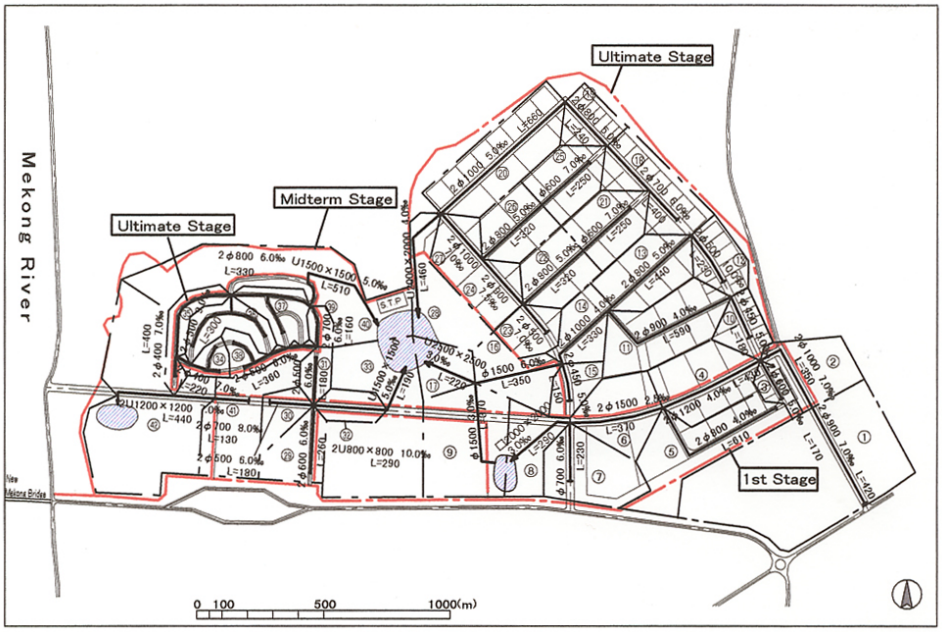

Figure 6.13 Layout of Drainage at Site A

(7) Water Supply System

It is reported that groundwater of less than 50 m in depth is saline and the Mekong river is recommended to be a water source at the ultimate stage. It is noted, however, that according to MCTPC, saline water does not appear in the wells of less than 20 m in depth in Khantabouly. Consequently, the water supply system at Site A is planned in the following manner:

1st Stage : Water can be supplied from the Khantabouly Water Treatment Plant which is currently under the basic design stage for its expansion funded by JICA. The distribution pipeline of this project will come to the junction of the access road and Route 9. Water will be lead from the junction to the marketing center area and hotel area. Water for the industrial zone is supplied by gravity from the elevated tank. The supply capacity from the Khantabouly Water Treatment Plant will be 1,500 m^3/day.

Midterm Stage : Wells are developed for water supply to the residential area and service apartment. Prior to explore the wells, quality of groundwater should be closely examined.

Ultimate Stage : Raw water is taken from the Mekong river. The water is pumped from intake facilities through conveyance pipeline along the east-west road to the water treatment

plant in the industrial area. Treated water is distributed from an elevated tank by gravity.

Water demand for industrial use is estimated at the unit water consumption of 85.6 m^3/day/ha. Other water demands for commerce, amenity, and supporting areas are estimated at the unit water consumption of floor area or population in the facilities. The water demand at the 1st stage is calculated to be about 1,500 m^3/day, as shown in Table 6.9.

Table 6.9 Projected Water Demand at Site A

Area	Facilities	Water Demand (m^3/day)			Note
		1st Stage	Midterm Stage	Ultimate Stage	
Industry	Factories	1,464.4		7,750.0	85.6m^3/day/ha
Marketing Center	Administration Center	3.0			15 l/day/m^2
	Marketing Center	6.0	4.5	4.5	15l/day/m^2
	Wholesale	10.0	10.0	10.0	20l/day/m^2
	Exhibition	8.0			30 l/day/person
	Skill Training Center	8.0		8.0	80 l/day/person
Hotel	Hotel	26.3			250 l/day/person, 100 rooms
	Duty Free Shop	4.0	4.0	4.0	20l/day/m^2
	Service Apartment		16.8		200 l/day/person, 60 rooms
Residential	Bungalows & Housing			354.0	200 l/day/person, 100 persons/ha
Golf Course	Golf & Sports facilities		10.5		125 l/day/person
Total		1,529.6	45.8	8,130.5	

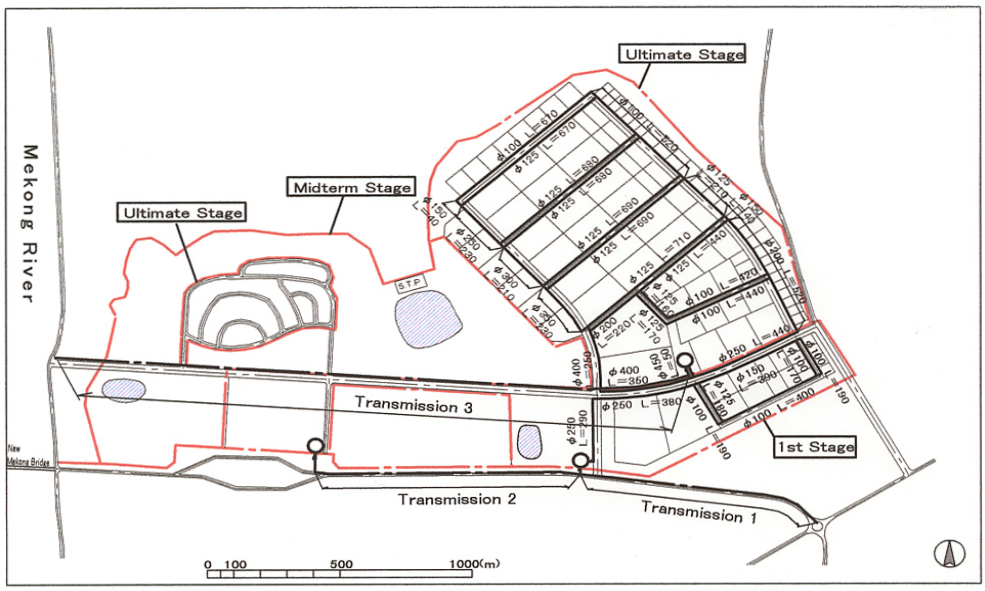

Figure 6.14 Layout of Water Supply Facilities at Site A

(8) Sewerage System

Wastewater in SEZ should be properly treated to avoid water pollution of the raw water. The facilities of wastewater treatment are planned as follows:

i) 1st & Midterm Stages:

All facilities are equipped with septic tanks. The infiltrated water is collected by sewerage pipelines to regulation ponds, where water is diluted. The outflow from the pond is inspected at the gate to the river.

ii) Ultimate Stage:

A sewerage treatment plant of oxidation ditch type is constructed beside the regulation pond on the lowest land in Site A. Wastewater of whole development area is collected by gravity through sewerage pipelines. The system covers the areas of the 1st and midterm stages.

The volume of wastewater is estimated as shown in Table 6.10.

Table 6.10 Projected Volume of Wastewater at Site A

Area	Facilities	Wastewater Volume (m^3/day)			
		1st Stage	Midterm Stage	Ultimate Stage	Total
Industry	Factories	1,701.0	0.0	9,022.4	10,703.4
Marketing Center	Administration Center	3.5	0.0	0.0	3.5
	Marketing Center	7.0	5.2	5.2	17.4
	Wholesale	11.6	11.6	23.2	46.5
	Exhibition	9.3	0.0	0.0	9.3
	Skill Training Center	9.3	0.0	9.3	18.6
Hotel	Hotel	30.5	0.0	0.0	30.5
	Duty Free Shop	4.6	4.6	4.6	13.9
	Service Apartment	0.0	19.5	0.0	19.5
Residential	Bungalows & Housing	0.0	0.0	411.2	411.2
Golf Course	Golf & Sports facilities	0.0	12.2	0.0	12.2
Total		1,776.8	53.2	9,456.0	11,286.0

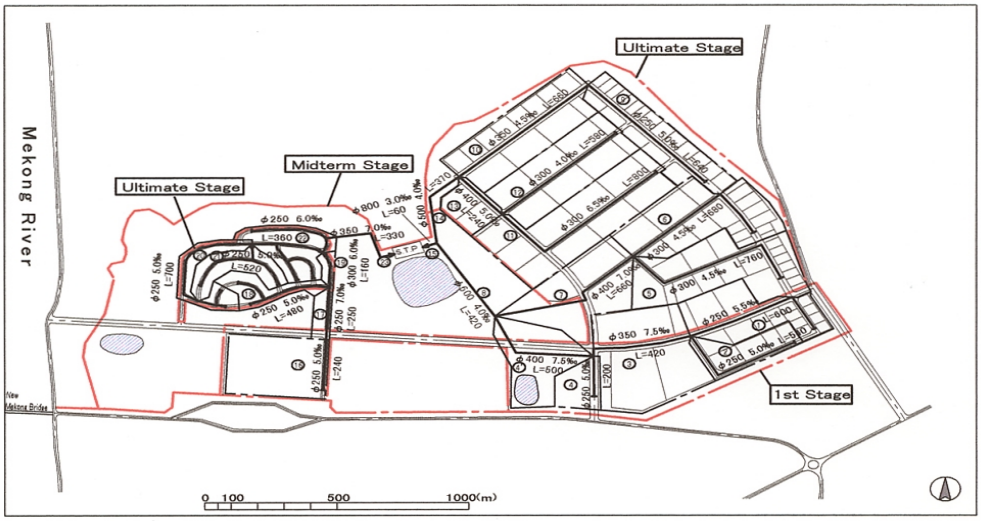

Figure 6.15 Layout of Sewerage Facilities at Site A

(9) Electricity

Electric power demand at Site A is estimated to be 3.5-4.0 MW at the 1st and midterm stages. The demand will increase to around 25 MW at the ultimate stage.

i) 1st Stage & Mid term stage: SEZ receives the power from the new substation (18.2 MW) in Khantabouly.

ii) Ultimate Stage: SEZ establishes the new substation (20MVA) to cover the additional demand at the Ultimate stage.

Since the planned capacity of the neo substation is insufficient if it supplies electricity to the gold/copper mine in Xepon, its capacity should be expanded accordingly.

Table 6.11 Power Demand in Savannakhet Province and SEZ (MW)

		1999	2004 (1st stage)	2005	2006	2007 (Mid. Stage)	2010 (Ultimate Stage)
Demand	Site A	-	3.4	3.6	3.7	3.9	24.9
	Site B	-	0.1	0.1	0.1	0.1	0.2
	Subtotal	-	3.5	3.7	3.8	4.0	25.2
	Savan.province (by EdL)	13.4	37.7 *	54.5 *	57.0	59.5	67.0
	Total	13.4	41.2	58.2	60.8 *	63.5 *	92.2 *
Supply	Pakbo Substation	18.2	18.2	18.2	18.2	18.2	18.2
	New Substation		18.2	18.2	18.2	18.2	18.2
	Nam Theun 2				75.0	75.0	75.0
	Total	18.2	36.4	36.4	111.4	111.4	111.4

Note: * including demand of the gold/copper mine in Xepon.

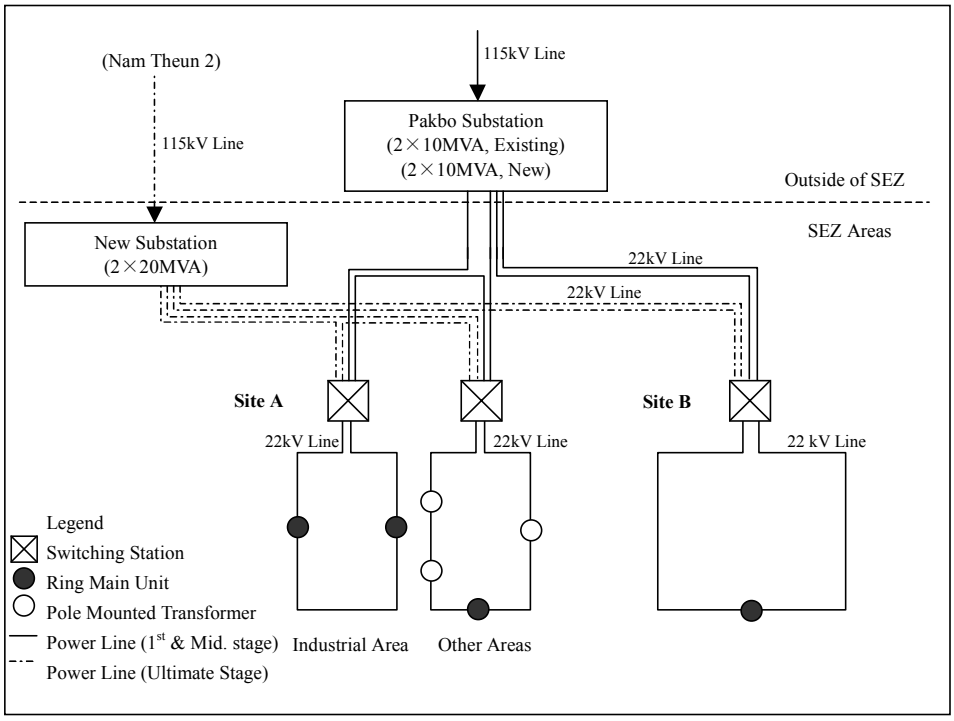

Figure 6.16 Electricity System Plan

(10) Telecommunications

Telecommunication demand in Savannakhet province is currently over the capacity of a 34Mbps microwave, which is the backbone of the provincial telecommunications system. SEZ requires sufficient telecommunications capacity, especially for marketing activity

At the 1st stage, SEZ establishes a new switching station, which connects to existing switching station in Khantabouly and an optical fiber route to be extended from Mukdahan along the New Mekong Bridge.

Table 6.12 Telecommunication Lines Demand

Area	1st Stage	Mid. Stage	Ultimate Stage	Total
Industry	108 lines	0 lines	522 lines	630 lines
Hotel	73 lines	113 lines	53 lines	240 lines
M.C.	140 lines	70 lines	100 lines	310 lines
Public	30 lines	30 lines	100 lines	160 lines
Housing	0 lines	0 lines	584 lines	584 lines
Total	351 lines	213 lines	1,359 lines	1,924 lines

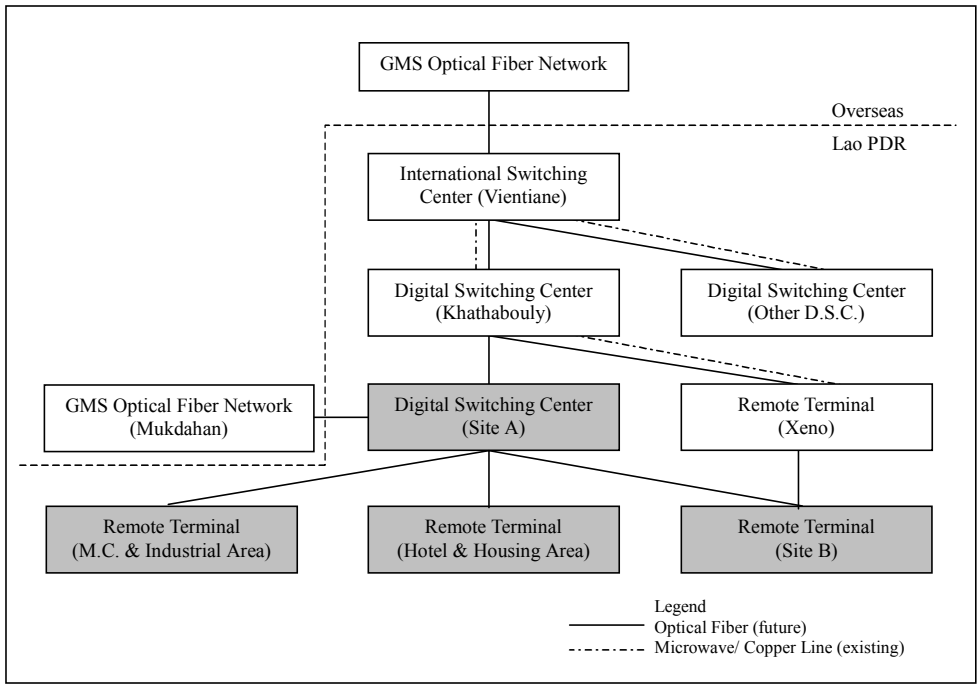

Figure 6.17 Telecommunication System Plan

(11) Buildings

A conceptual plan of buildings in the marketing center area, hotel area, and residential area has been prepared for reference. These areas are developed by private investment.

i) Marketing Center Area

The site plan is proposed as follows:

- Marketing center and wholesale area are located along the entrance road of SEZ.
- Exhibition facility is located between marketing center and wholesale area.
- Marketing center and administration office are in the same building.

Table 6.13 Floor Area in Marketing Center Area

Buildings	Floor Area (m^2)				Note
	1st stage	Mid. Stage	Ultimate Stage	Total	
Marketing Center	400	300	300	1,000	incl. bank, post office, meeting room, local product promotion center, FDI promotion center, shops
Admin. Center	200	-	-	200	
Wholesale	500	500	1,000	2,000	
Training Center	700	-	700	1,400	
Total	1,800	800	2,000	4,600	

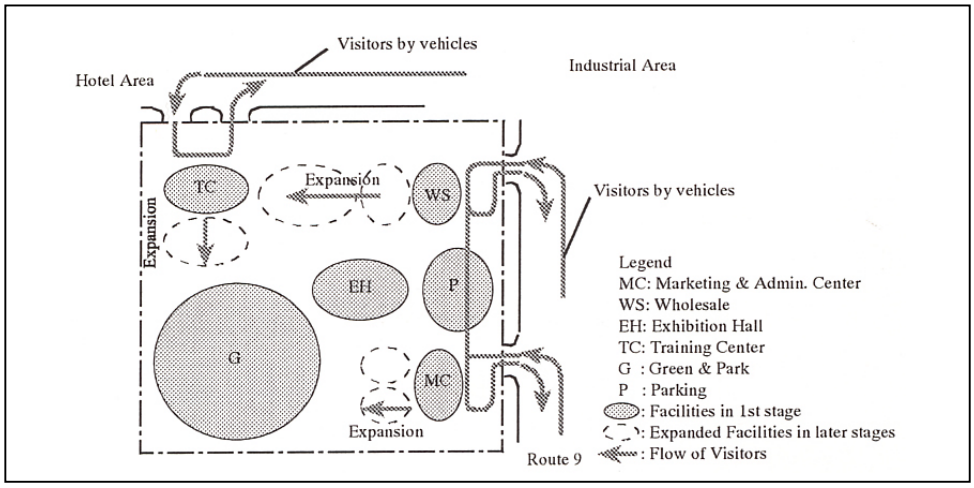

Figure 6.18 Conceptual Plan of Marketing Center

ii) Hotel Area

The hotel area is located at the highest place to ensure a view of the Mekong river and surrounding green belt. Duty free shops are arranged

adjacent to the Border Contract Facility of the New Mekong Bridge. Passenger can access to DFS directly through the pedestrian deck.

Table 6.14 Floor Area of Hotel Area

Buildings	Floor Area (m^2)			Note
	1st stage	Mid. Stage	Ultimate Stage	
Hotel	8,000	-	-	100 rooms, including restaurants and shops.
Service Apartment	-	6,000	-	60 bedrooms
Duty Free Shop	200	200	200	
Total	8,200	6,200	200	

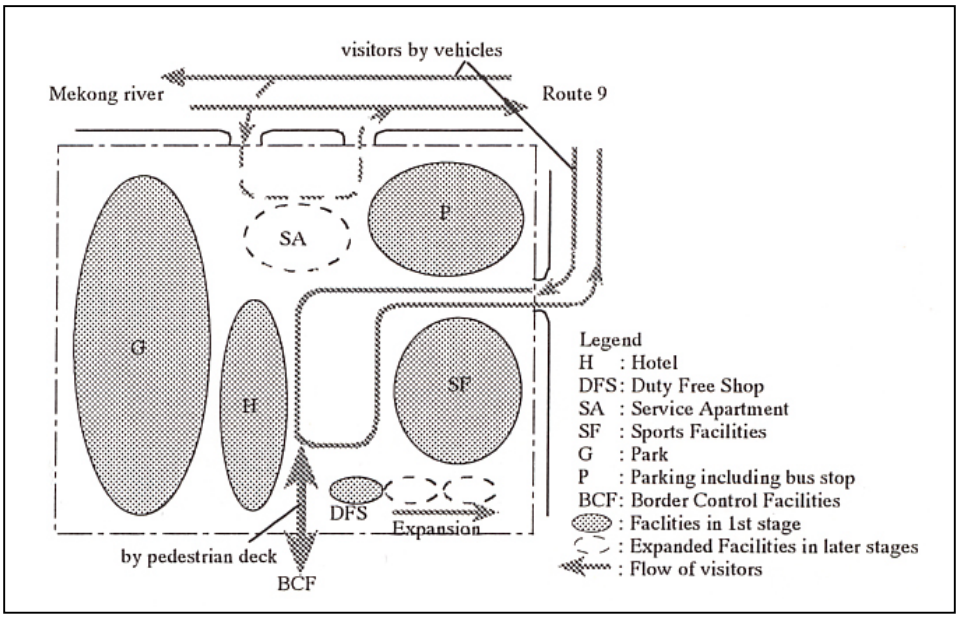

Figure 6.19 Conceptual Plan of Hotel Area

iii) Residential and the Other Areas

The residential area is planned as a low density housing area of 100 persons/ha. Houses are low rising type of two stories. The area is selected to the northern slope of the hill, to avoid sunstroke. The view of the Mekong River is also available. Golf course, park and green area are located in the buffer zone between the manufacturing area and the other areas. The green area surrounding the industrial zone prevents the other areas from noise and dust. Facilities in the park consist of athletic tools (multi-purpose park, game ground), and public open space (park, green field, and walk way).