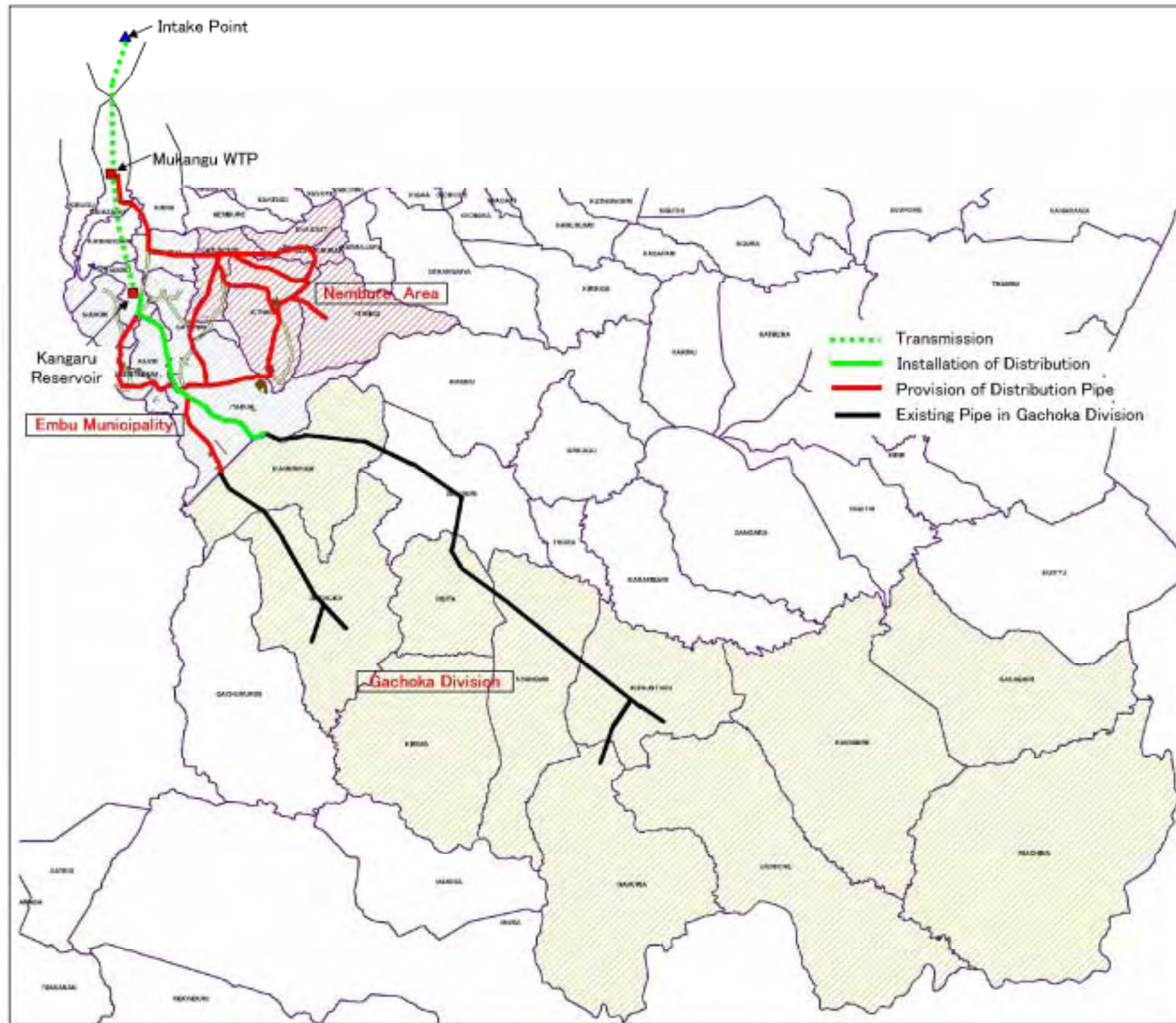


**THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF WATER SUPPLY SYSTEM IN EMBU AND THE SURROUNDING AREAS**

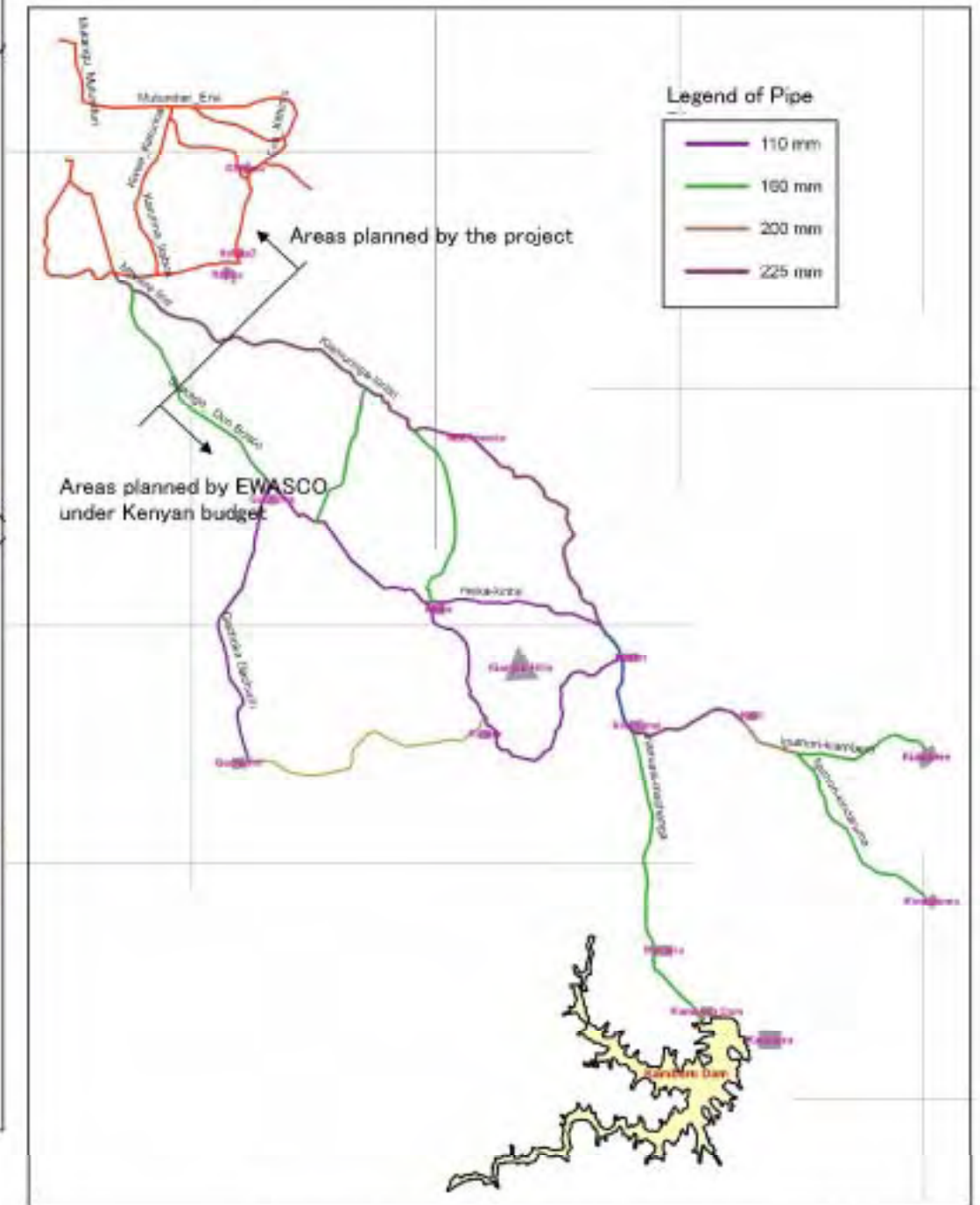
**DRAFT FINAL REPORT ATTACHED APPENDIX 5**

**The List of Drawings for Basic Design**

No.	Drawing Name	Note
1)	Location Map	
2)	Flow Sheet and Hydraulic Profile of System	
3)	Intake Flow Sheet	
4)	Intake Facilities Layout Plan	
5)	Intake Facilities Plan and Section	
6)	Plan for Raw Water Transmission Main	
7)	Pipe Bridge of Raw Water Transmission Main	
8)	Mukangu WTP 2 Yard Layout Plan	
9)	Mukangu WTP 2 Flow Sheet	
10)	Mukangu WTP 2 Sedimentation Tanks with Related Tanks Plan and Section	
11)	Mukangu WTP 2 Rapid Filters Plan and Section	
12)	Mukangu WTP 2 Clear Water Reservoir Plan and Section	
13)	Mukangu WTP 2 Elevated Water Tank and Washed Water Drainage Tank Plan and Section	
14)	Mukangu WTP 2 Sludge Lagoons Plan and Section	
15)	Mukangu WTP 2 Generator/Chemical Building Plan and Section	
16)	Mukangu WTP 2 Control/Electrical Building Plan and Section	
17)	Mukangu WTP 2 Chlorine Dosing House Plan and Section	
18)	Mukangu WTP 2 Lift Pump House Plan and Section	
19)	Mukangu WTP 2 Pipe Layout Plan	
20)	Plan for new Clear Water Transmission Main	
21)	Kangaru Reservoir Site Flow Sheet	
22)	Kangaru Clear Water Reservoir Plan and Section	
23)	Kangaru Reservoir Site Layout with Pipes	
24)	Plan for Distribution Pipes (from Kangaru to Majimbo)	
25)	Plan for Distribution Pipes (from Majimbo to Mbreere)	
26)	Electrical Instrument Flow	
27)	Single Flow Diagram for Mukangu and Kangaru	

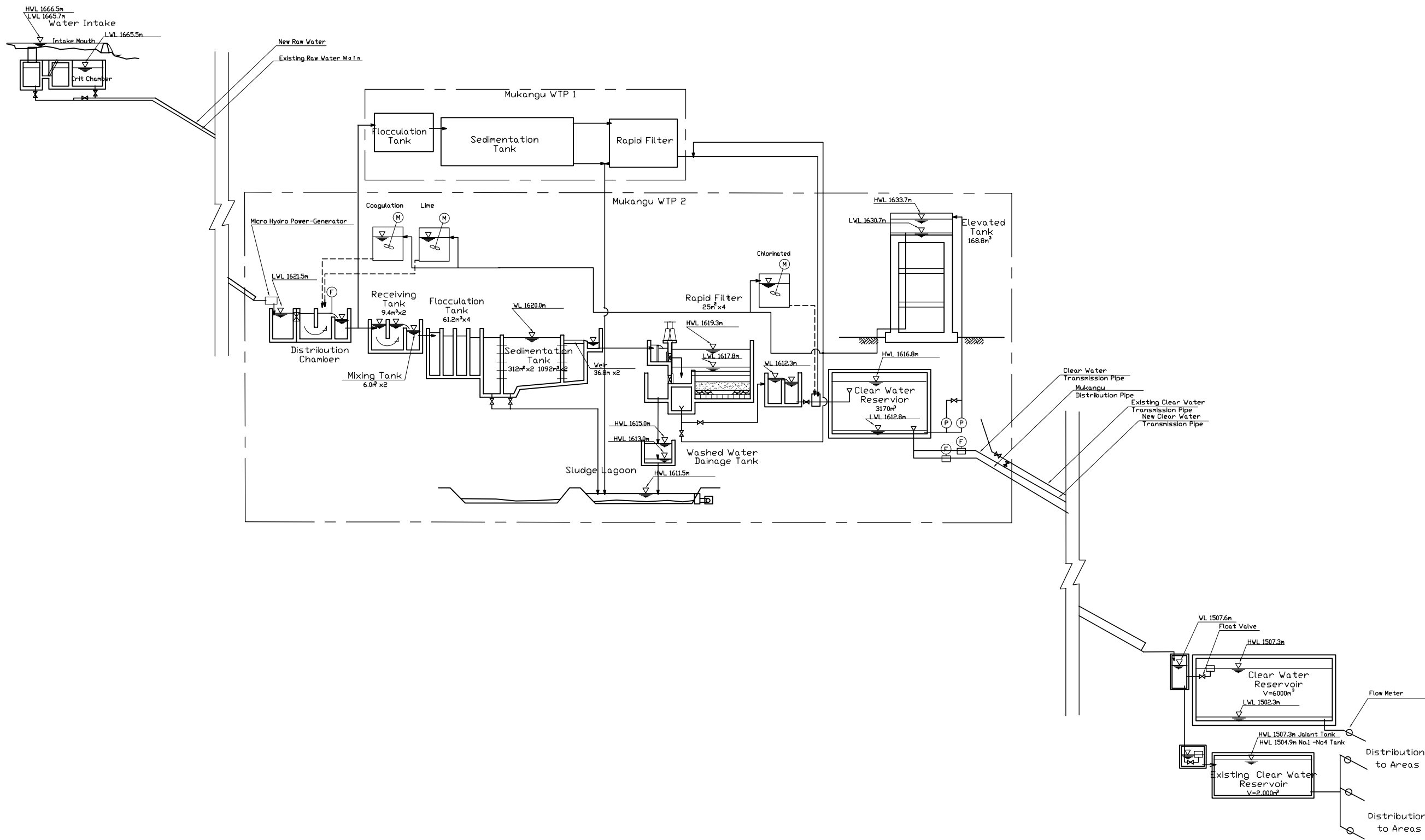


Location Map of the Project



Proposed Distribution Pipe Network by EWASCO

Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Location Map	
Scale:	N.T.S
Drawing No.	01 by 27

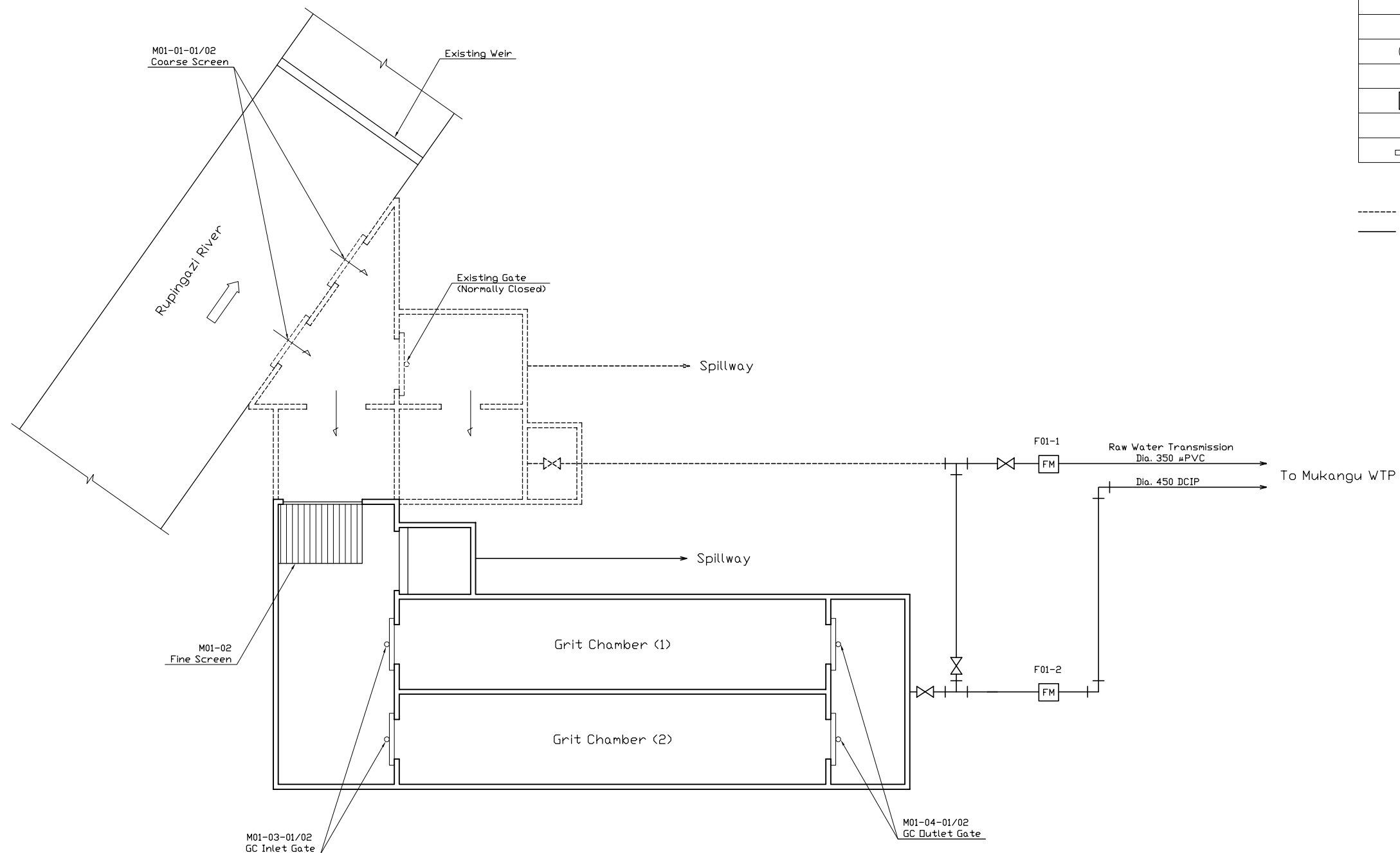


01

Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Flow Sheet and Hydraulic Profile of the System	
Scale:	N.T.S
No. 02 of 27	

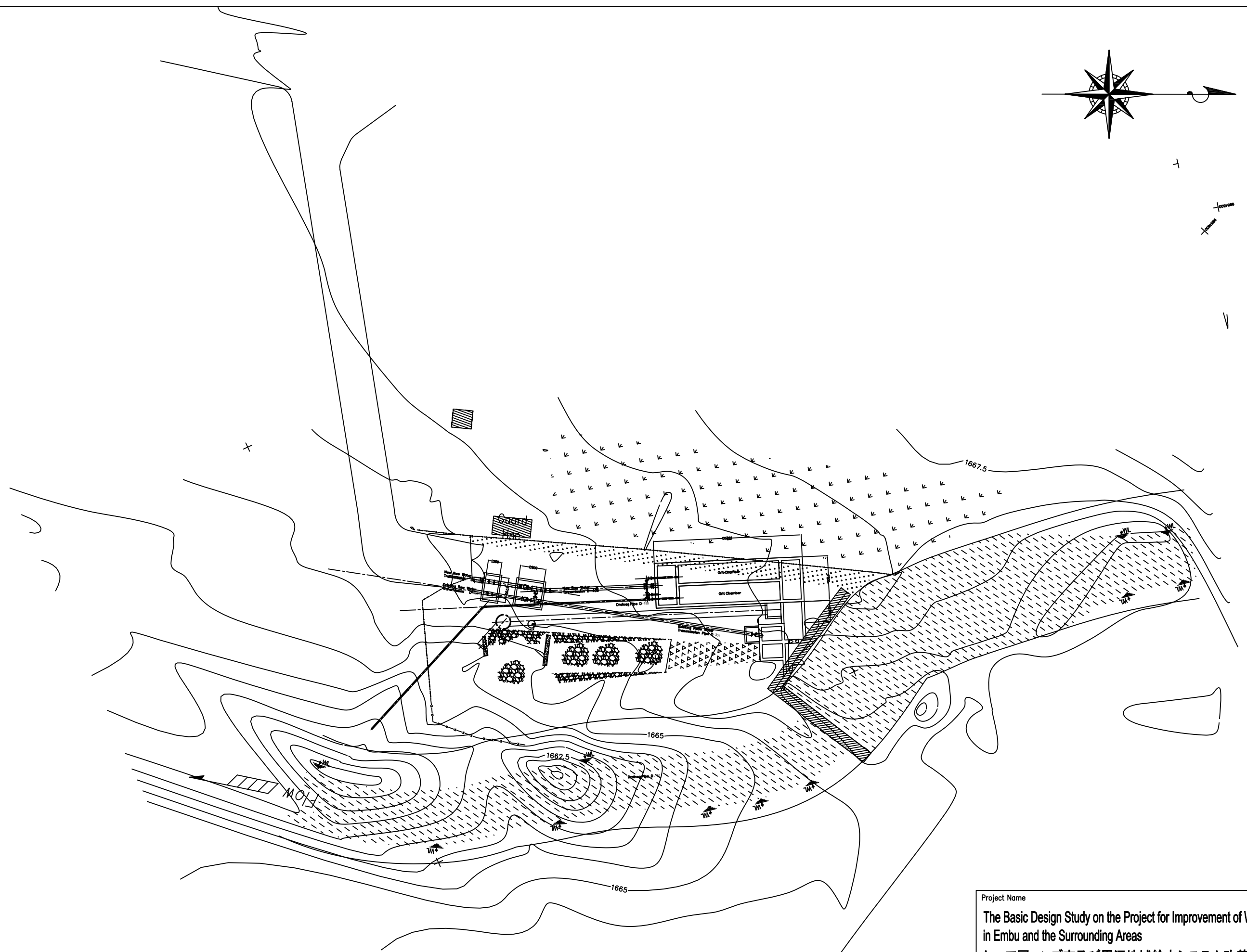
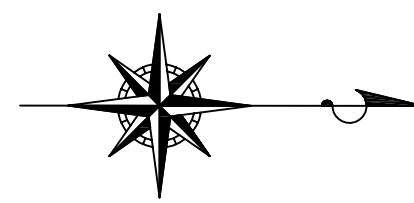
Legend	
—	Water/Sludge
- - -	Chemical
⊗	Gate Valve
∇	Check Valve
⊘	Butterfly Valve
⊠	Ball Valve
⊞	Flow Control Valve
⊙	Pump
⊞	Motor
⊞	Mechanical Flow Meter
⊞	Electrical Flow Meter
⊞	Gate

----- : Existing  
 ————— : New



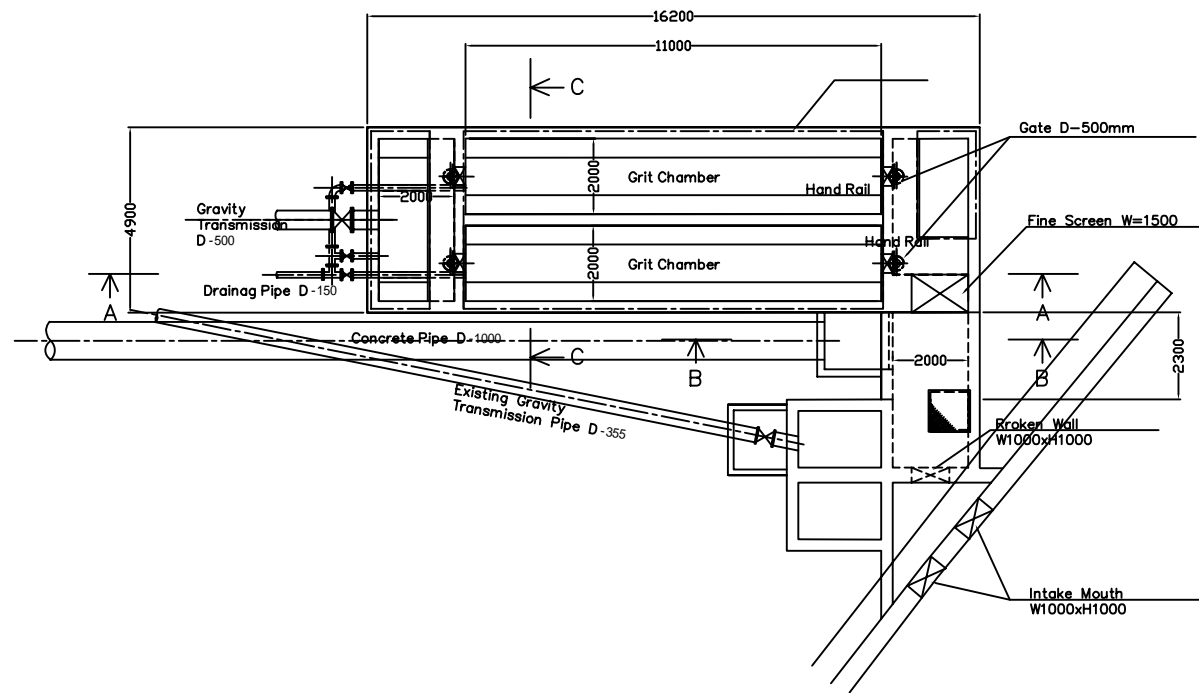
Intake Facility S=non scale

Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Intake Flow Sheet	
Scale:	N.T.S
No. 03 of 27.	

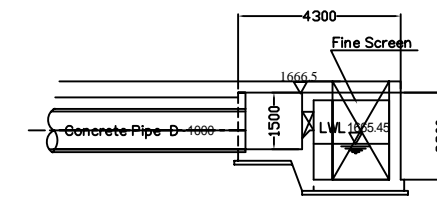


Intake Facilities Layout  
S=1:200

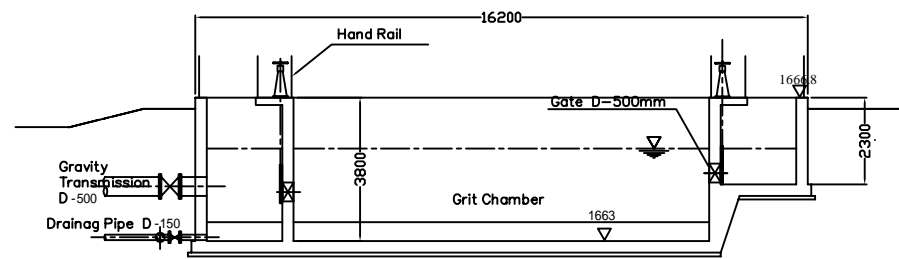
Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Intake Facilities Layout Plan	Scale: 1/200
No. 04 of 27	



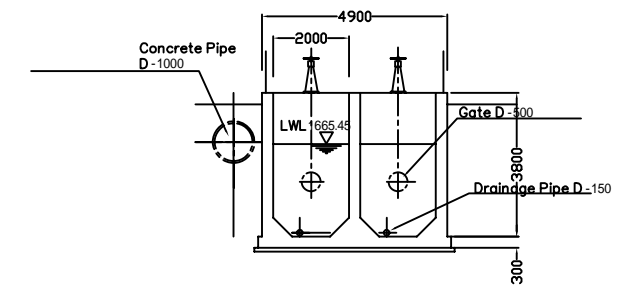
Intake Facilities Plan s=1:100



Section B-B s=1:100



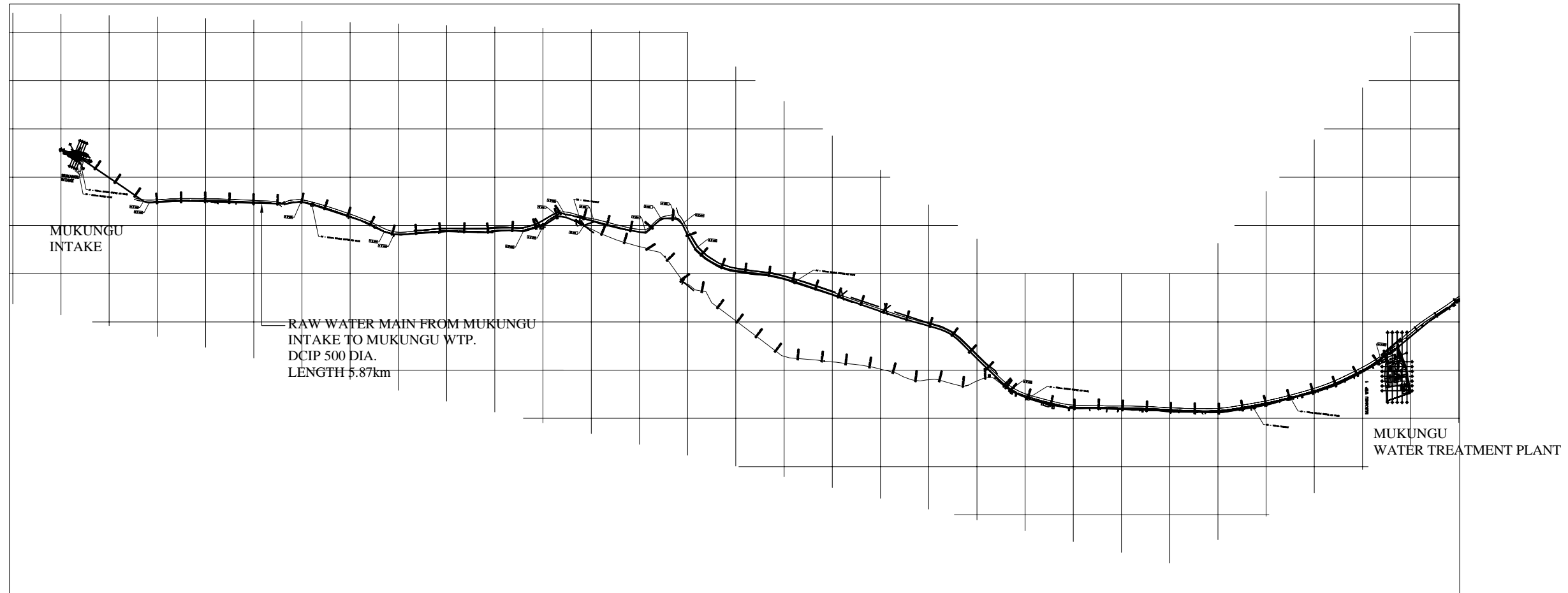
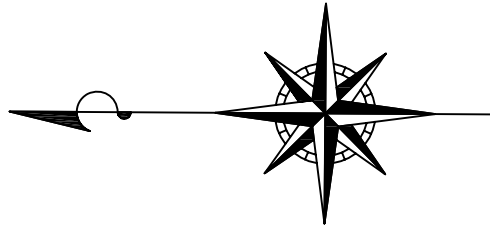
Section A-A s=1:100



Section C-C s=1:100

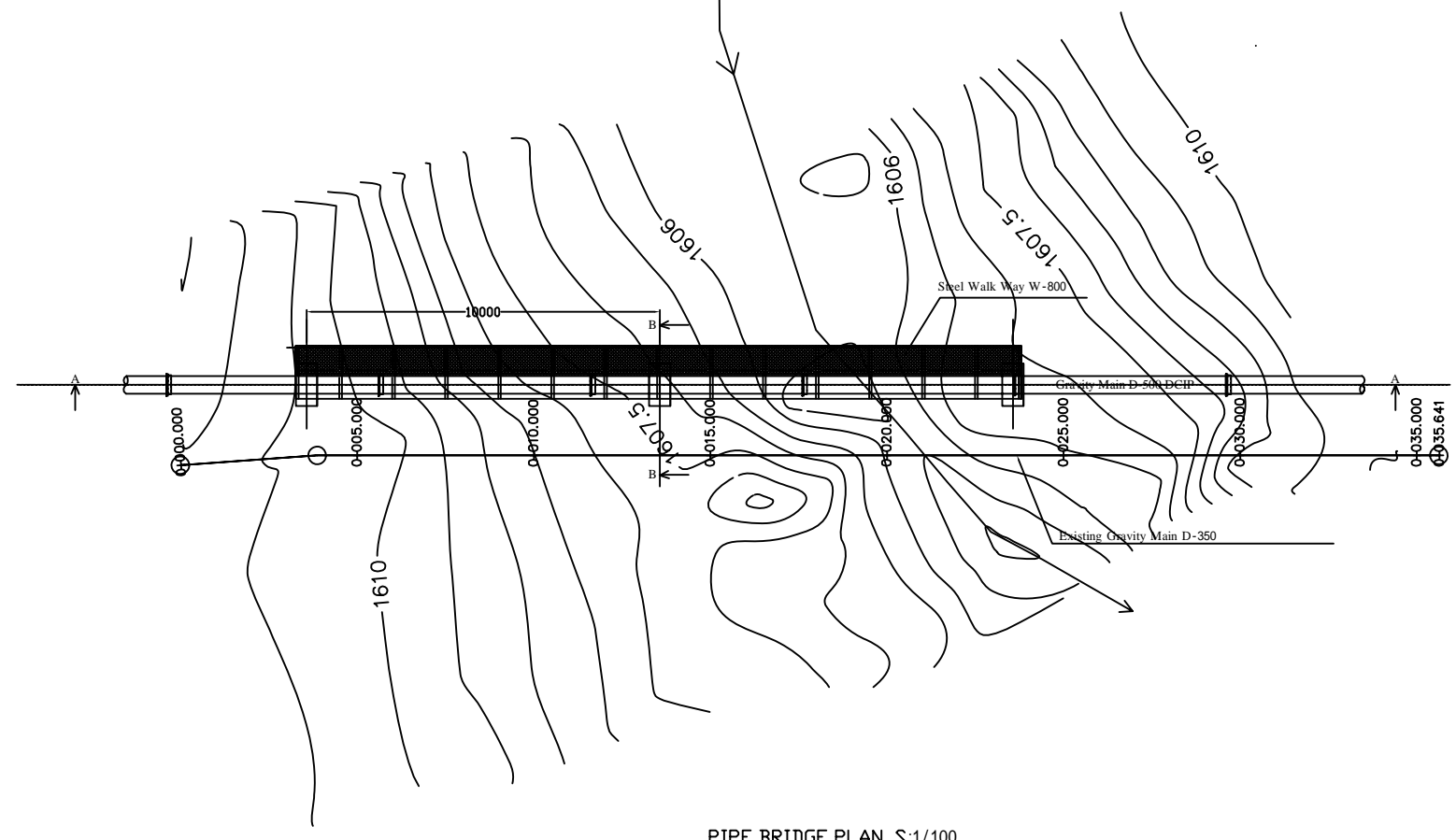
Intake Facilities s=1:100

Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	Scale: 1/100
Intake Facilities Plan and Section	No. 05 of 27

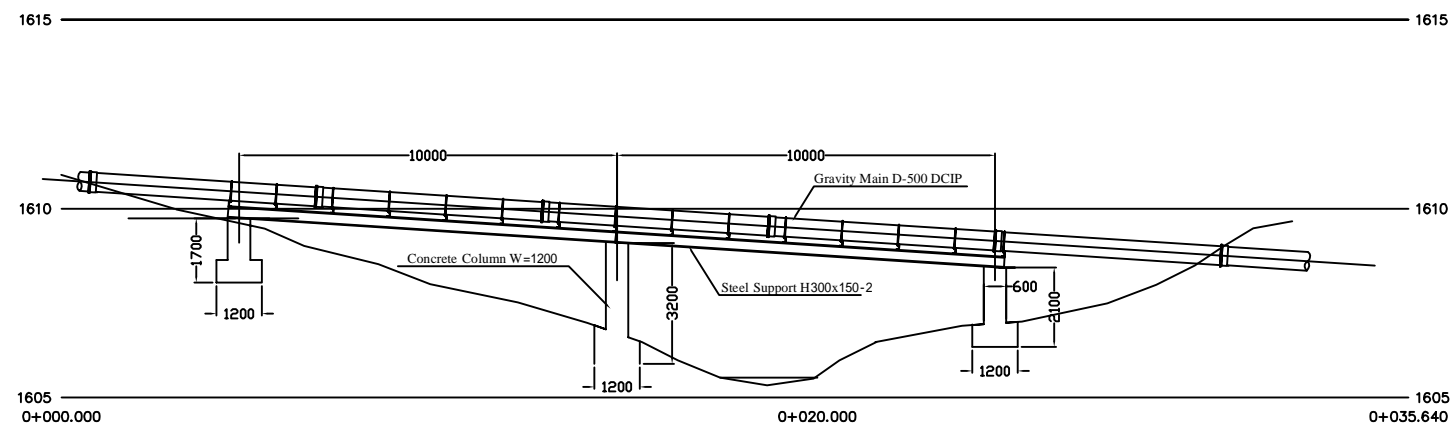


## Raw Water Transmission General Plan

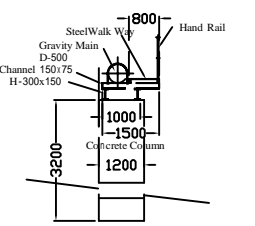
Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	Scale:
Plan for Raw Water Transmission Main	1:2000
No. 06 of 27	



PIPE BRIDGE PLAN S:1/100



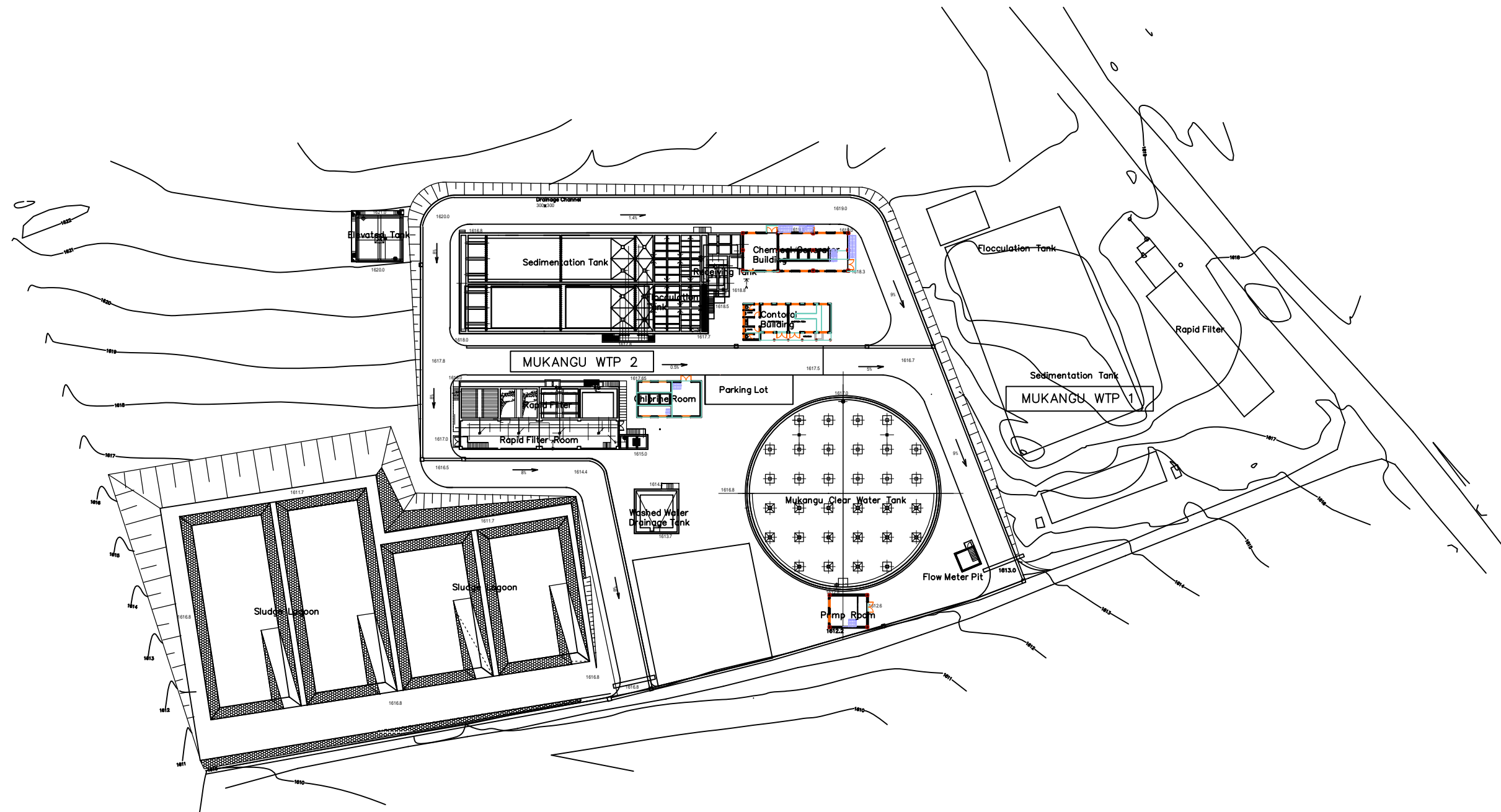
SECTION A-A S:1/100



SECTION B-B S:1/100

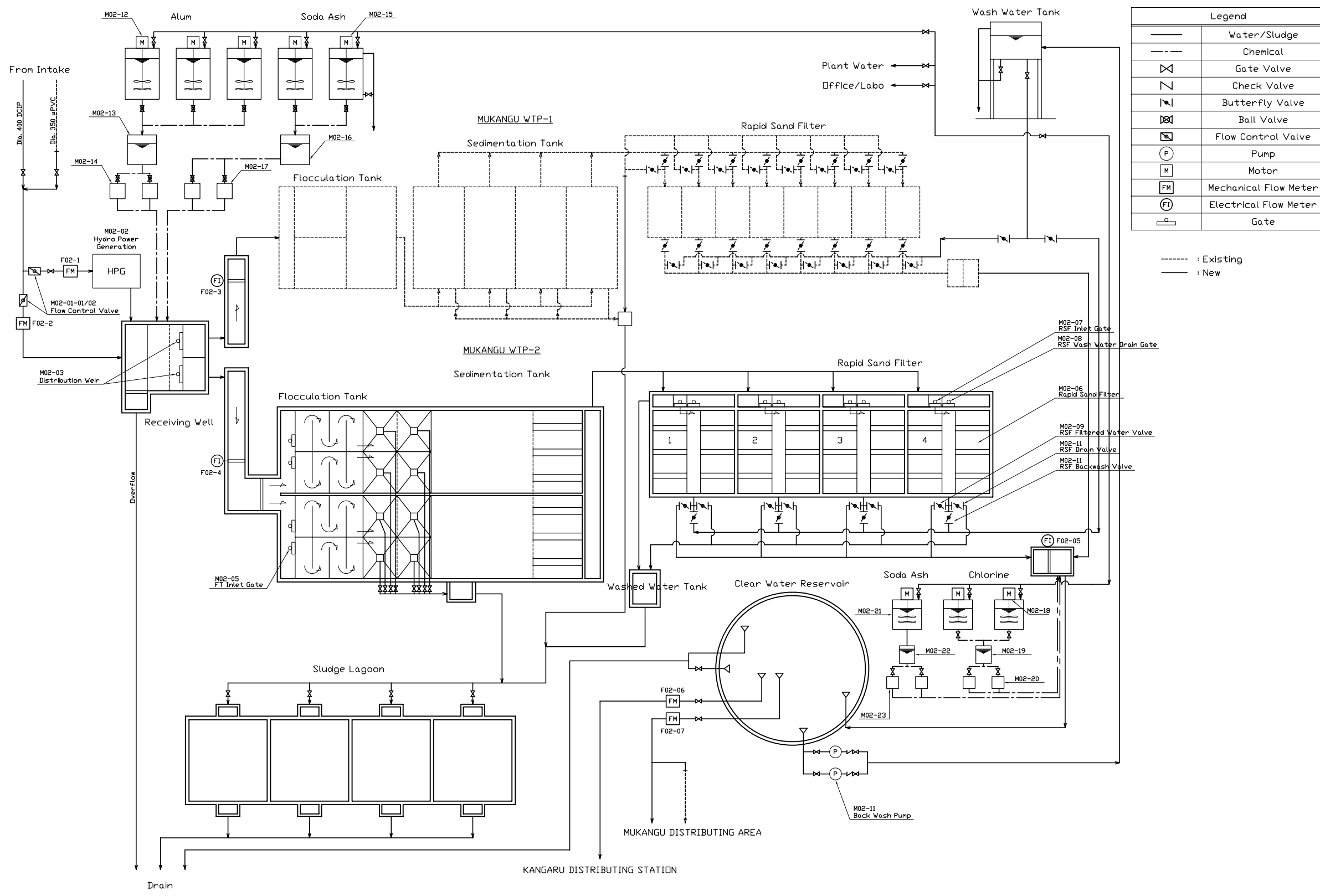
Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	Scale: 1:100
Pipe Bridge for Raw Water Transmission Main	No. 07 of 27





General Layout Plan  
Scale=1/800

Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Mukangu WTP	Scale: 1:800
Yard Layout Plan	No. 08 of 27

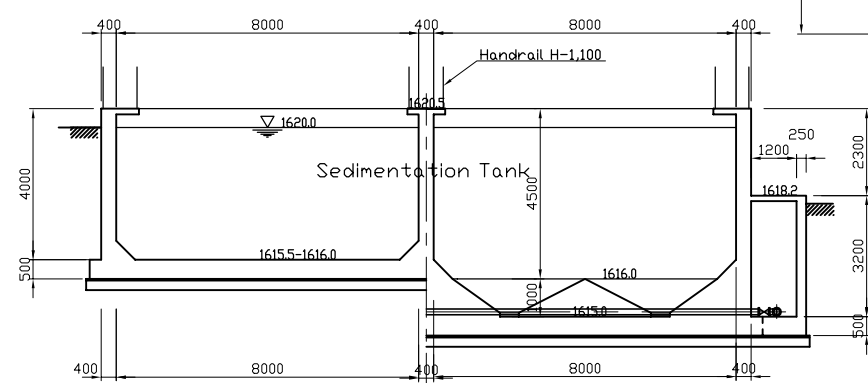
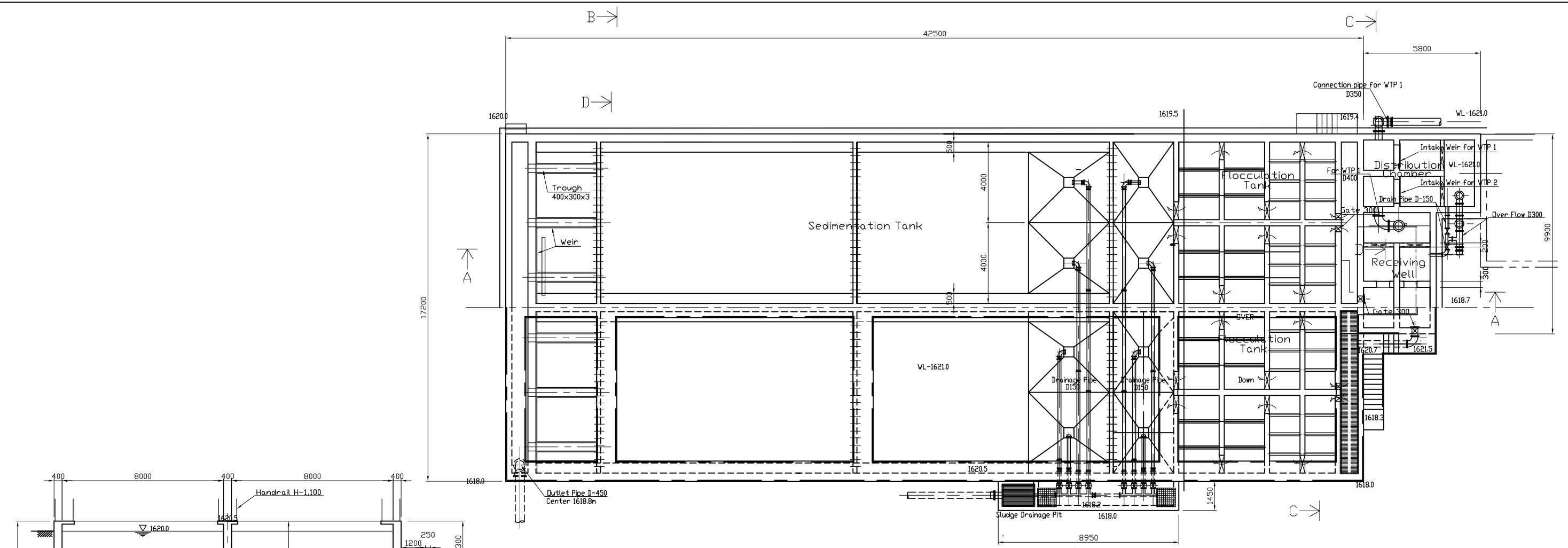


Legend	
—	Water/Sludge
- - -	Chemical
⊗	Gate Valve
∇	Check Valve
⊘	Butterfly Valve
⊙	Ball Valve
⊠	Flow Control Valve
(P)	Pump
(M)	Motor
(FM)	Mechanical Flow Meter
(FI)	Electrical Flow Meter
⊔	Gate

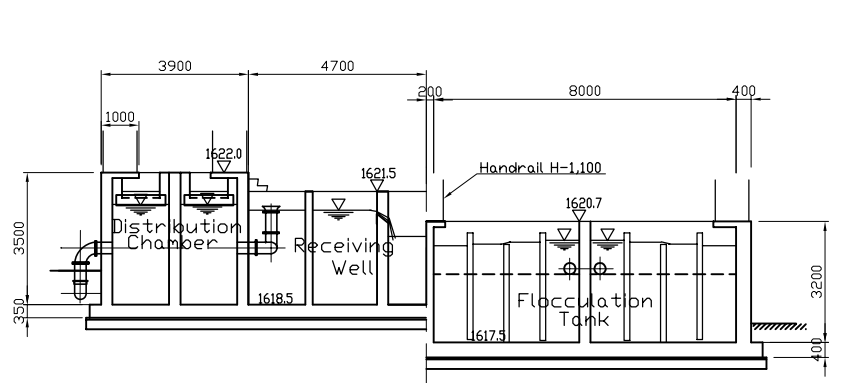
- - - : Existing  
 — : New

MUKANGU WATER TREATMENT PLANT S=NDNE SCALE

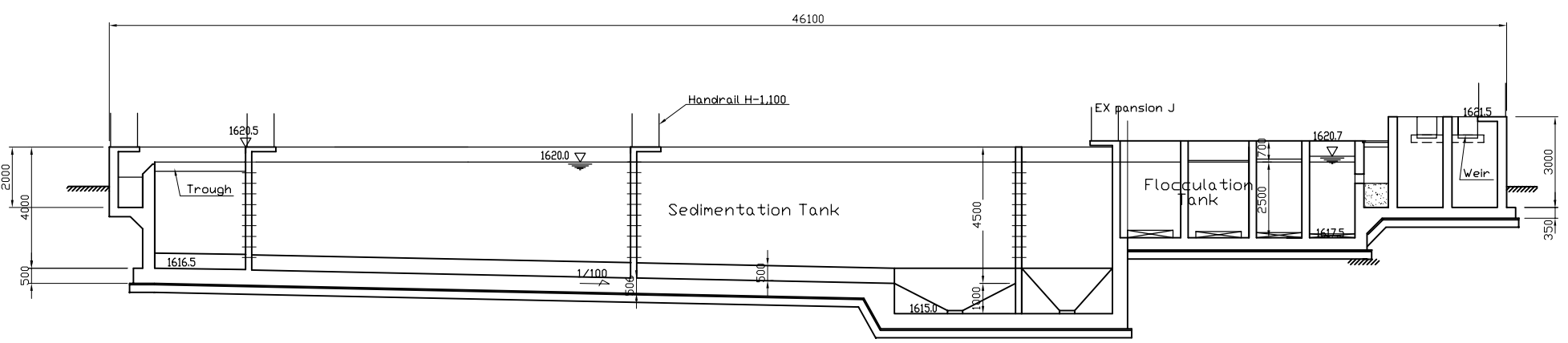
Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Mukangu WTP Flow Sheet	
Scale:	N.T.S
No. 09 of 27	



Section B-B s=1:100



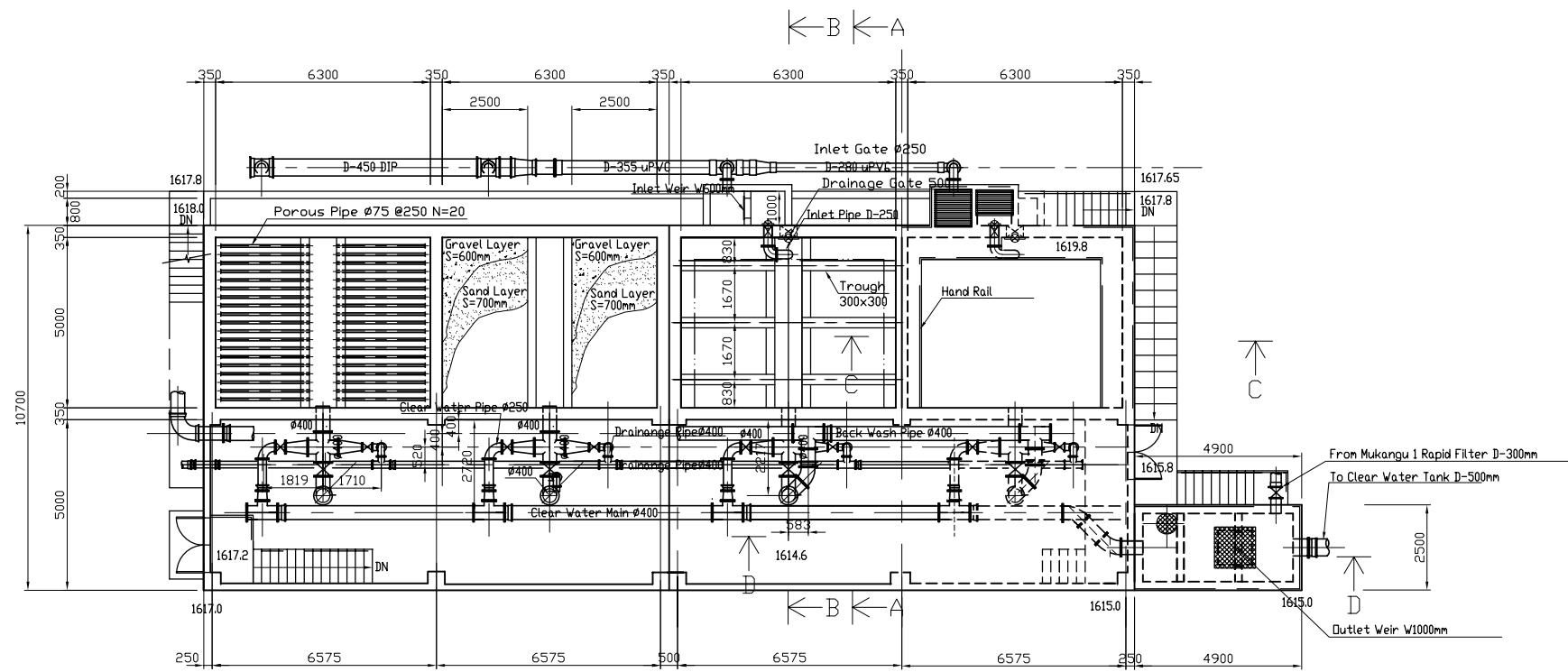
Section C-C s=1:100



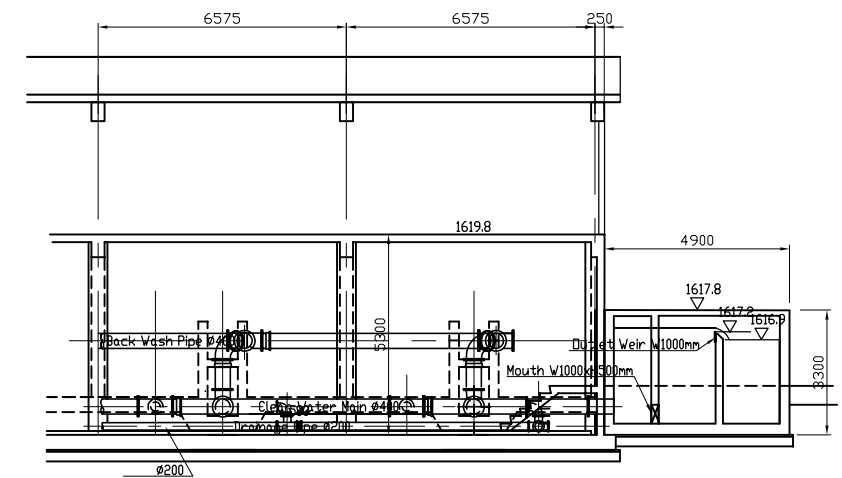
Section A-A s=1:100

\*Inside of wall encompassing the structure shall be water-proof painting.

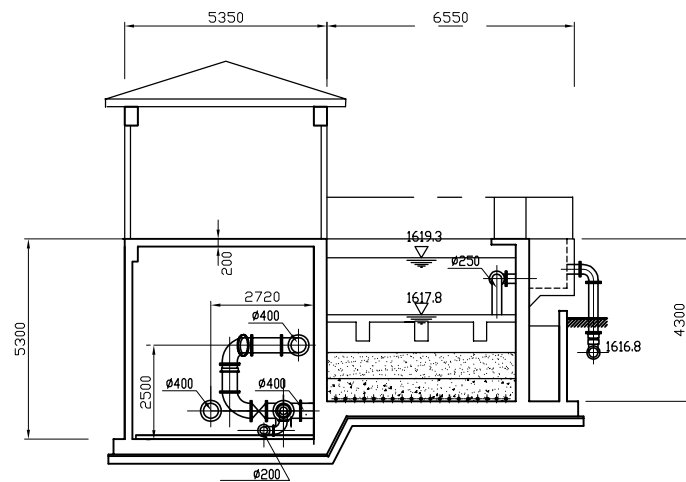
Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Mukangu WTP Sedimentation Tank with Related Tanks Plan and Sections	
Scale:	1/100
Drawing No.	10 of 27



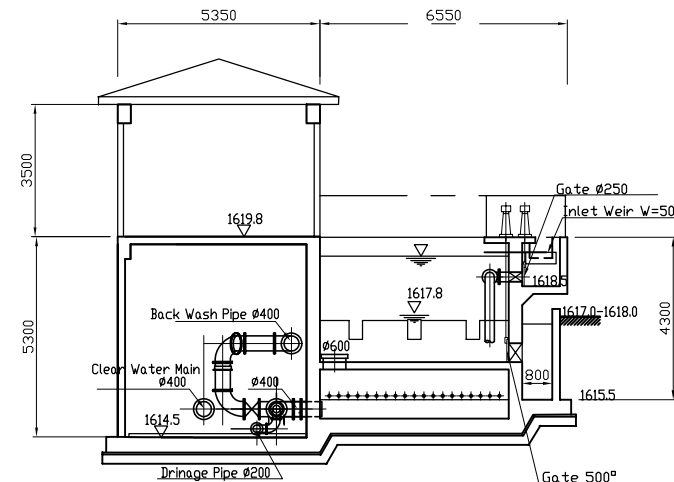
Rapid Filter Plan s=1:100



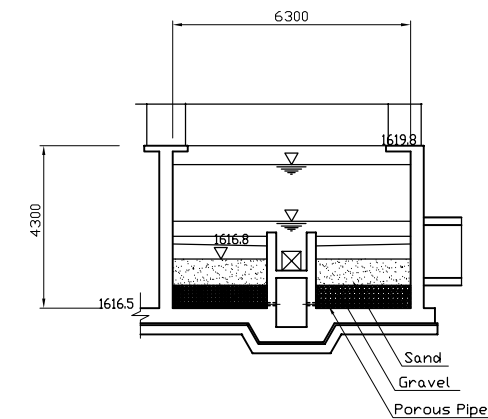
Section D-D s=1:100



Section A-A s=1:100



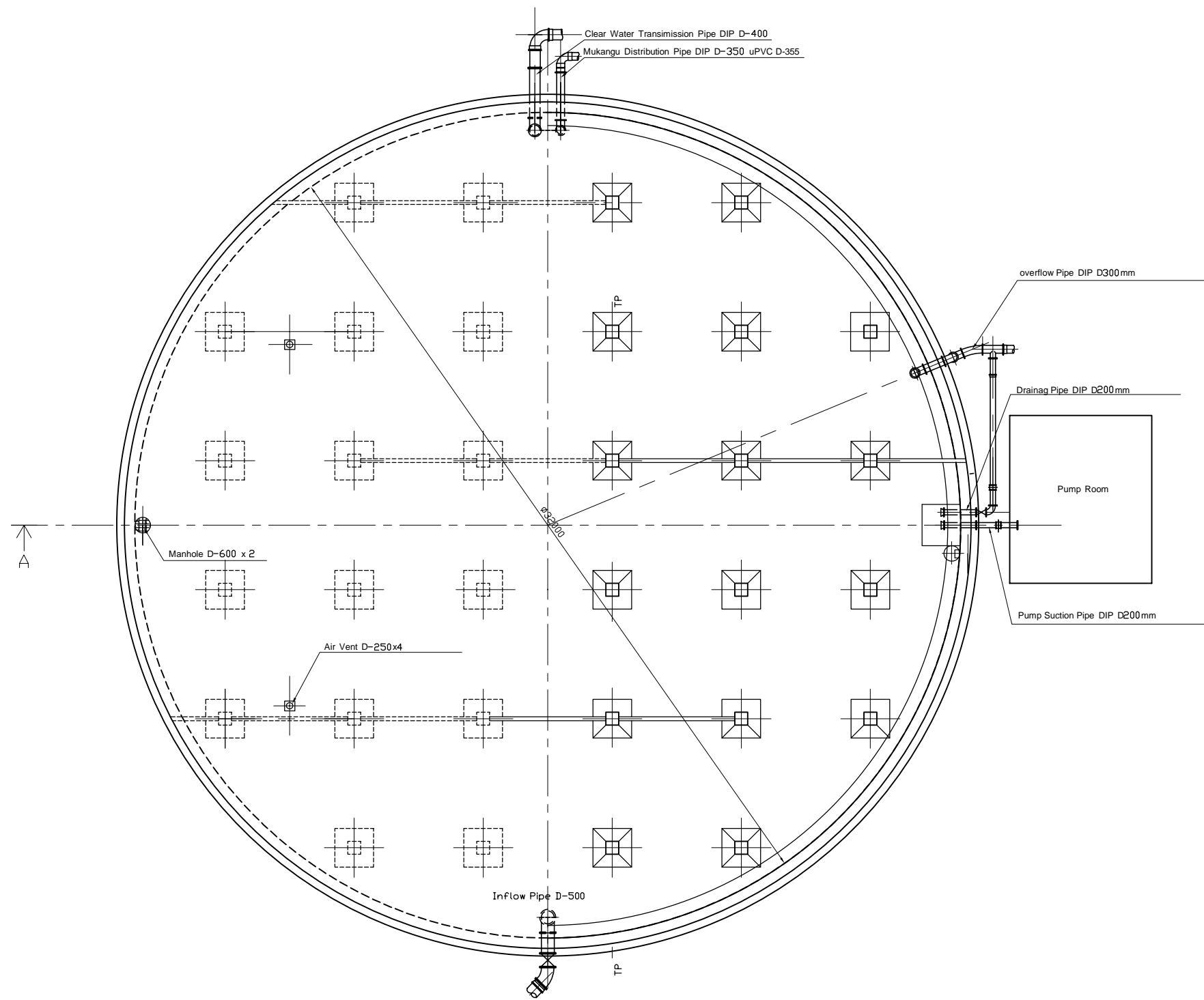
Section B-B s=1:100



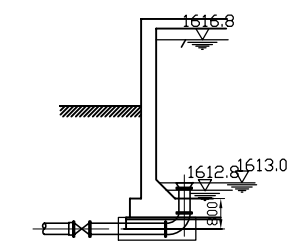
Section C-C s=1:100

\*Inside of wall encompassing the structure shall be water-proof painting.

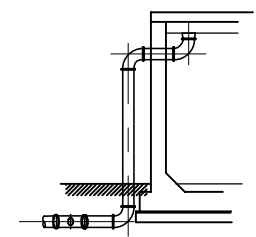
Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	Scale: 1/100
Mukangu WTP	
Rapid Filters Plan and Section	Drawing No. 11 of 26



Clear Water Reservoir s=1:100

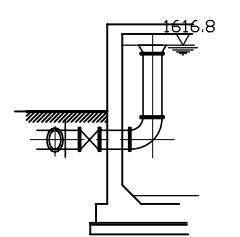


Out Flow D-350/400

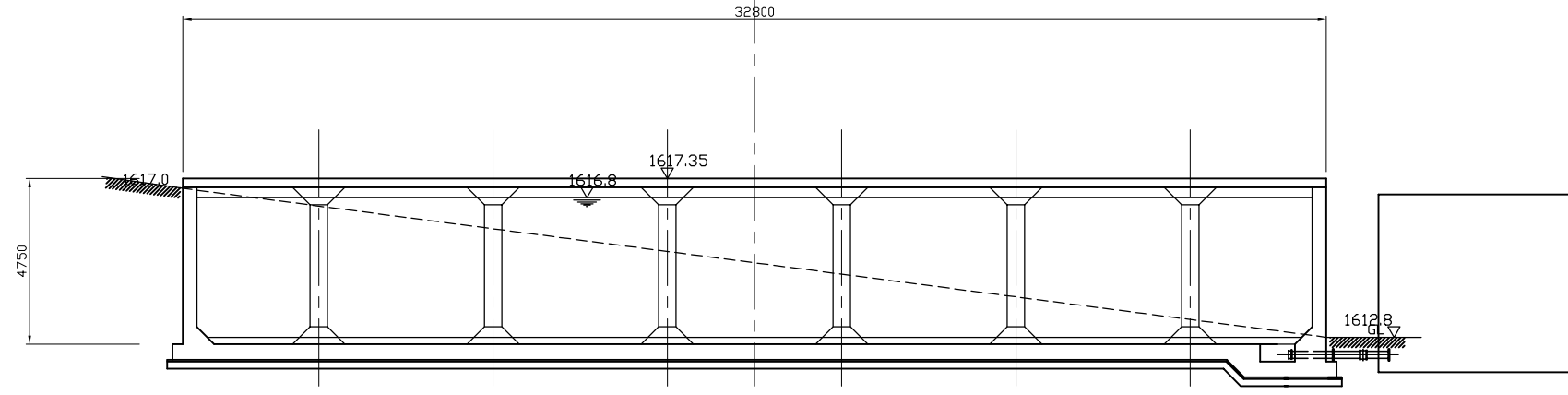


Overflow D300

\*Inside of wall encompassing the structure shall be water-proof painting.

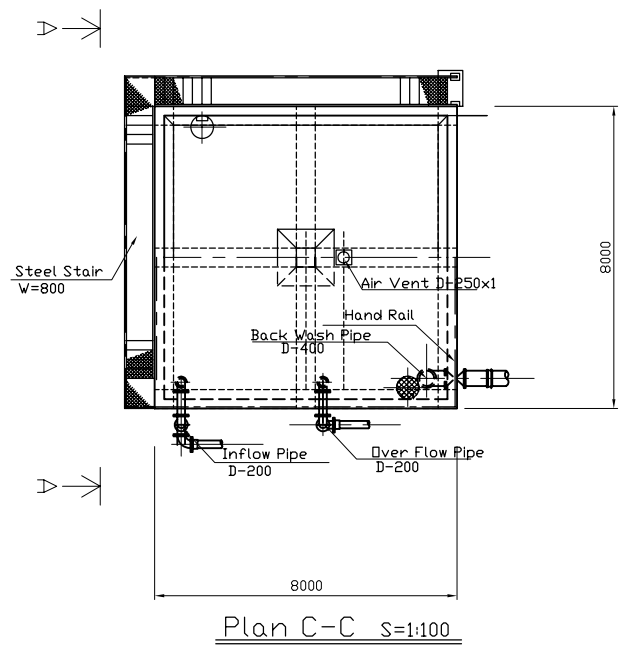


Inflow D-500

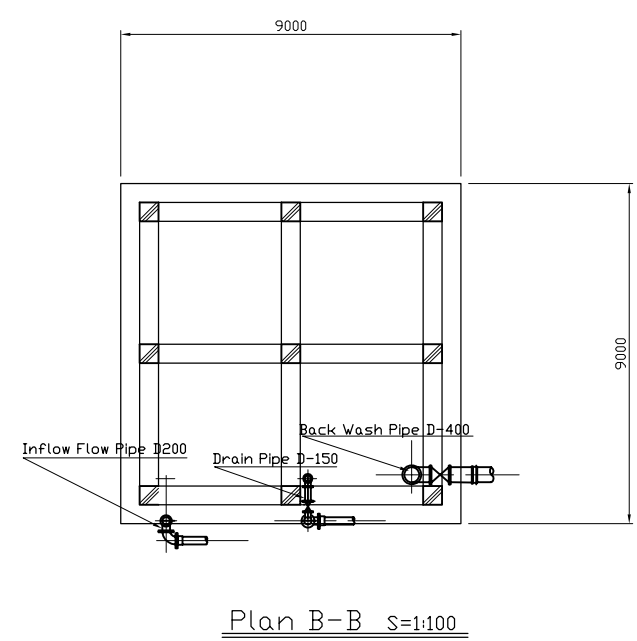


Section A-A s=1:100

Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	Scale: 1/100
Mukangu WTP	Drawing No. 12 of 27
Clear Water Reservoir Plan and Section	

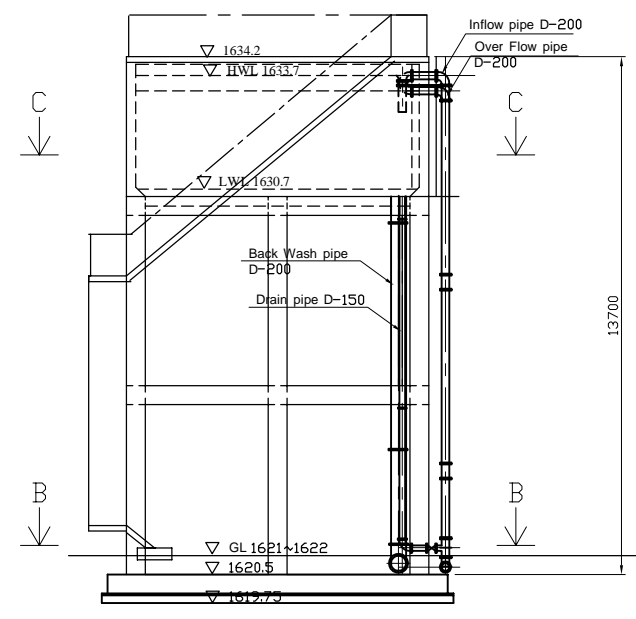


Plan C-C s=1:100

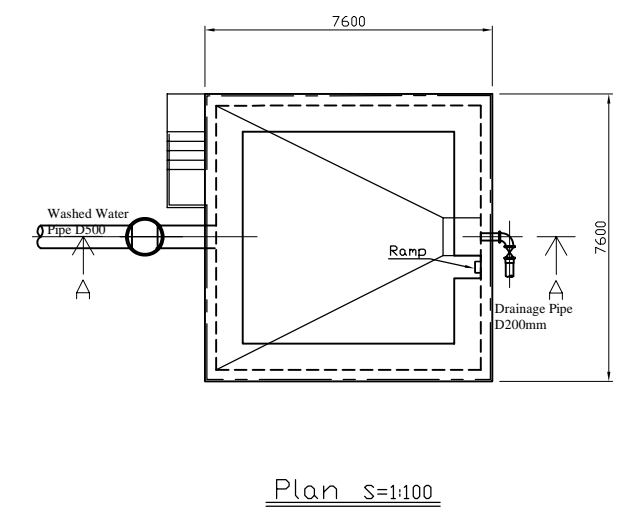


Plan B-B s=1:100

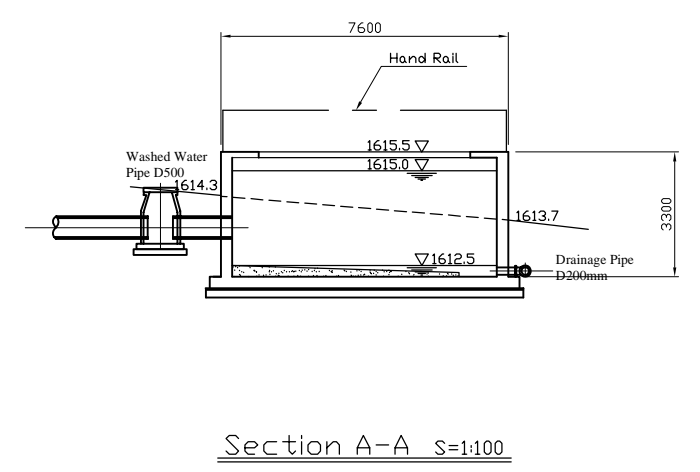
Elevated Tank s=1:100



Section A-A s=1:100



Plan s=1:100

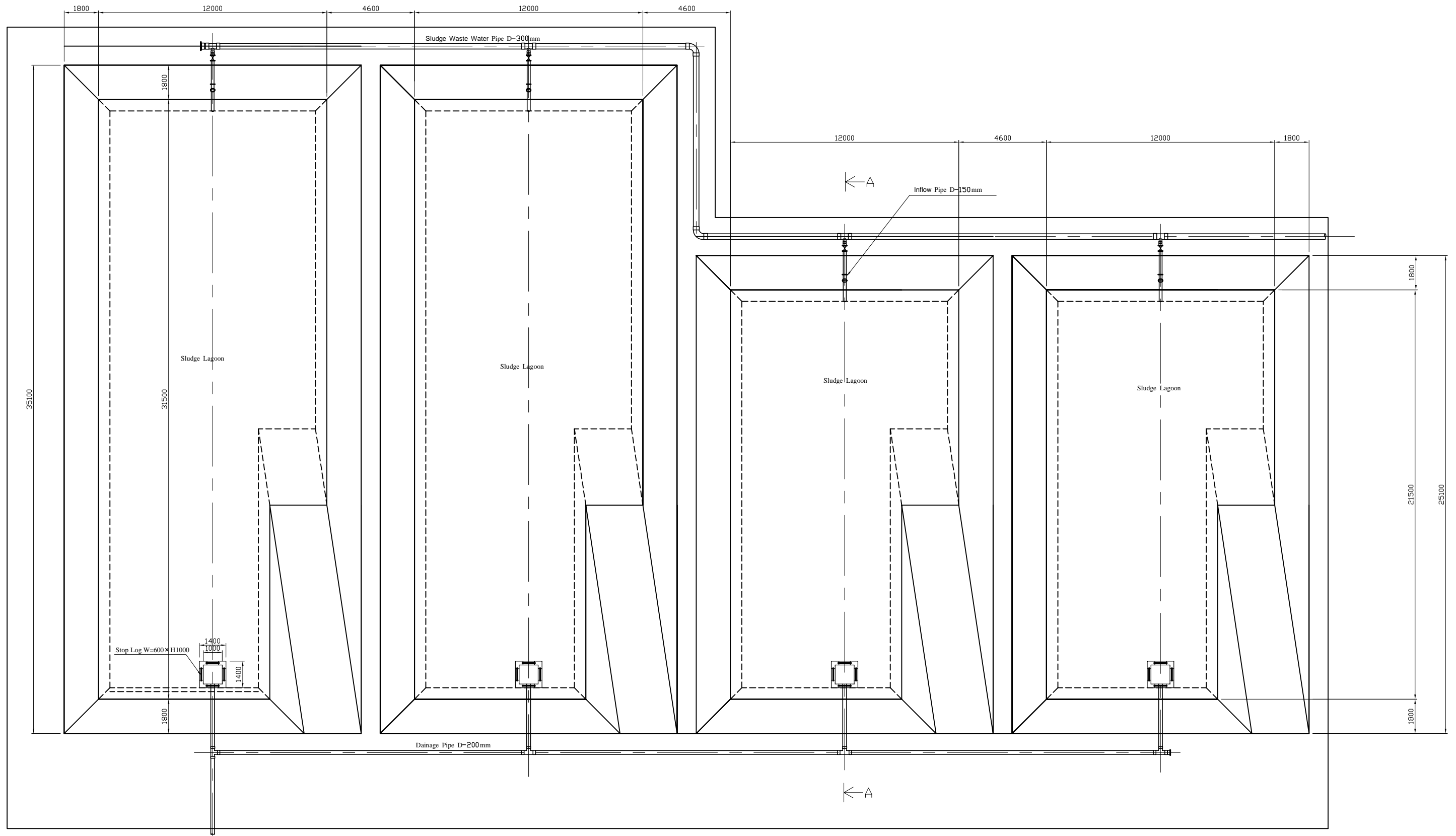


Section A-A s=1:100

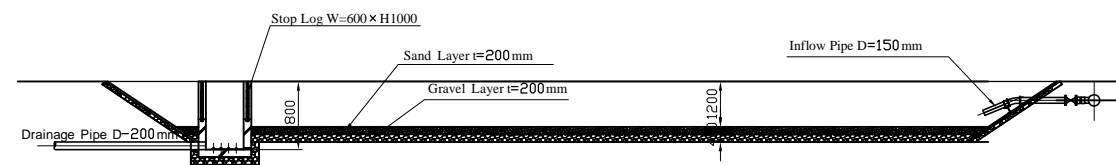
Washed Water Tank s=1:100

\*Inside of bass and wall encompassing the structure shall be water-proof painting.

Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	Scale: 1/100
Mukangu WTP	Drawing No. 13 of 27
Elevated Tank and Washed Water Drainage Tank Plan and Section	

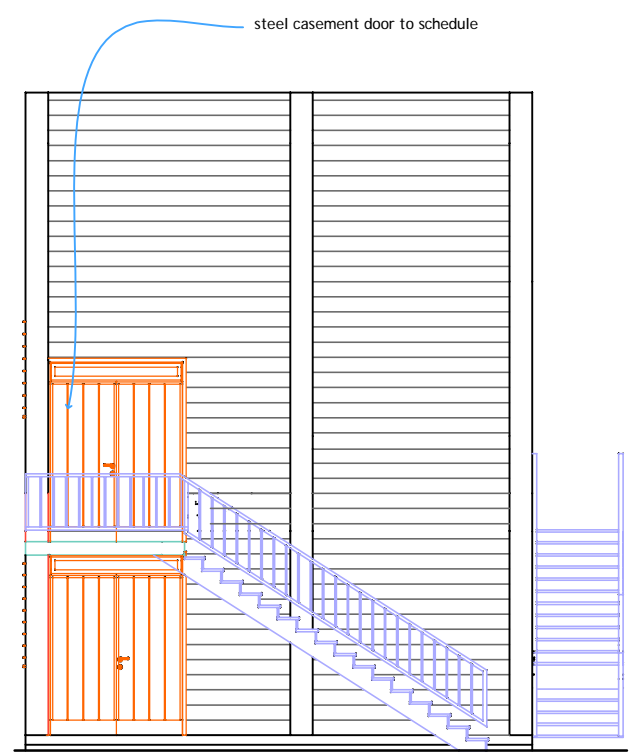
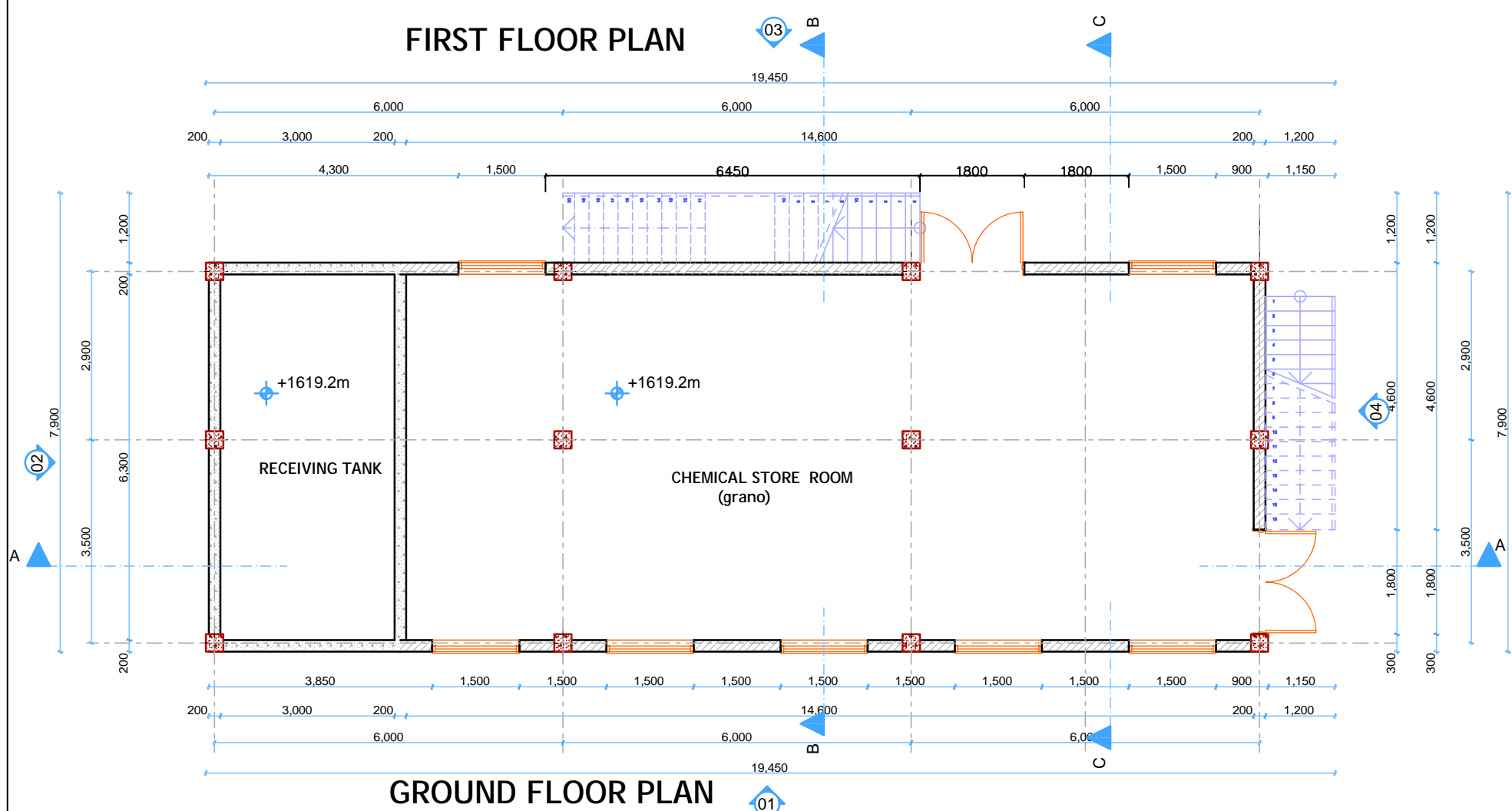
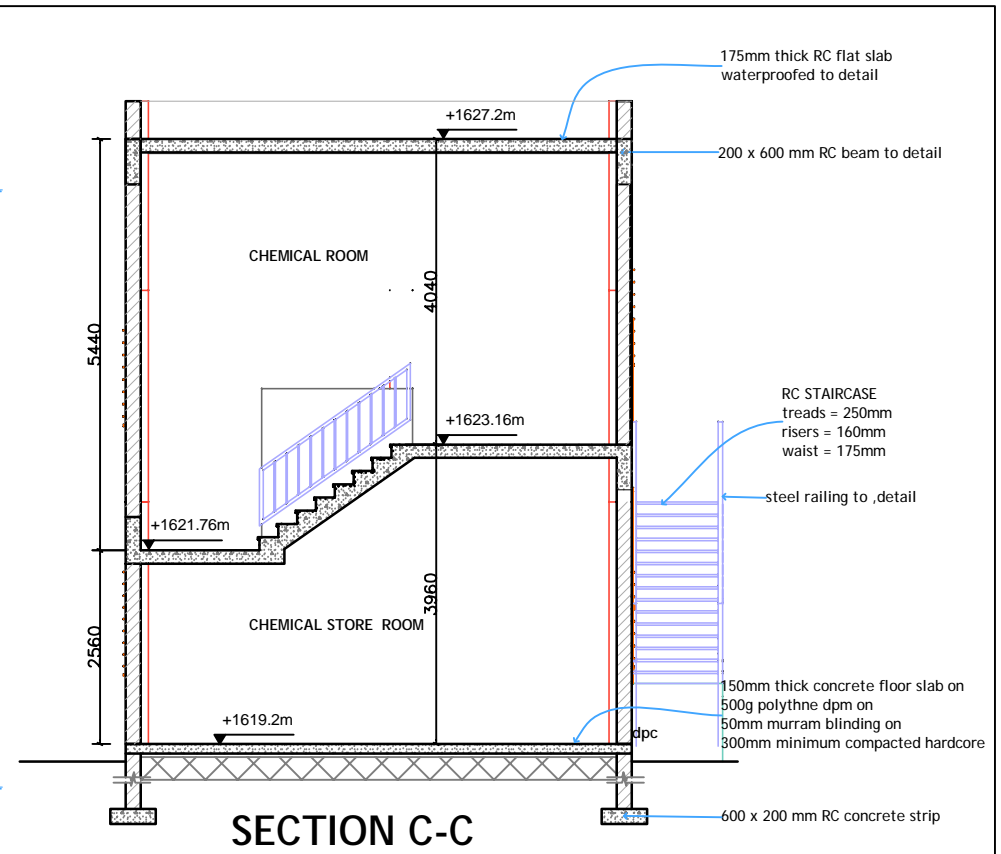
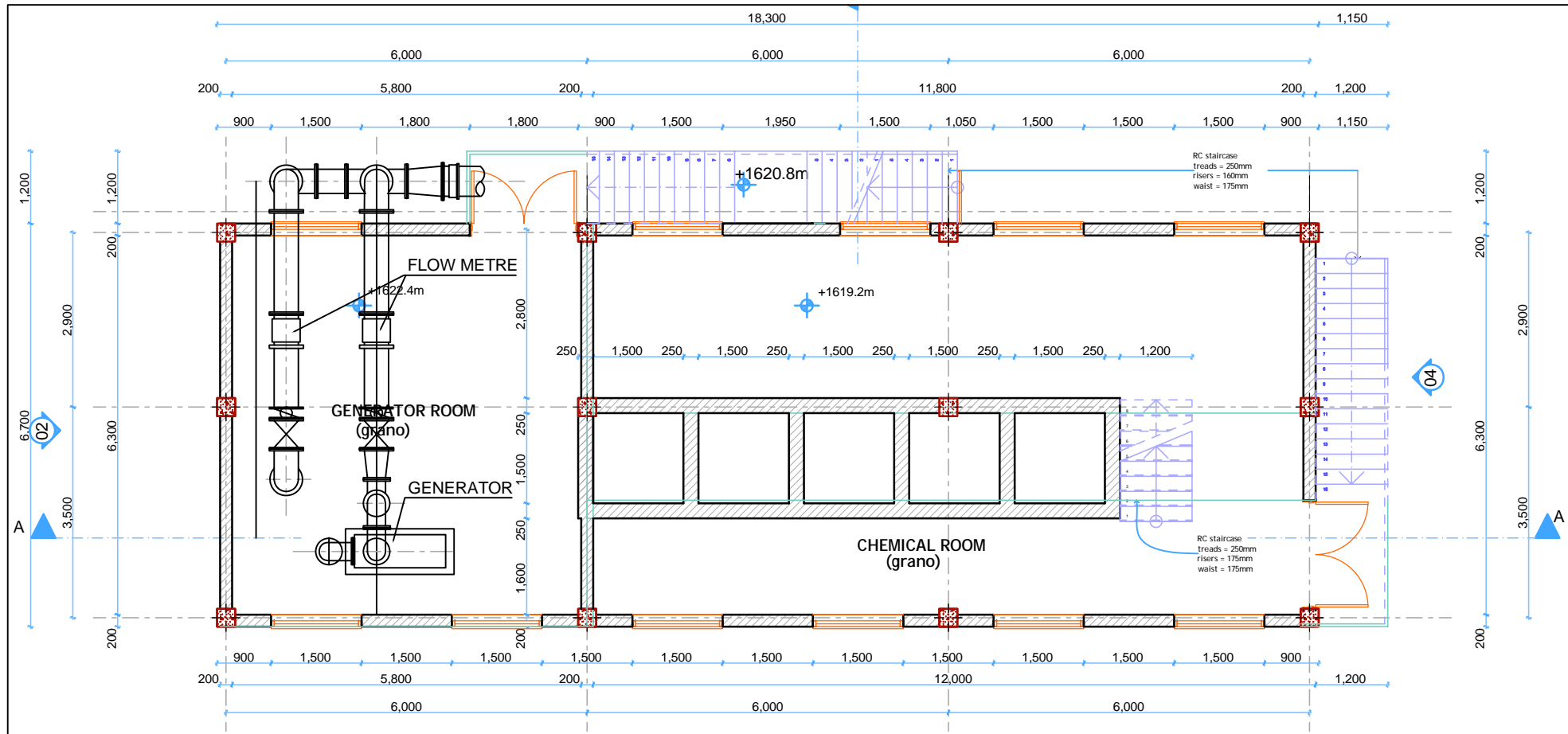


Sludge Lagoon Plan s=1:100



Section A-A s=1:100

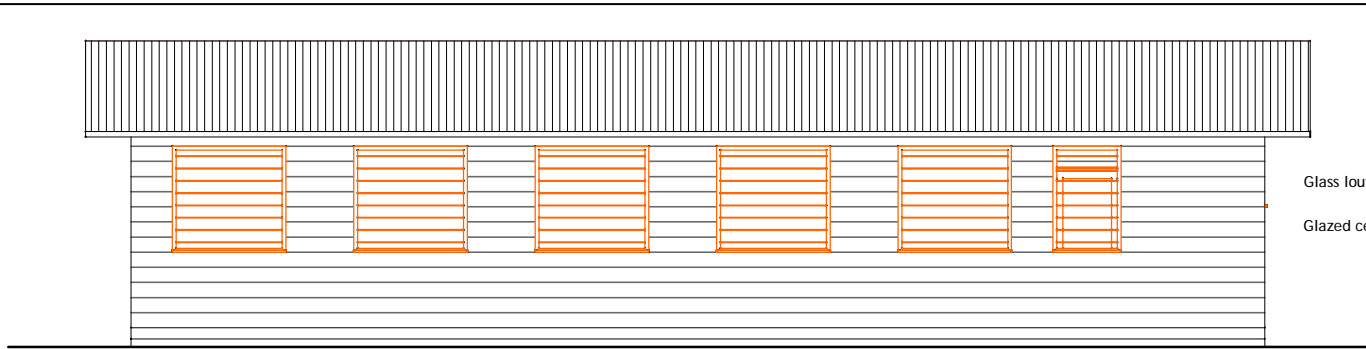
Project Name	
The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title	
Mukangu WTP	Scale: 1/100
Sludge Lagoon Plan and Section	No. 14 of 27



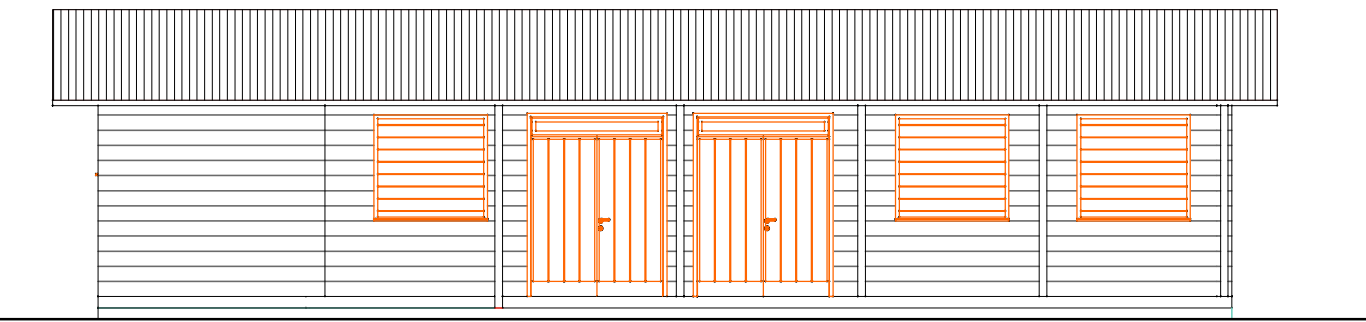
**ELEVATION 02**

Project Name		The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
Drawing Title		Mukangu WTP Generator/Electrical Building Plan Section and Elevation	
Scale: 1:100		No. 15 of 27	

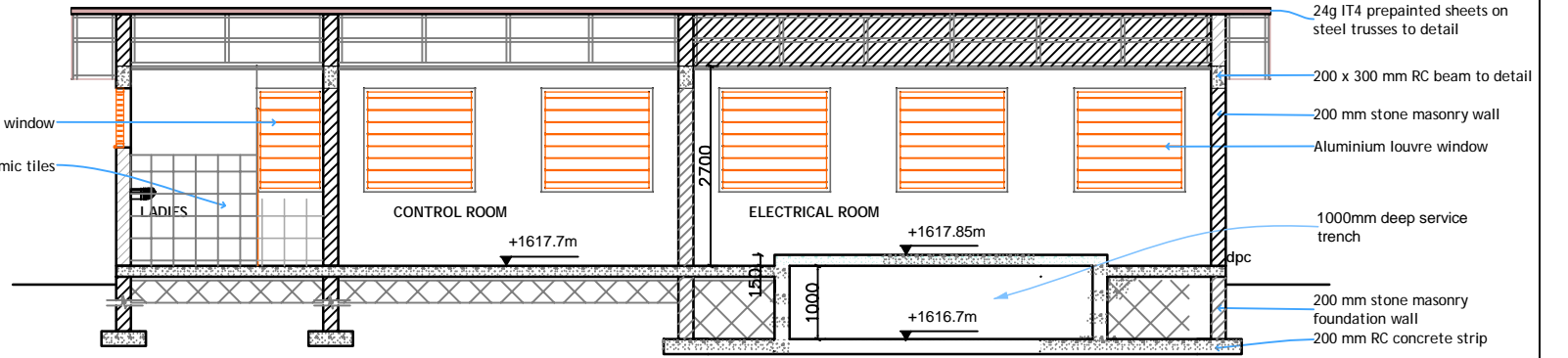




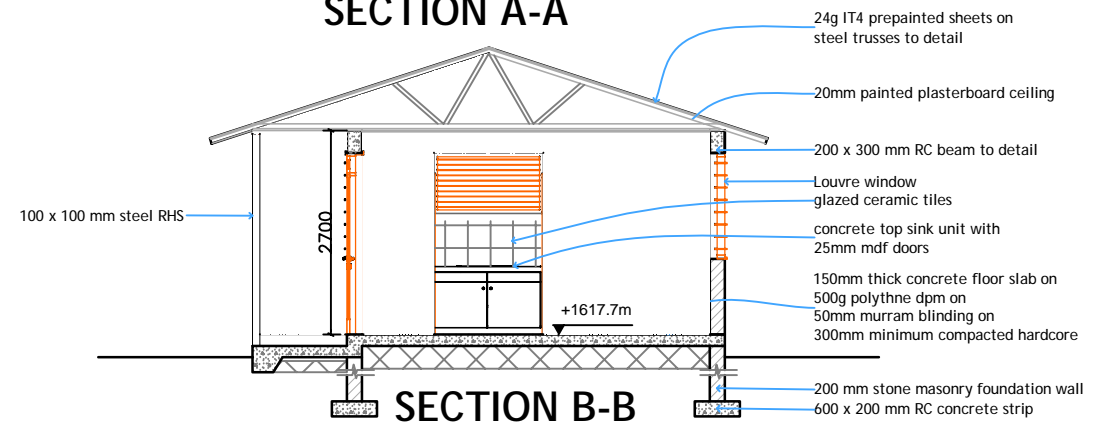
ELEVATION 03



ELEVATION 01



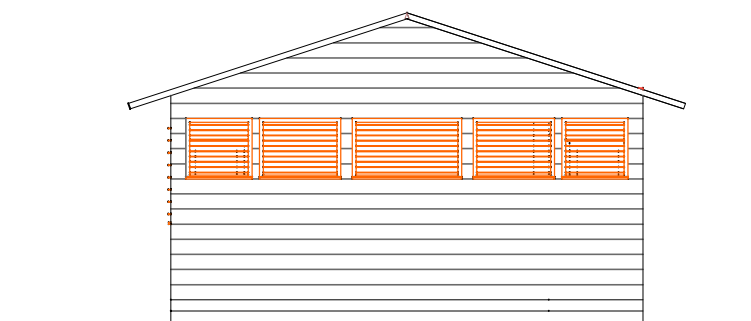
SECTION A-A



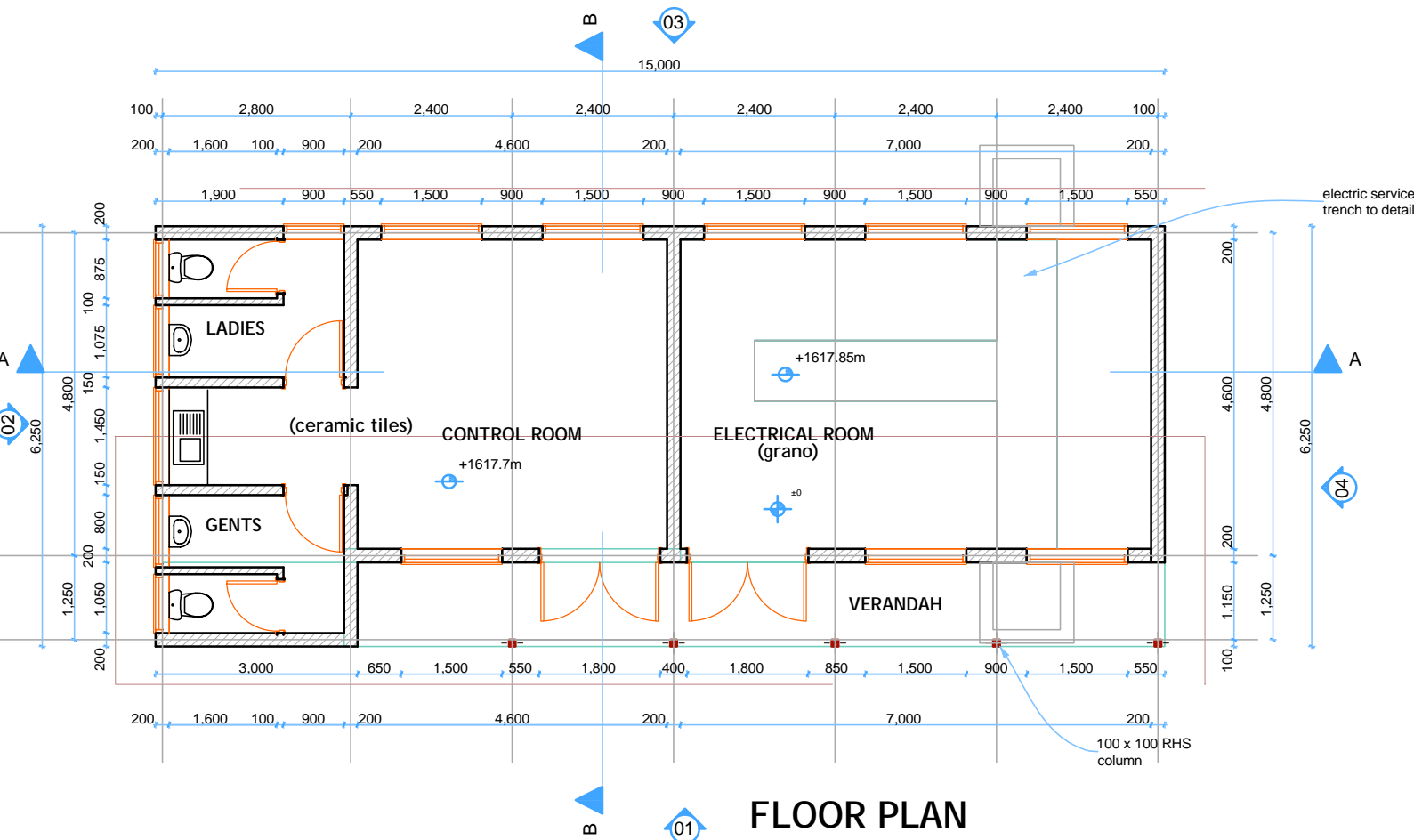
SECTION B-B



ELEVATION 04



ELEVATION 02



FLOOR PLAN

Project Name		The Basic Design Study on the Project for Improvement of Water Supply System in Embu and the Surrounding Areas	
		ケニア国エンブ市及び周辺地域給水システム改善計画準備調査	
Drawing Title		Mukangu WTP	Scale:
		Control/Electrical Building	
		Plan and Section	No. 16 of 27