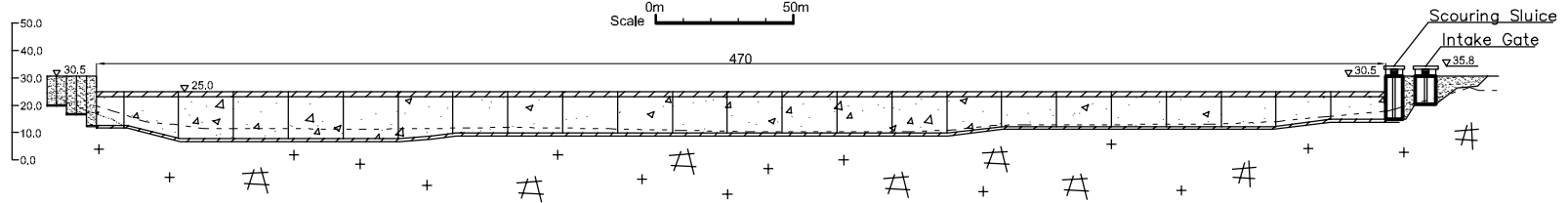
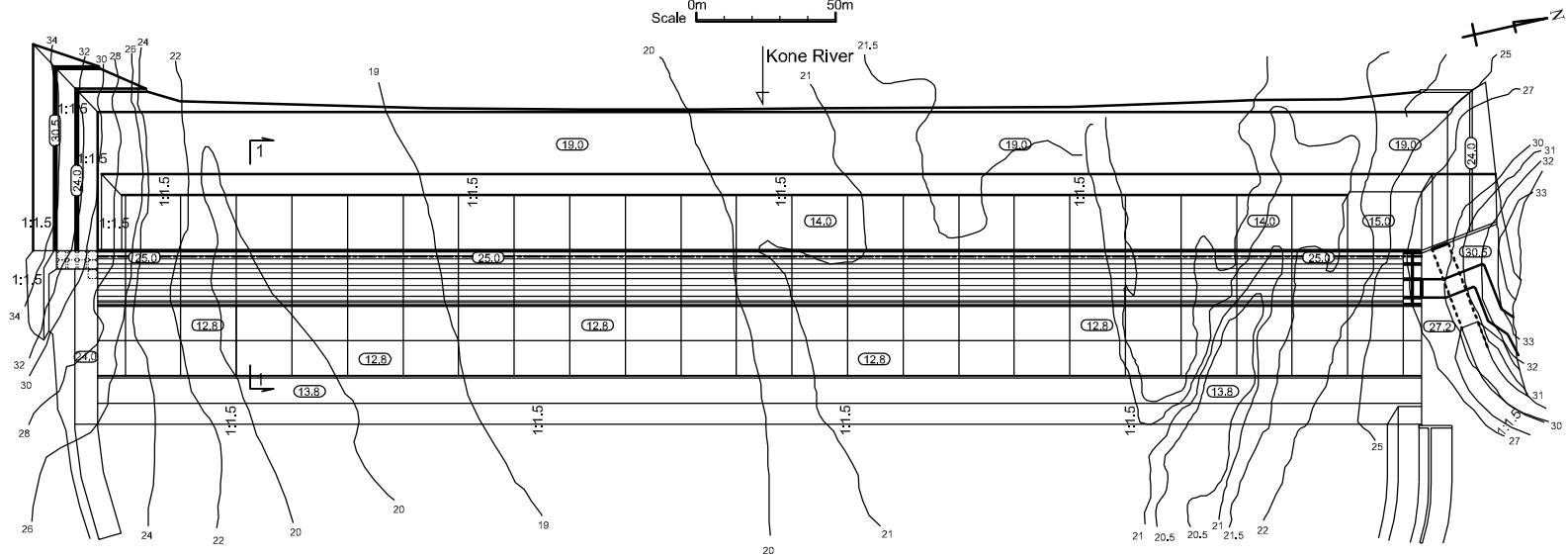


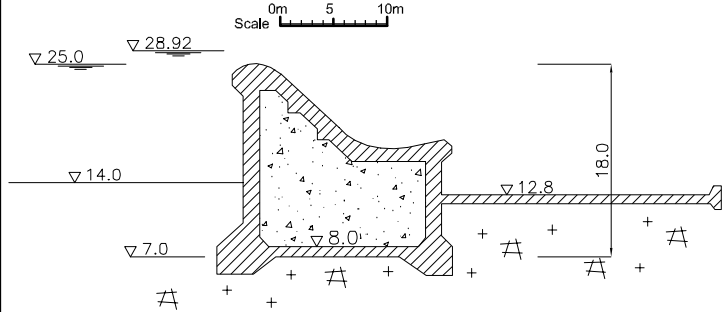
### Longitudinal Section



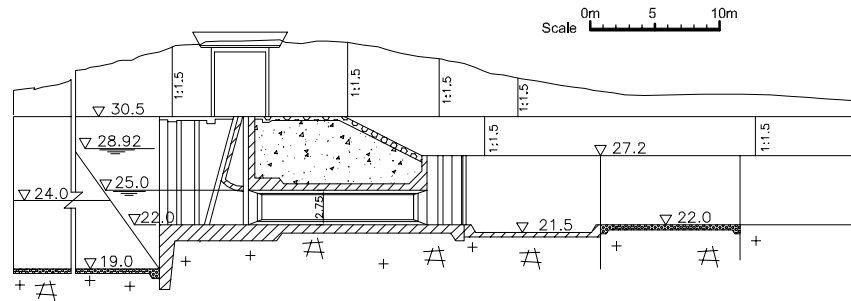
### Plan

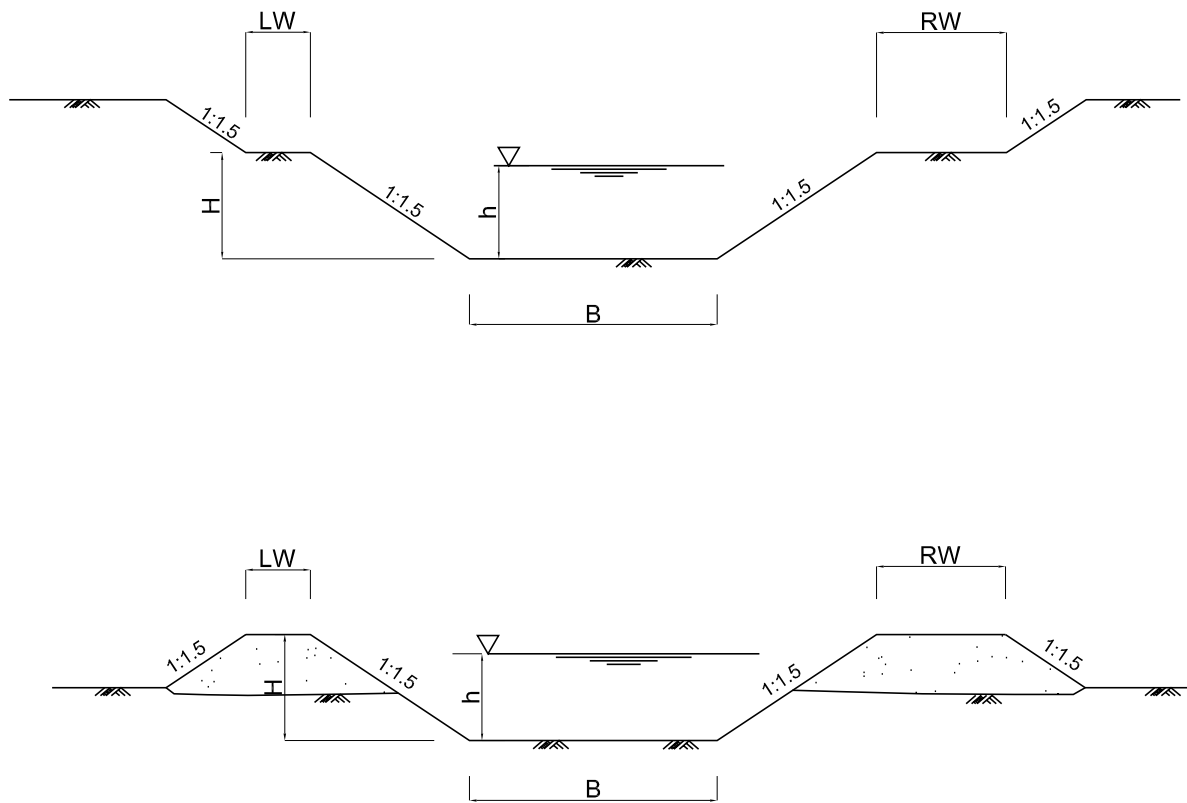


### Section 1-1



### Longitudinal Section of Intake Gate





Unit:(m)

Sec. No.	B	H	h	LW	RW
1	8.0	3.5	3.1	2.0	5.0
2	7.5	3.5	3.1	2.0	5.0
3	7.0	3.5	3.1	2.0	5.0
4	6.5	3.4	3.0	2.0	5.0
5	5.5	3.2	2.8	2.0	5.0
6	4.5	2.6	2.25	2.0	5.0
7	4.0	2.4	2.1	2.0	5.0
8	3.0	2.1	1.8	2.0	5.0
9	2.5	1.73	1.44	2.0	5.0

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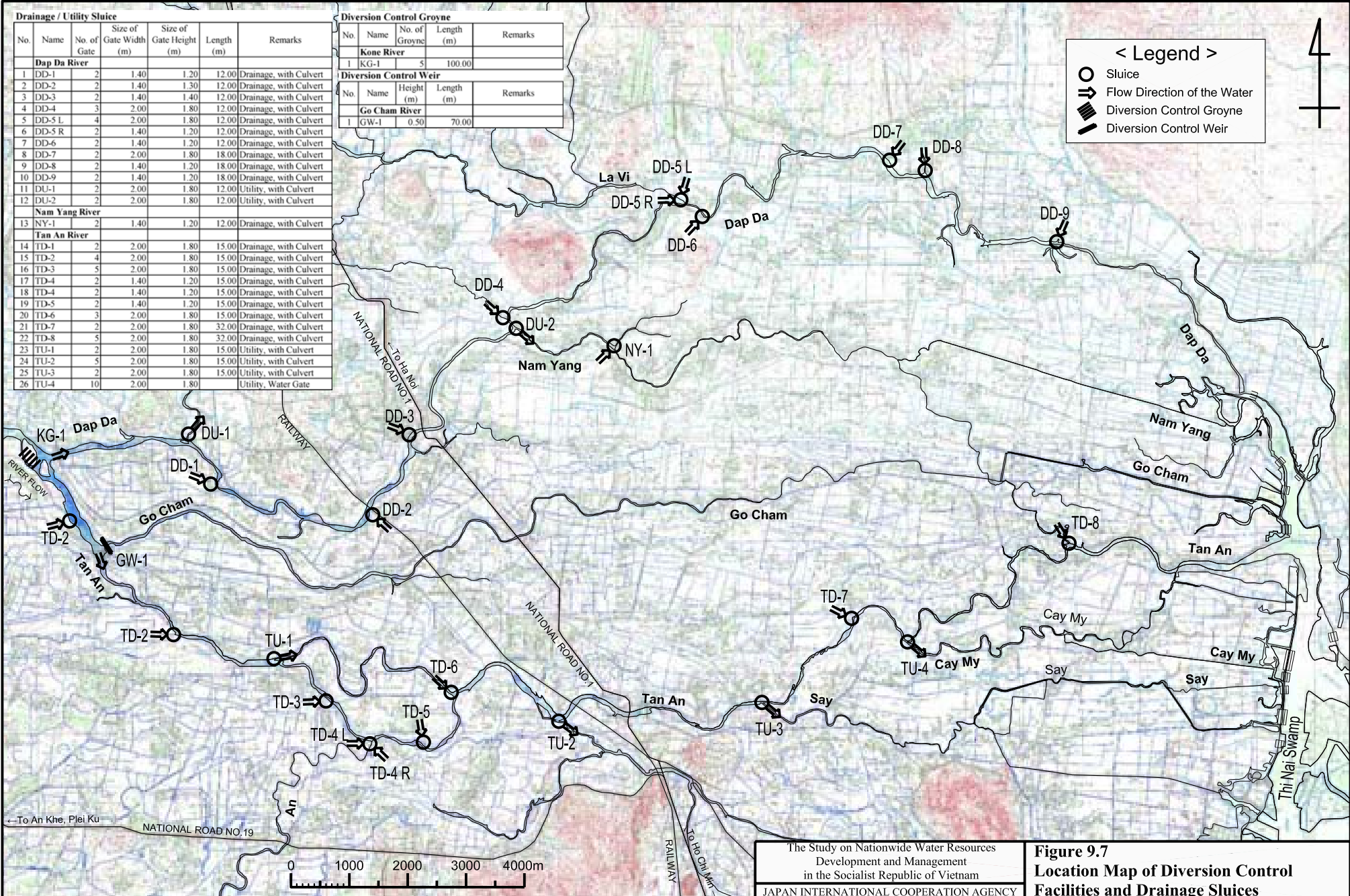
**Figure 9.6**  
**Typical Cross-section of Irrigation Canal**

Drainage / Utility Sluice						
No.	Name	No. of Gate	Size of Gate Width (m)	Size of Gate Height (m)	Length (m)	Remarks
<b>Dap Da River</b>						
1	DD-1	2	1.40	1.20	12.00	Drainage, with Culvert
2	DD-2	2	1.40	1.30	12.00	Drainage, with Culvert
3	DD-3	2	1.40	1.40	12.00	Drainage, with Culvert
4	DD-4	3	2.00	1.80	12.00	Drainage, with Culvert
5	DD-5 L	4	2.00	1.80	12.00	Drainage, with Culvert
6	DD-5 R	2	1.40	1.20	12.00	Drainage, with Culvert
7	DD-6	2	1.40	1.20	12.00	Drainage, with Culvert
8	DD-7	2	2.00	1.80	18.00	Drainage, with Culvert
9	DD-8	2	1.40	1.20	18.00	Drainage, with Culvert
10	DD-9	2	1.40	1.20	18.00	Drainage, with Culvert
11	DU-1	2	2.00	1.80	12.00	Utility, with Culvert
12	DU-2	2	2.00	1.80	12.00	Utility, with Culvert
<b>Nam Yang River</b>						
13	NY-1	2	1.40	1.20	12.00	Drainage, with Culvert
<b>Tan An River</b>						
14	TD-1	2	2.00	1.80	15.00	Drainage, with Culvert
15	TD-2	4	2.00	1.80	15.00	Drainage, with Culvert
16	TD-3	5	2.00	1.80	15.00	Drainage, with Culvert
17	TD-4	2	1.40	1.20	15.00	Drainage, with Culvert
18	TD-4	2	1.40	1.20	15.00	Drainage, with Culvert
19	TD-5	2	1.40	1.20	15.00	Drainage, with Culvert
20	TD-6	3	2.00	1.80	15.00	Drainage, with Culvert
21	TD-7	2	2.00	1.80	32.00	Drainage, with Culvert
22	TD-8	5	2.00	1.80	32.00	Drainage, with Culvert
23	TU-1	2	2.00	1.80	15.00	Utility, with Culvert
24	TU-2	5	2.00	1.80	15.00	Utility, with Culvert
25	TU-3	2	2.00	1.80	15.00	Utility, with Culvert
26	TU-4	10	2.00	1.80		Utility, Water Gate

Diversion Control Groyne				
No.	Name	No. of Groyne	Length (m)	Remarks
<b>Kone River</b>				
1	KG-1	5	100.00	
Diversion Control Weir				
No.	Name	Height (m)	Length (m)	Remarks
<b>Go Cham River</b>				
1	GW-1	0.50	70.00	

**< Legend >**

- Sluice
- Flow Direction of the Water
- Diversion Control Groyne
- Diversion Control Weir



**Figure 9.7**  
**Location Map of Diversion Control**  
**Facilities and Drainage Sluices**

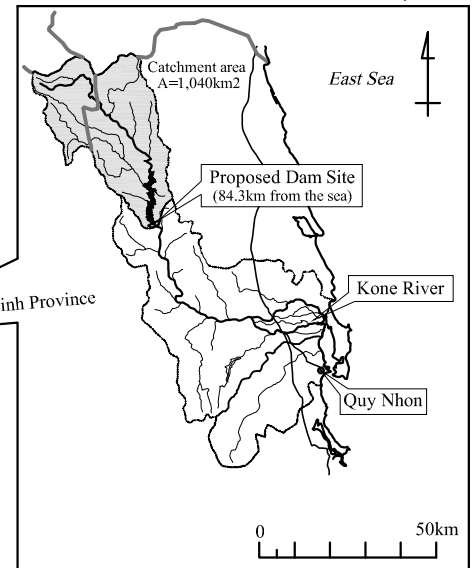
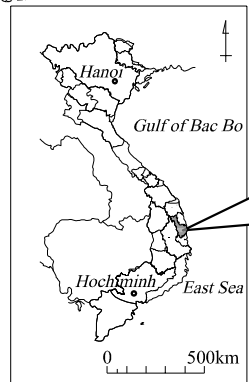
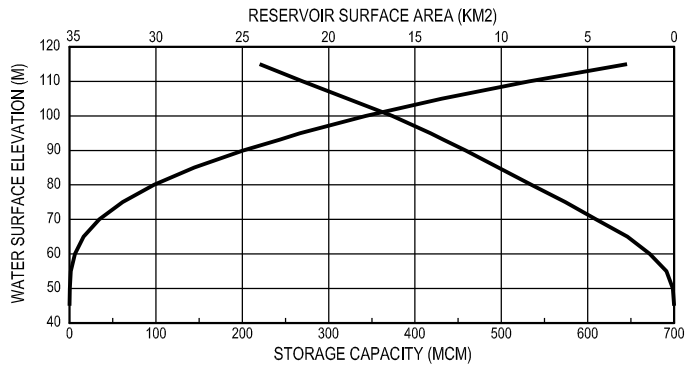
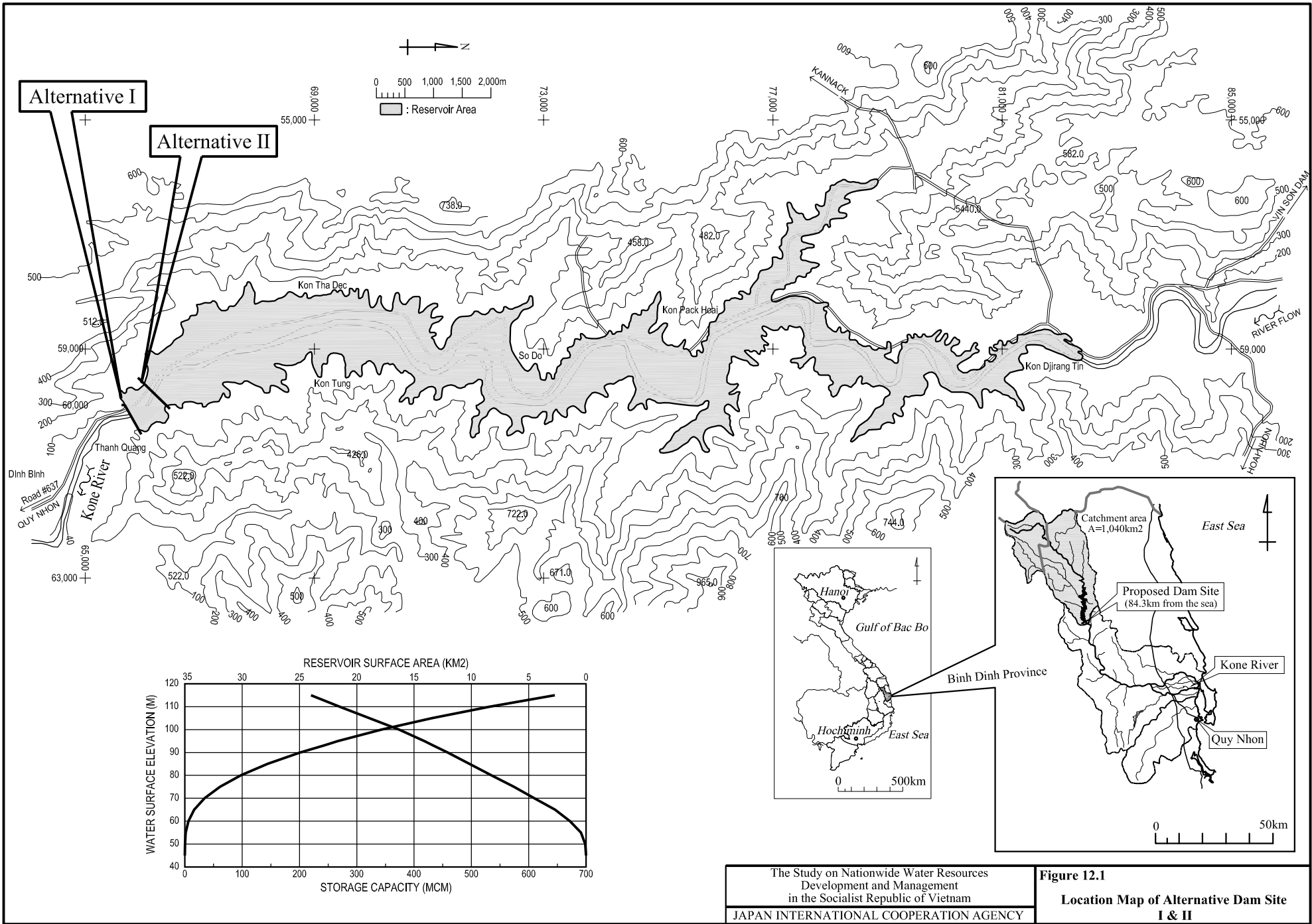
Figure 10.1 Overall Implementation Schedule by Sector

Description	Year																		
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>1. Study on Nationwide Water Resources</b>	[Gantt bars for 2002-2003]																		
Kone River Basin Master Plan	[Gantt bar for 2002]																		
Kone River Basin Feasibility Study	[Gantt bar for 2003]																		
<b>2. Dinh Binh Reservoir Project</b>	[Gantt bars for 2003-2011]																		
2.1 Financial Arrangement	[Gantt bars for 2003-2004]																		
2.2 Approval of Project and Arrangement by GOV	[Gantt bars for 2003-2006]																		
2.3 Procurement of Consultant	[Gantt bar for 2004]																		
2.4 Engineering Services (Basic Design, Detailed Design and Supervision)	[Gantt bars for 2005-2011]																		
2.5 Pre-qualification Tendering	[Gantt bar for 2006]																		
2.6 International Competitive Bidding	[Gantt bar for 2007]																		
2.7 Land Acquisition and Resettlement	[Gantt bars for 2003-2006]																		
2.8 Dinh Binh Reservoir Project( Concrete Dam )	[Gantt bars for 2007-2011]																		
2.9 Relocation Road	[Gantt bars for 2005-2006]																		
<b>3. Flood Control Facilities</b>	[Gantt bars for 2007-2016]																		
3.1 Financial Arrangement	[Gantt bars for 2007-2008]																		
3.2 Approval of Project and Arrangement by GOV	[Gantt bars for 2007-2011]																		
3.3 Procurement of Consultant	[Gantt bar for 2009]																		
3.4 Engineering Services (Basic Design, Detailed Design and Supervision)	[Gantt bars for 2010-2016]																		
3.5 Pre-qualification Tendering	[Gantt bar for 2011]																		
3.6 International Competitive Bidding	[Gantt bar for 2012]																		
3.7 Land Acquisition and Resettlement	[Gantt bars for 2007-2011]																		
3.8 Flood Control Facilities	[Gantt bars for 2012-2016]																		
<b>4. Irrigation and Drainage Facilities</b>	[Gantt bars for 2003-2019]																		
4.1 Financial Arrangement	[Gantt bars for 2003-2004]																		
4.2 Approval of Project and Arrangement by GOV	[Gantt bars for 2003-2010]																		
4.3 Procurement of Consultant	[Gantt bar for 2004]																		
4.4 Engineering Services (Basic Design, Detailed Design and Supervision)	[Gantt bars for 2005-2019]																		
4.5 Pre-qualification Tendering	[Gantt bars for 2006, 2010]																		
4.6 International Competitive Bidding	[Gantt bars for 2007, 2011]																		
4.7 Land Acquisition and Resettlement	[Gantt bars for 2003-2006]																		
4.8 Irrigation and Drainage facilities	[Gantt bars for 2007-2019]																		
<b>5. Domestic and Industrial Water Supply</b>	[Gantt bars for 2003-2019]																		
5.1 Financial Arrangement	[Gantt bars for 2003-2004]																		
5.2 Approval of Project and Arrangement by GOV	[Gantt bars for 2005-2006, 2015-2016]																		
5.3 Procurement of Consultant	[Gantt bars for 2005, 2015]																		
5.4 Engineering Services (Basic Design, Detailed Design and Supervision)	[Gantt bars for 2006-2010, 2015-2019]																		
5.5 Pre-qualification Tendering	[Gantt bars for 2007, 2016]																		
5.6 International Competitive Bidding	[Gantt bars for 2008, 2017]																		
5.7 Domestic and Industrial Water Supply	[Gantt bars for 2007-2019]																		

Figure 10.2 Overall Implementation Schedule by Facility

Description	Year																			
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
<b>1. Dinh Binh Reservoir Project</b>																				
1.1 Preparatory Works																				
1.2 River Diversion																				
1.3 Dam																				
- Dam Excavation																				
- Foundation Treatment																				
- Concrete Dam																				
1.4 Hydromechanical Works																				
1.5 Hydropower																				
- Powerhouse																				
- Generating Equipment																				
- Substation																				
1.6 Relocation Road																				
1.7 High Voltage Line																				
1.8 Financial Arrangement																				
1.9 Land Acquisition and Resettlement																				
1.10 Engineering Services by Consultants																				
<b>2. Flood Control Facilities</b>																				
2.1 Preparatory Works																				
2.1 Thi Nai Swamp																				
- Sea Dyke																				
- Improvement of Sluice Gates																				
- Improvement of Spillway																				
- New Construction of Spillway																				
2.2 Dap Da River																				
- Dyke																				
- Bridges																				
- Side Overflow Spillway																				
- New Construction of Sluice Gates																				
- Bank Protection works																				
- Reconstruction of Irrigation Weir																				
2.3 Go Cham River																				
- Dyke																				
- Bridges																				
- Side Overflow Spillway																				
- New Construction of Fixed Weir																				
- Reconstruction of Irrigation Weir																				
- Bank Protection works																				
2.4 Tan An River																				
- Dyke																				
- Bridges																				
- Side Overflow Spillway																				
- New Construction of Sluice Gates																				
- Improvement of Irrigation Weir																				
- Bank Protection works																				
2.5 Nam Yang River																				
- Dyke																				
- Bridges																				
- New Construction of Sluice Gates																				
- Bank Protection works																				
2.6 Ca My River																				
- Dyke																				
- Bank Protection works																				
2.7 Kone River																				
- Groyne																				
2.4 Financial Arrangement																				
2.5 Land Acquisition and Resettlement																				
2.6 Engineering Services by Consultants																				
<b>3. Irrigation and Drainage Facilities</b>																				
3.1 Preparatory Works																				
3.2 Van Phong Weir																				
- Weir																				
- Scouring Sluice and Intake Facilities																				
3.3 Rehabilitation Works of Existing Weirs																				
- 7 Weirs																				
- 1 Weir (Loc Giang)																				
3.4 Construction Works of New Weirs																				
- 1 Weir																				
3.5 Construction Works of New Earthfill Dams																				
- 1 Earthfill Dam (Phu Tai)																				
- 10 Earthfill Dams																				
3.6 Existing Reservoirs to be Rehabilitated																				
- 18 Reservoirs																				
3.7 Construction of New Pumping Station																				
- 6 places																				
3.8 Improvement of Existing Function																				
- 15,700 ha																				
- 8,700 ha																				
3.9 Rehabilitation and Improvement for Non-Function Area																				
- 3,200 ha																				
- 3,500 ha																				
3.10 Construction for New Development Area																				
- 17,800 ha																				
- 2,600 ha																				
- 3,000 ha																				
3.11 Financial Arrangement																				
3.12 Land Acquisition and Resettlement																				
3.13 Engineering Services by Consultants																				
<b>4. Domestic and Industrial Water Supply</b>																				
4.1 Preparatory Works																				
4.2 Raw Water Intake and Pre-treatment Units																				
4.3 Booster Pumping Stations and Ancillaries																				
4.4 Elevated Storage reservoirs																				
4.5 Pipelines (Primary, secondary and tertiary Mains)																				
4.6 Metered House Connections																				
4.7 Financial Arrangement																				
4.8 Engineering Services by Consultants																				

Note : Marked with..... means design and manufacturing period.



**Figure 12.1**  
**Location Map of Alternative Dam Site I & II**