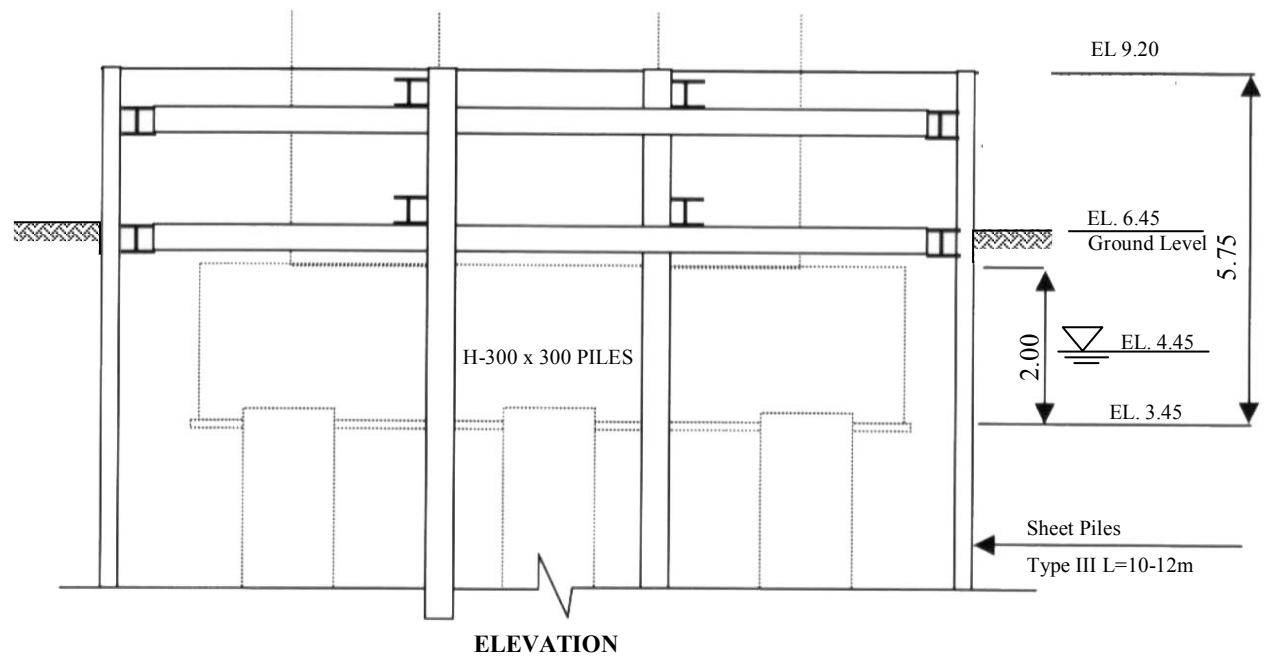
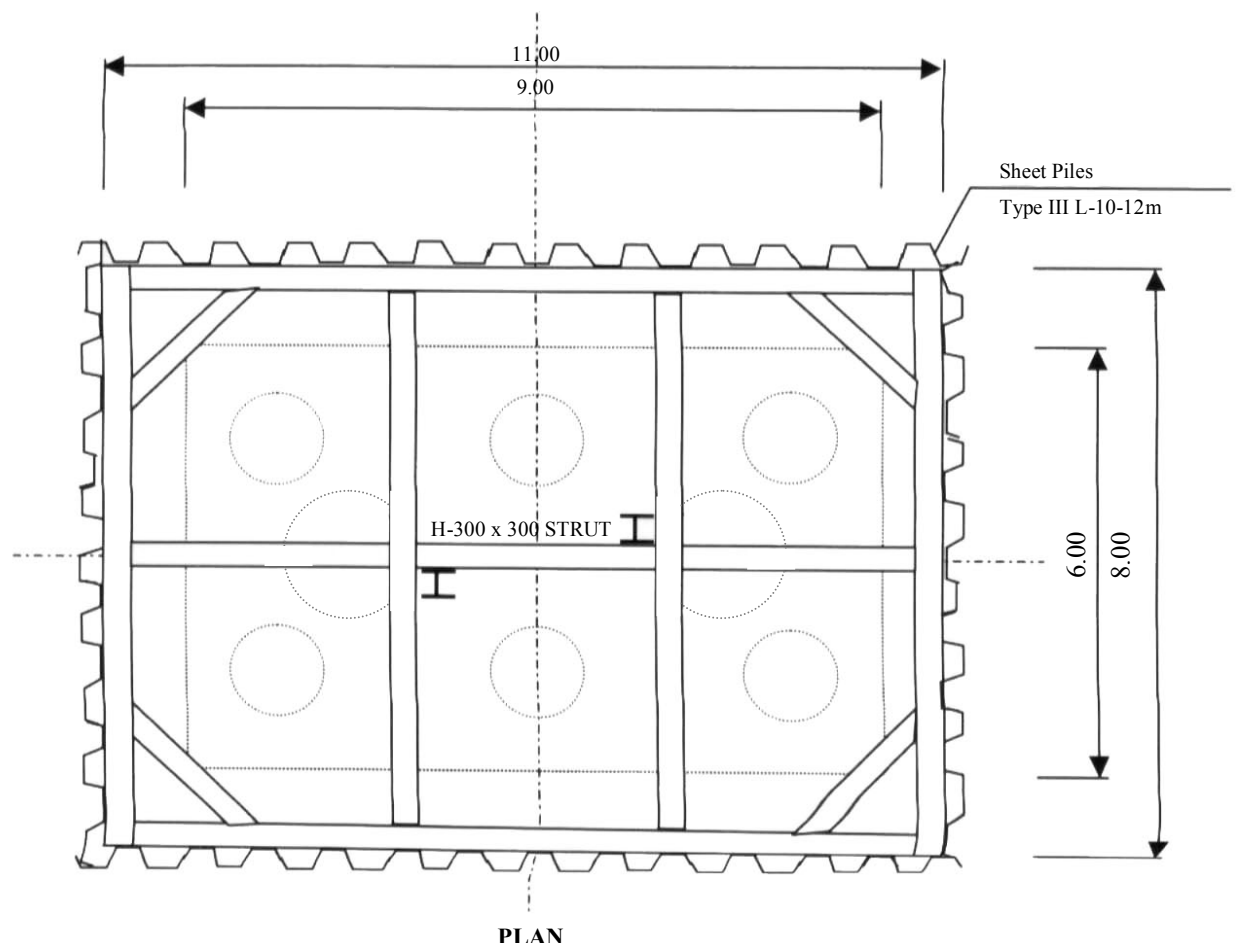


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Figure 1.3.1
**General View of the Bucao Bridge for
 Reconstruction**

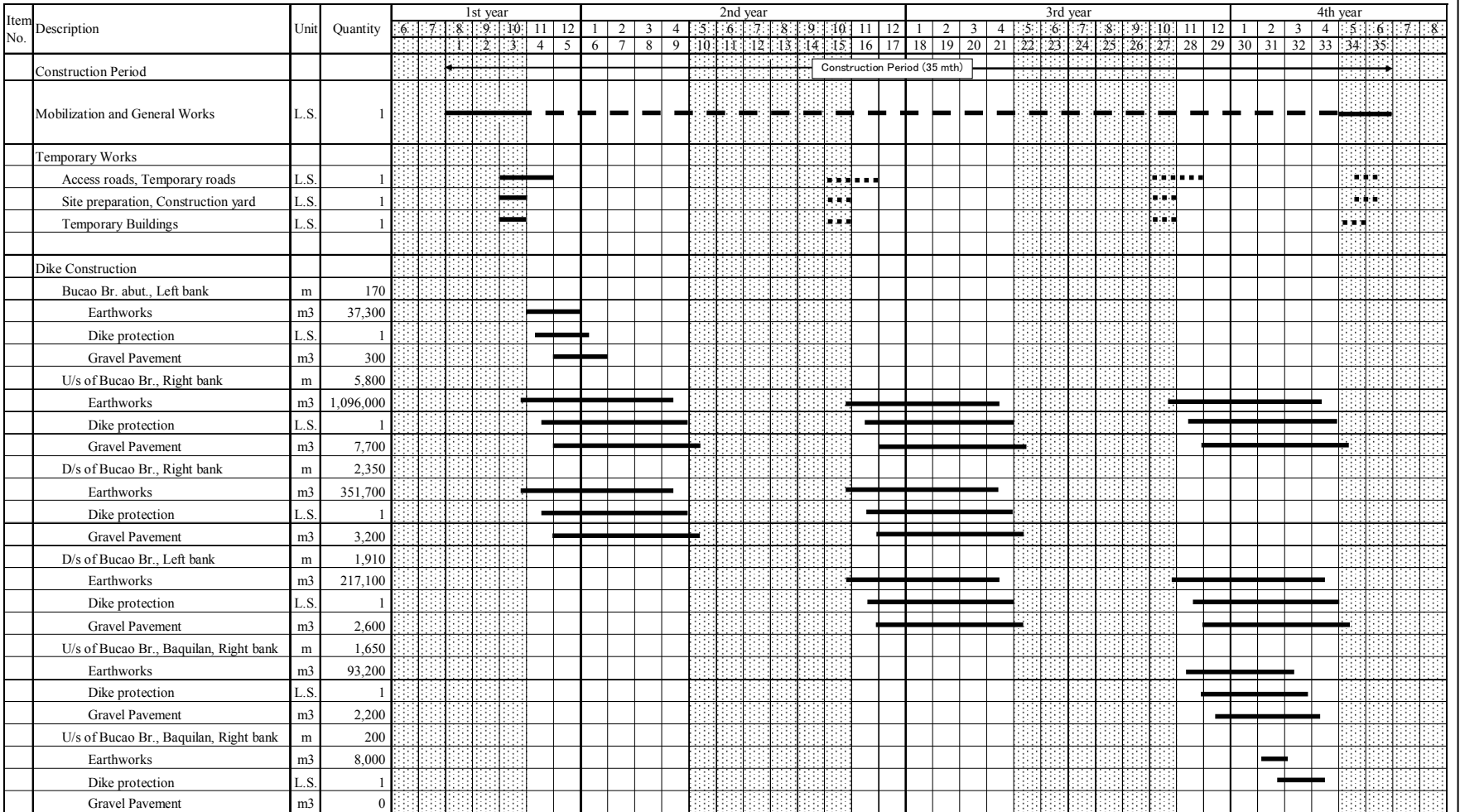


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Figure 1.3.2
Cofferdam for Pier Foundation



Note: Dry season is from November to April and rainy season is from May to October.
Earthworks quantities show required embankment volume for constructing each section of dikes.

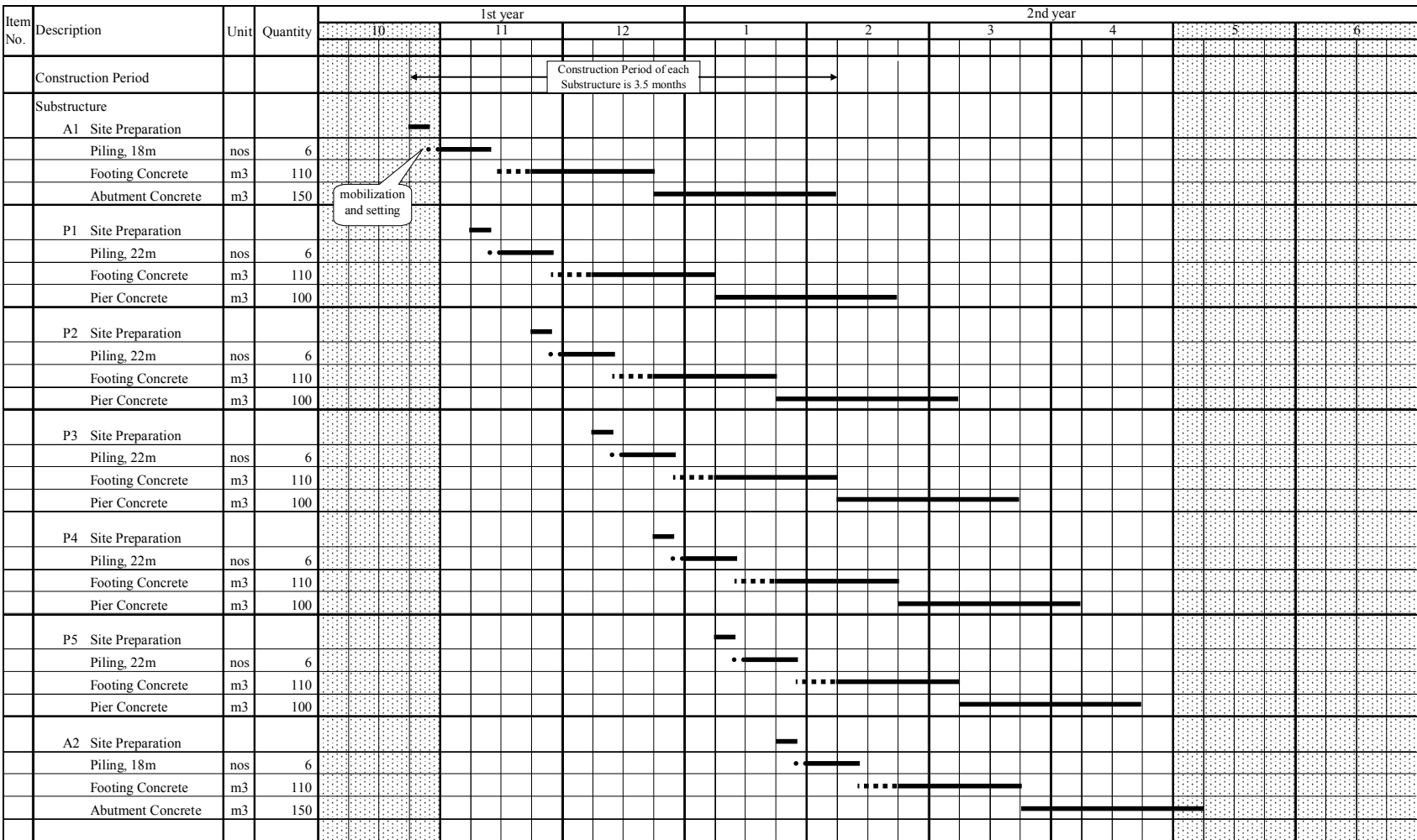
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Figure 1.3.3

Construction Schedule of the Bucao Bridge



Note: Foundation piling starts from left bank (A1) towards river flow center (possibly up to P4) then shift to the right bank and resume work from river flow center (P5) to right bank (A2).

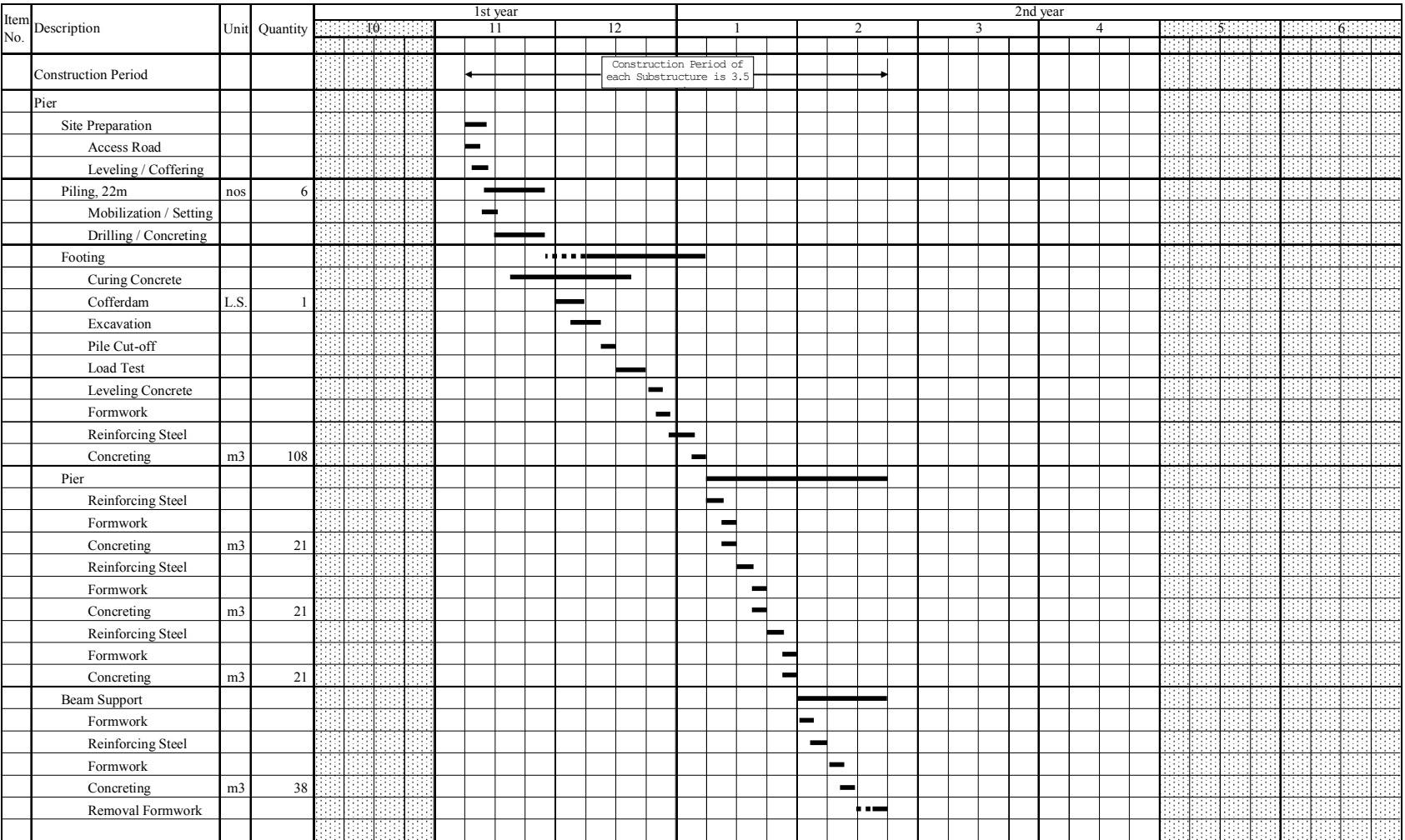
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Figure 1.3.4

The Study on Sabo and Flood Control for
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Detailed Construction Schedule of the Bucaro
Bridge Substructure

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Note: Time required for concrete curing and loading test of piles are included.

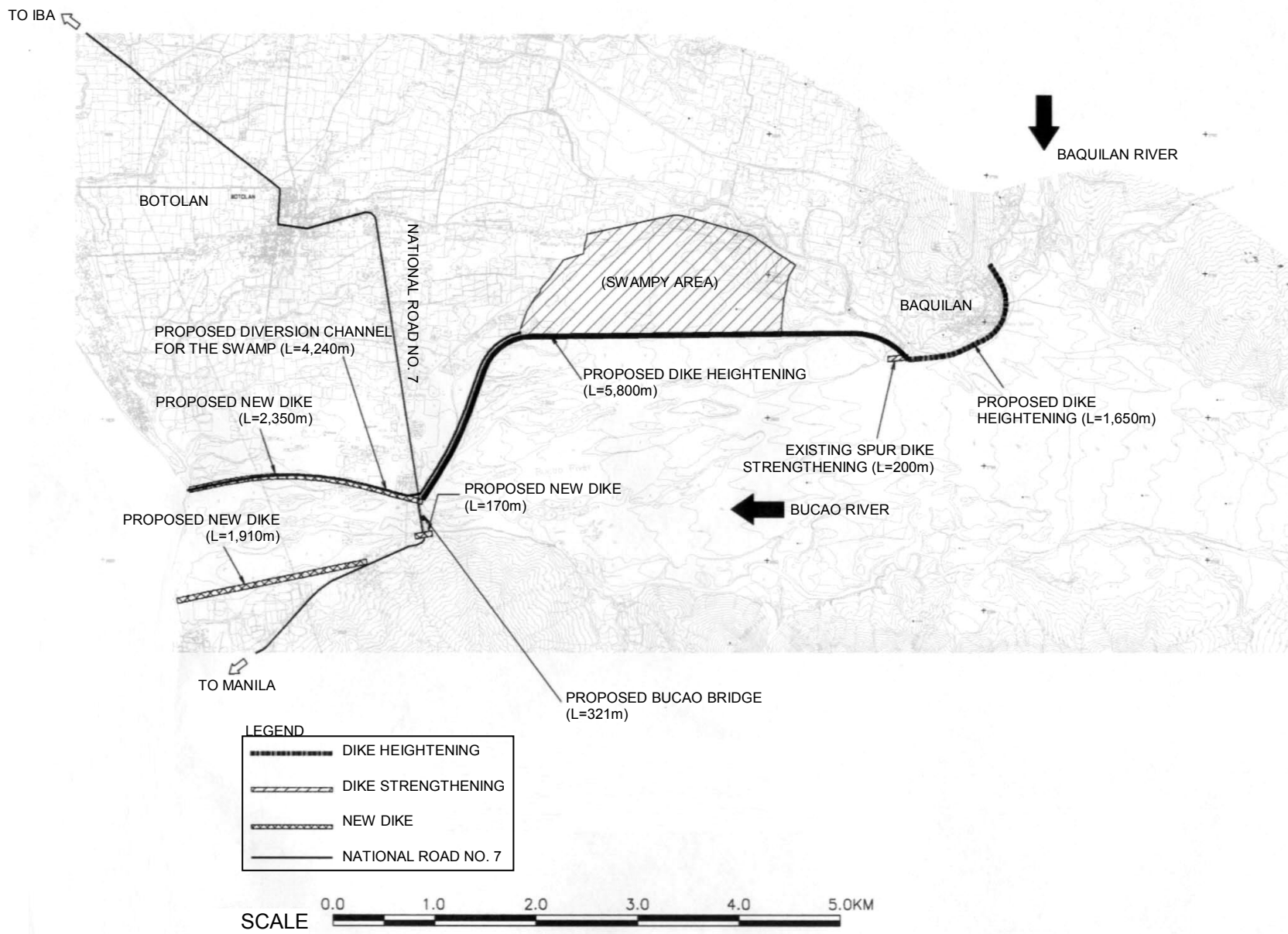
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Figure 1.3.5

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Typical Construction Schedule of the Bucao
Bridge Pier

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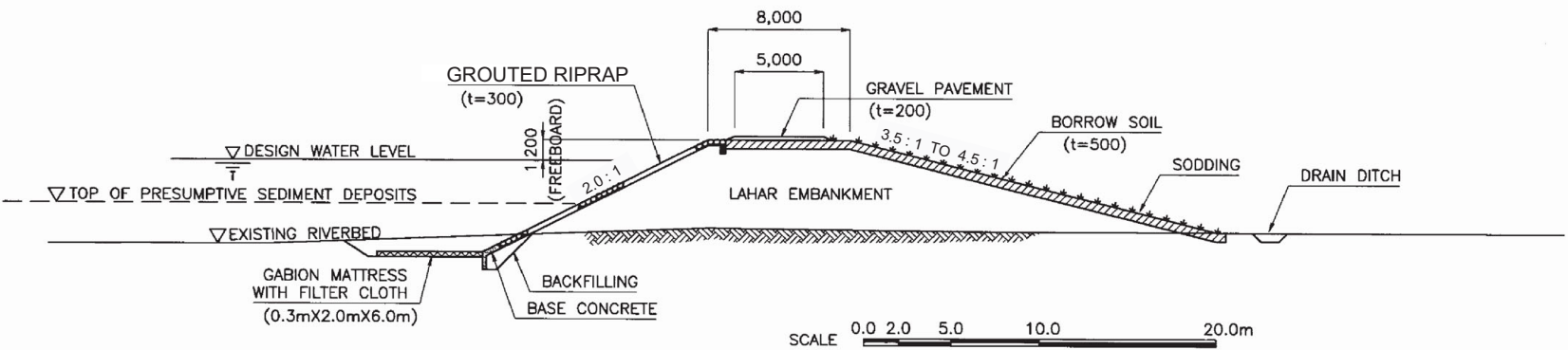
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Figure 1.4.1

Locations of the Bucao River Dikes



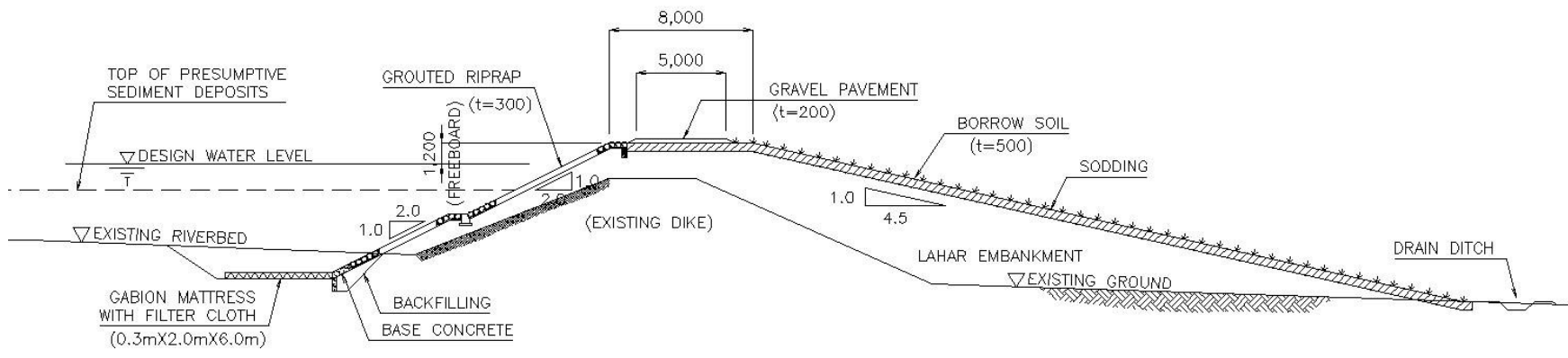
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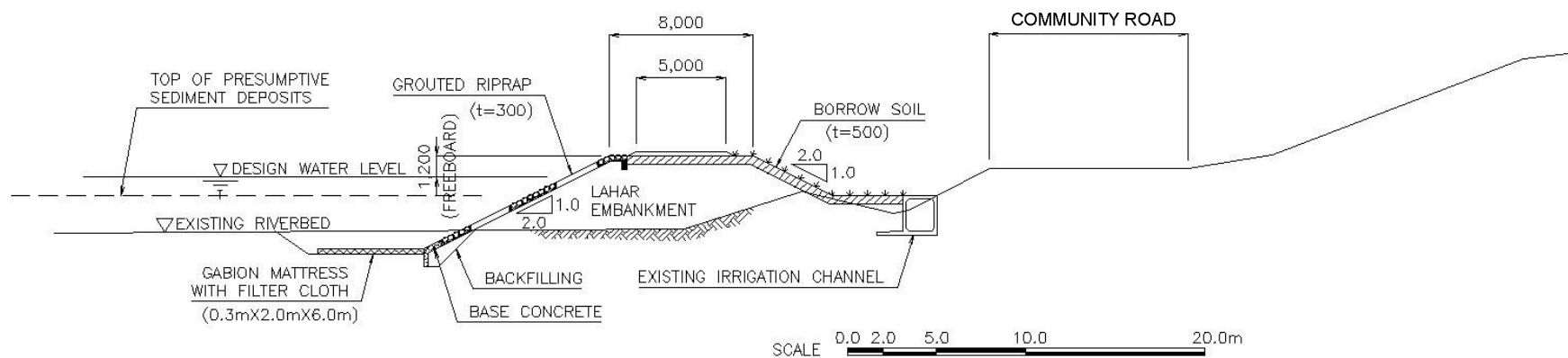
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Figure 1.4.2

**Typical Cross Section of New Dike, Bucao
 River**

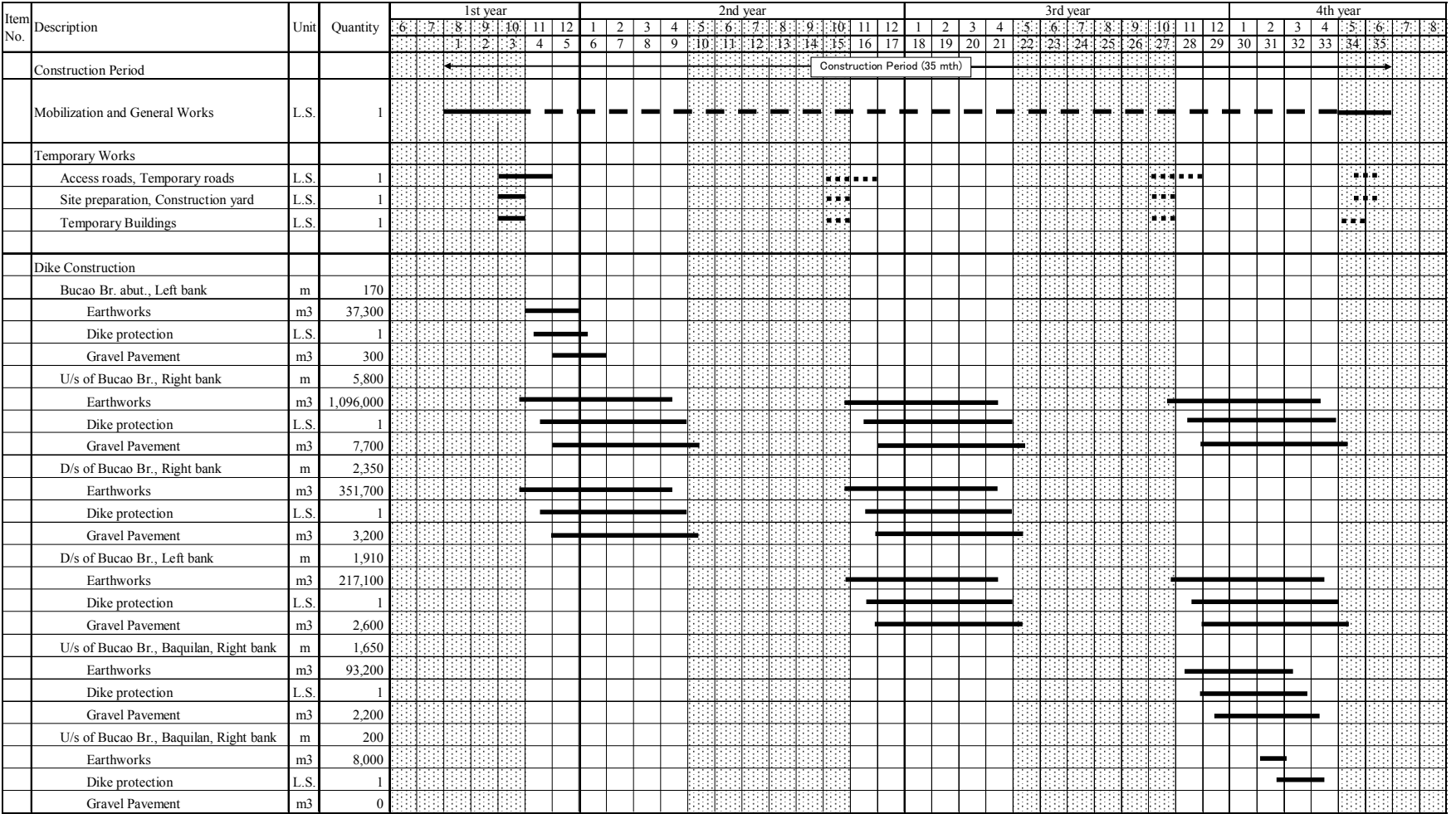


BUCAO BRIDGE TO STA. +4.8 KM



SCALE 0.0 2.0 5.0 10.0 20.0m

STA. +4.8 KM UPSTREAM



Note: Dry season is from November to April and rainy season is from May to October.
Earthworks quantities show required embankment volume for constructing each section of dikes.

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Figure 1.4.4

The Study on Sabo and Flood Control for Western River Basins of Mount Pinatubo in the Republic of the Philippines

Construction Schedule of the Bucao River Dikes

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Item No.	Description	Unit	Quantity	1st year			2nd year					
				10	11	12	1	2	3	4	5	
New Dike (L=2,350m in 12 months = @196m/month)												
	Clearing & Grabbing	t=20cm	m ²	10,500	█	█	█	█	█	█		
	Embankment (Lahar Material)		m ³	29,300	█	█	█	█	█	█	█	█
	Excavation	h=1.0m	m ³	3,070	█	█	█	█	█	█	█	█
	Base Concrete (1) incl. form work	h=1.0m	m ³	54	█	█	█	█	█	█	█	█
	Curing / Form removal											
	Backfilling		m ³	583	█	█	█	█	█	█	█	█
	Base Concrete (2)	σca = 17 MPa	m ³	54	█	█	█	█	█	█	█	█
	Filter Cloth		m ²	1,300	█	█	█	█	█	█	█	█
	Gabion Mattress	0.3 x 2.0 x 6.0m	m ³	392	█	█	█	█	█	█	█	█
	Wet Stone Masonry	t=30cm	m ³	950	█	█	█	█	█	█	█	█
	Covering Borrow Soil	t=50cm	m ³	3,390	█	█	█	█	█	█	█	█
	Sodding	t=10mm	m ²	5,220	█	█	█	█	█	█	█	█
	Gravel Pavement	t=20cm	m ³	267	█	█	█	█	█	█	█	█
Dike Heightening (L=5,800m in 18 months = @322m/month)												
	Demolition of Existing Revetment		m ³	1,570	█	█	█	█	█	█	█	█
	Clearing & Grabbing	t=20cm	m ²	22,300	█	█	█	█	█	█	█	█
	Embankment (Lahar Material)		m ³	60,900	█	█	█	█	█	█	█	█
	Excavation	h=1.0m	m ³	7,170	█	█	█	█	█	█	█	█
	Base Concrete (1) incl. form work	h=1.0m	m ³	83	█	█	█	█	█	█	█	█
	Curing / Form removal											
	Backfilling		m ³	960	█	█	█	█	█	█	█	█
	Base Concrete (2)	σca = 17 MPa	m ³	83	█	█	█	█	█	█	█	█
	Filter Cloth		m ²	2,130	█	█	█	█	█	█	█	█
	Gabion Mattress	0.3 x 2.0 x 6.0m	m ³	639	█	█	█	█	█	█	█	█
	Wet Stone Masonry	t=30cm	m ³	2,090	█	█	█	█	█	█	█	█
	Covering Borrow Soil	t=50cm	m ³	7,490	█	█	█	█	█	█	█	█
	Sodding	t=10mm	m ²	12,500	█	█	█	█	█	█	█	█
	Gravel Pavement	t=20cm	m ³	428	█	█	█	█	█	█	█	█

Note: Quantities and bar schedule show required volume and time for completing the work in every 1 month.

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Figure 1.4.5

**Typical Construction Schedule of the Bucaco
River Dikes**