

**Ministry of Agriculture
Republic of Peru**

**THE PREPARATORY STUDY
ON
PROJECT OF THE PROTECTION OF
FLOOD PLAIN AND VULNERABLE RURAL
POPULATION AGAINST FLOOD IN THE
REPUBLIC OF PERU**

**FINAL REPORT
I-6 SUPPORTING REPORT
ANNEX-15 DESIGN DRAWINGS**

March 2013

**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

**YACHIYO ENGINEERING CO., LTD.
NIPPON KOEI CO., LTD.
NIPPON KOEI LATIN AMERICA –
CARIBBEAN Co., LTD.**

GE
CR(4)
13 - 096



Figure Survey Area

ABBREVIATION

Abbreviation	Official Form or Meaning
ANA	Autoridad Nacional del Agua/National Water Authority
ALA	Autoridad Local del Agua/Local Water Authority
B/C	Costo Benefit Ratio/Benefit Cost Ratio
GDP	Gross Domestic Product/Gross Domestic Product
GIS	Geographic Information System/Geographic Information System
DGAA	Dirección General de Asuntos Ambientales/General Directorate of Environmental Affairs
DGFFS	Dirección General de Forestal y de Fauna Silvestre/Directorate General of Forest and Wildlife
DGIH	Dirección General de Infraestructura Hidráulica/Directorate General for Water Infrastructure
DGPI (Paleo-DGPM)	Dirección General de Política de Inversiones/Directorate General of Investment Policy
DNEP	Dirección Nacional de Endeudamiento Público/National Directorate of Public Debt
DRA	Dirección Regional de Aguricultura/Regional Directorate Aguriculture
EIA	Evaluación de Impacto Ambiental/Environmental Impact Assessment
FAO	Agricultura y la Alimentación Organización de las Naciones Unidas/ Food and Agriculture Organization of the United Nations
F/S	Estudio de Factibilidad/ Feasibility Study
GORE	Gobierno Regional/Regional Government
HEC-HMS	Centros de Ingeniería Hidrológica Sistema de Modelación Hidrológica Método /Hydrologic Engineering Centers Hydrologic Modeling System Method
HEC-RAS	Centros de Ingeniería Hidrológica del Río de Análisis del Sistema Méhode /Hydrologic Engineering Centers River Analysis System Method
IGN	Instituto Geográfico Nacional/National Geographic Institute
IGV	Impuesto General a Ventas/General Sales Tax
INDECI	Instituto Nacional de Defensa Civil/National Institute of Civil Defense
INEI	Instituto Nacional de Estadística/National Institute of Statistics
INGEMMET	Instituto Nacional Geológico Minero Metalúrgico/National Geological and Mining Metallurgical Institute
INRENA	Instituto Nacional de Recursos Naturales/Natural Resources Institute
IRR	Tasa Interna de Retorno (TIR)/Internal Rate of Return
JICA	Japonés de Cooperación Internacional /Japan International Cooperation Agency
JNUDRP	Junta Nacional de Usuarios de Distritos del Perú/National Board of Peru

	Districts Users
L/A	Convenio de Préstamo/Loan Agreement
MEF	Ministerio de Economía y Finanzas/Ministry of Economy and Finance
MINAG	Ministerio de Agricultura/Ministry of Agriculture
M/M	Acta de la reunion/Minutes of Meeting
NPV	Valor Actual Neto (VAN)/NET PRESENT VALUE
O&M	Operación y Mantenimiento /Operation and maintenance
OGA	Oficina General de Administración/General Office of Administration
ONERRN	Oficina Nacional de Evaluación de Recursos Naturales/National Bureau of Natural Resource Evaluation
OPI (OPP)	Oficina de Programación e Inversiones/Programming and Investment Office (Oficina de Planificación e Presupuesto/Office of Planning and Budget)
PBI	Producto Bruto Interno/Gross Domestic Product
PE	Exp. Proyecto Especial (PE) Chira-Piura/ Exp. Special Project Chira-Piura
PES	Pago por Servicios Ambientales (PSA)/Payment for Environmental Services
PERFIL	PERFIL/PROFILE (Preparatory survey of project before investment)
Pre F/S	Estudio de Prefactibilidad /Pre-Feasibility Study
PERPEC	Programa de Encauzamiento de Ríos y protección de Estructura de Captación
PRONAMACHIS	Programa Nacional de Manejo de Cuencas Hidrográficas y Conservación de Suelos/National Program of River Basin and Soil Conservation Management
PSI	Programa de Sub Sectorial de Irrigaciones/Program of Sub Irrigation Sector
SCF	Factor de conversión estándar/Standard conversion factor
SENAMHI	Servicio Nacional de Meteorología y Hidrología/ National Service of Meteorology and Hydrology
SNIP	Sistema Nacional de Inversión Pública/National Public Investment System
UF	Unidad formuladora/Formulator unit
VALLE	Valle/Valley
VAT	Impuesto al valor agregado/Value-added tax

**THE PREPARATORY SURVEY ON PROJECT OF THE PROTECTION
OF
FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD
IN THE REPUBLIC OF PERU
FEASIBILITY STUDY REPORT
SUPPORTING REPORT**

**Annex-15
Design Drawings**

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II NOT SELECTED BASINS

5	Chira River	5-1
6	Yauca River	6-1

Flood control facilities design drawings area shown in the following pages.

The list of basins is as follows.

I. Selected basins

1. Cañete River
2. Chincha River
3. Pisco River
4. Majes-Camana River

II. Not selected basins

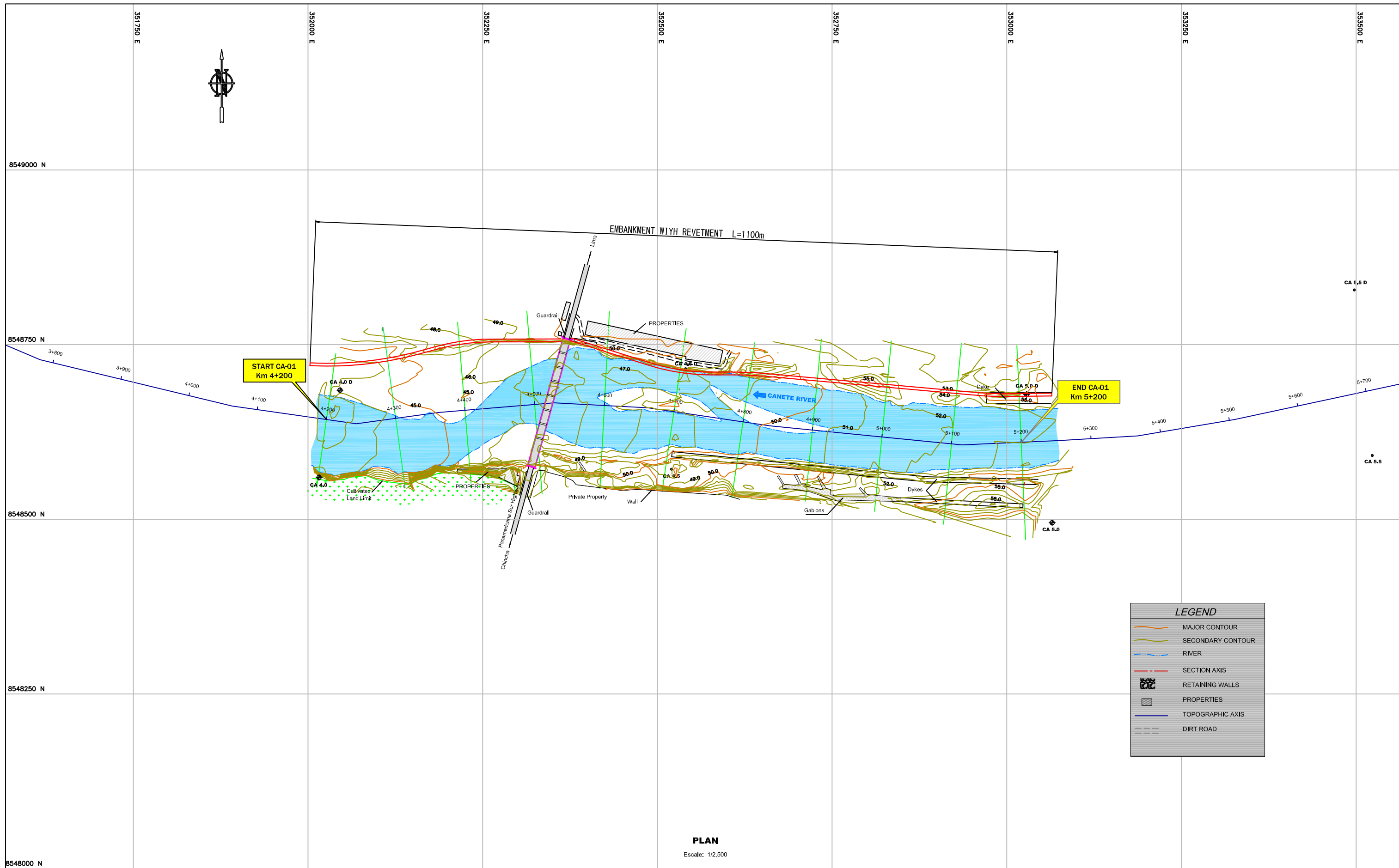
5. Chira River
6. Yauca River

I. Selected Basins

1. Cañete River

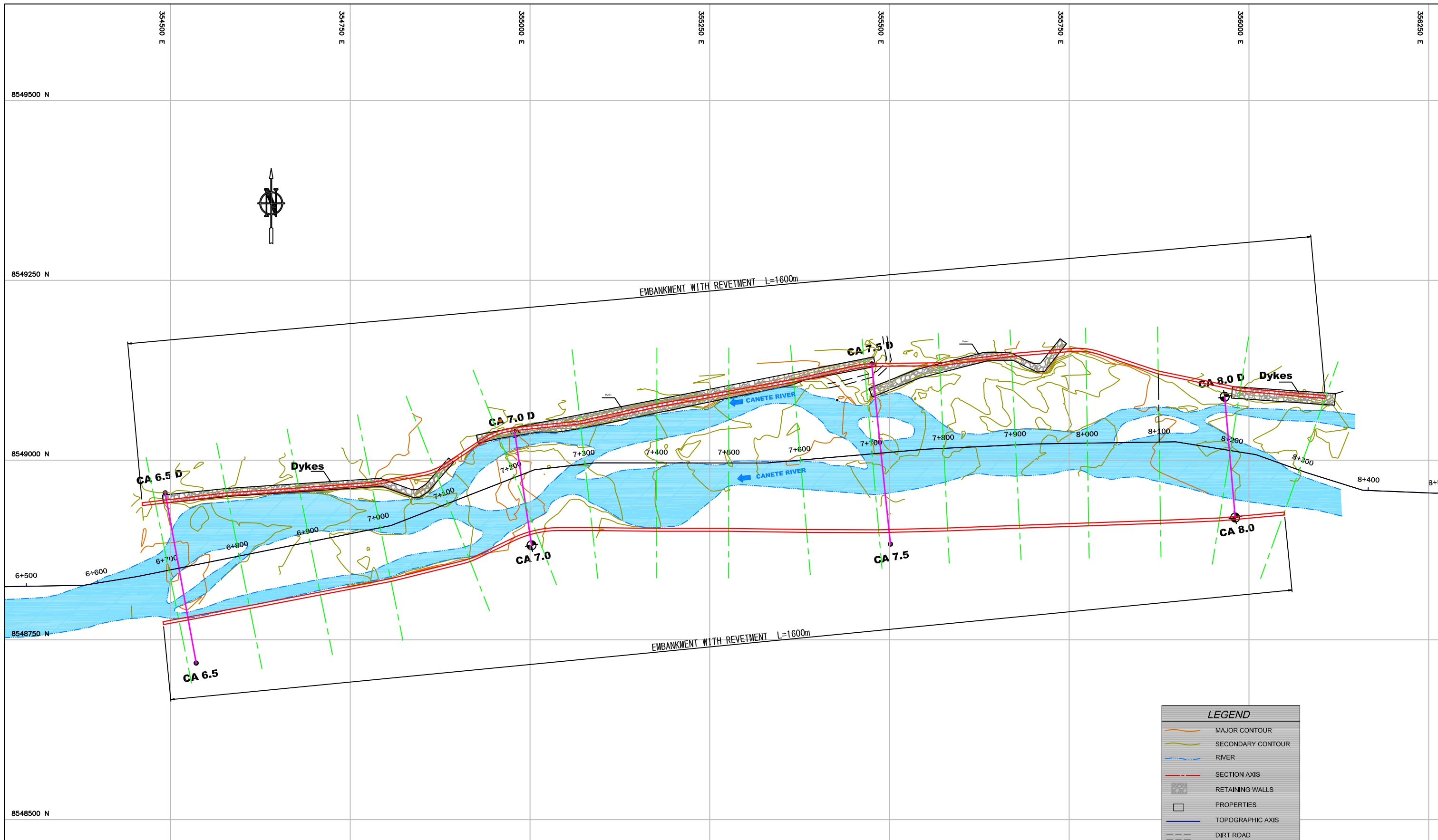
Index of Drawings

Name of river : Rio Cañete				
No.	Drawing name			
1.	Rio Cañete	CA-1	Ground Plan	Km.4+200~Km.5+200
2.	Rio Cañete	CA-2	Ground Plan	Km.6+700~Km.8+300
3.	Rio Cañete	CA-3	Ground Plan	Km.10+200~Km.11+200
4.	Rio Cañete	CA-4	Ground Plan	Km.24+500~Km.25+000
5.	Rio Cañete	CA-5	Ground Plan	Km.25+000~Km.26+800
6.	Rio Cañete	CA-1	Longitudinal Section Profile	Km.4+200~Km.5+200
7.	Rio Cañete	CA-2	Longitudinal Section Profile	Km.6+300~Km.7+200
8.	Rio Cañete	CA-2	Longitudinal Section Profile	Km.7+300~Km.8+400
9.	Rio Cañete	CA-3	Longitudinal Section Profile	Km.10+200~Km.11+200
10.	Rio Cañete	CA-4	Longitudinal Section Profile	Km.24+600~Km.25+000
11.	Rio Cañete	CA-5	Longitudinal Section Profile	Km.25+100~Km.26+000
12.	Rio Cañete	CA-5	Longitudinal Section Profile	Km.26+100~Km.26+800
13.	Rio Cañete	Embankment Typical Cross Section		
14.	Rio Cañete	CA-1	Cross Section	Km.4+200~Km.5+200
15.	Rio Cañete	CA-2	Cross Section	Km.6+700~Km.7+600
16.	Rio Cañete	CA-2	Cross Section	Km.7+700~Km.8+300
17.	Rio Cañete	CA-3	Cross Section	Km.10+200~Km.10+600
18.	Rio Cañete	CA-3	Cross Section	Km.10+700~Km.10+800
19.	Rio Cañete	CA-3	Cross Section	Km.10+900~Km.11+200
20.	Rio Cañete	CA-4	Cross Section	Km.24+600~Km.25+00
21.	Rio Cañete	CA-5	Cross Section	Km.25+100~Km.25+600
22.	Rio Cañete	CA-5	Cross Section	Km.25+700~Km.26+000
23.	Rio Cañete	CA-5	Cross Section	Km.26+100~Km.26+400
24.	Rio Cañete	CA-5	Cross Section	Km.26+500~Km.26+600



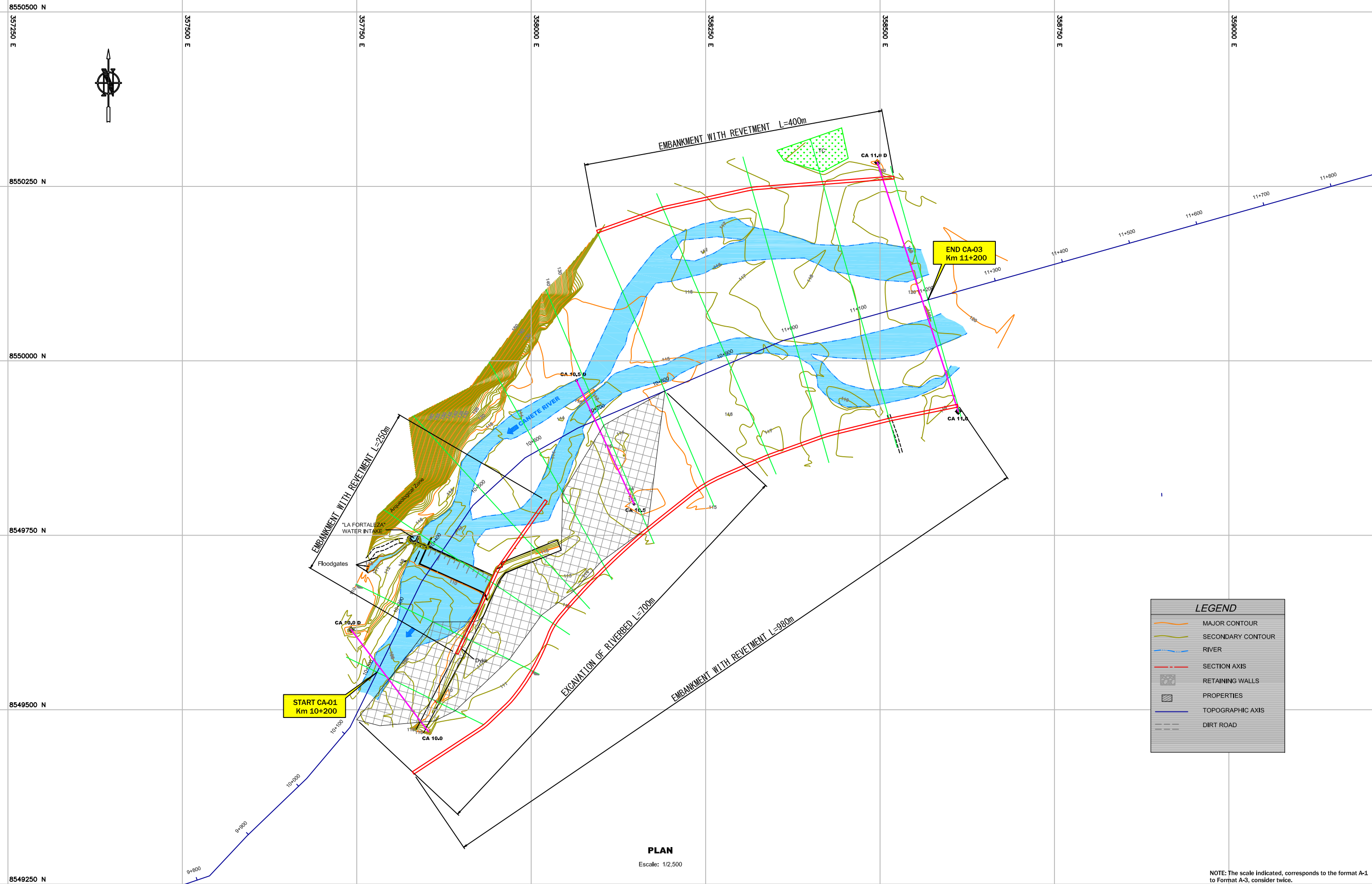
LEGEND	
	MAJOR CONTOUR
	SECONDARY CONTOUR
	RIVER
	SECTION AXIS
	RETAINING WALLS
	PROPERTIES
	TOPOGRAPHIC AXIS
	DIRT ROAD

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



PLAN
Escale: 1/2,500

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

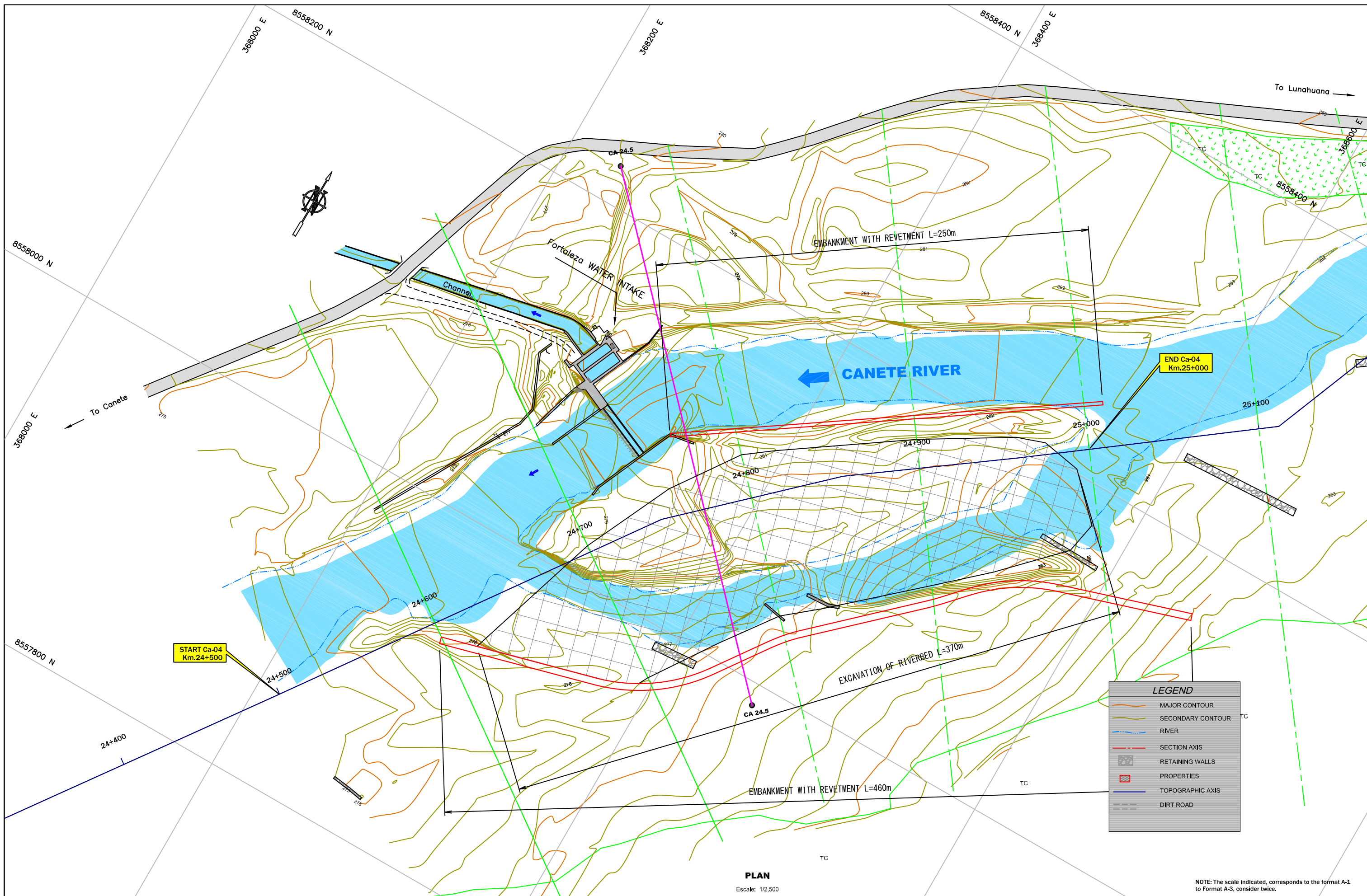


LEGEND	
	MAJOR CONTOUR
	SECONDARY CONTOUR
	RIVER
	SECTION AXIS
	RETAINING WALLS
	PROPERTIES
	TOPOGRAPHIC AXIS
	DIRT ROAD

PLAN

Scale: 1/2,500

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

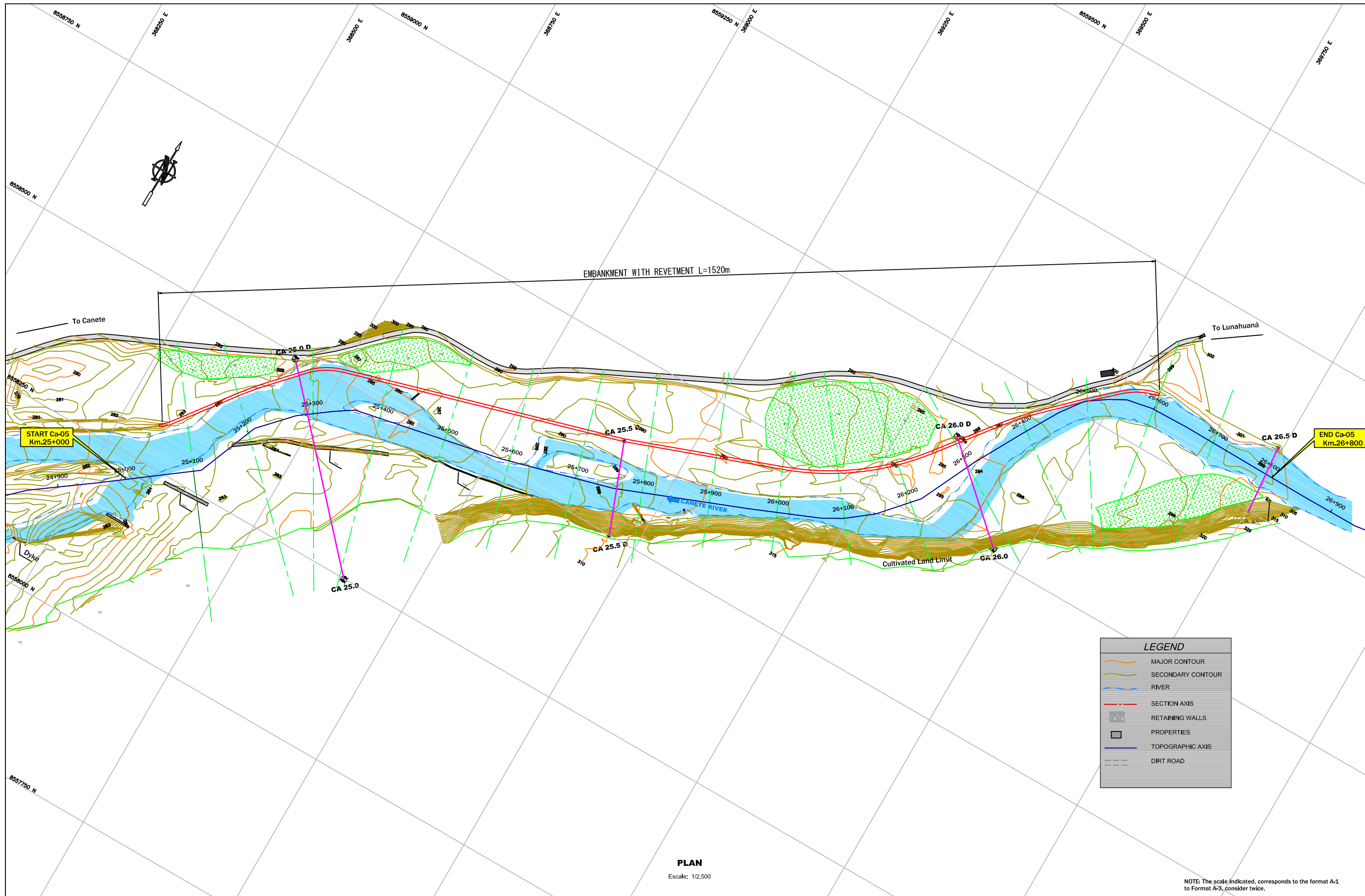


LEGEND

- MAJOR CONTOUR
- SECONDARY CONTOUR
- RIVER
- SECTION AXIS
- RETAINING WALLS
- PROPERTIES
- TOPOGRAPHIC AXIS
- DIRT ROAD

PLAN
Escale: 1/2,500

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



PLAN
Escale: 1/2,500

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

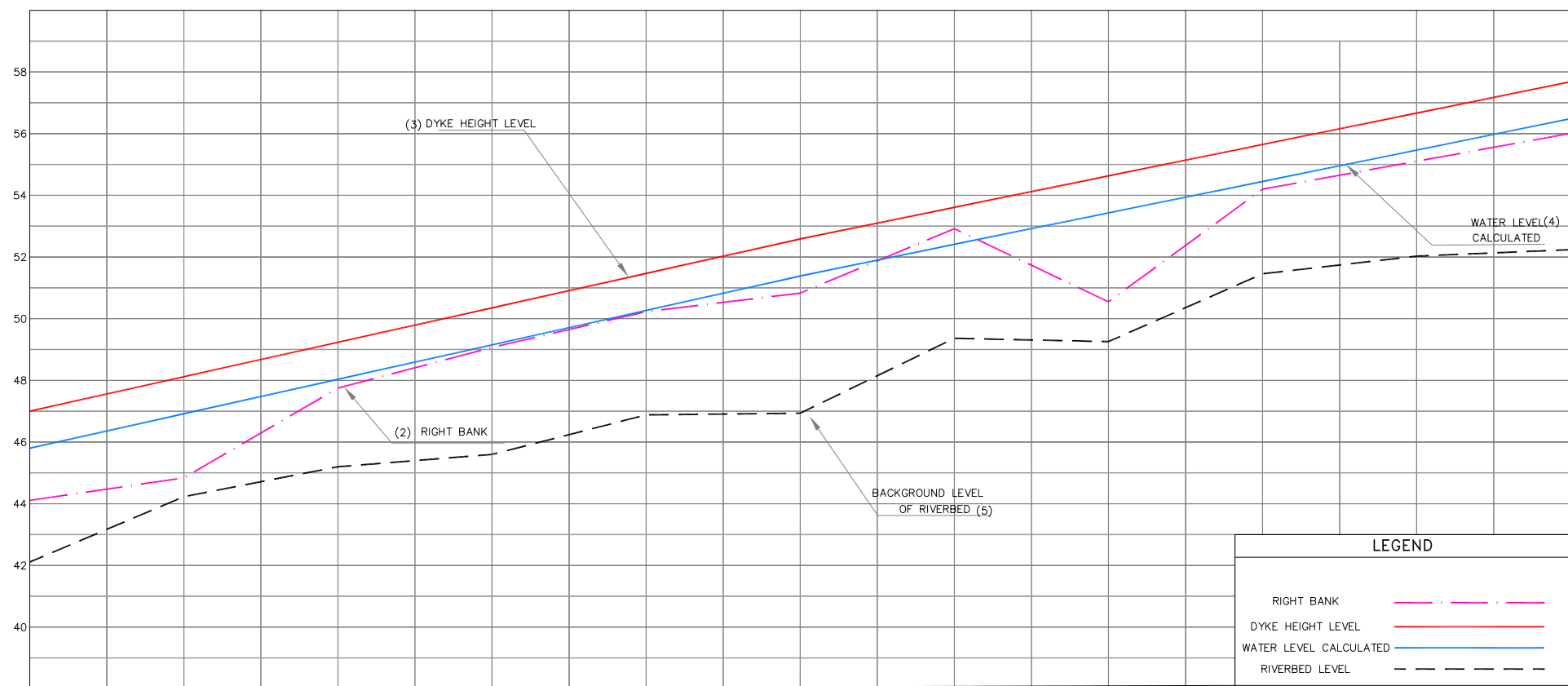
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



DISTANCE (m)	4+200	4+300	4+400	4+500	4+600	4+700	4+800	4+900	5+000	5+100
(2) RIGHT BANK LEVEL	44.11	44.84	47.75	49.07	50.23	50.83	52.92	50.55	54.20	55.11
(3) DYKE HEIGHT LEVEL	47.00	48.12	49.24	50.35	51.47	52.59	53.61	54.63	55.65	56.67
(4) WATER LEVEL CALCULATED	45.80	46.92	48.04	49.15	50.27	51.39	52.41	53.43	54.45	55.47
(5) BACKGROUND LEVEL OF RIVERBED	42.11	42.79	43.79	45.12	46.88	46.94	49.37	49.26	51.46	52.10

**CANETE RIVER
CRITICAL POINT N° 1
LONGITUDINAL PROFILE**

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

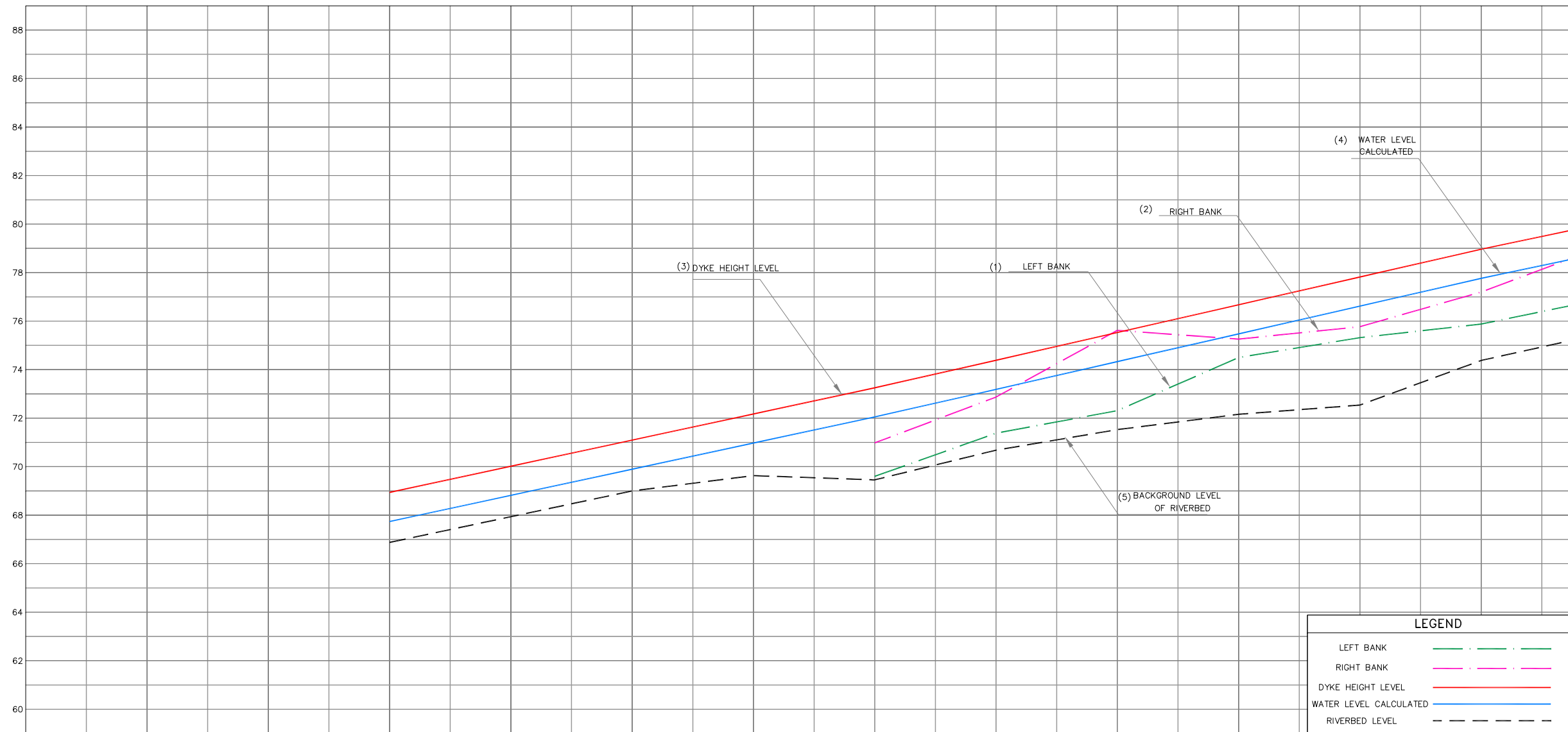
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



DISTANCIA (m)	6+000	6+100	6+200	6+300	6+400	6+500	6+600	6+700	6+800	6+900	7+000	7+100	7+200	
(1) LEFT BANK LEVEL								69.60	71.38	72.31	74.50	75.32	75.88	
(2) LEFT BANK LEVEL								70.98	72.87	75.62	75.26	75.77	77.20	
(3) DYKE HEIGHT LEVEL				66.94	70.02		71.10	72.17	73.25	74.39	75.53	76.68	77.82	78.96
(4) WATER LEVEL CALCULATED				67.74	68.82		70.02	72.05	73.19	74.33	75.48	76.62	77.76	
(5) BACKGROUND LEVEL OF RIVERBED				66.88	67.94		69.00	69.63	70.69	71.53	72.16	72.54	74.38	

**CANETE RIVER
CRITICAL POINT N° 2 (1/2)
LONGITUDINAL PROFILE**

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

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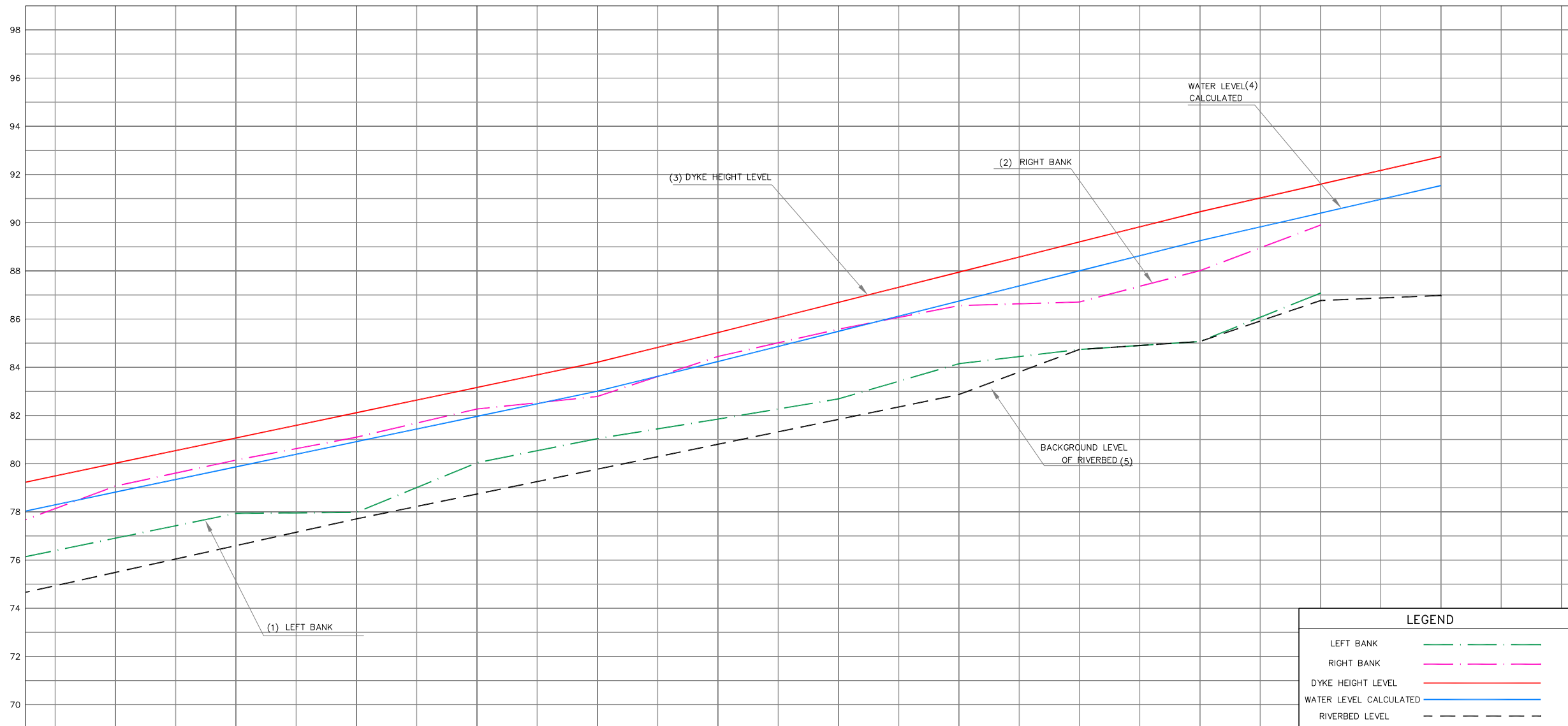
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



LEGEND	
LEFT BANK	— · — · — ·
RIGHT BANK	— · — · — ·
DYKE HEIGHT LEVEL	—————
WATER LEVEL CALCULATED	—————
RIVERBED LEVEL	— · — · — ·

DISTANCIA (m)	7+300	7+400	7+500	7+600	7+700	7+800	7+900	8+000	8+100	8+200	8+300	8+400	8+500
(1) LEFT BANK LEVEL	76.91	77.94	77.98	80.04	81.04	81.85	82.69	84.15	84.74	85.07	87.08	0.00	
(2) LEFT BANK LEVEL	79.07	80.15	81.10	82.27	82.79	84.45	85.58	86.56	86.71	88.01	89.90	0.00	
(3) DYKE HEIGHT LEVEL	80.02	81.07	82.12	83.16	84.21	85.44	86.69	87.95	89.20	90.45	91.60	92.74	
(4) WATER LEVEL CALCULATED	78.82	79.87	80.92	81.96	83.01	84.24	85.49	86.75	88.00	89.25	90.40	91.54	
(5) BACKGROUND LEVEL OF RIVERBED	75.49	76.60	77.71	78.74	79.77	80.81	81.84	82.87	84.74	85.74	86.77	86.98	

**CANETE RIVER
CRITICAL POINT N°2 (2/2)
LONGITUDINAL PROFILE**

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Consultants:



NIPPON KOEI LAC CO., LTD.
Consulting Engineers

Designed by: M.SOYA
Revised by: M.KITANO
Approved by: Y.NAKAGAWA
Revised by: Y.NAKAGAWA

Project:
THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing:
**CANETE RIVER:
CRITICAL POINT N°2 (2/2)
LONGITUDINAL PROFILE**

ESCALE: INDICATED
DATE: MARCH - 2013
CODE: **CANETE - 2**

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

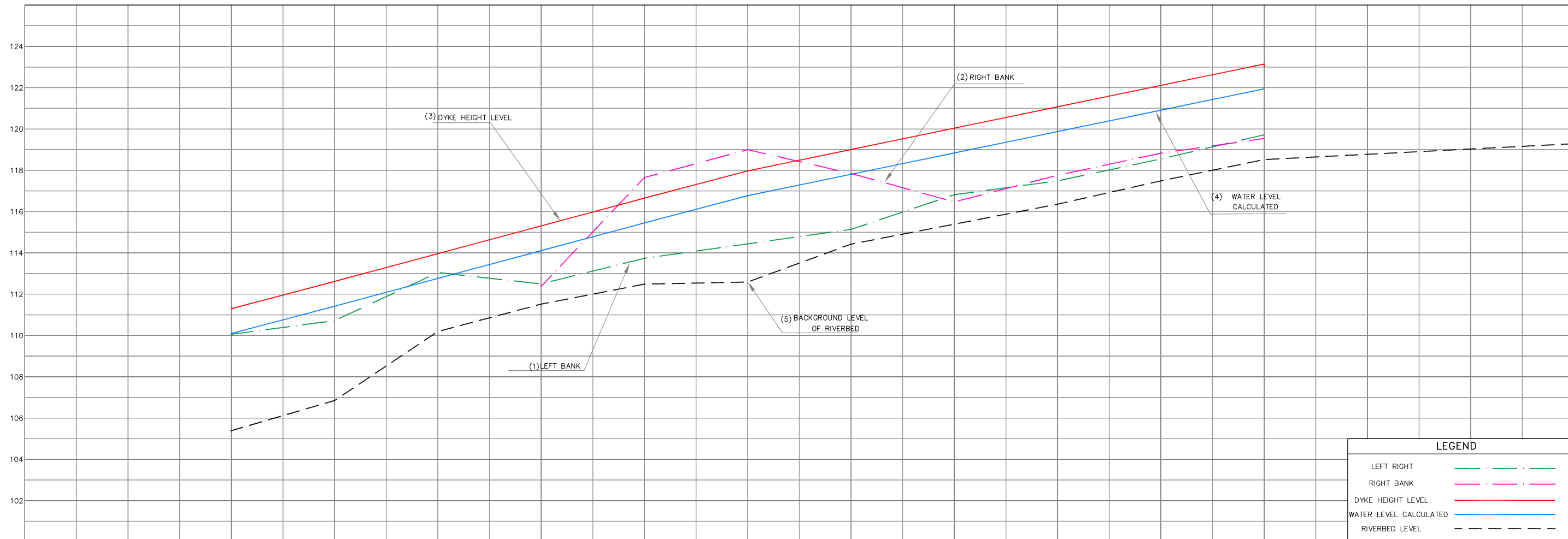
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



LEGEND	
LEFT BANK	---
RIGHT BANK	---
DYKE HEIGHT LEVEL	---
WATER LEVEL CALCULATED	---
RIVERBED LEVEL	---

DISTANCE (m)	10+000	10+100	10+200	10+300	10+400	10+500	10+600	10+700	10+800	10+900	11+000	11+100	11+200	11+300	11+400
(1) LEFT BANK LEVEL			110.06	110.72	113.05	112.50	113.74	114.44	115.14	116.82	117.49	118.55	119.72		
(2) RIGHT BANK LEVEL															
(3) DYKE HEIGHT LEVEL			110.09	111.29	112.62	113.96	115.31	116.65	117.97	119.01	120.04	121.08	122.11	123.15	124.18
(4) WATER LEVEL CALCULATED			110.09	111.42	112.76	114.11	115.45	116.77	117.81	118.84	119.88	120.91	122.11	123.15	124.18
(5) BACKGROUND LEVEL OF RIVERBED	105.39		106.85	111.42	112.62	113.96	115.31	116.65	117.97	119.01	120.04	121.08	122.11	123.15	124.18

**CHIRA RIVER
CRITICAL POINT N° 3
LONGITUDINAL PROFILE**

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Consultants:



NIPPO LAC CO., LTD.
Consulting Engineers

Designed by: M.SOYA
Revised by: M.KITANO
Approved by: Y.NAKAGAWA
Revised by: Y.NAKAGAWA

Project:

THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing:

**CANETE RIVER:
CRITICAL POINT N° 3
LONGITUDINAL PROFILE**

ESCALE: INDICATED

DATE: MARCH - 2013

CODE: **CANETE - 3**

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

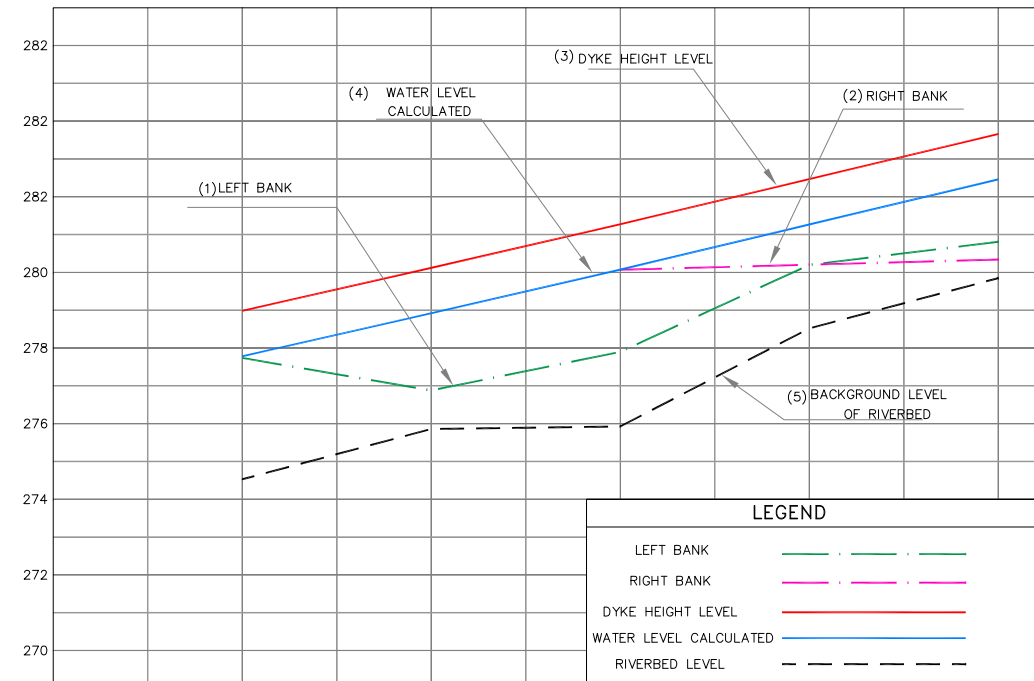
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1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



DISTANCE (m)	24+500	24+600	24+700	24+800	24+900	25+000
(1) LEFT BANK LEVEL		277.74	276.88	277.90	280.20	280.89
(2) RIGHT BANK LEVEL				278.07	280.21	280.34
(3) DYKE HEIGHT LEVEL		278.98	280.12	281.07	282.47	283.66
(4) WATER LEVEL CALCULATED		277.78	278.92	280.07	281.27	282.46
(5) BACKGROUND LEVEL OF RIVERBED		274.53	275.86	275.92	278.52	280.01

**CANETE RIVER
CRITICAL POINT N°4
LONGITUDINAL PROFILE**

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

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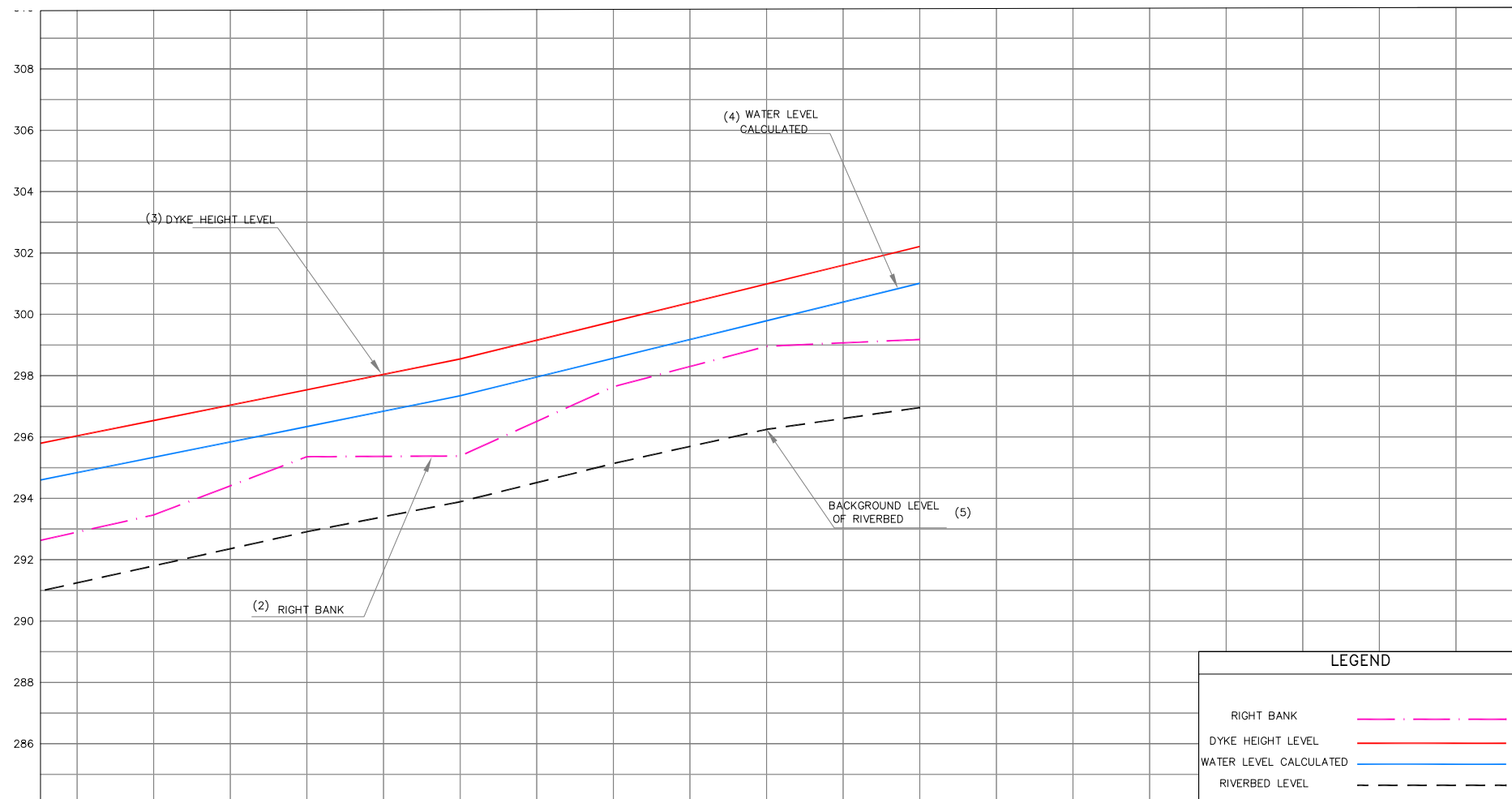
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1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



LEGEND	
RIGHT BANK	-----
DYKE HEIGHT LEVEL	—————
WATER LEVEL CALCULATED	—————
RIVERBED LEVEL	-----

	26+100	26+200	26+300	26+400	26+500	26+600	26+700	26+800	26+900	27+000
(2) RIGHT BANK LEVEL										
(3) DYKE HEIGHT LEVEL	296.54	297.54	298.55	299.77	300.99	302.21				
(4) WATER LEVEL CALCULATED	295.34	296.34	297.35	298.57	299.79	301.01				
(5) BACKGROUND LEVEL OF RIVERBED	291.80	292.91	293.89	295.14	296.25	296.96				

**CANETE RIVER
CRITICAL POINT N° 5 (2/2)
LONGITUDINAL PROFILE**

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

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1:150 0 1 2 3 4 5 6 7 8 9 10

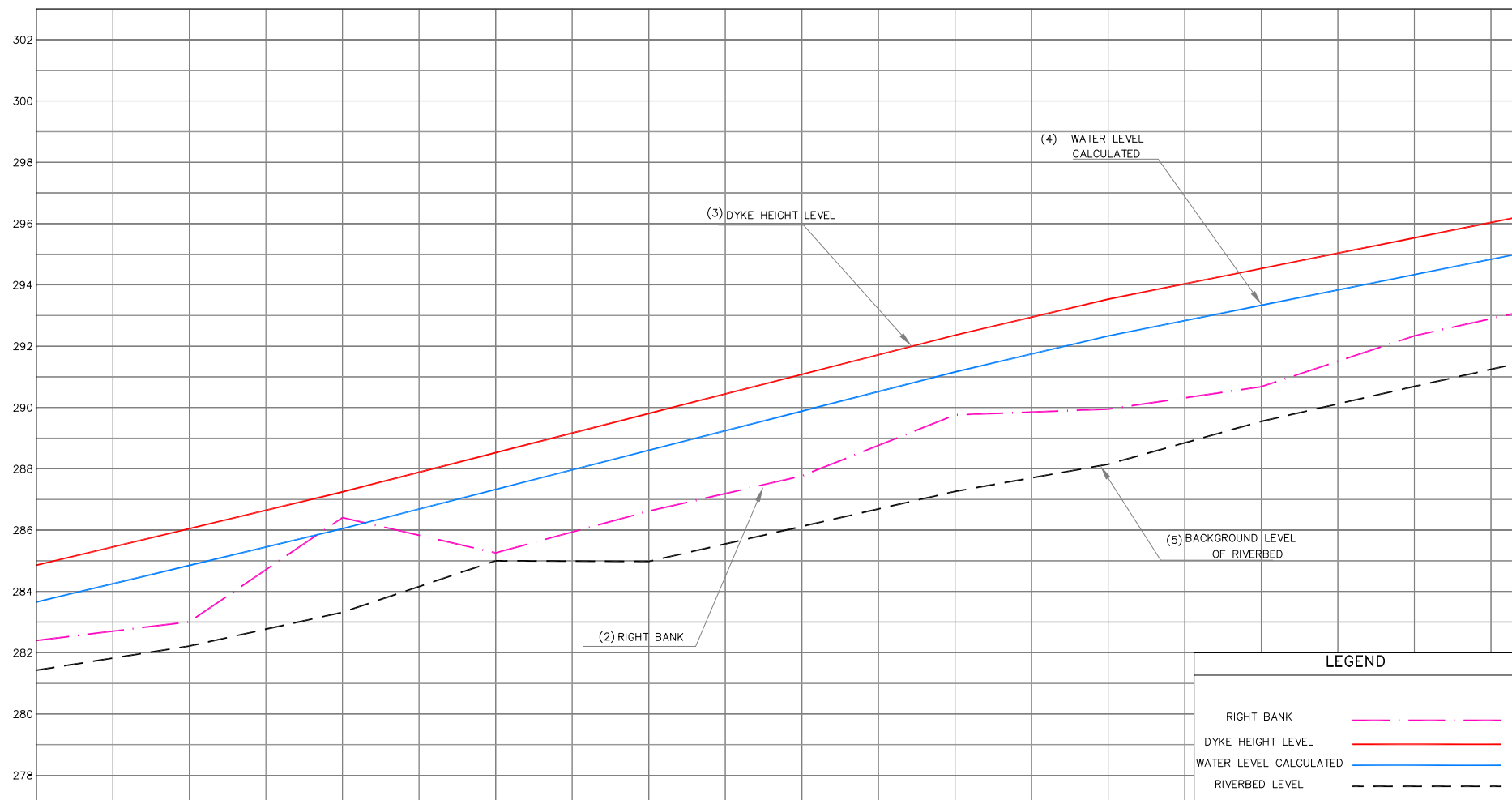
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1:250 0 5 10 15 20

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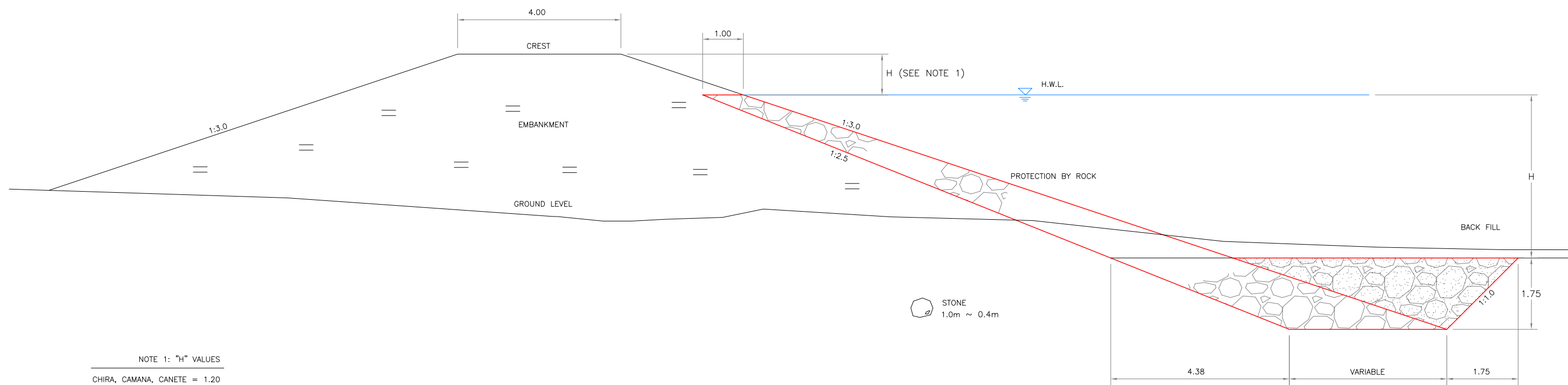
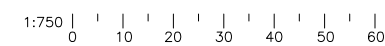
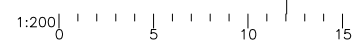
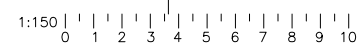
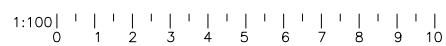
1:750 0 10 20 30 40 50 60



	25+100	25+200	25+300	25+400	25+500	25+600	25+700	25+800	25+900	26+000					
(2) RIGHT BANK LEVEL	281.43	283.66	284.86	282.40	283.01	286.41	285.26	286.62	288.61	289.77	289.76	289.95	289.95	290.68	292.34
(3) DYKE HEIGHT LEVEL	281.43	283.66	284.85	286.05	283.01	286.41	285.26	286.62	288.61	289.77	289.76	289.95	289.95	290.68	292.34
(4) WATER LEVEL CALCULATED	281.43	283.66	284.85	286.05	287.25	286.41	285.26	286.62	288.61	289.77	289.76	289.95	289.95	290.68	292.34
(5) BACKGROUND LEVEL OF RIVERBED	281.43	283.66	284.85	286.05	287.25	286.41	285.26	286.62	288.61	289.77	289.76	289.95	289.95	290.68	292.34

**CANETE RIVER
CRITICAL POINT N° 5 (1/2)
LONGITUDINAL PROFILE**

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



NOTE 1: "H" VALUES
 CHIRA, CAMANA, CANETE = 1.20
 PISCO = 1.00
 CHINCHA, YAUCA = 0.80

TYPICAL SECTION OF THE PROJECTED DYKE

NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

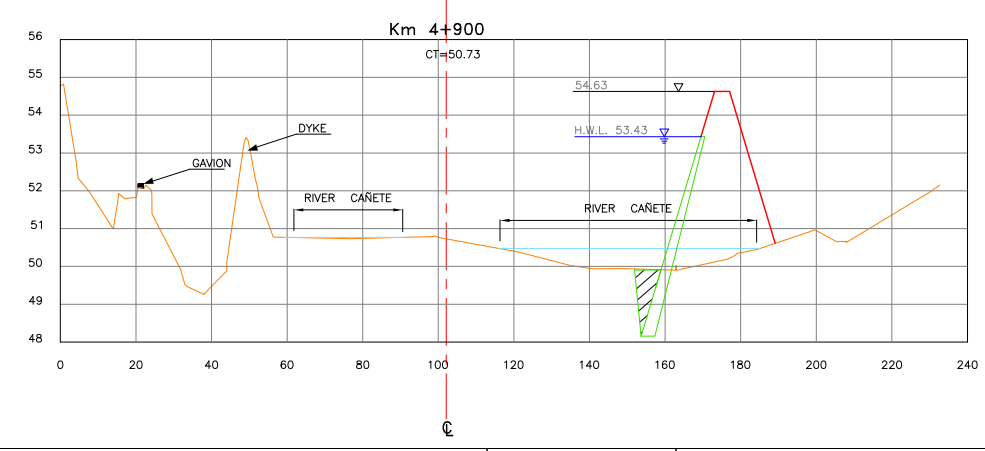
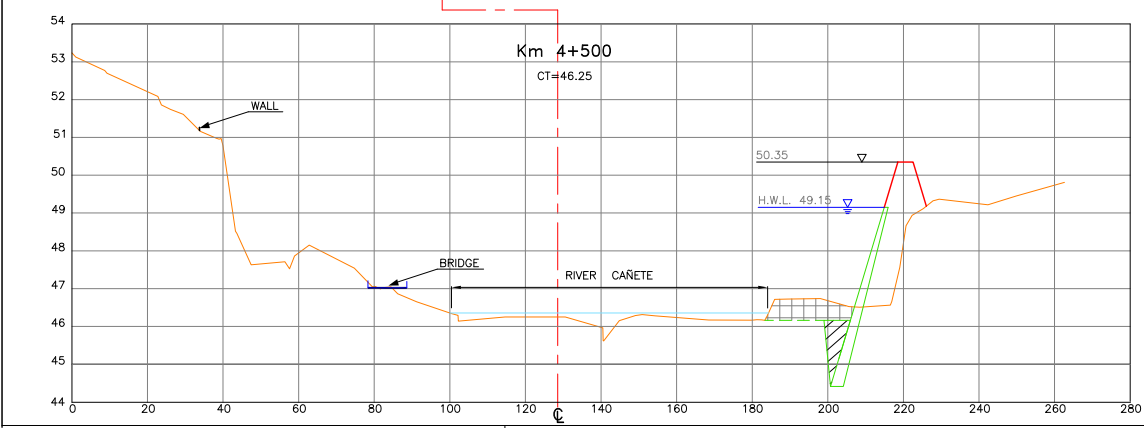
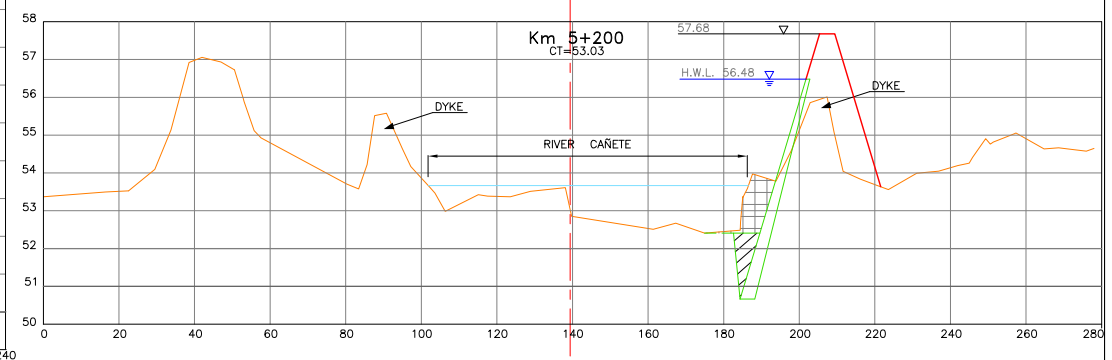
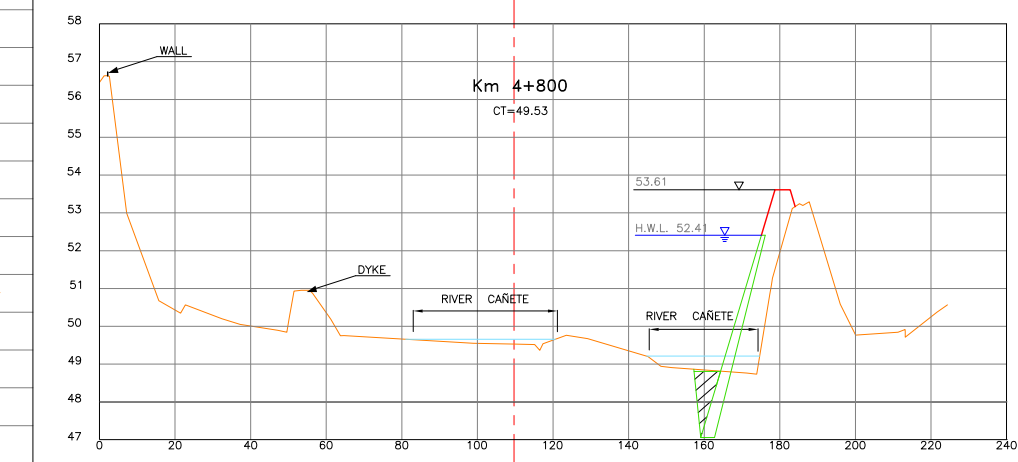
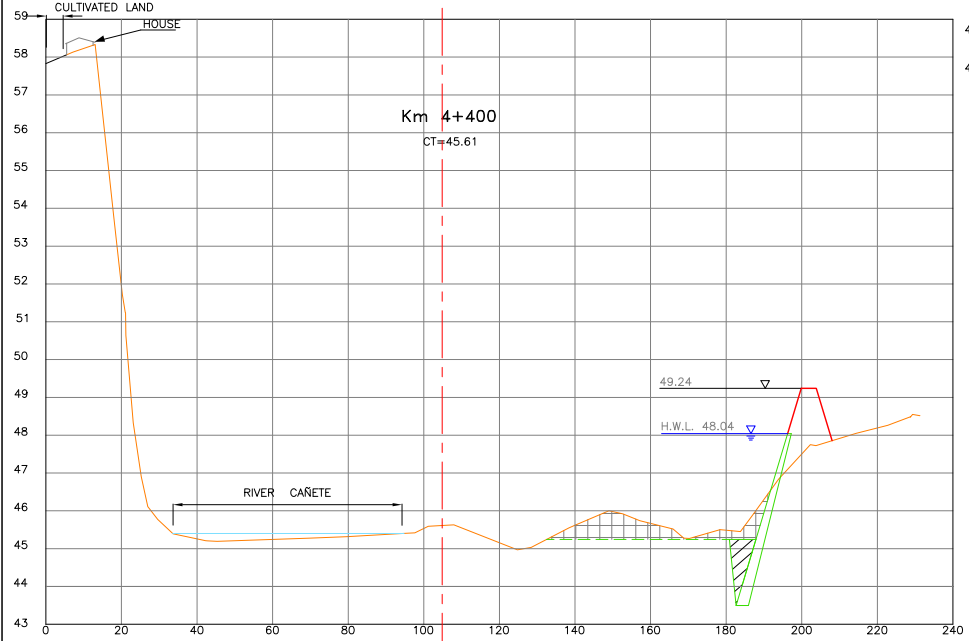
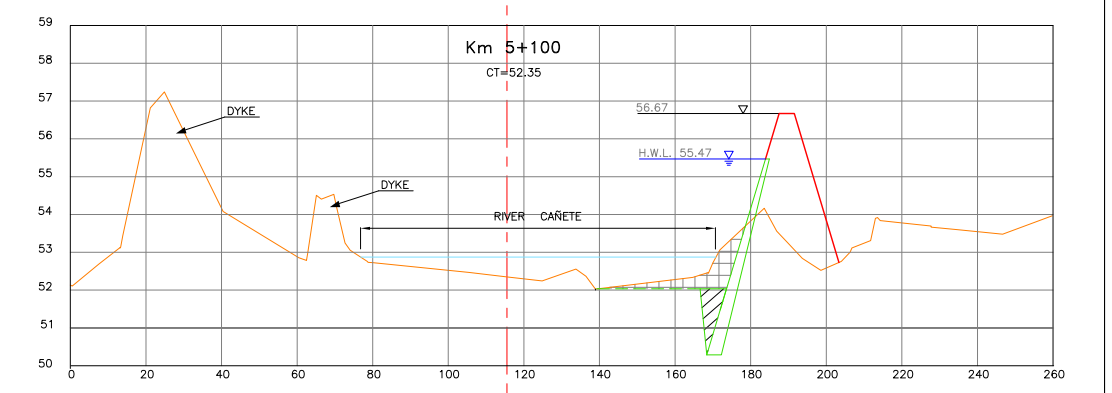
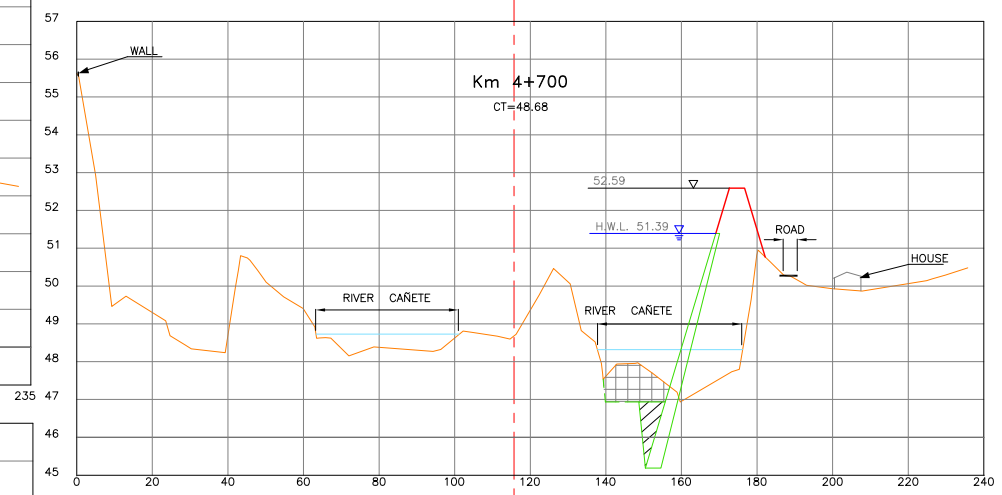
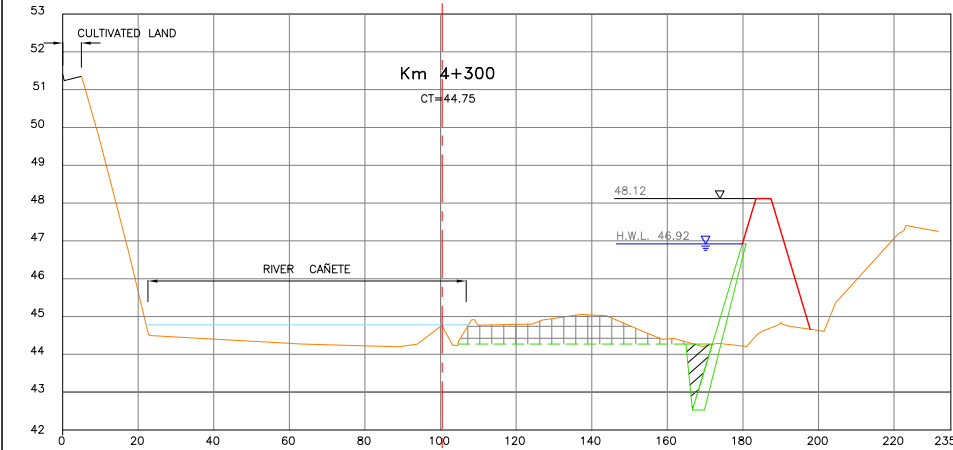
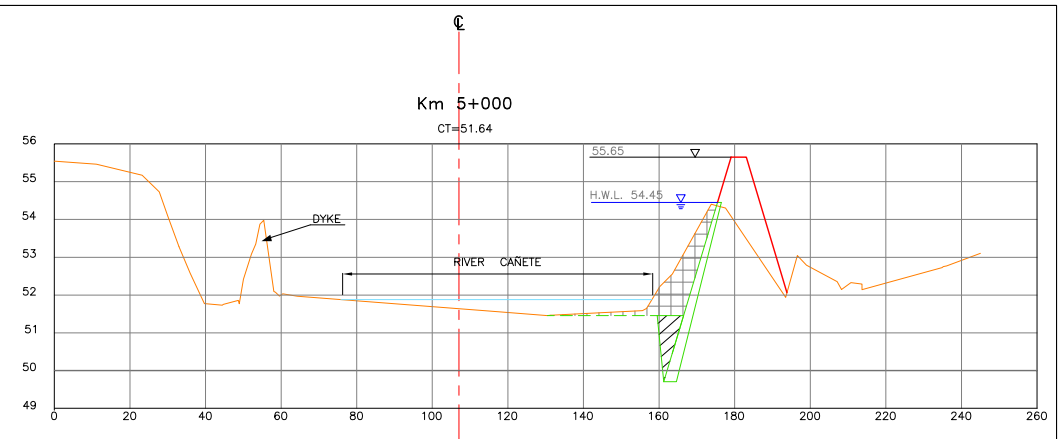
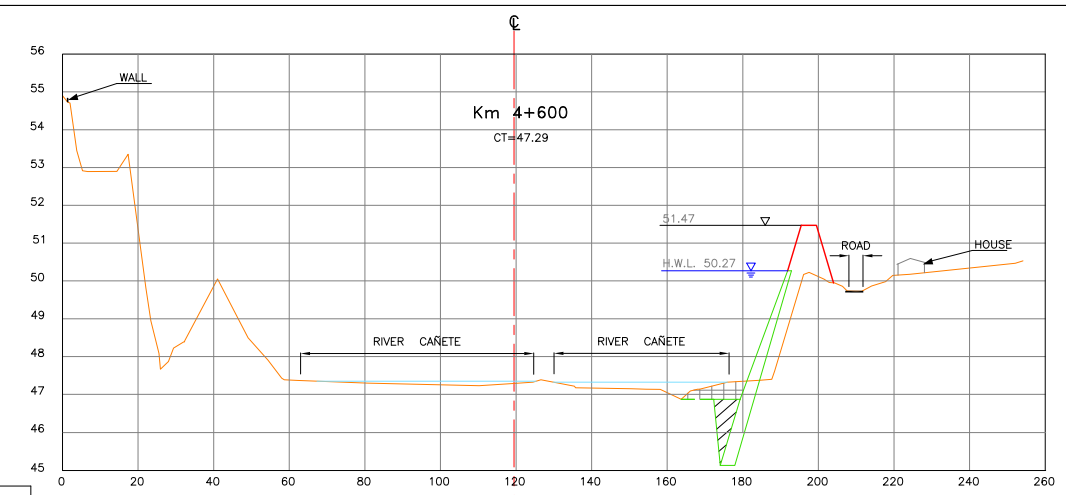
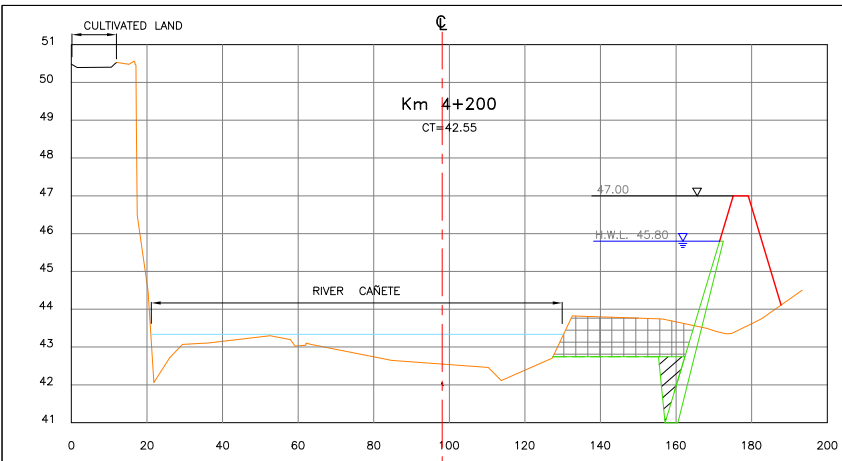
1:200 0 5 10 15 20

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

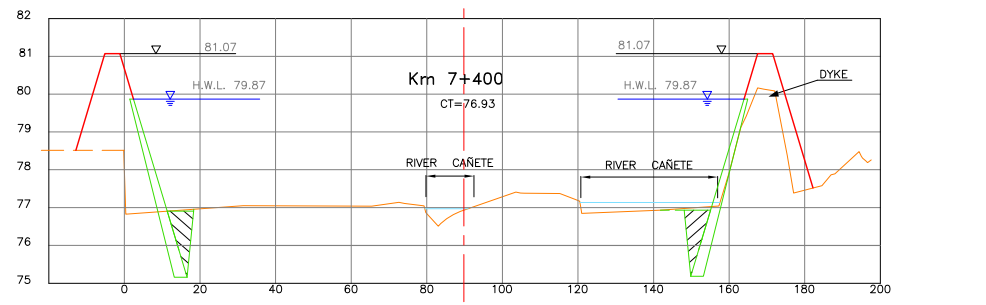
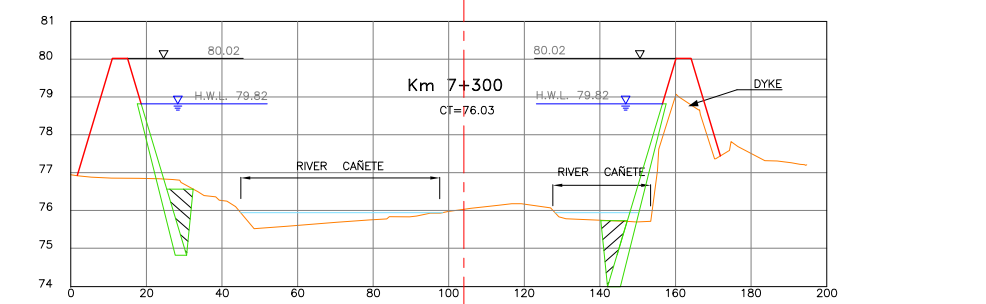
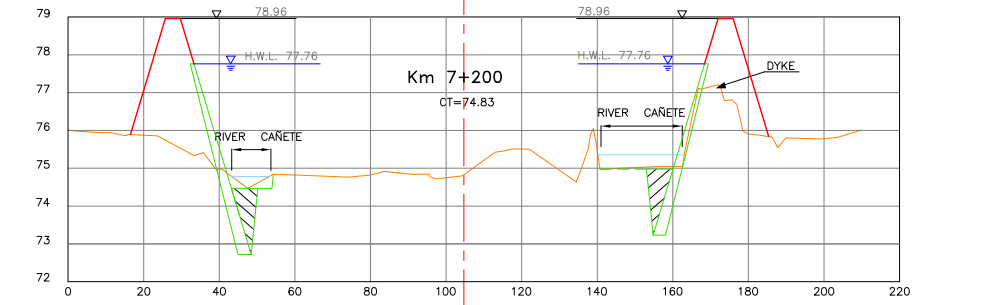
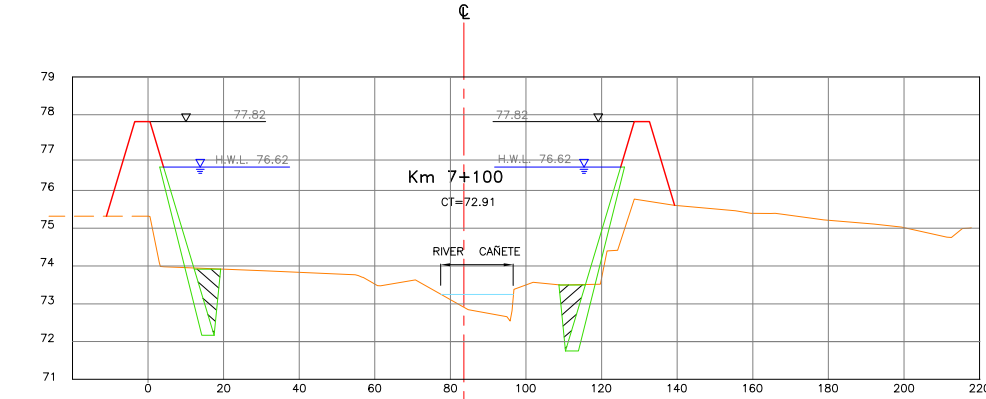
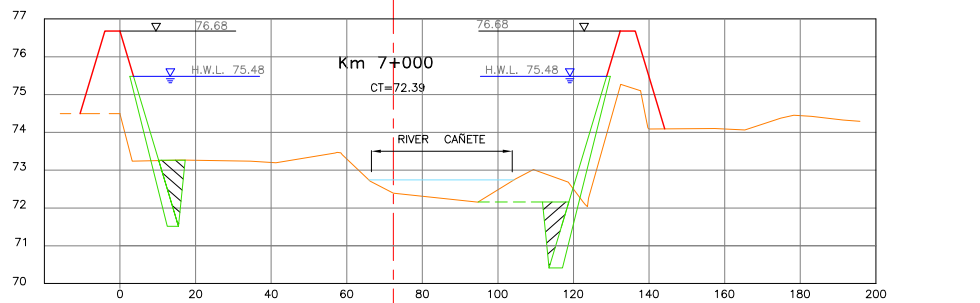
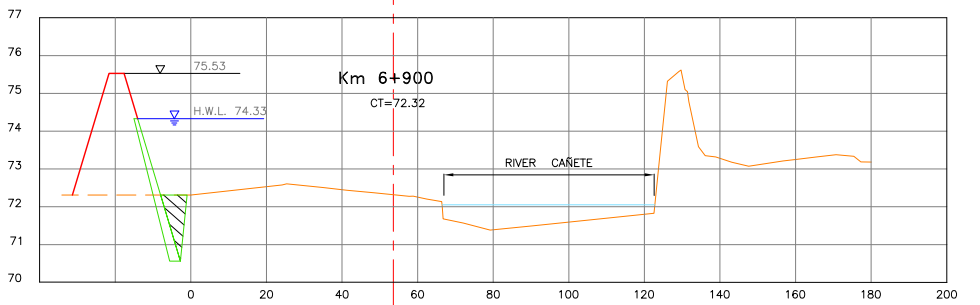
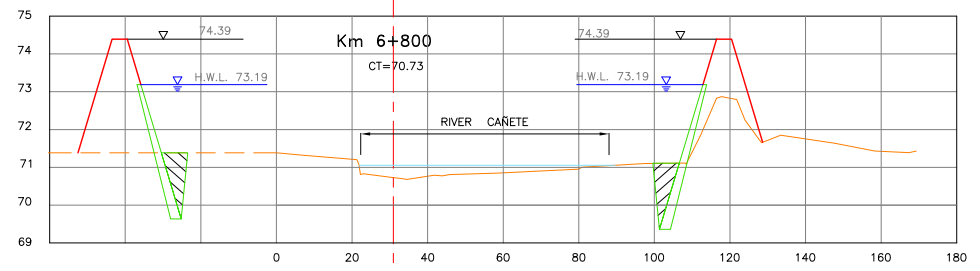
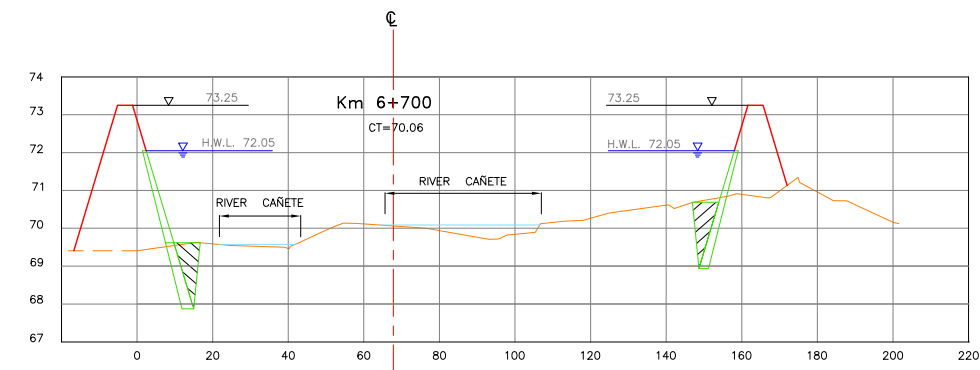
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Consultants:



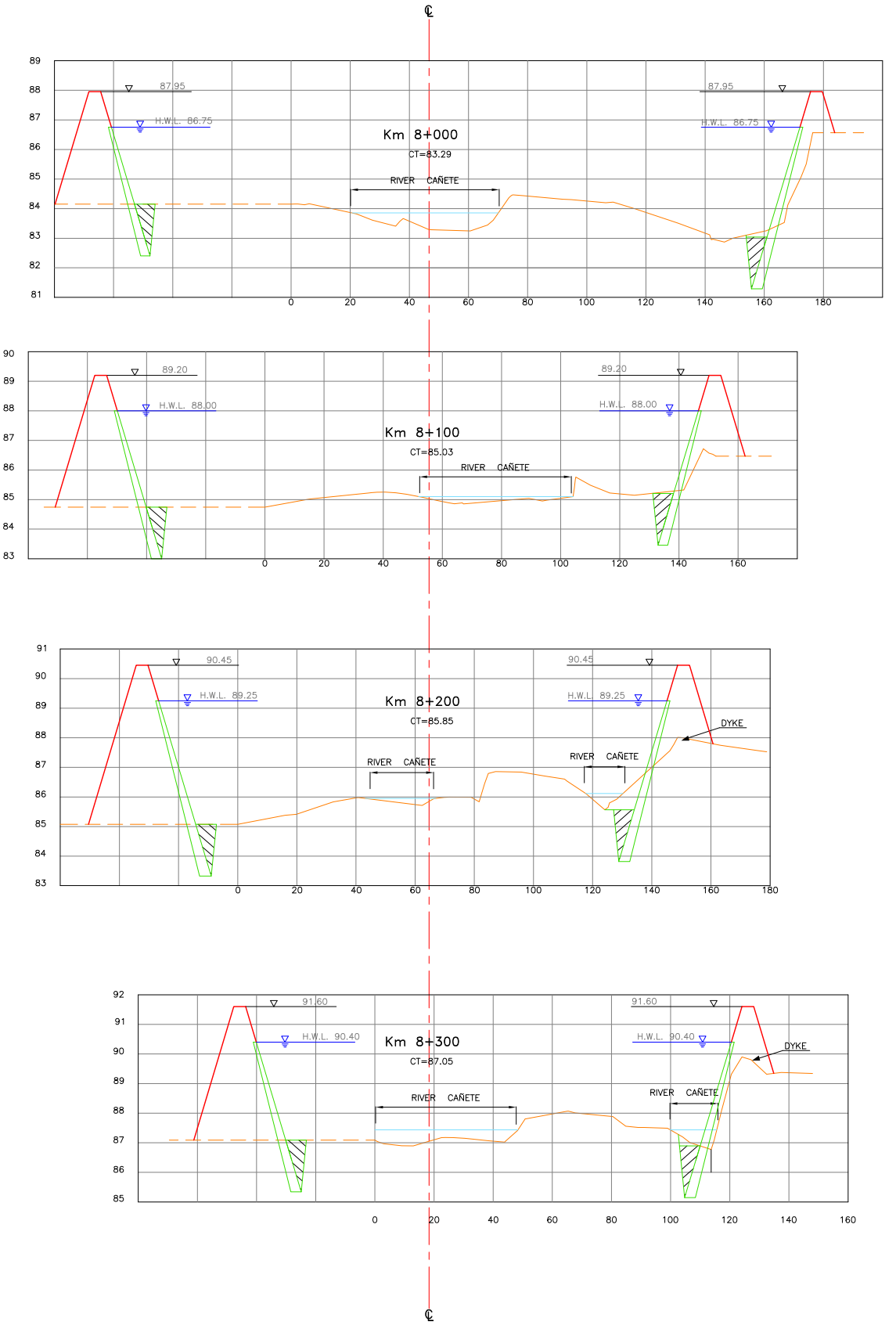
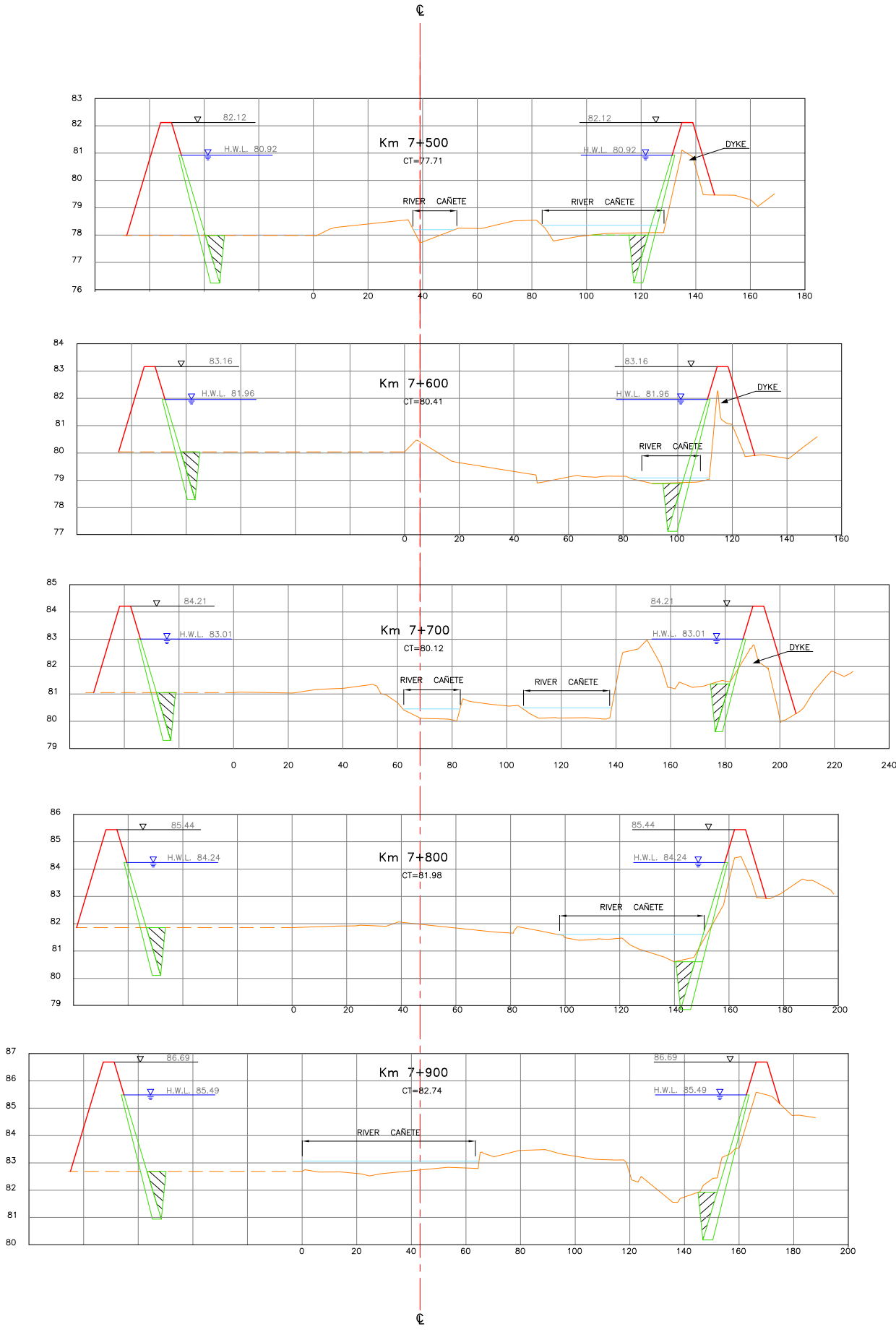
Designed by: M.SOYA
 Revised by: M.KITANO
 Approved by: Y.NAKAGAWA
 Revised by: Y.NAKAGAWA

Project:
 THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing:

CANETE RIVER: CA-2 CROSS SECTIONS
KM. 6+700 - KM. 7+400

ESCALE: INDICATED
 DATE: MARCH - 2013
 CODE: CA-2-ST-01



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

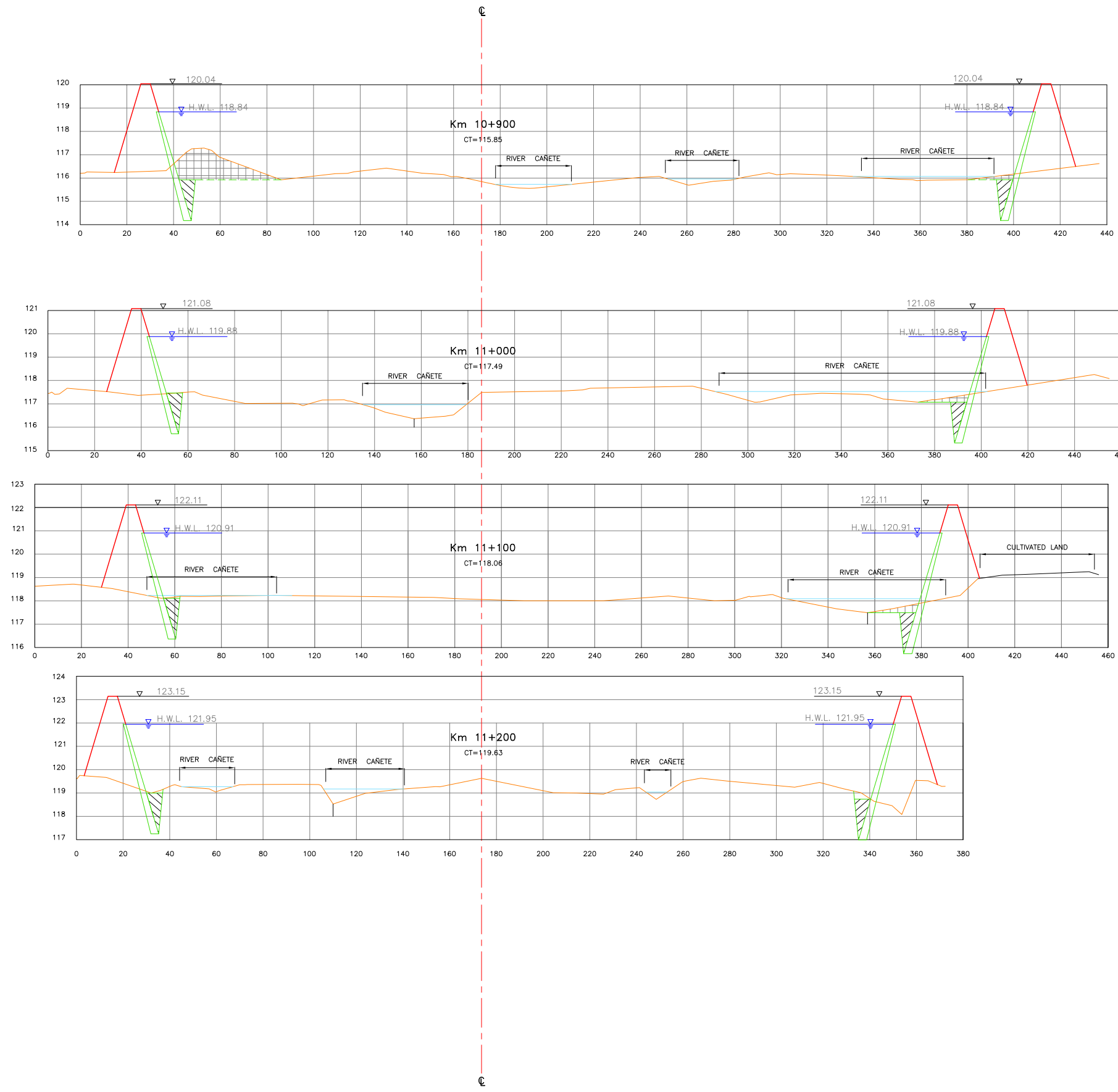
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

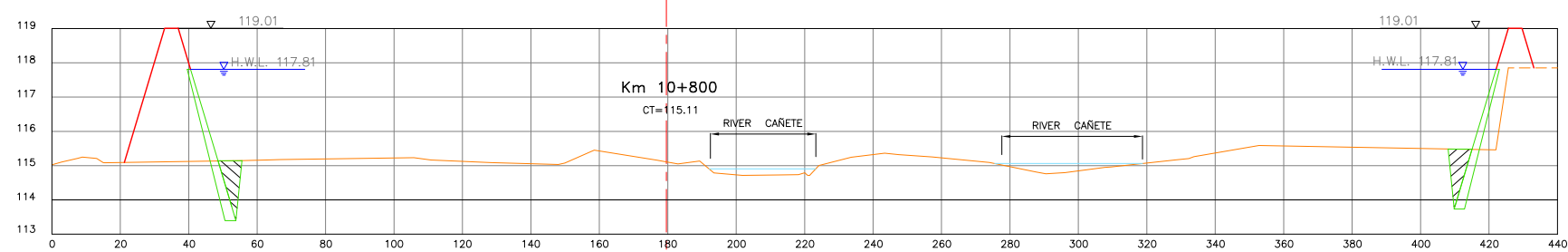
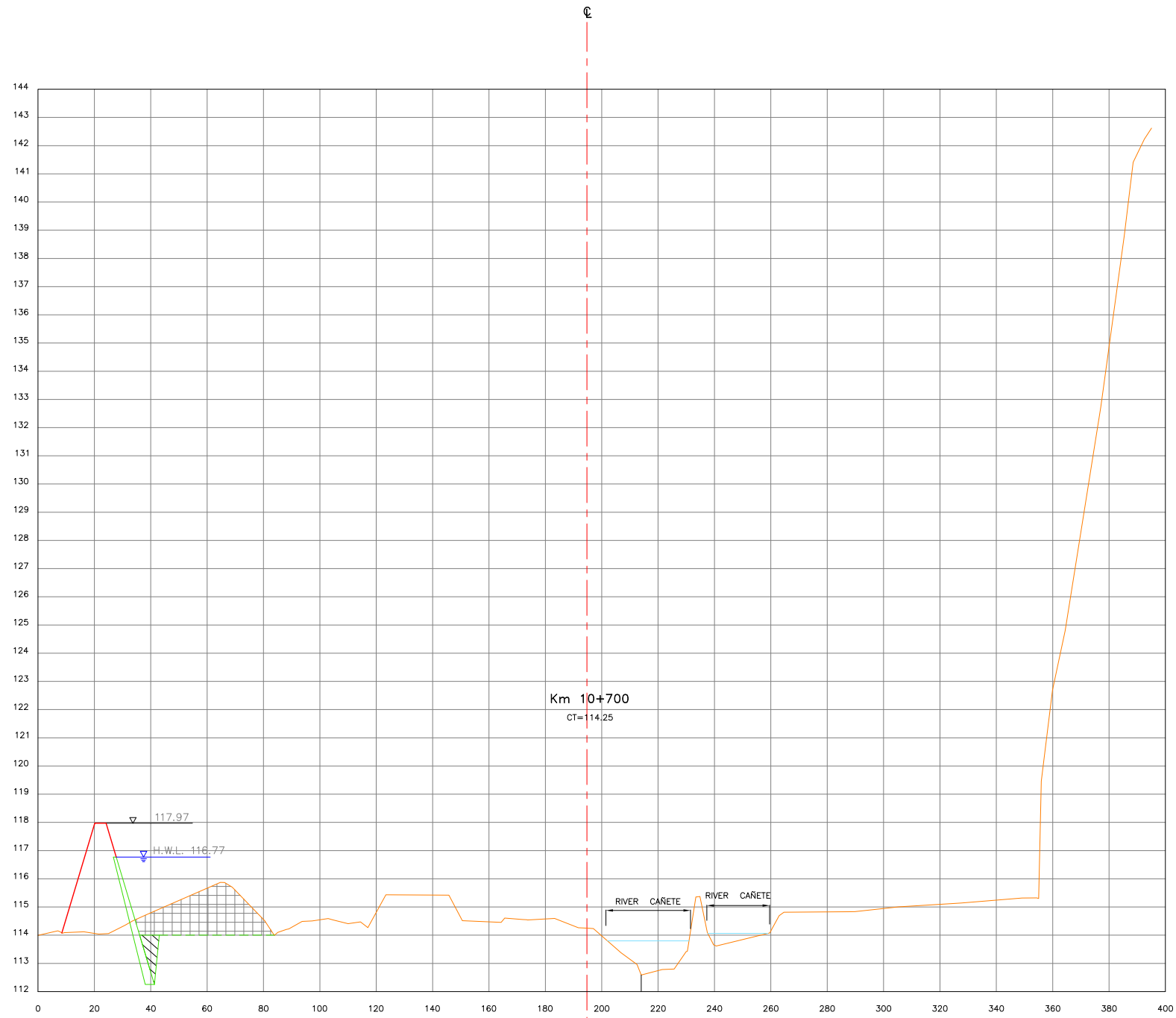
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Japan International Cooperation Agency

Consultants:



Yachyo Engineering Co., Ltd.



NIPON KOEI CO., LTD.



NIPON KOEI LAC CO., LTD. Consulting Engineers

Designed by: M.SOYA
Revised by: M.KITANO
Approved by: Y.NAKAGAWA
Revised by: Y.NAKAGAWA

Project:
THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing:

CANETE RIVER: CA-03
CROSS SECTIONS
KM 10+700 - KM 10+800

ESCALE: INDICATED
DATE: MARCH - 2013
CODE: CA-03-ST-02

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

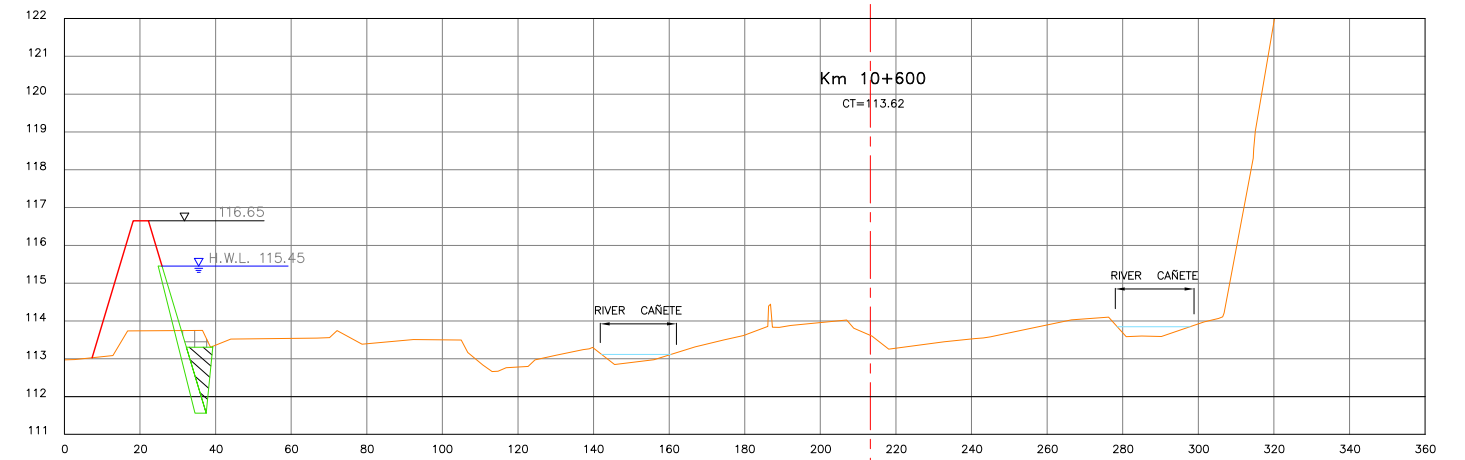
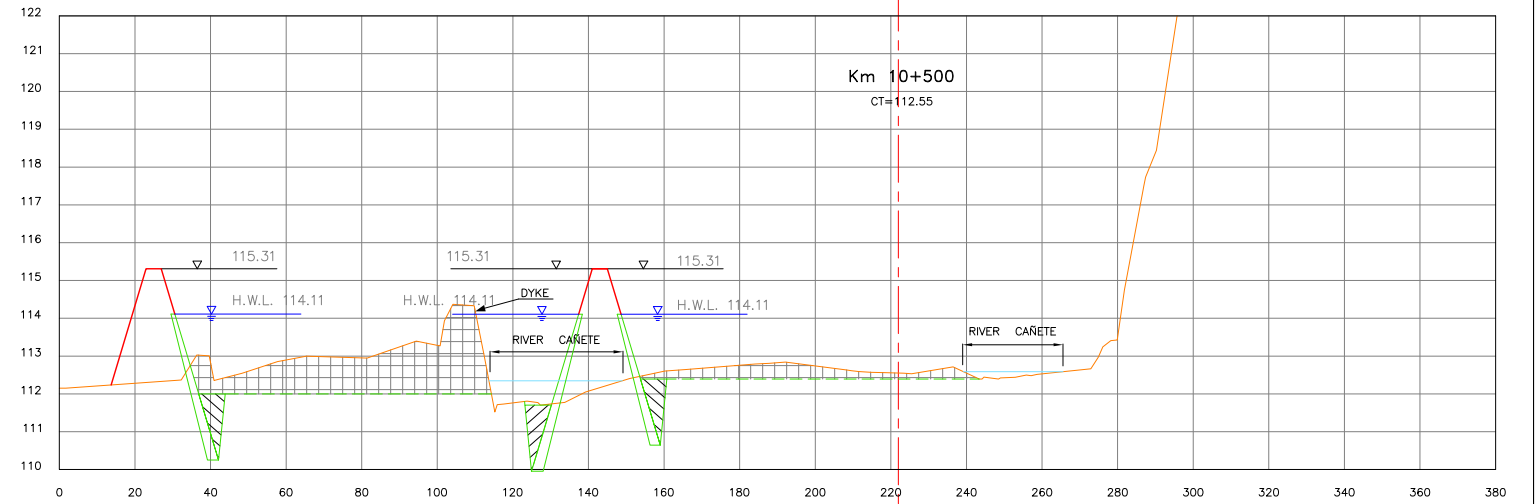
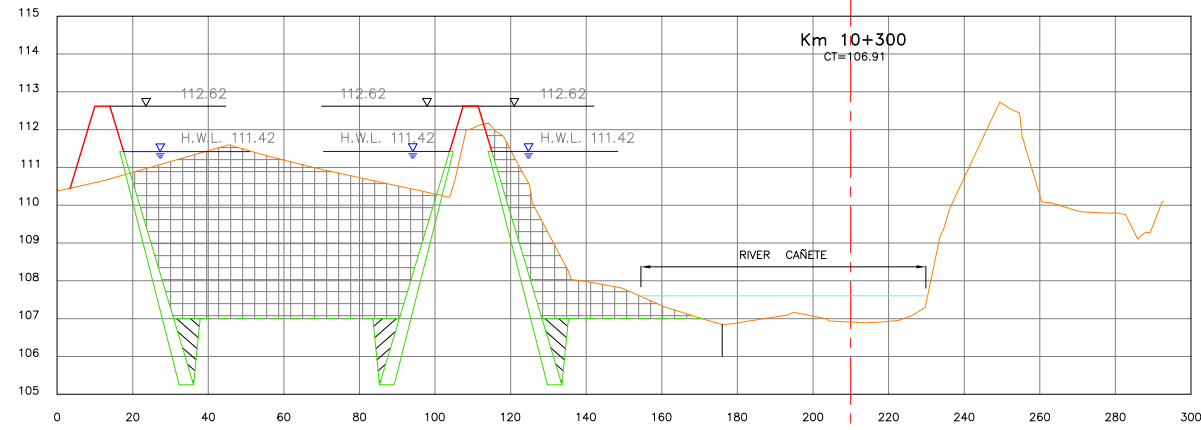
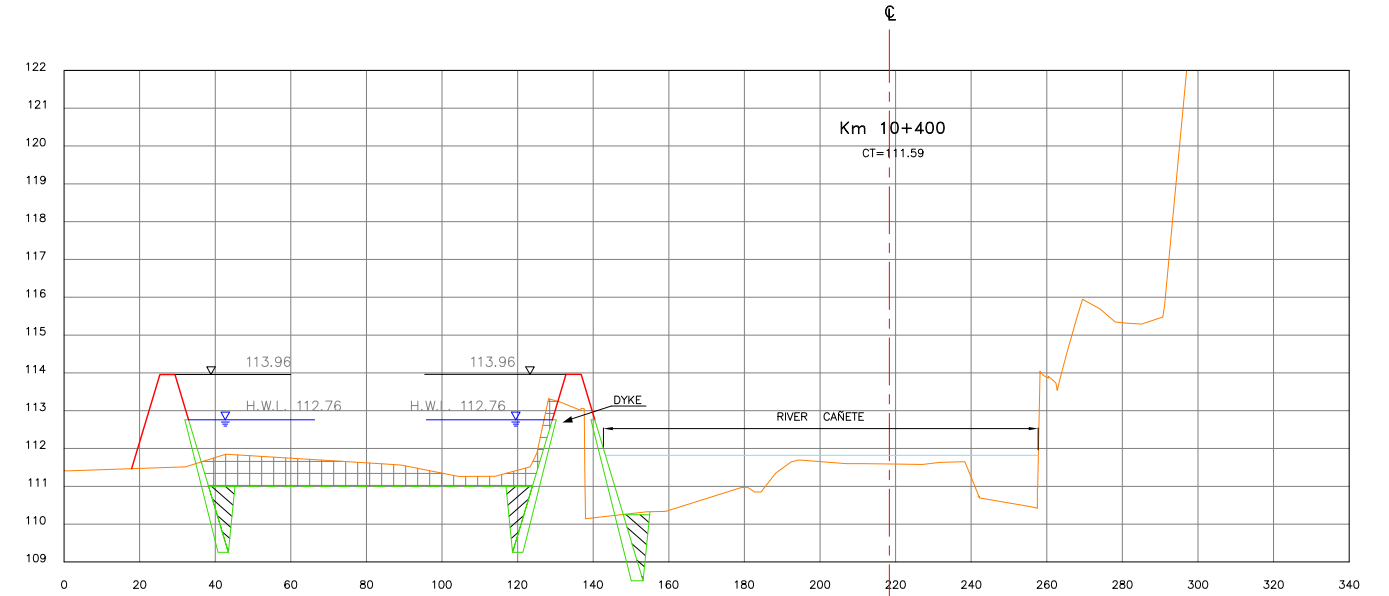
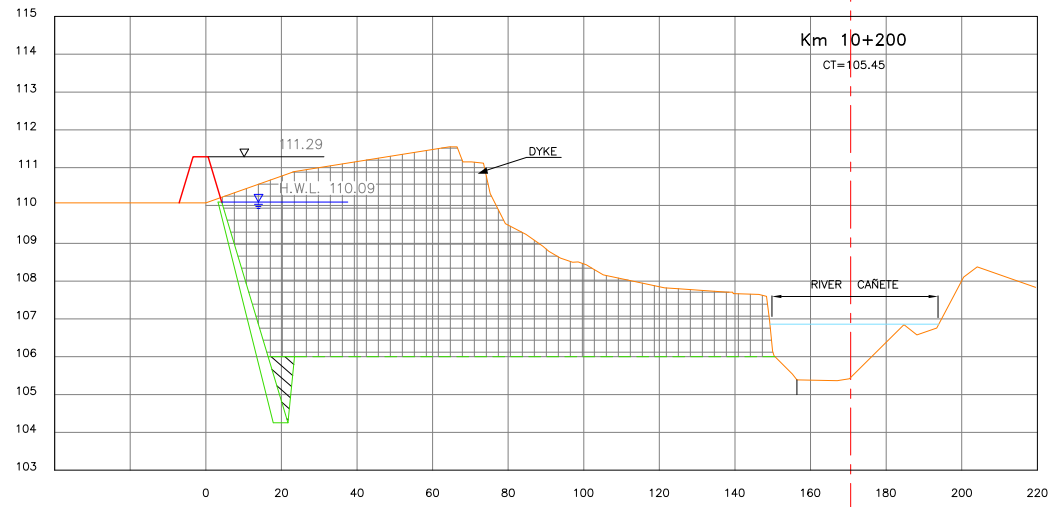
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Consultants:
Yec
Yachyo Engineering Co., Ltd.



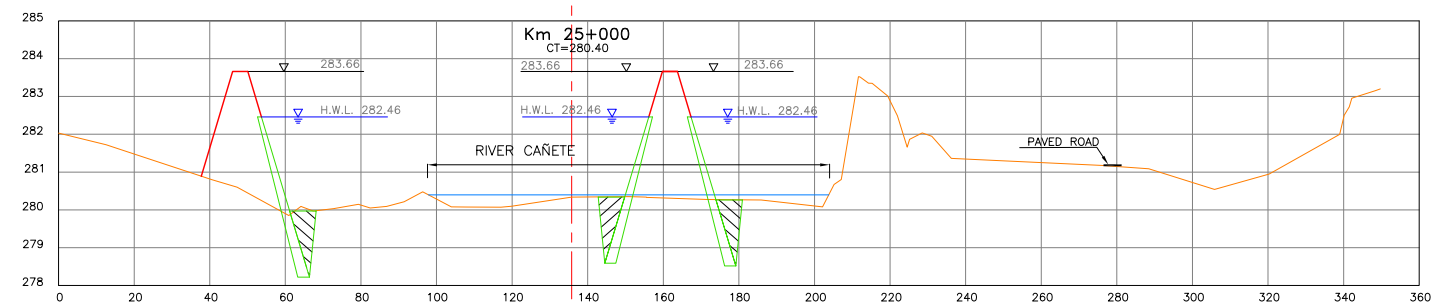
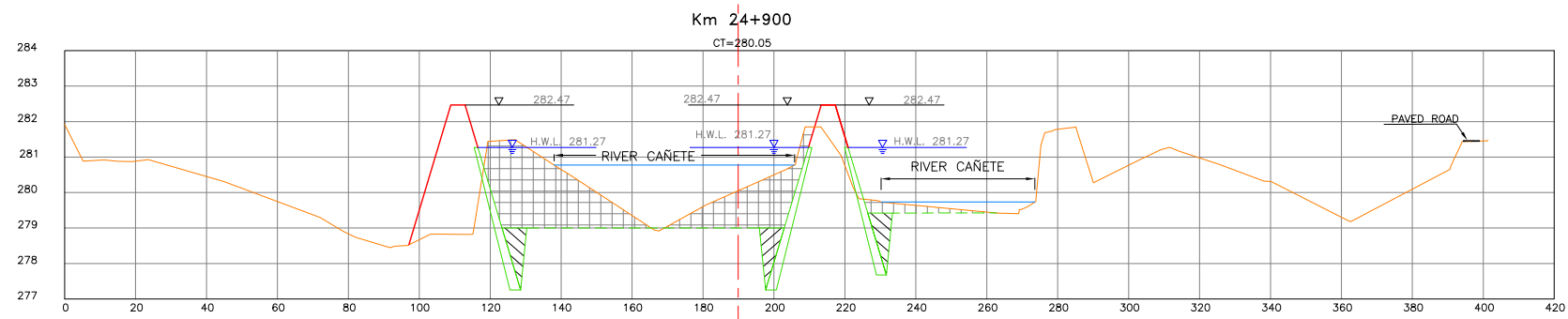
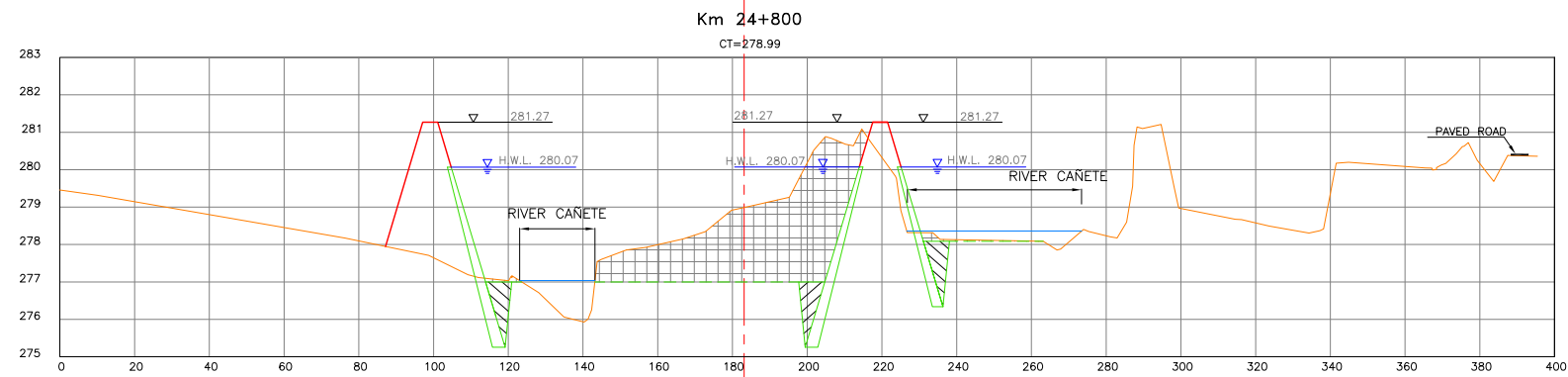
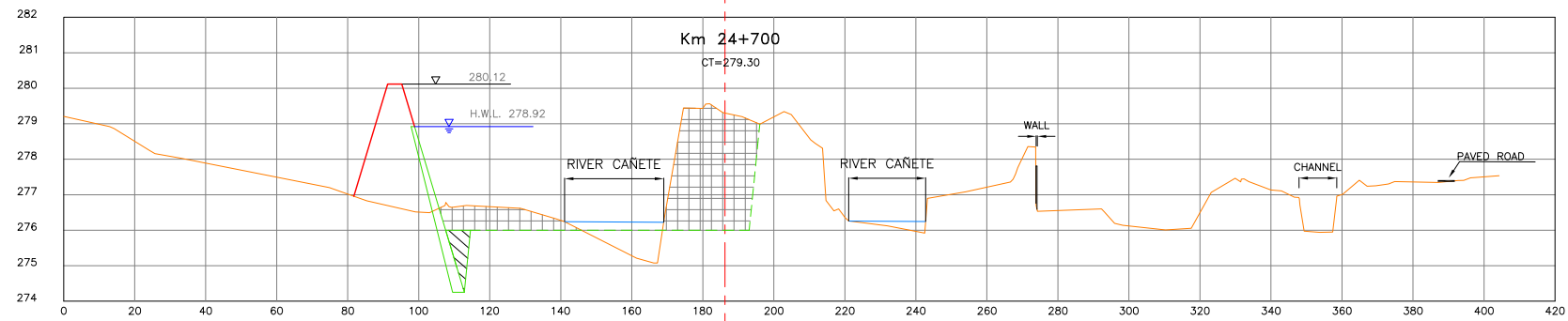
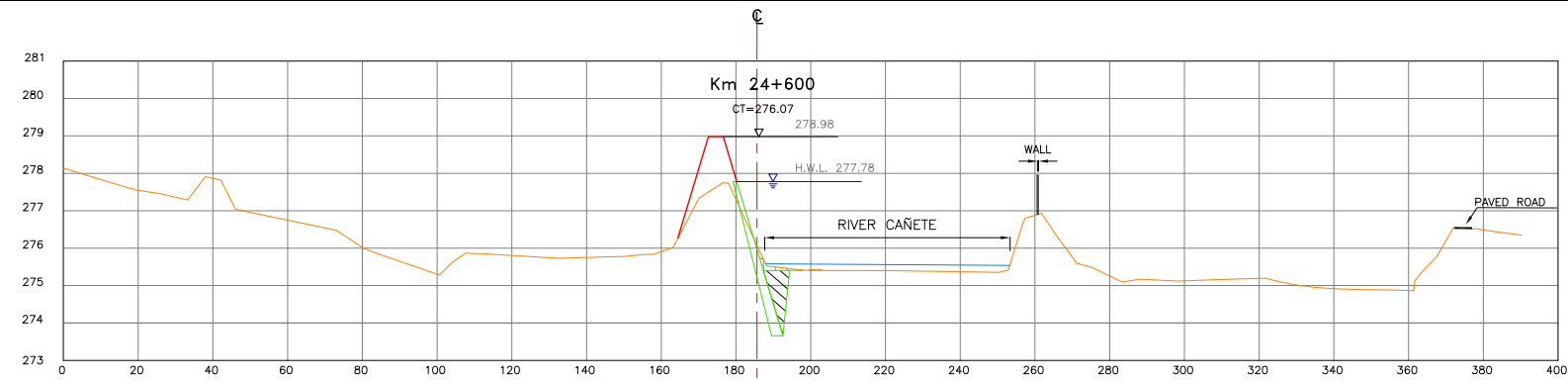
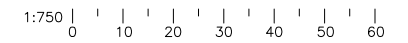
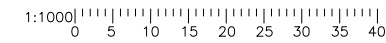
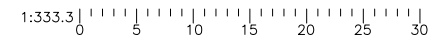
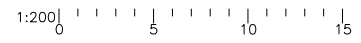
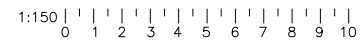
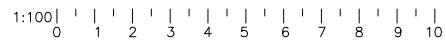
LATIN AMERICA - CARIBBEAN
NIPPON KOEI LAC CO., LTD.
Consulting Engineers

Designed by: M.SOYA
Revised by: M.KITANO
Approved by: Y.NAKAGAWA
Revised by: Y.NAKAGAWA

Project:
THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing:
**CANETE RIVER: CA-3
CROSS SECTIONS
KM. 10+200 - KM. 10+600**

ESCALE: INDICATED
DATE: MARCH - 2013
CODE: **CA-3-ST-01**



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

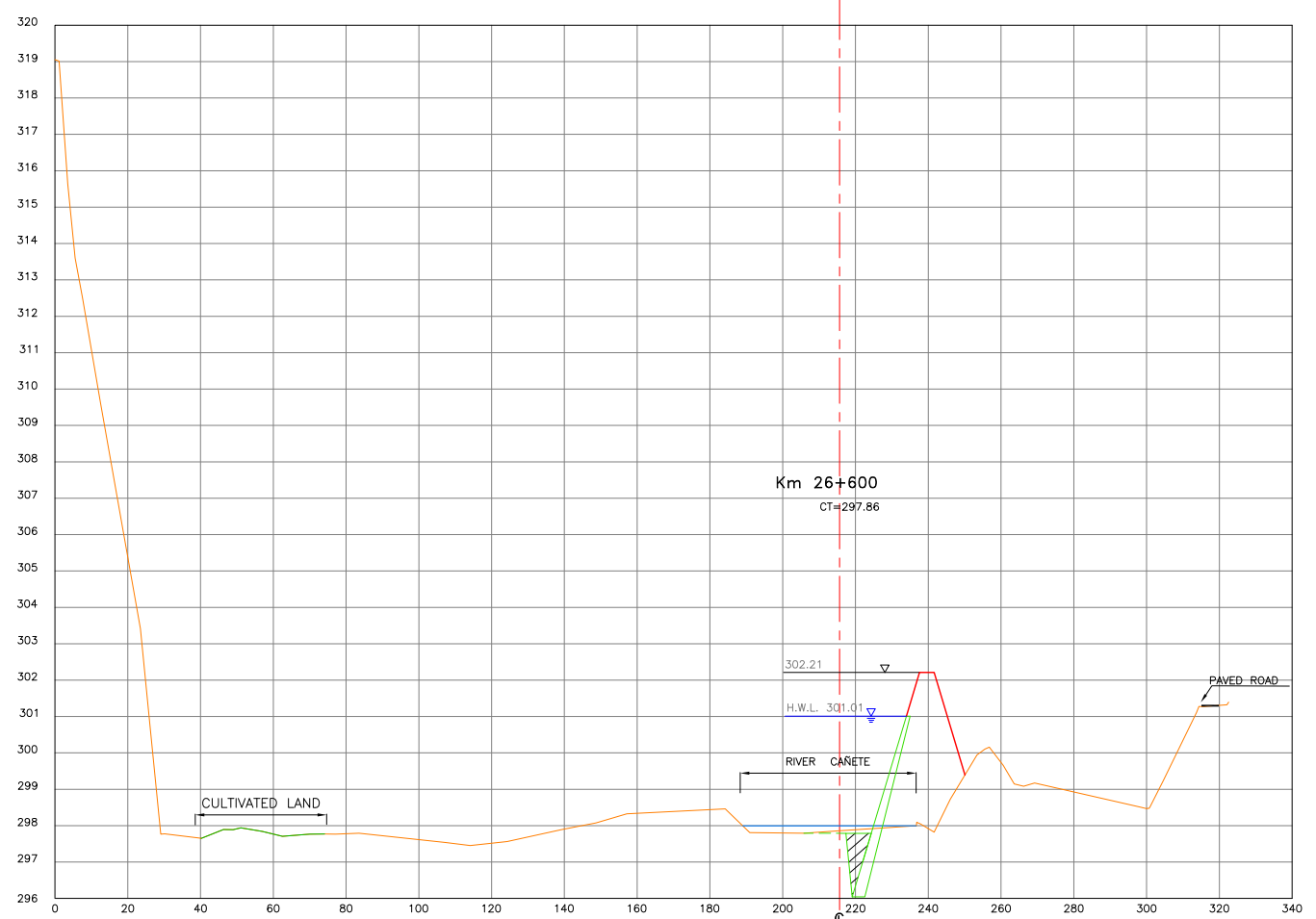
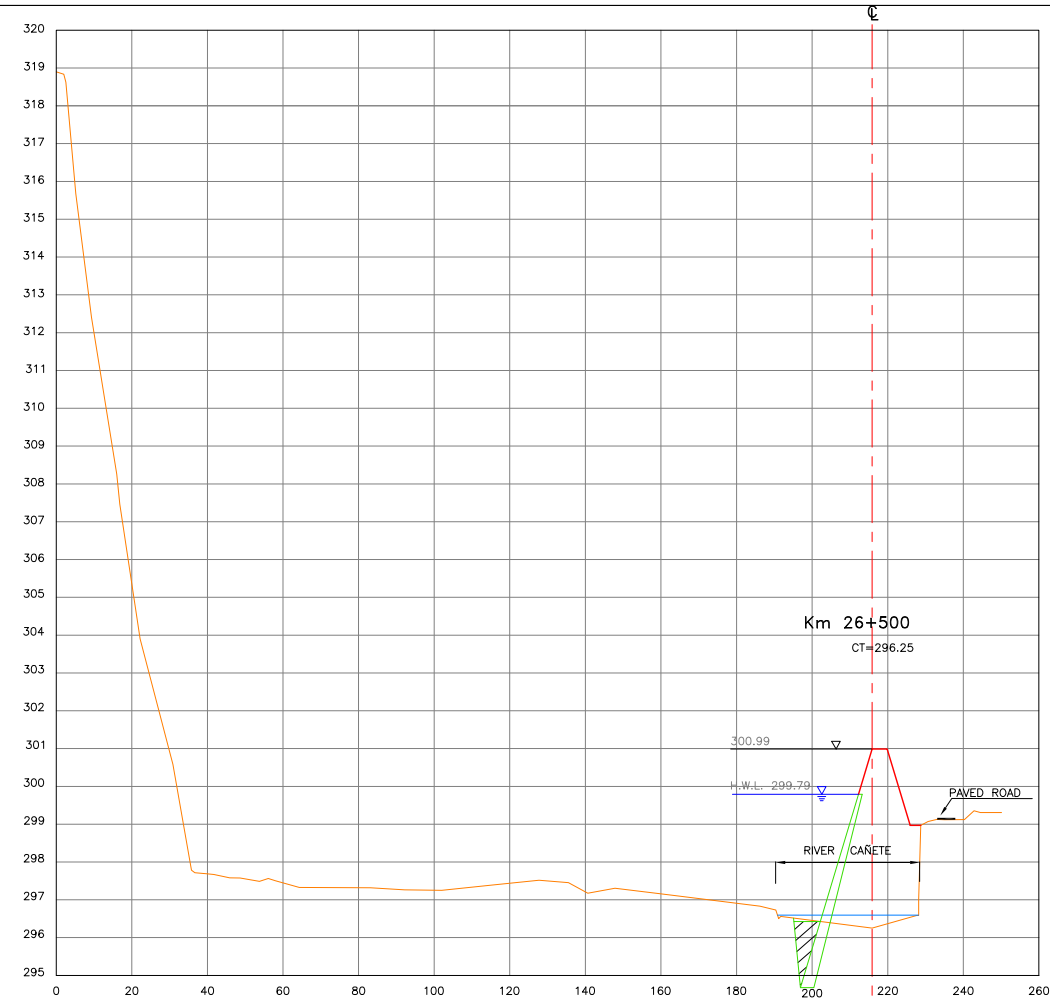
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Consultants:
Yec
Yachiyo Engineering Co., Ltd.

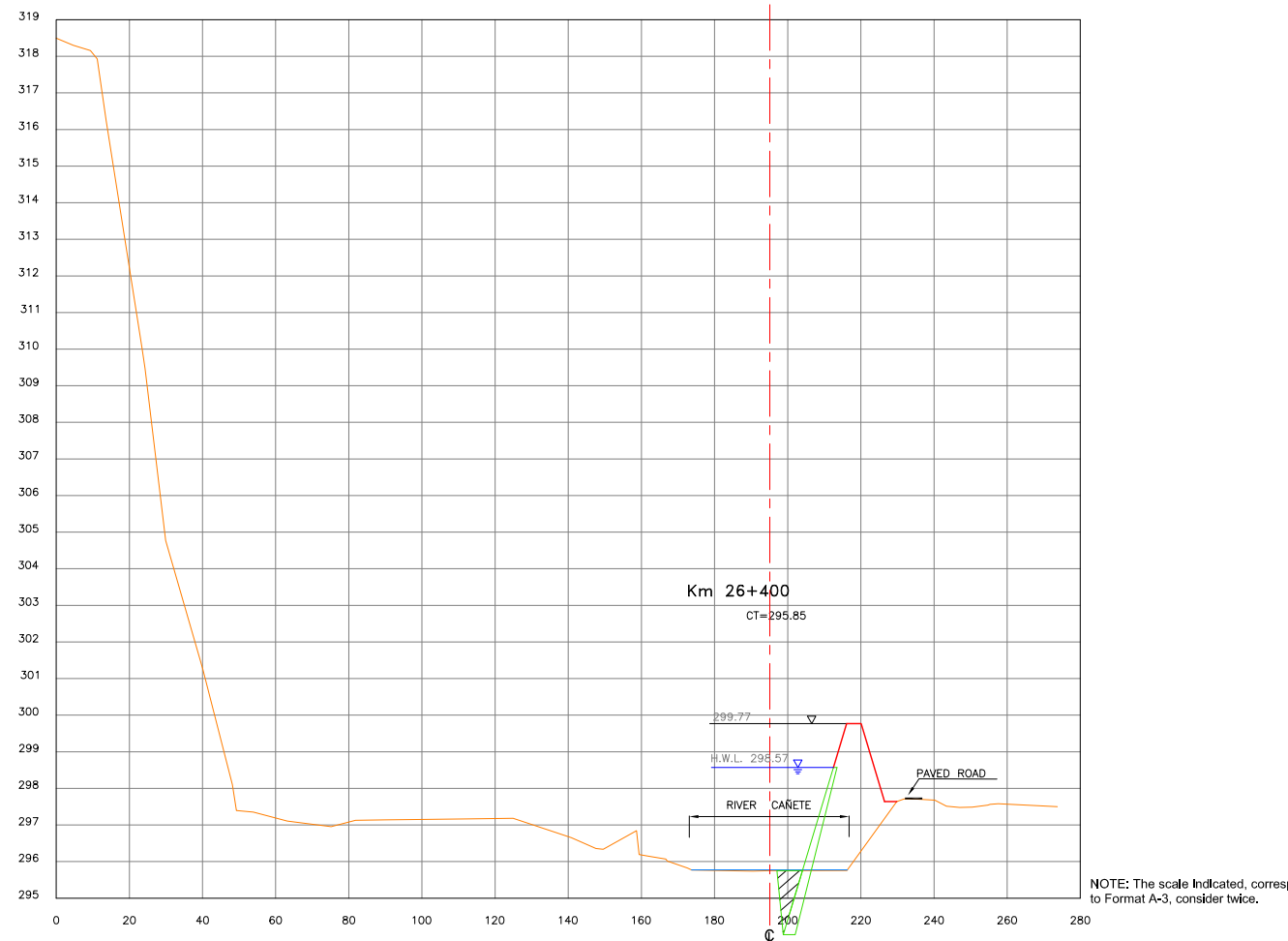
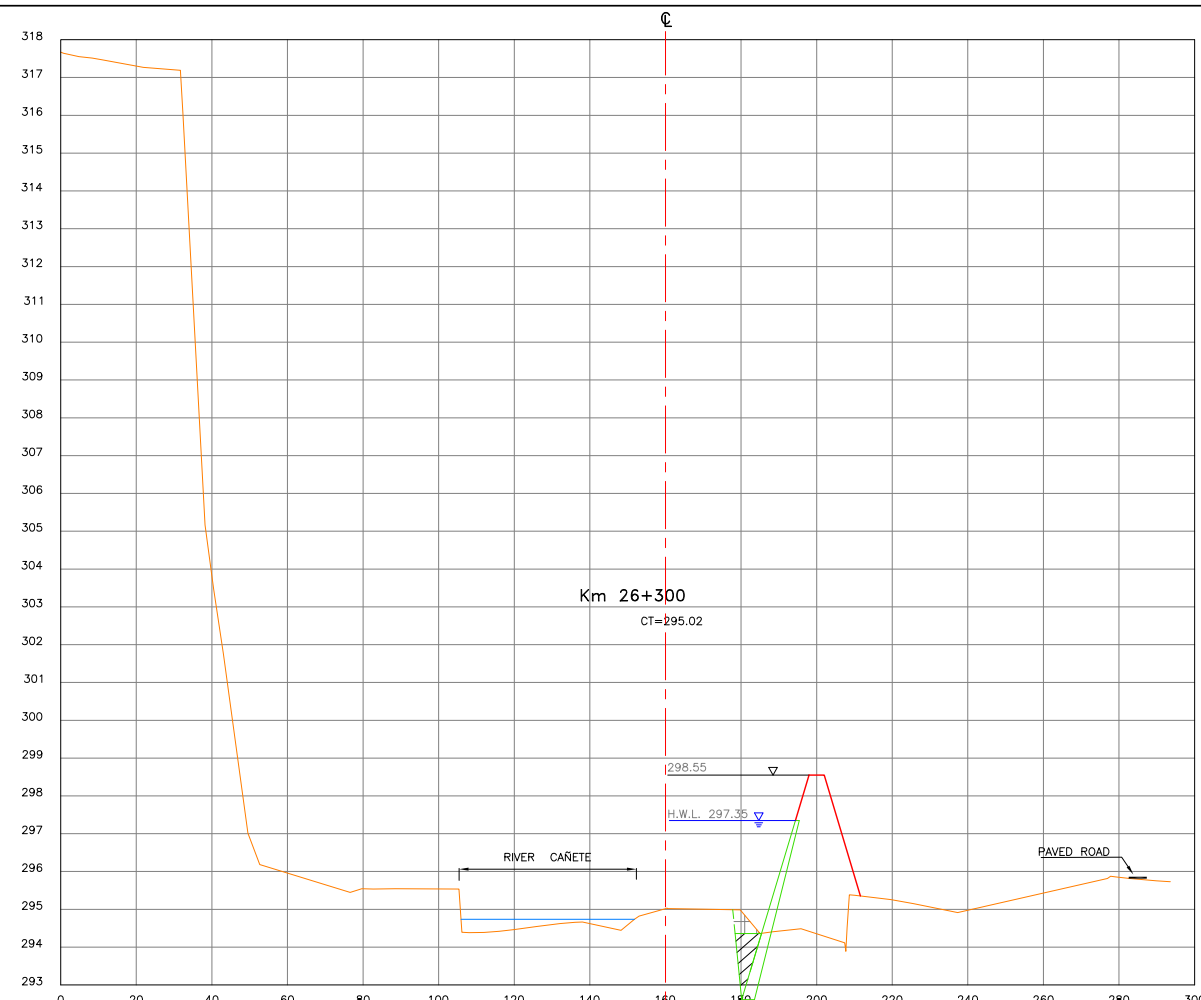
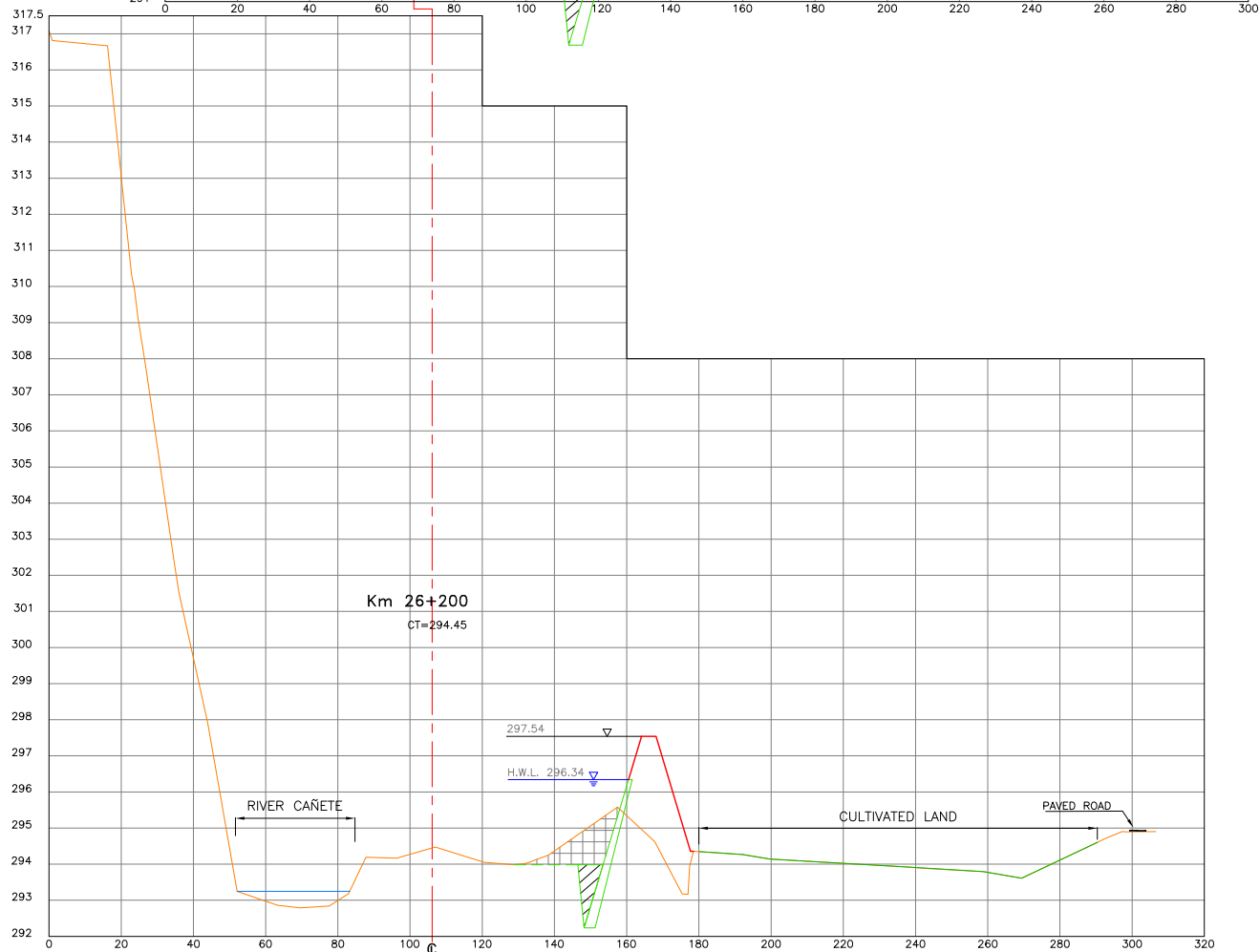
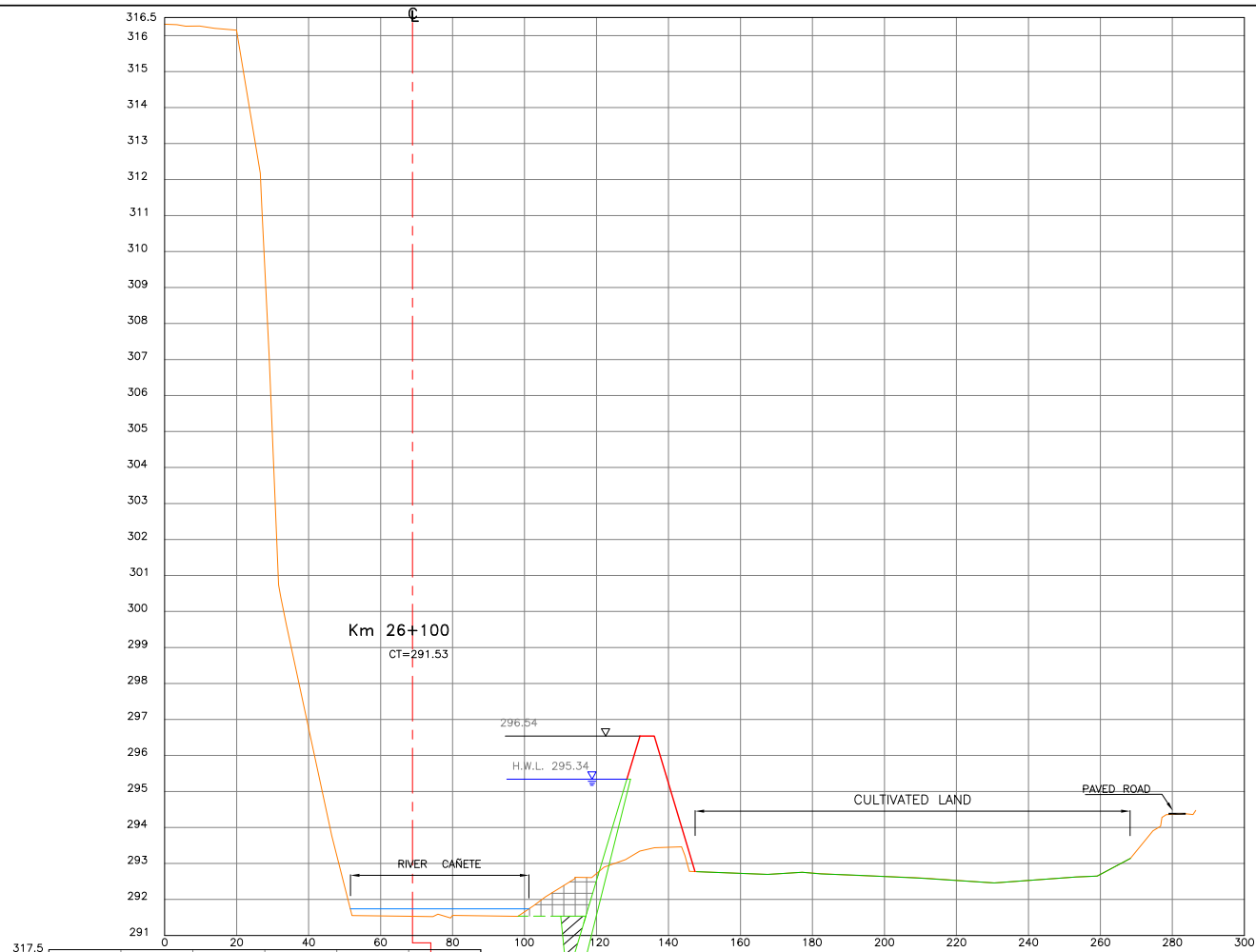


Designed by: M.SOYA
Revised by: M.KITANO
Approved by: Y.NAKAGAWA
Revised by: Y.NAKAGAWA

Project:
THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing:
**CANETE RIVER: CA-5
CROSS SECTIONS
KM 26+500 - KM 26+600**

ESCALE: INDICATED
DATE: MARCH - 2013
CODE: **CA-5-ST-04**



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

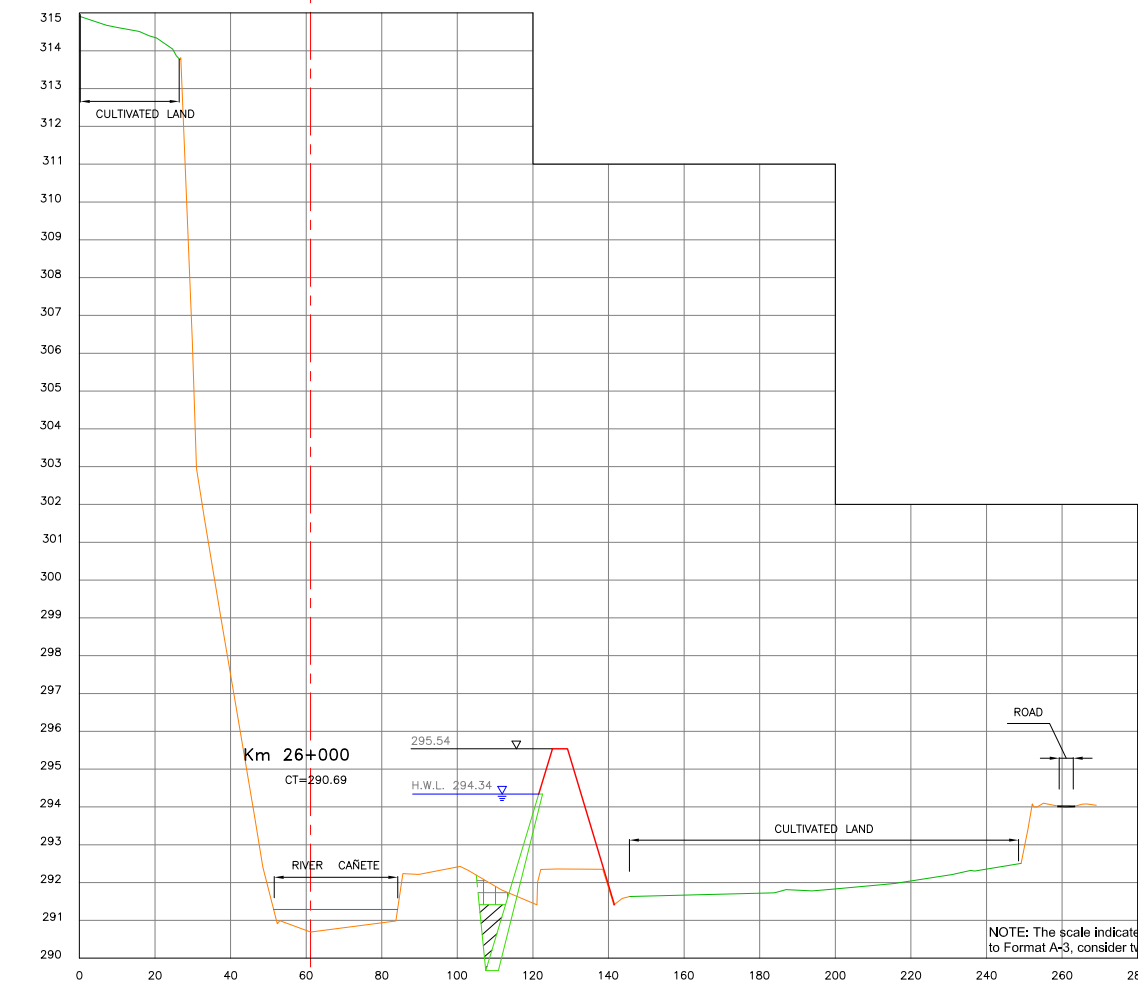
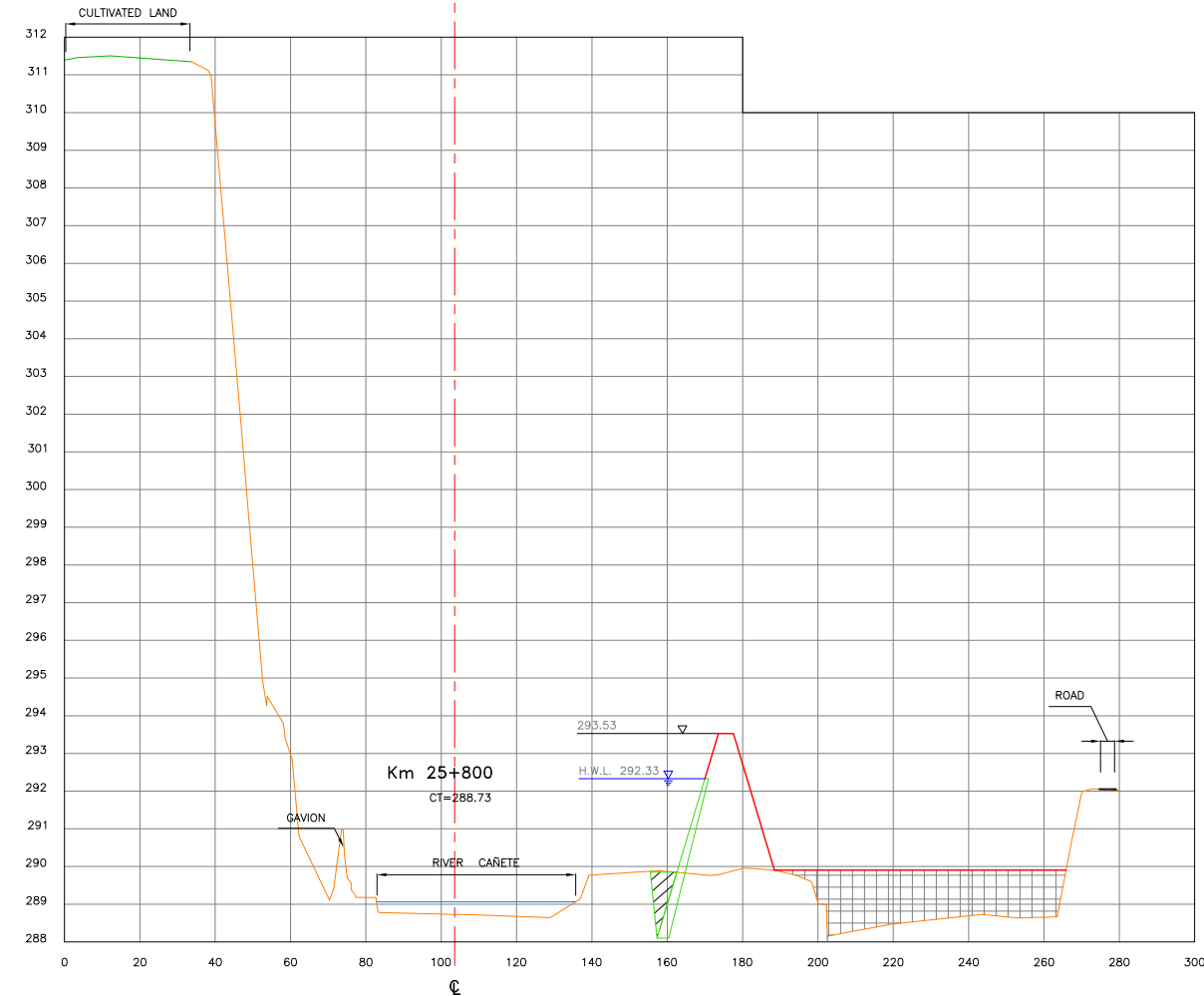
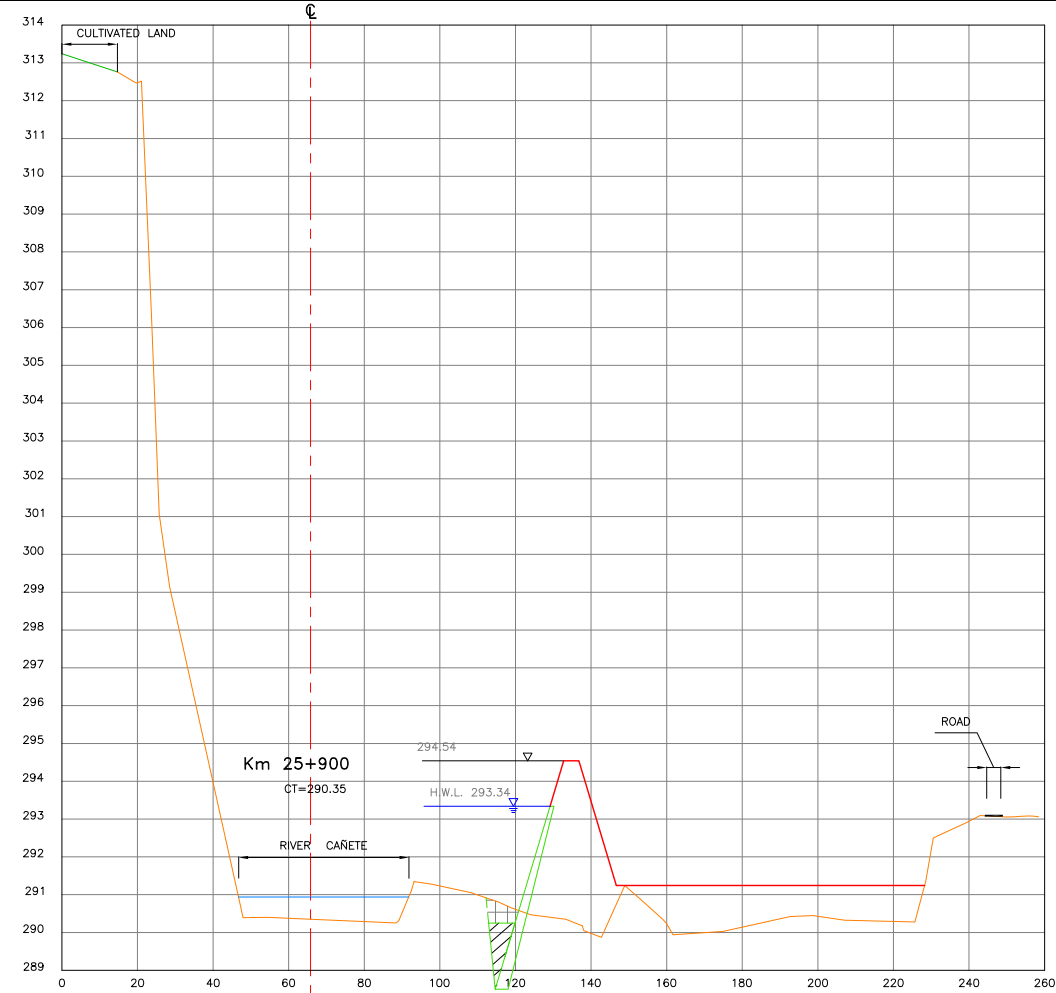
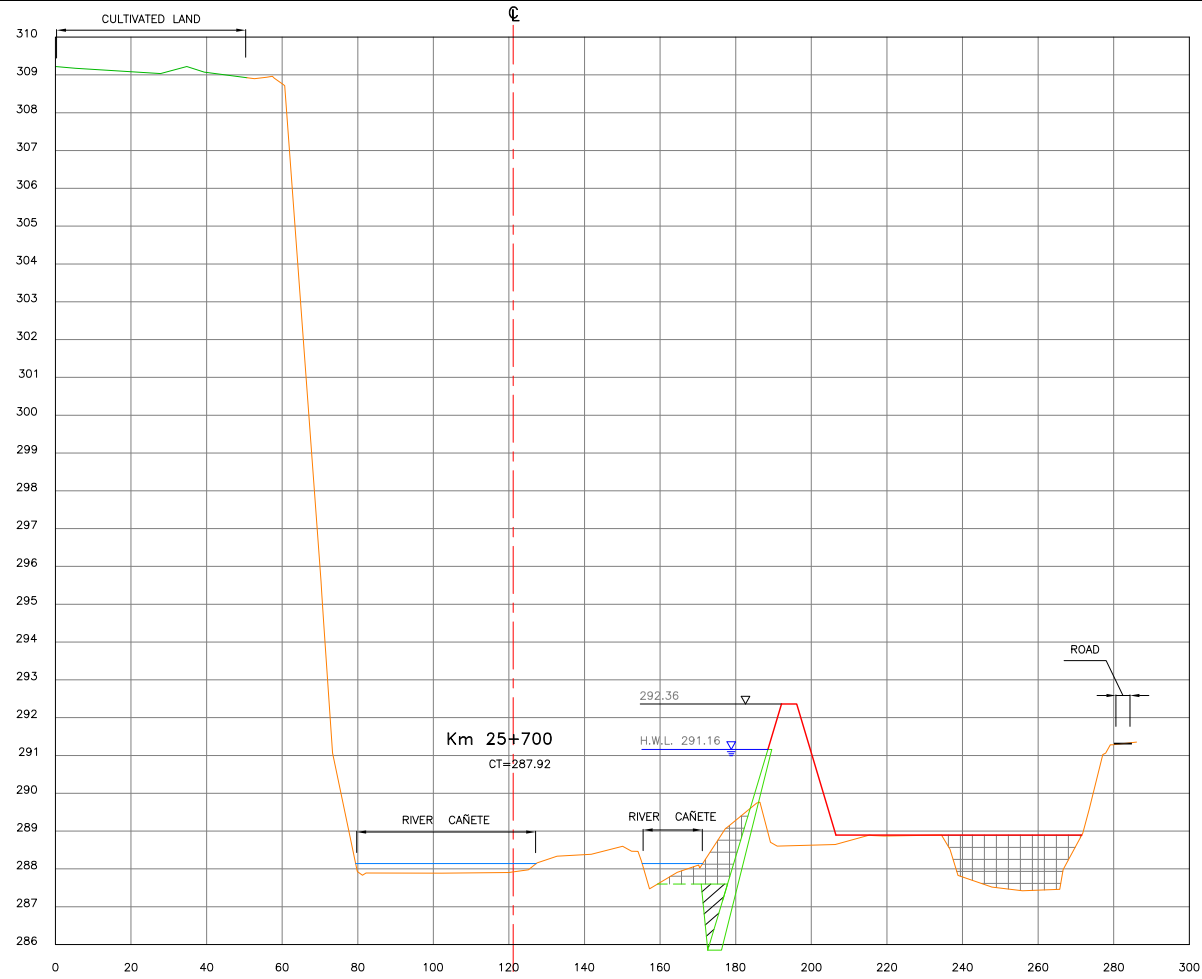
1:200 0 5 10 15

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Consultants: **Yec** Yachyo Engineering Co., Ltd.



Designed by: M.SOYA
Revised by: M.KITANO
Approved by: Y.NAKAGAWA
Revised by: Y.NAKAGAWA

Project: THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing: **CANETE RIVER: CA-5 CROSS SECTIONS KM. 25+700 - KM. 26+000**

ESCALE: INDICATED
DATE: MARCH - 2013
CODE: **CA-5-ST-02**

1:100 0 1 2 3 4 5 6 7 8 9 10

1:150 0 1 2 3 4 5 6 7 8 9 10

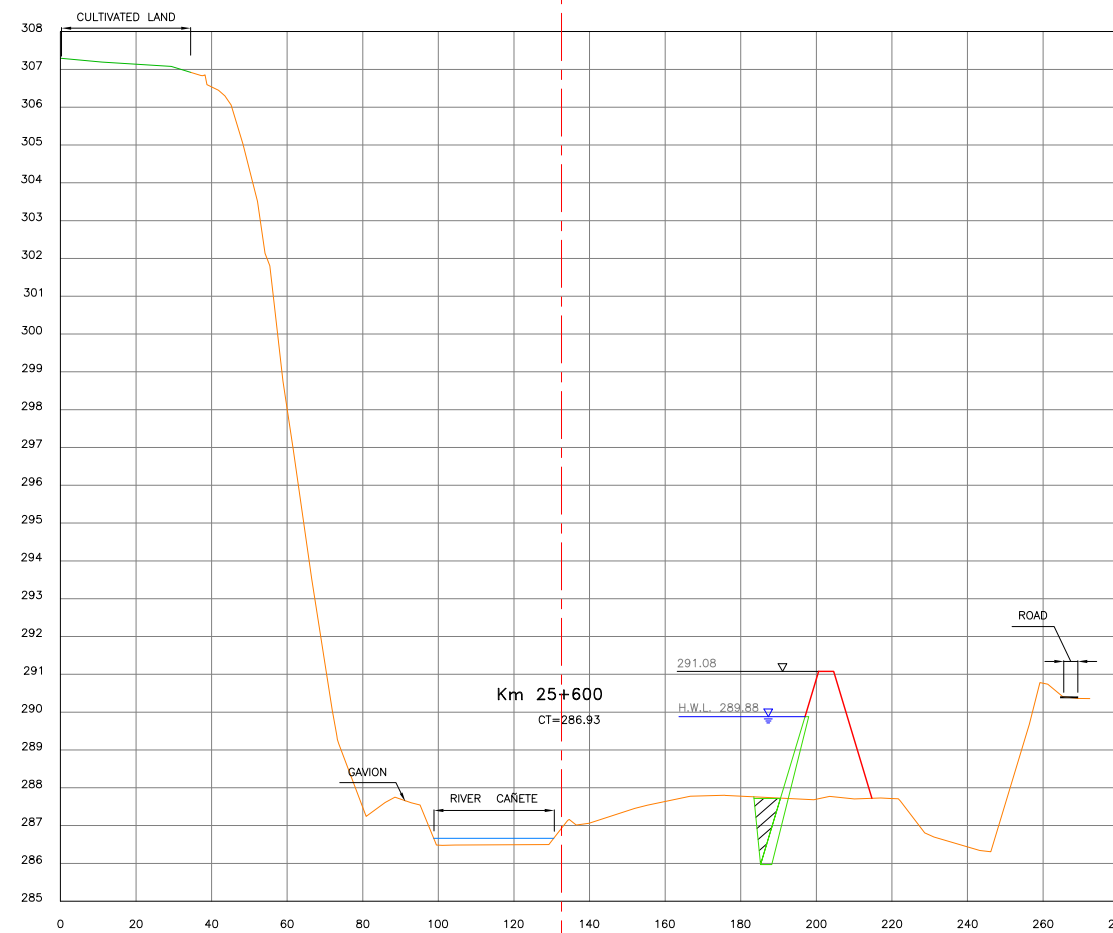
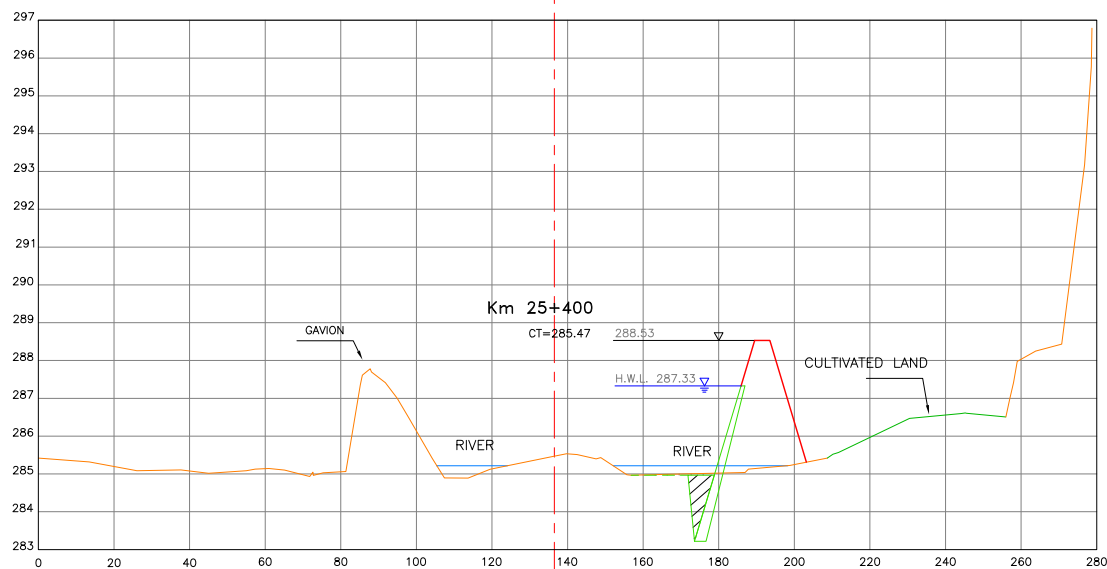
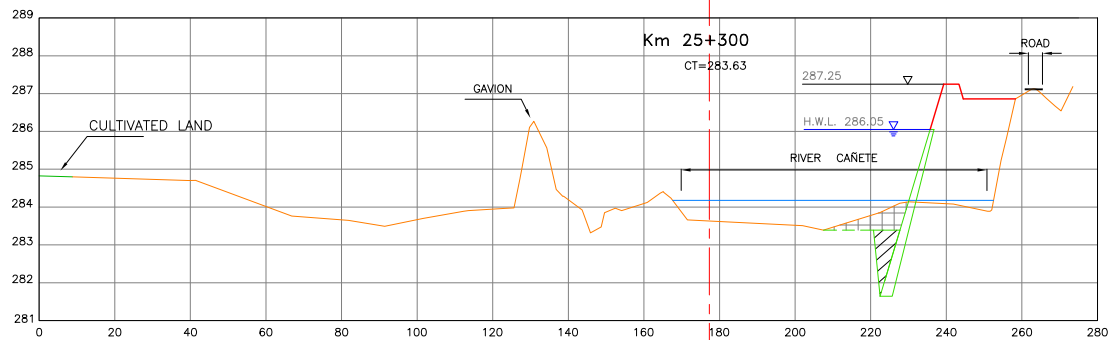
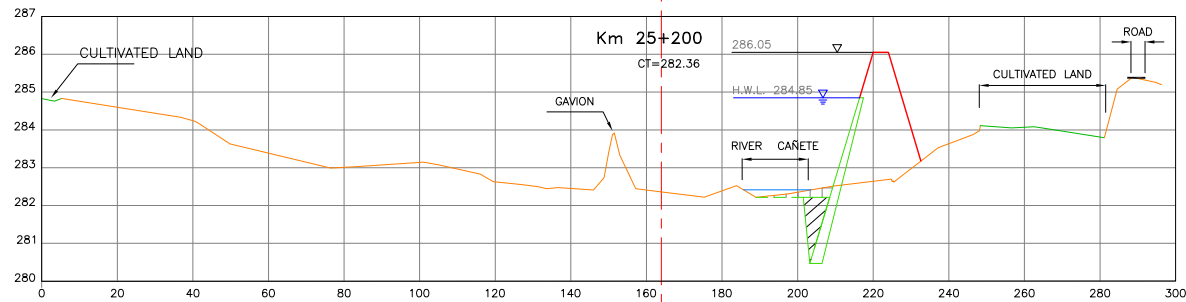
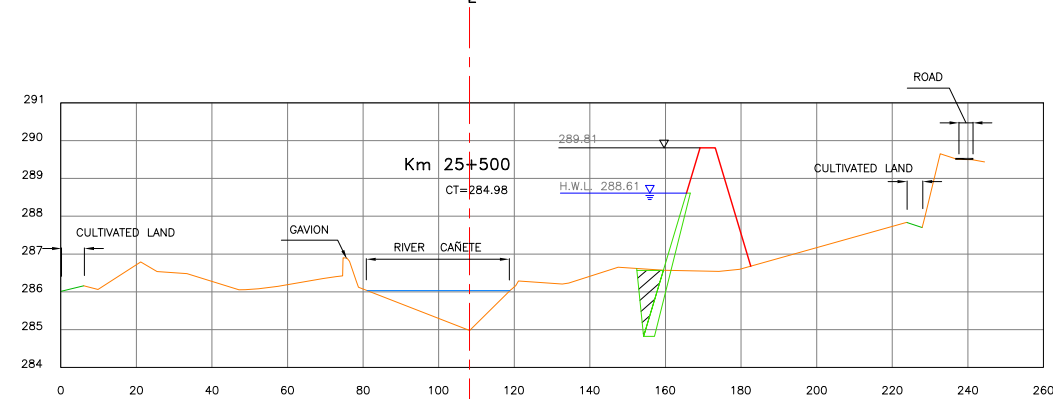
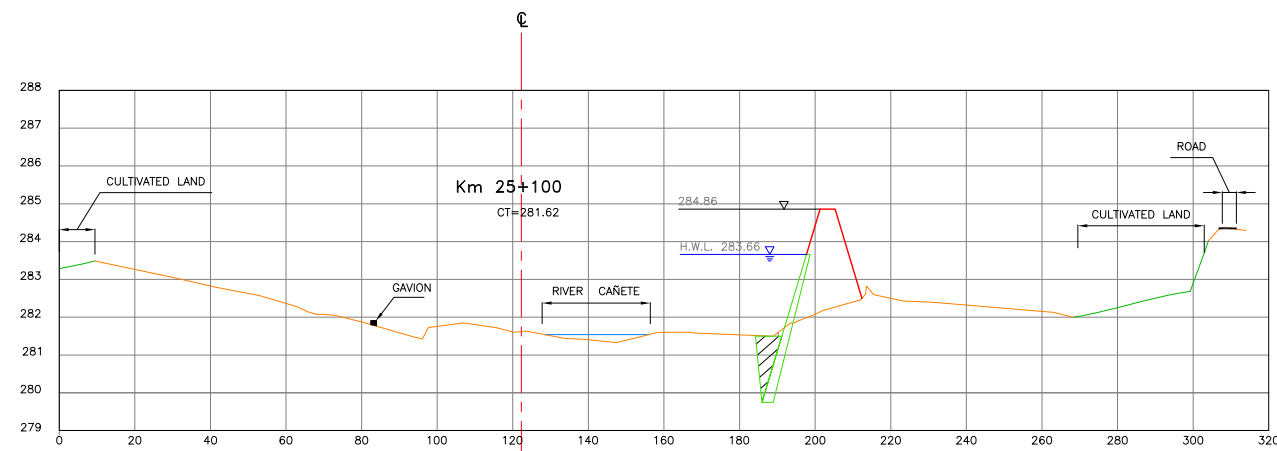
1:200 0 5 10 15 20

1:250 0 5 10 15 20

1:333.3 0 5 10 15 20 25 30

1:1000 0 5 10 15 20 25 30 35 40

1:750 0 10 20 30 40 50 60



NOTE: The scale indicated, corresponds to the format A-1 to Format A-3, consider twice.



Consultants: **Yec** Yachiyo Engineering Co., Ltd.



LATIN AMERICA - CARIBBEAN **NIPPON KOEI LAC CO., LTD.** Consulting Engineers

Designed by: M.SOYA
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Revised by: Y.NAKAGAWA

Project: THE PREPARATORY STUDY ON PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOOD IN THE REPUBLIC OF PERU

Drawing: **CANETE RIVER: CA-5 CROSS SECTIONS KM. 25+100 - KM. 25+600**

ESCALE: INDICATED
DATE: MARCH - 2013
CODE: **CA-5-ST-01**