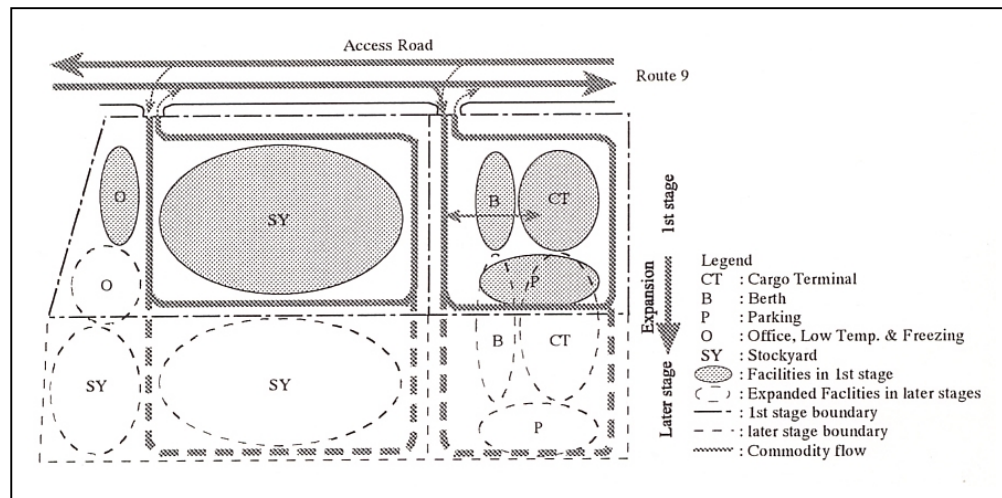


temperature and freezing storage. The site plan is proposed to facilitate future extension and commodity flow.

**Table 6.19 Floor Area of Cargo Terminal**

Buildings	Floor Area (m <sup>2</sup> )			Note
	1 <sup>st</sup> stage	Ultimate Stage	Total	
Cargo Terminal	4,000	8,000	12,000	Including offices for transportation company, packaging yard, low temperature and freezing storage.



**Figure 6.24 Conceptual Plan of Cargo Terminal & Bonded Warehouse**

## 6.8 Estimated Cost

Development cost at the 1st stage has been estimated to be around US\$13.0 million, as show below.

This estimate is made on the assumptions as follows:

- i) Site A is currently used for paddy fields and forestry. The amount for land compensation is provisional.
- ii) Buildings are developed by private investment. Earthwork is to be done by public investment at the 1st stage.

**Table 6.20 Estimated Cost of Site A**

(US\$)

Items		1st Stage	Mid. Stage	Ult. Stage	Total
<b>1</b>	<b>Land Acquisition</b>	<b>1,615,600</b>	<b>3,474,200</b>	<b>3,878,000</b>	<b>8,967,800</b>
<b>2</b>	<b>Internal Infrastructure</b>				
2.1	Earthwork				
	a) Clearing and grubbing	54,202	7,173	45,195	106,570
	b) Cut	2,617,020	0	5,337,890	7,954,910
	c) Fill	1,940,400	0	5,643,000	7,583,400
	d) Disposal of Unsuitable Materials	72,800	0	0	72,800
2.2	Road				
	a) Main Road	975,685	231,173	1,145,665	2,352,523
	b) Sub Road	219,569	0	671,622	891,191
	c) Collector Road	67,290	42,617	0	109,907
2.3	Drainage				
	a) Regulation Pond	405,545	890,925	0	1,296,470
	b) Drainage Canal	892,068	0	3,766,170	4,658,238
2.4	Water Supply				
	a) Reservoir	47,837	0	253,202	301,039
	b) Pipeline	63,515	0	670,664	734,180
	c) Water Treatment Plant	0	0	2,660,084	2,660,084
2.5	Sewerage				
	a) Pipeline	113,820	0	367,676	481,496
	b) Sewage Treatment Plant	0	0	3,904,956	3,904,956
2.6	Electric Facility	565,166	269,183	2,967,290	3,801,639
2.7	Telecommunication Facility	920,370	447,020	1,366,250	2,733,640
2.8	Green & Park	300,000	0	396,000	696,000
2.9	Engineering Service Cost	1,110,634	226,571	3,503,480	4,840,685
2.10	Sub Total	10,365,921	2,114,661	32,699,145	45,179,728
2.11	Physical Contingency	1,036,592	211,466	3,269,914	4,517,973
2.12	Total	11,402,514	2,326,128	35,969,059	49,697,701
<b>3</b>	<b>Total(Land Acquisition + Infrastructure)</b>	<b>13,018,114</b>	<b>5,800,328</b>	<b>39,847,059</b>	<b>58,665,501</b>

**Table 6.21 Estimated Cost of Site B**

(US\$)

Items		1st Stage	Ult. Stage	Total
<b>1</b>	<b>Land Acquisition</b>	<b>0</b>	<b>358,400</b>	<b>358,400</b>
<b>2</b>	<b>Internal Infrastructure</b>			
2.1	Earthwork			
	a) Clearing and grubbing	664	4,177	4,840
	b) Cut	87,234	372,198	459,432
	c) Fill	83,160	354,816	437,976
2.2	Road			
	a) Sub Road	74,912	100,743	175,655
	b) Collector Road	0	78,504	78,504
2.3	Drainage			
	a) Regulation Pond	0	715,289	715,289
	b) Drainage Canal	88,293	251,180	339,473
2.4	Water Supply			
	a) Reservoir	4,079	7,247	11,326
	b) Pipeline	2,790	10,970	13,760
	c) Deep Well	13,247	23,536	36,783
2.5	Electric Facility	265,383	269,883	535,266
2.6	Telecommunication Facility	168,000	269,500	437,500
2.7	Green & Park	4,000	88,000	92,000
2.8	Engineering Service Cost	95,011	305,525	400,536
2.9	Sub Total	886,773	2,851,567	3,738,340
2.10	Physical Contingency	88,677	285,157	373,834
2.11	Total	975,450	3,136,723	4,112,174
<b>3</b>	<b>Total</b>	<b>975,450</b>	<b>3,495,123</b>	<b>4,470,574</b>

## 6.9 Implementation Schedule

The opening of SEZ is targeted to be the opening of the New Mekong Bridge or 2004. The schedule is proposed on the following preconditions:

- i) Preparation of the SEZ law will take about two years.
- ii) Promotion of FDI to SEZ will be initiated as early as possible.
- iii) The SEZ Authority is established after the enactment of the law.
- iv) Prior to the opening of SEZ, training of SEZ Authority staff is required. The training for more than 3 months will be done at Site B.
- v) The existing factories in the SEZ zone are permitted for SEZ privilege immediately after the opening of SEZ.
- vi) The development area is expanded at Site A and Site B, following the investment demands.

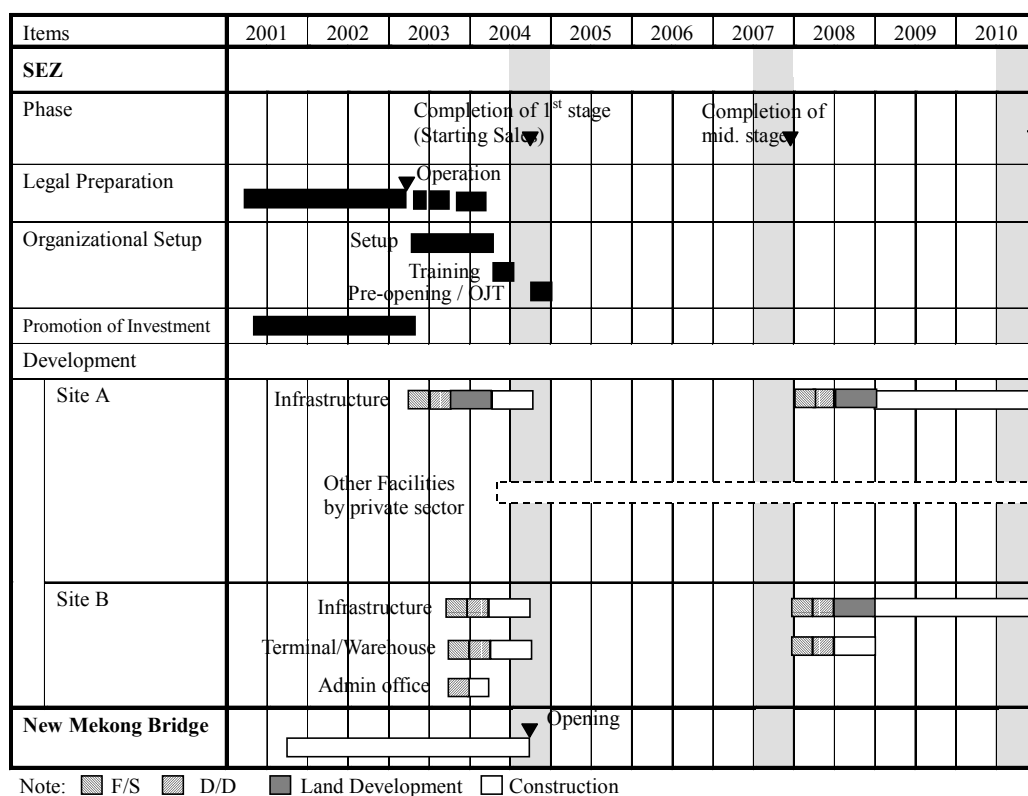


Figure 6.25 Implementation Schedule

## 6.10 Economic Impact of Savannakhet SEZ

It is not easy to predict economic impacts of SEZ development, as the demands are unpredictable for the long term. The prediction of economic impacts is therefore confined to the impacts in the manufacturing sector, including packaging. As the manufacturing sector is a small part of SEZ, the overall impacts of SEZ development would be much more notable.

Prediction has been conducted in the following manner:

- 1) The number of employees is estimated for each subsector.
- 2) Value added and total outputs are estimated for each subsector, based on the UNIDO Survey on the existing industries.

Besides, the following assumptions have been applied:

- 1) Development area for the manufacturing sector is 100 ha in the year 2010.
- 2) Manufacturing factories for 5 subsectors, namely i) wood processing, ii) food processing, iii) garment, iv) electric and v) packaging, are expected to be set up in the land of 20 ha each when fully occupied.
- 3) Three (3) cases of projection are exercised; i) conservative case with an occupancy rate of 30% in 2010, ii) base case with an occupancy rate of 50% in 2010, and iii) optimistic case with an occupancy rate of 70% in 2010.

As shown in the table below, the manufacturing sector in Savannakhet SEZ will have employment of 14,000, output of 1,087 billion kips and value added of 416 billion kips at 1999 price for the base case.

**Table 6.22 Estimate of Economic Impact of SEZ Development (Manufacturing) in 2010**

	Composition of Manufacturing in Savannakhet SEZ	Total	Wood	Food	Garment	Electronic	Packaging <sup>3</sup>
			processing	processing			
Data for Estimation	Area (ha)	100.0	20.0	20.0	20.0	20.0	20.0
	Employees per ha <sup>1</sup>		120	520	500	150	110
	Value added per employee <sup>2</sup> (Kip '000)		2,520	69,359	6,575	6,575	17,403
	Value added ratio <sup>2</sup>		0.09	0.68	0.24	0.11	0.05
1. Conservative Case (Occupancy 30%)	Employment	8,400	720	3,120	3,000	900	660
	Value added (Kip mil.)	249,634	1,814	216,400	19,725	209	11,486
	Output (Kip mil.)	652,201	20,160	318,235	82,188	1,898	229,720
2. Base Case (Occupancy 50%)	Employment	14,000	1,200	5,200	5,000	1,500	1,100
	Value added (Kip mil.)	416,057	3,024	360,667	32,875	348	19,143
	Output (Kip mil.)	1,087,001	33,600	530,392	136,979	3,164	382,866
3. Optimistic Case (Occupancy 70%)	Employment	19,600	1,680	7,280	7,000	2,100	1,540
	Value added (Kip mil.)	582,480	4,234	504,934	46,025	487	26,801
	Output (Kip mil.)	1,521,802	47,040	742,549	191,771	4,429	536,012

Notes: 1. Data quoted from Investment Demand Survey in Vietnam.

2. Data quoted from Survey by UNIDO.

3. Value data represented by publishing and printing.

Source: JICA Study Team