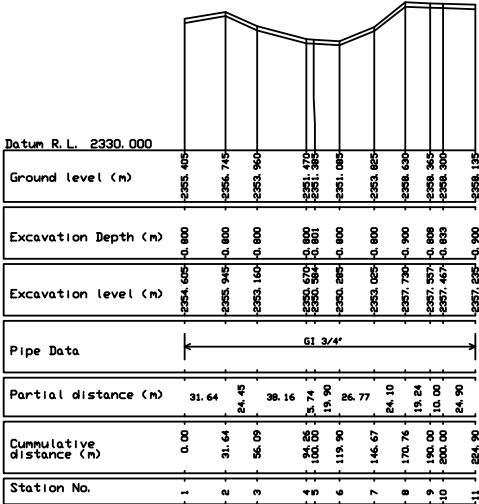
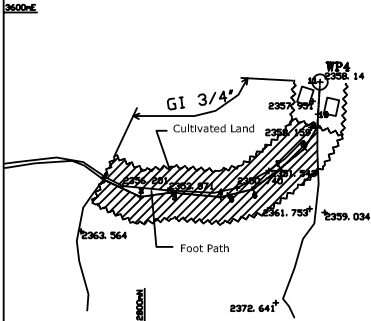


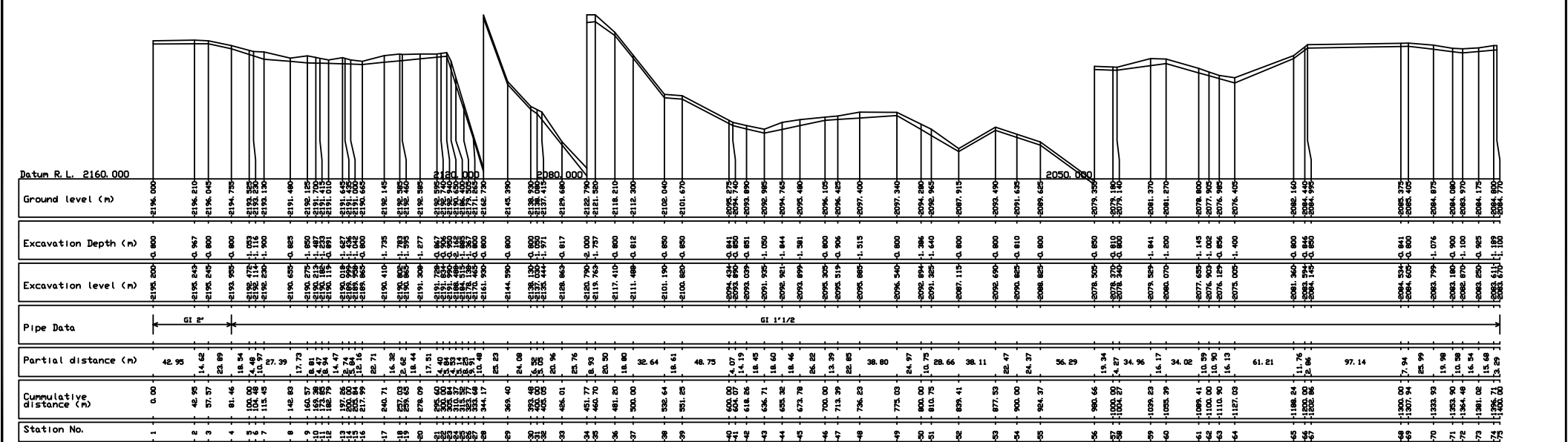
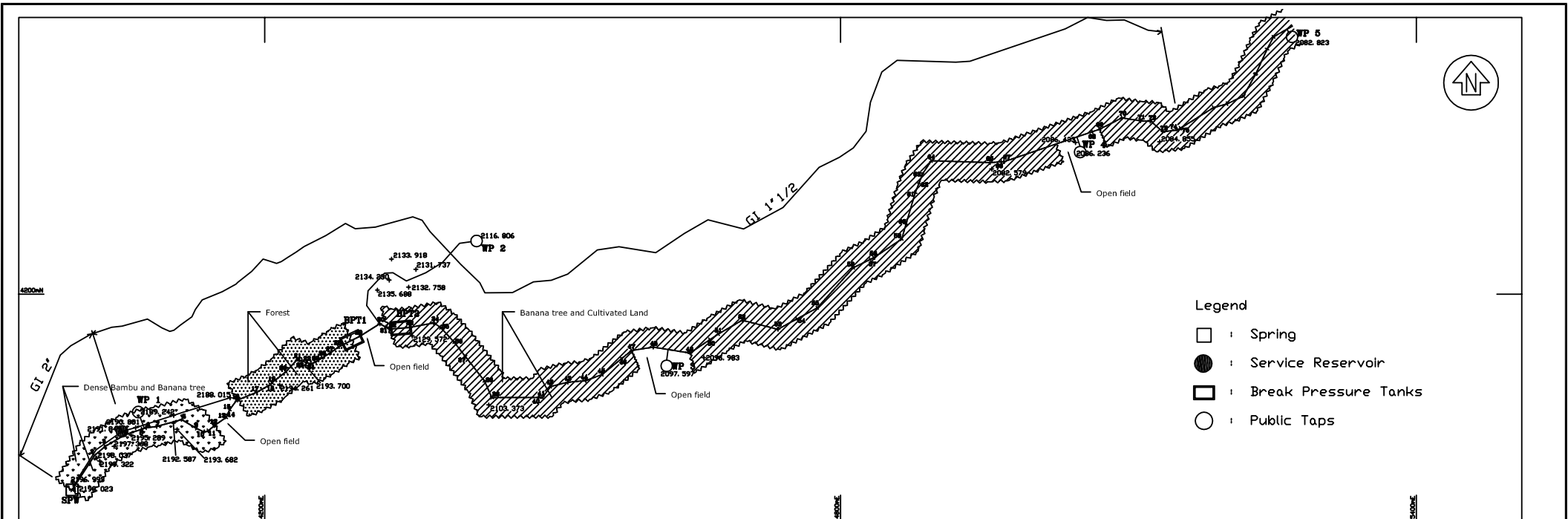


Legend

- ☐ : Spring
- ☒ : Service Reservoir
- ☐ : Break Pressure Tanks
- ☐ : Public Taps

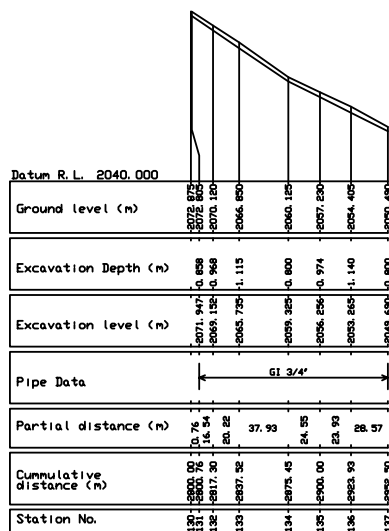
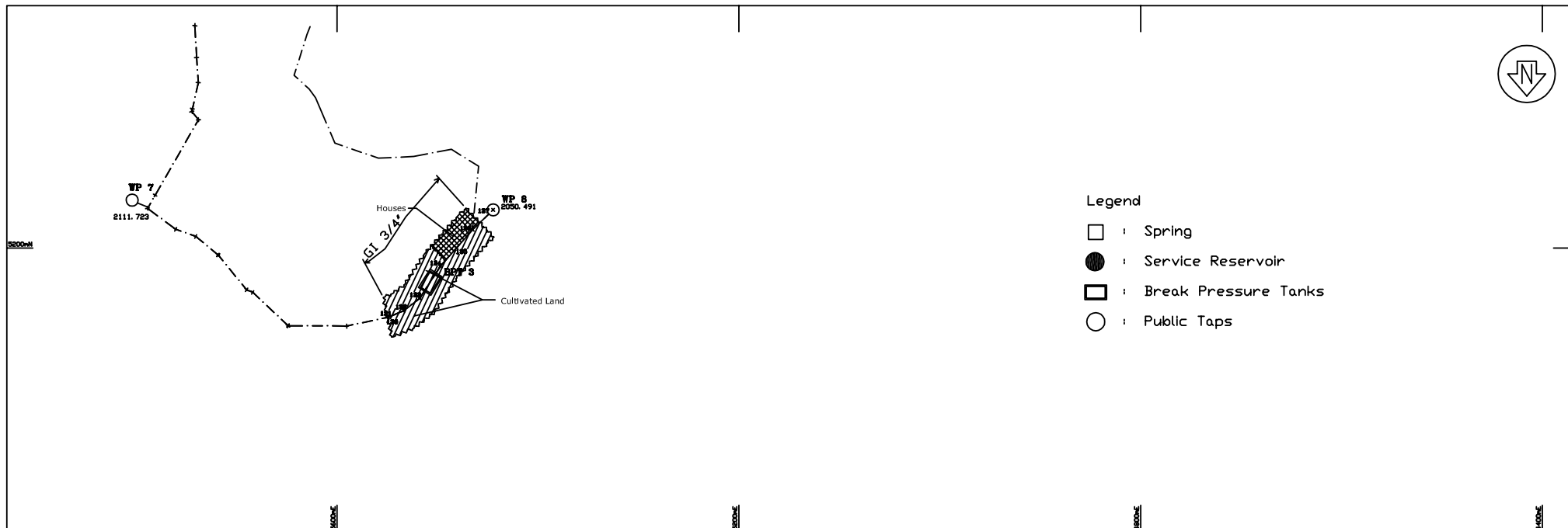


Longitudinal section between 0.00 and 224.90 option 1 line 2




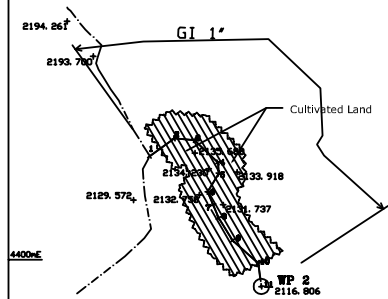
Longitudinal section between 0.00 and 1400.00 op1line1		OWNER :		PROJECT NAME :		CONSULTING ENGINEERS :		DRAWING TITLE :	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA		NIPPON KOEI CO.,LTD.		Ofa (Yoge) 1/4 (Topographical Drawing)		SCALE	
								Vt=1:500 Hz=1:2,000	DATE February 2005
								DRAWING NO.	
								SF-2.15	





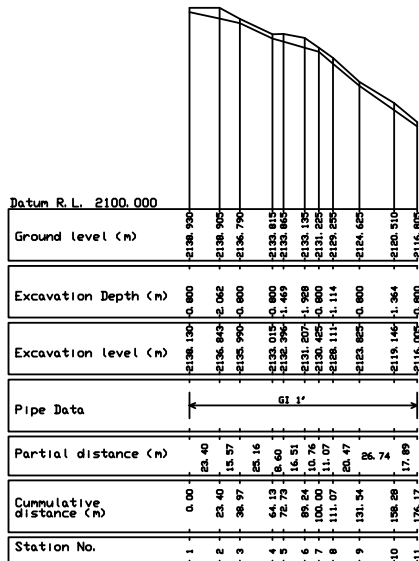
Longitudinal section between 2800.00 and 2952.50 opiline1

OWNER :  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PROJECT NAME : THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	CONSULTING ENGINEERS :   <b>NIPPON KOEI CO.,LTD.</b>	DRAWING TITLE : Ofa (Yoge) 3/4 (Topographical Drawing)		
			SCALE Vt=1:500 Hz=1:2,000	DATE February 2005	DRAWING NO. SF-2.17




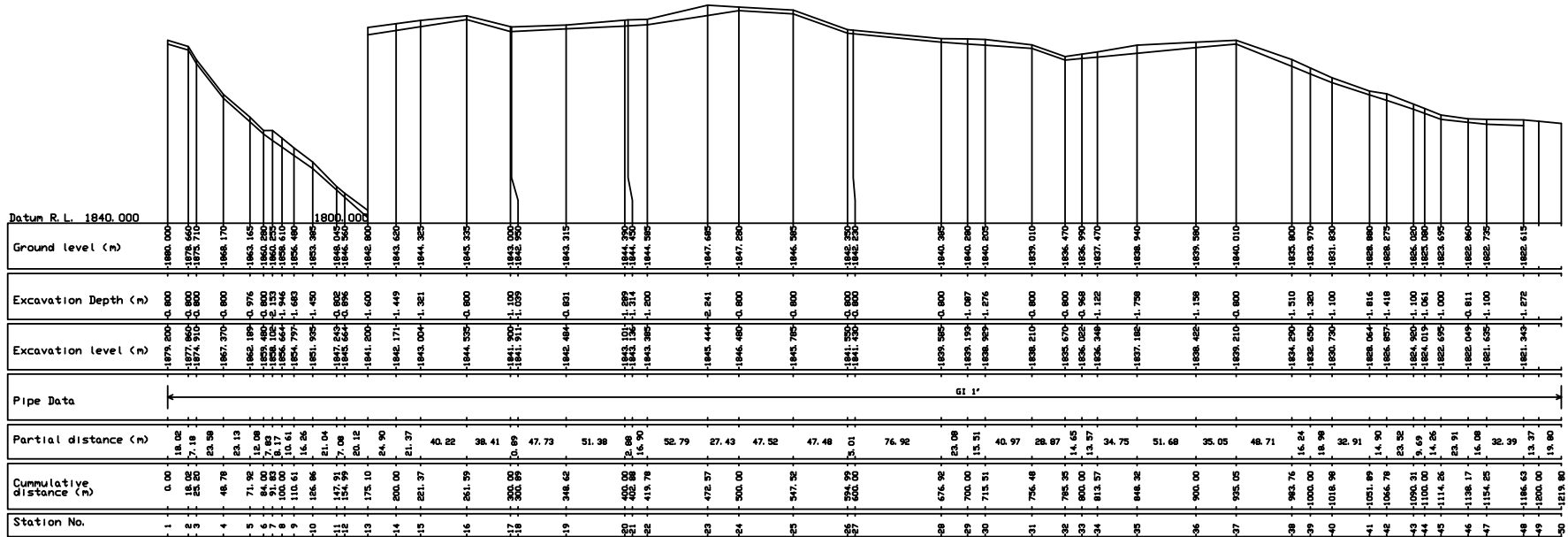
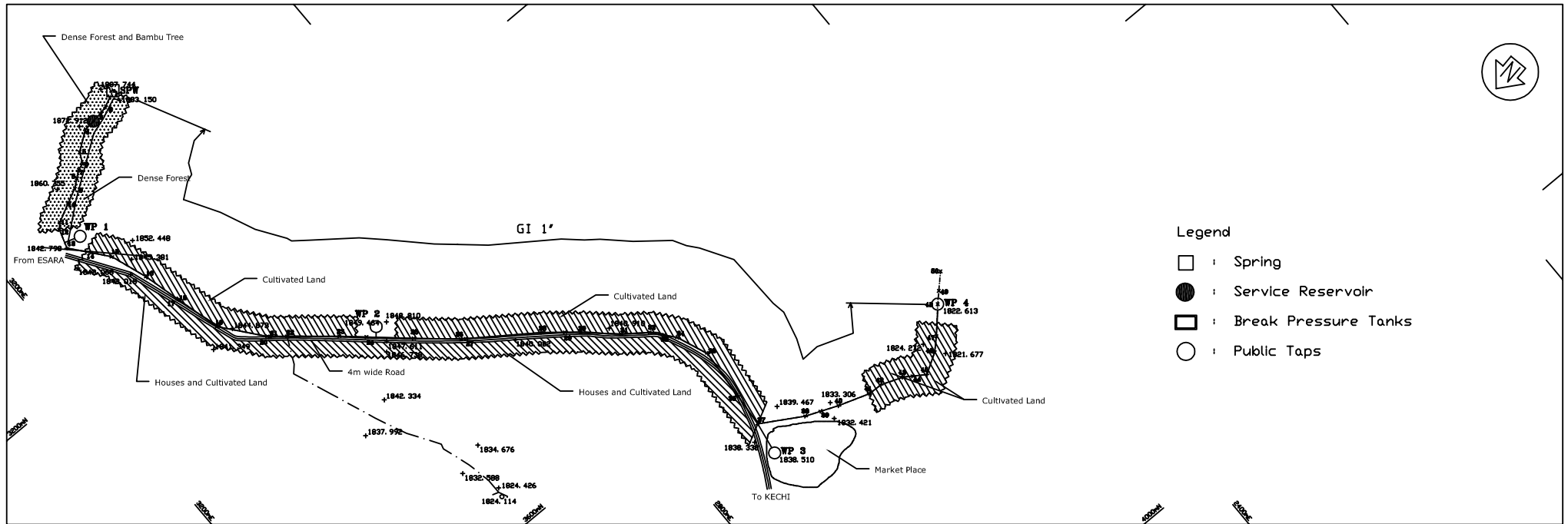
#### Legend

- : Spring
- : Service Reservoir
- : Break Pressure Tanks
- : Public Taps



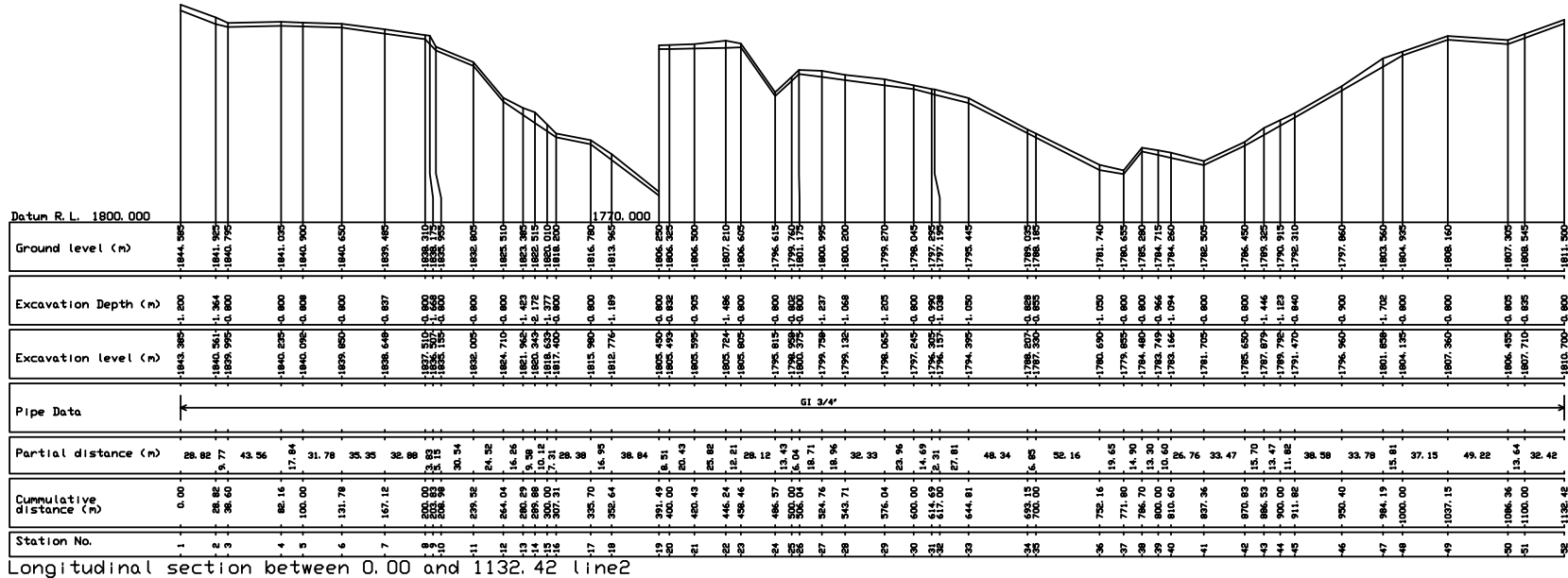
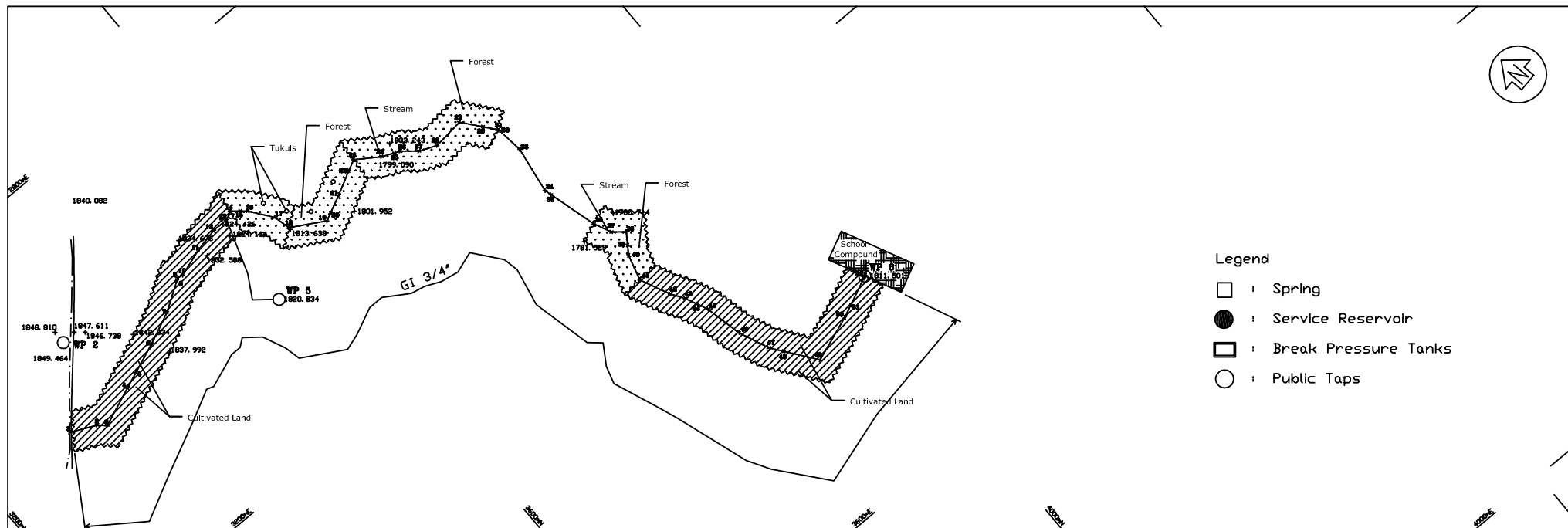
Longitudinal section between 0.00 and 176.17 op1line2

OWNER :  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PROJECT NAME :  THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	CONSULTING ENGINEERS :   NIPPON KOEI CO.,LTD.	DRAWING TITLE : Ofa (Yoge) 4/4 (Topographical Drawing)		
			SCALE Vt=1:500 Hz=1:2,000	DATE February 2005	DRAWING NO. SF-2.18



Longitudinal section between 0.00 and 1219.80 line1

OWNER :  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PROJECT NAME :  THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	CONSULTING ENGINEERS :   NIPPON KOEI CO.,LTD.	DRAWING TITLE :  Sengeti 1/3 (Topographical Drawing)		
			SCALE Vt=1:500 Hz=1:2,000	DATE  February 2005	DRAWING NO.  SF-2.19



Longitudinal section between 0.00 and 1132.42 line2

OWNER :

JAPAN INTERNATIONAL  
COOPERATION AGENCY (JICA)

PROJECT NAME :

THE BASIC DESIGN STUDY ON THE PROJECT  
FOR WATER SUPPLY IN SOUTHERN NATIONS,  
NATIONALITIES AND PEOPLE'S REGIONAL STATE  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CONSULTING ENGINEERS :



NIPPON KOEI CO.,LTD.

DRAWING TITLE :

Sengeti 2/3 (Topographical Drawing)

SCALE

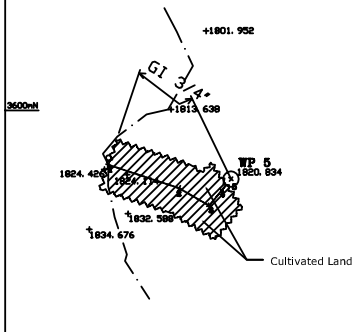
Vt=1:500  
Hz=1:2,000

DATE





February 2005

DRAWING NO.

SF-2.20



#### Legend

-  : Spring
-  : Service Reservoir
-  : Break Pressure Tanks
-  : Public Taps

Datum R.L. 1800.000					
Ground level (m)		1823.965		1824.225	1823.235
Excavation Depth (m)		1.423		0.995	0.800
Excavation level (m)		1821.962		1823.230	1824.435
Pipe Data		GI 3/4"			
Partial distance (m)		57.63		26.96	15.41
Cumulative distance (m)		0		57.63	84.59
Station No.		1		2	3

Longitudinal section between 0.00 and 111.22 line3

OWNER :

JAPAN INTERNATIONAL  
COOPERATION AGENCY (JICA)

PROJECT NAME :

THE BASIC DESIGN STUDY ON THE PROJECT  
FOR WATER SUPPLY IN SOUTHERN NATIONS,  
NATIONALITIES AND PEOPLE'S REGIONAL STATE  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CONSULTING ENGINEERS :



NIPPON KOEI CO.,LTD.

DRAWING TITLE :

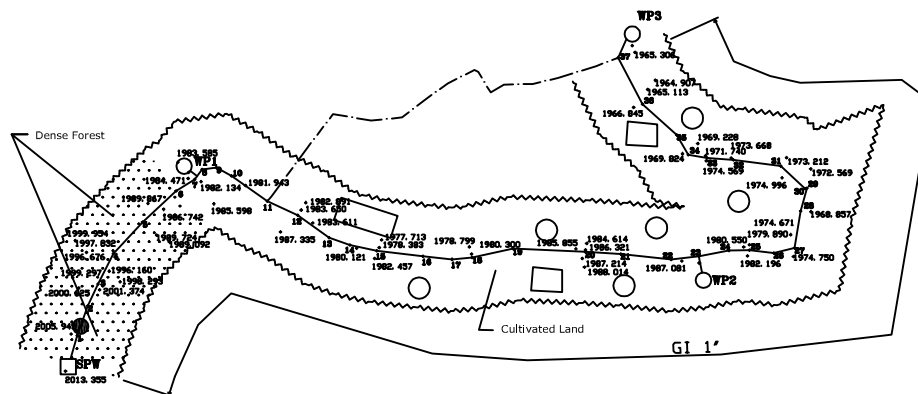
Sengeti 3/3 (Topographical Drawing)

SCALE Vt=1:500  
Hz=1:2,000

DATE  
February 2005

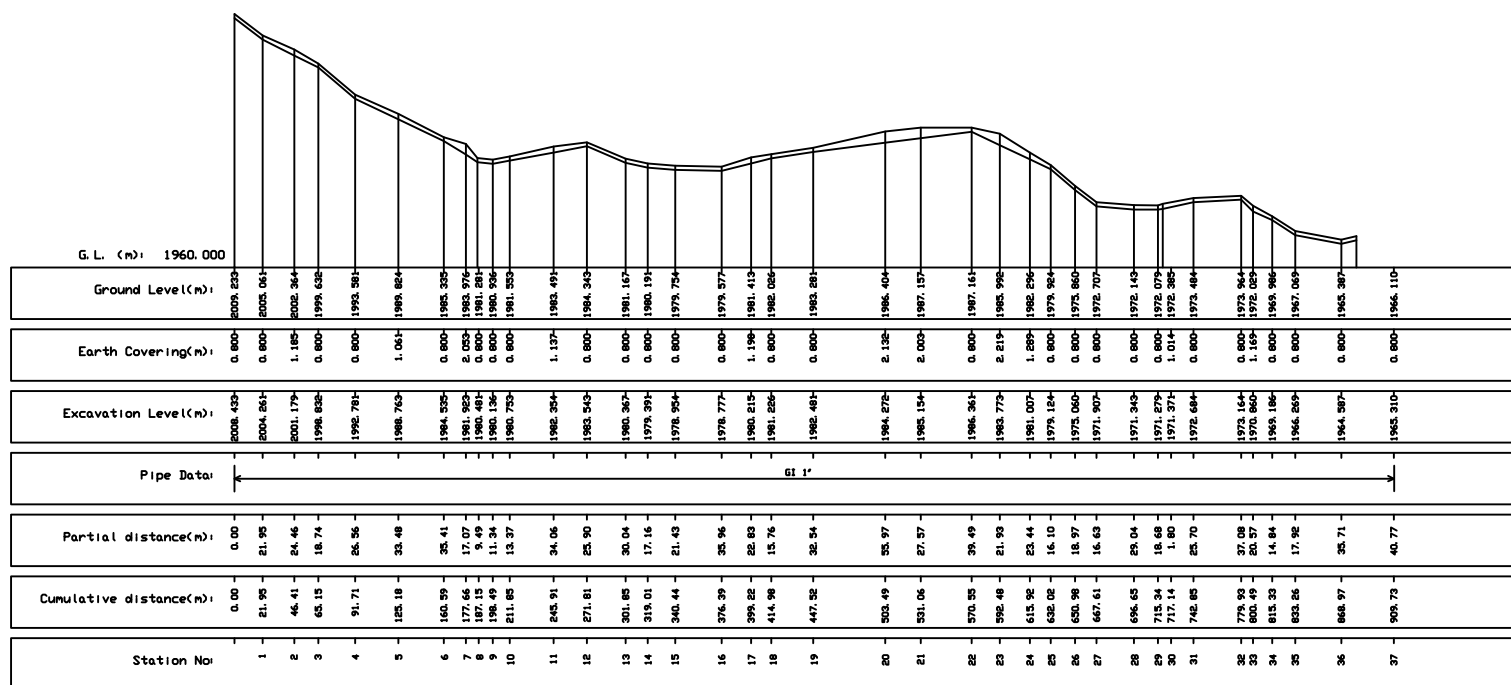
DRAWING NO.  
SF-2.21





#### Legend

- : Spring
- : Service Reservoir
- ▣ : Break Pressure Tanks
- : Public Taps



OWNER :

JAPAN INTERNATIONAL  
COOPERATION AGENCY (JICA)

PROJECT NAME :

THE BASIC DESIGN STUDY ON THE PROJECT  
FOR WATER SUPPLY IN SOUTHERN NATIONS,  
NATIONALITIES AND PEOPLE'S REGIONAL STATE  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CONSULTING ENGINEERS :



NIPPON KOEI CO.,LTD.

DRAWING TITLE :

L. Argoba - Kora (Topographical Drawing)

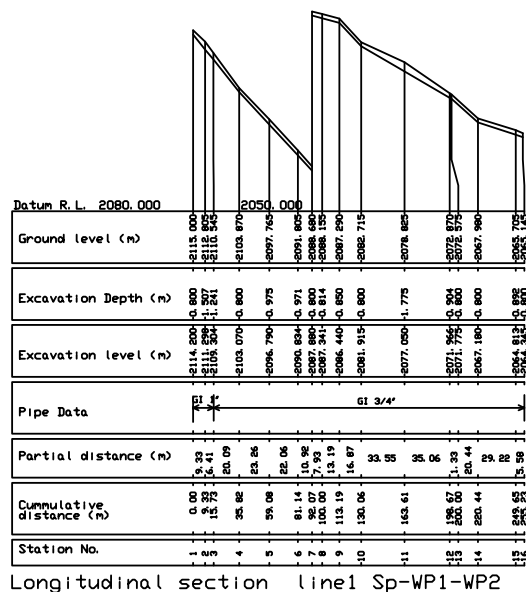
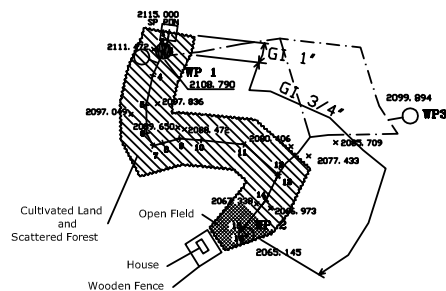
SCALE  
Vt=1:500  
Hz=1:2,000

DATE  
February 2005

DRAWING NO.  
SF-2.22

# Legend

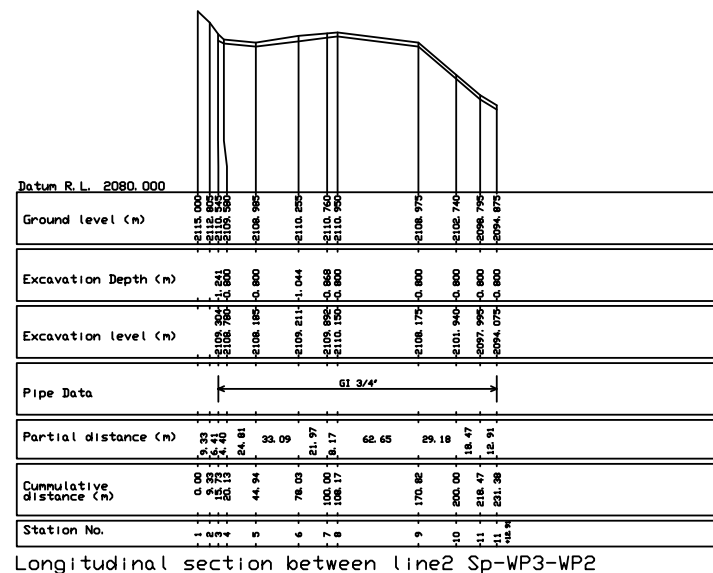
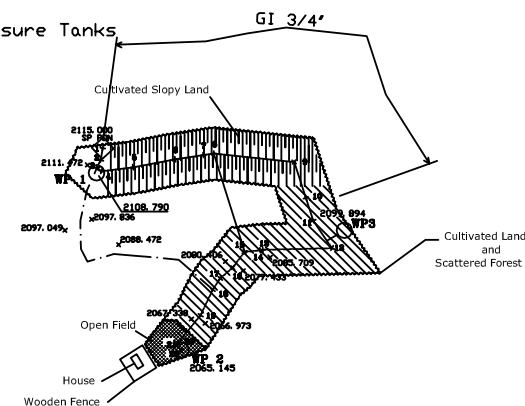
- : Spring
- : Service Reservoir
- : Break Pressure Tanks
- : Public Taps



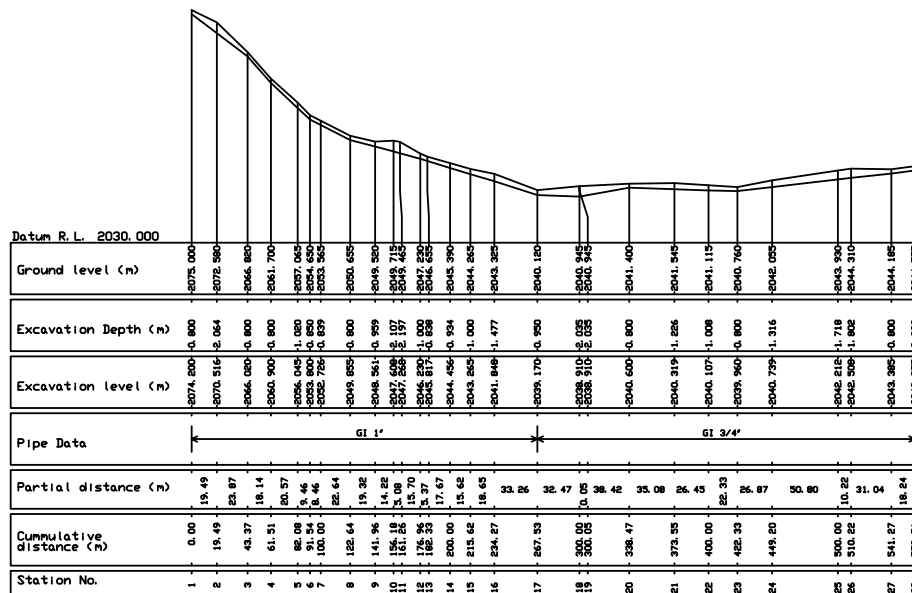
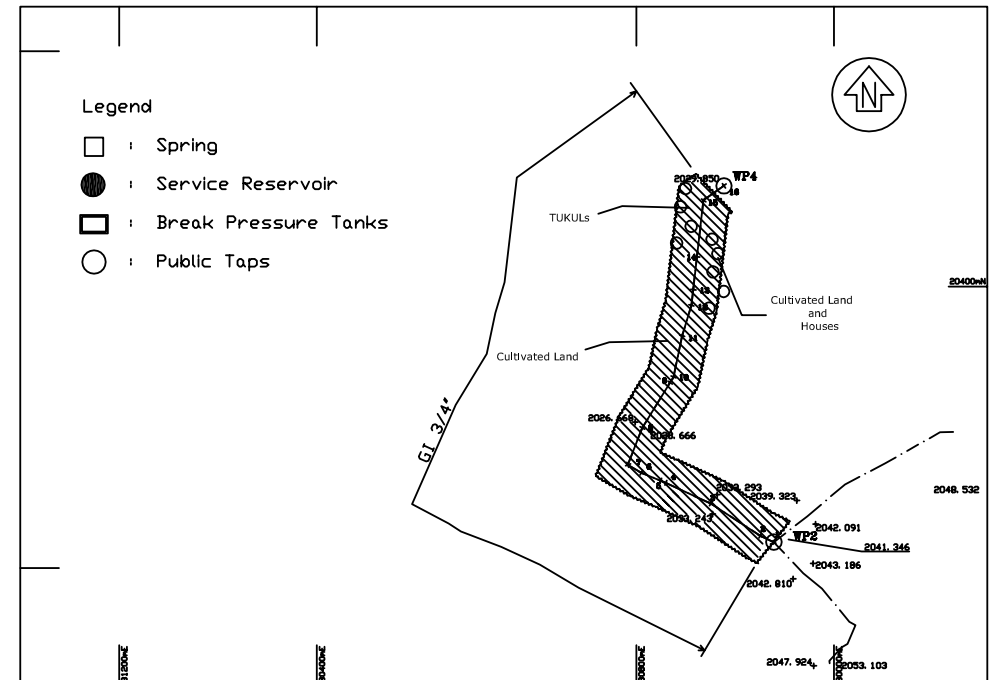
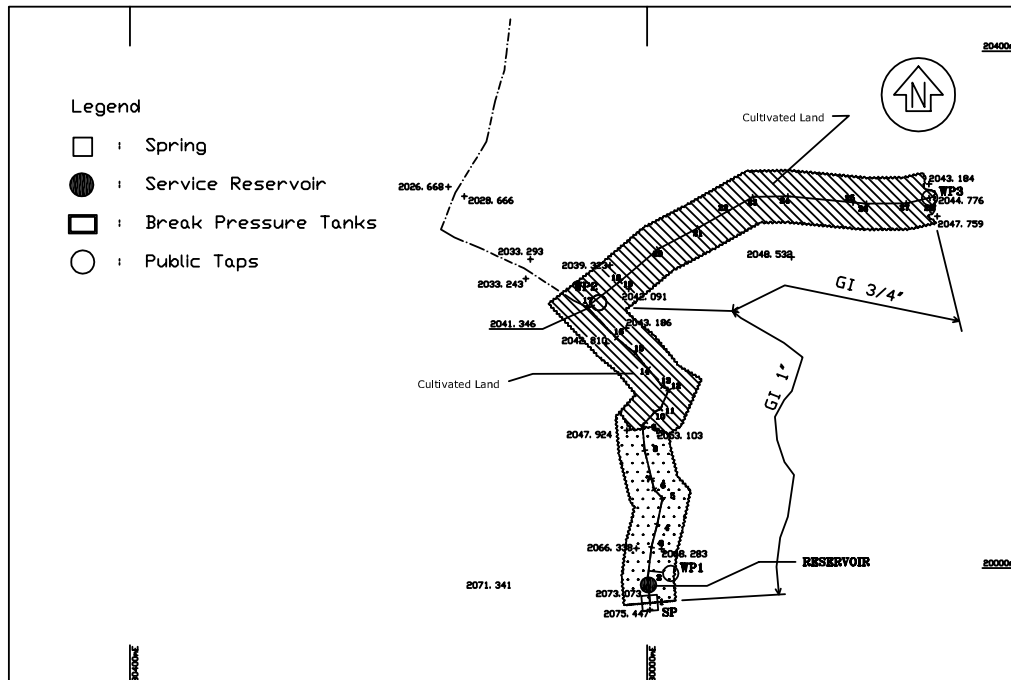
Longitudinal section line1 Sp-WP1-WP2

# Legend

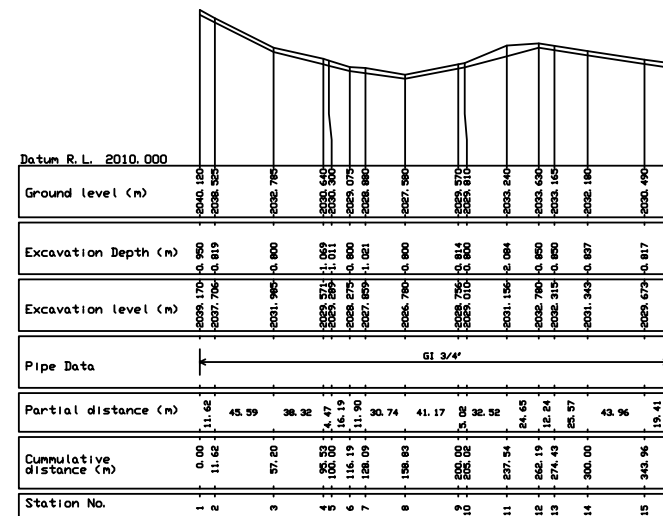
- : Spring
- : Service Reservoir
- : Break Pressure Tanks
- : Public Taps



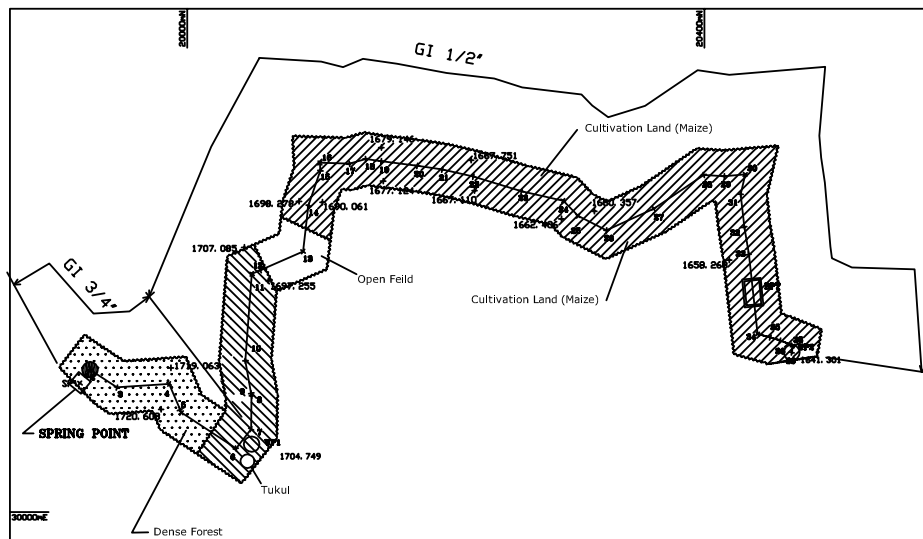
Longitudinal section between line2 Sp-WP3-WP2



Longitudinal section between 0.00 and 559.51 Line 1 Sp to Wp3

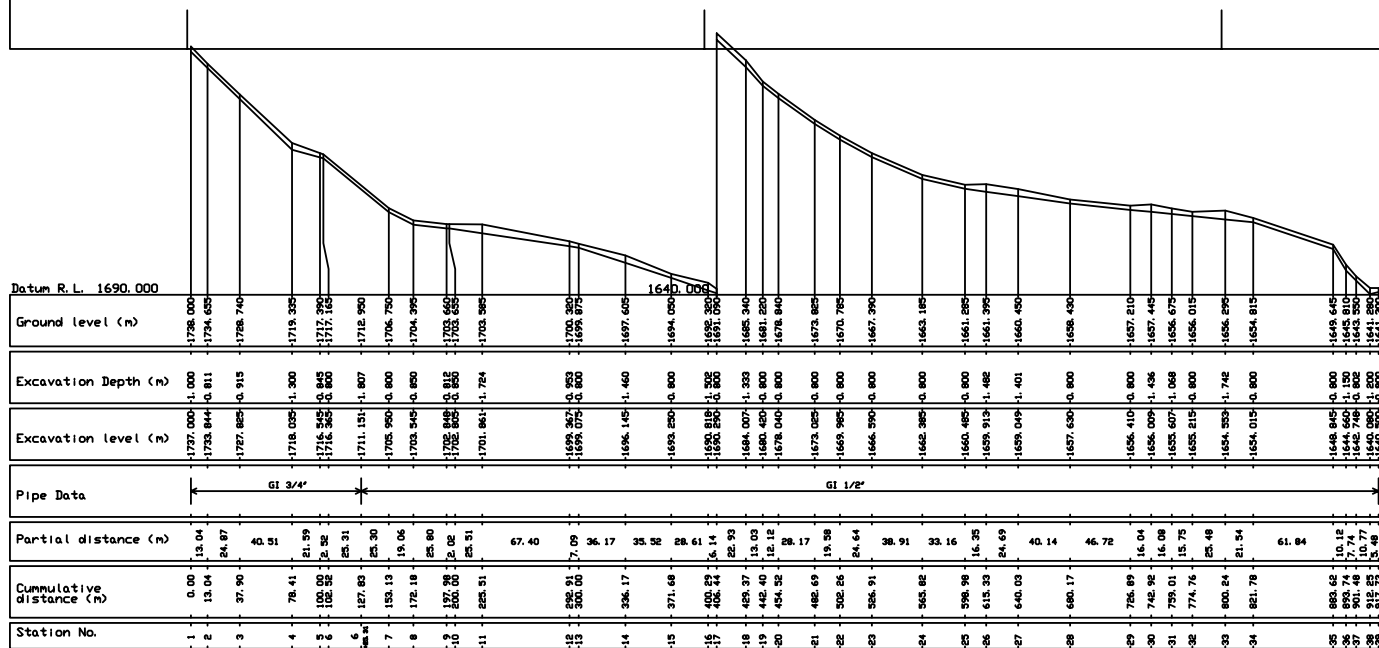


Longitudinal section between 0.00 and 363.36 Junction to Wp4




#### Legend

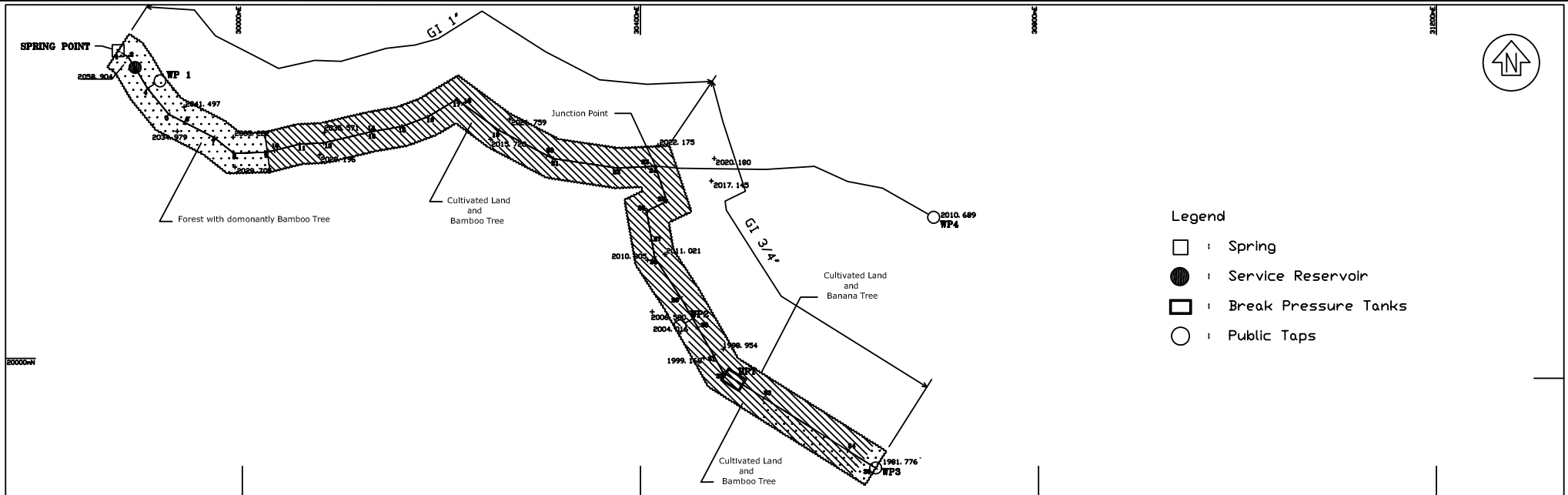
- : Spring
- : Service Reservoir
- : Break Pressure Tanks
- : Public Taps



Longitudinal section between 0.00 and 917.73 Line 1

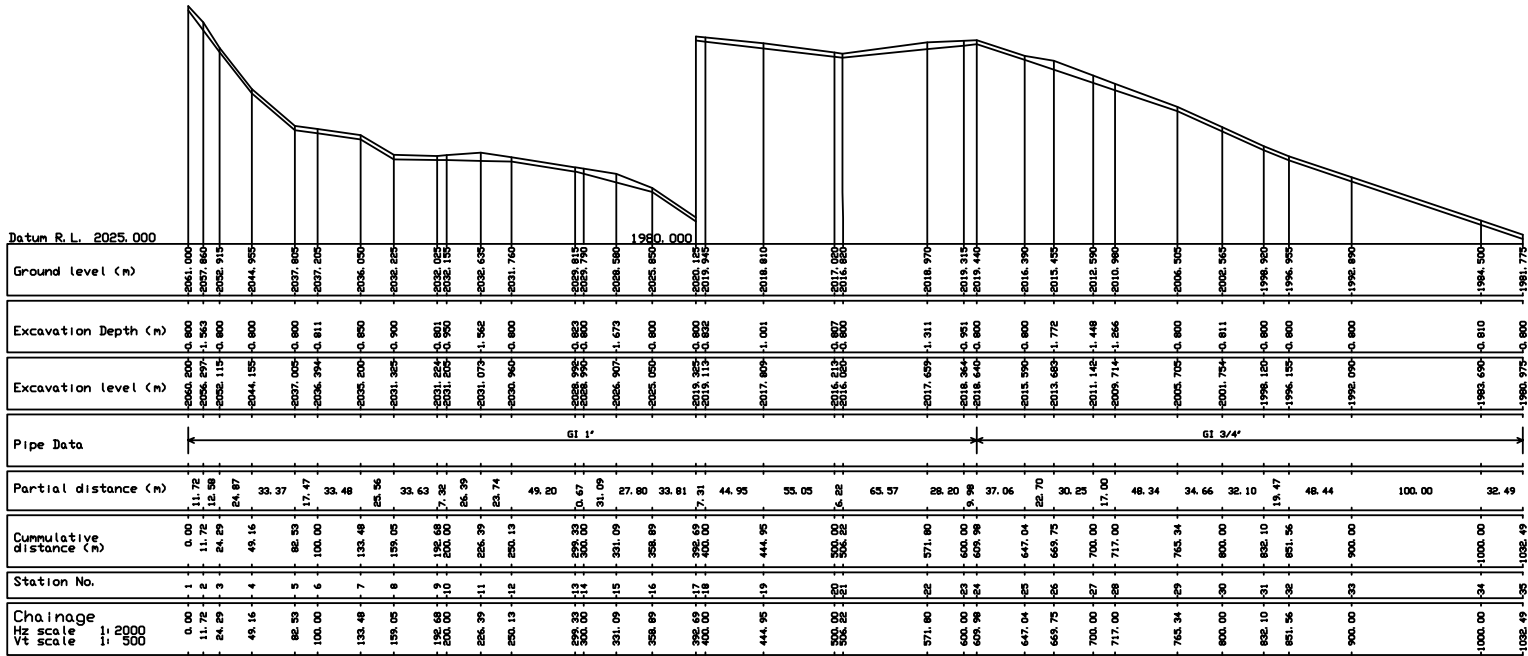
OWNER :  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PROJECT NAME : THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
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CONSULTING ENGINEERS :   <b>NIPPON KOEI CO., LTD.</b>		DRAWING TITLE : Walayte (Elcola) 1/1 (Topographical Drawing)	
SCALE	Vt=1:500 Hz=1:2,000	DATE	February 2005 DRAWING NO. SF-2.25



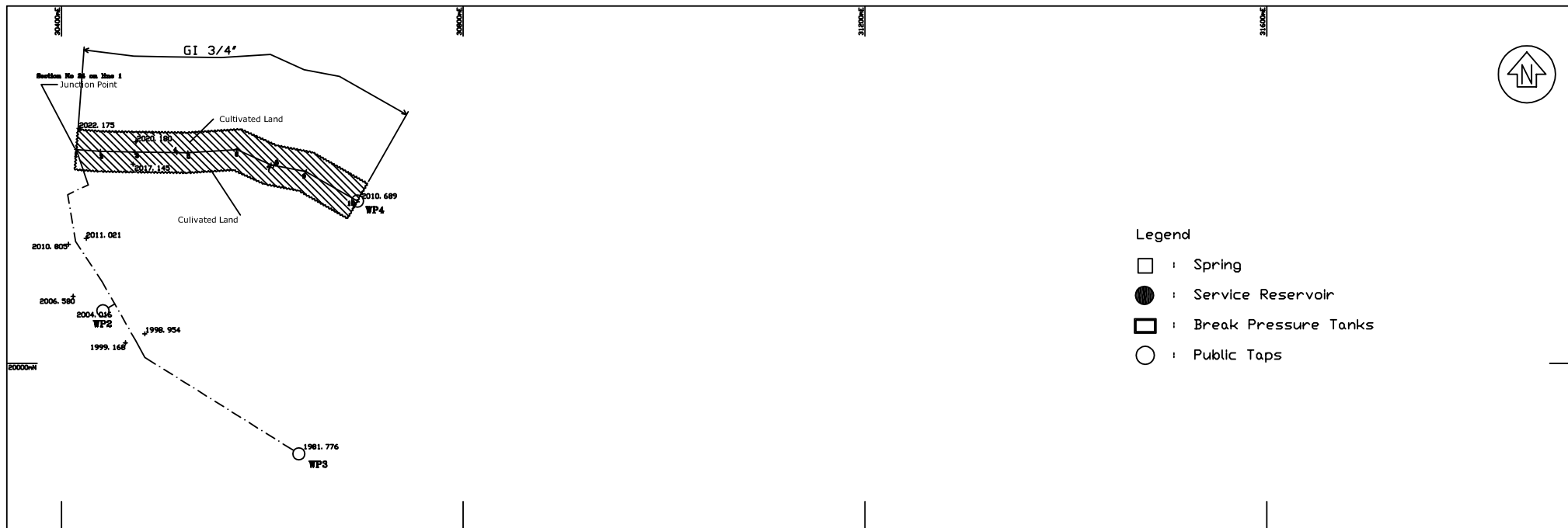
#### Legend

- : Spring
- : Service Reservoir
- : Break Pressure Tanks
- : Public Taps



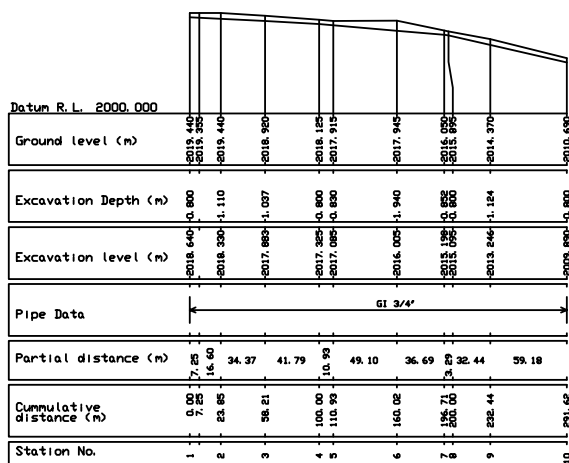
Longitudinal section between 0.00 and 1032.49 Line 1 Sp to WP3

OWNER :  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PROJECT NAME :  THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	CONSULTING ENGINEERS :   <b>NIPPON KOEI CO., LTD.</b>	DRAWING TITLE : Busabaso (Kogdeya) 1/2 (Topographical Drawing)		
			SCALE Vt=1:500 Hz=1:2,000	DATE February 2005	DRAWING NO. SF-2.26



# Legend

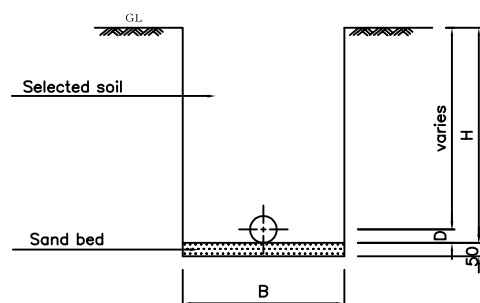
- : Spring
- : Service Reservoir
- : Break Pressure Tanks
- : Public Taps



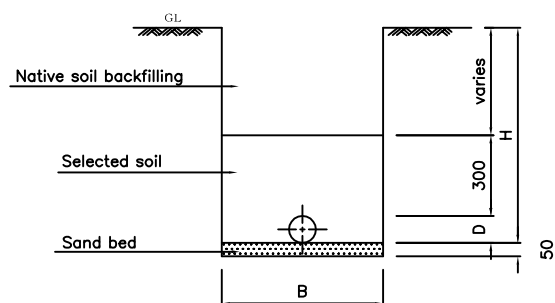
Longitudinal section between 0.00 and 291.62 Junction to Wp4

OWNER :	PROJECT NAME :	CONSULTING ENGINEERS :	DRAWING TITLE :		
			Busabaso (Kodegeya) 2/2 (Topographical Drawing)		
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	NIPPON KOEI CO.,LTD.	SCALE	DATE	DRAWING NO.
			Vt=1:500 Hz=1:2,000	February 2005	SF-2.27

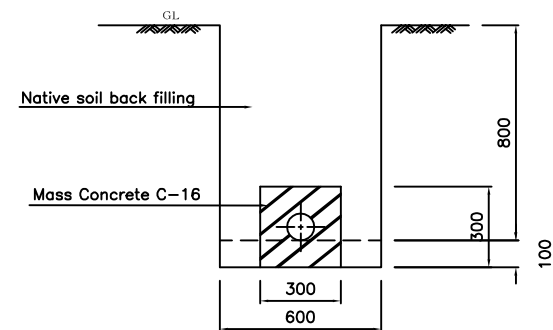
Unit:mm			
H	1,050	1,550	2,050
B	600	700	800



Typical section of soil excavation



Typical section of rock excavation



Section of road crossing

OWNER :

JAPAN INTERNATIONAL  
COOPERATION AGENCY (JICA)

PROJECT NAME :

THE BASIC DESIGN STUDY ON THE PROJECT  
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NATIONALITIES AND PEOPLE'S REGIONAL STATE  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

CONSULTING ENGINEERS :



NIPPON KOEI CO.,LTD.

DRAWING TITLE : Typical Section of Earth Work  
for Pipe Laying

SCALE

S=1:100

DATE

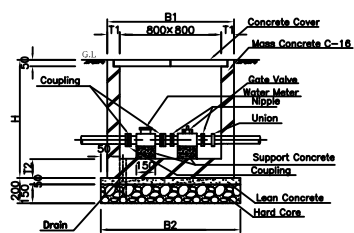
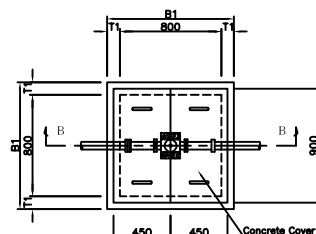
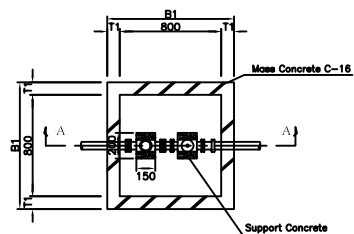
February 2005

DRAWING NO.

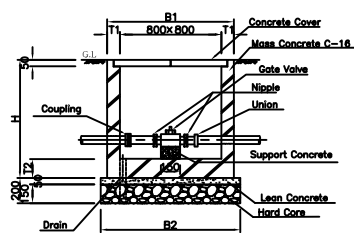
SF-2.28

Dimension	Unit:mm	
	H=1.00m	H=1.50m
T1	100	150
T2	150	200
B1	1,000	1,100
B2	1,100	1,200
H	1,300	1,850

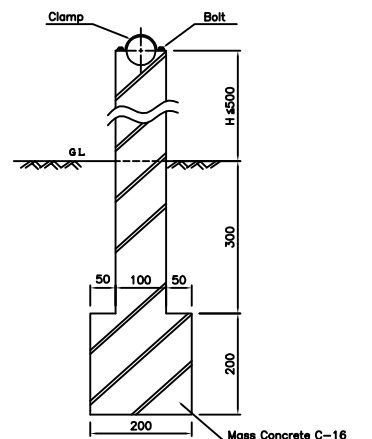
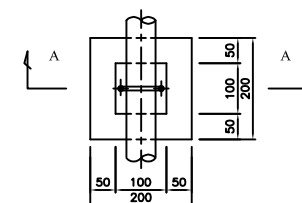
Pipe Size	Bolt DIA
1/2" ~ 1"	φ6mm
1" 1/2	φ10mm
2" ~ 2" 1/2	φ15mm



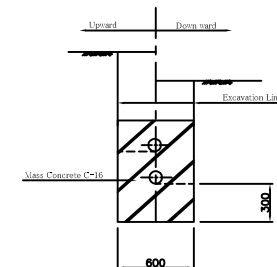
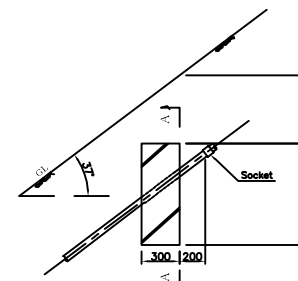
Water Meter & Gate Valve chamber  
S=1:20



Water Meter & Gate Valve chamber  
S=1:20




Support Concrete  
S=1:5



Concrete block for pipe on slope  
S=1:20

N.B. : The Chambers of wash-out and air valves are also applied to types of the chambers shown in drawing No.2.29.

OWNER :  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	PROJECT NAME :  THE BASIC DESIGN STUDY ON THE PROJECT FOR WATER SUPPLY IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGIONAL STATE IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	CONSULTING ENGINEERS :   NIPPON KOEI CO.,LTD.	DRAWING TITLE : Chambers, Support Concrete and Concrete Block for Pipe on Slope		
			SCALE  S=1:20 S=1:5	DATE  February 2005	DRAWING NO.  SF-2.29