

DRAWING LIST
HARMONIZATION ATLANTIC (3x3WSB)

3/2/2006

FINAL REPORT

x	Rev.	Title
TASK 2		
D2- 0	-206	A Levels in the lock chambers
TASK 3		
D3- 0	-201	B Lock Alignment P1A : geotechnical situation
TASK 4		
Lay-out		
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Lock Walls		
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	-202	B Western Lock Wall : longitudinal view
	-203	B Plan view on lock chamber 1
	-204	B Plan view on lock chamber 2
	-205	B Plan view on lock chamber 3
	-206	B Cross sections lock walls
	-207	B Lock head 2 : plan view
	-208	B Lock head 2 : longitudinal section
	-209	B Lock head 2 : cross section
	-210	B Lock head 1 : plan view
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	-213	B Lock head 3 : plan view
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Filling and Emptying System		
D4- C	-203	B Side by side conduits disposition
Lock operating GATES		
D4- D	-200	C Rolling gate PA1, PA2, PA3, PA4 - sections
	-201	C Rolling gate PA1: general layout
	-202	C Rolling gate PA2: general layout



DRAWING LIST

HARMONIZATION ATLANTIC (3x3WSB)

3/2/2006

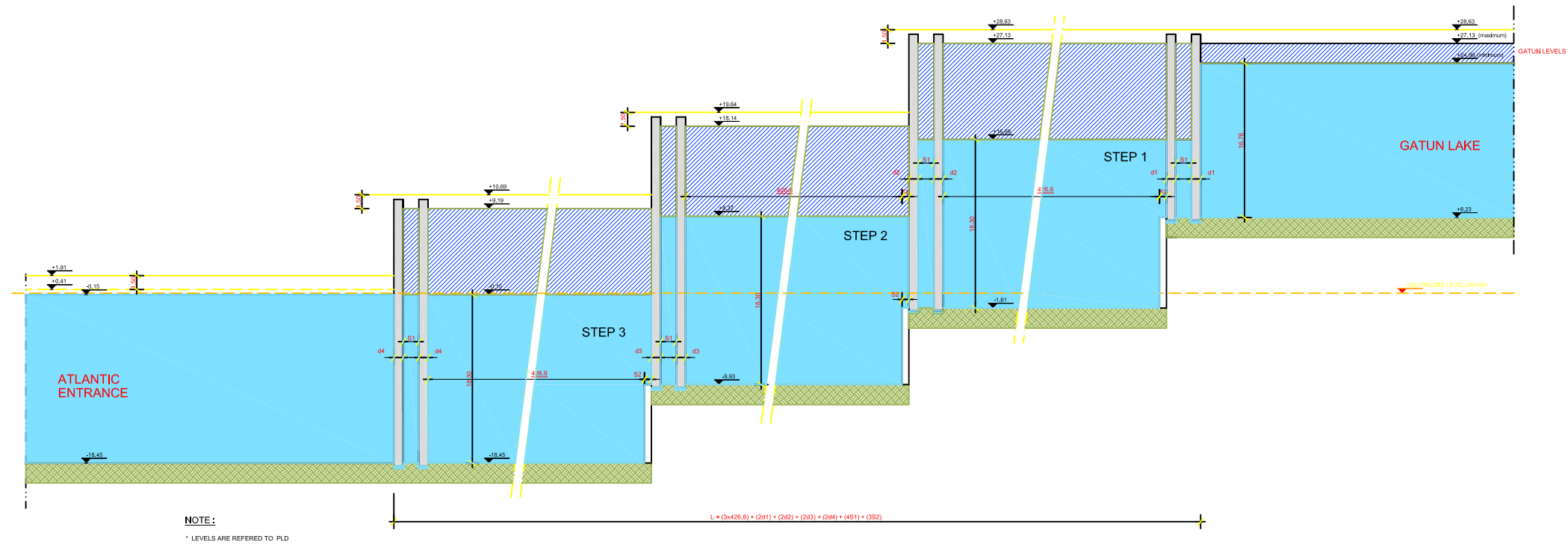
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- | | | |
|------|---|----------------------------------|
| -203 | B | Rolling gate PA3: general layout |
| -204 | B | Rolling gate PA4: general layout |
| -205 | B | Support rolling wagons |

Electrical power and power requirements

- | | | | |
|-------|------|---|-------------------------------|
| D4- H | -206 | A | High voltage one-line diagram |
|-------|------|---|-------------------------------|

Entrance walls

- | | | | |
|-------|------|---|-------------------------------|
| D4- I | -201 | B | Cross sections entrance walls |
|-------|------|---|-------------------------------|



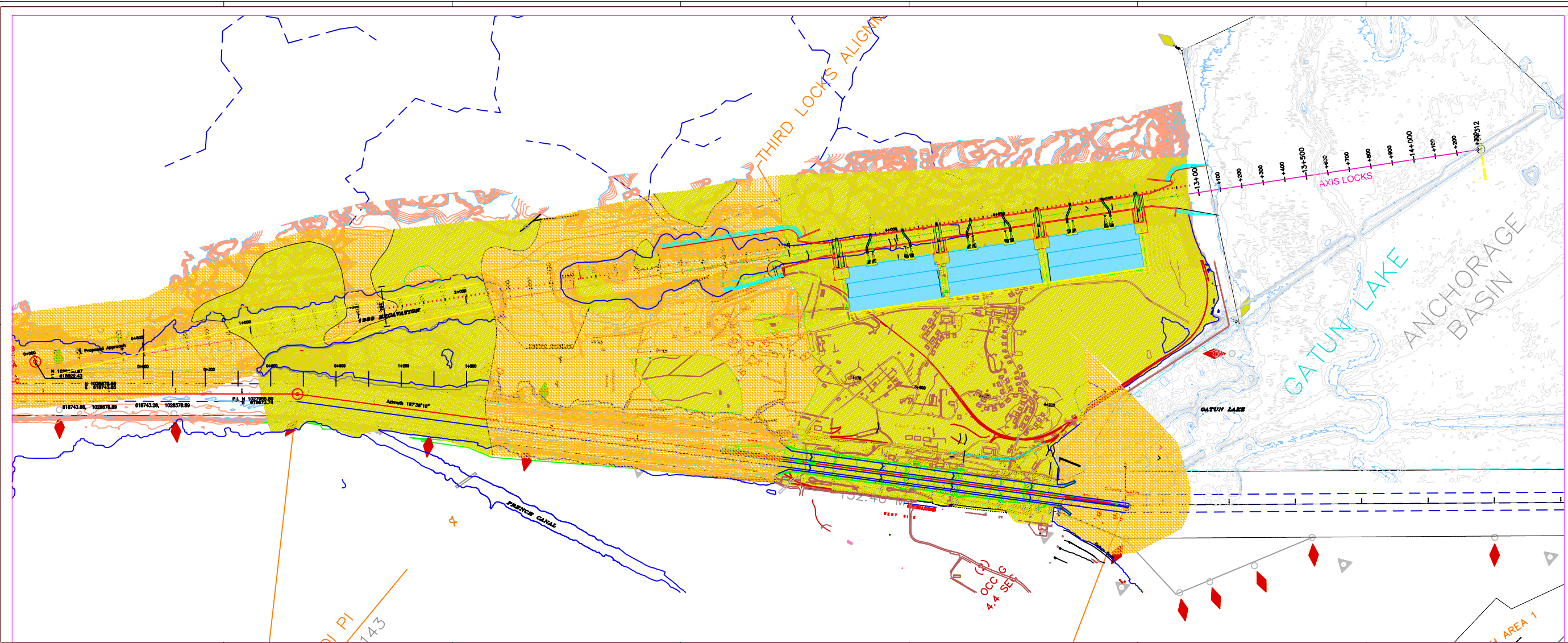
CPP
 Consorcio Post Panamax
 Tractebel Development Engineering
 TECHNUM
 COYNET BELLIER
 Consorcio Nacional de Riberas
 Avenida Alvaro 7 B-1219 Davao
 In association with:
ASO
SBE

ACP
 División de Proyectos de Capacidad del Canal
 Autoridad del Canal de Panamá
 Edificio 901
 CORGICAL
 República de Panamá

**Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure**

**ATLANTIC LOCKS COMPLEX (3x3 WSB)
LEVELS IN THE LOCK CHAMBERS**

Contract	Scale	Drawing n°:	Rev.:	Folio
SM-14335	1/200	D2- 0 - 206	A	1 / 1



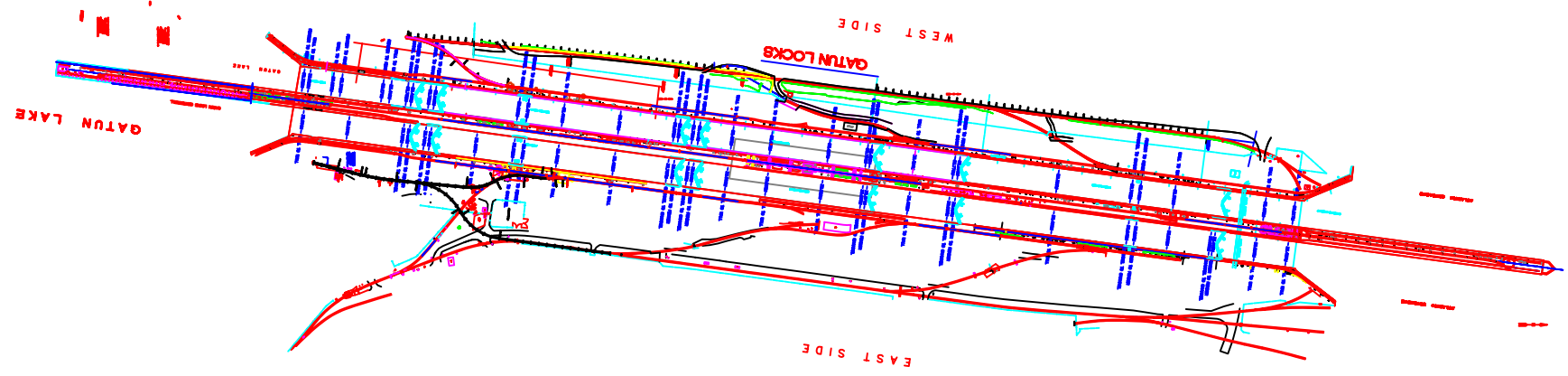
CPP
 Consorcio Post Panamax
 Tractebel Engineering
 TECHNUM
 COYNE ET BELIER
 Arco Alcaz 7
 SBE

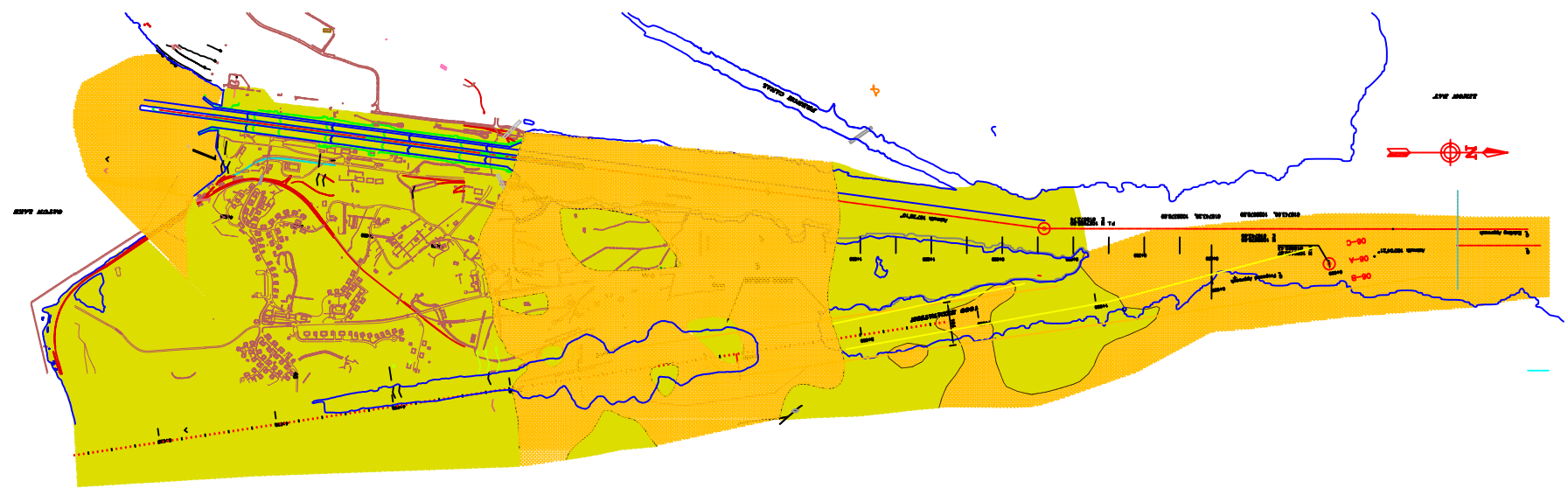
ACP
 Autoridad del Canal de Panamá
 División de Estudios de Ingeniería y Topografía de Panamá
 Panamá Canal Area

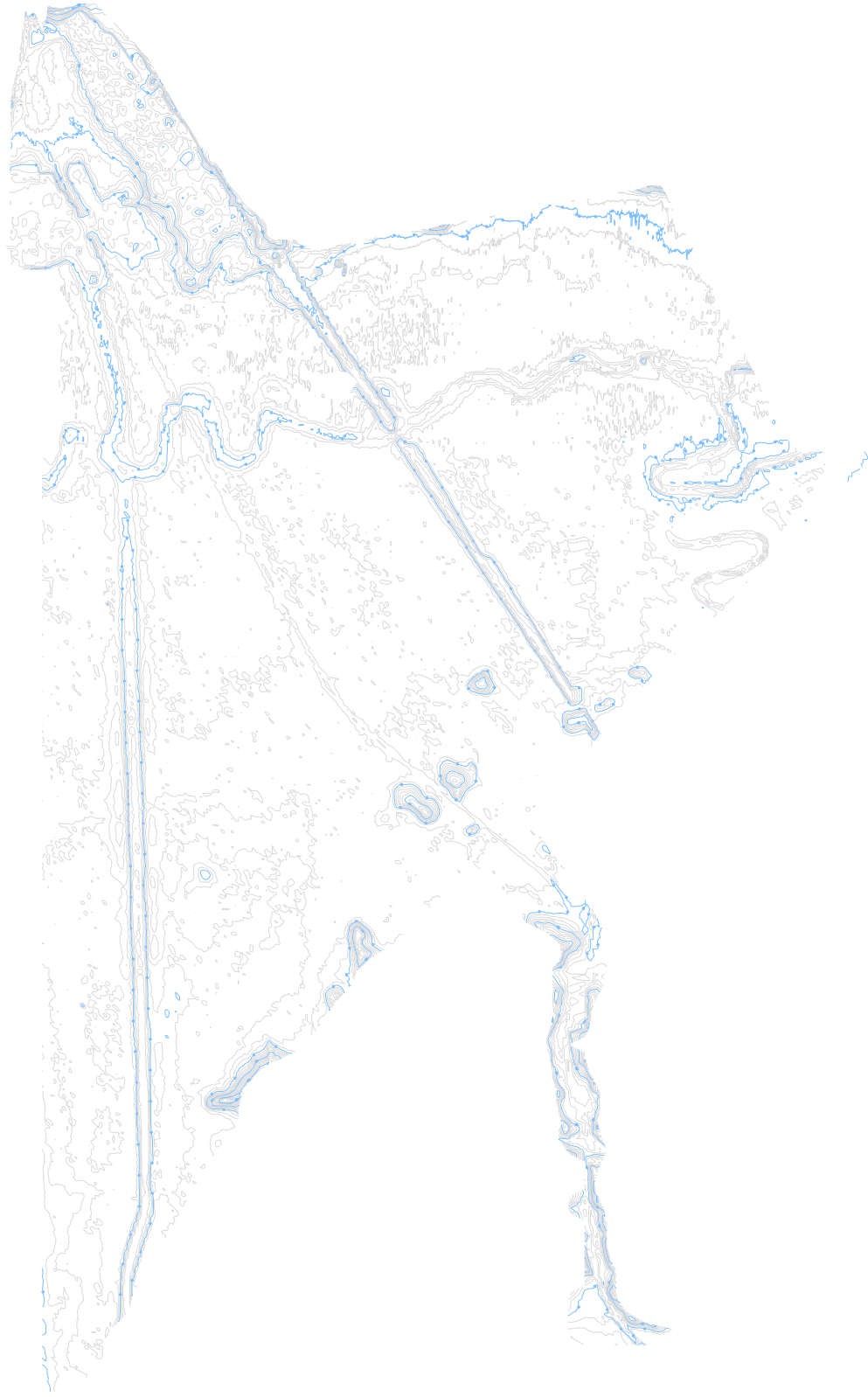
**Diseño Conceptual de las Esclusas Post Panamax
 Actualization & Harmonization Study
 of New Lock Structure**
 ATLANTIC LOCKS COMPLEX (3x3 WSB)
 LOCK ALIGNMENT : GEOTECHNICAL SITUATION

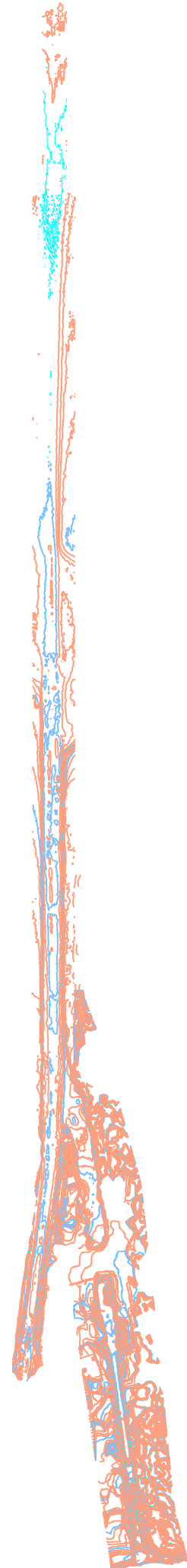
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1	ELABORACIÓN DEL DISEÑO	2011	FINAL
2	REVISIÓN	2011	FINAL
3	REVISIÓN	2011	FINAL
4	REVISIÓN	2011	FINAL
5	REVISIÓN	2011	FINAL
6	REVISIÓN	2011	FINAL
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10	REVISIÓN	2011	FINAL

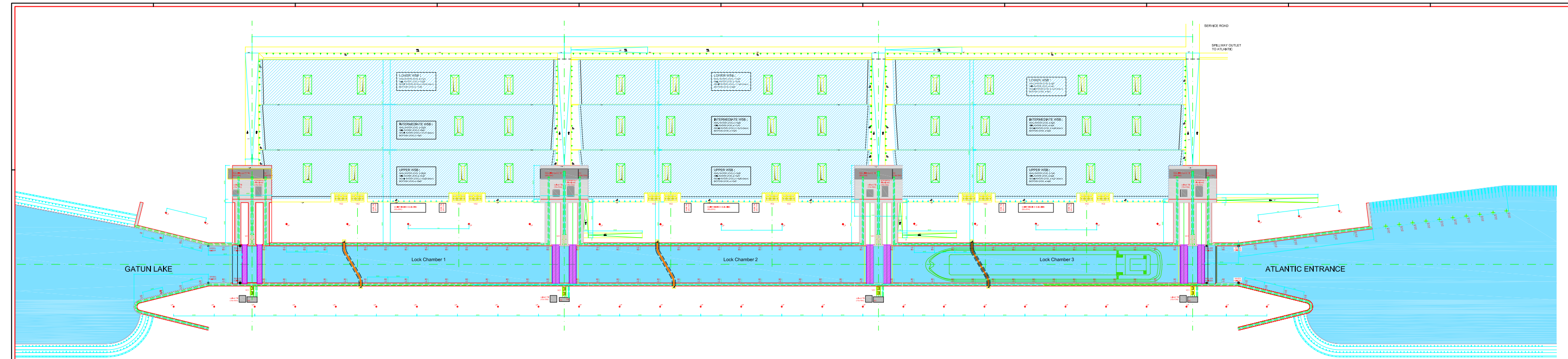
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SA-14321	1/500	D3-0-201	B	1 / 1











- Legend**
- FD: Fender
 - LD: Ladder
 - BD: Ballast
 - LP: Lighting Pole
 - CB: Control Building
 - TB: Technical Building
 - HV: High Voltage building
 - VC1: Valve Chamber on culvert
 - VC2: Valve Chamber water saving basins
 - Cable Duct
 - Traffic Direction

ALL DIMENSIONS ARE ON THE LEVEL OF CONCEPT DESIGN AND HAVE TO BE CHECKED AND
 ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED

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 Puertos y Canales
ACP
 Autoridad del Canal de Panamá
TECHNIM
COYNET BELIER
SBE

**Plan de Conceptos de las esclusas Post-Panamá
 Actualización e Harmonización
 of New Lock Structure**
 ATLANTIC LOCKS COMPLEX (3x3 WSB)
 General Plan View

Scale	Drawing ID	Rev	Date
1:1	D4-A-203	A	1/1

SPILLWAY OUTLET
TO ATLANTIC

LOWER WSB :
MAX. WATER LEVEL : +13.07
MIN. WATER LEVEL : +11.61
MEAN WATER LEVEL : +12.34 (SDMW)
BOTTOM LEVEL : +0.81

INTERMEDIATE WSB :
MAX. WATER LEVEL : +15.83
MIN. WATER LEVEL : +15.25
MEAN WATER LEVEL : +14.48 (SDMW)
BOTTOM LEVEL : +3.35

UPPER WSB :
MAX. WATER LEVEL : +17.40
MIN. WATER LEVEL : +16.00
MEAN WATER LEVEL : +16.21 (SDMW)
BOTTOM LEVEL : +3.02

ATLANTIC ENTRANCE

CONFERENCES FOR COUVERT VALUES AND SURFACES SEE DRAWING D4-007/214
CONFERENCES FOR WSB VALUES AND SURFACES SEE DRAWING D4-007/215
ALL CONFERENCES ARE ON THE LEVEL OF CONCEPT DESIGN AND HAVE TO BE CHECKED AND
VALIDATED BY THE CONTRACTOR BEFORE CONSTRUCTION
ALL DIMENSIONS ARE IN METERS

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Autoridad Costarricense de los Puertos del Atlántico

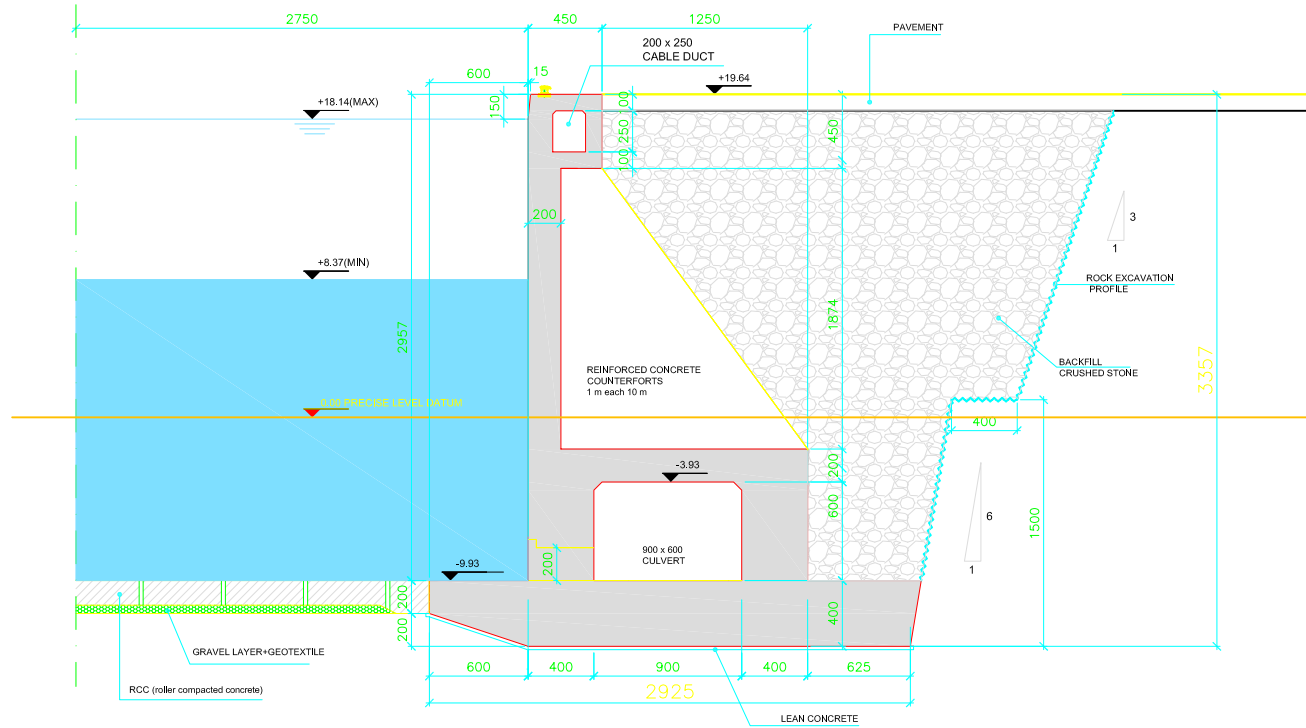
TECHNUM
COYNETBELIER
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Mapa Conceptual de las Estructuras Post Panamá
Actualización & Harmonización Study
of New Lock Structure

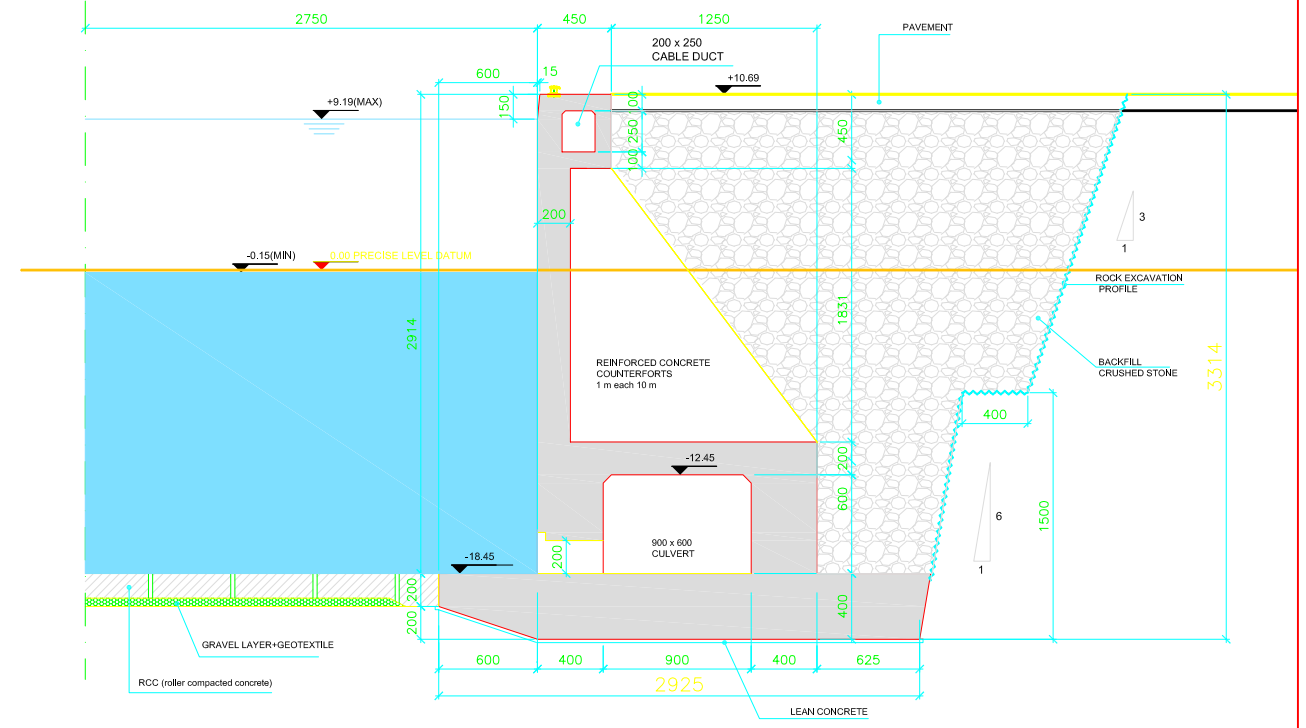
ATLANTIC LOCKS COMPLEX (3x3 WSB)
LOCK CHAMBER 3: PLAN VIEW

Scale	Drawing A1	Sheet	17/1
Code	D4- B - 205		

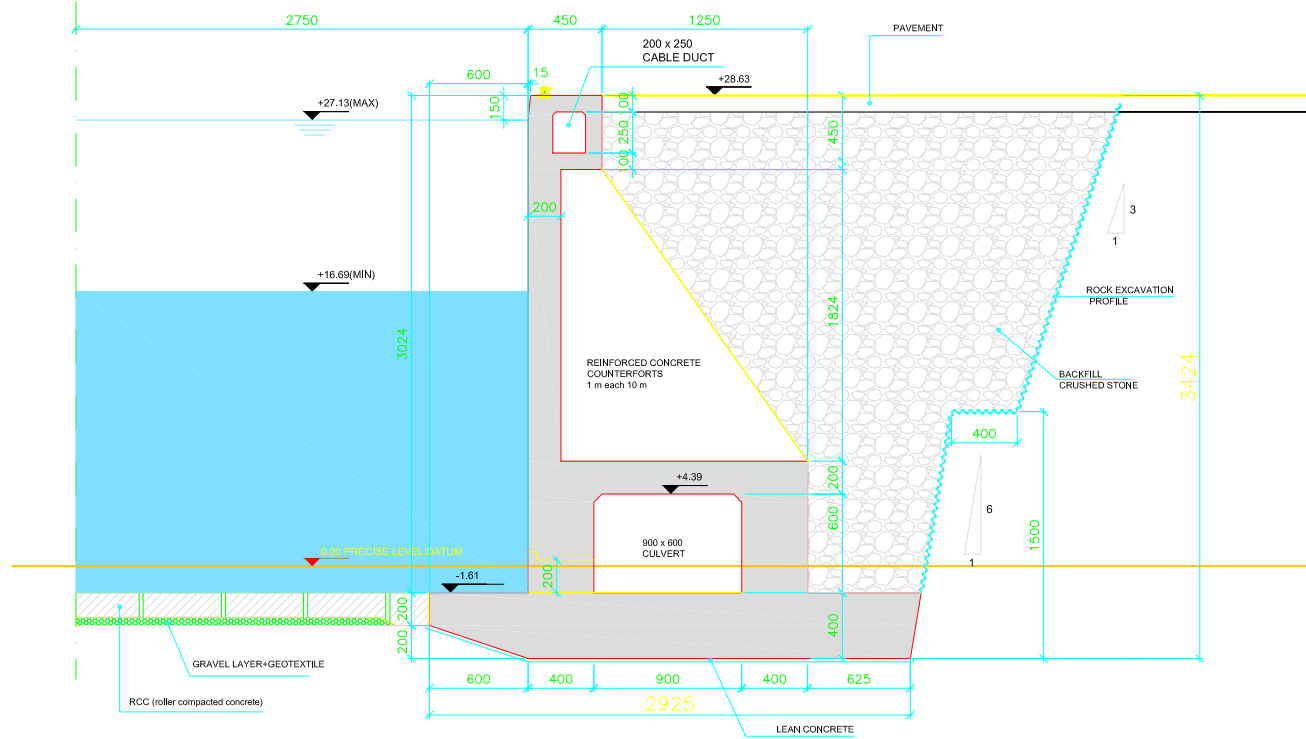
lock chamber 2



lock chamber 3



lock chamber 1



ALL DIMENSIONS ARE ON THE LEVEL OF CONCEPT DESIGN AND HAVE TO BE CHECKED AND VALIDATED DURING FURTHER AND DETAILED DESIGN
ALL DIMENSIONS ARE IN CENTIMETERS

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Consortio Post Panamax

Tractebel Development Engineering

TECHNUM

COYNE ET BELLIER
Compagnie Nationale du Rhône

Avenue Adrien 7 B-1209 Brussels

In association with:

FLA 4050 **SBE**

ACP
Autoridad del Canal de Panamá

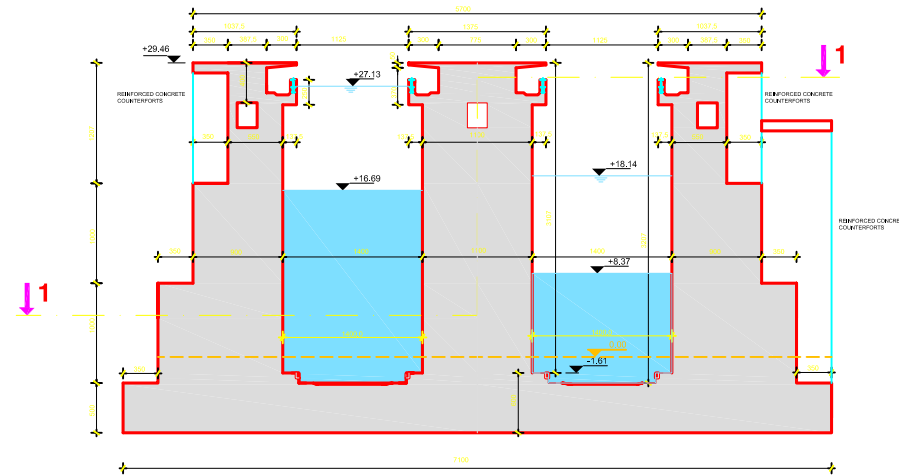
Dirección de Proyectos de Capacidad del Canal
Autoridad del Canal de Panamá
Edificio 601
COROZAL
República de Panamá

**Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure**

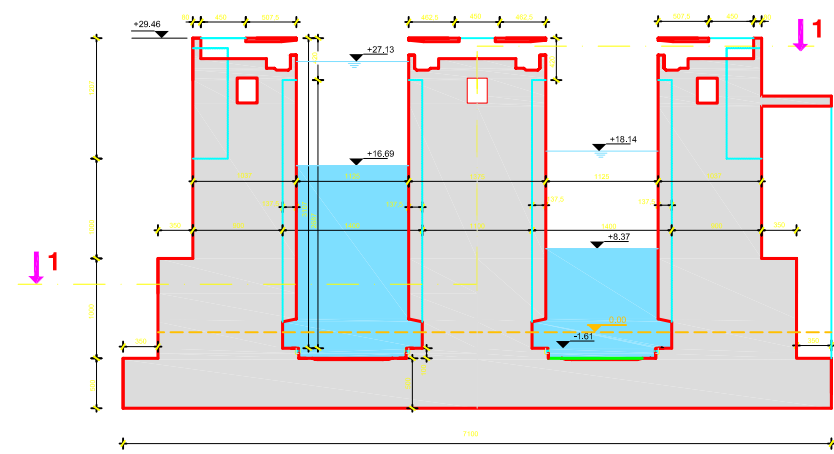
**ATLANTIC LOCKS COMPLEX (3x3WSB)
Cross-sections Lock Walls**

REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	APPROVED
A	27/05/20	FINAL REPORT	PAI	AME	JAN
B	27/05/20	UPDATE REPORT FINAL REPORT	PAI	AME	JAN
C	10/06/20	CONCEPT FINAL REPORT	PAI	AME	JAN

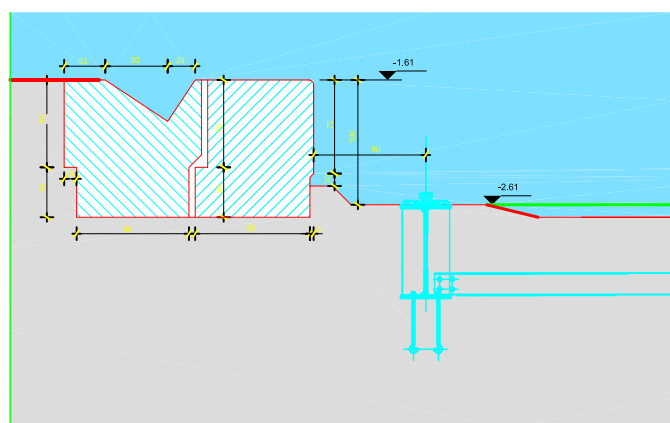
Contract: SA-143351 Scale: 1/200 Drawing n°: D4- B - 206 Rev.: B Folio: 1 / 1



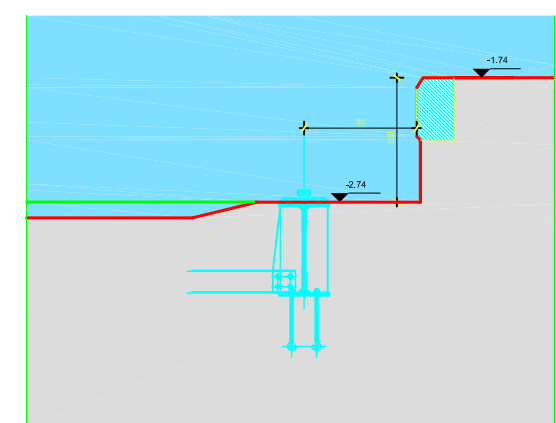
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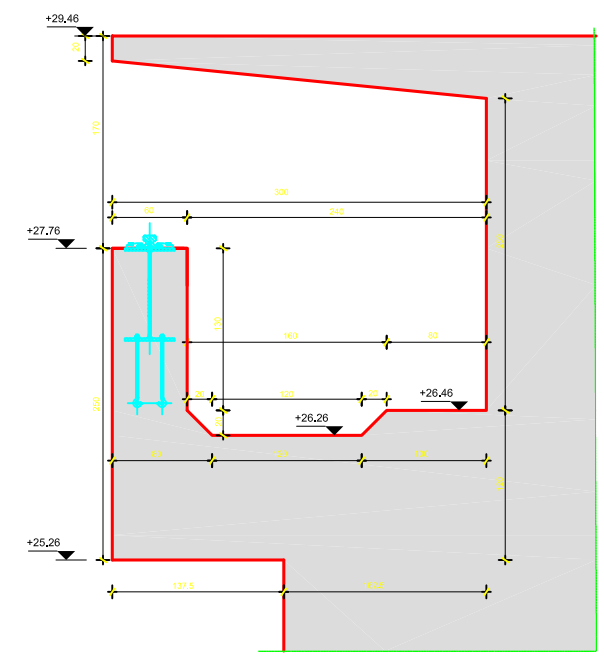
SECTION C-C



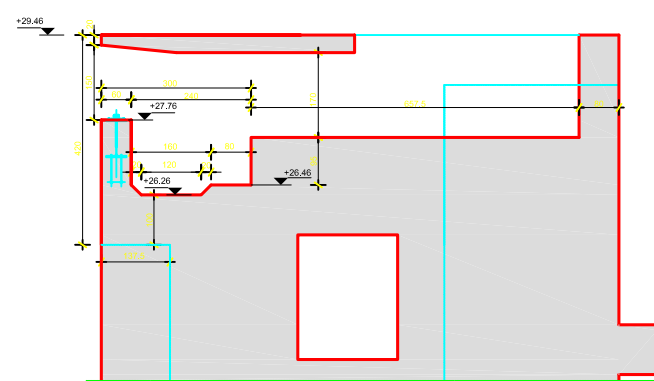
**SECTION F-F
DETAIL RAIL FOR UNDERWAGON**



**SECTION E-E
DETAIL RAIL FOR UNDERWAGON**

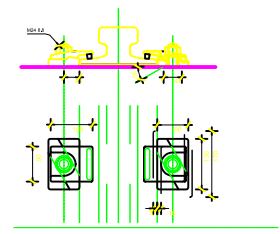


DETAIL RAIL FOR UPPERWAGON

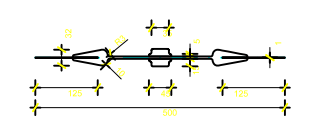


DETAIL SHAFT FOR MAINTENANCE SUPPORT WAGON

All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.
All dimensions are in cm.
All levels are in meter and referred to PLD.



**DETAIL CLIP TYPE
Scale 1/50**



**DETAIL DILATATION JOINT
Scale 1/50**

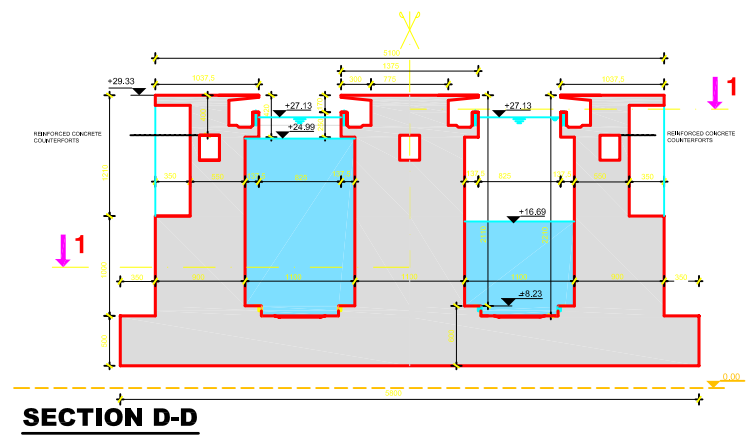
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 Compagnie Nationale du Béton
 Avenida Adria 7 B-1270 Brussels
 In association with:
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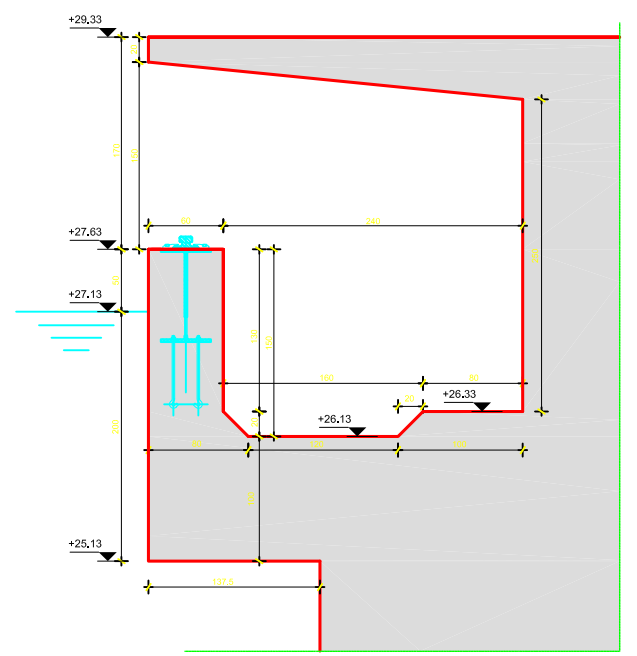
Diseño Conceptual de las Esclusas Post Panamax
 Actualization & Harmonization Study
 of New Lock Structure
ATLANTIC LOCKS COMPLEX (3x3 WSB)
LOCK HEAD 2
CROSS SECTION

NO.	DATE	DESCRIPTION	BY	CHK	APP
1	01-04-09	DRIFT FINAL REPORT
2	02-04-09	FINAL DESIGN
3	03-04-09	DESIGN

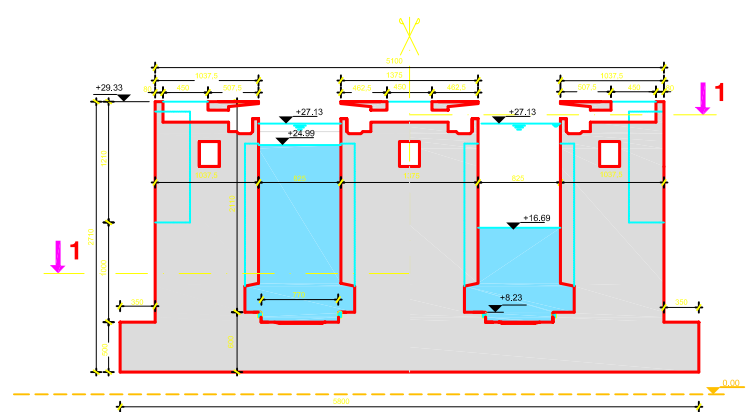
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 Rev.: B
 Folio: 1/1



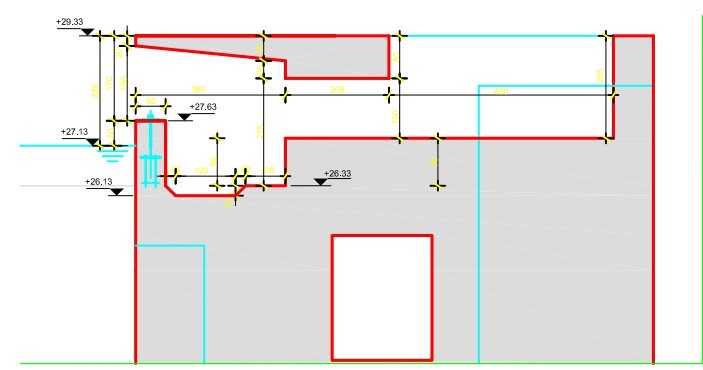
SECTION D-D



DETAIL RAIL FOR UPPERWAGON

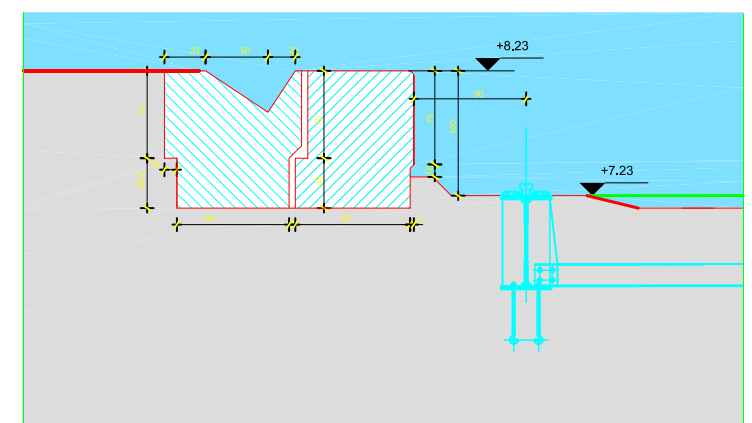


SECTION C-C

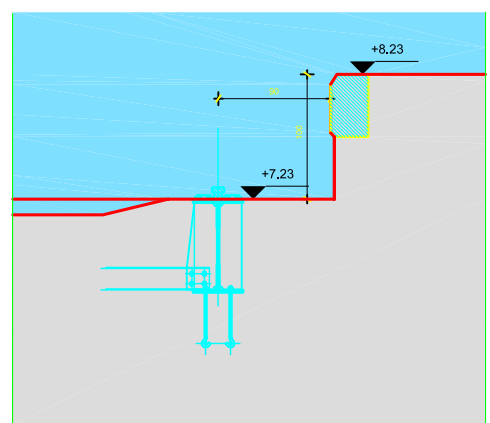


DETAIL SHAFT FOR MAINTENANCE SUPPORT WAGON

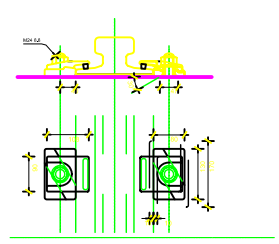
All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.
 All dimensions are in cm.
 All levels are in meter and referred to PLD.



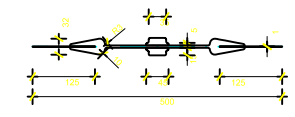
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DETAIL RAIL FOR UNDERWAGON**



**SECTION E-E
DETAIL RAIL FOR UNDERWAGON**



**DETAIL CLIP TYPE
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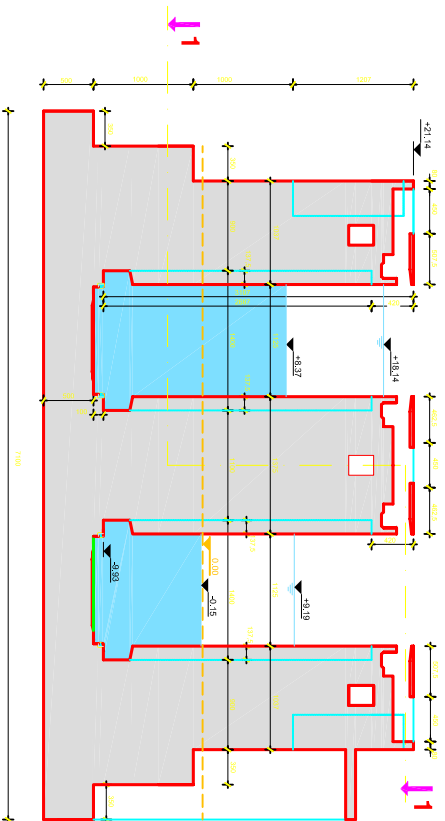
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Scale 1/50**

**Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure**

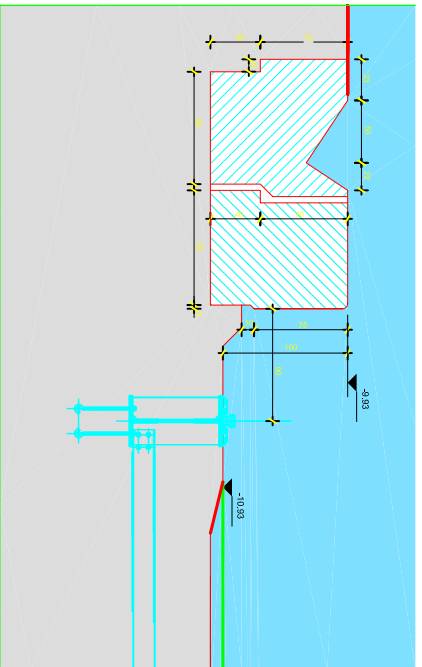
ATLANTIC LOCKS COMPLEX (3x3 WSB)
LOCK HEAD 1
CROSS SECTION

NO.	DATE	DESCRIPTION	REV.	BY	CHK.
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2	15/04/2015	ISSUE FOR REVIEW	02
3	15/04/2015	ISSUE FOR REVIEW	03

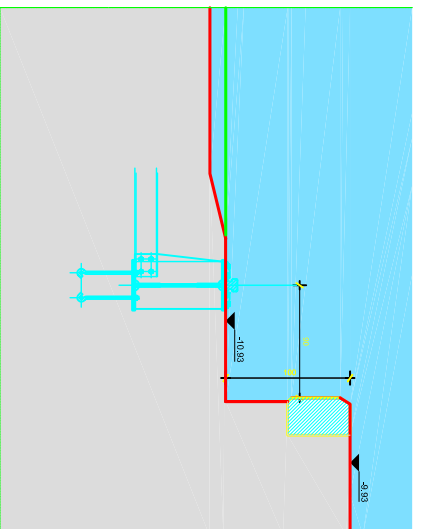
Contract: SA-143351
 Scale: 1/250
 Drawing n°: D4-B-212
 Rev.: B
 Folio: 1/1



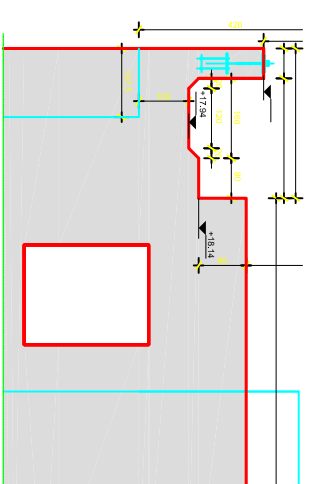
SECTION C-C



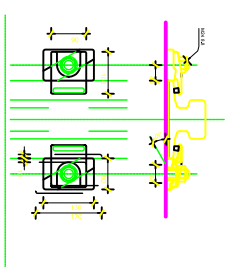
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DETAIL RAIL FOR UNDERWAGON**



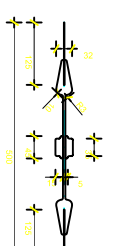
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DETAIL RAIL FOR UNDERWAGON**



DETAIL SHAFT FOR MAINTENANCE SUPPORT

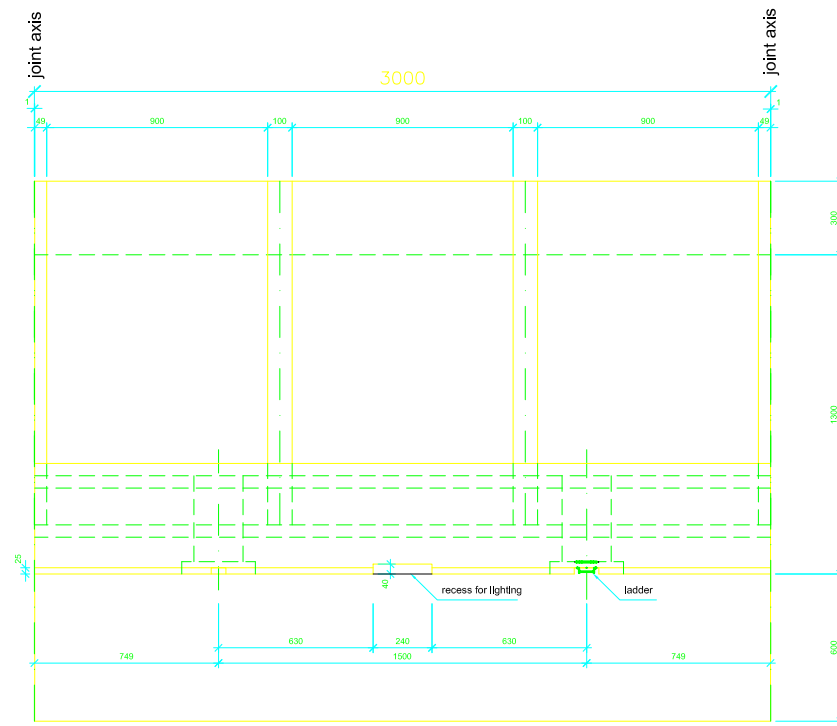


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Scale 1/50**

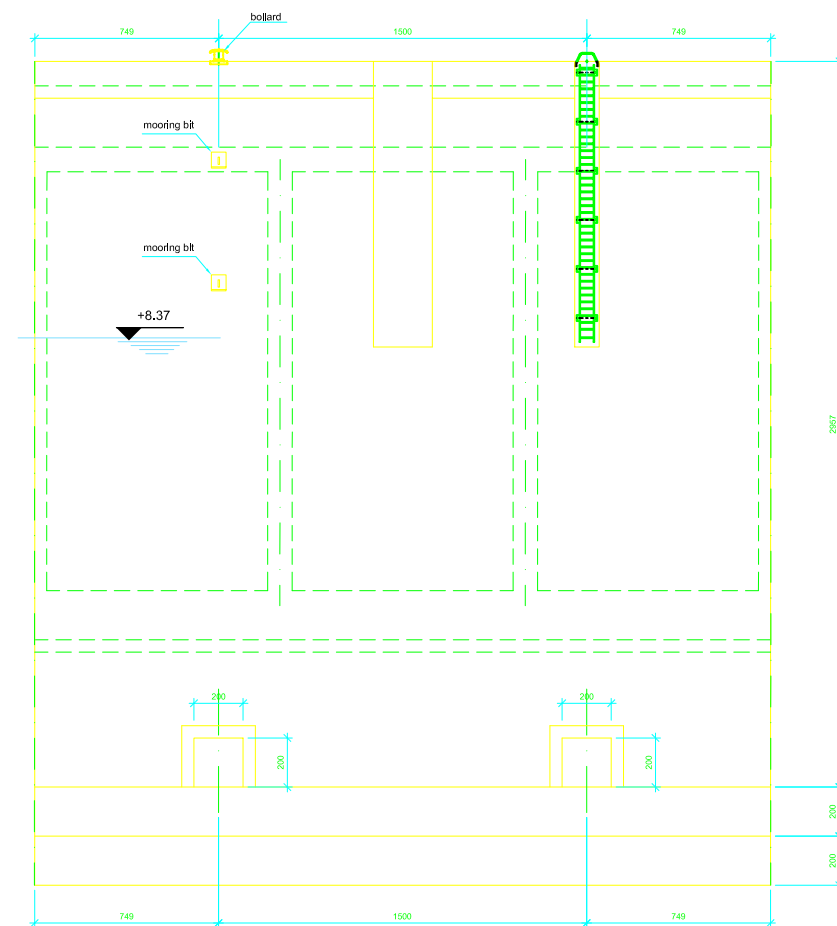


**DETAIL DILATATT
Scale 1/50**



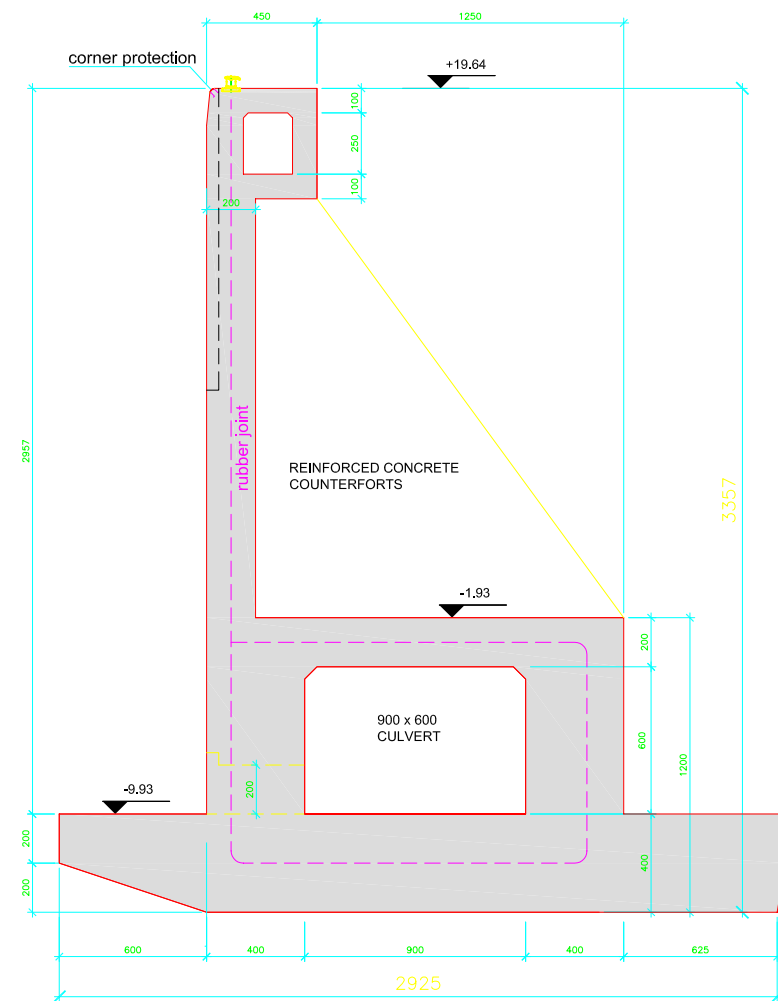


plan view



front view

LOCK CHAMBER 2



cross section

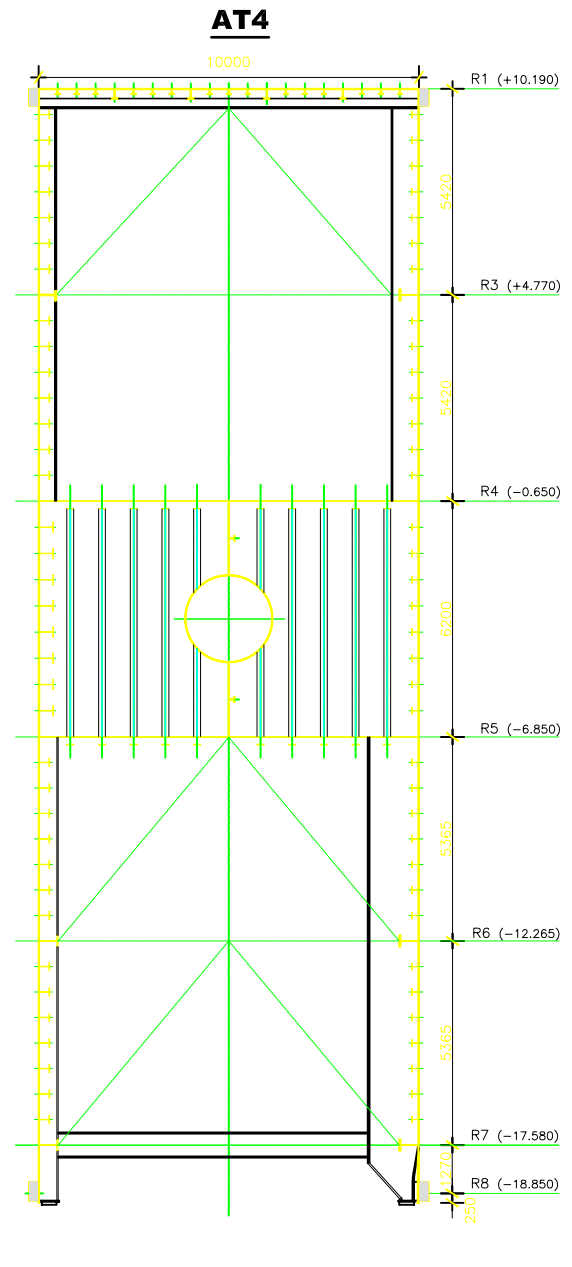
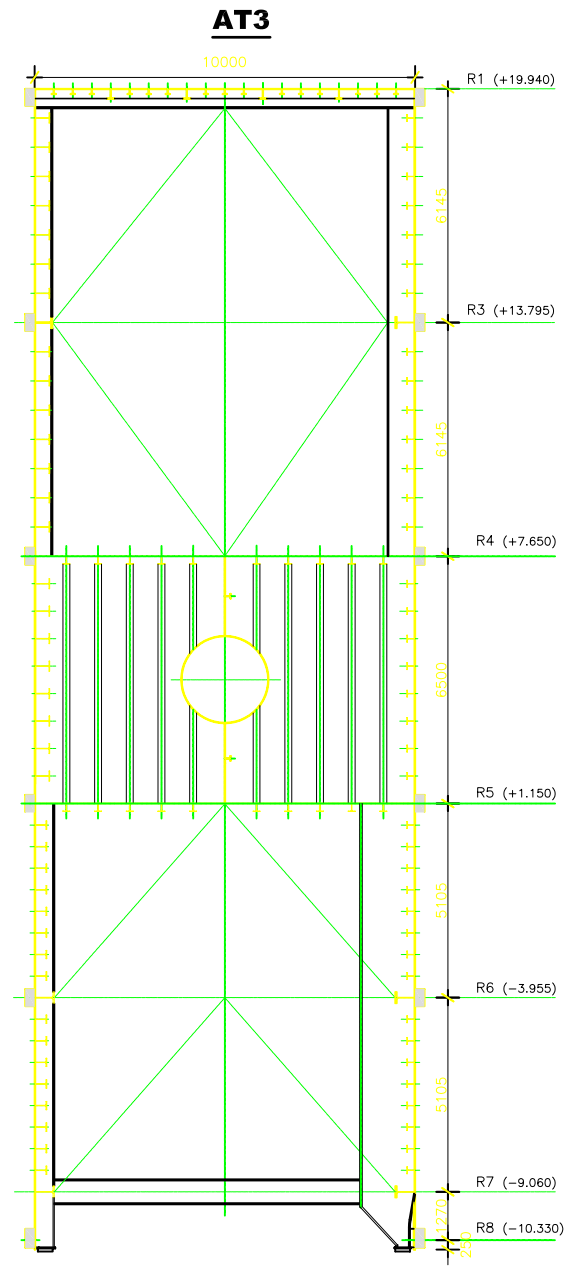
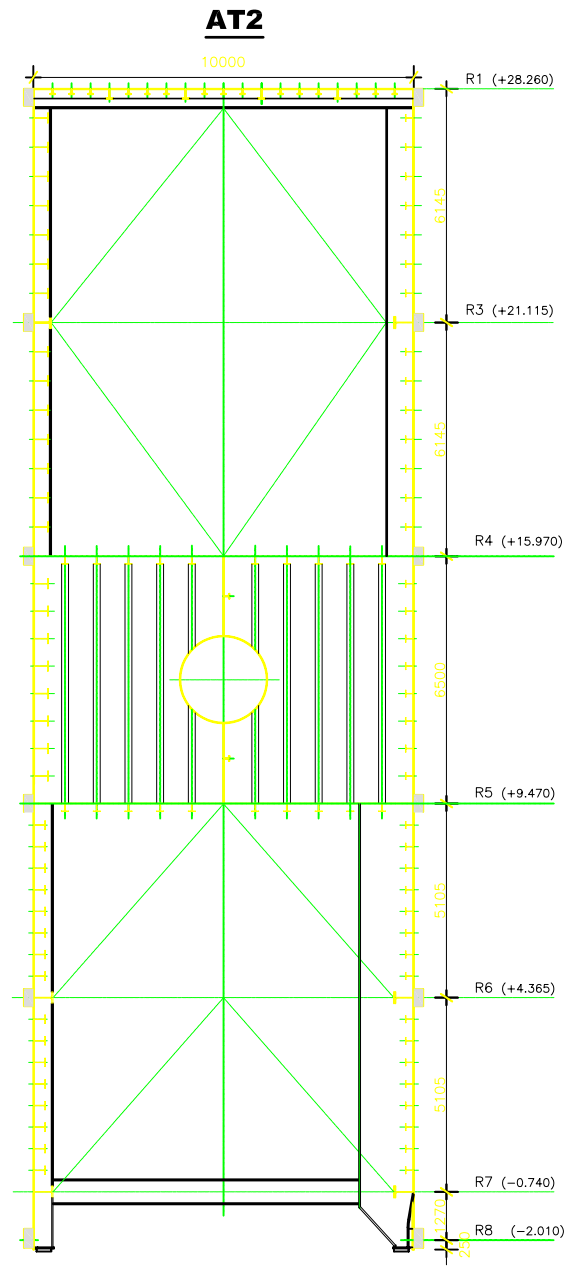
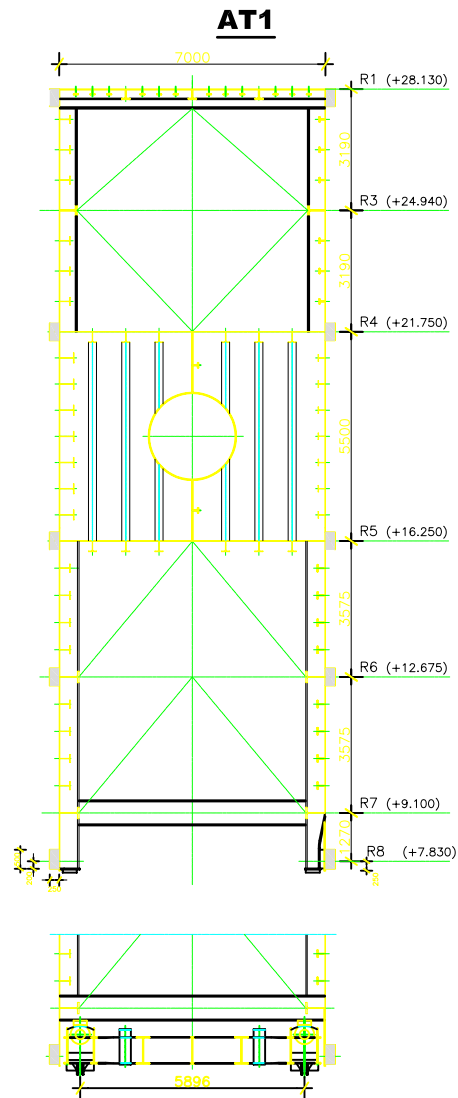
ALL DIMENSIONS ARE ON THE LEVEL OF CONCEPT DESIGN AND HAVE TO BE CHECKED AND VALIDATED DURING FURTHER AND DETAILED DESIGN
ALL DIMENSIONS ARE IN CENTIMETERS

<p>CPP Consorcio Post Panamax</p> <p>Tractebel Development Engineering</p> <p>TECHNUM</p> <p>COYNEET BELLIER Compagnie Nationale de Études</p> <p>Avenue Adèle 7 B-1200 Brussels</p> <p>In association with:</p> <p>FIA 1050</p> <p>SBE</p>	<p>ACP Autoridad del Canal de Panamá</p> <p>Dirección de Proyectos de Capacidad del Canal Autoridad del Canal de Panamá Edificio 601 CORONAL República de Panamá</p> <p>Panama Canal Area</p>
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Diseño Conceptual de las Esclusas Post Panamax
Concept Design of New Lock Structure

ATLANTIC LOCKS COMPLEX (3x3 WSB)
Segment of Lock Walls

Contract	Scale	Drawing n°	Rev.	Folio
SW-14335	1/100	D4- B - 219	A	1 / 1



Gate structures AT1 and PA1 are identical
 Gate structures AT2, AT3, PA2 and PA3 are identical

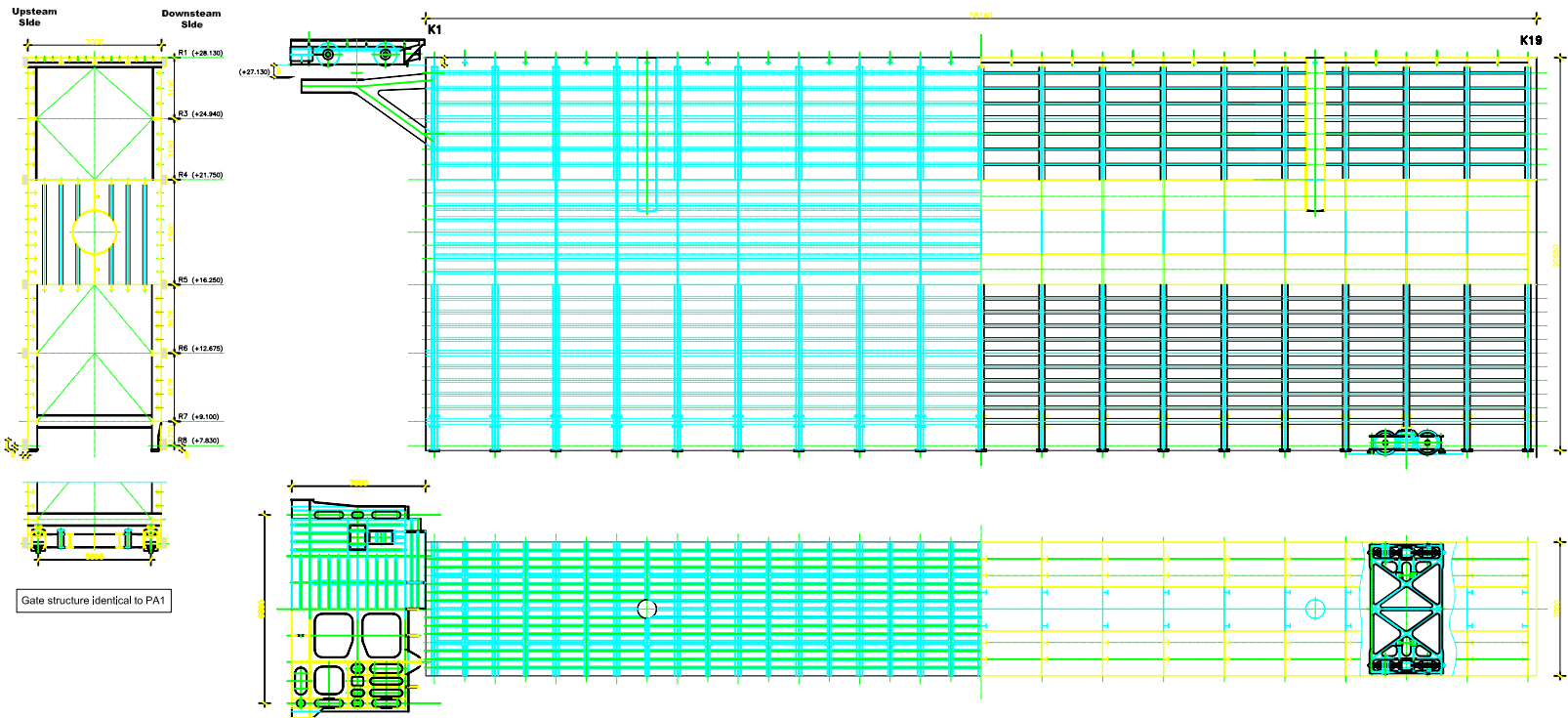
Layout of lower upstream stiffened skin plating panels to be adapted to flow openings required to minimize delay in equalization of water level between a pair of lock gates.
 Gate structure possibly to be adapted for valves built in the gate.

All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.
 All dimensions are in mm.
 All levels are in meter and referred to PLD.

**Diseño Conceptual de las Esclusas Post Panamax
 Actualization & Harmonization Study
 of New Lock Structure**

**ATLANTIC LOCKS COMPLEX (3x3 WSB)
 ROLLING GATE AT1,AT2,AT3,AT4 - SECTIONS**

F					
E					
D					
C	27/05/05	FINAL REPORT			
B	29/04/05	UPDATE FINAL REPORT - ADDITIONAL CROSS SECTION AT4			
A	01/04/05	DRAFT FINAL REPORT			
-	31/03/05	FIRST EDITION			
REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
Contract	Scale:	Drawing n°:	Rev.:	Folio	
SAA-143351	1/100	D4-D-200	C	1/1	



Layout of lower upstream stiffened skin plating panels to be adapted to flow openings required to minimize delay in equalization of water level between a pair of lock gates.

Gate structure possibly to be adapted for valves built in the gate.

All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.

All dimensions are in mm.

All levels are in meter and referred to PLD.

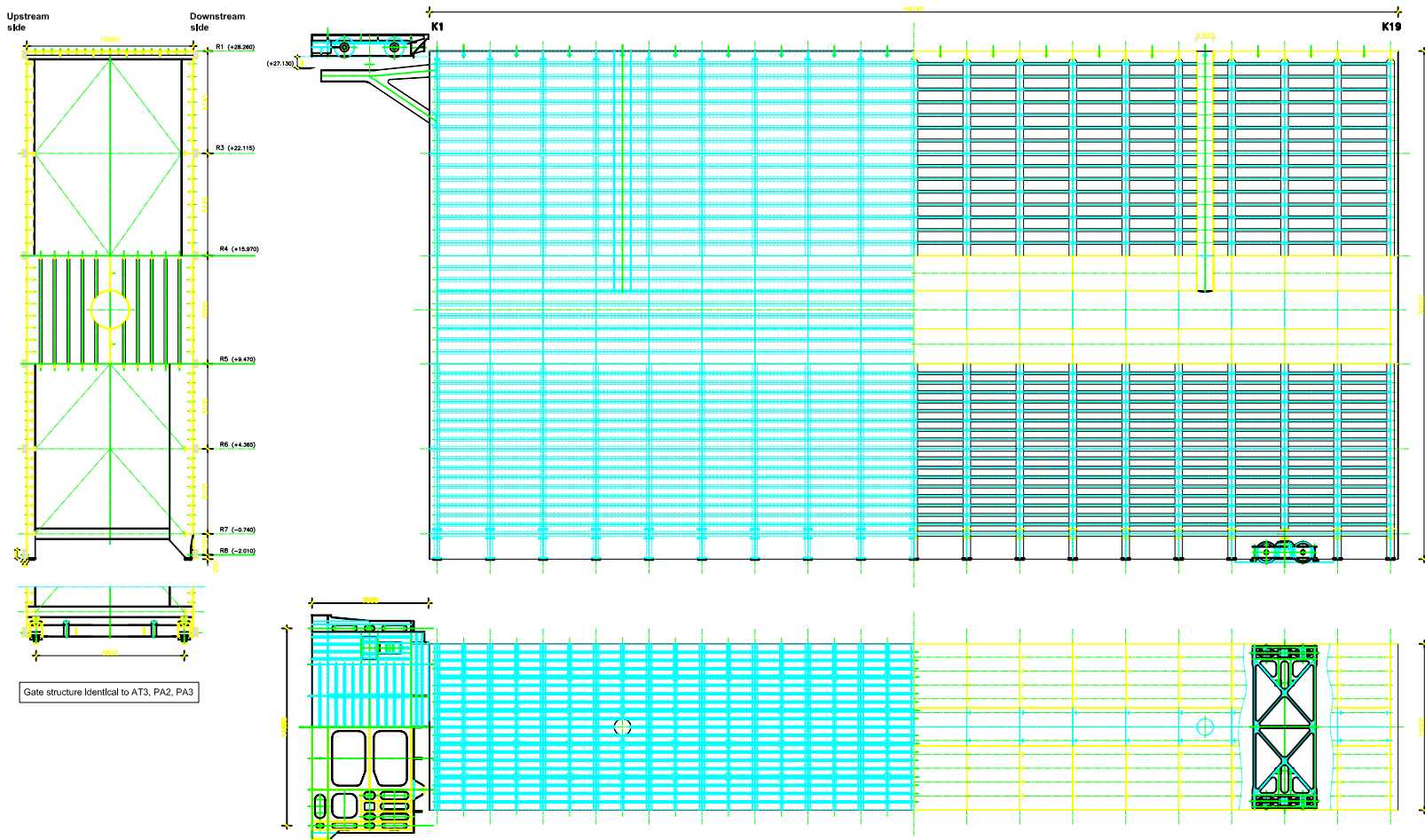
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 Consorcio Post Panamax
Tractebel Development Engineering
TECHNUM
COYNET BELIER
 Compagnie Nationale du Rhône
 Area 1000 7 B-12000000
SBE

ACP
 Comité de Projets de Capital de Canal
 Autorité de Canal de Panama
 Canal de Panama
 République de Panama
 Panama Canal Area

Diseño Conceptual de las Esclusas Post Panamax Actualization & Harmonization Study of New Lock Structure

ATLANTIC LOCKS COMPLEX (3x3 WSB)
 ROLLING GATE AT1 : GENERAL LAY OUT

Contract	Scale	Drawing n°:	Rev.	Folio
SM-14200	1/100	D4-0-201	C	1/1



Gate structure identical to AT3, PA2, PA3

Layout of lower upstream stiffened skin plating panels to be adapted to flow openings required to minimize delay in equalization of water level between a pair of lock gates.

Gate structure possibly to be adapted for valves built in the gate.

All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.

All dimensions are in mm.

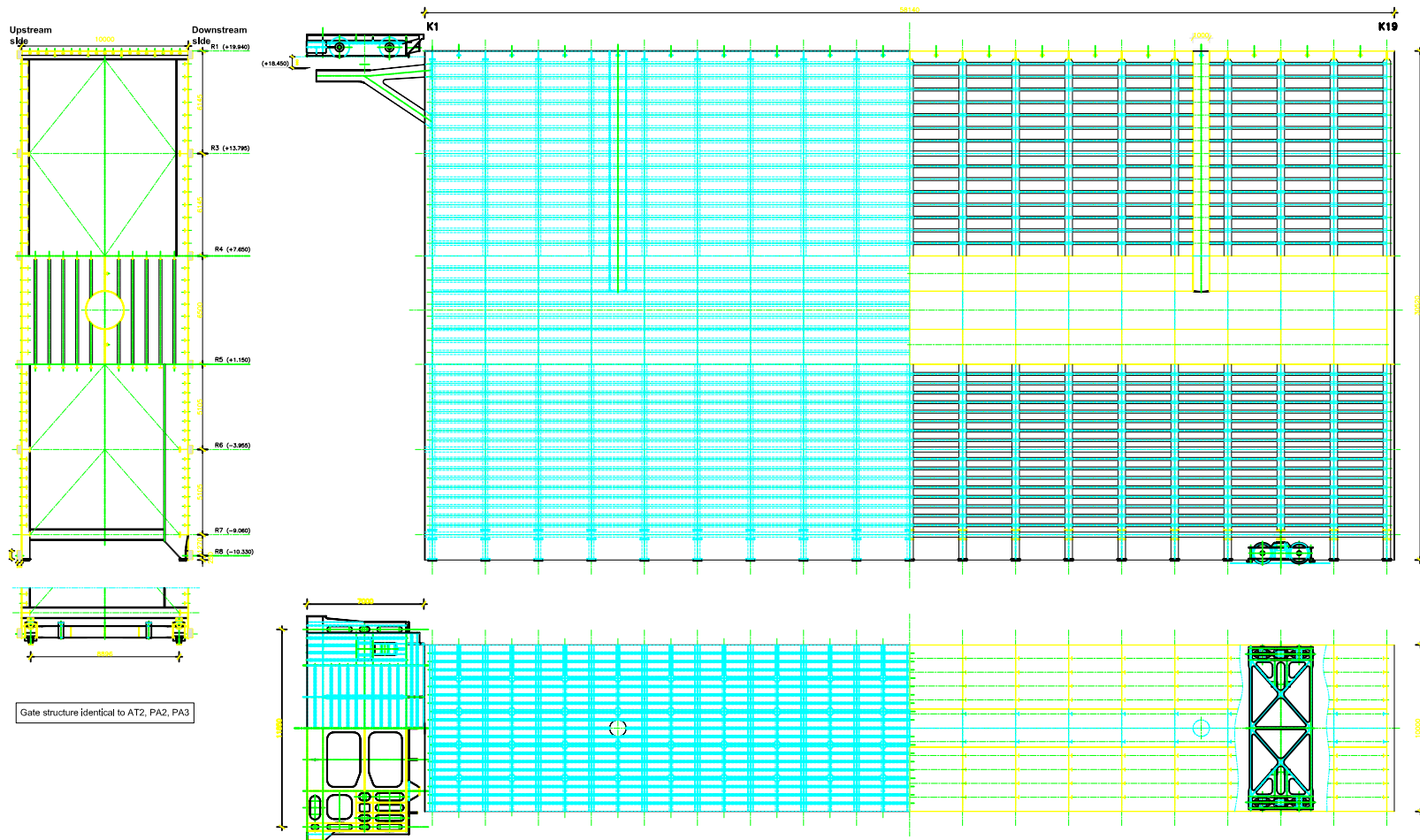
All levels are in meter and referred to PLD.

**Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure**

ATLANTIC LOCKS COMPLEX (3x3 WSB)
ROLLING GATE AT2 : GENERAL LAY OUT

REVISIONES		AUTORIZACIONES	
Nº	FECHA	FECHA	FECHA

Contract	Scale	Drawing n°:	Rev:	Folio
99-14283	1/100	D4-D-202	c	1/1



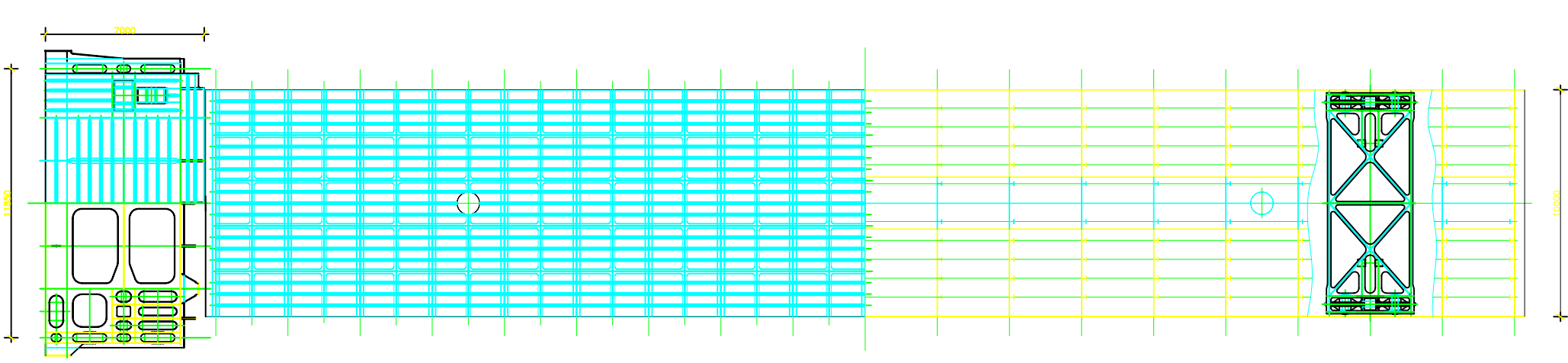
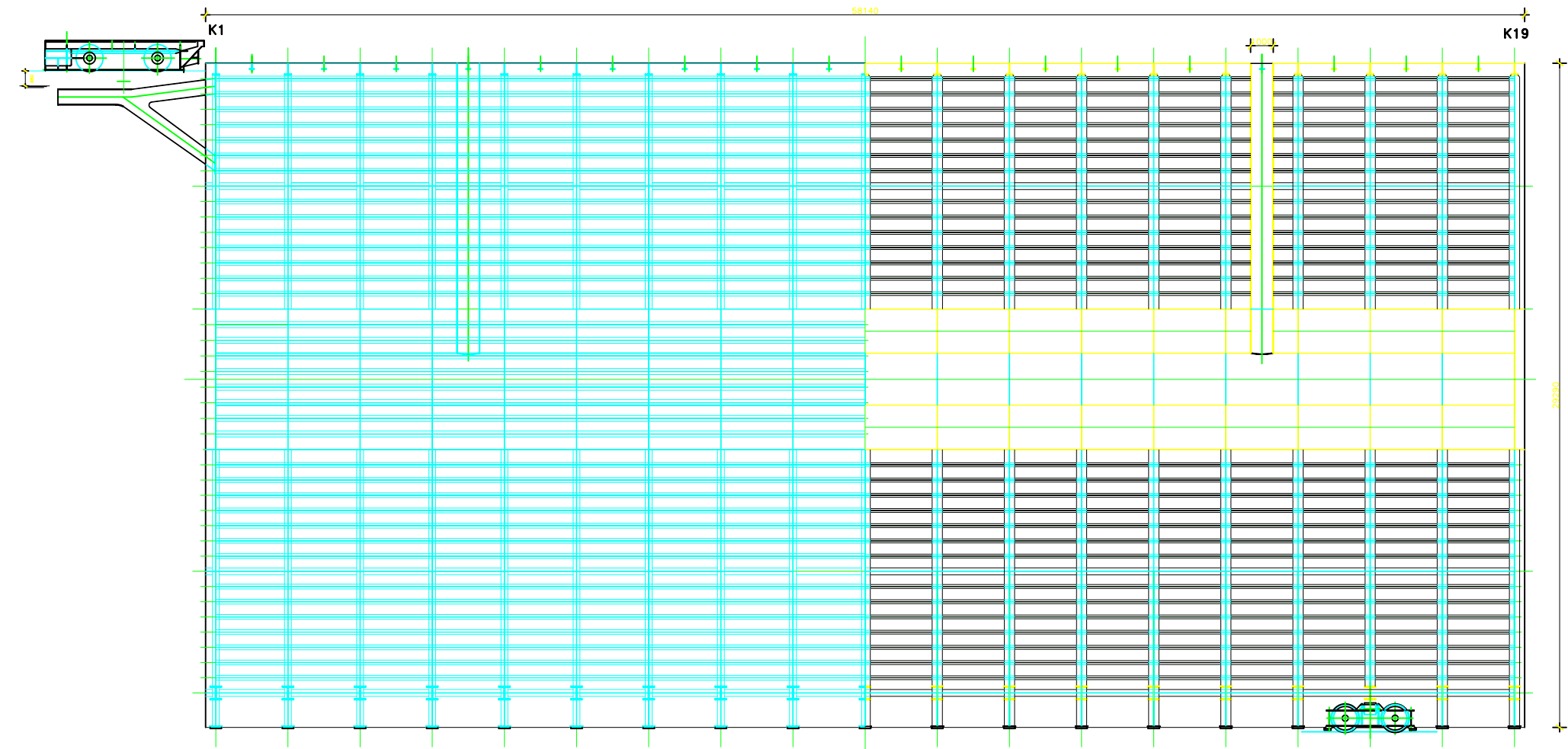
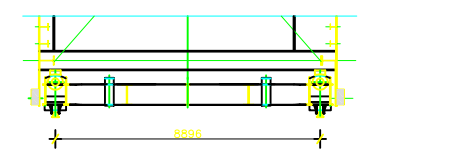
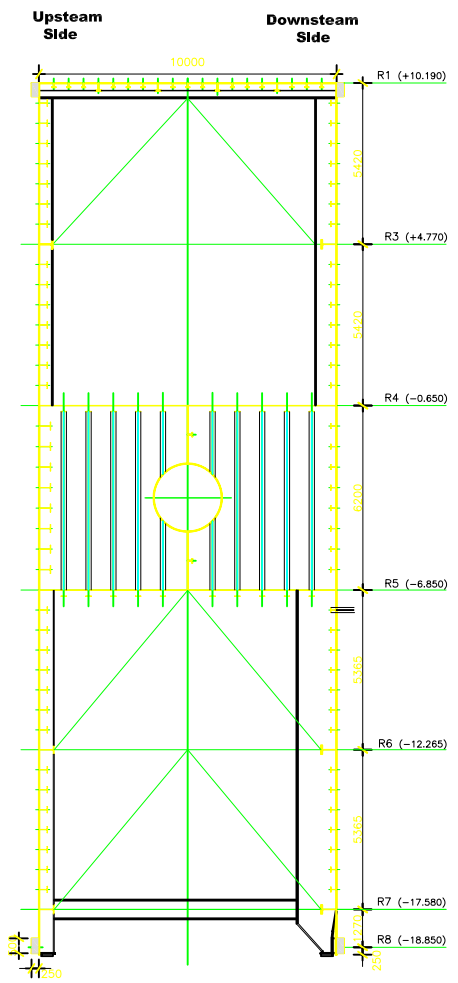
Gate structure identical to AT2, PA2, PA3

Layout of lower upstream stiffened skin plating panels to be adapted to flow openings required to minimize delay in equalization of water level between a pair of lock gates.
 Gate structure possibly to be adapted for valves built in the gate.
 All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.
 All dimensions are in mm.
 All levels are in meter and referred to PLD.

**Diseño Conceptual de las Esclusas Post Panamax
 Actualization & Harmonization Study
 of New Lock Structure**

ATLANTIC LOCKS COMPLEX (3x3 WSB)
 ROLLING GATE AT3 : GENERAL LAY OUT

Contract	Scale	Drawing n°	Rev.	Folio
99-14201	1/100	D4-D-203	B	1/1



Layout of lower upstream stiffened skin plating panels to be adapted to flow openings required to minimize delay in equalization of water level between a pair of lock gates.

Gate structure possibly to be adapted for valves built in the gate.

All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.

All dimensions are in mm.
All levels are in meter and referred to PLD.

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Avenue Adrien 7 B-1209 Brussels

In association with:

FIRA AGSO

SBE

ACP
Autoridad del Canal de Panamá

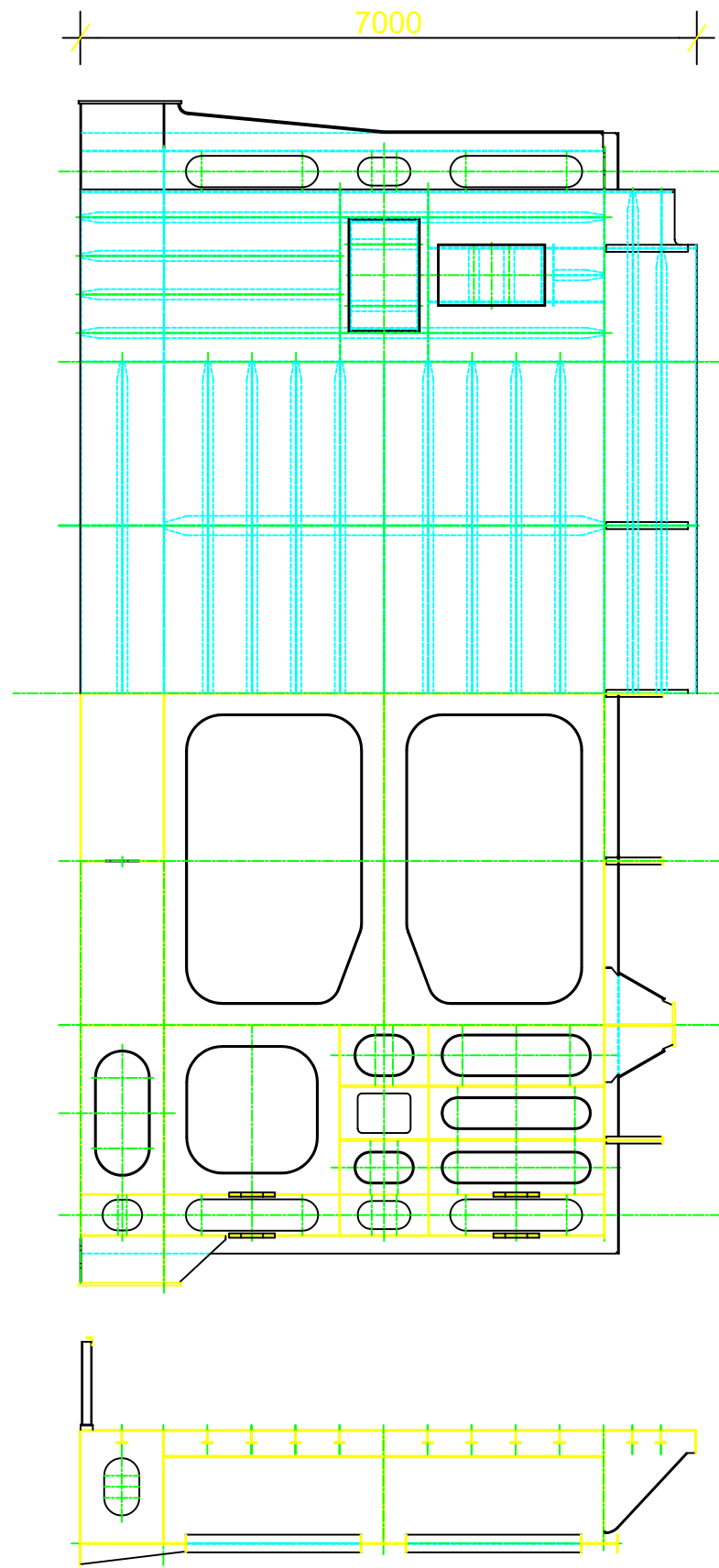
Dirección de Proyectos de Capacidad del Canal
Estación 8011
CORROZAL
República de Panamá

**Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure**

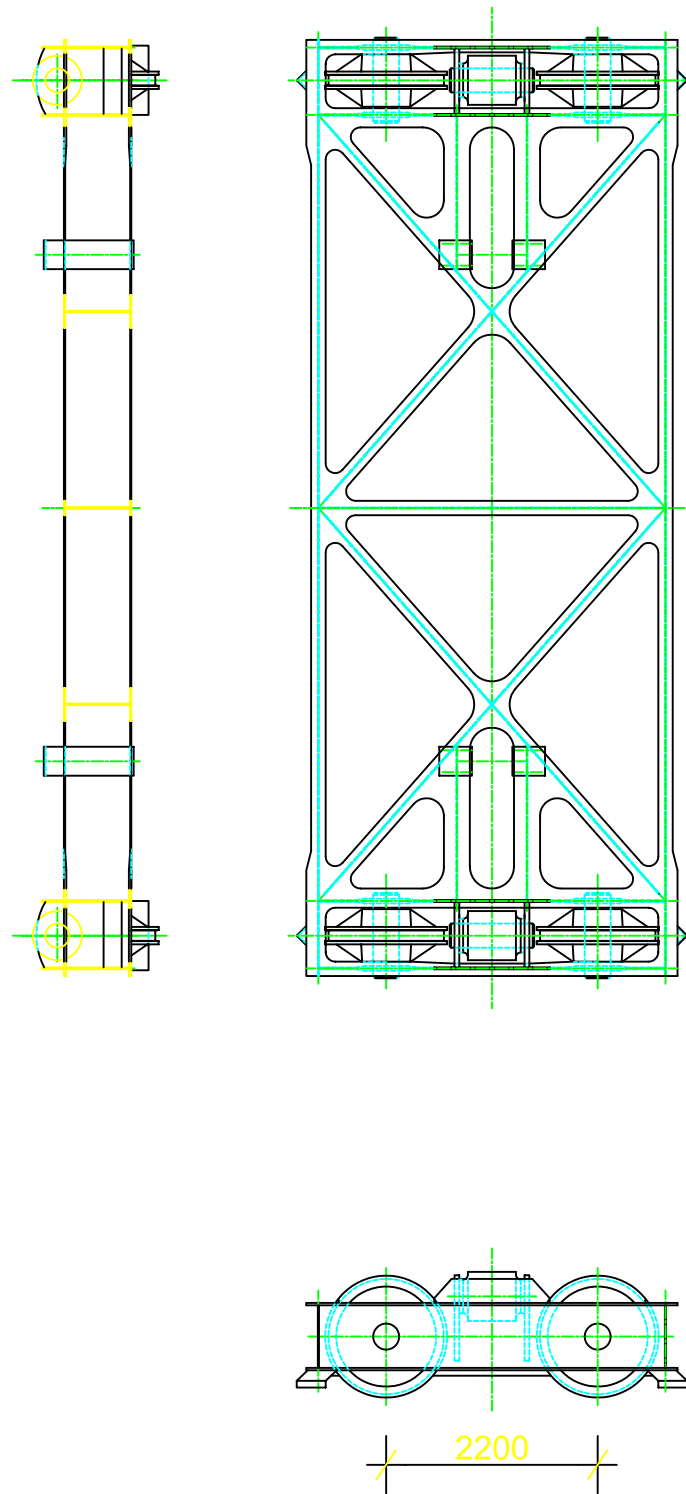
**ATLANTIC LOCKS COMPLEX (3x3 WSB)
ROLLING GATE AT4 : GENERAL LAYOUT**

REV	DATE	DESCRIPTION	DESIGN	CHECKED	APPROVED
Contract	Scale:	Drawing n°:	Rev.:	Folio	
SA-143351	1/100	D4-D-204	B	1/1	

UPPER WAGON



LOWER WAGON



All dimensions are on the level of concept design and have to be checked and validated during further and detailed design.

All dimensions are in mm.

All levels are in meter and referred to PLD.

tittleblock_atlantic.bmp

Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure

ATLANTIC LOCKS COMPLEX (3x3 WSB)
SUPPORT ROLLING WAGONS

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
F					
E					
D					
C					
B	27-05-05	FINAL REPORT	FJH	BME	JDR
A	01-04-05	DRAFT FINAL REPORT	FJH	BME	JDR
-	31/03/05	FIRST EDITION			

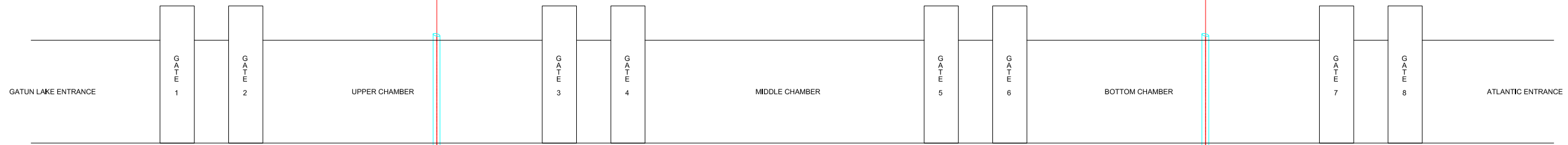
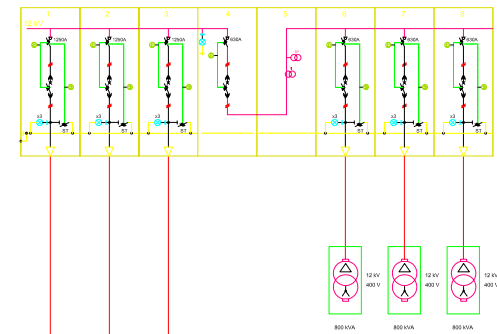
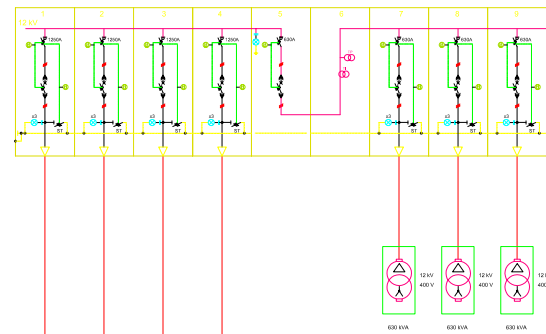
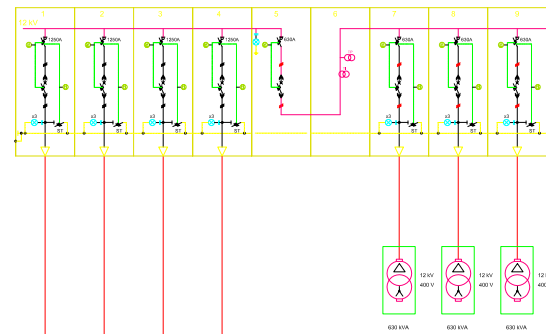
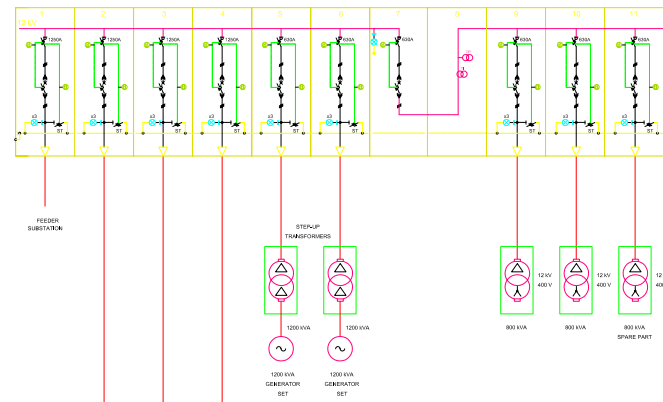
Contract	Scale:	Drawing n°:	Rev.:	Folio
SAA-143351	1/50	D4-D-205	B	1/1

H.V. SWITCHGEAR 1.

H.V. SWITCHGEAR 2.

H.V. SWITCHGEAR 3.

H.V. SWITCHGEAR 4.

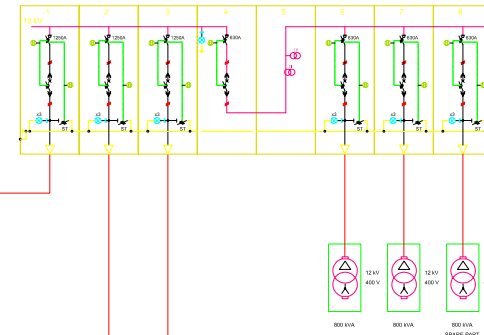
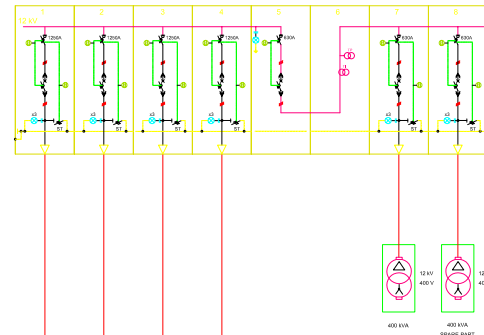
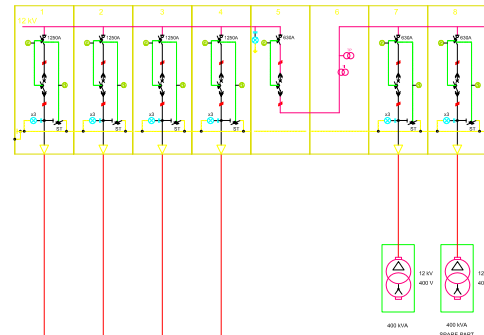
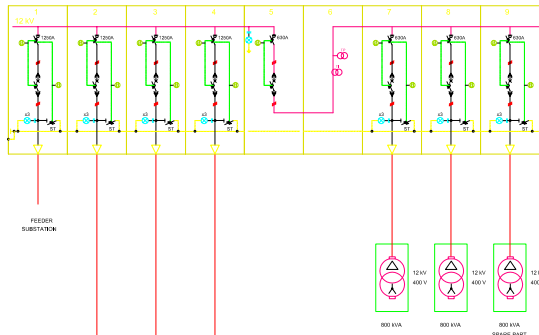


H.V. SWITCHGEAR 5.

H.V. SWITCHGEAR 6.

H.V. SWITCHGEAR 7.

H.V. SWITCHGEAR 8.

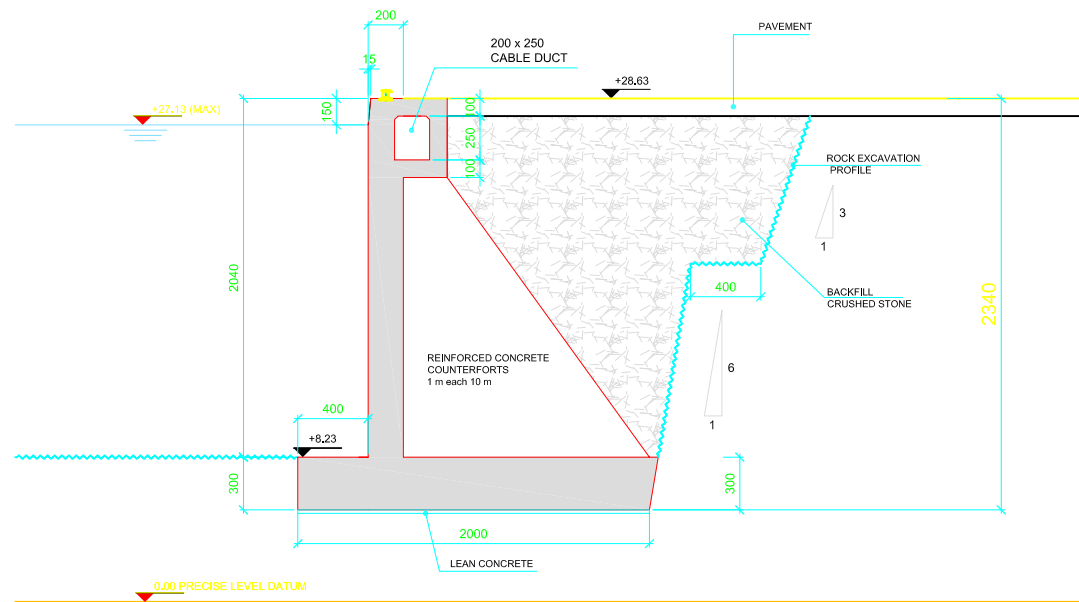


Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure

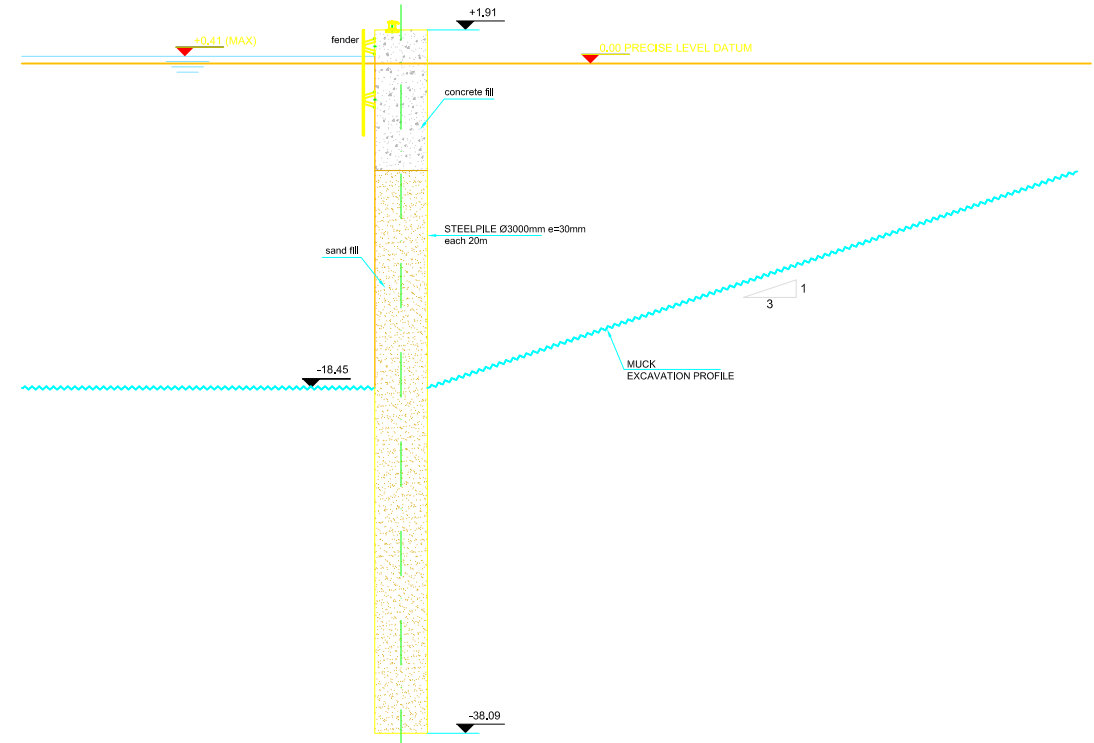
ATLANTIC LOCKS COMPLEX (3x3 WSB)
High voltage one-line diagram

Contract	Scale	Drawing n°:	Rev.:	File:
SM-14320	1/200	D4- H - 206	A	1 / 1

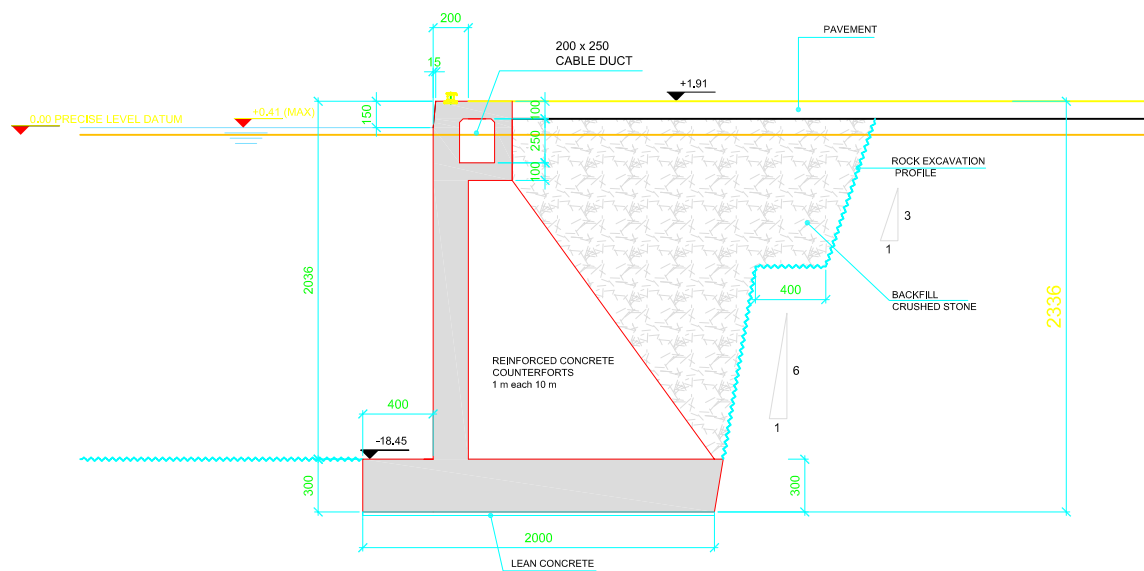
Gatun Lake side in Gatun rock



Atlantic entrance in muck



Atlantic entrance in Gatun rock



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SBE

PORT OF ANTWERP

ACP
Autoridad del Canal de Panamá

División de Proyectos de Capacidad del Canal
Autoridad del Canal de Panamá
Edificio 601
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República de Panamá

**Diseño Conceptual de las Esclusas Post Panamax
Actualization & Harmonization Study
of New Lock Structure**

**ATLANTIC LOCKS COMPLEX (3x3 WSB)
CROSS SECTIONS ENTRANCE WALLS**

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
F					
E					
D					
C					
B	27/05/05	FINAL REPORT	PAH	BEH	JDR
A	29/04/05	UPDATE DRAFT FINAL REPORT	PAH	BEH	JDR
-	01/04/05	DRAFT FINAL REPORT	PAH	BEH	JDR

Contract	Scale:	Drawing n°:	Rev.:	Folio
SAA-143351	1/200	D4- I - 201	B	1 / 1