

Chapter 10

Construction Programme, Manpower and Plant Planning

10.1 Construction Programme

The construction work of Pennar (Somasila) – Palar - Cauvery (Grand Anicut) project is proposed to be completed in 10 years. It is proposed to complete all the preliminary works such as additional survey, design studies, laboratory tests, construction of approach roads, preparation of detailed project report, etc. in the first 2 years. The process of land acquisition and thereafter rehabilitation and resettlement, procurement of machinery and T&P are proposed to be taken-up from the first year itself and can be completed by the end of second year. Construction of colonies and approach roads for the same and laying of electric lines shall also be commenced from first year and completed in third year. The construction of head regulator is to start with excavation from the fifth year and would be completed by the end of eighth year. The excavation of canals is to commence from second year and completed by the end of the tenth year. The construction of the cross drainage and cross masonry (CD and CM) works are proposed to be taken up during second year and completed by the end of tenth year. The lining work of the entire length of canal will be started in fourth year and the same will be completed by the end of tenth year. The distributory system as well as drainage including command area development are programmed to be taken-up simultaneously in the fourth year and can be completed by tenth year. The unit wise construction programme is given in the following paras.

Unit I - Head Works

All the preliminary works are proposed to commence in the first year and to be completed by the end of second year including designs and field tests. The construction works of head regulator shall be taken-up from fifth year and completed by the end of eighth year. Other miscellaneous works are also slated to be taken-up and completed simultaneously.

Unit II - Conveyance System

The preliminary works shall be started from first year and to be finished by second year including land acquisition, rehabilitation and

resettlements. Construction of camp colonies is also proposed to be started in the first year itself and completed by the end of third year. The excavation for main canal, branch canals, construction works of CD & CM structures are to be started from second year and completed by the end of tenth year. The procurement of special tools and plants is to be taken-up in first year and completed in the third year. Construction of distributaries, minors and watercourses, are also to be simultaneously started in the second year and completed by tenth year. Plantation along the link canal can be taken-up in the eighth year and to be completed by ninth year.

10.2 Material Planning

The works broadly comprise of the following items

- (i) Construction of head regulator
- (ii) Construction of link canal, branch canals, distributaries and field channels and allied works.

All the construction materials like soil for embankments, sand and coarse aggregates are available within a maximum lead of about 70 km from the proposed alignment of the link canal. Nearest stone and sand quarries have been identified during the surveys and investigations, throughout the length of the link canal. Cement and steel required, can be procured from places identified for the purpose, which are well connected by roads and railways. These aspects are already dealt in detail in Chapter on "Surveys and Investigations".

10.3 Plant and Machinery Planning

The special tools and plants required for construction of the link project are shown in Table 10.1.

Table 10.1
Requirement of Special Tools and Plants for Construction of Link Canal

Sl.No.	Item	No.
I.	"Q" Special tools and plants (Machinery)	
1	Hydraulic Excavator 3.8 m3	24
2	Hydraulic Excavator 2.84 m3	4
3	Rear dumper 35T	146
4	Wagon drills	13
5	Air compressors 40 cft	13
6	Concrete mixer 1077 cft	7
7	Concrete mixer 1 m3 with weight batcher	13
8	Dozer 320 HP	5
9	Water tanker 7500 Lts.	23
10	Water pump 10 HP	9
11	Vibrator rollers	5
12	Trucks 8-10T	44
13	Motorised water tanker 7500 Lts.	67
14	Trailors 25T	3
15	Trailors 40T	3
16	Pneumatic tractor 50 HP	40
17	Trailors 7.5T	40
18	Crane 10 T	1
19	Generator 75 kVA	5
20	Water pump	13
21	Workshop equipment	120
22	Dewatering equipment	13
23	Explosive van	3
II.	Inspection and transportation vehicles	
24	Jeeps	166
25	Cars	11
26	Ambulances	3
27	Buses	3
28	Station wagons	40
29	Jeep trailors	27

10.4 Manpower Planning

It is proposed to have, in all, five Circle offices including a Design Circle under one Chief Engineer's office to be located at Chennai. Each of

these Circles in turn will have four Divisions located at various places along the canal alignment for effective execution of works. In addition to these, four Circle offices will have one Mechanical Division each. It is also proposed to have two Pay and Accounts Offices to facilitate the financial transactions in respect of the works and other payments like Salaries, T.A & D.A etc. to the personnel working in the project offices. Two Special Deputy Collector offices are proposed to be set up for the land acquisition and other related works. Suitable places along the link alignment for locating all these offices have been tentatively identified to facilitate effective monitoring and control over the execution of various works.

10.4 Programme of year-wise expenditure

The total cost of the Pennar (Somasila)-Palar-Cauvery (Grand Anicut) link project is estimated to be Rs. 676889 lakh at 2003-04 price level. Table 10.2 shows the tentative distribution of the year-wise expenditure for construction of the link project, so as to complete the same within the proposed period of 10 years.

Table 10.2
Year-wise Expenditure for the Construction of the Link Canal

Year	Expenditure (Rs. in lakh)		
	Unit I	Unit II	Total
1st	141	21698	21839
2nd	167	83459	83626
3rd	790	73850	74640
4th	790	72036	72826
5th	790	69924	70714
6th	43	69924	69967
7th	43	71527	71570
8th	43	71527	71570
9th	39	71768	71807
10th	0	68330	68330
Total	2846	674043	676889

If financial allocations are made in accordance with the above proposed year-wise distribution, duly increasing the same in relation to the possible inflation and planning of men and material is properly done, the construction of the project can be completed within the proposed period of 10 years.