

**Ministry of Planning and
Ministry of National Economy
Palestinian National Authority (PNA)**

Japan International Cooperation Agency (JICA)

No.

**Feasibility Study
on
Agro-industrial Park Development
in
the Jordan River Rift Valley**

Final Report

**Volume 2
(Reference Data and Materials of Engineering Study)**

1/2

March 2009

JAPAN INTERNATIONAL COOPERATION AGENCY

KRI INTERNATIONAL CORP.
NIPPON KOEI CO., LTD.

IDD

JR

09-018

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Ministry of National Economy
Palestinian National Authority (PNA)

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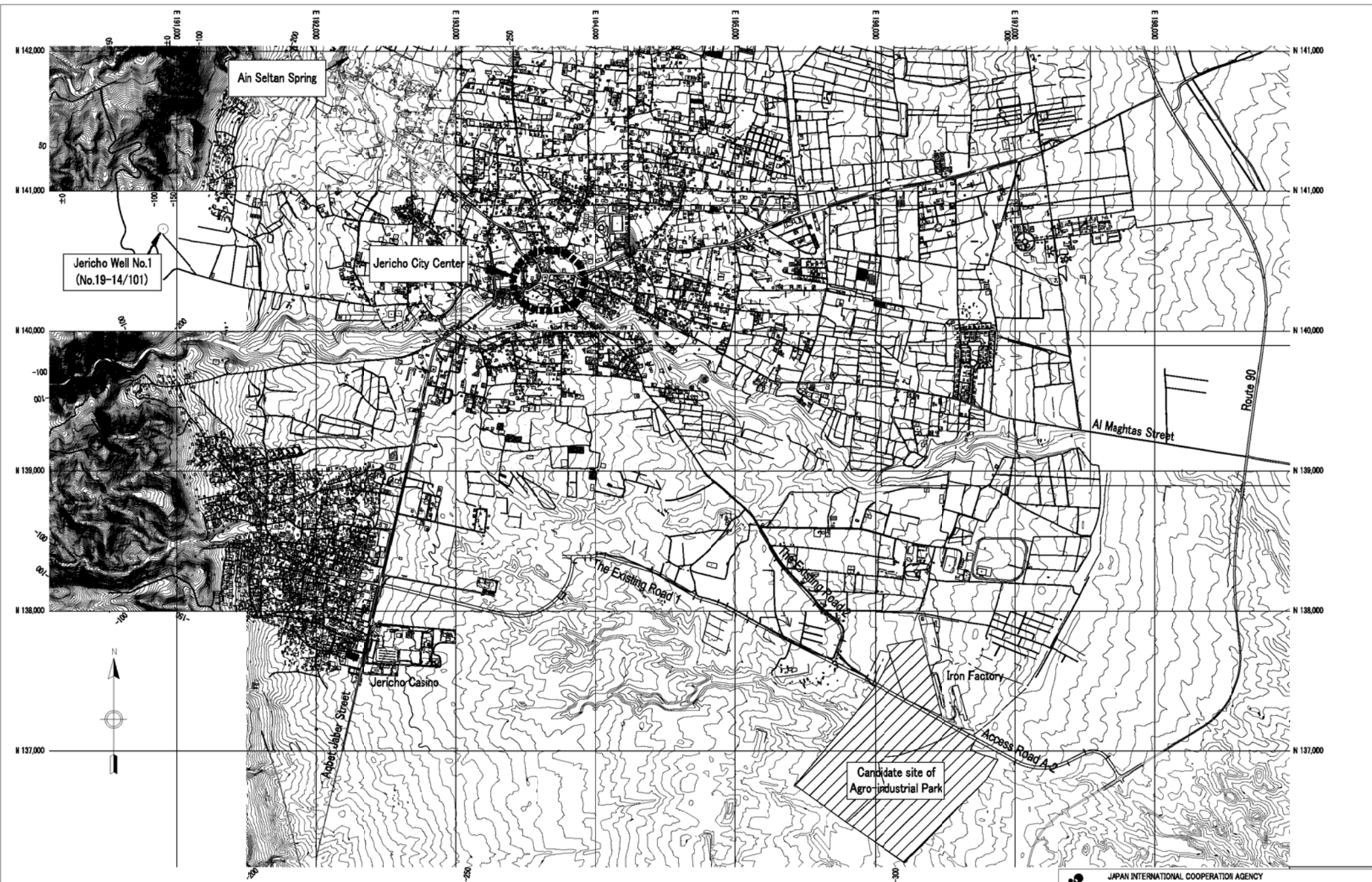
JAPAN INTERNATIONAL COOPERATION AGENCY

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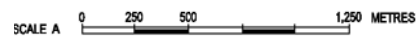
IDD
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09-018

Chapter I DRAWINGS

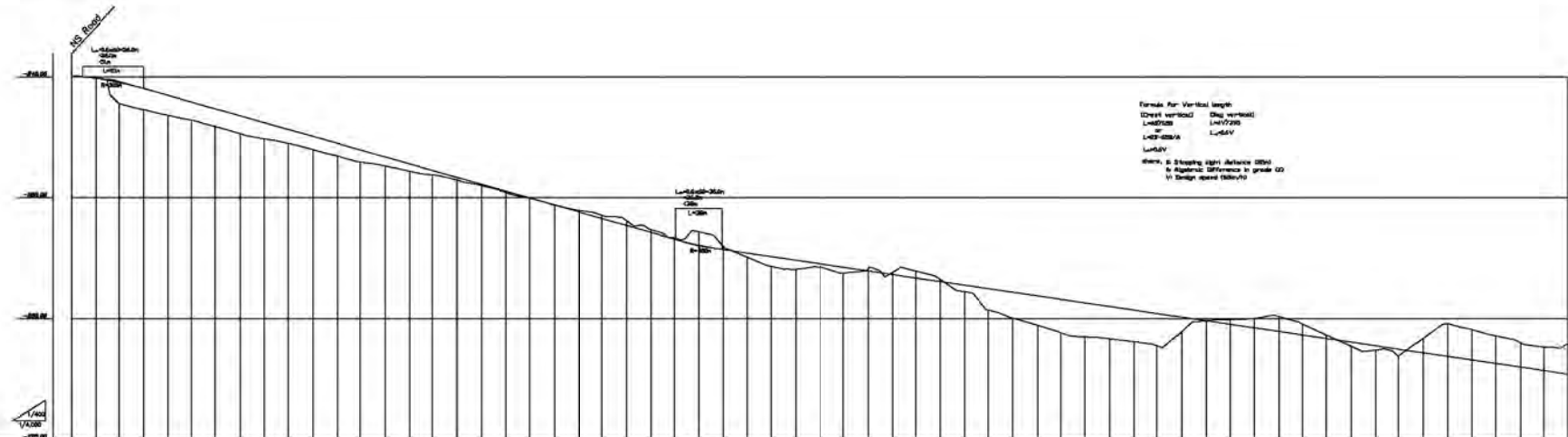
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212	Land Use Image	Stage I + II					
213	Land Use Image	Stega I, II and III					
214	Land Use Image	Stage I+II and III					



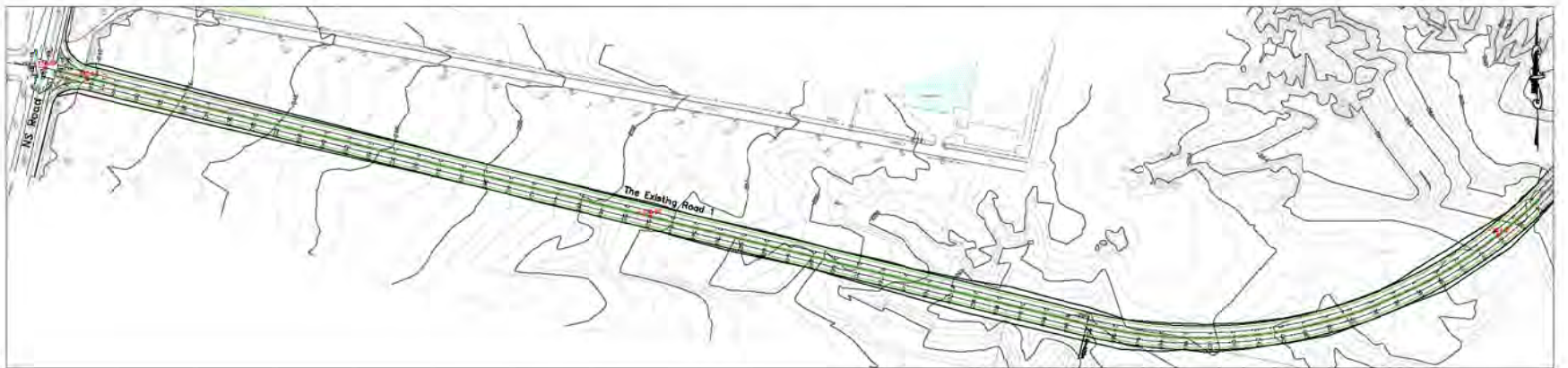
Note: This drawing was prepared on the JDECO Topographic Map.



 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY	
Drawing Title: Location Map	
Prepared by:  KRI INTERNATIONAL CORP.	Drawing No: 001
 NIPPON KOEI CO., LTD.	Date: November 2008



PROPOSED HEIGHT	Vertical Curve Data																																				
	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	
GRADE HEIGHT	427.50	427.00	426.50	426.00	425.50	425.00	424.50	424.00	423.50	423.00	422.50	422.00	421.50	421.00	420.50	420.00	419.50	419.00	418.50	418.00	417.50	417.00	416.50	416.00	415.50	415.00	414.50	414.00	413.50	413.00	412.50	412.00	411.50	411.00	410.50	410.00	
FILL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CUT																																					
STATION NO.	4100	4105	4110	4115	4120	4125	4130	4135	4140	4145	4150	4155	4160	4165	4170	4175	4180	4185	4190	4195	4200	4205	4210	4215	4220	4225	4230	4235	4240	4245	4250	4255	4260	4265	4270	4275	4280

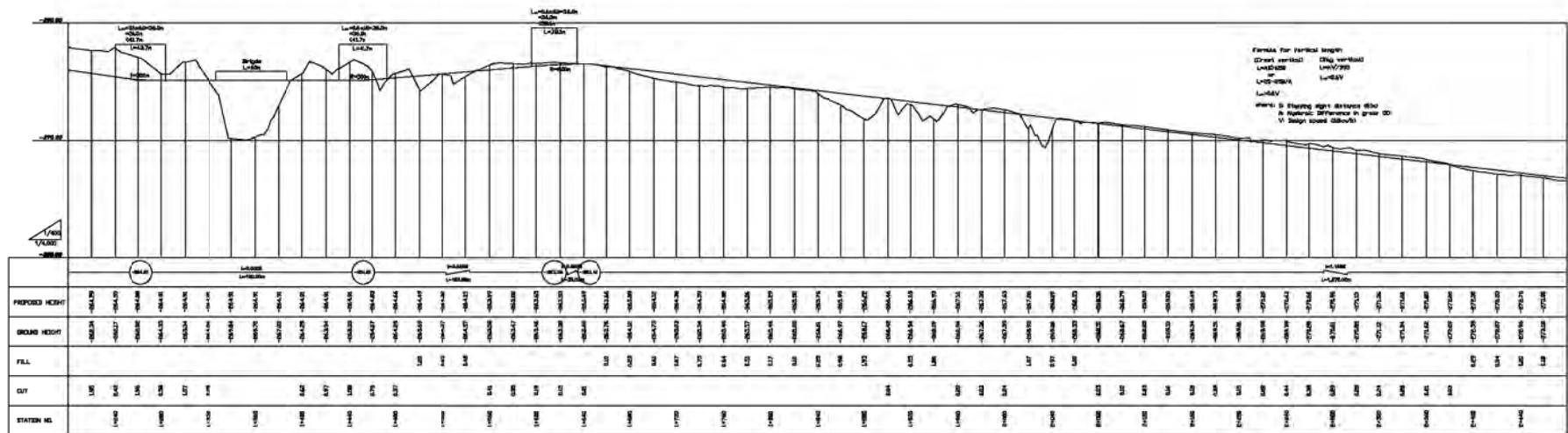


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 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

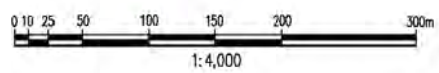
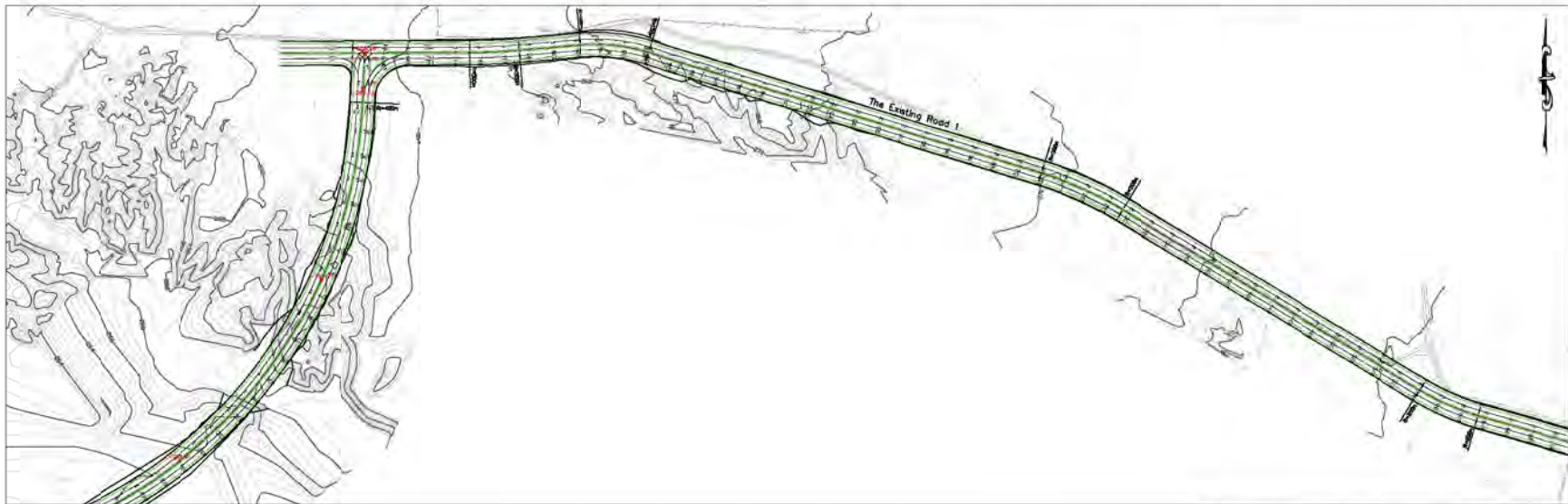
Drawing Title: **The Existing Road 1 & Access Road A-2 Plan and Profile, Sheet 1**

Prepared by: **KRI INTERNATIONAL CORP.**
 NIPPON KOEI CO., LTD.

Drawing No: 101
 Date: November 2008



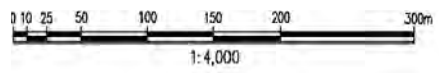
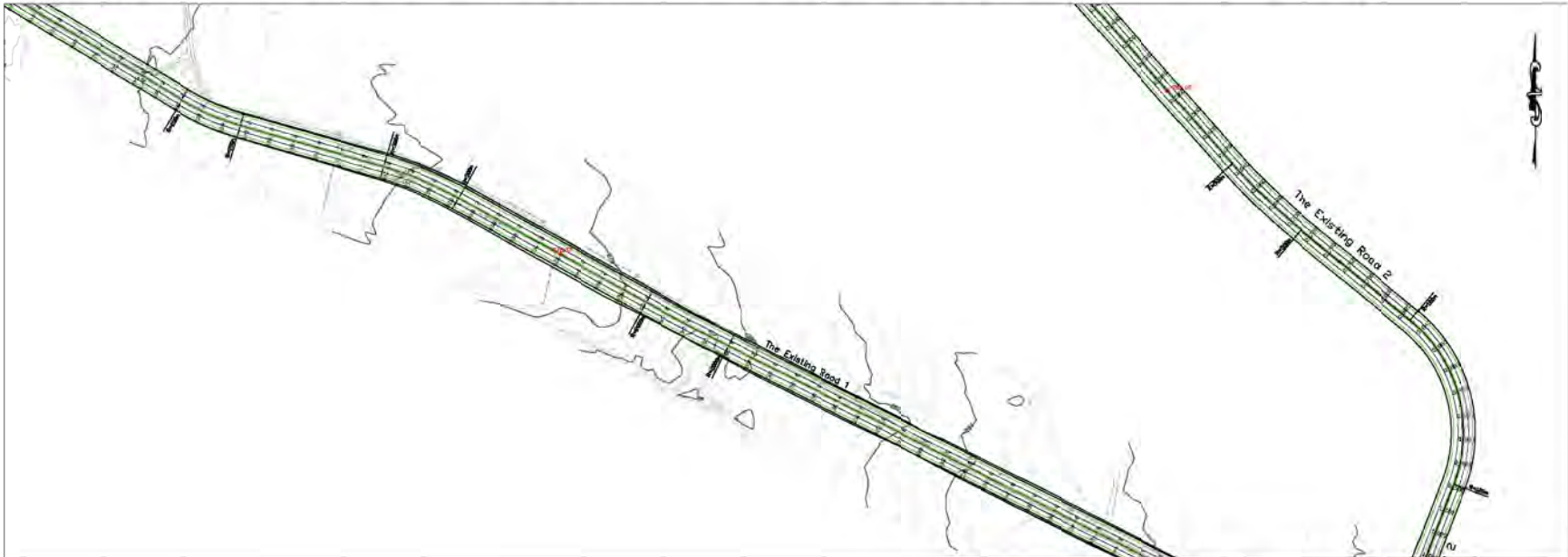
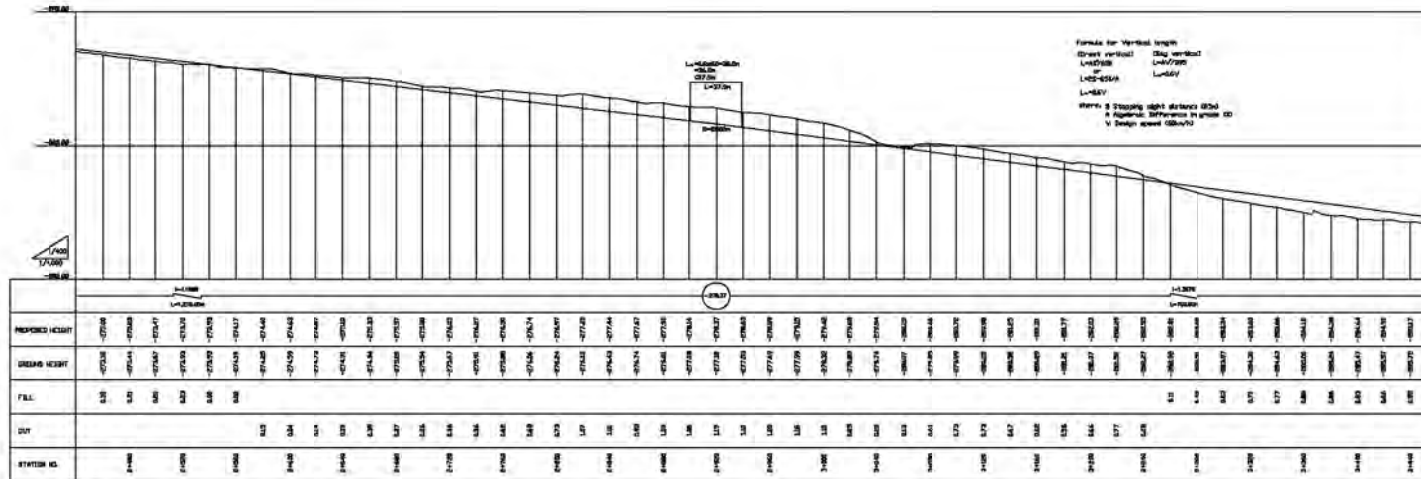
Formula for Parabolic length:
 2d = $\frac{h}{2a}$ 2d = $\frac{h}{2a}$
 L = $\frac{h}{2a}$ L = $\frac{h}{2a}$
 L = $\frac{h}{2a}$
 where: d = stopping sight distance (m)
 h = maximum difference in grade (%)
 a = design speed (km/h)



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 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

Drawing Title: **The Existing Road 1 & Access Road A-2
 Plan and Profile, Sheet 2**

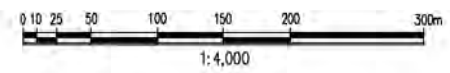
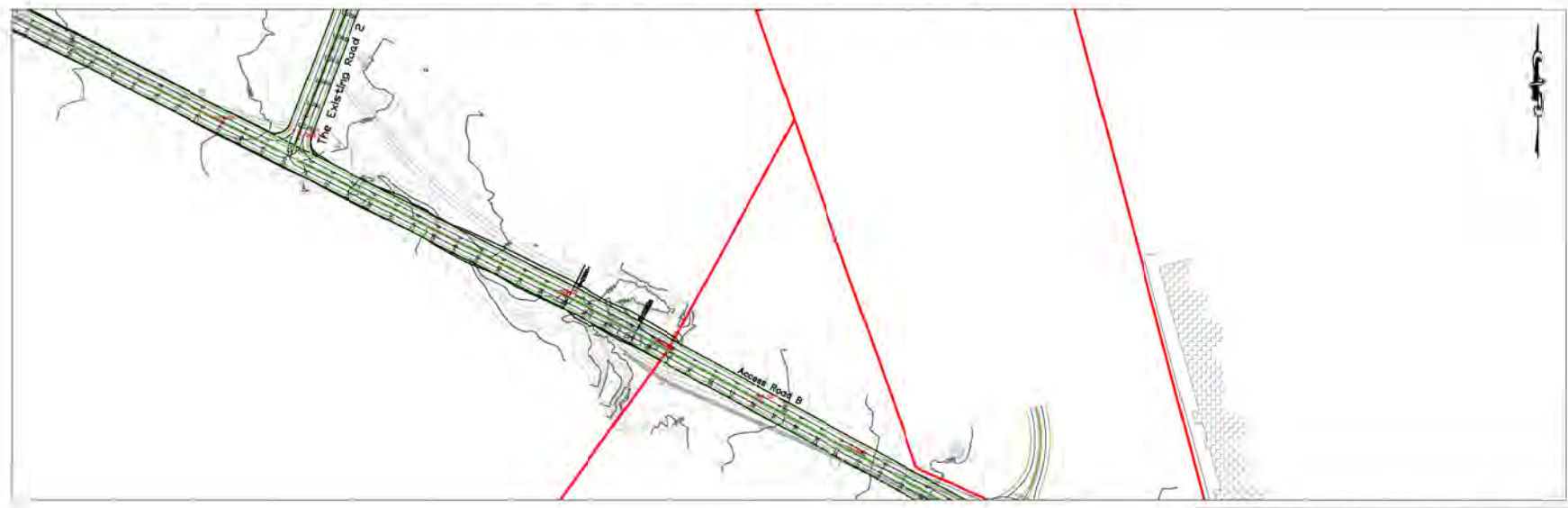
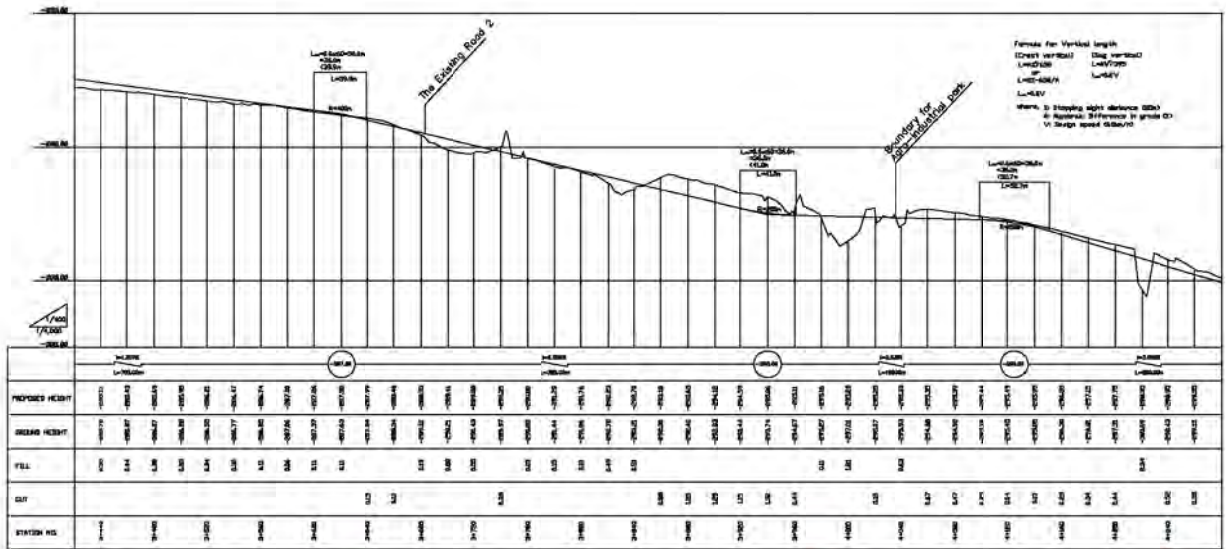
Prepared by: **KRI INTERNATIONAL CORP.** Drawing No: **102**
NIPPON KOEI CO., LTD. Date: **November 2008**



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 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY

Drawing Title: **The Existing Road 1 & Access Road A-2**
Plan and Profile, Sheet 3

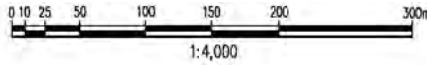
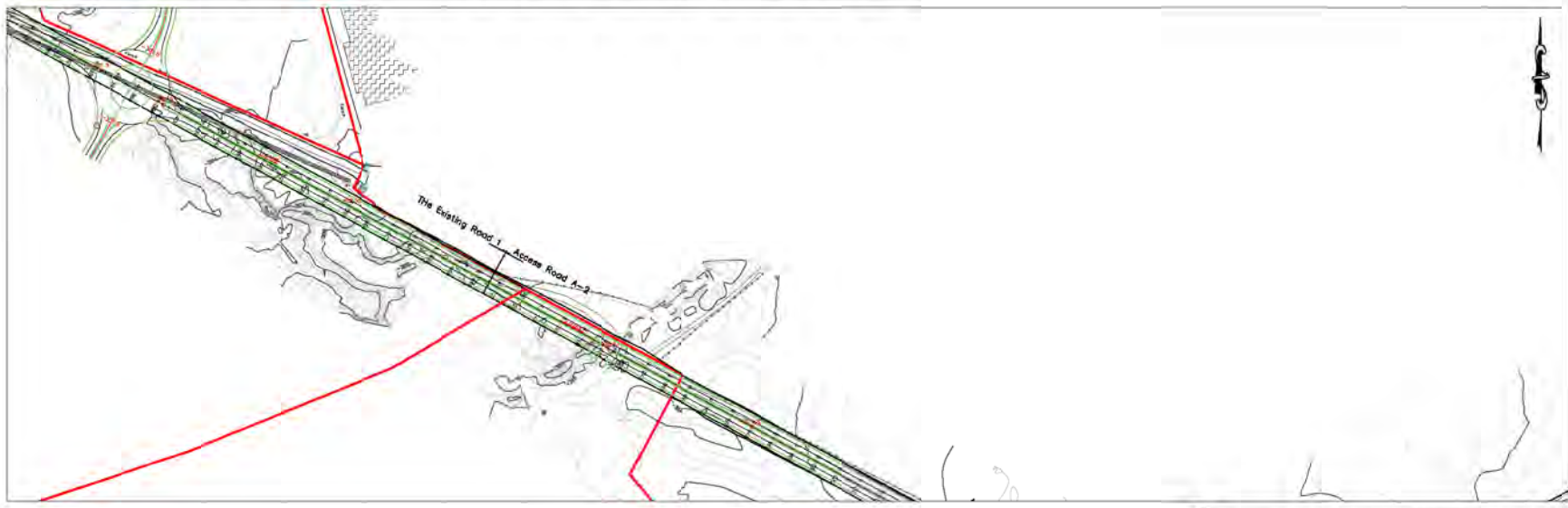
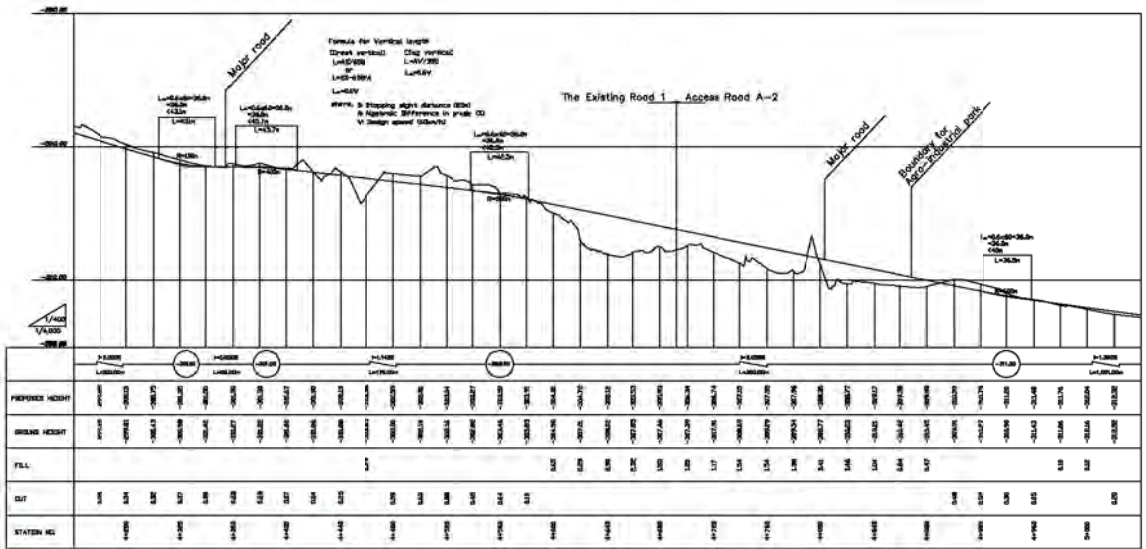
Prepared by: **KRI INTERNATIONAL CORP.** Drawing No: **103**
NIPPON KOGI CO., LTD. Date: **November 2008**



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 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK
 DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

Drawing Title: **The Existing Road 1 & Access Road A-2
 Plan and Profile, Sheet 4**

Prepared by: **KRI INTERNATIONAL CORP.** Drawing No: **104**
NIRODY KOEI CO., LTD. Date: **November 2008**

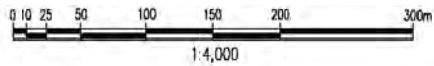
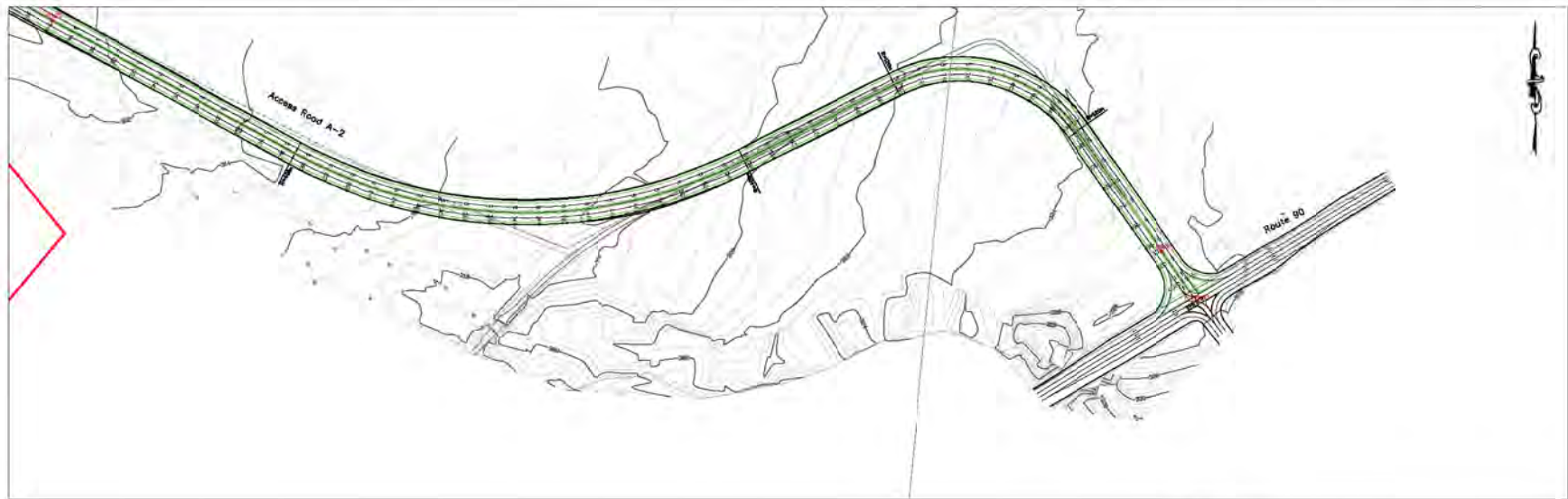
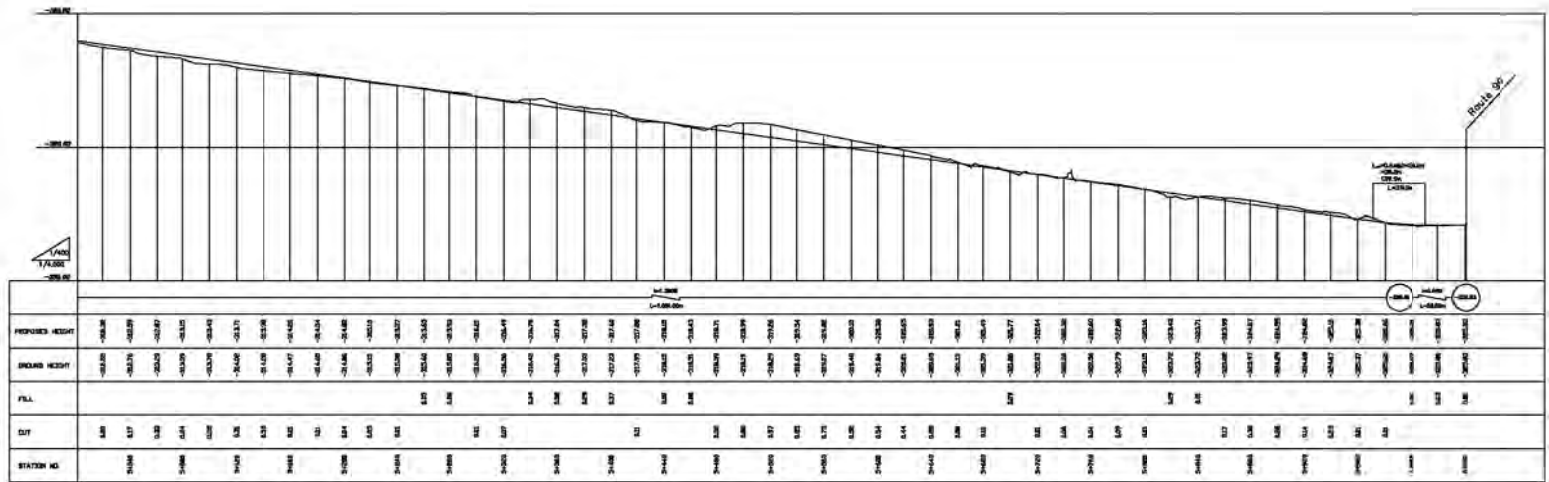



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 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK
 DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

Drawing Title: **The Existing Road 1 & Access Road A-2
 Plan and Profile, Sheet 5**


Prepared by: **KRI INTERNATIONAL CORP.**
NIIPPON KOGI CO., LTD.

Drawing No: 105
 Date: November 2008

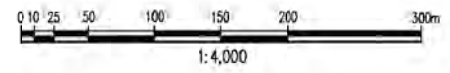
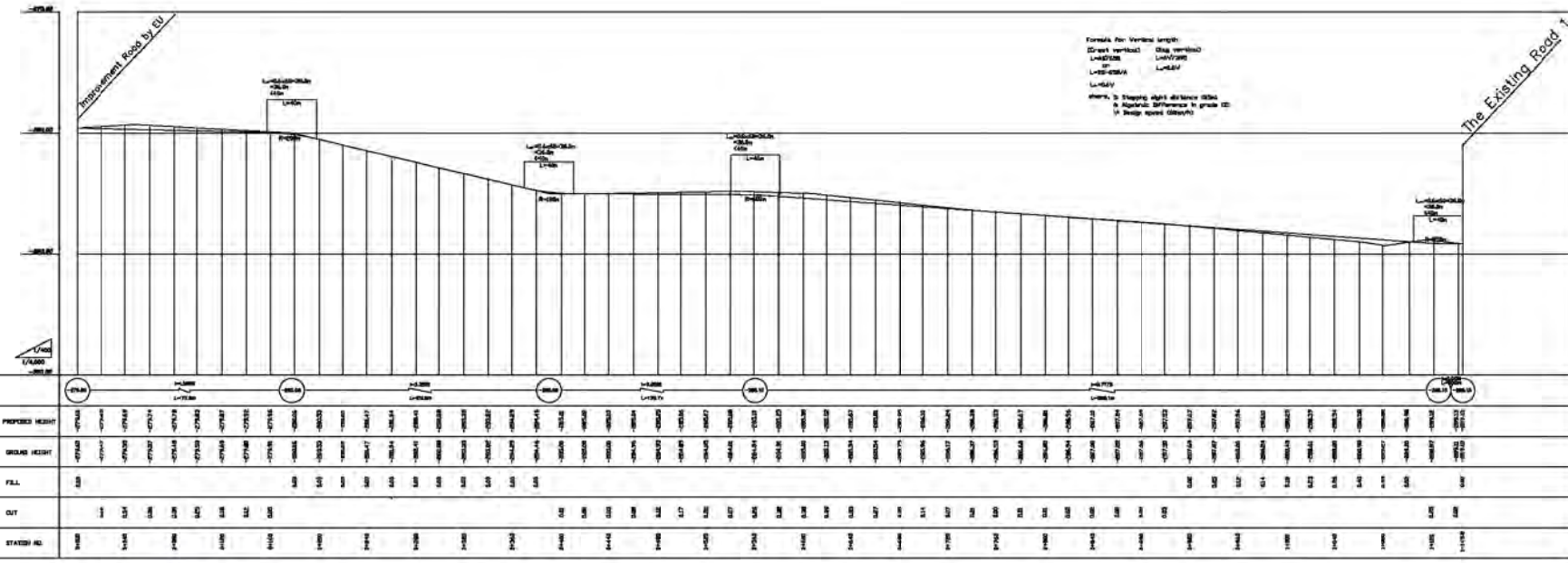



JAPAN INTERNATIONAL COOPERATION AGENCY
 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK
 DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

Drawing Title: The Existing Road 1 & Access Road A-2
 Plan and Profile, Sheet 6

Prepared by: KRI INTERNATIONAL CORP.
 NIPPON KOEI CO., LTD.

Drawing No: 106
Date: November 2008

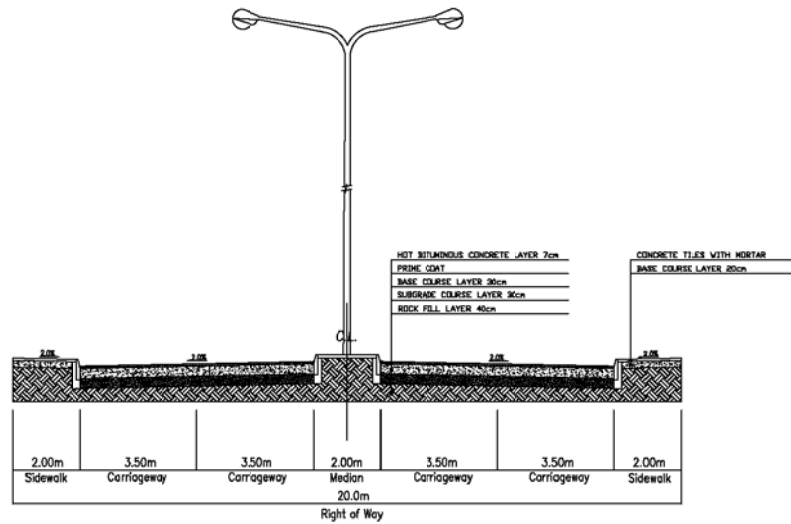




JAPAN INTERNATIONAL COOPERATION AGENCY
 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK
 DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

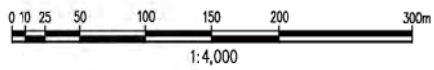
jica


Drawing Title: **The Existing Road 2
Plan and Profile**

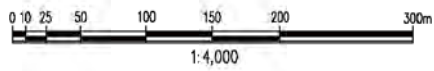
Prepared by: **KRI INTERNATIONAL CORP.** Drawing No: **107**
NIPPON KOGI CO., LTD. Date: **November 2008**




	JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY	
	Drawing Title: The Existing Road 1, 2 & Access Road A-2 Typical Cross Section	
Prepared by:	KRI INTERNATIONAL CORP.  NIPPON KOEI CO., LTD.	Drawing No: 108 Date: November 2008





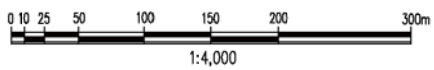
	JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY	
	Drawing Title:	Road Improvement Plan, Sheet 1
Prepared by:	 KRI INTERNATIONAL CORP.	Drawing No: 109
	 NIPPON KOEI CO., LTD.	Date: November 2008




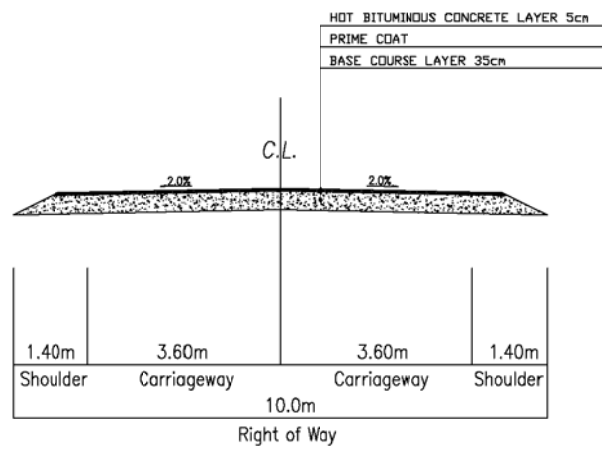

 JAPAN INTERNATIONAL COOPERATION AGENCY
 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK
 DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

Drawing Title: **Road Improvement
 Plan, Sheet 2**





Prepared by:  KRI INTERNATIONAL CORP. Drawing No: **110**
 NIPPON KOEI CO., LTD. Date: **November 2008**

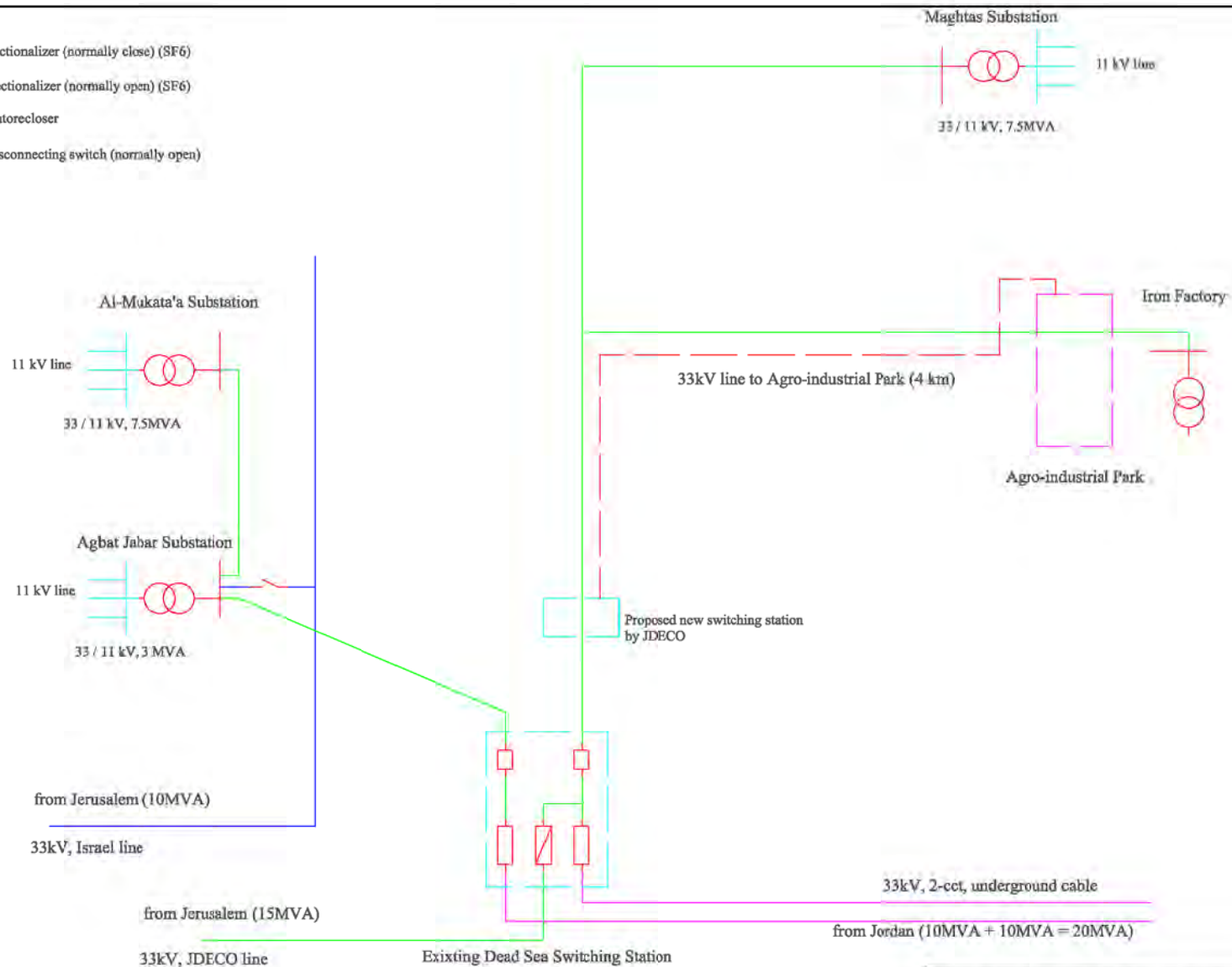





 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY		
Drawing Title:		Road Improvement Plan, Sheet 3
Prepared by:	KRI INTERNATIONAL CORP.  NIPPON KOEI CO., LTD.	Drawing No: 111 Date: November 2008

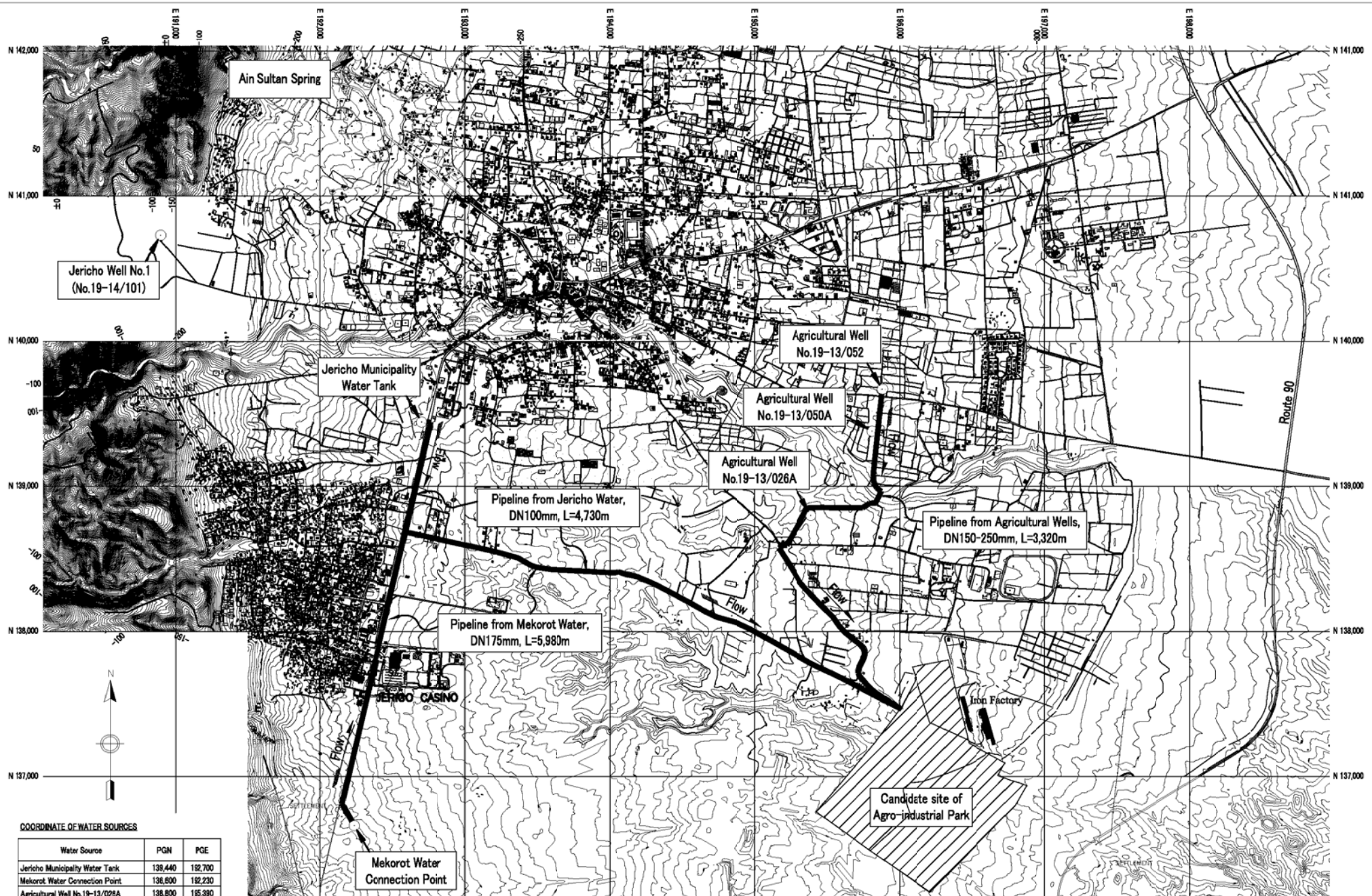


 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY	
Drawing Title:	Road Improvement Typical Cross Section
Prepared by:	KRI INTERNATIONAL CORP. Drawing No: 112  NIPPON KOEI CO., LTD. Date: November 2008

-  Sectionalizer (normally close) (SF6)
-  Sectionalizer (normally open) (SF6)
-  Autorecloser
-  Disconnecting switch (normally open)



 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY	
Drawing Title: Power Supply Network in Jericho	
Prepared by:  KRI INTERNATIONAL CORP.  NIPPON KOEI CO., LTD.	Drawing No: 121 Date: November 2008



COORDINATE OF WATER SOURCES

Water Source	PGN	PGE
Jericho Municipality Water Tank	139,440	192,700
Mekorot Water Connection Point	136,600	192,230
Agricultural Well No.19-13/026A	138,800	195,390
Agricultural Well No.19-13/050A	139,380	195,810
Agricultural Well No.19-13/052	139,670	195,880
Ain Sultan Spring	141,970	192,280
Jericho Well No.1 (No.19-14/101)	140,730	190,900

Note: This drawing was prepared on the JDECO CAD file n 2007.
However, surveyed year of topographic data is unknown.



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THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT
IN THE JORDAN RIVER RIFT VALLEY

Drawing Title:

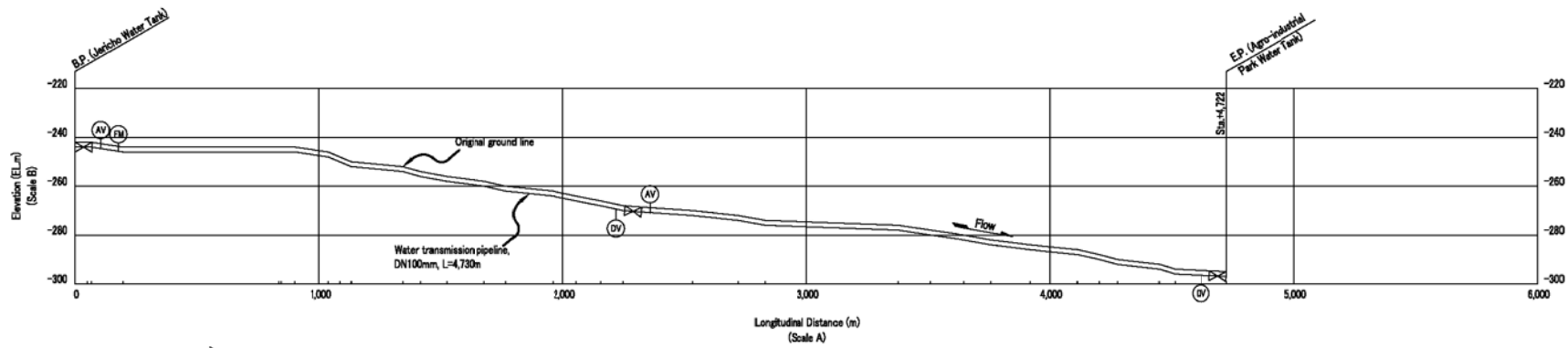
**Water Supply Facilities
General Layout**

Prepared by: **KR** INTERNATIONAL CORP.

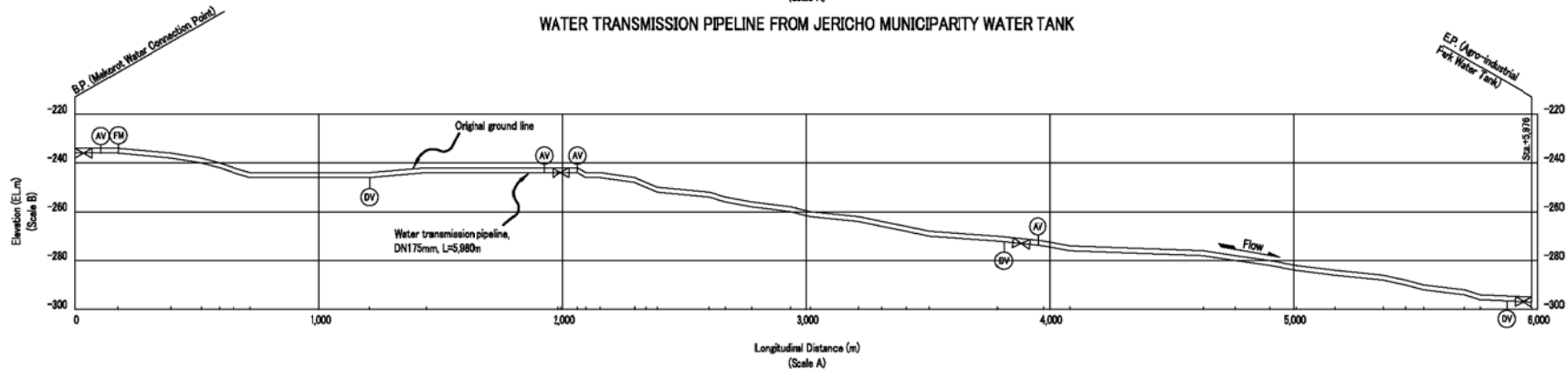
Drawing No: **131**

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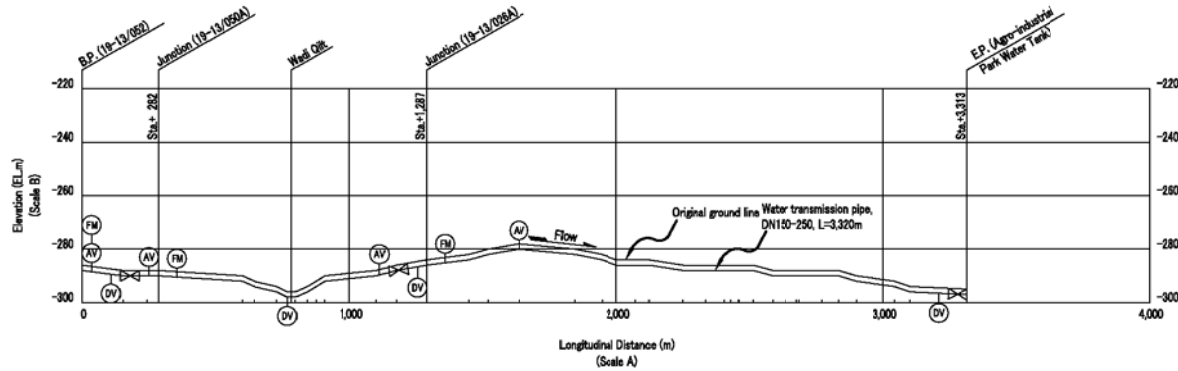
Date: **November 2008**



WATER TRANSMISSION PIPELINE FROM JERICHO MUNICIPALITY WATER TANK



WATER TRANSMISSION PIPELINE FROM MEKOROT WATER CONNECTION POINT



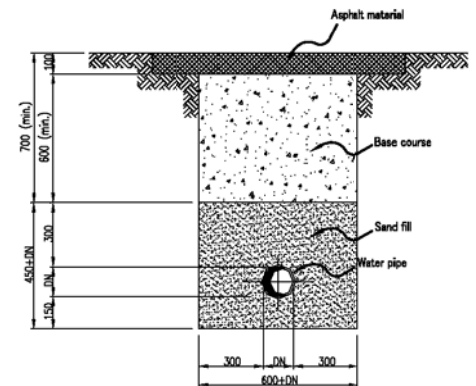
WATER TRANSMISSION PIPELINE FROM AGRICULTURAL WELLS

PLANNED LENGTH OF PIPE & NUMBER OF ACCESSORIES

	Jerico	Mekorot	Agricultural Wells	Total
Ductile Pipe				
DN100	4,730m	-	-	4,730m
DN150	-	-	290m	290m
DN175	-	5,980m	-	5,980m
DN200	-	-	1,010m	1,010m
DN250	-	-	2,030m	2,030m
Sluice Valve				
DN100	3	-	-	4
DN150	-	-	1	1
DN175	-	4	-	4
DN200	-	-	1	1
DN250	-	-	1	1
Air Valve				
DN100	2	-	-	3
DN150	-	-	1	1
DN175	-	4	-	4
DN200	-	-	1	1
DN250	-	-	1	1
Drain Valve				
DN100	2	-	-	3
DN150	-	-	1	1
DN175	-	3	-	4
DN200	-	-	2	2
DN250	-	-	1	1
Flow Meter				
DN100	1	-	-	1
DN150	-	-	1	1
DN175	-	1	-	1
DN200	-	-	1	1
DN250	-	-	1	1

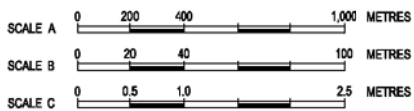
LEGEND

- ⊗ : Sluice Valve
- AV : Air Valve
- DV : Drain Valve
- FM : Fire Hydrant



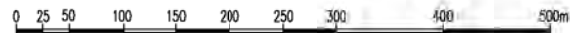
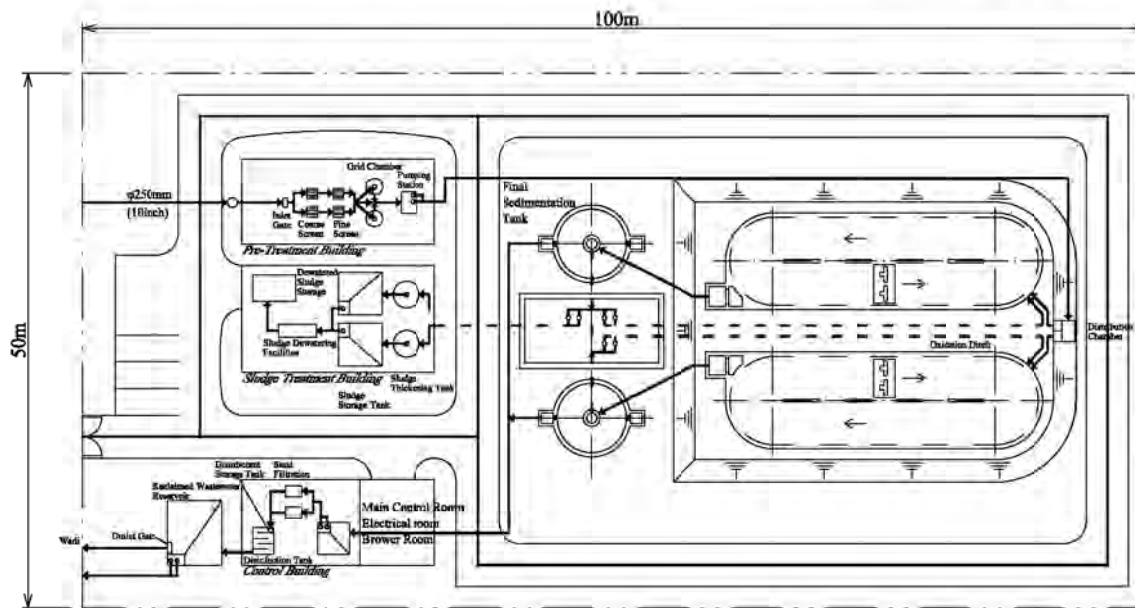
TYPICAL SECTION OF PIPE TRENCH (Scale C)


Note: The above typical sections are referred to DWG. P-SW-01 in the "Planning & Design Guidelines for Construction & Installation of Pipes in Water Supply & Sewerage Trenches" published by PWA in 2000.



Concept Design of Wastewater Treatment Plant in Agro-industrial Park (Stage I)

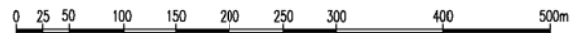
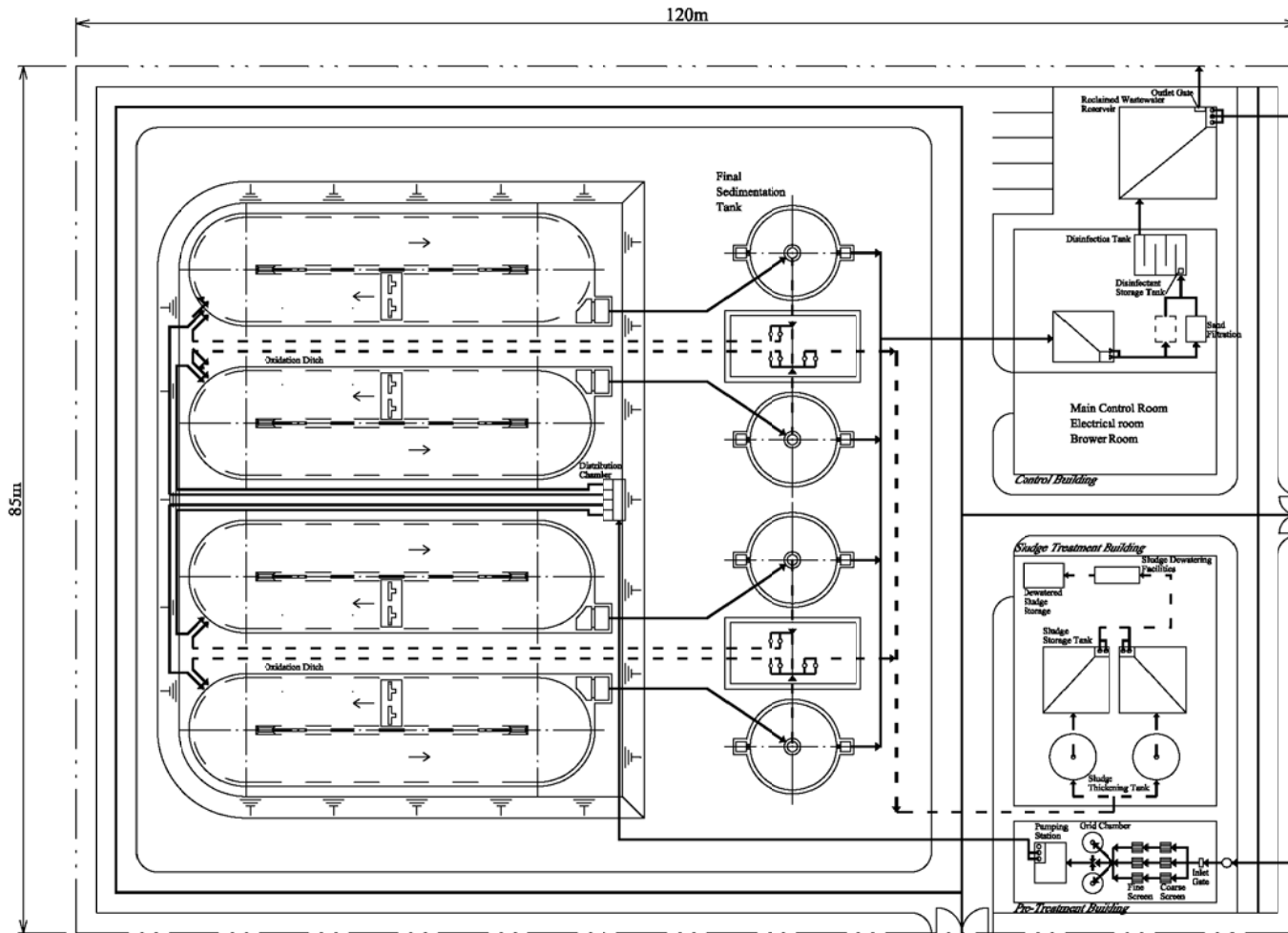
Q=470m³/day(Daily Max)



 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY	
Drawing Title:	Wastewater Treatment Facilities Stage I, Plan
Prepared by:	KRI INTERNATIONAL CORP.  NIPPON KOEI CO., LTD.
Drawing No:	141
Date:	November 2008

Concept Design of Wastewater Treatment Plant in Agro-industrial Park (Stage II)

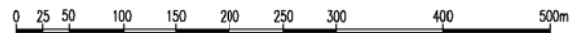
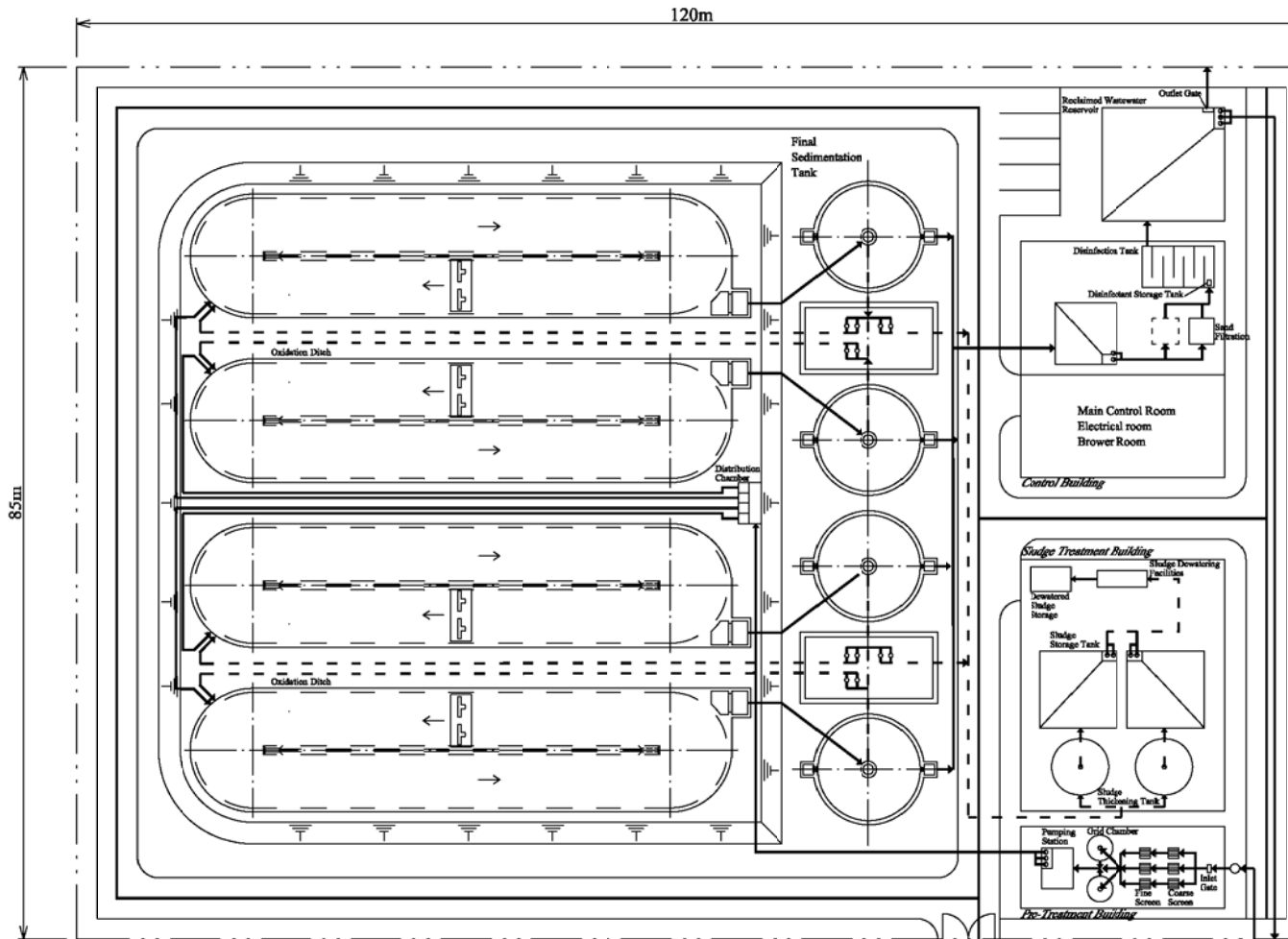
Q=1,650m³/day(Daily Max)



 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY		
Drawing Title: Wastewater Treatment Facilities Stage II, Plan		
Prepared by:	 KRI INTERNATIONAL CORP.  NIPPON KOEI CO., LTD.	Drawing No: 142 Date: November 2008

Concept Design of Wastewater Treatment Plant in Agro-industrial Park (Stage III)

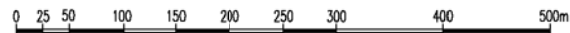
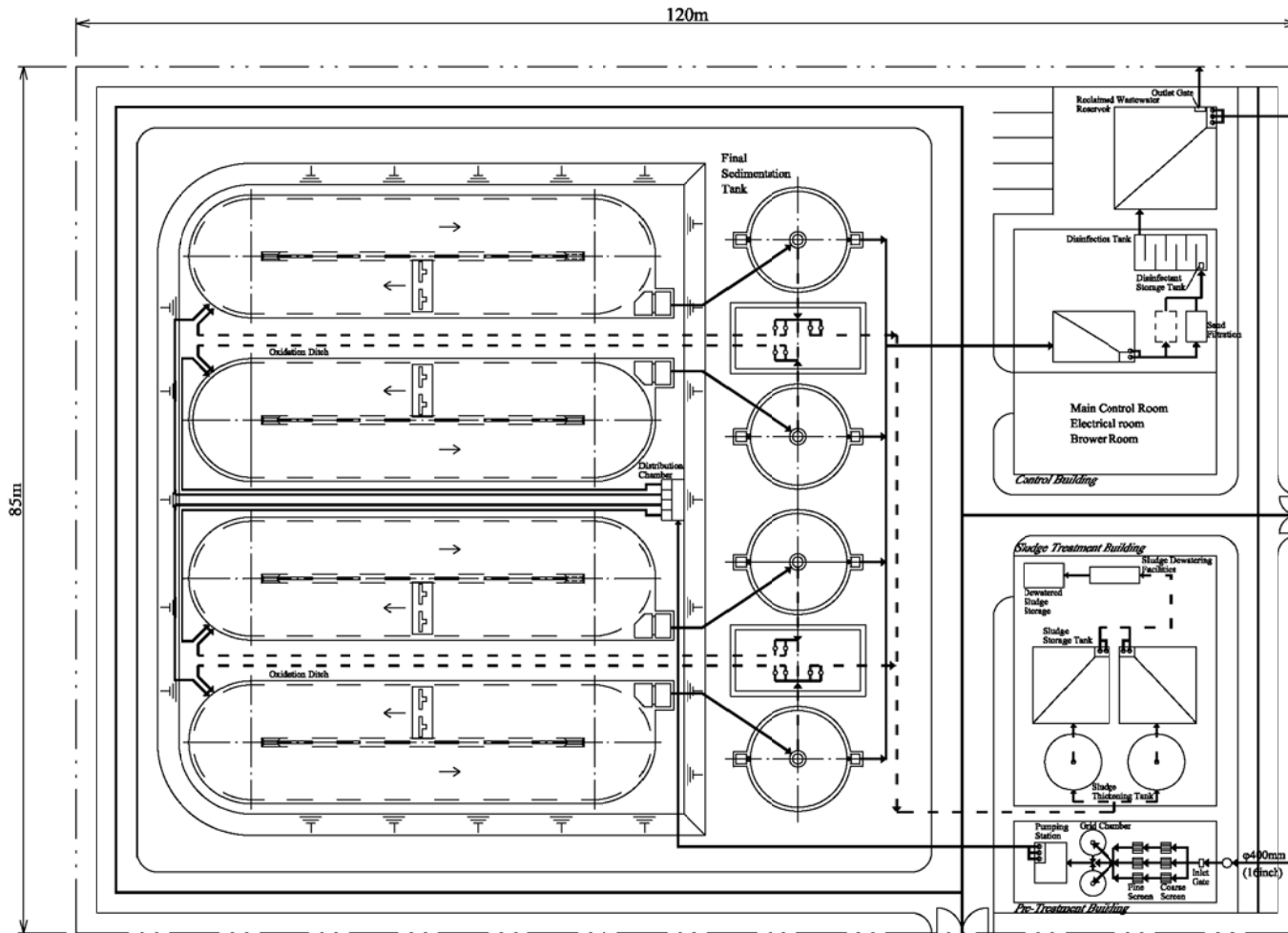
Q=2,450m³/day(Daily Max)



 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY		
Drawing Title: Wastewater Treatment Facilities Stage III, Plan		
Prepared by:  KRI INTERNATIONAL CORP.	Drawing No: 143	Date: November 2008
 NIPPON KOEI CO., LTD.		

Concept Design of Wastewater Treatment Plant in Agro-industrial Park (Stage I+II)

Q=2,120m³/day(Daily Max)



 JAPAN INTERNATIONAL COOPERATION AGENCY THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT IN THE JORDAN RIVER RIFT VALLEY		
Drawing Title: Wastewater Treatment Facilities Stage I + II, Plan		
Prepared by:  KRI INTERNATIONAL CORP.	Drawing No: 144	Date: November 2008
 NIPPON KOEI CO., LTD.		

Stage I + II

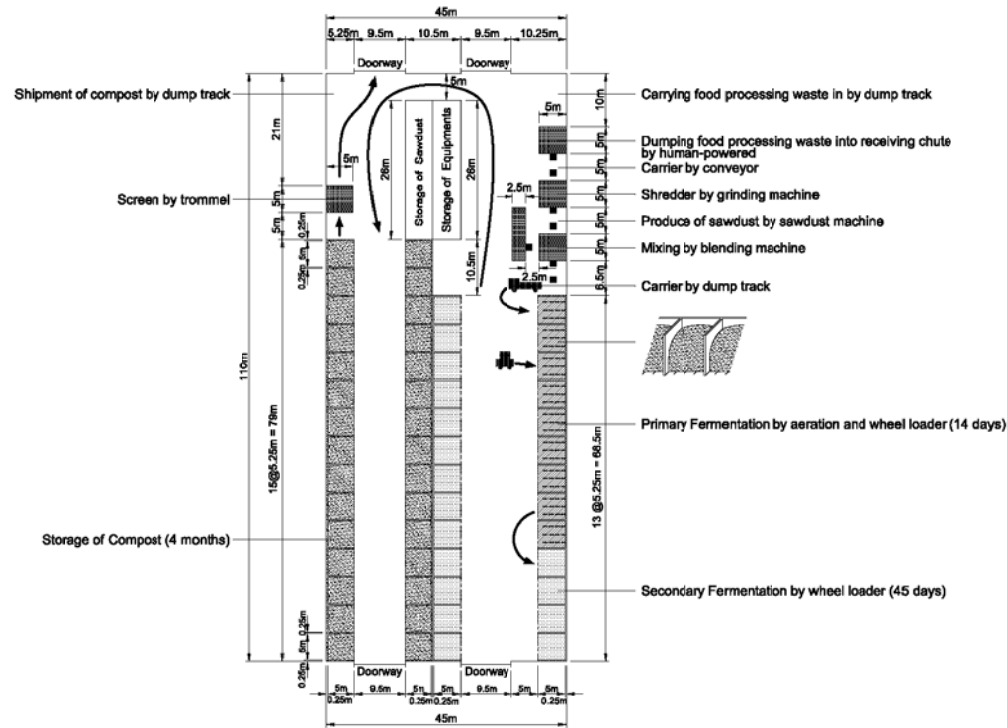
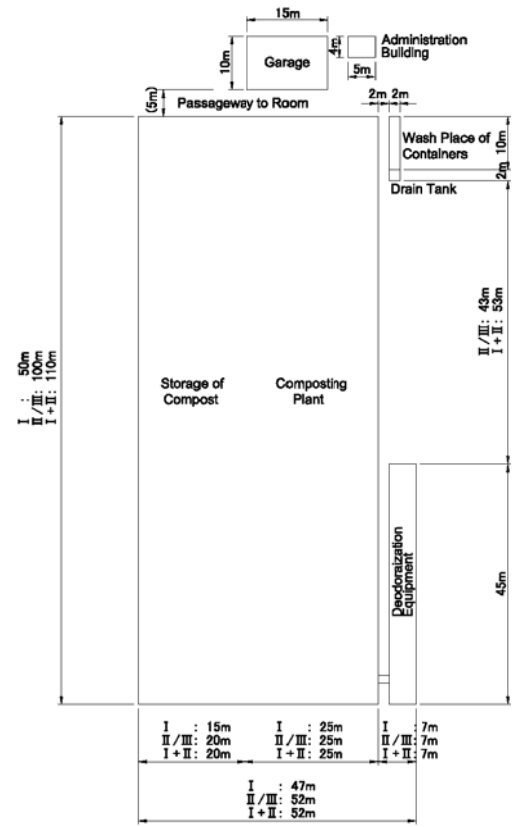
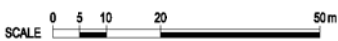


Image of Process of Composting



Total Square excluding garage and administration building

I : 50m x 47m = 2,350m²

II / III : 100m x 52m = 5,200m²

I + II : 110m x 52m = 5,720m²

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
 THE FEASIBILITY STUDY ON AGRO-INDUSTRIAL PARK DEVELOPMENT
 IN THE JORDAN RIVER RIFT VALLEY

Drawing Title: **Solid Waste Treatment Facilities Layout and Process of Composting**

Prepared by: **KRI INTERNATIONAL CORP.** Drawing No: **151**
NIPPON KOEI CO., LTD. Date: **November 2008**