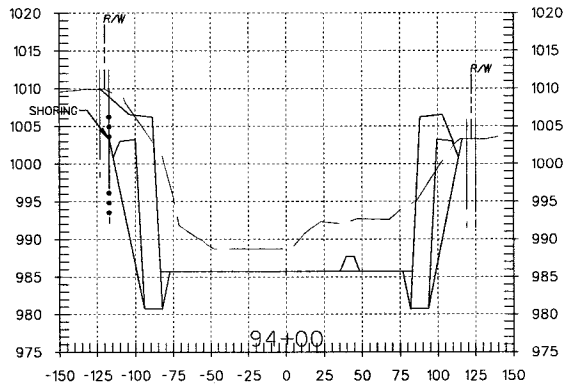


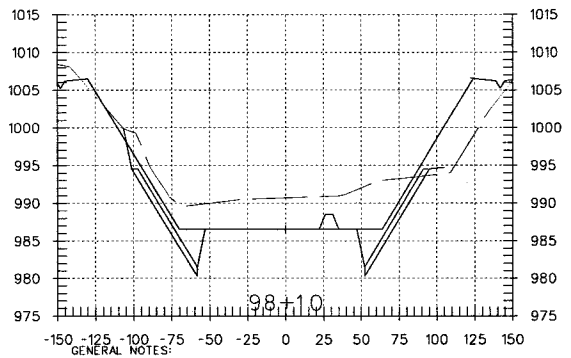












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

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

CROSS SECTIONS
STA 98+00 TO STA 92+00

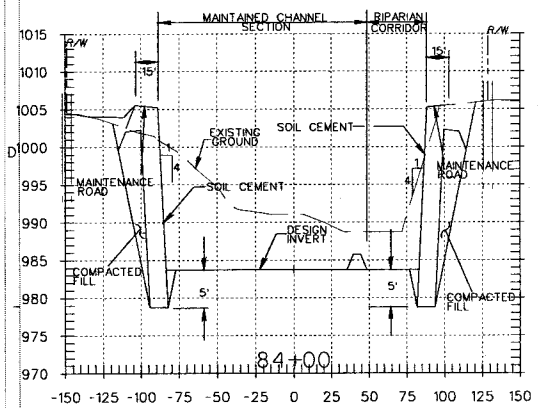
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

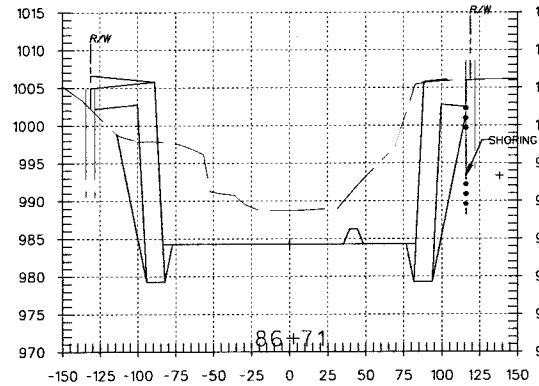
DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME: C27.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/273
Scale:
SHEET C-27

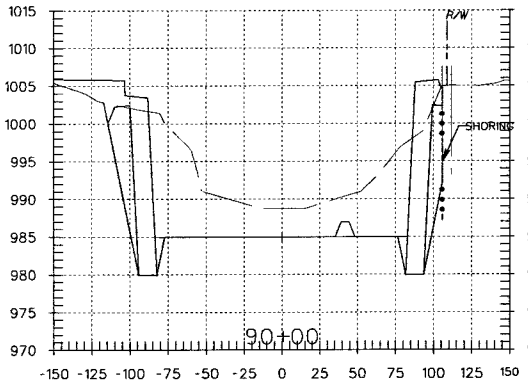
SAFETY! PAYS

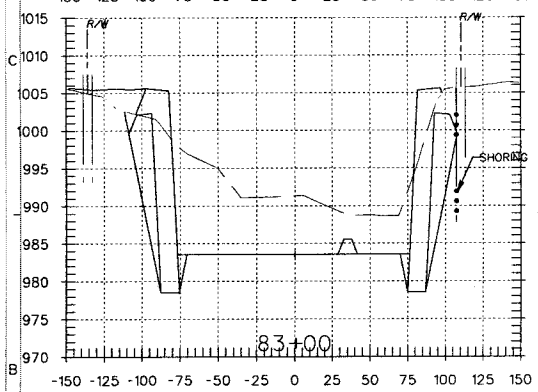
Plot Date: 25-JULY-2014

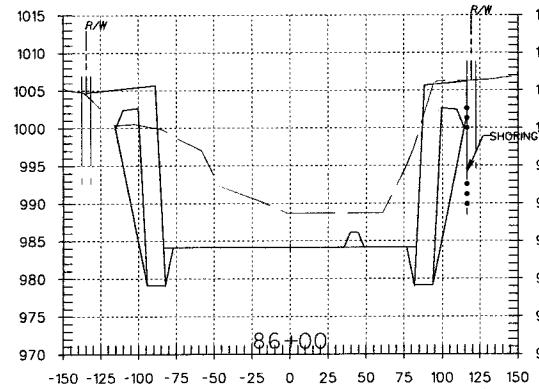
VALUE ENGINEERING PAYS

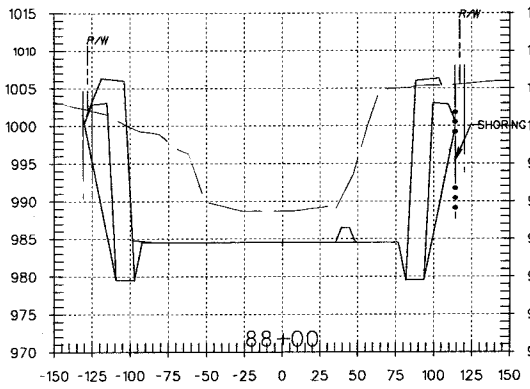


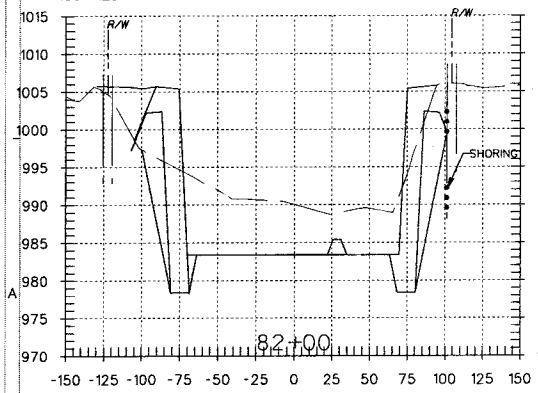


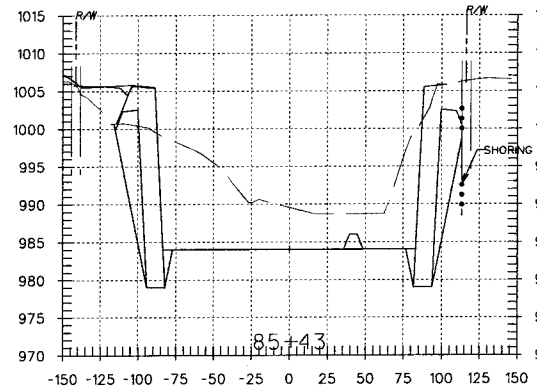


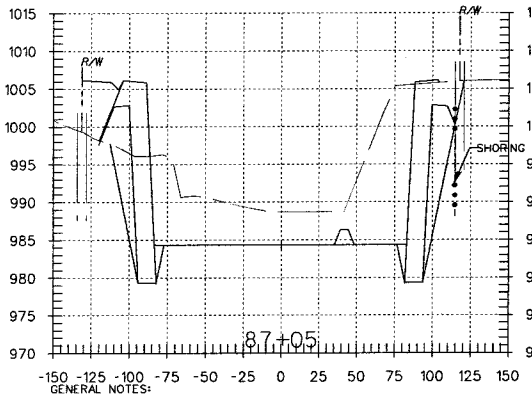












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SAFETY! PAYS

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

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

CROSS SECTIONS
STA 92+00 TO STA 82+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C28.DGN

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

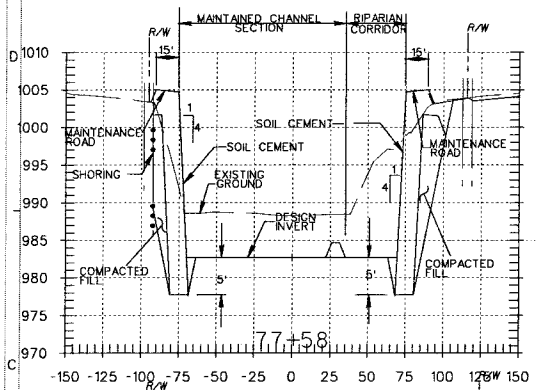
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

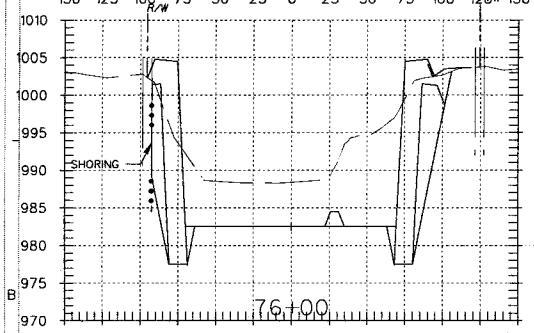
DISTRICT FILE NO. 226/276 | SPEC. NO. W912PL-15-B-0001

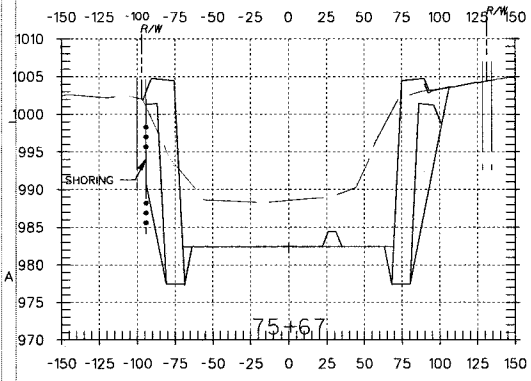
Scale:
SHEET
C-28

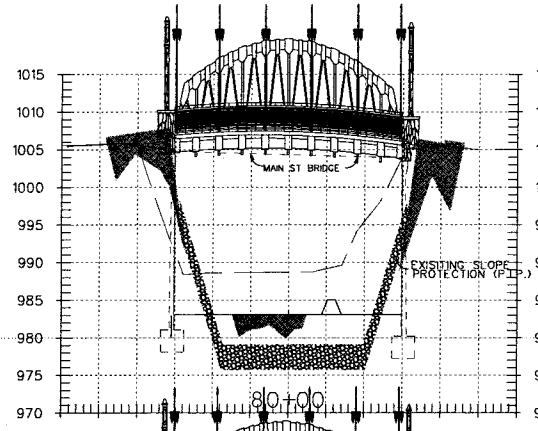
Plot Date: 25-JULY-2014

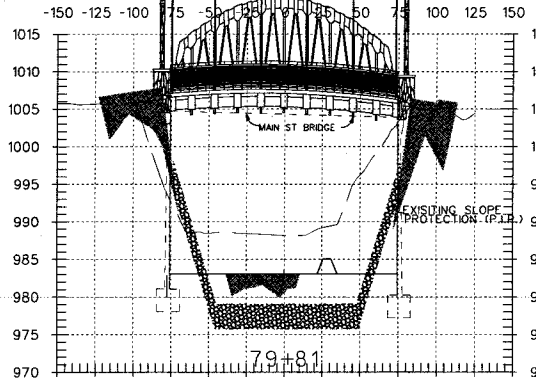
VALUE ENGINEERING PAYS

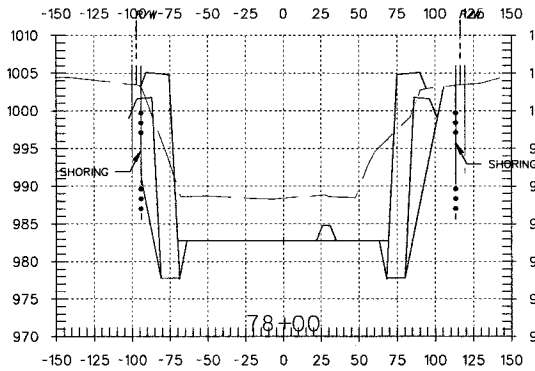


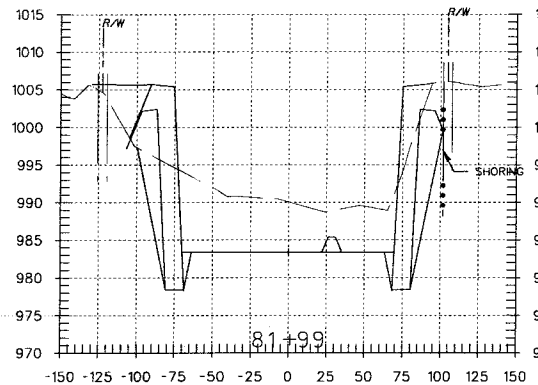


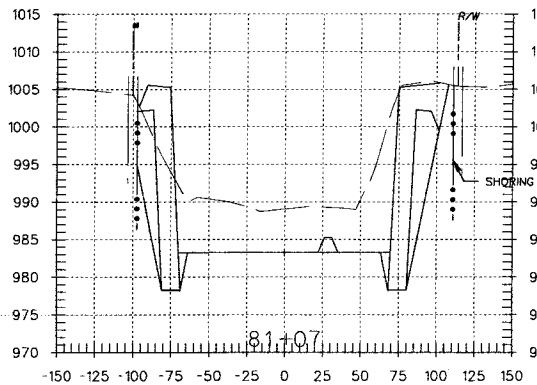


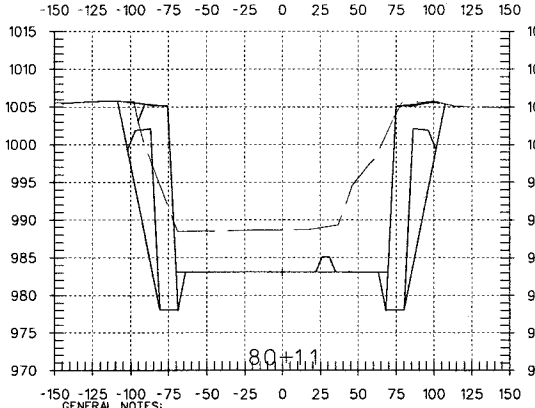












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 82+00 TO STA 75+00

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

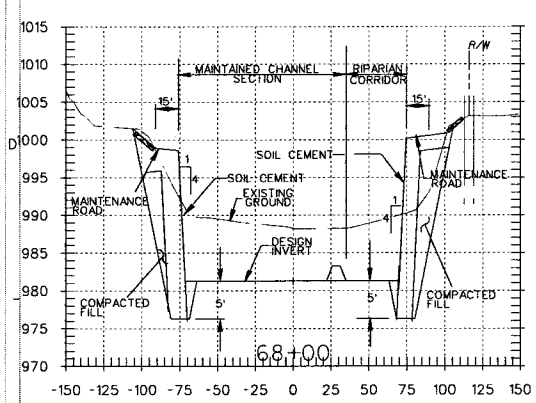
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

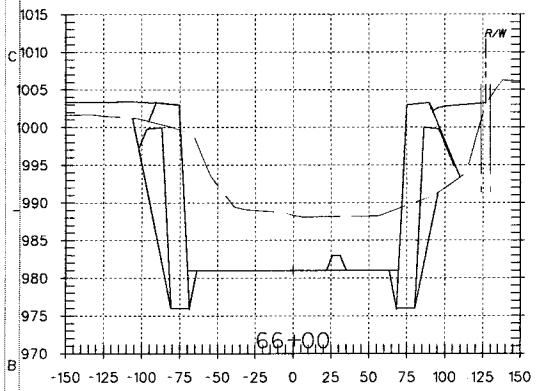
DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C29.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/277

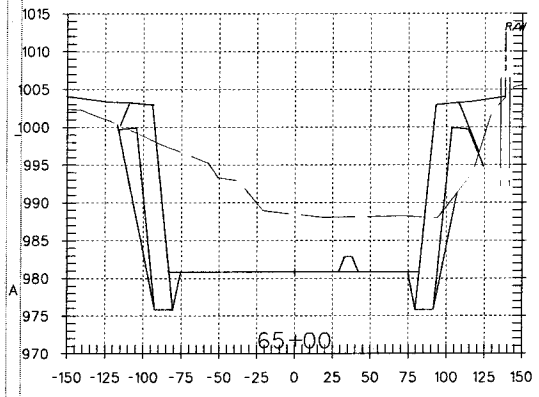
Scale:
SHEET
C-29

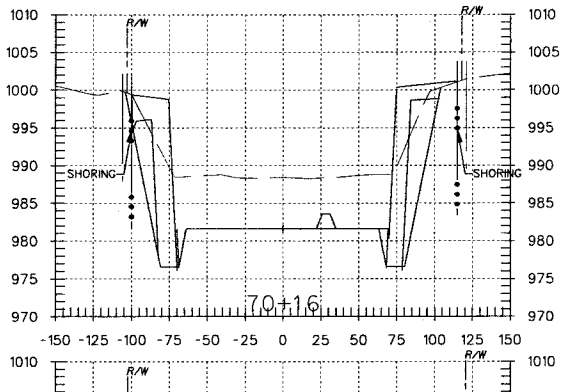
Plot Date: 25-JULY-2014

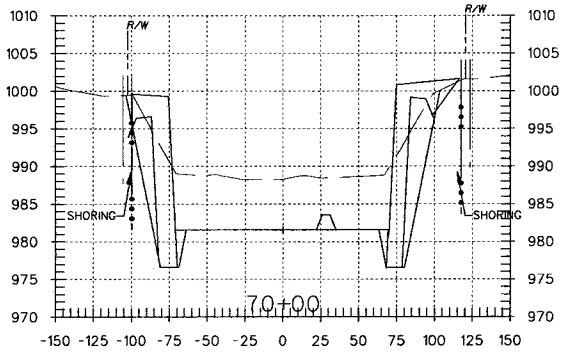
VALUE ENGINEERING PAYS

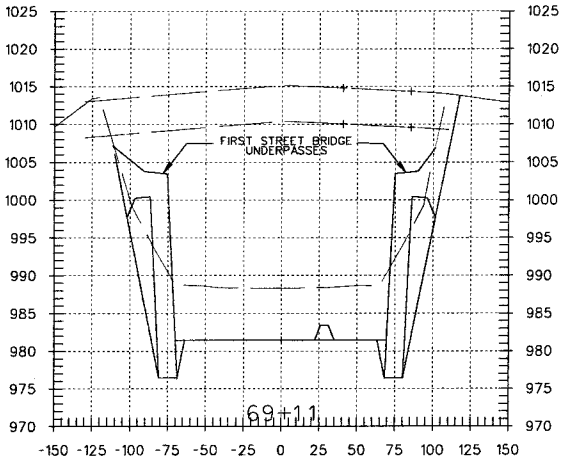


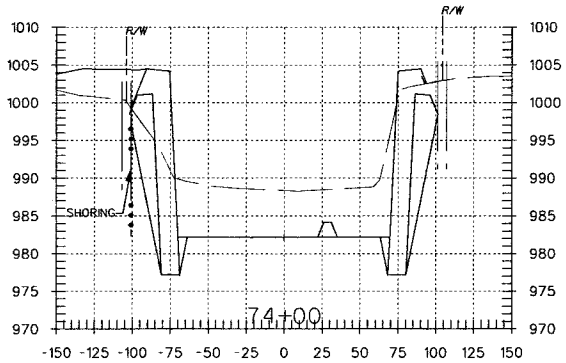


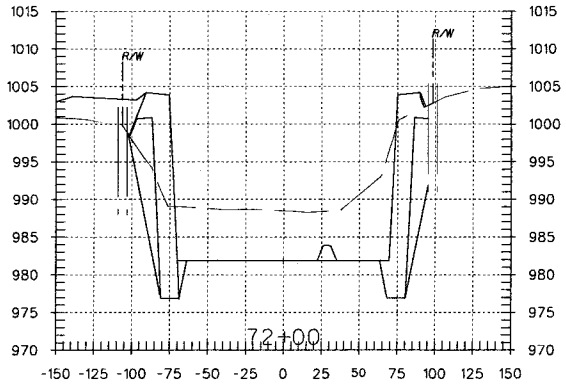


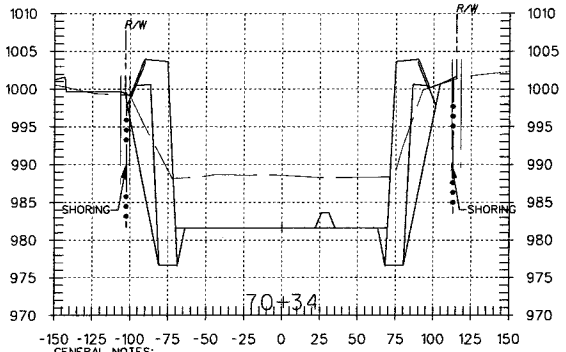












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 74+00 TO STA 65+00

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C30.DGN

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

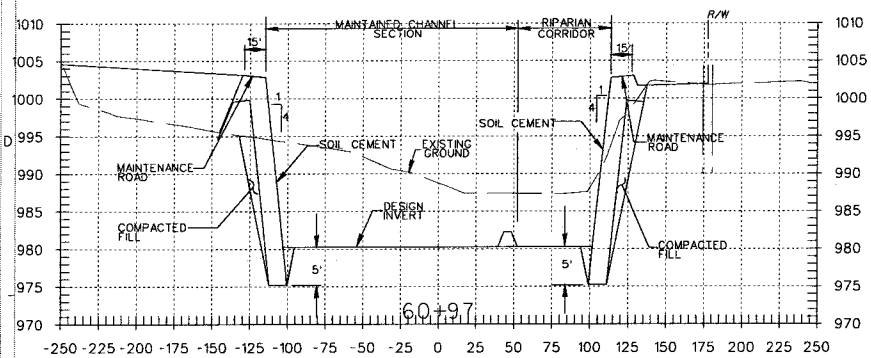
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

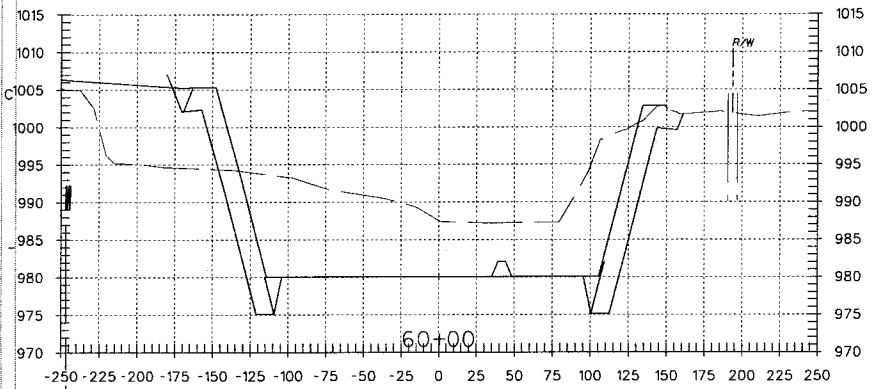
DISTRICT FILE NO. 226/278
SPEC. NO. W912PL-15-B-0001

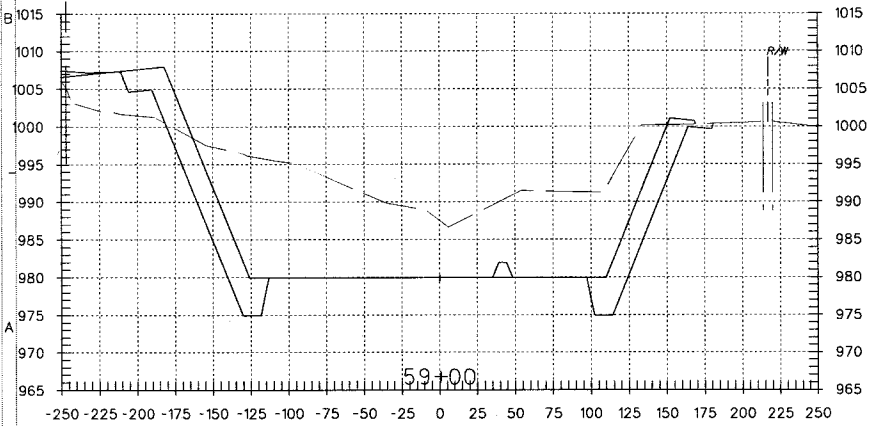
Scale:
SHEET
C-30

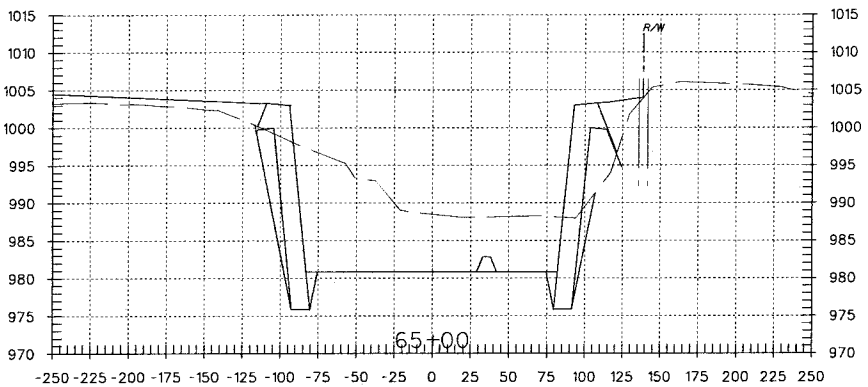
Plot Date: 25-JULY-2014

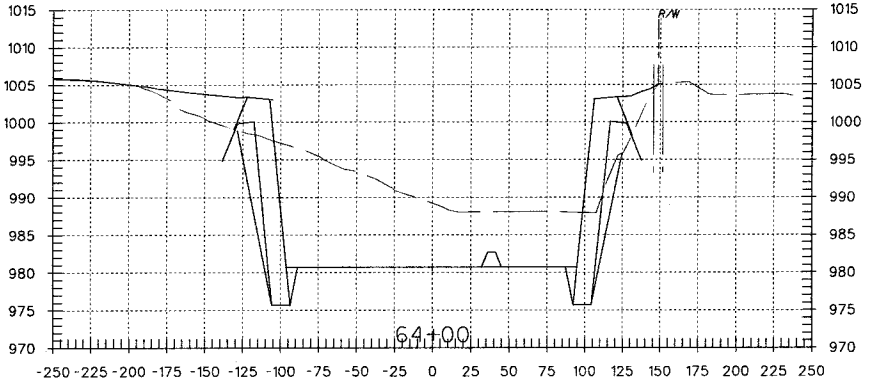
VALUE ENGINEERING PAYS

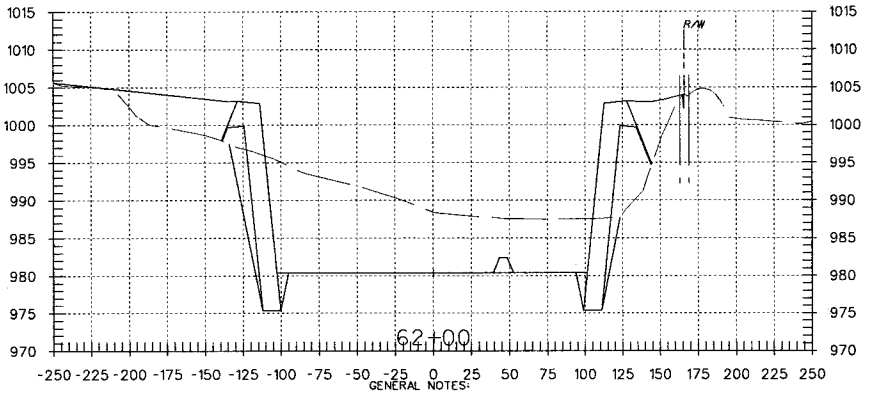












GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE IN FEET.
2. CROSS SECTIONS ARE SHOWN LOOKING UPSTREAM.
3. SHORING LINES ARE DEPICTED ON CROSS SECTIONS ONLY TO PROVIDE A GENERAL IDEA OF ANTICIPATED LIMITS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

SAFETY PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

CROSS SECTIONS
STA 65+00 TO STA 59+00

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

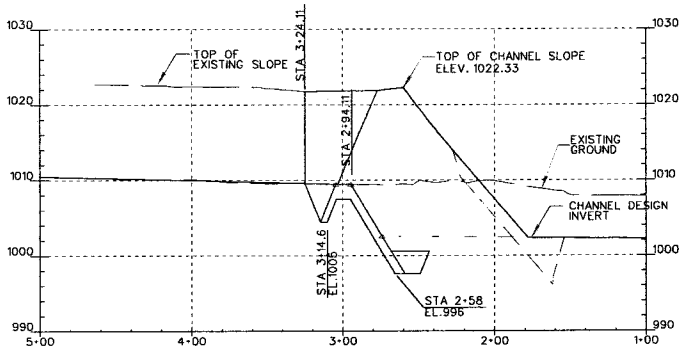
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/279 | SPEC. NO. W912PL-15-B-0001 | FILE NAME: C31.DGN

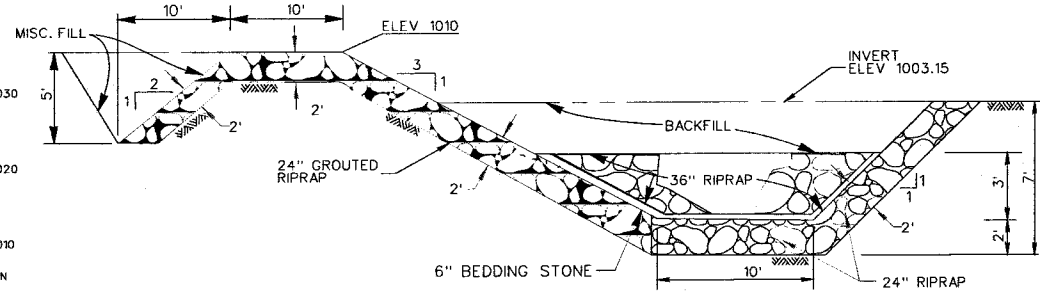
Scale:

SHEET
C-31

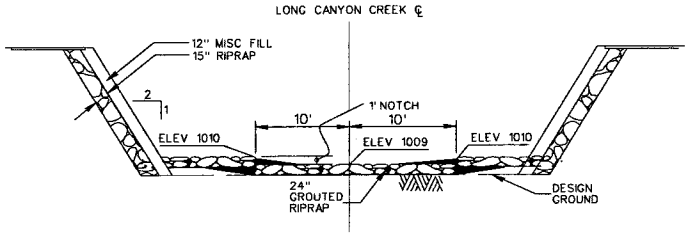
Plot Date: 25-JULY-2014



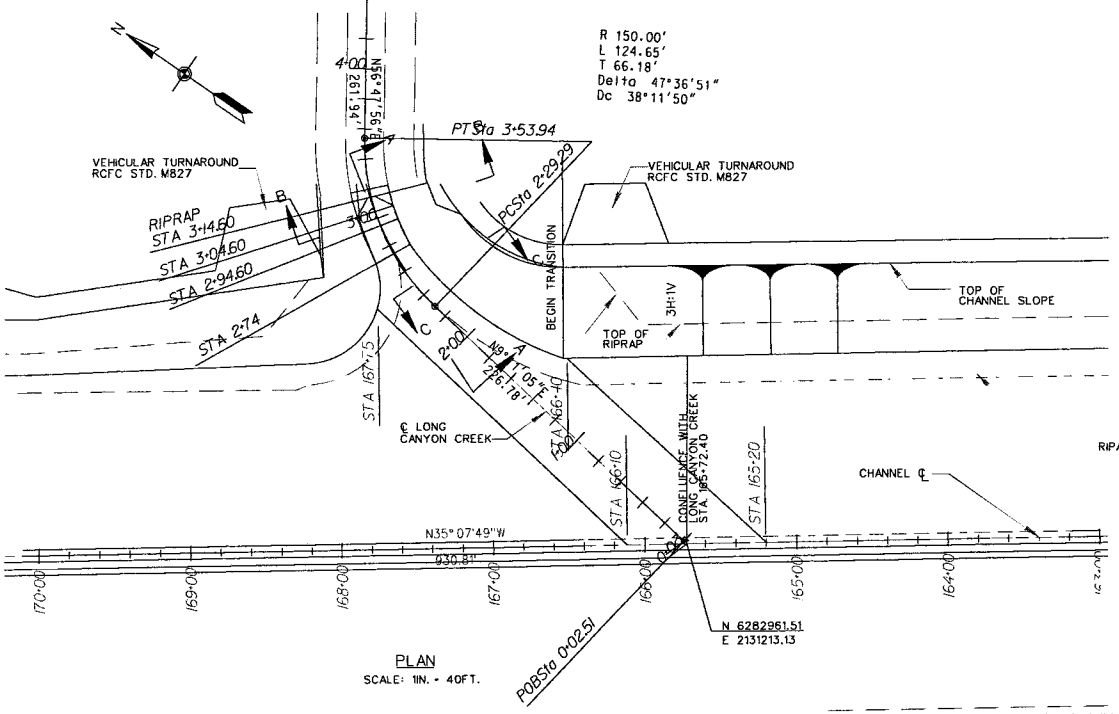
PROFILE
VERT. SCALE: 1IN. = 10FT.
HORIZ. SCALE: 1IN. = 40FT.



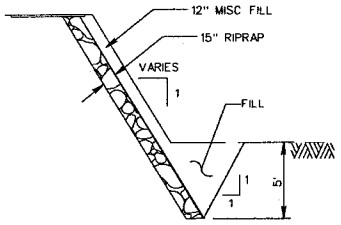
GROUTED STONE STABILIZER
SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE



PLAN
SCALE: 1IN. = 40FT.



SECTION C-C
NOT TO SCALE

40 20 0 40 80FT
SCALE: 1"= 40'
10 5 0 10 20FT
SCALE: 1"= 10'

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

LONG CANYON CONFLUENCE
PLAN, PROFILE, & DETAILS

DESIGNED BY: S.H.V.
DRAWN BY: A.M.
CHECKED BY: S.H.V.
FILE NAME: C32.DGN

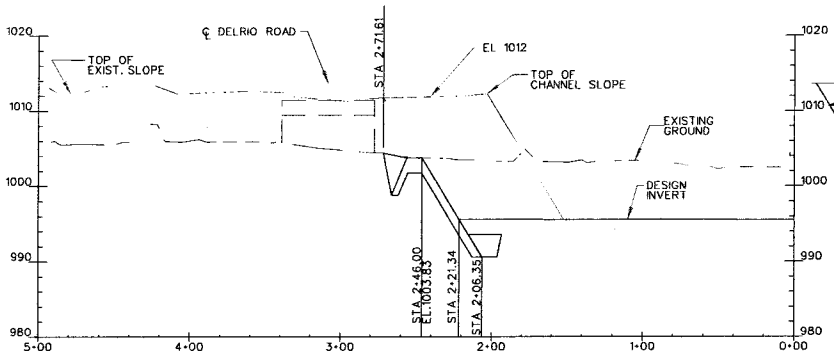
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

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

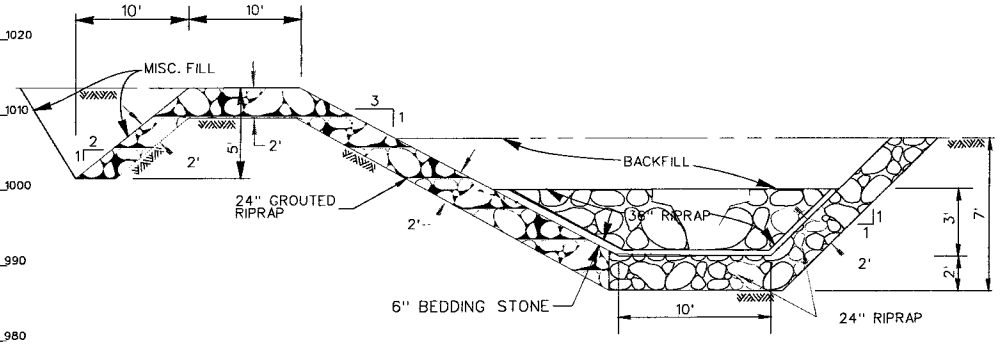
DISTRICT FILE NO. 226/280 | SPEC. NO. W912PL-15-B-0001

Scale: AS SHOWN
SHEET C-32

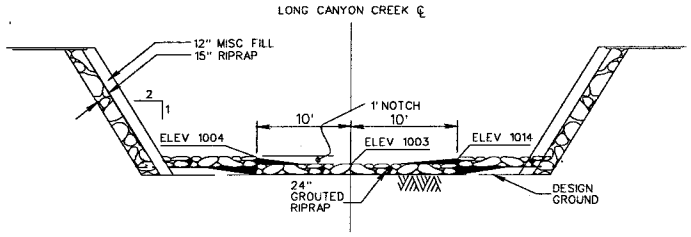
Plot Date: 25-JULY-2014



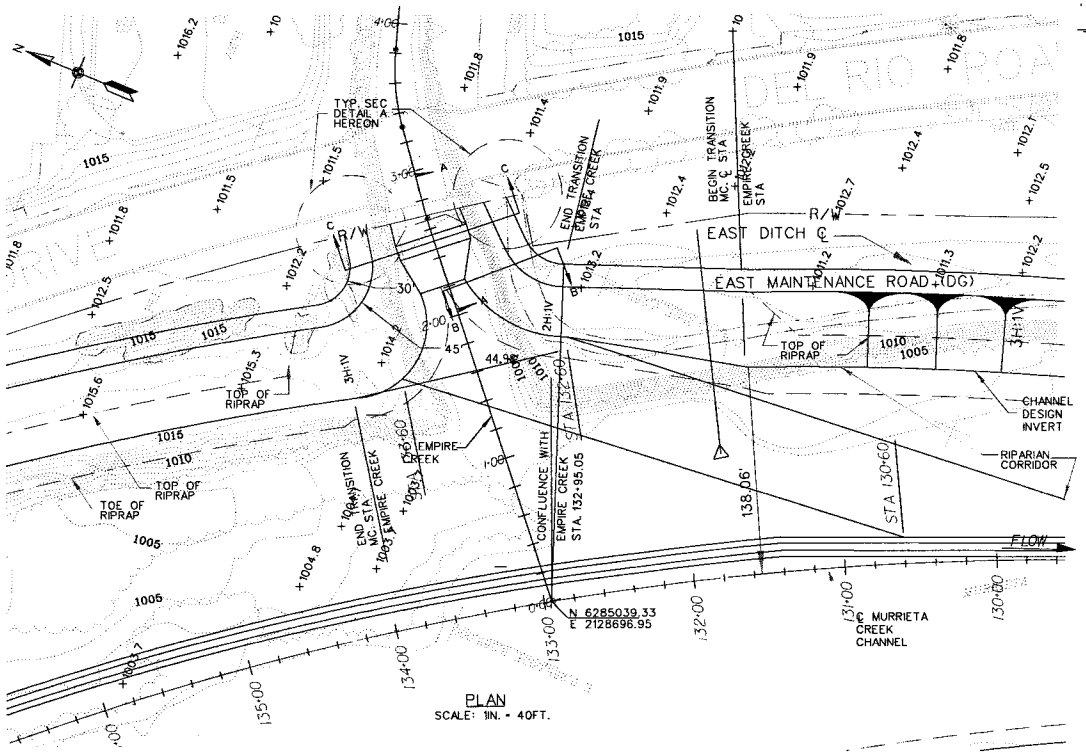
PROFILE
VERT. SCALE: 1 IN = 10FT
HORIZ. SCALE: 1 IN = 40FT



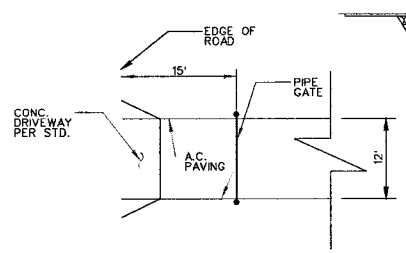
GROUTED STONE INVERT STABILIZER
SECTION A-A
NOT TO SCALE



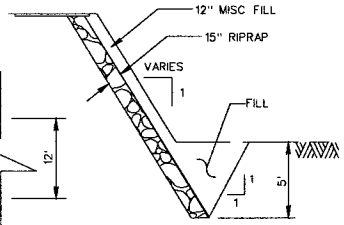
SECTION C-C
NOT TO SCALE



PLAN
SCALE: 1IN. = 40FT.



DETAIL A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

40 20 0 40 80FT
SCALE: 1"= 40'
10 5 0 10 20FT
SCALE: 1"= 10'

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

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

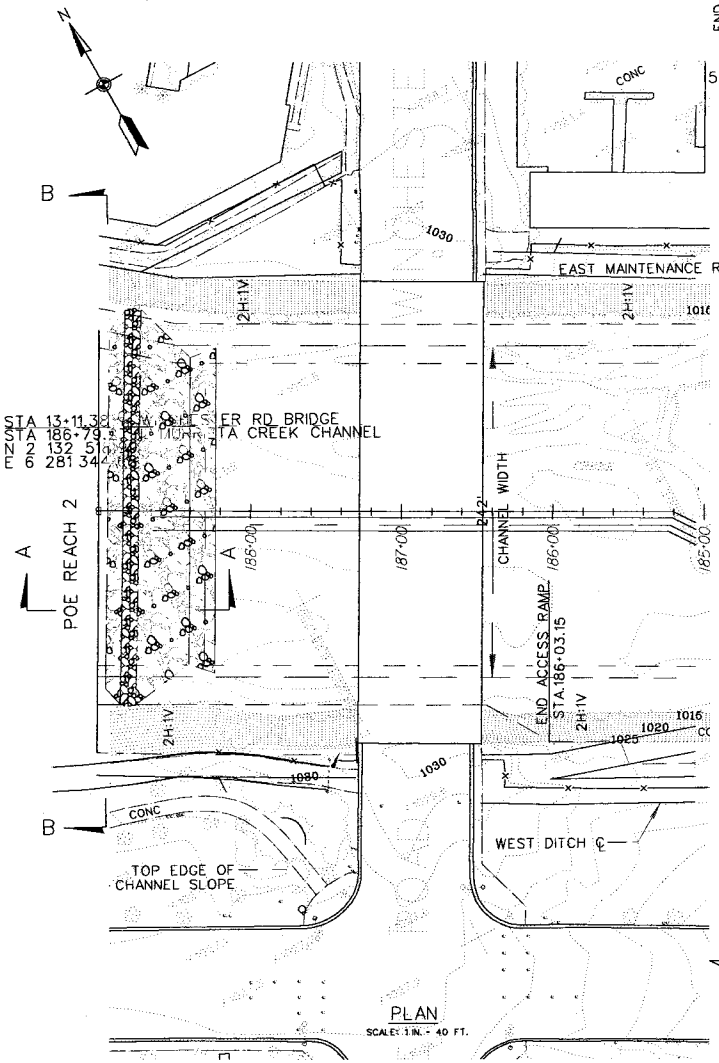
EMPIRE CREEK CONFLUENCE
PLAN, PROFILE, & DETAILS

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

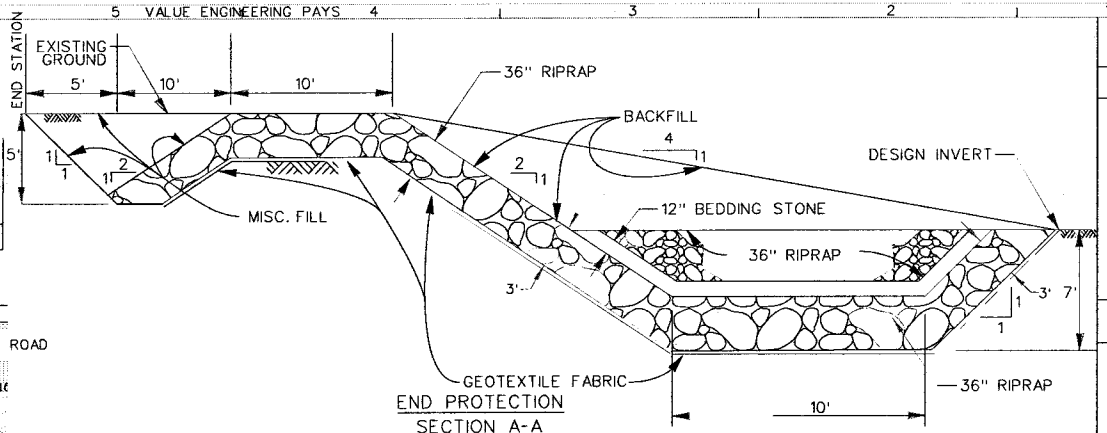
SUBMITTED BY: ARTHUR Y. JUANG, PE
CHIEF, DESIGN BRANCH

DESIGNED BY: S.H.V.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C33.DGN
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/281
Scale: AS SHOWN
SHEET C-33

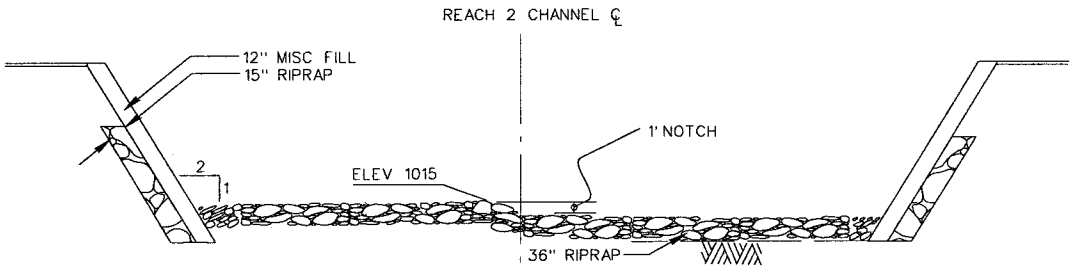
Plot Date: 25-JULY-2014



PLAN
SCALE: 1 IN. = 40 FT.

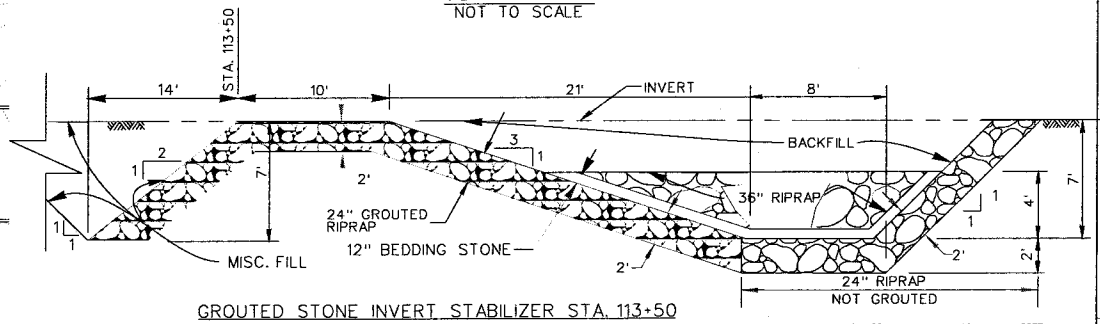


END PROTECTION
SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

SECTION B-B
NOT TO SCALE



GROUTED STONE INVERT STABILIZER STA. 113+50
NOT TO SCALE

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

GROUTED STONE INVERT STABILIZER AND END PROTECTION DETAILS

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C34.DGN

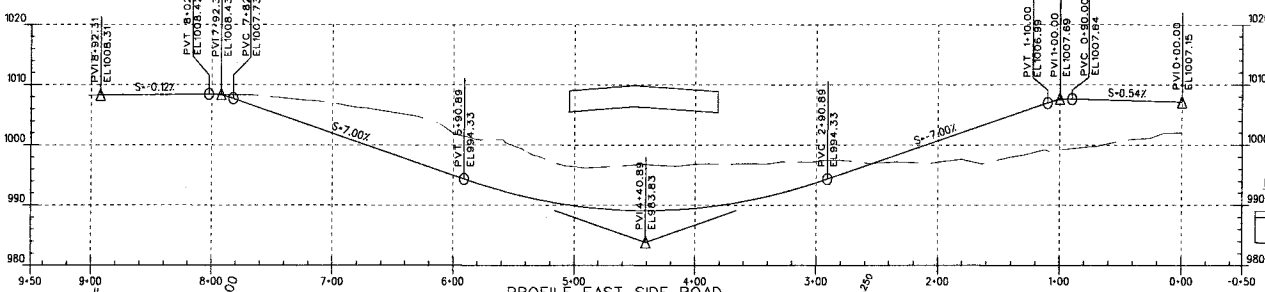
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

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

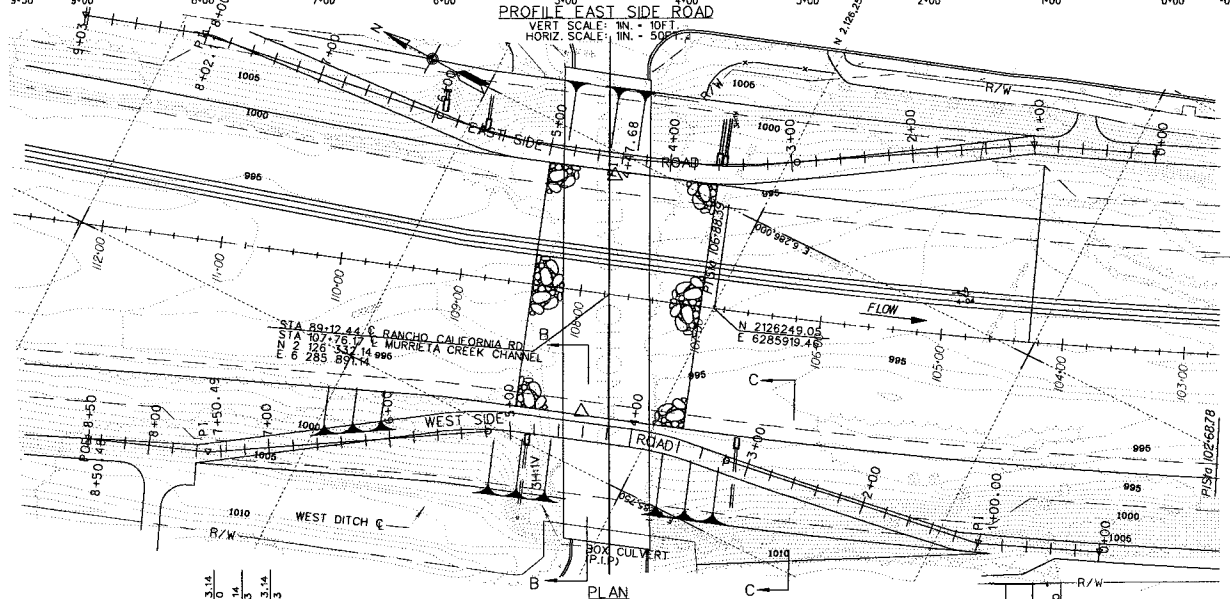
DISTRICT FILE NO. 226/282 | SPEC. NO. W912P.-15-B-0001

Scale: AS SHOWN
SHEET
C-34

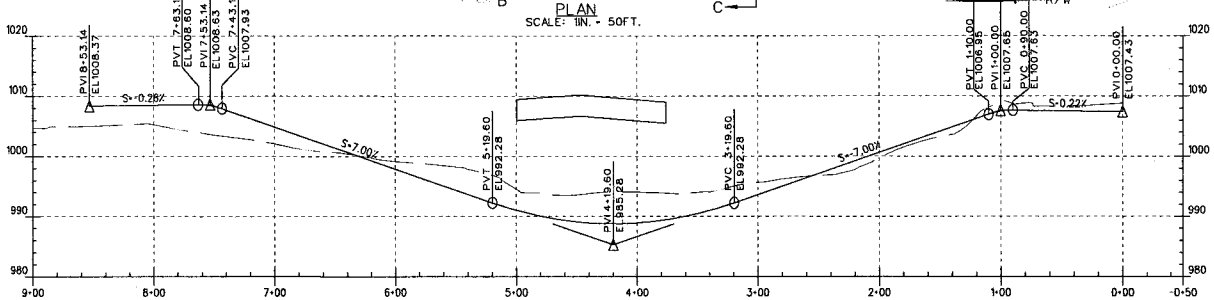
Plot Date: 25-JULY-2014



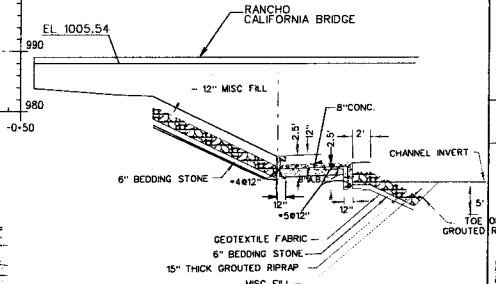
PROFILE EAST SIDE ROAD
VERT SCALE: 1IN. = 10FT.
HORIZ. SCALE: 1IN. = 50FT.



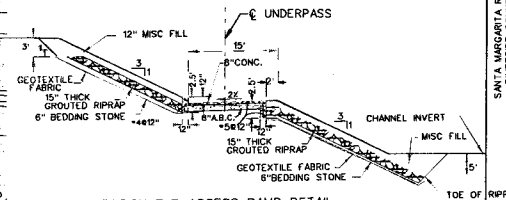
PLAN
SCALE: 1IN. = 50FT.



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"

50 25 0 50 100FT
SCALE: 1"= 50'

10 5 0 10 20FT
SCALE: 1"= 10'

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

ACCESS UNDERCROSSING AT RANCHO CALIFORNIA PLAN, PROFILE AND DETAILS

DESIGNED BY: A.M.
DRAWN BY: A.M.
CHECKED BY: S.H.V.
FILE NAME: C35.DGN

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

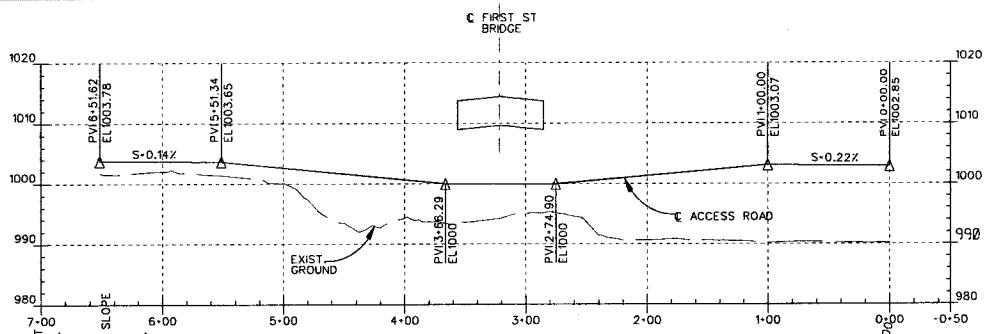
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/283
SPEC. NO. W912PL-15-B-0001

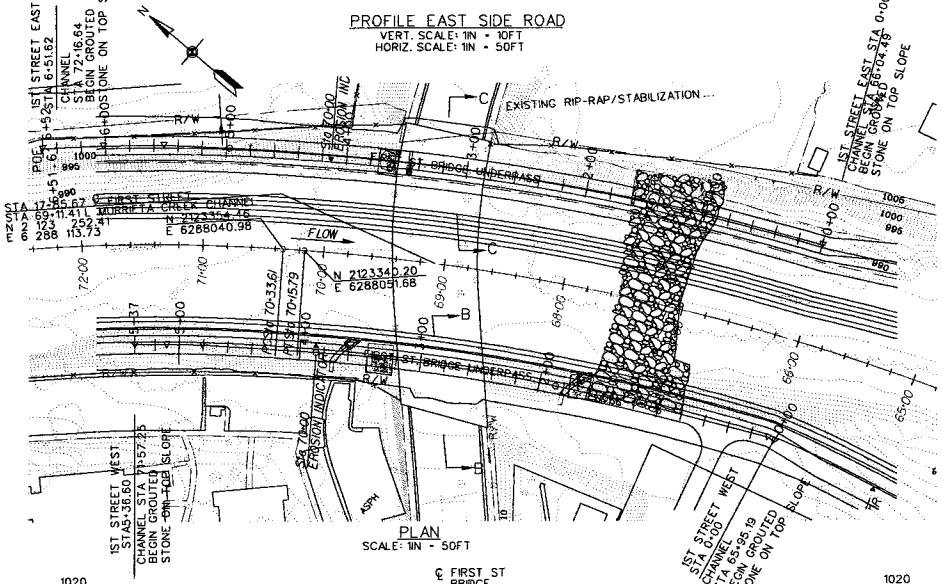
Scale: AS SHOWN
SHEET C-35

Plot Date: 25-JULY-2014

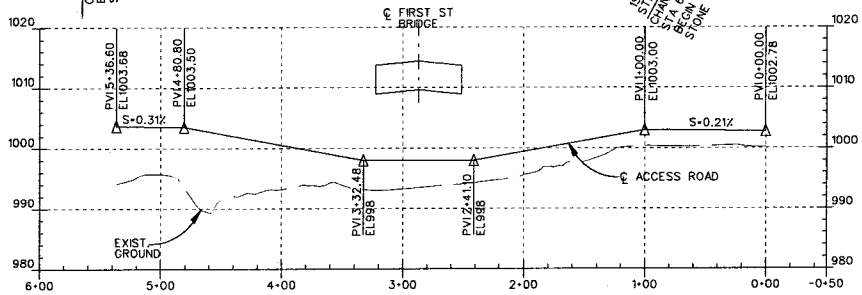
VALUE ENGINEERING PAYS



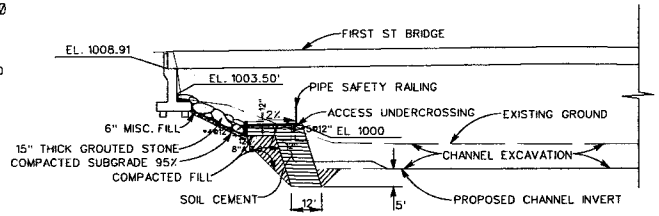
PROFILE EAST SIDE ROAD
VERT. SCALE: 1IN = 10FT
HORIZ. SCALE: 1IN = 50FT



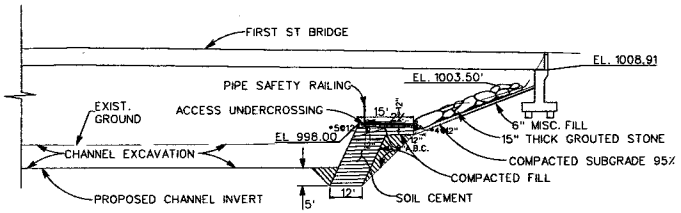
PLAN
SCALE: 1IN = 50FT



PROFILE WEST SIDE ROAD
VERT. SCALE: 1IN = 10FT
HORIZ. SCALE: 1IN = 50FT



SECTION C-C
NOT TO SCALE



SECTION B-B
NOT TO SCALE

	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'

50 25 0 50 100FT
SCALE: 1"= 50'

10 5 0 10 20FT
SCALE: 1"= 10'

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

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

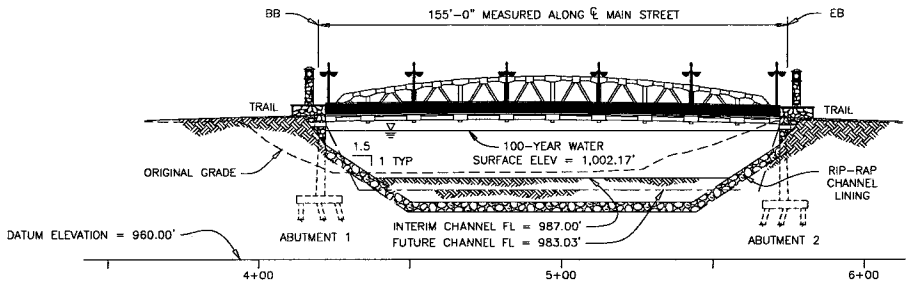
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

DESIGNED BY: A.M.
DRAWN BY: A.M.
CHECKED BY: S.H.V.
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
DISTRICT FILE NO. 226/284
SPEC. NO. W912PL-15-B-0001
FILE NAME: C36.DGN
Scale:
SHEET
C-36

SAFETY PAYS

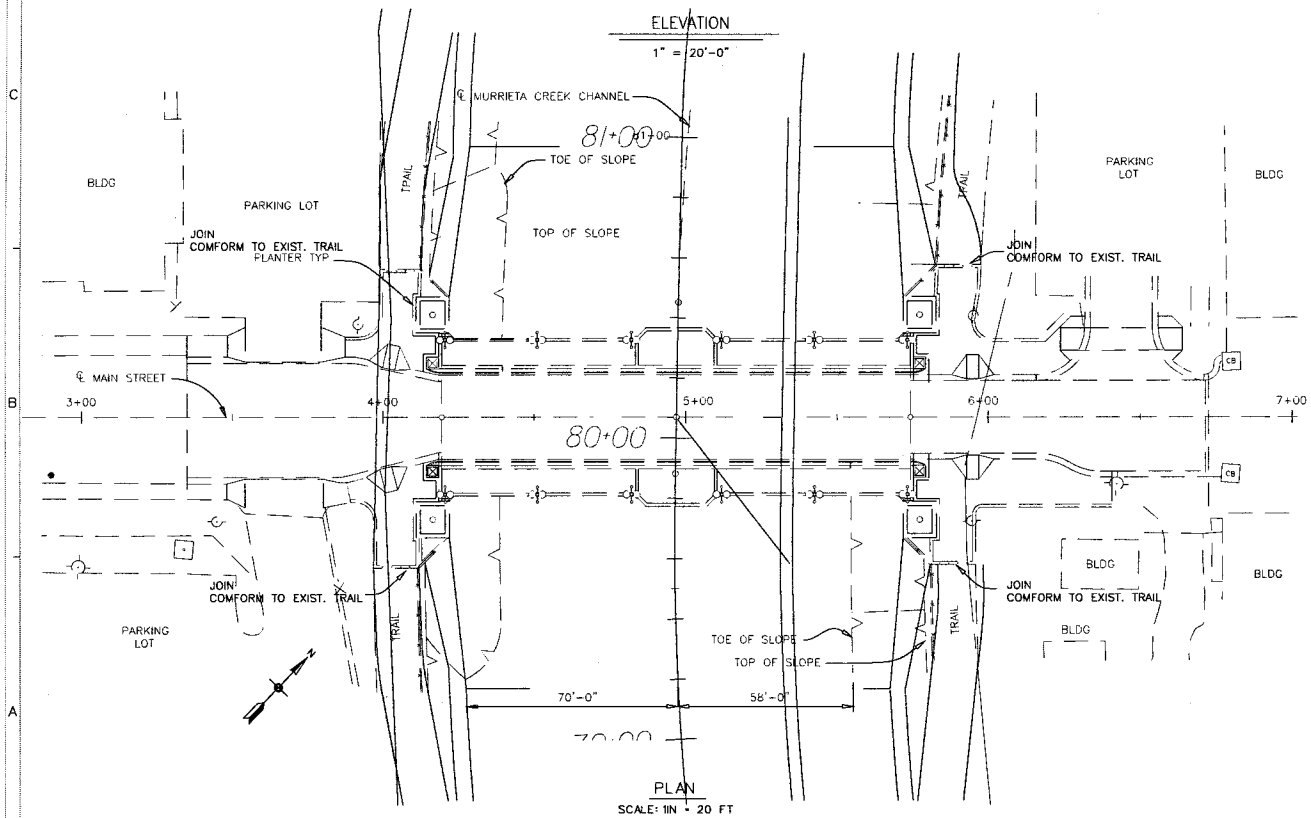
Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS



ELEVATION

1" = 20'-0"



PLAN

SCALE: 1IN = 20 FT

NOTES:

MAIN ST. BRIDGE TO BE CONSTRUCTED BY OTHERS.

20 10 0 20 40FT

SCALE: 1"= 20'

SAFETY PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

MAIN STREET BRIDGE
TIE-IN DETAILS

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

SUBMITTED BY: ARTHUR Y. JUNG, PE
PROJ. DESIGN MANAGER

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

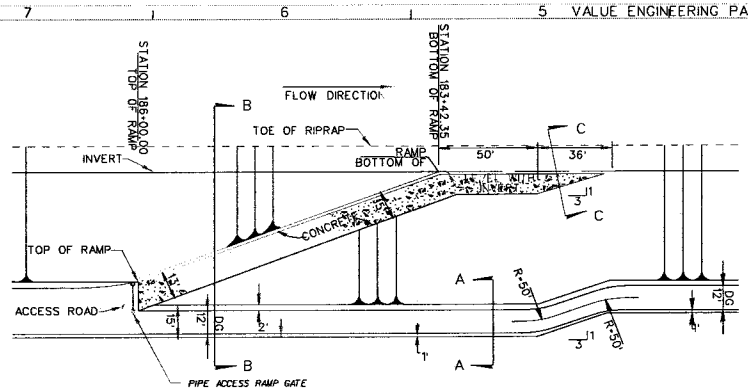
FILE NAME: C37.DGN

DISTRICT FILE NO. 226/285 | SPEC. NO. W912PL-15-B-0001

Scale:

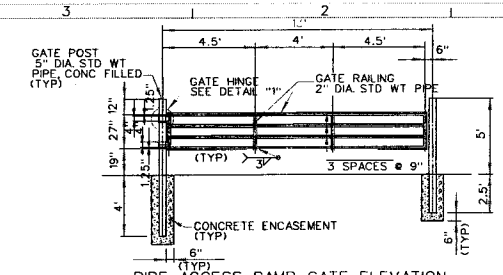
SHEET
C-37

Plot Date 25-JULY-2014



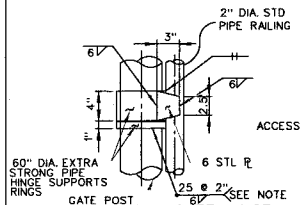
TOP OF RAMP		BOTTOM OF RAMP		CHANNEL SIDE
STATION	ELEVATION	STATION	ELEVATION	
186+00.00	1029.39	183+42.35	1003.63	WEST

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

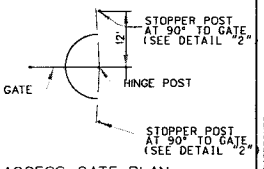


PIPE ACCESS RAMP GATE ELEVATION
NOT TO SCALE

NOTES:
ALL METAL PARTS OF PIPE GATE TO BE GALVANIZED

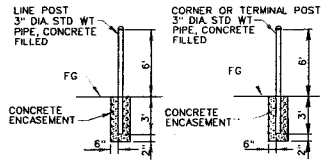


DETAIL "1" - GATE HINGE
NOT TO SCALE

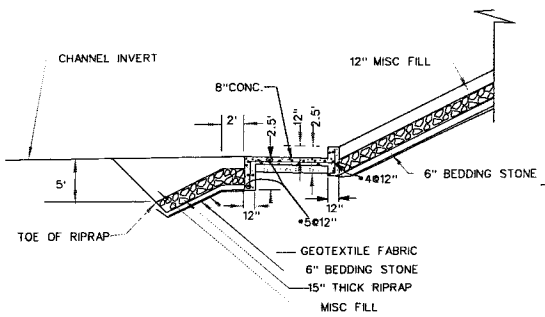


ACCESS GATE PLAN
NOT TO SCALE

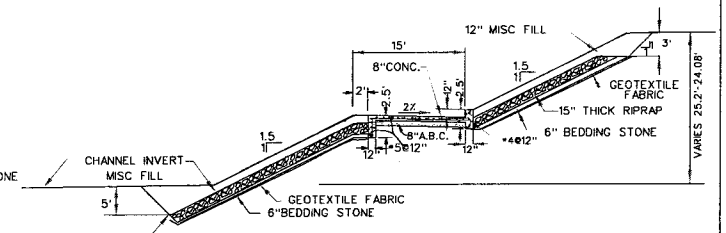
NOTE:
BOTTOM HINGE SUPPORT RING SHOP WELDED; TOP HINGE SUPPORT RING SHALL BE FIELD WELDED FOLLOWING GATE INSTALLATION.



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



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



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

40 20 0 40 80FT
SCALE: 1"= 40'

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

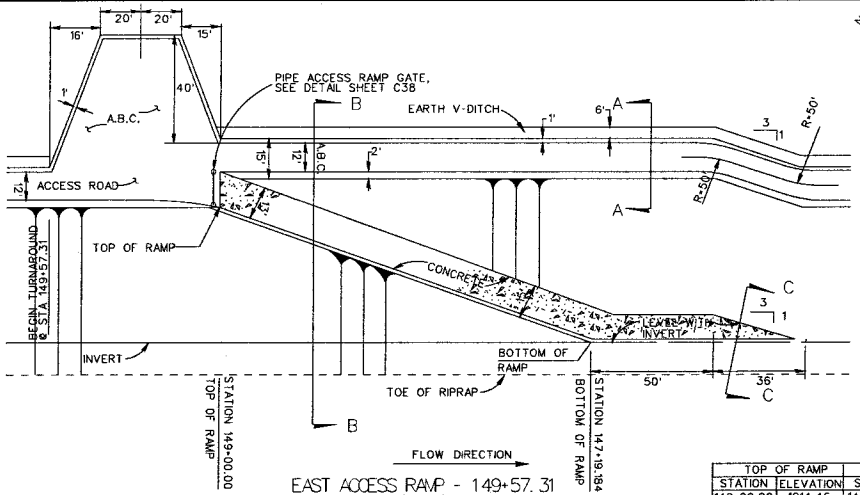
WEST ACCESS RAMP
PLAN AND SECTIONS - STA. 186+00

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

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: C38.DGN
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
DISTRICT FILE NO. 228/286
SPEC. NO. W912PL-15-B-0001
Scale:
SHEET
C-38

Plot Date: 25-JULY-2014

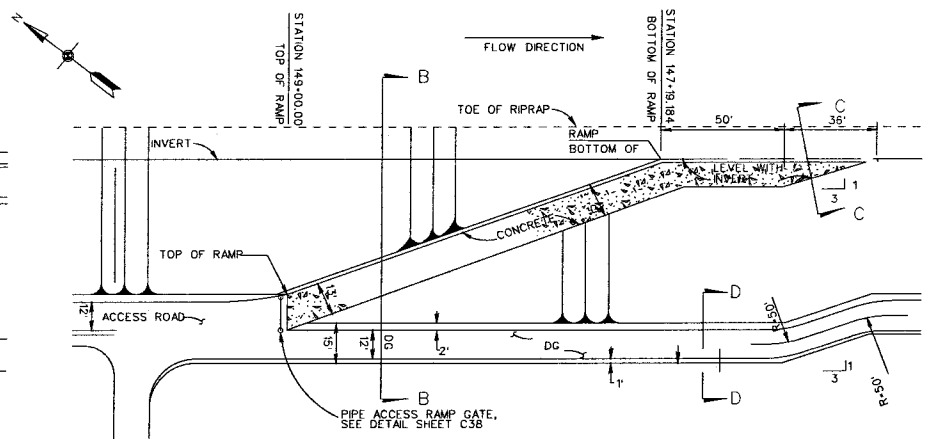
VALUE ENGINEERING PAYS



EAST ACCESS RAMP - 149+57.31

PLAN VIEW

N.T.S.

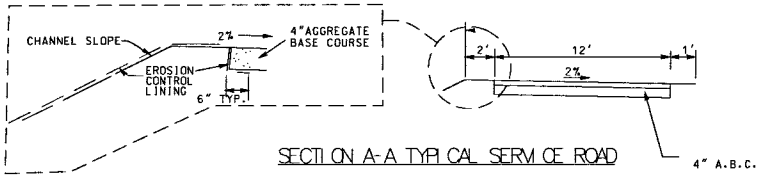


WEST ACCESS RAMP - 149+57.31

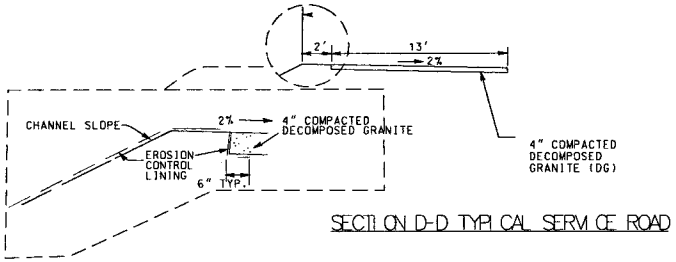
PLAN VIEW

N.T.S.

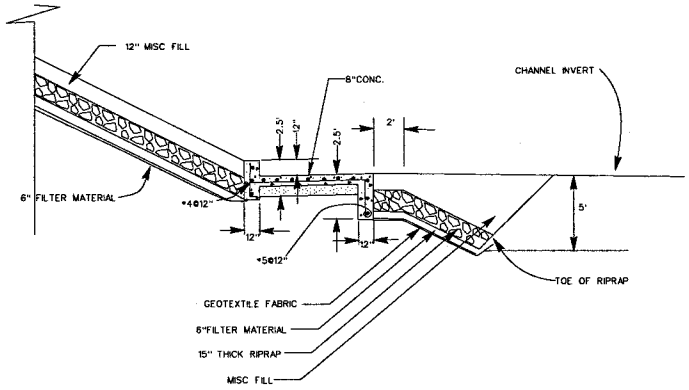
TOP OF RAMP		BOTTOM OF RAMP		CHANNEL SIDE
STATION	ELEVATION	STATION	ELEVATION	
149+00.00	1014.46	147+19.184	996.38	EAST
149+00.00	1014.46	147+19.184	996.38	WEST



SECTION A-A TYPICAL SERVICE ROAD

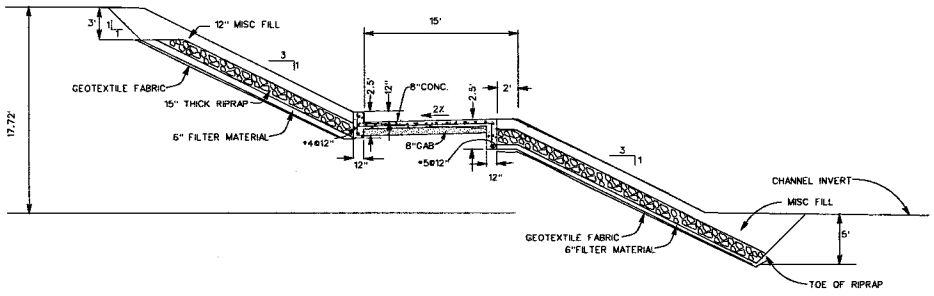


SECTION D-D TYPICAL SERVICE ROAD



SECTION C-C ACCESS RAMP DETAIL

N.T.S.



SECTION B-B ACCESS RAMP DETAIL

N.T.S.

SAFETY PAYS

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA

MURRIETA CREEK - PHASE 2

EAST ACCESS RAMP

PLAN AND SECTIONS - STA. 149+00

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

DESIGNED BY: J.G.R.

DRAWN BY: J.G.R.

CHECKED BY: S.H.V.

FILE NAME: C39.DGN

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

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

DISTRICT FILE NO. 226/287

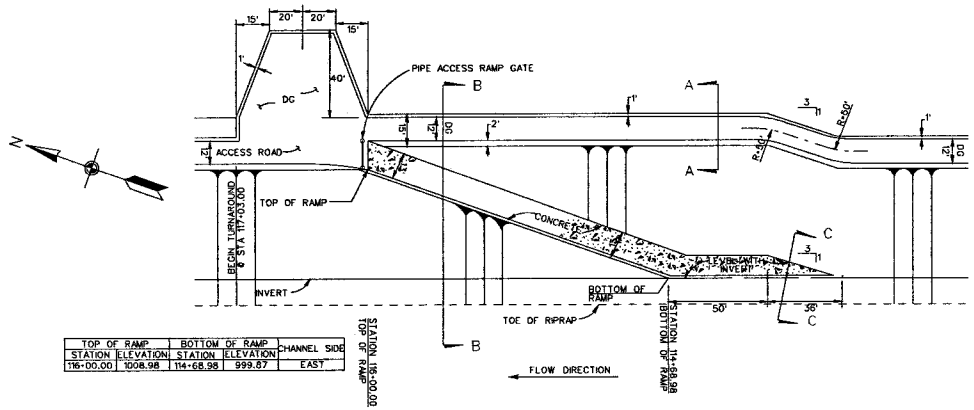
SPEC. NO. W912PL-14-B-0003

Scale:

SHEET C-39

Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS

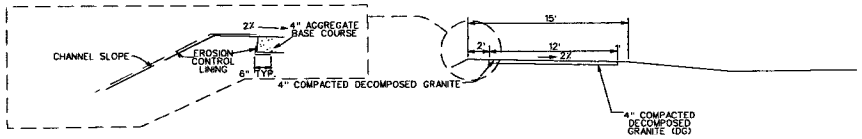


TOP OF RAMP		BOTTOM OF RAMP		CHANNEL SIDE
STATION	ELEVATION	STATION	ELEVATION	
116+00.00	1008.98	114+68.98	999.67	EAST

EAST ACCESS RAMP - 116+00.00

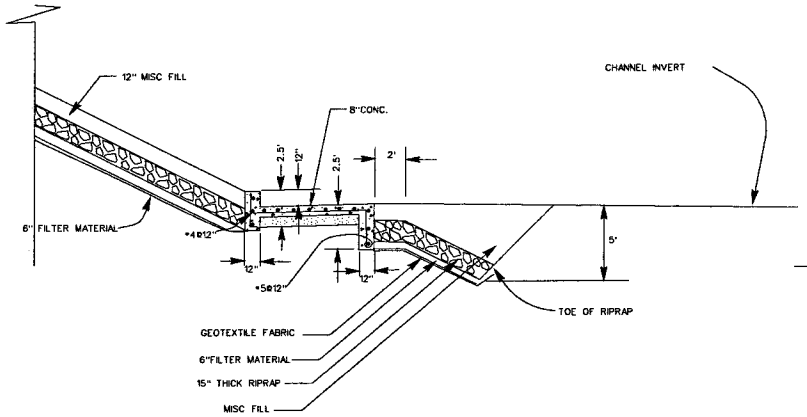
PLAN VIEW

N.T.S.



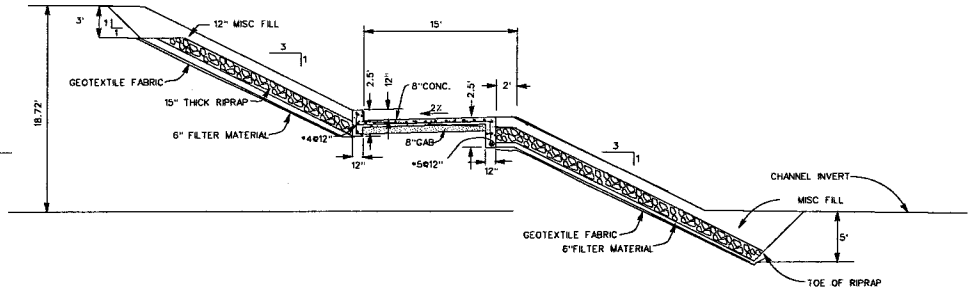
SECTION A-A TYPICAL SERVICE ROAD

N.T.S.



SECTION C-C ACCESS RAMP DETAIL

N.T.S.



SECTION B-B ACCESS RAMP DETAIL

N.T.S.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA

MURRIETA CREEK - PHASE 2

EAST ACCESS RAMP

PLAN AND SECTIONS - STA. 116+00

DESIGNED BY: J.G.R.

DRAWN BY: J.G.R.

CHECKED BY: S.H.V.

FILE NAME: C40.DGN

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

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

DISTRICT FILE NO. 226/288 | SPEC. NO. W912PL-14-B-0003

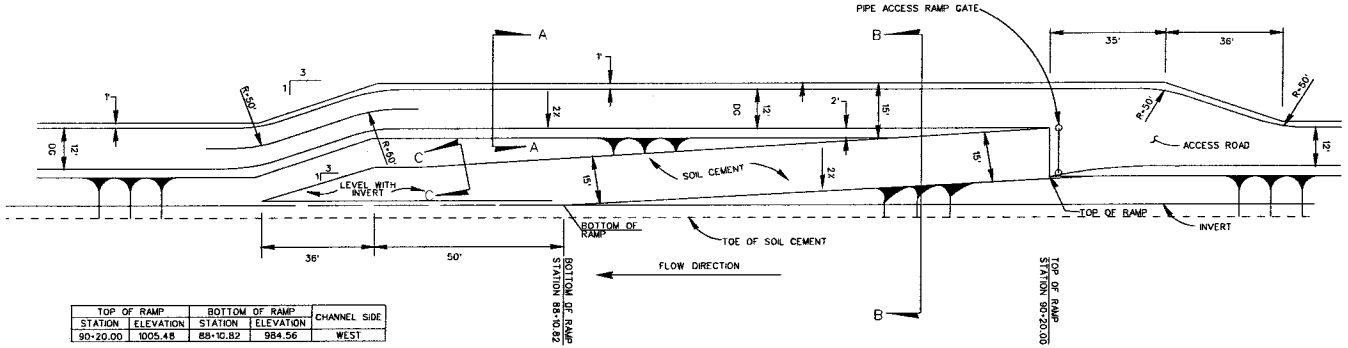
Scale:

SHEET C-40

SAFETY! PAYS

Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS

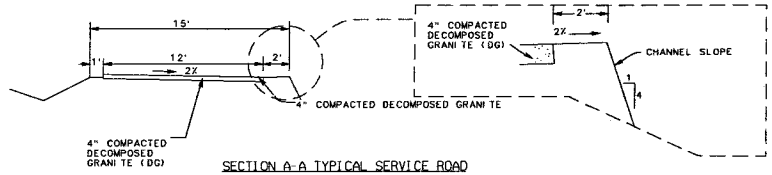


TOP OF RAMP		BOTTOM OF RAMP		CHANNEL SIDE
STATION	ELEVATION	STATION	ELEVATION	
90+20.00	1005.48	88+10.82	984.56	WEST

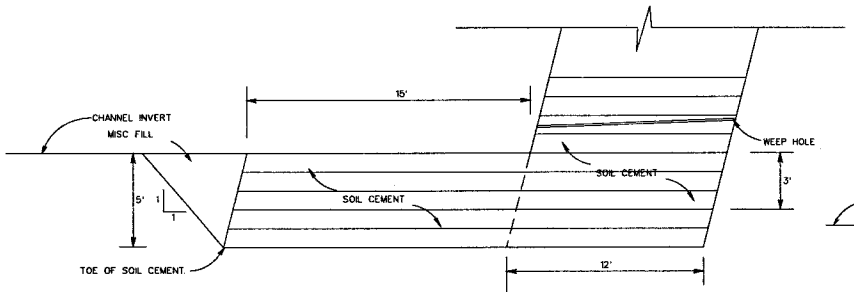
WEST ACCESS RAMP - 90+20.00

PLAN VIEW

N.T.S.

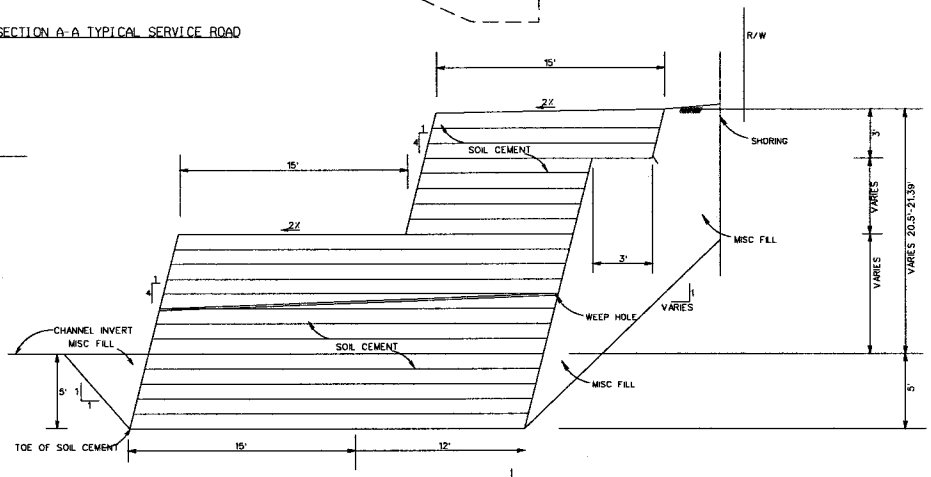


SECTION A-A TYPICAL SERVICE ROAD



SECTION C-C ACCESS RAMP DETAIL

N.T.S.



SECTION B-B ACCESS RAMP DETAIL

N.T.S.

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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.G.R.
CHECKED BY: S.H.V.
FILE NAME: C41.DGN

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

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

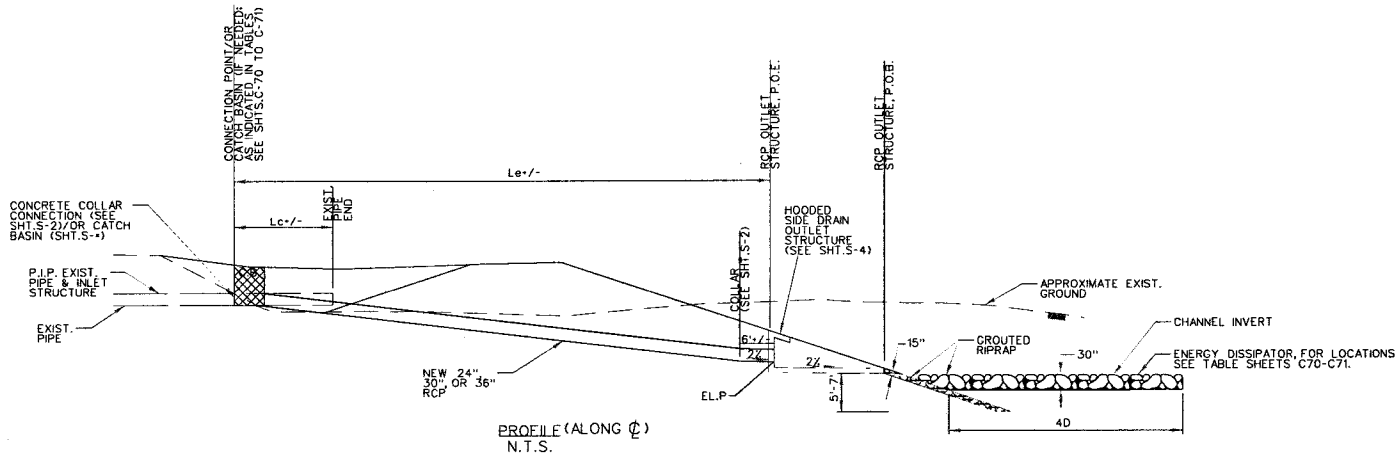
DISTRICT FILE NO. 226/269 | SPEC. NO. W912PL-14-B-0003

Scale:

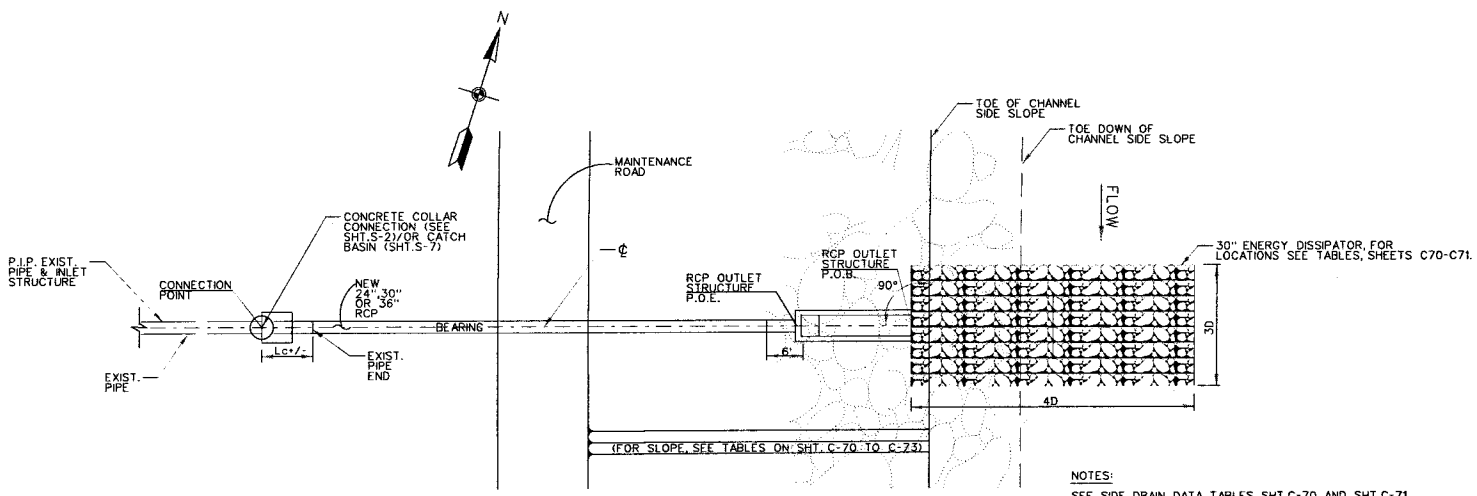
SHEET C-41

Plot Date 25-JULY-2014

VALUE ENGINEERING PAYS



PROFILE (ALONG ℄)
N.T.S.



PLAN
N.T.S.

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.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

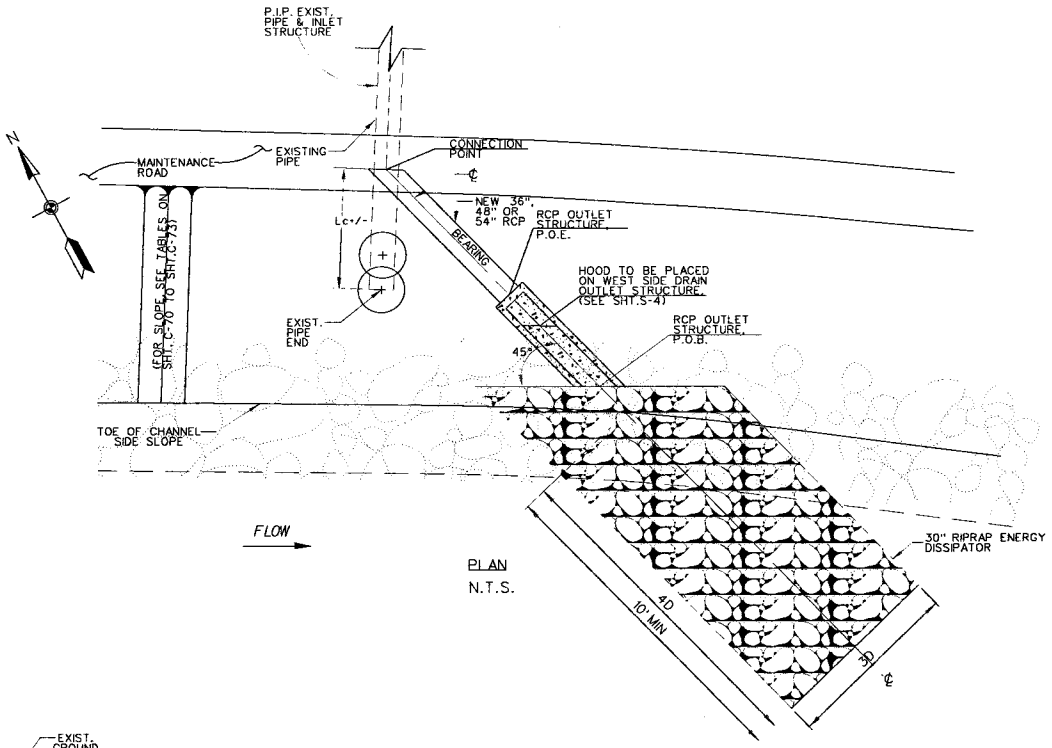
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

DESIGNED BY: RV
DRAWN BY: RV
CHECKED BY: SV
SUBMITTED BY: ARTHUR Y. JUNG, P.E. CHIEF, DESIGN BRANCH
FILE NAME: C65.DGN
DISTRICT FILE NO. 228/???
SPEC. NO. W912PL-14-B-0003
Scale: AS SHOWN
SHEET C-65

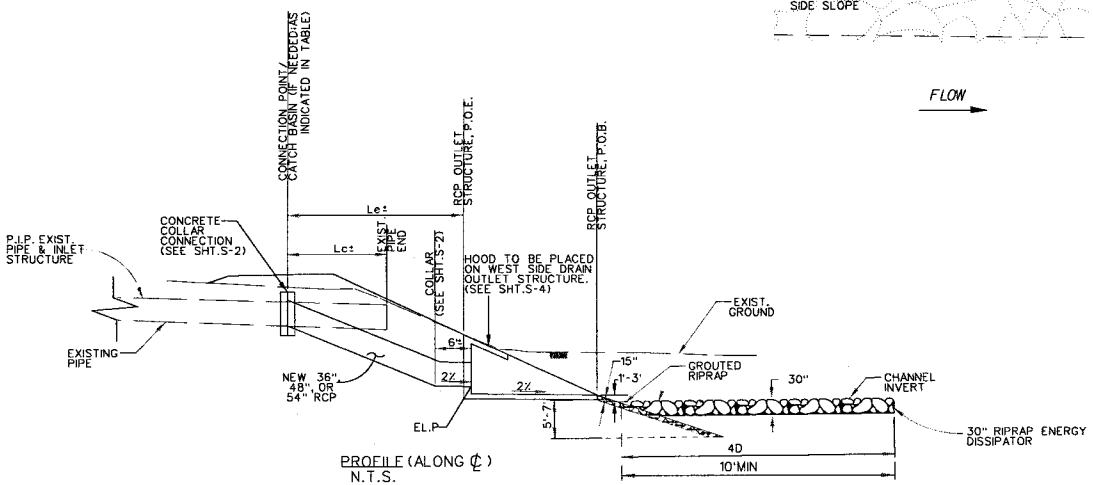
SAFETY! PAYS

Plot Date: 23-July-2014

VALUE ENGINEERING PAYS



PLAN
N.T.S.



PROFILE (ALONG ℄)
N.T.S.

NOTES:

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

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

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

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

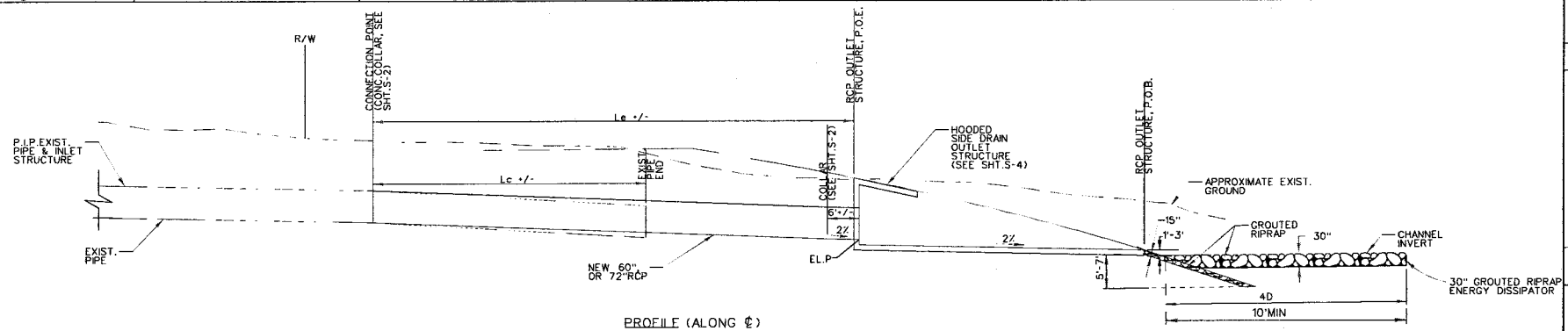
DESIGNED BY: RV
DRAWN BY: RV
CHECKED BY: SV
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
DISTRICT FILE NO. 226/777
SPEC. NO. W912PL-14-B-0003
FILE NAME: C66.DGN

Scale: AS SHOWN
SHEET
C-66

SAFETY! PAYS

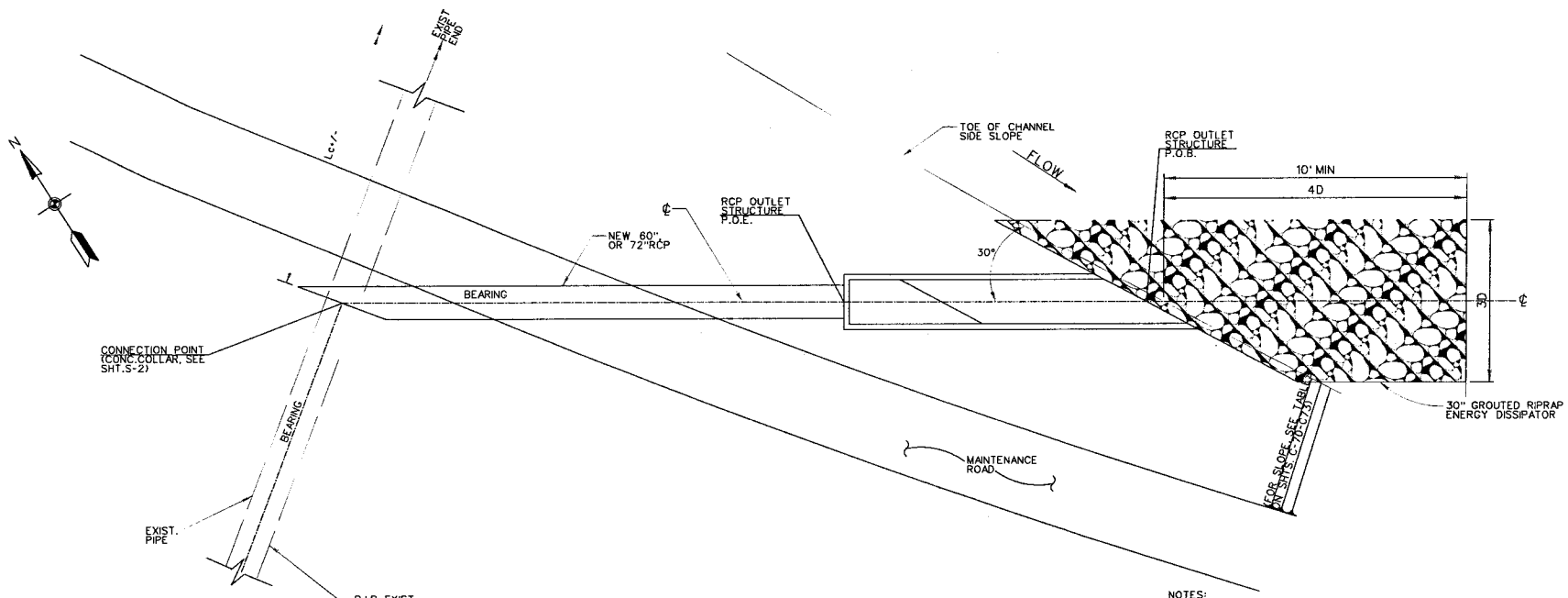
Plot Date: 15-October-2014

VALUE ENGINEERING PAYS



PROFILE (ALONG ℄)
N.T.S.

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



PLAN
N.T.S.

NOTES:

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

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

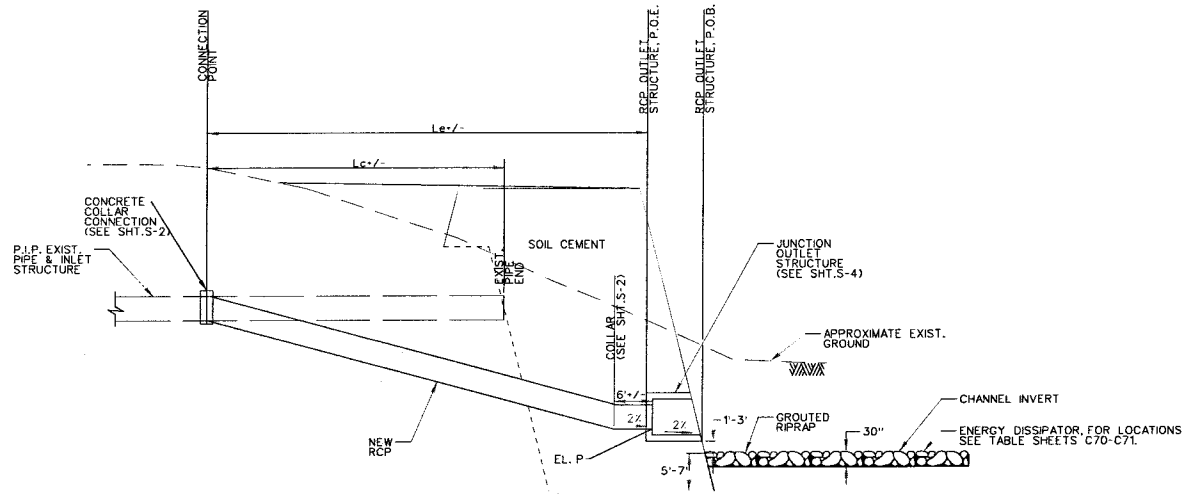
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
TYPICAL 60", 72" SIDE DRAIN THROUGH RIP RAP SLOPE
PLAN AND PROFILE

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

DESIGNED BY: RV
DRAWN BY: RV
CHECKED BY: SV
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH
FILE NAME: C67.DGN
DISTRICT FILE NO. 226/???
SPEC. NO. W912PL-14-B-0003
Scale: AS SHOWN
SHEET C-67

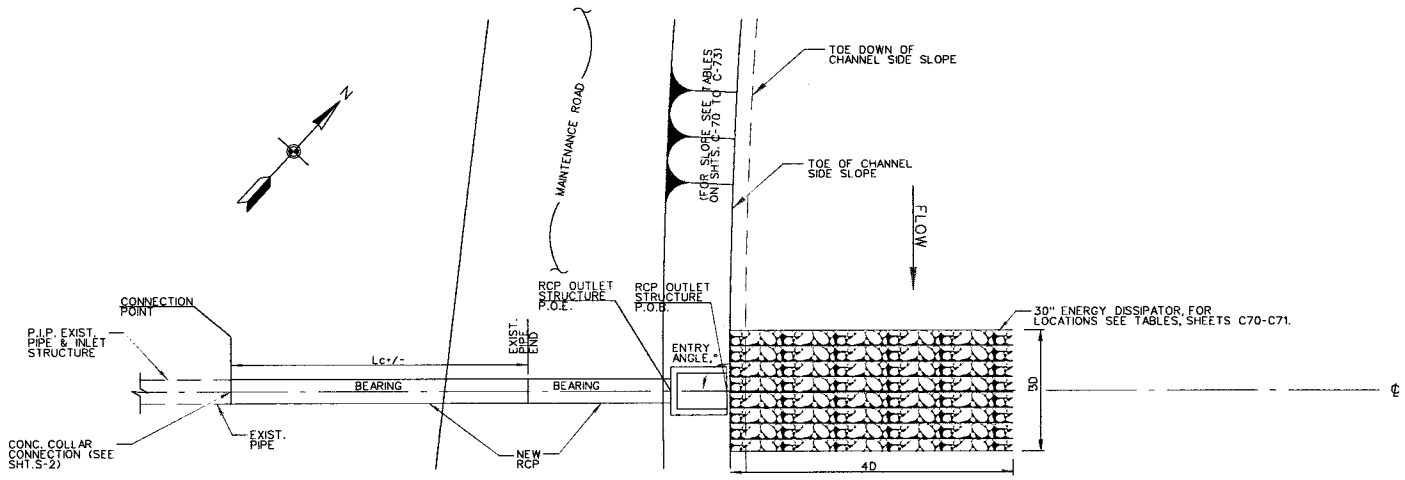
SAFETY! PAYS

Plot Date: 23-July-2014



PROFILE (ALONG ℄)
N.T.S.

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



PLAN
N.T.S.

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.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

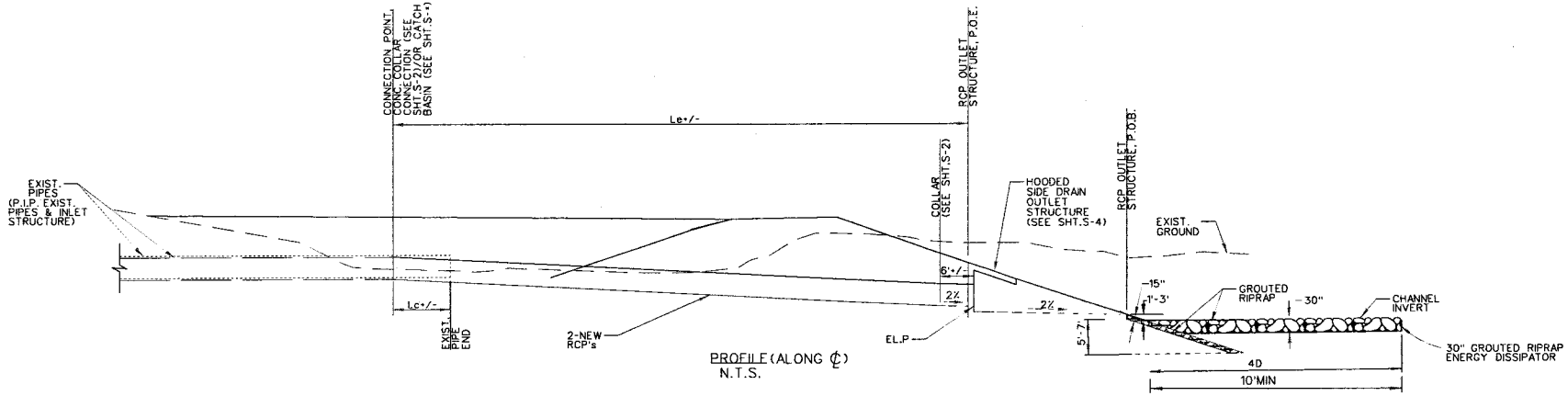
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
TYPICAL 24", 30", 48", 54", 60", 72" RCP SIDE DRAIN THROUGH SOIL CEMENT SLOPE
PLAN AND PROFILE

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

SUBMITTED BY: ARTHUR Y. LUNG, PE, CHIEF, DESIGN BRANCH
DESIGNED BY: RV
DRAWN BY: RV
CHECKED BY: SV
FILE NAME: C68.DGN
SPEC. NO. W912PL-14-B-0003
DISTRICT FILE NO. 226/777

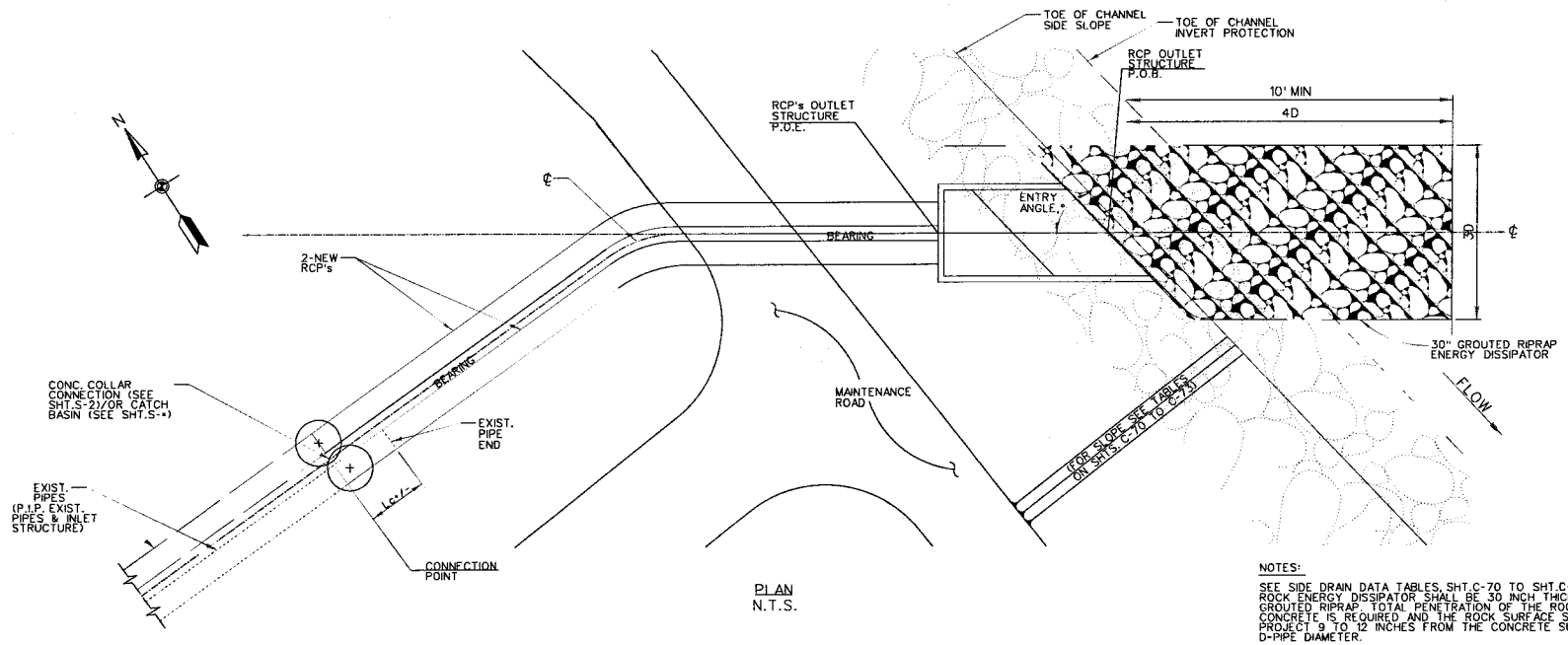
Scale: AS SHOWN
SHEET C-68

Plot Date: 25-JULY-2014



PROFILE (ALONG ℄)
N.T.S.

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



PLAN
N.T.S.

NOTES:

SEE SIDE DRAIN DATA TABLES, SHT.C-70 TO SHT.C-73
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.
D-PIPE DIAMETER.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
TYPICAL DOUBLE-PIPE RCP SIDE DRAINS
THROUGH RIP RAP SLOPE
PLAN AND PROFILE

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

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

DESIGNED BY: RL
DRAWN BY: RY
CHECKED BY: SV

DISTRICT FILE NO. 226/777
SPEC. NO. W912PL-14-B-0003
FILE NAME: C-69.DGN

Scale: AS SHOWN
SHEET
C-69

Plot Date: 25-JULY-2014

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.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
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:

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" 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.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
SIDE DRAIN DATA TABLE
STA. 60+97 TO STA. 106+99

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

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

Plot Date: 25-JULY-2014

SIDE DRAIN TABULATION (CONT.)

REFERENCE STA FOR BID ITEMS	CHANNEL STA.	OUTLET STRUCTURE P.O.B. STA.	ELEVATION PIPE (EL. 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.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

SIDE DRAIN DATA TABLE
STA. 108+28 TO SAT. 183+04

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

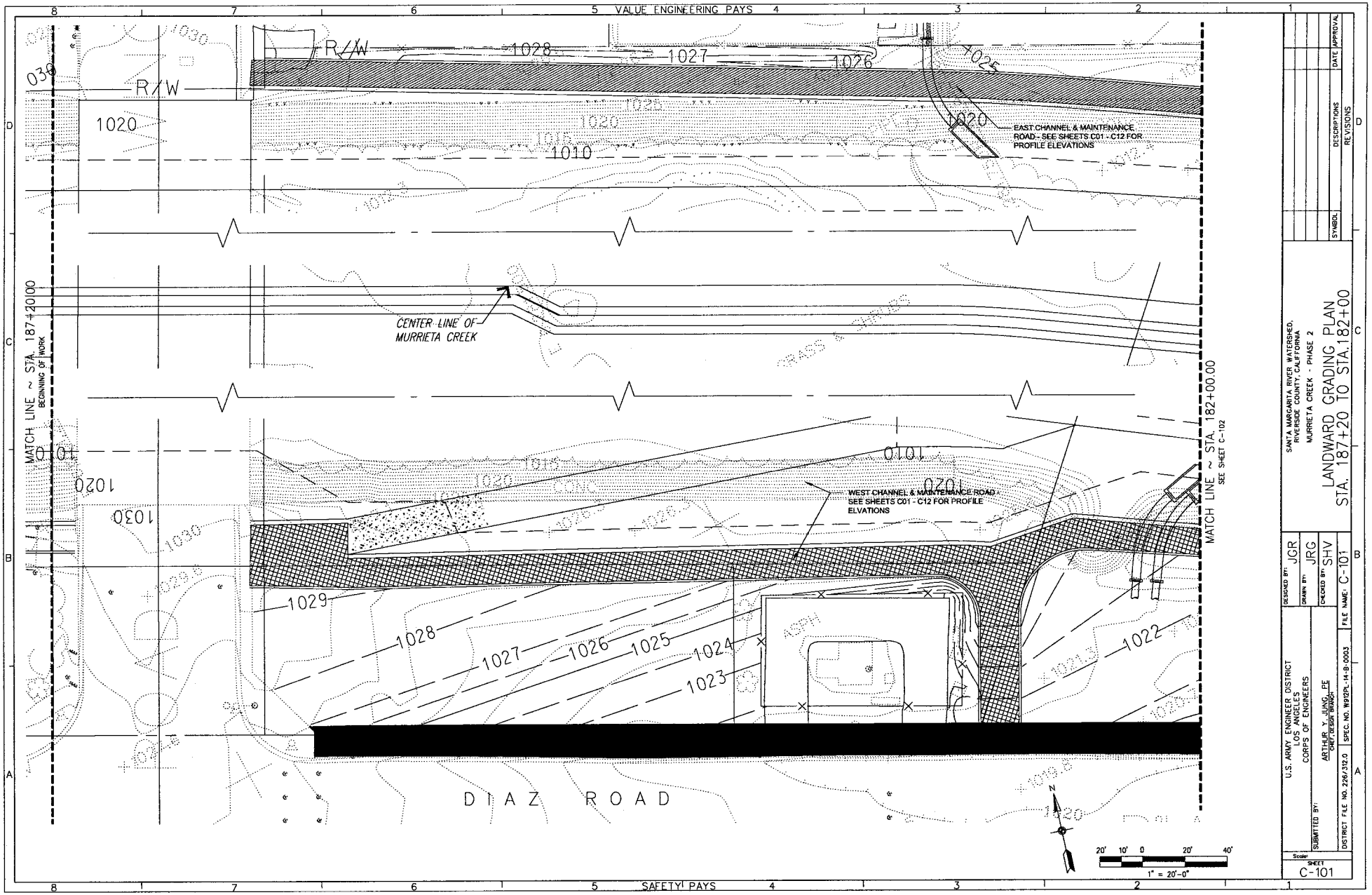
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DESIGNED BY: RV
DRAWN BY: RV
CHECKED BY: SY

DISTRICT FILE NO. 226/311 | SPEC. NO. W912PL-14-B-0003 | FILE NAME: .DGN

Scale: AS SHOWN
SHEET
C-71

Plot Date: 25-JULY-2014



SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

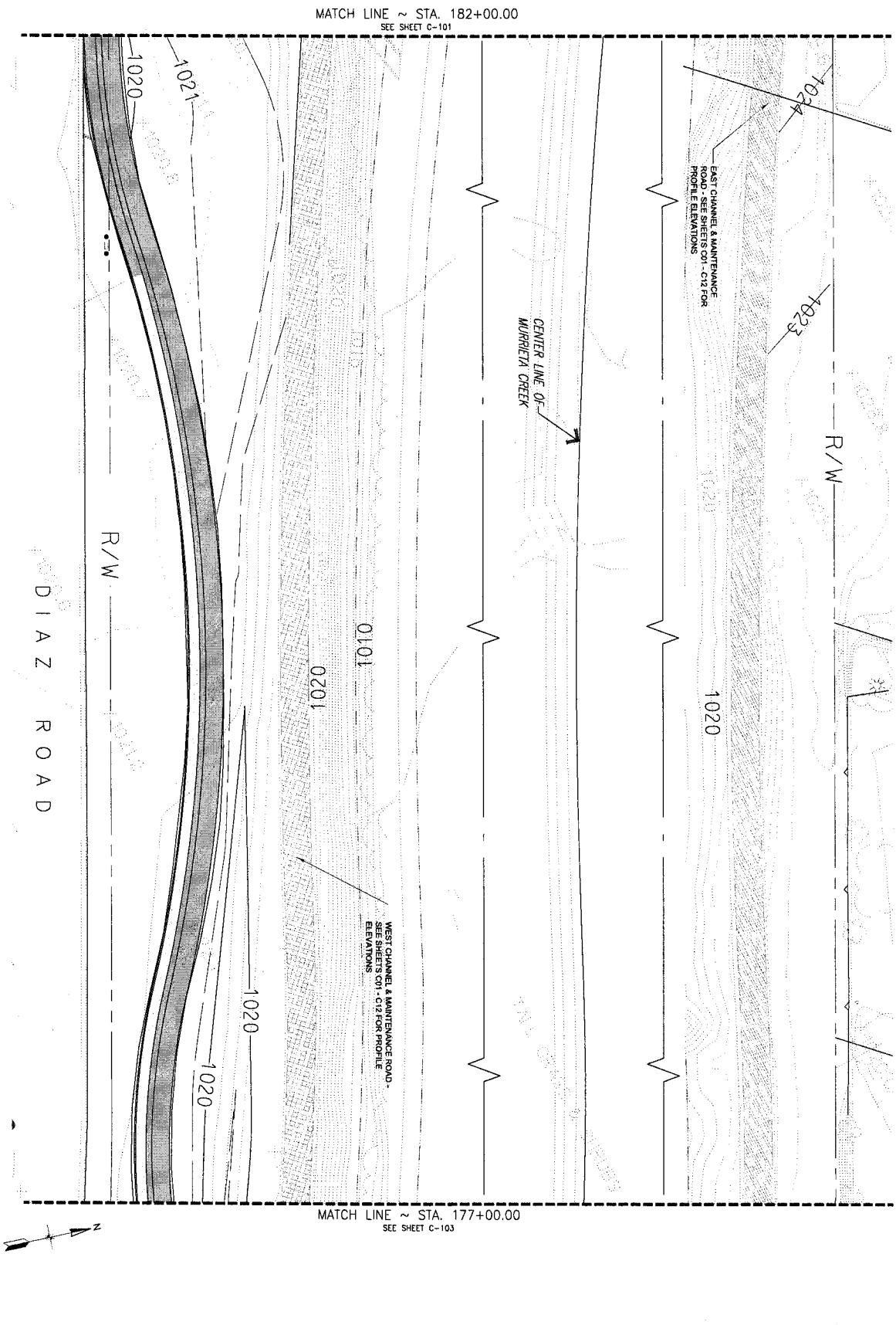
SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

LANDWARD GRADING PLAN
STA. 187+20 TO STA.182+00

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

DESIGNED BY: JGR
DRAWN BY: JRG
CHECKED BY: SHV
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME: C-101
DISTRICT FILE NO. 226/312.0
SPEC. NO. W912PL-14-B-0003
Scale:
SHEET C-101

Plot Date: 25-JULY-2014



SAFETY! PAYS

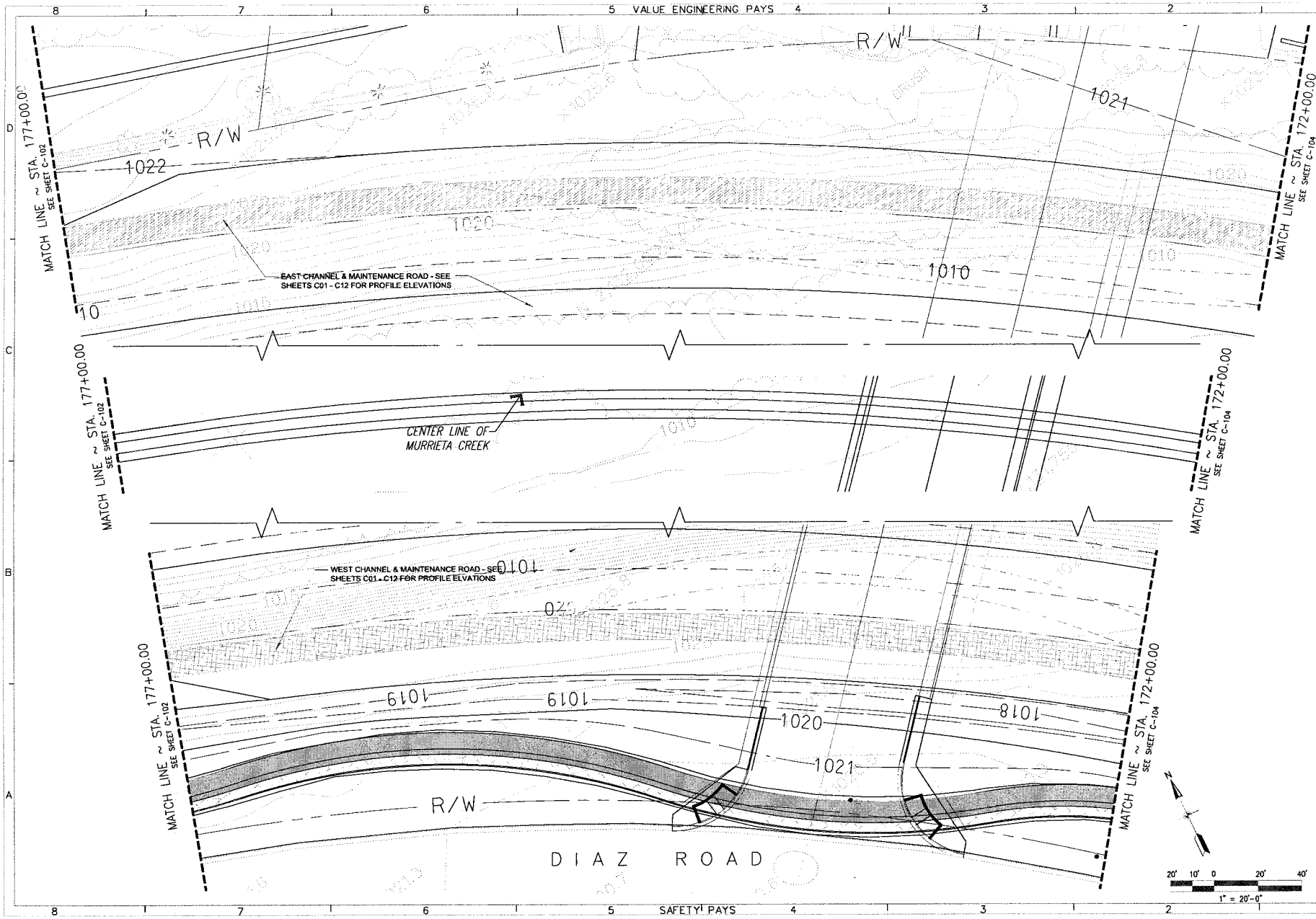
VALUE ENGINEERING PAYS

U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DESIGNED BY:	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFFORNIA MURRIETA CREEK - PHASE 2	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	DRAWN BY:	LANDWARD GRADING PLAN STA. 182+00 TO STA. 177+00	
	CHECKED BY:		
DISTRICT FILE NO. 225/312.1 · SPEC. NO. W912PL-14-B-0003	FILE NAME:		

Sheet C-102

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

Plot Date 25-AUG-2014



SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

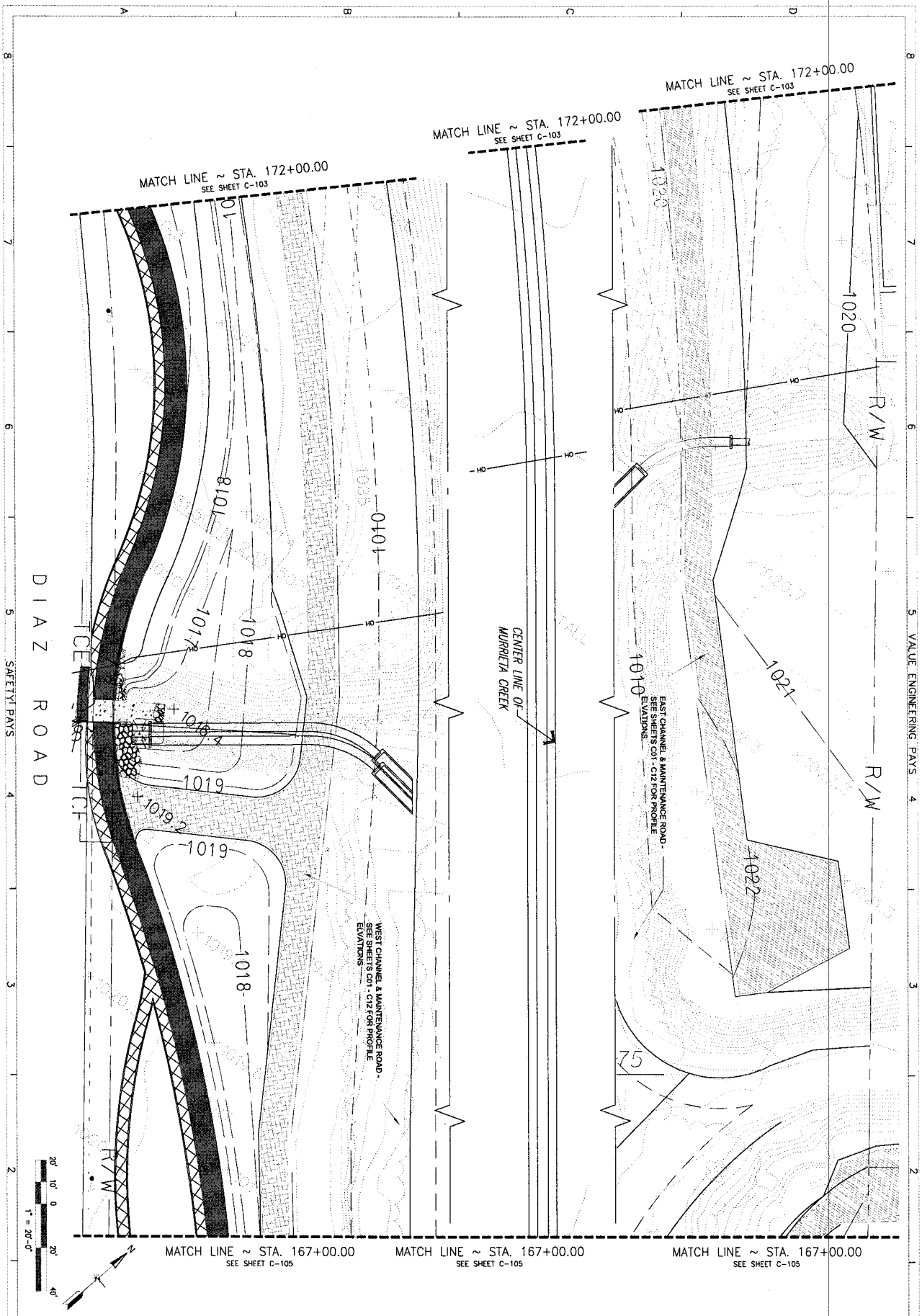
SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2

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

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

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY:
ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME:
DISTRICT FILE NO. 226/314
SPEC. NO. W912PL-14-B-0003
Scale:
SHEET
C-103

Plot Date: 25-JULY-2014



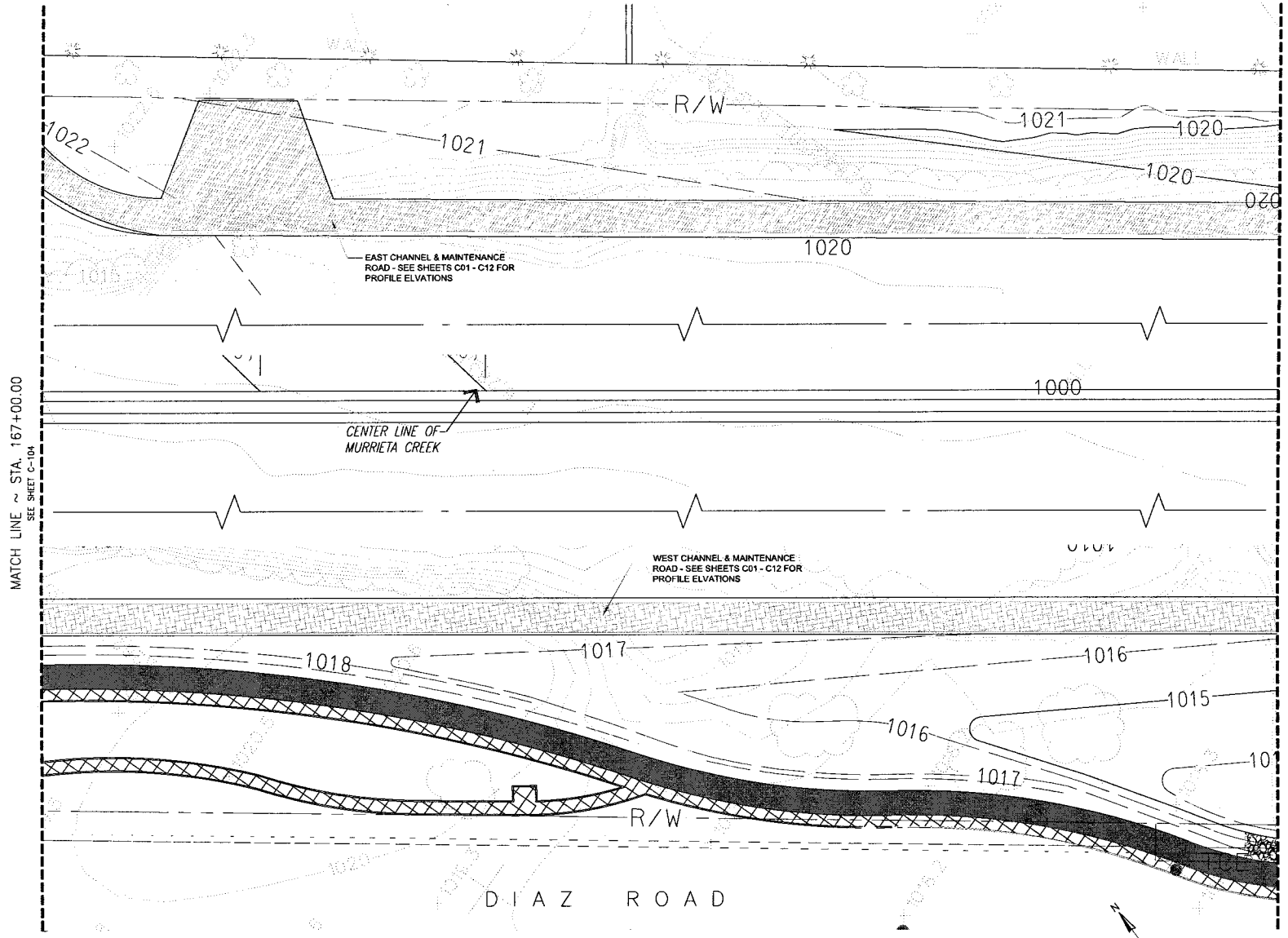
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DESIGNED BY:	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	DRAWN BY:	LANDWARD GRADING PLAN STA. 172+00 TO STA. 167+00	
	CHECKED BY:		
DISTRICT FILE NO. 226/315 · SPEC. NO. W912PL-14-B-0003	FILE NAME:		

SCUM SHEET C-104

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

PAD Date: 25-AUG-2014

VALUE ENGINEERING PAYS



SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

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

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

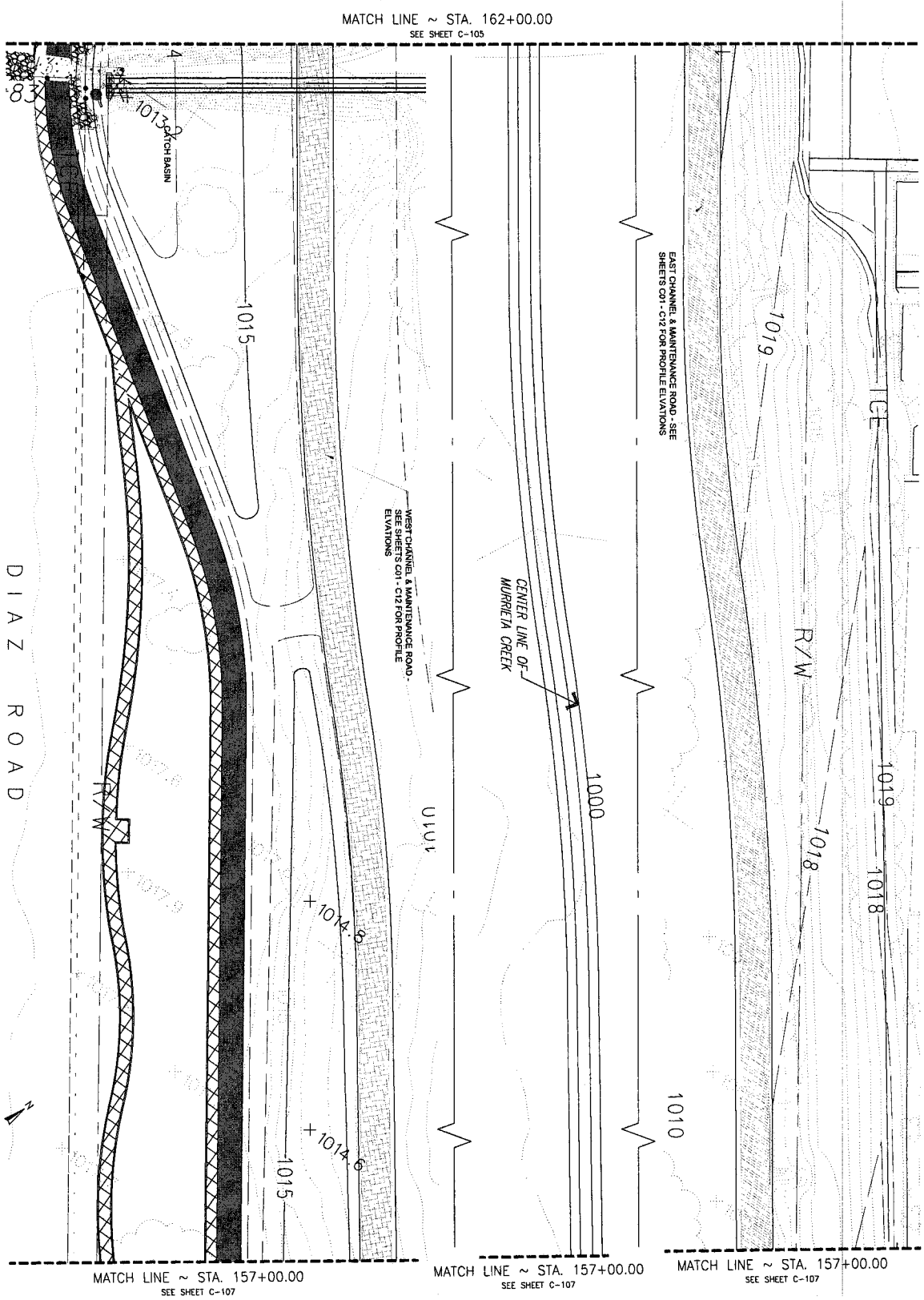
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DESIGNED BY:
DRAWN BY:
CHECKED BY:
FILE NAME:

DISTRICT FILE NO. 226/316
SPEC. NO. W912PL-14-B-0003

Scale:
SHEET
C-105

Plot Date: 25-JULY-2014



SAFETY! PAYS

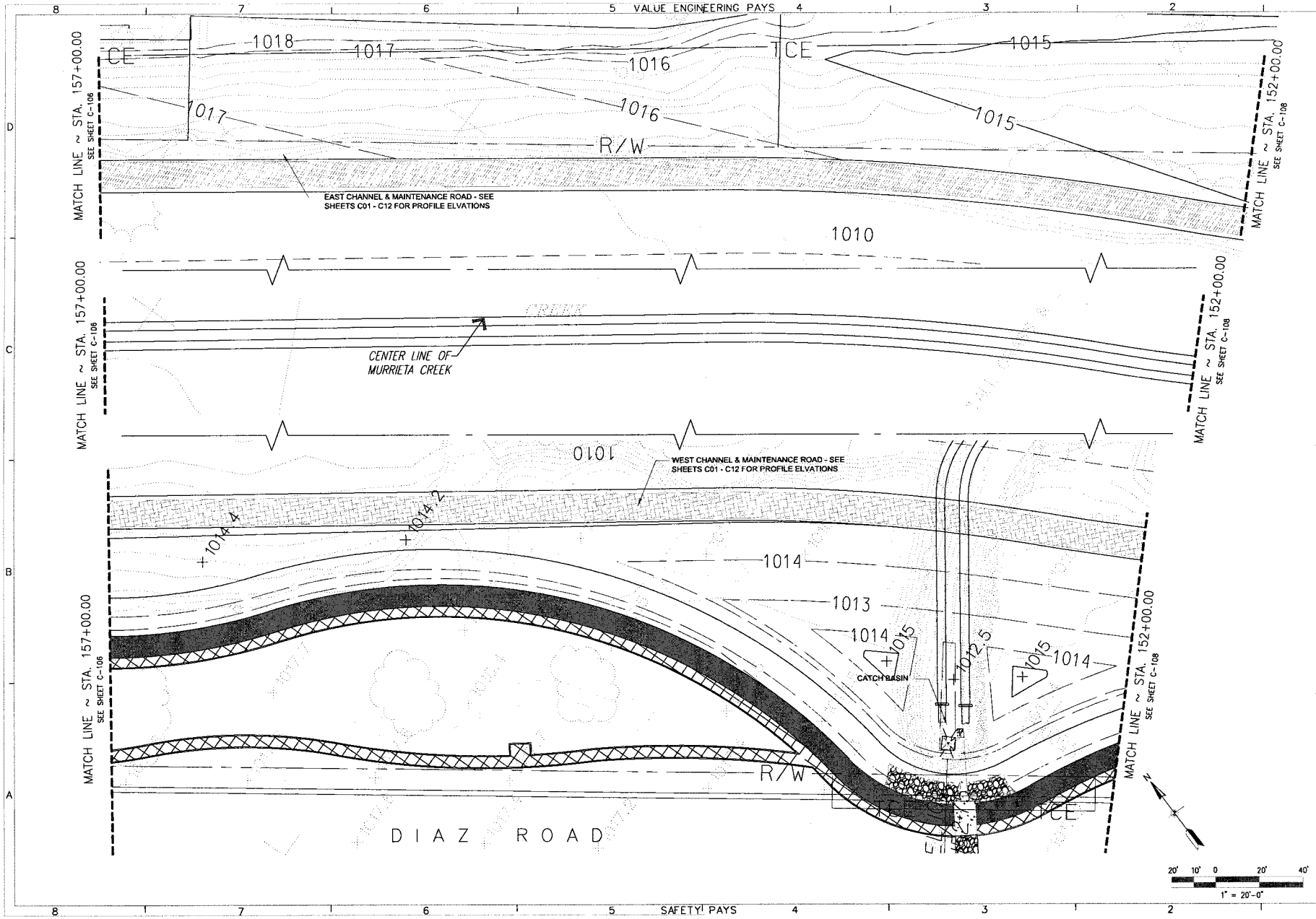
VALUE ENGINEERING PAYS

U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DESIGNED BY:	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2 LANDWARD GRADING PLAN STA. 162+00 TO STA. 157+00	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	DRAWN BY:		
	CHECKED BY:		
DISTRICT FILE NO. 226/317 · SPEC. NO. W912PL-14-B-0003	FILE NAME:		

SCALE · SHEET C-106

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

FRW Date: 25-AUG-2014



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

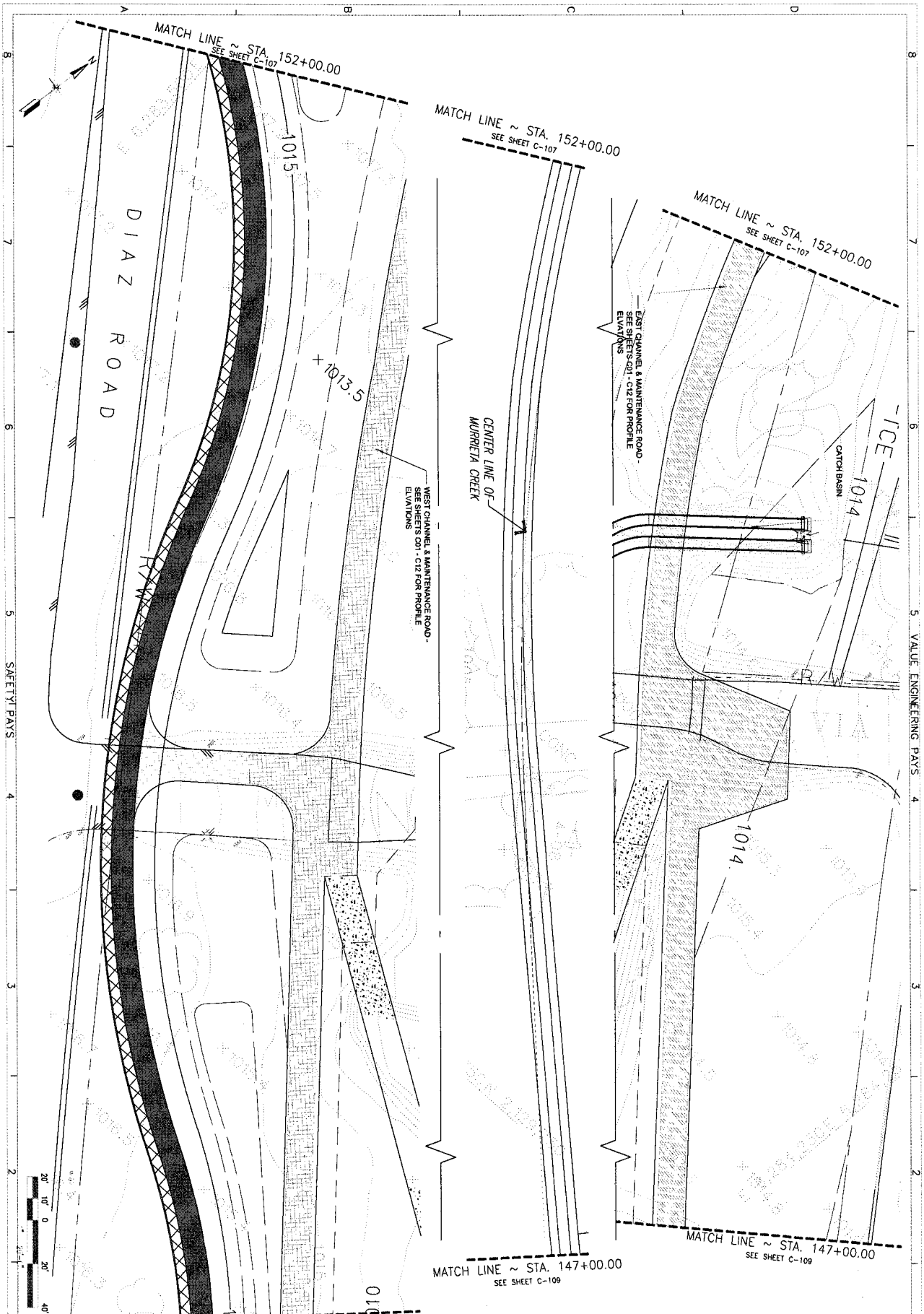
LANDWARD GRADING PLAN
STA. 157+00 TO STA. 152+00

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

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

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH
FILE NAME:
DISTRICT FILE NO. 228/318
SPEC. NO. W912PL-14-B-0003
Scale:
SHEET C-107

Plot Date: 25-JULY-2014



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

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

DRAWN BY:
CHECKED BY:

DISTRICT FILE NO. 226/319 | SPEC. NO. W912PL-14-B-0003 | FILE NAME:

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA

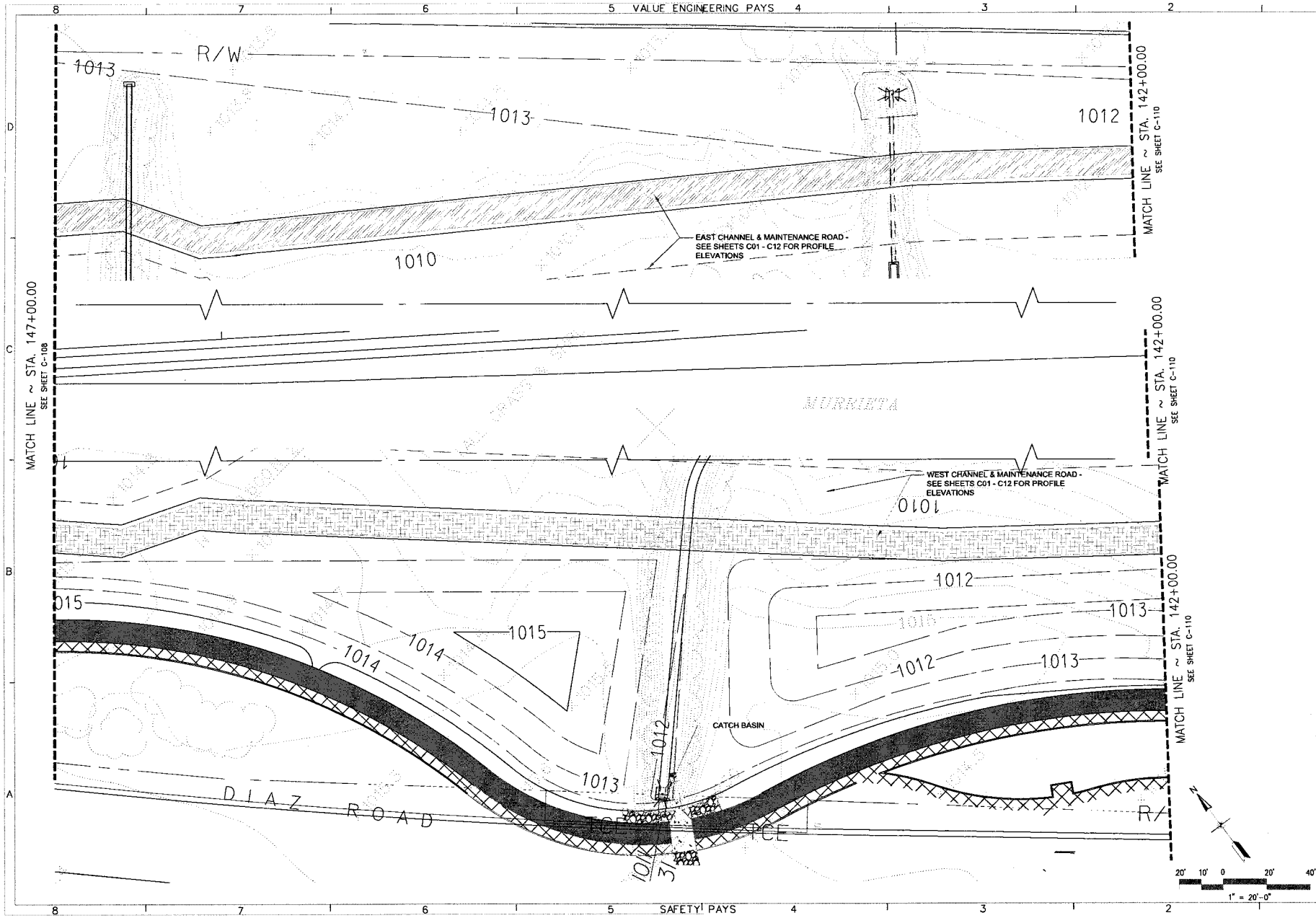
MURRIETA CREEK - PHASE 2

LANDWARD GRADING PLAN
STA. 152+00 TO STA.147+00

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

Sheet C-108

File Date: 25-AUG-2014



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

LANDWARD GRADING PLAN
STA. 147+00 TO STA.142+00

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

DESIGNED BY:
DRAWN BY:
CHECKED BY:

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

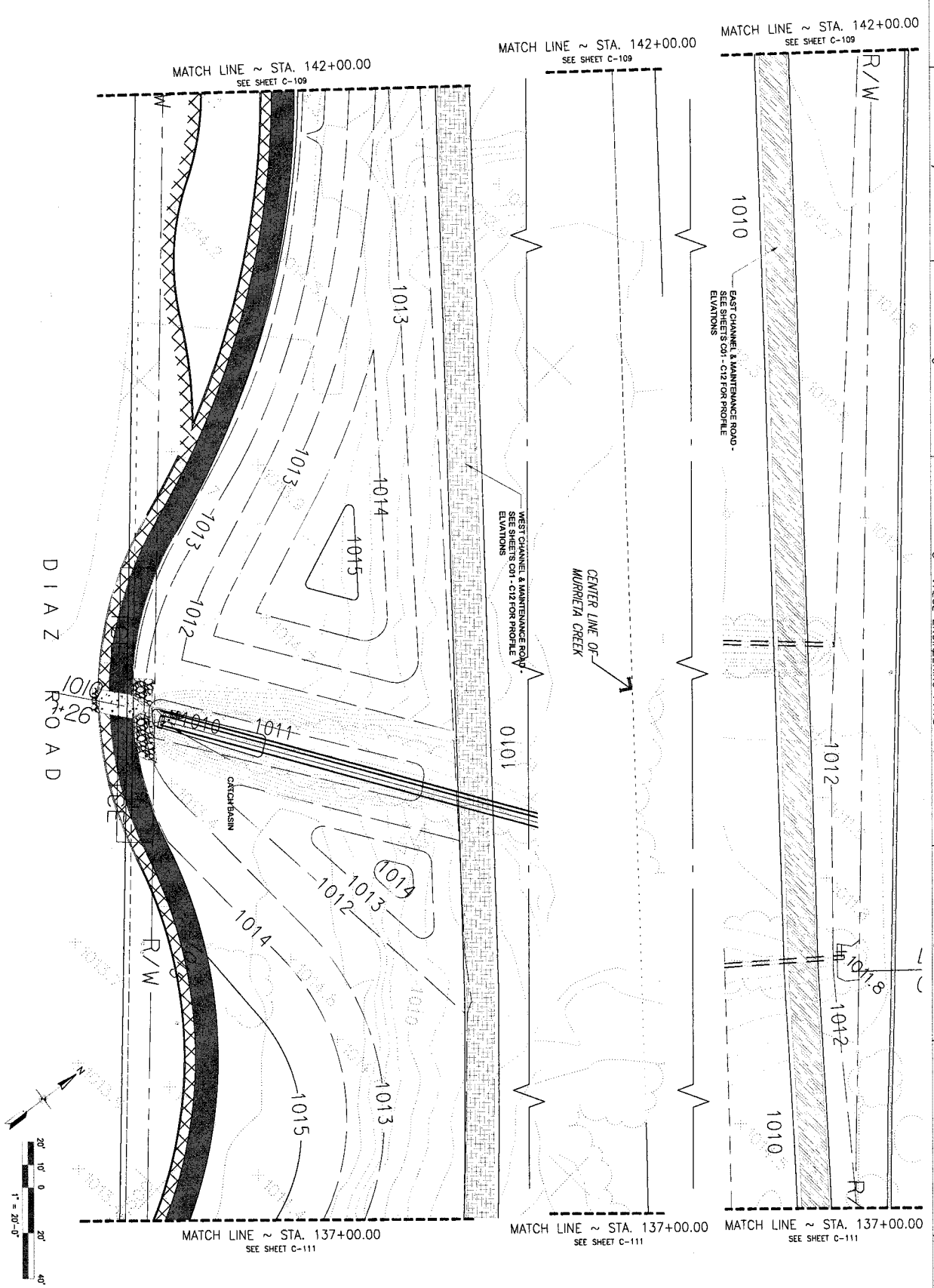
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DISTRICT FILE NO. 226/320 | SPEC. NO. W912PL-14-B-0003 | FILE NAME:

Scale:

SHEET
C-109

Plot Date: 25-JULY-2014



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

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

DISTRICT FILE NO. 226/321 | SPEC. NO. W912PL-14-B-0003 | FILE NAME:

DESIGNED BY:
DRAWN BY:
CHECKED BY:

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

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

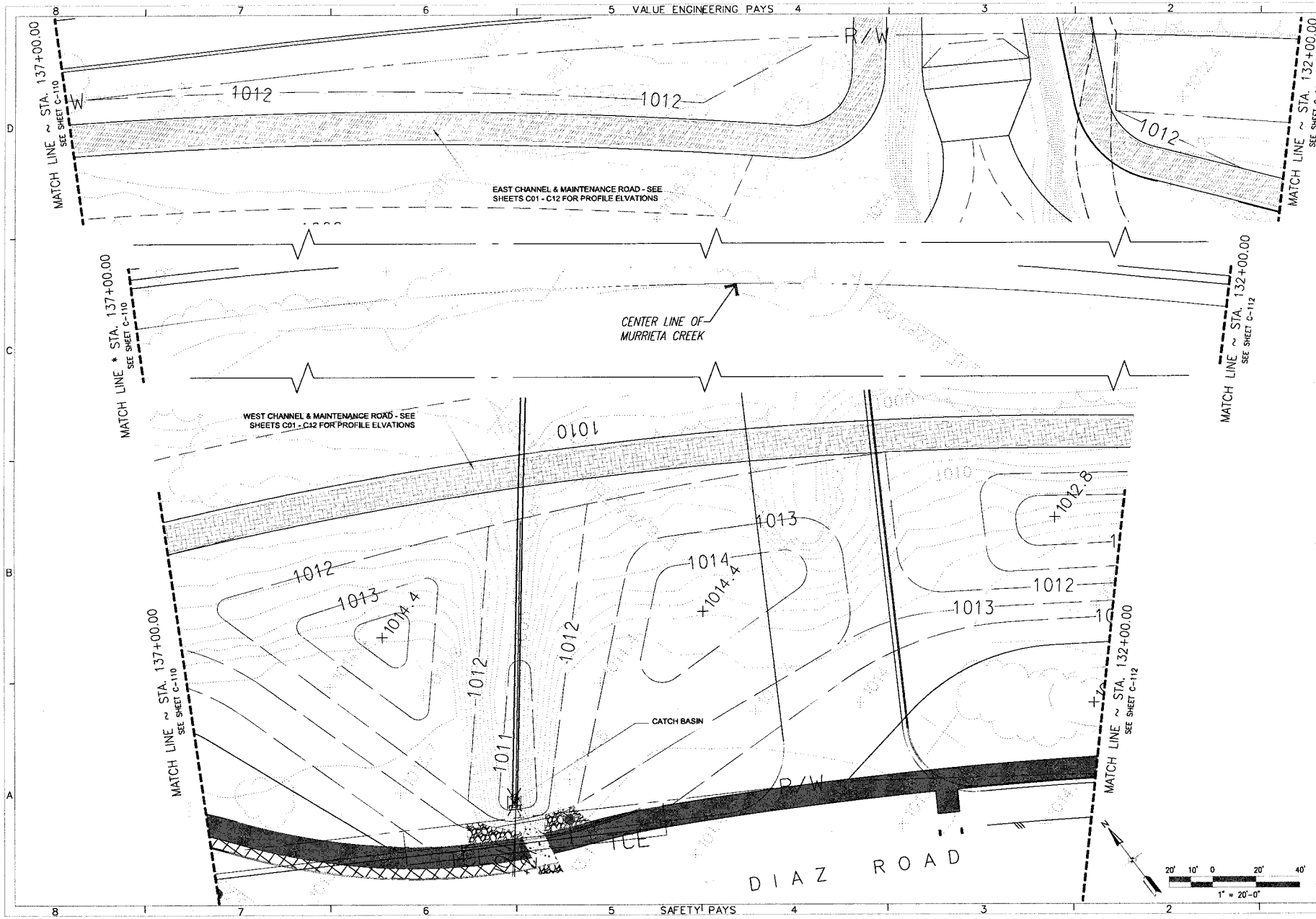
SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SHEET C-110

Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS

SAFETY PAYS



SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

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

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

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

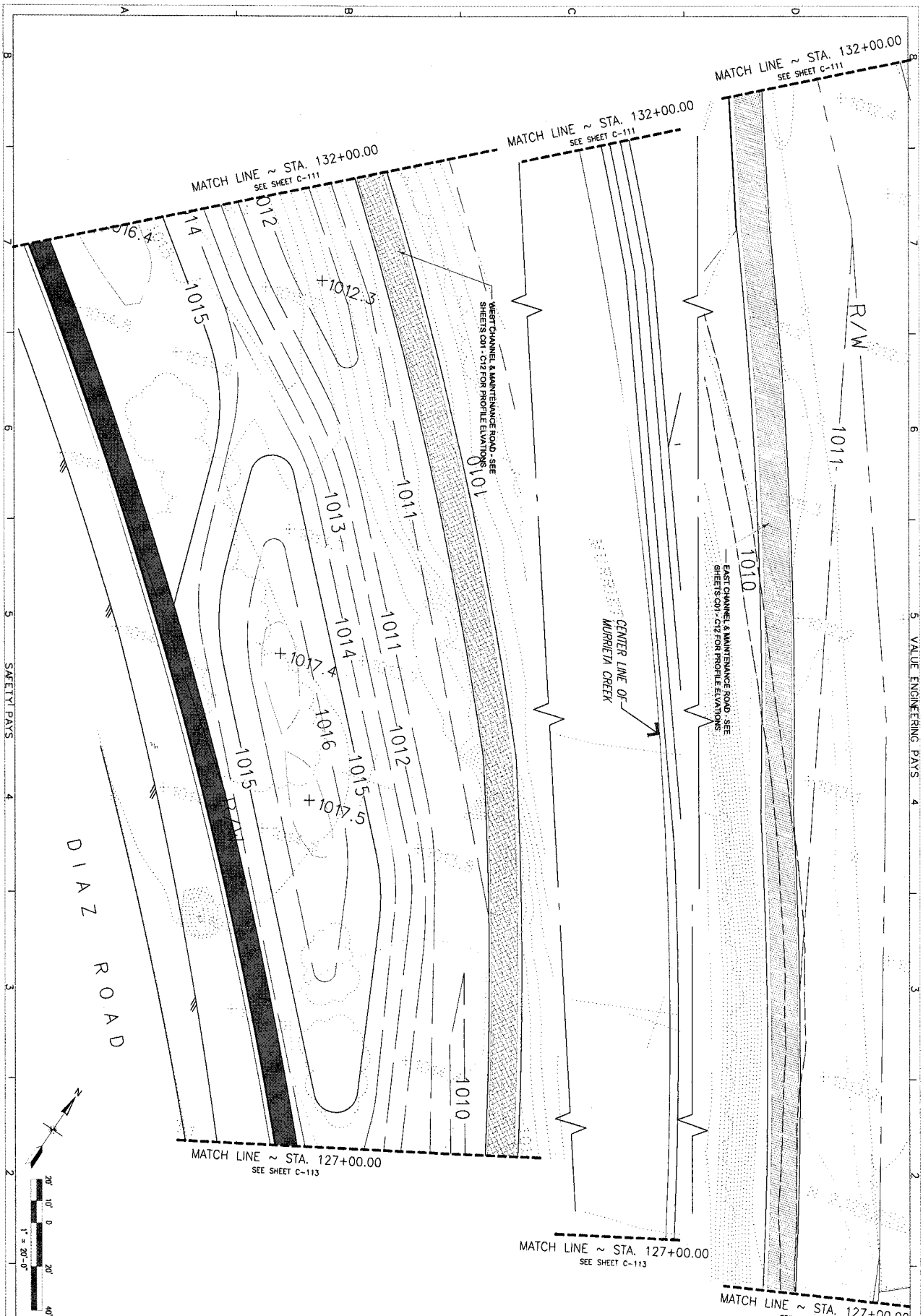
DESIGNED BY:
DRAWN BY:
CHECKED BY:

DISTRICT FILE NO. 226/322 | SPEC. NO. W912PL-14-B-0003 | FILE NAME:

Scale:

SHEET C-111

Plot Date: 25-JULY-2014



SAFETY! PAYS

VALUE ENGINEERING PAYS

U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DESIGNED BY: JGR DRAWN BY: JGR CHECKED BY: SHV	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFFORNIA MURRIETA CREEK - PHASE 2 LANDWARD GRADING PLAN STA. 132+00 TO STA. 127+00	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH			
DISTRICT FILE NO. 226/322 · SPEC. NO. W912PL-14-B-0003 · FILE NAME:			

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

Sheet C-112

Plot Date: 25-AUG-2014

VALUE ENGINEERING PAYS

MATCH LINE ~ STA. 127+00.00
SEE SHEET C-112

R/W

1010

1010

R/W

1010

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

MATCH LINE ~ STA. 127+00.00
SEE SHEET C-112

PRC

PCS

CENTER LINE OF MURRIETA CREEK

MATCH LINE ~ STA. 127+00.00
SEE SHEET C-112

1000

1010

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

1010

MATCH LINE ~ STA. 122+00.00
SEE SHEET C-114

1011

1012

R/W

TCE

TCE

DROP INLET EL 1008
CHANNEL Sta 123+95

DIAZ ROAD

GAS UG T

20' 10' 0 20' 40'
1" = 20'-0"

SAFETY! PAYS

SYMBOL	DESCRIPTIONS REVISIONS	DATE	APPROVAL

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

LANDWARD GRADING PLAN
STA. 127+00 TO STA. 122+00

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

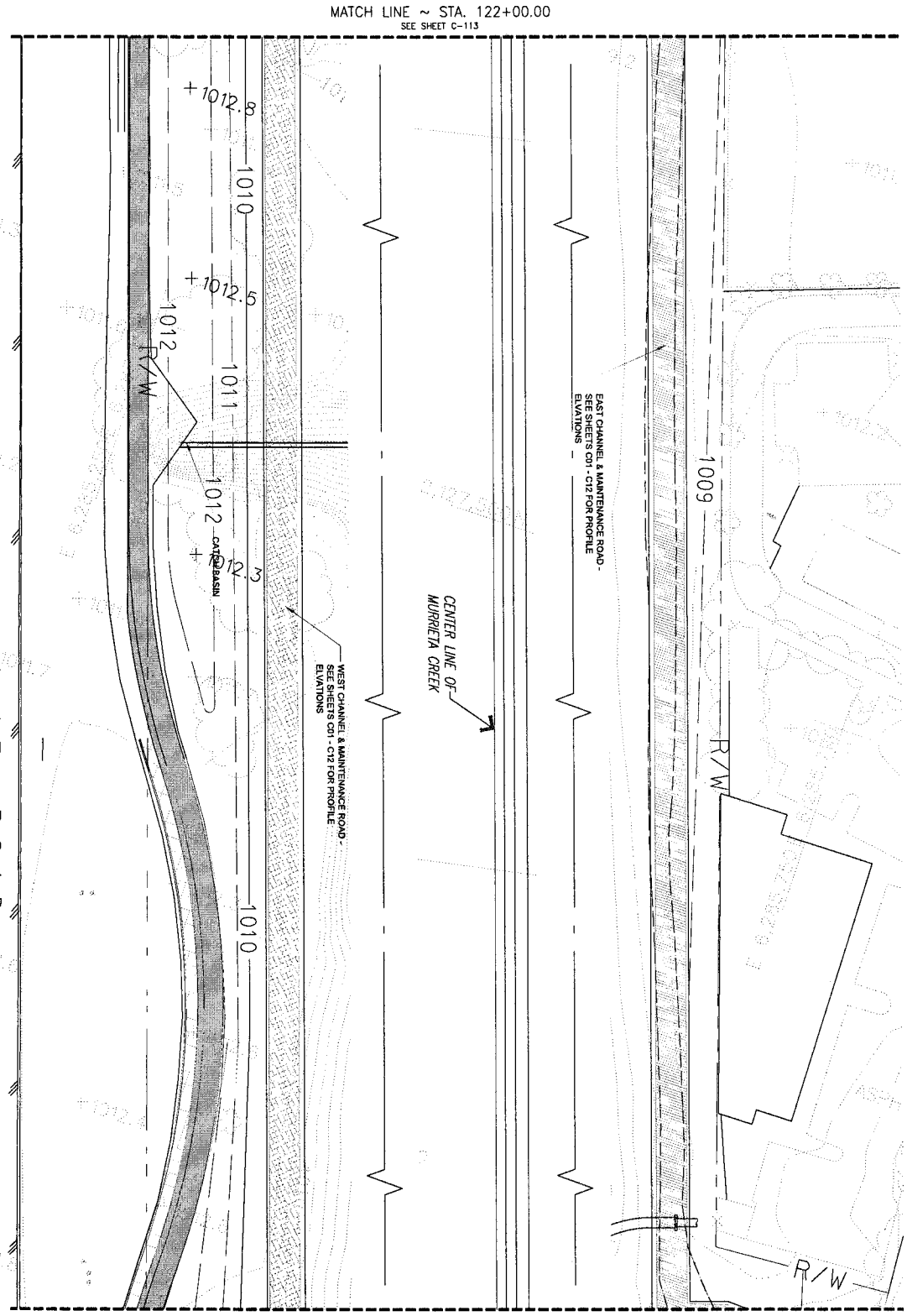
SUBMITTED BY: ARTHUR Y. JUNG, PE
CHIEF, DESIGN BRANCH

DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: SHV

DISTRICT FILE NO. 226/323
SPEC. NO. W912PL-14-B-0003
FILE NAME:

Scale:
SHEET C-113

Plot Date: 25-JULY-2014



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

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

DISTRICT FILE NO. 226/324 | SPEC. NO. W912PL-14-B-0003 | FILE NAME:

DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: SHV

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFFORNIA

MURRIETA CREEK - PHASE 2

LANDWARD GRADING PLAN
STA. 122+00 TO STA. 117+00

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SHEET C-114

SAFETY! PAYS

VALUE ENGINEERING PAYS

Plot Date: 25-AUG-2014

VALUE ENGINEERING PAYS

FRONT STREET

1008

R/W

10

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

N18° 48'54"W

1703.61'

CENTER LINE OF MURRIETA CREEK

MATCH LINE ~ STA. 117+00.00
SEE SHEET C-114

MATCH LINE ~ STA. 112+00.00
SEE SHEET C-116

1000

R/W

R/W

1000

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

1010

R/W

1010

1011

R/W

R/W

DIAZ ROAD

N

20' 10' 0 20' 40'

1" = 20'-0"

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

LANDWARD GRADING PLAN
STA. 117+00 TO STA. 112+00

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

SUBMITTED BY: ARTHUR Y. JUNG, PE
PROJECT MANAGER

DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: SHV

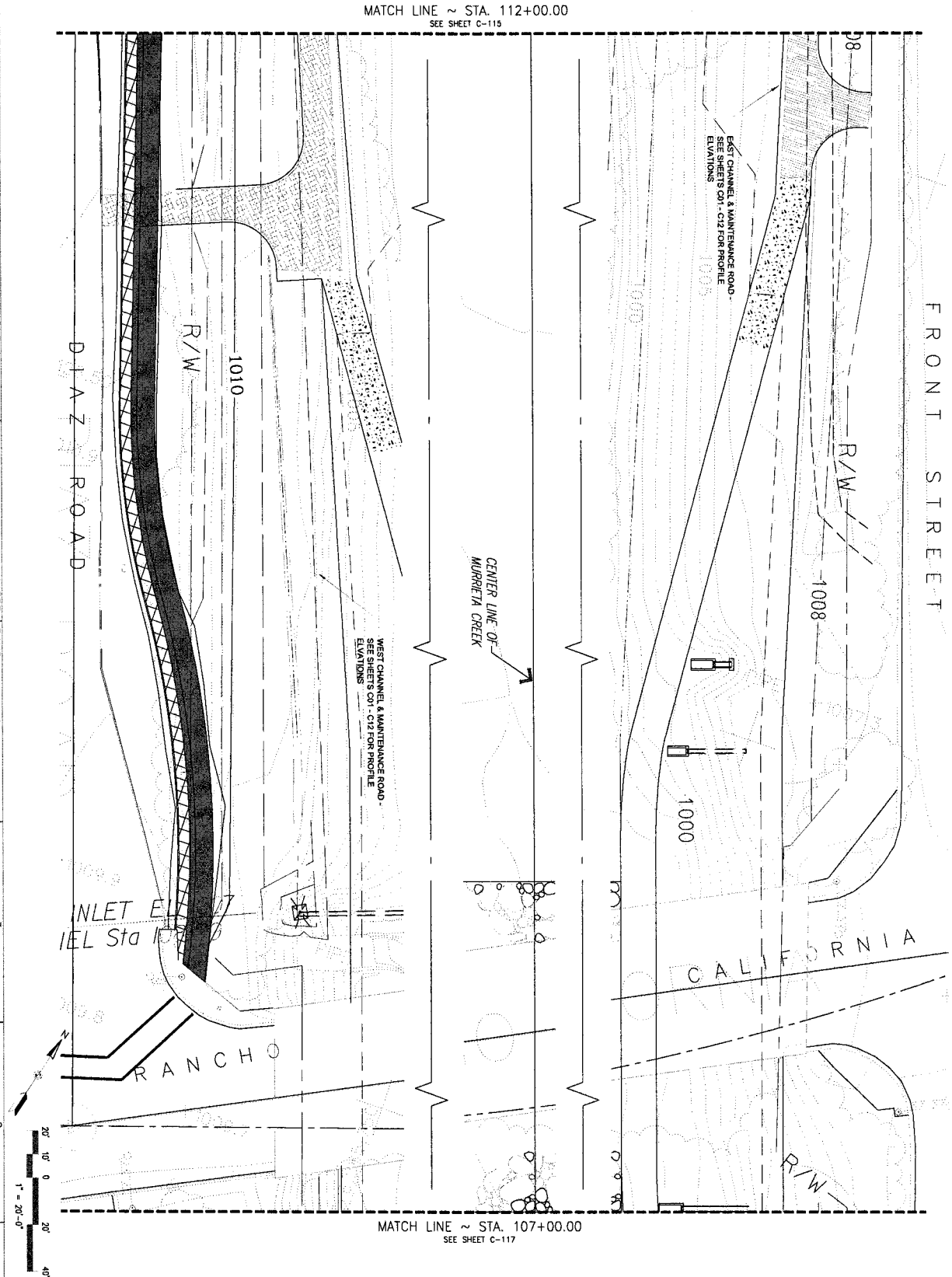
FILE NAME:

DISTRICT FILE NO. 226/325 | SPEC. NO. W912PL-14-B-0003

Scale:

SHEET C-115

Plot Date 25-JULY-2014



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

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

DISTRICT FILE NO. 226/326 | SPEC. NO. W912PL-14-B-0003 | FILE NAME:

DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: SHV

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

LANDWARD GRADING PLAN
STA. 112+00 TO STA. 107+00

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

Scale:
SHEET C-116

PM Date: 25-AUG-2014

SAFETY PAYS

VALUE ENGINEERING PAYS

VALUE ENGINEERING PAYS

FRONT STREET

R/W

1006

1000

990

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

MATCH LINE ~ STA. 102+00.00 SEE SHEET C-118

MATCH LINE ~ STA. 107+00.00 SEE SHEET C-118

CENTER LINE OF MURRIETA CREEK

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

1010

1009

1011

R/W

20' 10' 0 20' 40'

1" = 20'-0"

SAFETY PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

LANDWARD GRADING PLAN STA. 107+00 TO STA. 102+00

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

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

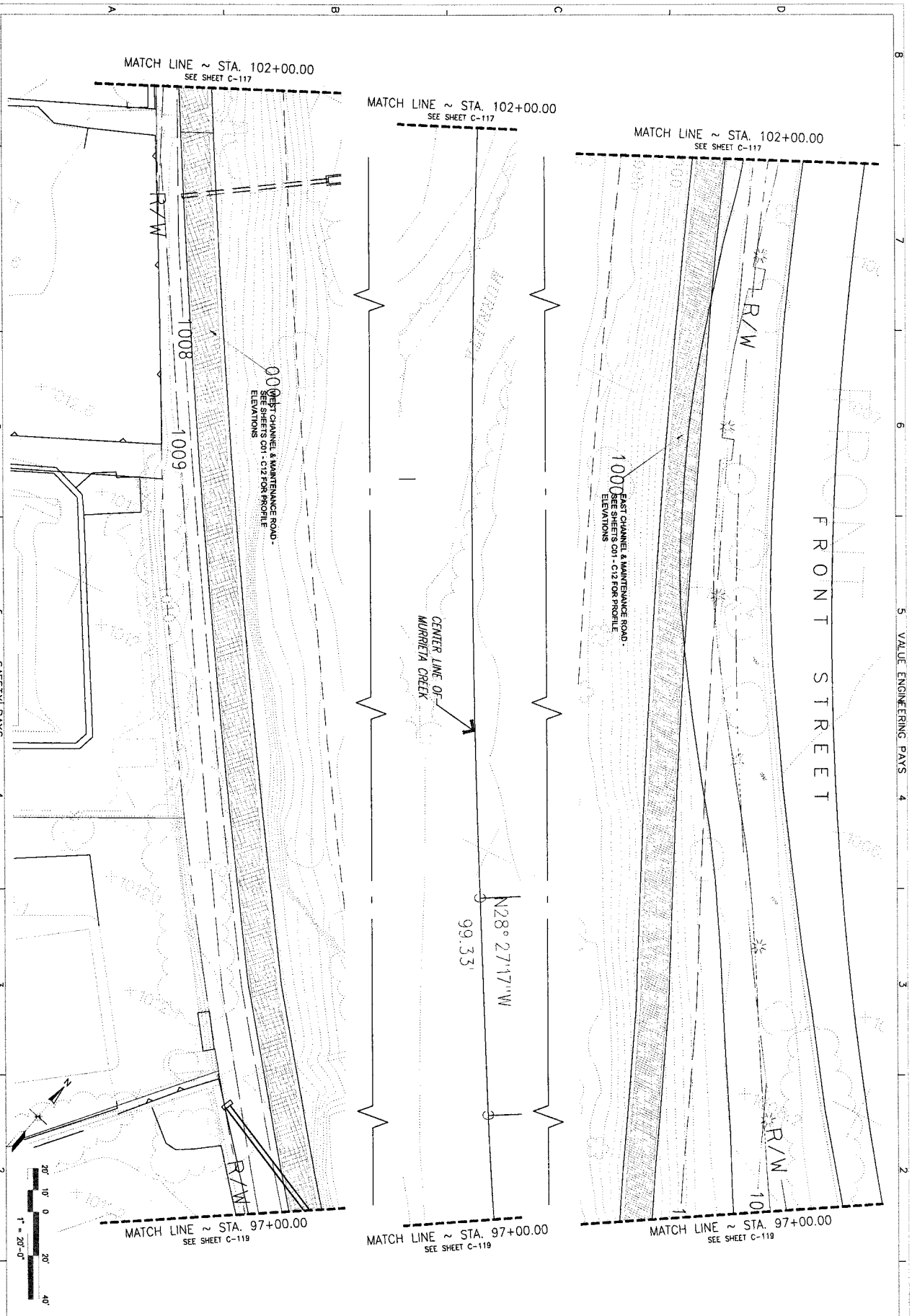
DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: SHV
FILE NAME:

DISTRICT FILE NO. 226/327 | SPEC. NO. W912PL-14-B-0003

Scale:

SHEET C-117

Plot Date: 25-JULY-2014



SAFETY! PAYS

VALUE ENGINEERING PAYS

U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DESIGNED BY: JGR	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFFORNIA MURRIETA CREEK - PHASE 2	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	DRAWN BY: JGR	LANDWARD GRADING PLAN STA. 102+00 TO STA. 97+00	
	CHECKED BY: SHV		
DISTRICT FILE NO. 226/328 · SPEC. NO. W912PL-14-B-0003 · FILE NAME:			

Scale: 1" = 20'-0"
Sheet C-118

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

Plot Date: 05-AUG-2014

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

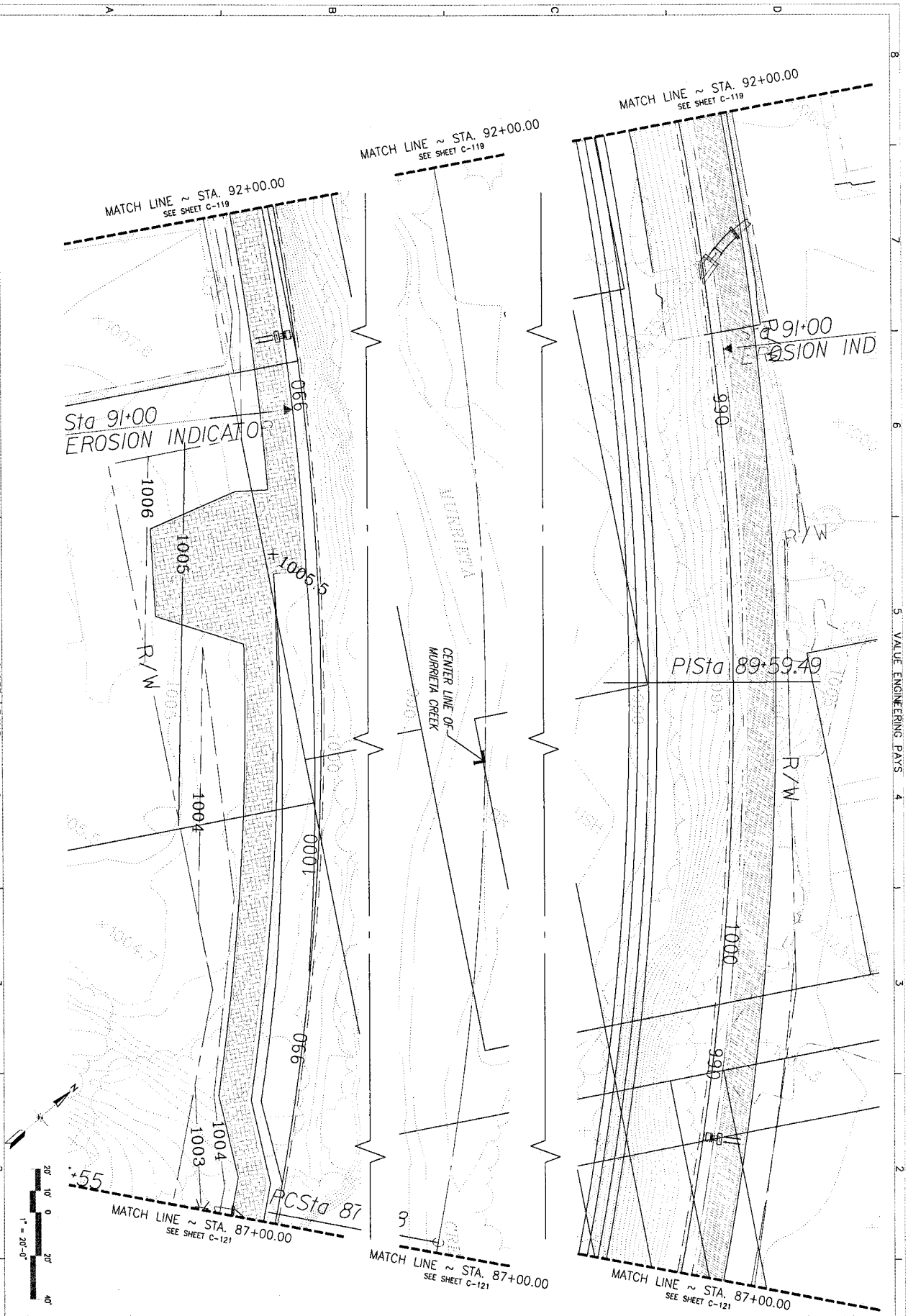
SHEET C-119

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SAFETY! PAYS

VALUE ENGINEERING PAYS

Plot Date: 25-JUL-2014



SAFETY! PAYS

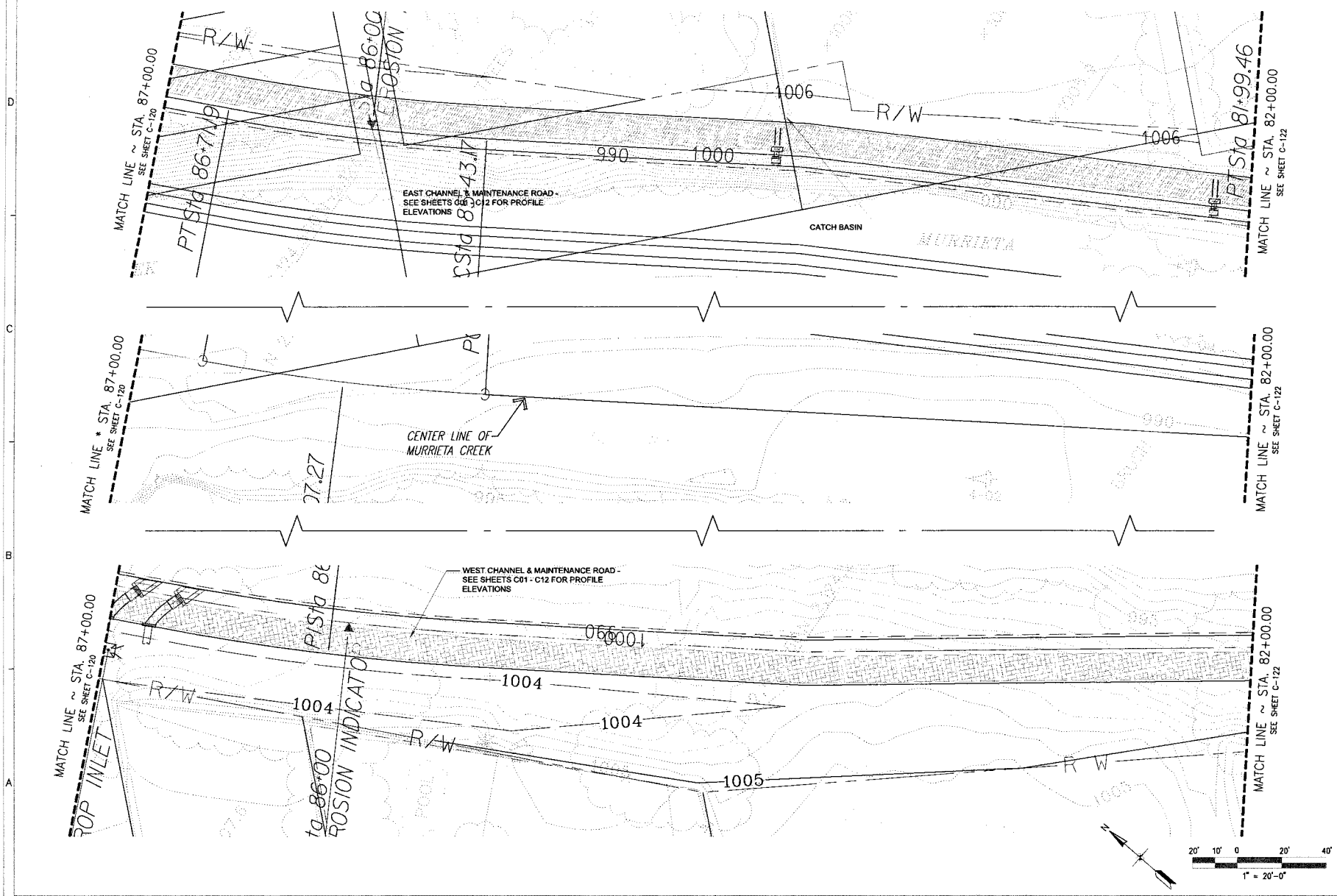
VALUE ENGINEERING PAYS

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

Scale: Sheet C-120

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

PM Date: 25 AUG 2014



SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

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

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

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

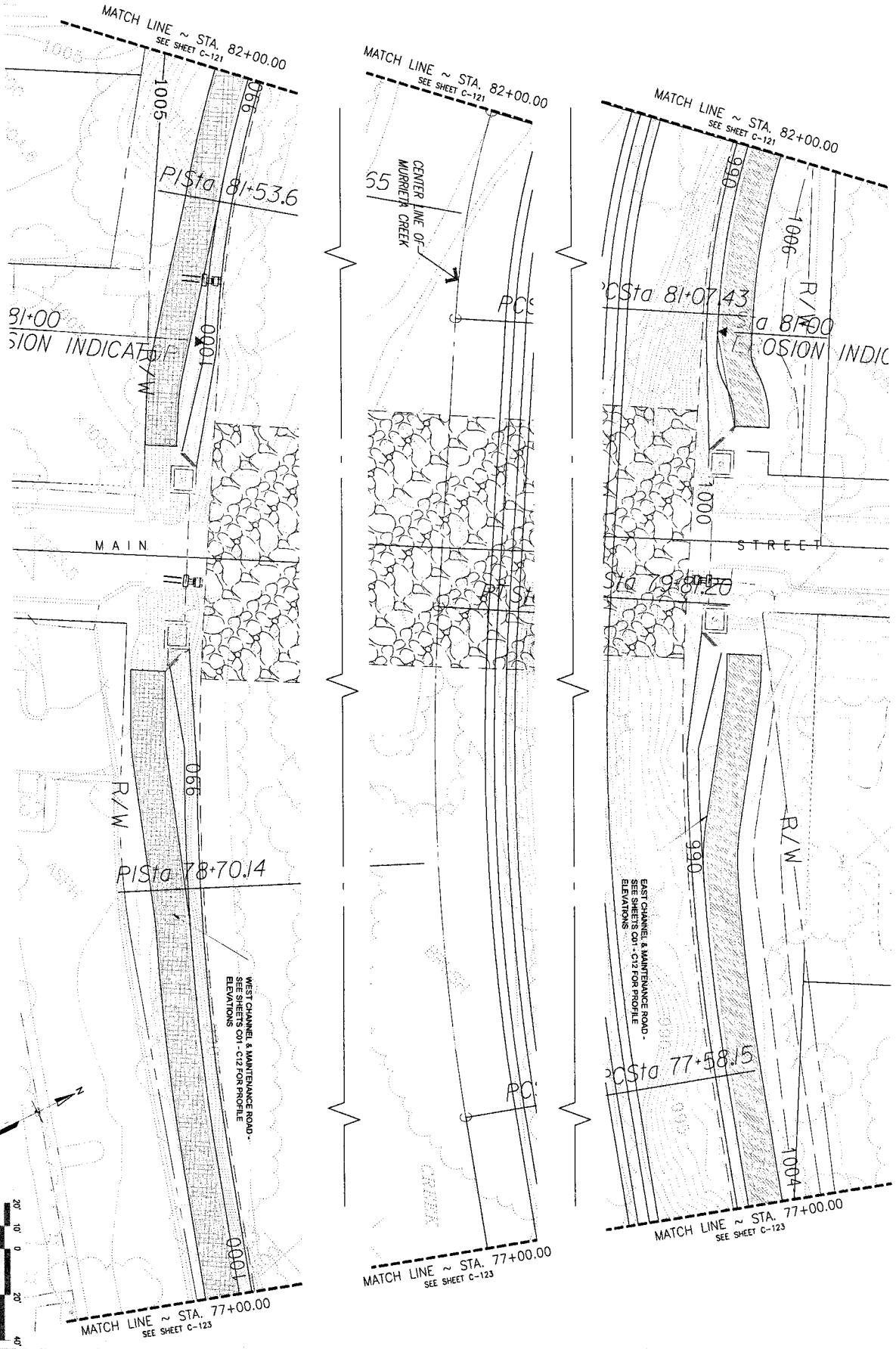
DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: SHV
FILE NAME:

DISTRICT FILE NO. 226/331 | SPEC. NO. W912PL-14-B-0003

Scale:

SHEET C-121

Plot Date: 25-JULY-2014



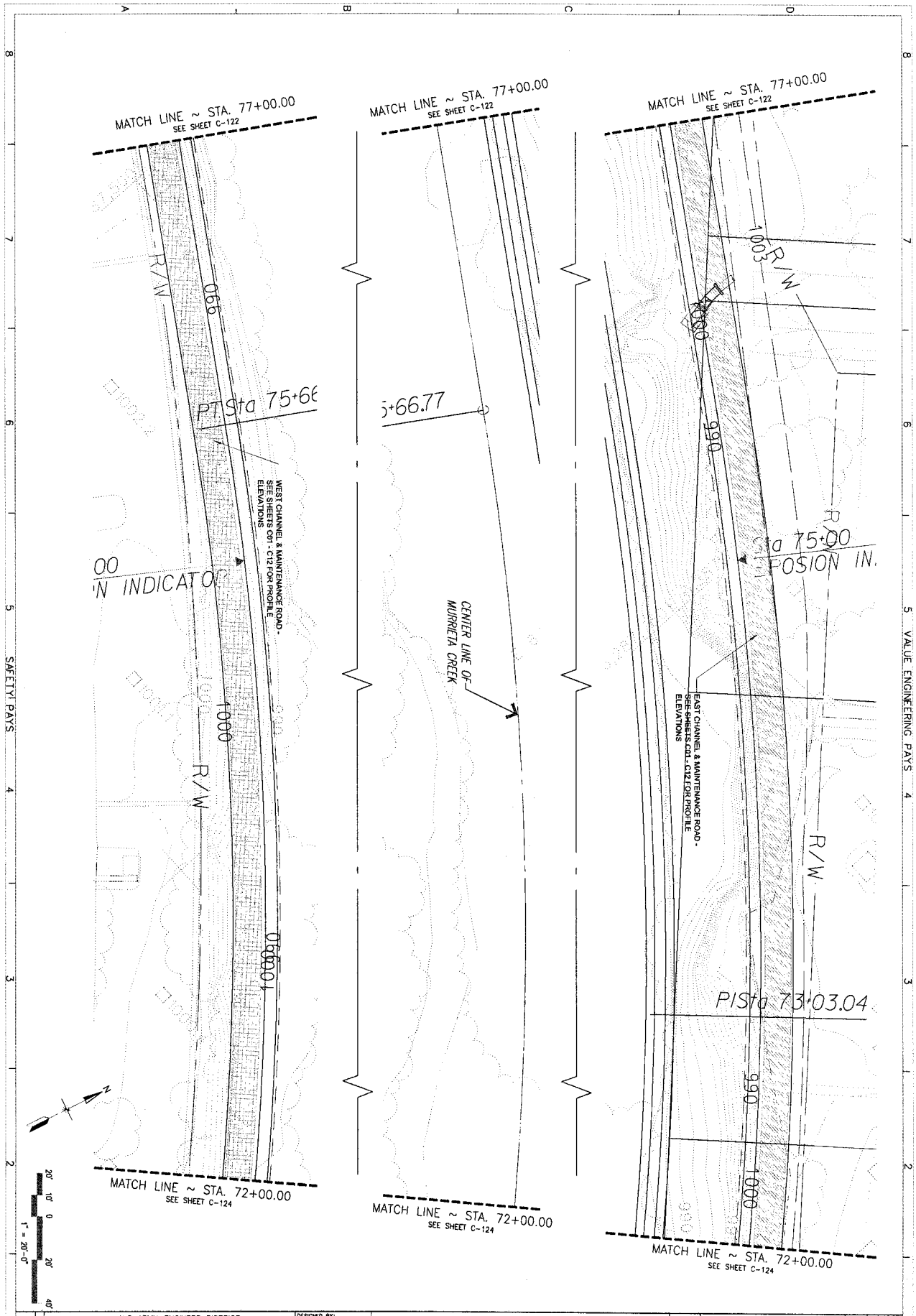
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DESIGNED BY: JGR DRAWN BY: JGR	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH	CHECKED BY: SHV	LANDWARD GRADING PLAN STA. 82+00 TO STA. 77+00	
DISTRICT FILE NO. 226/332 · SPEC. NO. W912PL-15-B-0001 · FILE NAME:			

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SHEET C-122

SAFETY PAYS · VALUE ENGINEERING PAYS

Plot Date: 25-AUG-2014



SAFETY PAYS

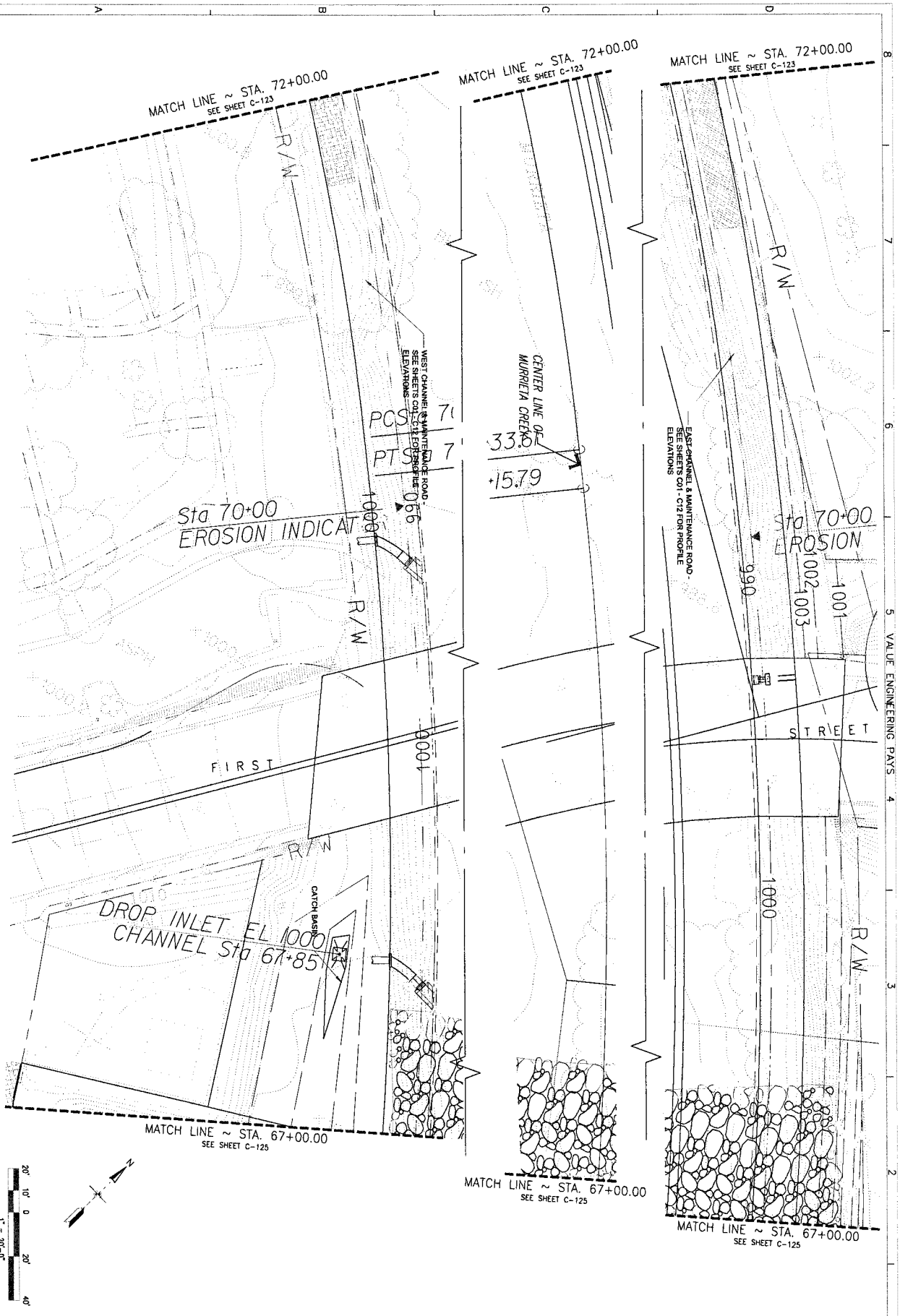
VALUE ENGINEERING PAYS

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

SHEET C-123

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

Plot Date: 25-JULY-2014



SAFETY PAYS

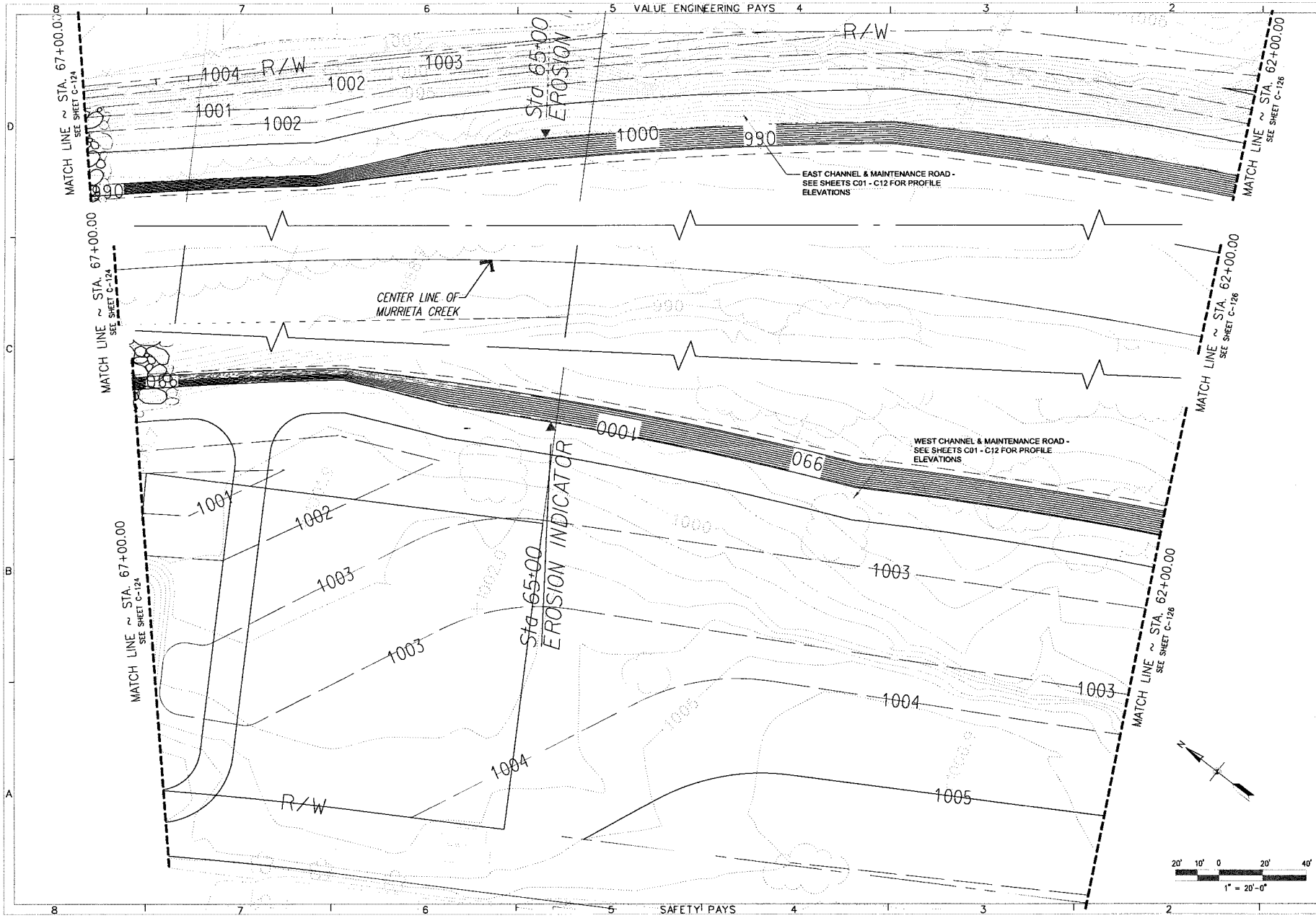
VALUE ENGINEERING PAYS

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

Scale: 1" = 20'-0"
Sheet: C-124

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

Plot Date: 25-AUG-2014



SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

LANDWARD GRADING PLAN
STA. 67+00 TO STA. 62+00

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

DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: SHV

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

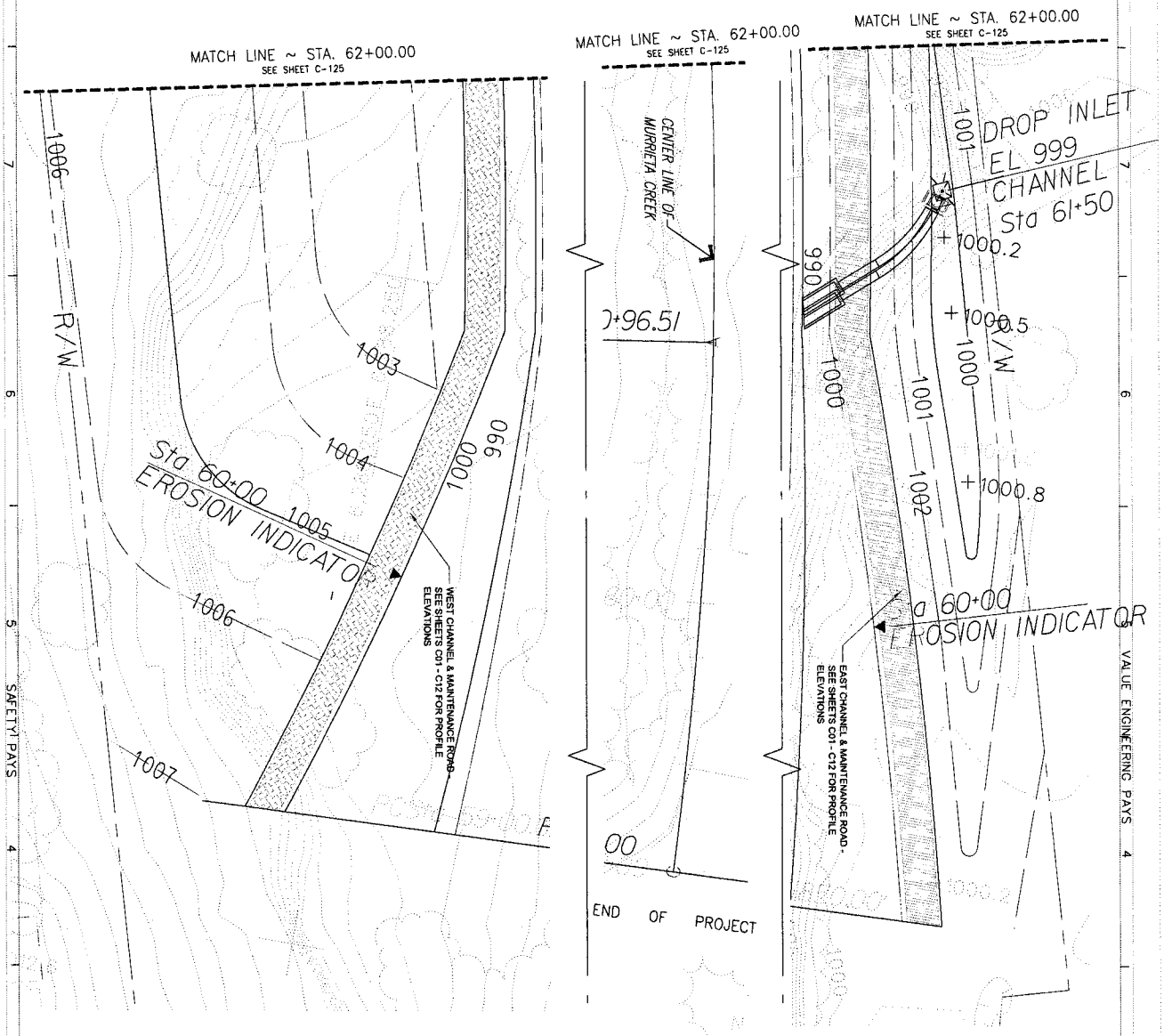
FILE NAME:

DISTRICT FILE NO. 226/335
SPEC. NO. W912PL-15-B-0001

Scale:

SHEET
C-125

Plot Date: 25-JULY-2014



SAFETY PAYS

VALUE ENGINEERING PAYS

N

20' 10' 0 20' 40'

1" = 20'-0"

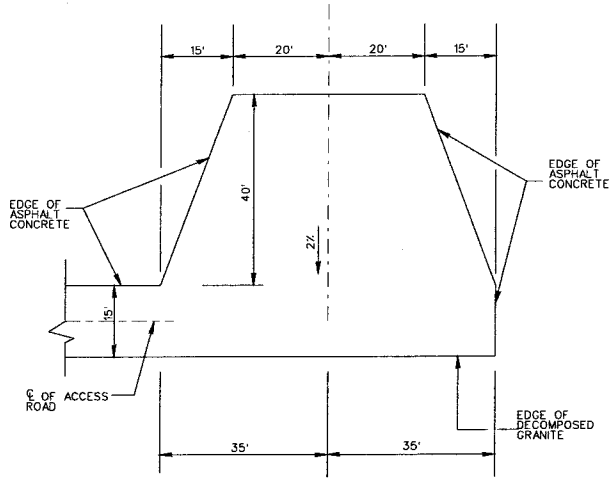
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	DESIGNED BY: JGR DRAWN BY: JGR CHECKED BY: SHV	SANTA MARGARITA RIVER WATERSHED, RIVERSIDE COUNTY, CALIFORNIA MURRIETA CREEK - PHASE 2	
SUBMITTED BY: ARTHUR Y. JUNG, PE CHIEF, DESIGN BRANCH		LANDWARD GRADING PLAN STA. 62+00 TO STA. 59+00	
DISTRICT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

SHEET C-126

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

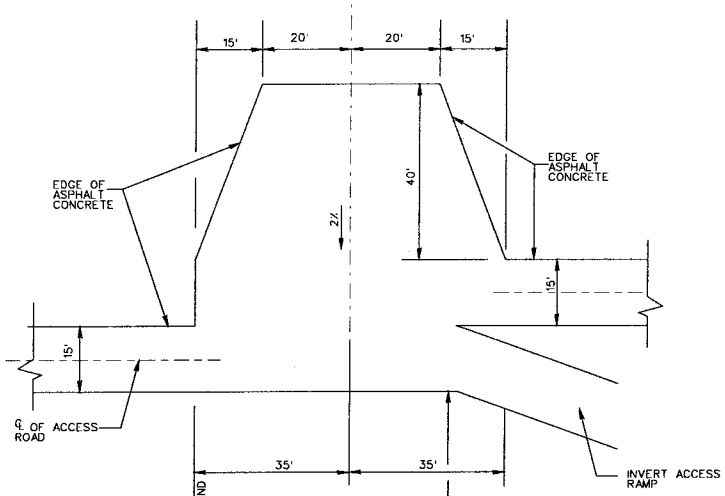
Plot Date: 25-JULY-2014

VALUE ENGINEERING PAYS



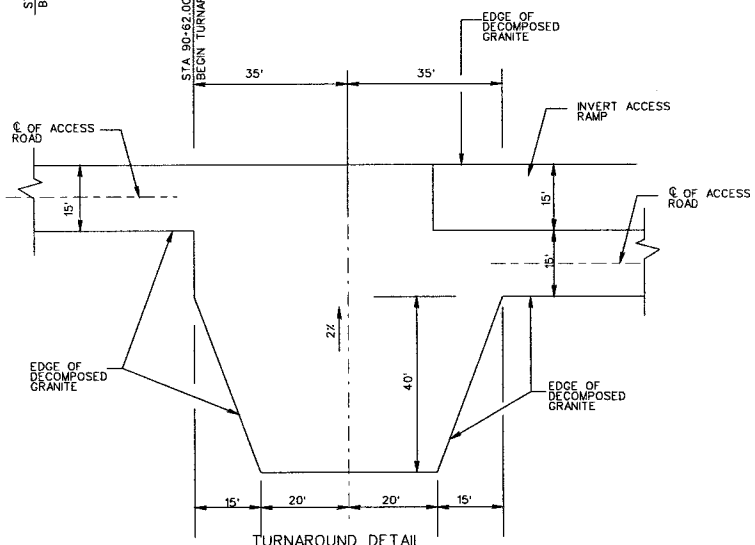
TURNAROUND DETAIL
BEGIN STA 168+81.29
NOT TO SCALE

STA 168+81.29
BEGIN TURNAROUND



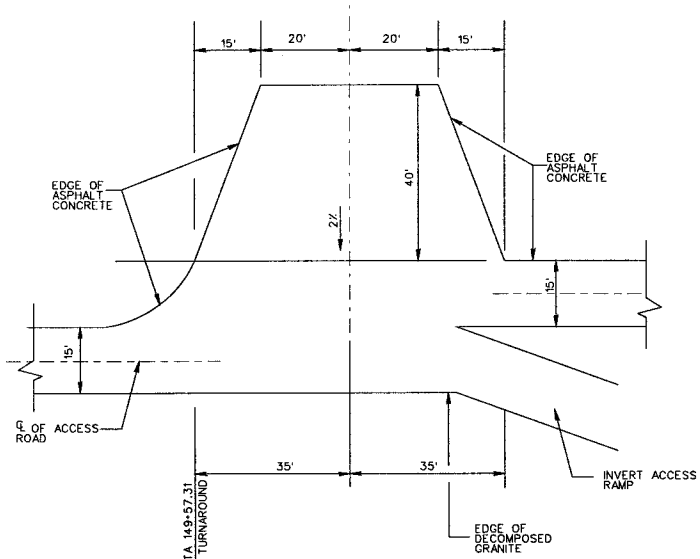
TURNAROUND DETAIL
BEGIN STA 117+03.00
NOT TO SCALE

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

SAFETY! PAYS

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

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

TURNAROUND DETAILS

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: M1.DGN

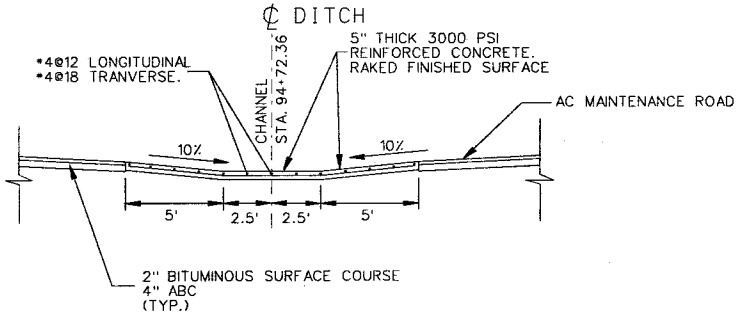
U.S. ARMY ENGINEER DISTRICT
LOS ANGELES
CORPS OF ENGINEERS

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

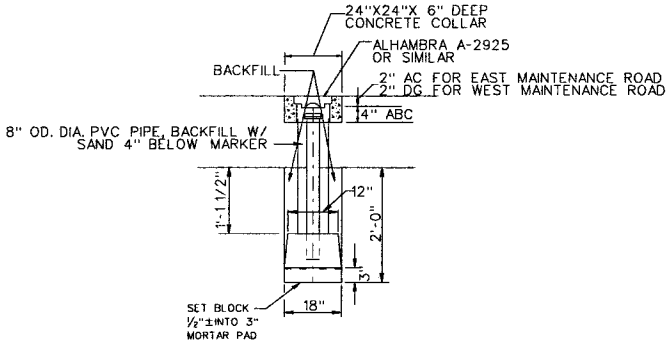
SPEC. NO. W912PL-15-B-0001
DISTRICT FILE NO. 226/

Scale:
SHEET
M1

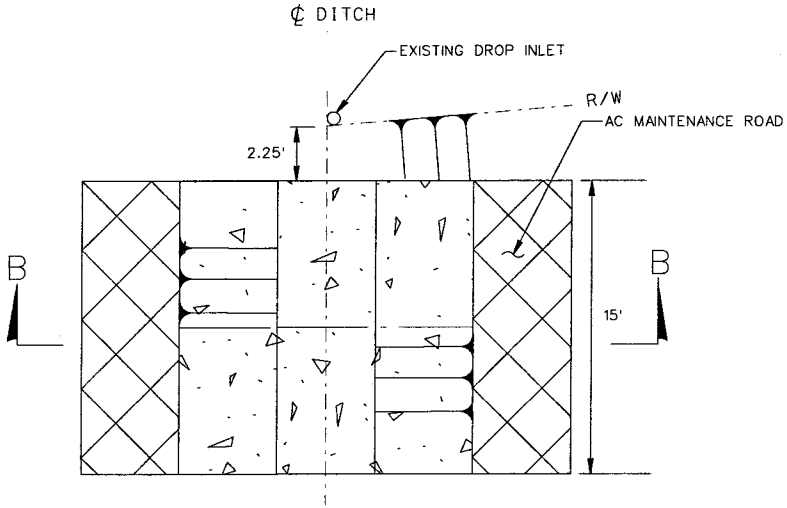
Plot Date: 25-JULY-2014



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.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
	REVISIONS		

SANTA MARGARITA RIVER WATERSHED,
RIVERSIDE COUNTY, CALIFORNIA
MURRIETA CREEK - PHASE 2
CONCRETE OVERFLOW &
SETTLEMENT MONUMENT DETAILS

DESIGNED BY: J.G.R.
DRAWN BY: J.G.R.
CHECKED BY: S.H.V.
FILE NAME: M2.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-15-B-0001

Scale:
SHEET
M2

Prid Date: 25-JUL-2014