



Government of Bombay

POST-WAR RECONSTRUCTION

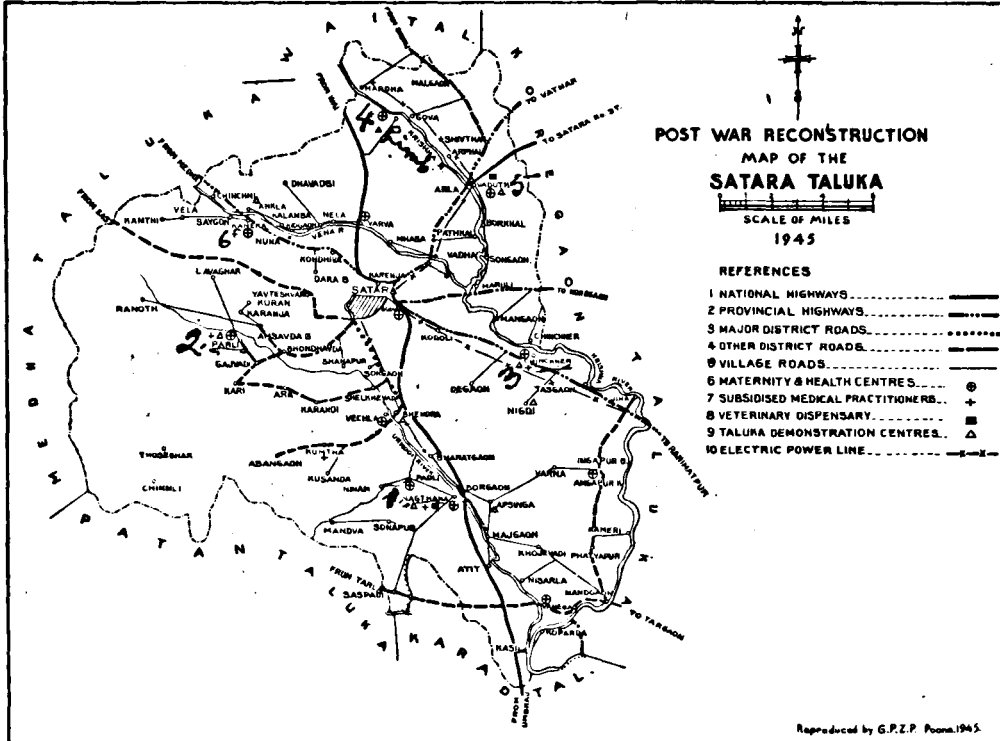
PROPOSALS
FOR
SATARA TALUKA



Government of Bombay

POST-WAR RECONSTRUCTION

PROPOSALS FOR SATARA TALUKA



1. Nagthana.
2. Parali
3. Chinchur
(Vandur)
4. Limb.
5. Vadur.
6. Kamher



THIS is a report submitted for the consideration of Government on which Government has still to pass orders. Its genesis is as follows..

The Bombay Post-War Reconstruction Plan consists of numerous schemes grouped under various subject heads. Government wished to have a cross-section of this body of schemes as applied to a defined area in order to be able to estimate the staff, materials, and finance required for the execution of the Post-War Plan. Three talukas were accordingly selected for inquiry, one in each revenue Division. The Satara taluka inquiry started first. The system adopted was for the various heads of departments to send to the special officer their proposals for this taluka. The special officer then after a rapid tour drew up first a very rough plan which was considered at a meeting in Satara attended by all the Advisers, the heads of departments, the Presidents of the District Local Board and of the Municipality and the local officers. Numerous decisions taken at that meeting were approved by Government and have been incorporated in this report. In the light of it and of the other reports which are being framed Government will decide to what extent, if any, it will be necessary to prune the Post-War Reconstruction Plan in order to fit it within the limitations of finance, materials and staff. The development suggested in the report is, therefore, still to be considered and very probably curtailed by Government. But it was thought better that it should be published as it stood in order that Government might have the benefit of public advice and criticism at the present stage in the development of its Plan.

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Note.—The numbering of the Schemes given in this book refer to the serial number in the official list of post-war reconstruction schemes.

SECTION No. I

INTRODUCTION

By Government Resolution No. 10665/39 by Government in the Reconstruction Department, dated 25th November 1944 I was appointed to work out in as full detail as possible the measures, cost and staff required to apply the Government of Bombay's Post War Reconstruction Plans to Satara Taluka. I took charge of the post on January 3rd, 1945.

2. *Staff and Procedure.*—The Government Resolution referred to above sanctioned the following staff:—

1 Shirastedar,

1 Clerk,

1 Stenographer,

1 Surveyor and

1 Assistant Rural Development Inspector.

A. buildings, their design and the area of land required have not yet been decided upon by the various Departments it was found that a Surveyor could not be used and none was appointed. When type designs have been settled it might be possible usefully to employ a surveyor. But in most cases buildings etc. will have to be sited by the P. W. D. and I doubt whether a Surveyor is required in planning posts of this character.

3. A rough preliminary plan was prepared for discussion at a meeting of the heads of Departments at Satara on the 22nd of January 1945. The minutes of that meeting were circulated under the Reconstruction Department's No. 10665/39-J of the 25th February 1945.

4. All the Sections of the Report that follows have been discussed in as much detail as possible with the Departments responsible for them and have been modified where necessary in order to fit them into the general plan. The road programme has also been considerably modified after a detailed examination on the ground by myself and the P. W. D. Deputy Engineer appointed for the purpose. Non-officials have also been consulted.

5. *Centres of Reconstruction.*—The necessity of concentrating the activities of the various Departments of Government in selected Centres in the Taluka rather than spreading them in a large number of villages was accepted at the meeting on the 22nd of January. The advantages of this policy are :—

(a) It is possible to provide medical and educational facilities, company and a higher standard of amenities such as accommodation and water-supply for the officials of the various departments stationed in the rural area. The Centres will be linked with all-weather roads to the nearest headquarters town so that Government servants working in the rural area will not feel as isolated as they have in the past. It is hoped that by this means it may be possible to make Government service in the rural areas more attractive to educated men and women and to counteract the drift of educated people to the towns—one of the factors responsible for the stagnation of village life.

(b) The Centres of Reconstruction are situated at places which are already Centres to which people of the countryside naturally come to attend bazaars etc. or which are centrally situated. It is hoped that more use will thus be made of the facilities that Government have to offer and that it will be easier to influence the population by example and by propaganda.

(c) It is hoped that a substantial economy in the construction of buildings etc. can be effected by centralising services such as drainage, water-supply and servants' quarters. The Public Health and Medical Departments, the Departments mainly affected, have not finally decided what they want and in the time available it has not been possible to work out details of this.

6. *Centres in Satara Taluka.*—The Centres chosen for Satara Taluka are :—

Name of Centre.	Population.	Distance from Satara, Miles.
1. Nagthana	2,467	10
2. Parali	1,088	7
3. Chinchner Vandan	1,319	6
4. Limb	3,788	7½
5. Vaduth	1,148	6½
6. Kanher	918	7

Nagthana, Parali, Limb and Chinchner Vandan should be Main Centres. At these places the activities of the various departments should be developed to the full.

At *Vaduth* and *Kanher* the same development is not necessary and these should be regarded as subsidiary Centres of Civilization. The population of the villages in the neighbourhood of *Kanher* is small and many of them naturally look to *Satara* for medical relief etc. On the other hand it is a suitable place for agricultural development.

In the neighbourhood of *Vaduth* the population is larger and a ground-nut factory means that it is more prosperous. As it is on the road to *Satara Road Station* it is more accessible to *Satara* than the other Centres and consequently better able to make use of the facilities available in the headquarters. At these subsidiary Centres the development can be on a scale more limited than at the four main Centres of Reconstruction.

All the places, except *Parali*, are served by motor-bus services.

The facilities to be provided at each Centre are listed in Section XVII.

7. Although the proposals embodied in this report have been arrived at after considerable thought and discussion they must not be regarded as final. In particular, sites selected for the location of buildings and other activities (the details are on record in this office but have not been included in the report proper) must be regarded as provisional pending detailed technical examination and modification of the original plans by the Departments concerned.

8. I have included a certain amount of material and a number of general observations not immediately relevant in the circumstances of *Satara Taluka* because this inquiry is the first of its type and suggestions and ideas put forward here may be worth consideration when similar inquiries are made elsewhere.

9. *Cost.*—The cost section of the report shows the approximate cost of applying the measures described in the Report. The details of some of the Departmental Schemes have not been worked out in detail or have not been approved by Government. The Section can be taken only as a very rough guide indeed of the capital and recurring cost of the measure described.

10. It should be emphasised that the headquarters of the District is situated in *Satara Taluka* and that the town has for centuries been an administrative Centre. Through roads are particularly well

developed though the fact that the railway does not traverse the Taluka and the absence of industry has retarded development. Despite the large area covered by hills on which cultivation is impossible or the soil poor, the density of population in the rural area (i.e. excluding Satara City) is 320 per square mile or 420 per square mile including the City, compared with an average of 271 for the District as a whole. This is doubtless partly responsible for the excessive sub-division of the land and the generally rather poor standard of cultivation.

11. On the other hand the number of schools and the school going population is comparatively large so that the size of the administrative problem of expanding educational facilities is correspondingly reduced.

12. These are facts that must be borne in mind in deducing from the figures available in this Report the cost of extending the schemes described to other Talukas in the Province.

13. *Immediate implementation of Schemes.*—In view of Government's intention to put into operation in the Taluka as many as possible of the plans before the end of the war I have indicated the extent to which each scheme is capable of immediate implementation and also roughly the priority in which parts of the various schemes should be started. In the Public Health Sections alternatives to the Departmental proposals have been worked out. Where buildings and roads have to be constructed this will depend also upon the availability of material and labour and the necessity of so grouping works that they can be conveniently supervised by the P. W. D. staff. Most departments have made a start already with the schemes with which they are concerned.

14. *Supervision.*—I have attempted to indicate where the schemes described below differ from those detailed in the Bombay Government's Book on Post-war Reconstruction Planning. I have tried also to ascertain from the Departments the extent to which the supervisory staff at present available requires to be supplemented. The answer in most cases has been that the staff now working in the District or Division can undertake the additional work as far as Satara Taluka is concerned. This will, however, not be the case when reconstruction activities on a larger scale are begun. The danger of increasing the number of subordinates in technical

departments, many of them only partly trained, without securing that they are properly supervised, is obvious.

15. The co-ordination of the various departmental plans is a matter of District rather than Taluka importance and is outside the scope of this inquiry.

16. Measures required in the Satara Municipal Area are also outside the scope of this inquiry.

T. L. CROSTHWAIT,

Satara, 25th March 1945.

Prant Officer on Special Duty,
Satara Taluka.

SECTION No. II

Physical Description of Satara Taluka.—The extreme length from North to South of Satara Taluka is 26 miles and the greatest breadth from East to West 23 miles. The area is 338 square miles. There are 152 villages (one uninhabited).

2. The valleys of the Krishna, Vena and Urmodi rivers with their feeders from the hills in the West, Centre and East determine the physical configuration of the Taluka. The mean height of the valley floors is about 2,000 feet. The hill masses spring with extreme abruptness, especially in the West, to an average height of about 3,000 feet.

3. *Rainfall.*—The average rainfall in Satara City is about 38". In the eastern part of the Taluka it is less than 25" and on the hill tops in the West 100–150".

4. The *Population* in 1941 was 1,42,823 of whom 33,548 were recorded as living in Satara City. The rural population is 1,09,255 distributed in villages as follows:—

Population.	No. of villages.
0–100	.. 9
101–400	.. 48
401–1,000	.. 52
1,001–2,000	.. 37
Over 2,000	.. 5

5. *Boundaries.*—From the administrative point of view the boundaries with the exceptions noted below, have been well selected. When roads are developed all villages except some in the Western hills will be easily accessible from the Taluka Headquarters.

The only *State Territory* enclosed in British Territory is the village of Sangam-Mahuli (Gaothan only) a few miles from Satara. This village belongs to Aundh State.

6. *Boundary Revision.*—The villages of *Chikhali*, *Baposhi* and *Jambhe* in the extreme S. W. of the Taluka are geographically part of Patan Taluka and not of Satara Taluka. Their natural outlet lies down the Tarale valley. When roads are developed the same will be true of *Saspade* in the South.

Koparde village, on the banks of the Krishna River in the extreme south of the Taluka, is inaccessible from Satara in the rains. It should properly be included either in Karad or in Koregaon Taluka.

The inclusion of these villages in Satara Taluka is anomalous and when any revision of Taluka boundaries is undertaken in the District these changes should be considered.

SECTION No. III

I. *Scheme.*—Road Development.

II. *Department.*—P. W. D.

III. *Existing Roads.*—(1) The larger part of the Taluka is already well served by roads. The Poona-Bangalore road runs through it from north to south. The roads to Medha to the West of Satara, to Satara Road Station, to Koregaon and to Rahimatpur to the East, are all-weather roads except that to Rahimatpur which is not fully bridged at the Krishna River.

(2) Except in the West there are village approach roads to nearly every village. Most of them are in bad repair.

(3) The hilly area to the West is badly served by roads. Parli, 6 miles from Satara, cannot be reached by cart and many other villages in the foot-hills can be reached with difficulty by bullock-cart even in the fair season. The roads, to the west of the Urmodi River are also generally in bad condition. The hill-top villages are unapproachable except by narrow steep foot-paths.

IV. *Reconstruction Programme.*—The roads, the reconstruction of which is now contemplated, are shown in the map. The total mileage proposed is :—

National Highways	..	..	23-4
Provincial Highways	..	..	24-6
Major District Roads	..	..	14-0
Other District Roads	..	..	15-1
Village Roads	..	..	114-4

Total .. 191-7 miles.

This compares with the original total of 213-3 miles.

(2) This mileage works out at 0.52 miles per square mile of area compared with an average of 0.62 miles per square mile of area found to be necessary in the first detailed pilot survey carried out by the Indian Roads and Transport Development Association in 3 Talukas in various parts of the Province.

(3) The roads suggested and their alignment have been decided upon after discussion with the Sub-Divisional Officer appointed to

examine the question and after examination on the ground. It is not likely that there will now be major changes.

V. *Principles governing Selection of Roads.*—(1) At the meeting on the 22nd of January it was accepted that it is better to have the larger part of the Taluka opened up by roads—even if at times liable to interruption—rather than to have a considerably small area opened up by entirely all-weather roads. In the examination of the road alignments etc. particular attention has been paid to the provision of adequate crossings at nullahs with this decision in mind and the intermediate road surface may not be of a very high standard.

(2) The main difference between the present road plan and the preliminary one is that the mileage of "Other District Roads" has been reduced from 55·4 miles to 15·1 miles. This has been made possible owing to the fact that most of the roads are not through routes and that much traffic need not be expected on them. The road from Shendra to Asangaon is an example.

(3) The classification of the road on the alignment Bargaon-Apshinga-Varna-Angapur-Jihe has been raised to that of an "Other District Road." The reason for this is that Rahimatpur is the Railway Station mainly used by the inhabitants on the south-eastern part of the Taluka and through traffic from the Poona-Bangalore road at Nagthana to Rahimatpur can be expected. This is an example of the importance of planning roads as feeders to the Railway line. If land has to be acquired for this road the width should be sufficient to enable it to be converted into a "Major District Road" if necessary.

(4) In the preliminary plan the following village roads additional to those proposed by the P. W. D. were suggested. They were intended to provide access to the hill villages on the plateau on which Raighar, Borna, Thoseghar are situated and other parts of the Parli area:—

Roads.		Miles.
1. Parli-Kamthi-Banghar-Kus B.	..	3
2. Kari-Ambala-Rayghar ..	..	1
3. Rayghar-Vavdara-Rajapuri-Borna	..	4
4. Borna-Pangare-Thoseghar	..	4
		<hr/>
Total ..		12
		<hr/>

These roads have been surveyed. The approach to the plateau involves an ascent of nearly 1,000 feet and a long approach road costing about 2 Lakhs would be necessary. As the total population on this plateau is less than 2,000 this expenditure is not justifiable. An alternative would be to construct all-weather foot paths up this steep hillside and to improve the foot paths to the remaining places.

This decision means that this already backward area will remain cut off from many of the facilities which are to be provided in the more accessible parts of the Taluka.

(5) No provision is made in the road plan for connecting villages with a population of less than 500 to the main road. In Satara Taluka this is not of much importance as only the villages of Thoseghar and Chikhali, neither of which is geographically part of the Taluka, are excluded. In other places, however, the application of this criterion may exclude villages and areas which should be provided with access roads on economic or other grounds and road plans should be examined from this point of view as well.

The smaller villages might be connected to main roads by concrete cycle tracks or by foot-paths with some sort of pukka surface which could be used by bicycles.

VI. *Cost.*—The road programme as now prepared represents a decrease of 21·4 miles over the road mileage originally suggested. The cost, as preliminary projects, works out at about 72 Lakhs (or 41 Lakhs excluding the Poona-Bangalore Road) compared with the original total of Rs. 92 Lakhs. As the standards to which these roads are to be constructed have not yet been decided and the roads themselves have not yet been fully surveyed it is impossible to say what the actual cost will be. It will, however, be much lower than this figure.

VII. *The extent to which the scheme can be immediately implemented.*—The improvement of village roads is a necessary preliminary to the execution of the reconstruction programme in other branches. If Parli is to be developed as a Centre of Reconstruction an all-weather road must be provided. A detailed survey, including the reconstruction of the foot-bridge across the Urmodi river, is nearly completed. This road will incidentally facilitate the movement of Government grain. If it can be completed before the monsoon it will be possible to observe the extent of the damage

caused by heavy rain and the suitability of the construction methods used for general adoption elsewhere.

VIII. *Miscellaneous.*—(1) The responsibility for the upkeep of roads constructed or repaired under the programme has to be decided.

(2) *Trees.*—Tree planting is expensive. But even if it is not possible to plant and maintain trees along all roads I suggest that provision should be made for the planting of trees along roads as they approach villages say within a quarter of a mile on either side. Inferior village servants could be paid to look after the trees for the first 2-3 years.

(3) More stringent *control of building construction* along roads is necessary. Under the present law Government has no power to control building in alienated land and even in unalienated villages control of new buildings is largely ineffective, owing partly to defects in the law and partly to the inefficiency of the Revenue Department's machinery for dealing with infringements of it.

SECTION No. IV

I. *Scheme.*—*Electric Grid Scheme.*—Provision of Electricity in rural areas (Scheme No. 46).

II. *Department.*—P. W. D.

III. *Existing Facilities.*—Satara city is supplied with hydro-electric power derived from Kas tank situated on the river Urmodi near its source and at a height of 1,400 feet above the city, 18 miles to the West of Satara. This water is subsequently supplied to the City and Cantonment. The hydro-electric power is supplemented by a diesel engine. Electricity is not supplied to any village in the Taluka outside Satara City.

IV. *Possibilities of extension in the rural area.*—(1) The approximate capital expenditure required fully to electrify the Taluka is estimated at Rs. 61,00,000. The total annual charges would be about Rs. 5,00,000 and the revenue which might be expected would be about Rs. 2,75,000. A yearly loss of over Rs. 2,00,000 would, therefore, have to be expected.

(2) Expenditure on this scale is clearly out of the question and a survey of the areas in Satara Taluka where economic development is possible, has been carried out by the Senior Assistant Engineer (Diesel and Steam).

(3) The following lines show promise of economic development in the first phase :—

Serial No.	Name of Section	Name of villages which may be served.	Length of the transmission line.	Population.	No. of recruits.	Probable load.	Probable sale of units.
1	2	3	4	5	6	7	8
1	Satara-Atit.	Songaon, Shendra, Vechla, Bharategaon, Kargaon, Naathana, Anshinge, Matvapuri & Atit.	13 miles.	11,055	306	50-7K.W.	98,950

Serial No.	Name of Section	Name of villages which may be served.	Length of the transmission line.	Population.	No. of recruits.	Probable load.	Probable sale of units.
1	2	3	4	5	6	7	8
2	Satara-Jihe (along Krishna river 6 miles)	Godoli, Kodoli, Jaitapur, Chinchner, Tasgaon & Jihe.	11 miles	7,204	432	70·1K.W.	1,19,756
3	Satara (Vaduth-Limb along Krishna river 5 miles)	Vadha, Arla, Vaduth, Arphal, Vangal, Gowa & Limb.	13 miles	10,523	127	129·1K.W.	2,75,598
		Total ..	37 miles.	28,791	955	255·9K.W.	4,98,334

(4) The above estimates of power consumption include lighting load and a rough estimate of possible pumping load. From these lines it would be possible to extend the system to serve most of the villages in the Taluka except those in the hills at Parli and those along the road north-west to Medha.

(5) A Taluka is too small in area in which to develop an electric grid and the full implications of the scheme are being worked out by the Department. The possibilities appear to be: (a) Hydro-electric generation at Bhatgar with a transmission line to Satara; and (b) expansion of the existing power house at Satara.

(6) If the latter alternative is selected, the Special Officer (Electric Grid)'s view is that some development in the rural area should be possible within two or three years.

V. Cost.—The capital cost of the scheme is Rs. 10½ Lakhs approximately. The nett loss at the end of the fifth year of working of the Schemes estimated to be about Rs. 30,000 yearly.

VI. *Conclusions*.—(1) The scheme will provide electricity to one-quarter of the population of the Taluka in the first phase and can be extended to supply nearly three-quarters including the main recruiting villages. The Centres, except Parli and Kanher, will be served in the first stage.

(2) The financial aspects of the scheme depend largely on the pumping and industrial load that can be provided. The closest co-operation between the Co-operative, Industries and Agricultural Departments will be necessary to ensure that electric power is used wherever possible. At present the industrial load available is limited to a few grinding mills and the area irrigated by power pumping very small.

(3) The villagers desire *cheap* electricity and the scheme will fail unless the cost of lighting and power is low. Low priced electricity is, I suggest, more important than the maintenance of high technical standards.

(4) Government itself should set an example in the use of electricity in every possible way—e.g. in pumps for water-supply and in heating in dispensaries and maternity Centres. If, as has been the case hitherto, Government fails to use electric power in its buildings, it is scarcely likely that the public will be convinced of its advantages.

SECTION No. V

I. *Scheme.*—Irrigation.

II. *Departments.*—P. W. D., Agricultural and Revenue.

III. *Existing Facilities.*—(1) No part of the Taluka is at present irrigated by canal. Wells and Bandharas are the principal sources of supply. Water is used for gardens, sugarcane and rice and, mainly in the West, for rabi wheat.

(2) *No Major Irrigation Projects are projected.*

IV. *Increased Irrigation.*—(1) The Memorandum on the Development of Agriculture in India published by the I. C. A. R. states that “no single factor can influence crop production to the same extent as an irrigation supply whether artificial or natural”.

The report gives the first priority to the construction of tanks, wells, etc. and the conservation of water resources. The cultivation of garden land is regarded in the Taluka as the most profitable form of agriculture.

(2) As major irrigation schemes are not practicable the use of the existing sources must be extended. The development of pumping load is desirable to provide a basic load for the electric grid scheme.

V. *Existing Facilities—Wells, Rivers and Nullas—(a) Wells.*—The number of wells used for irrigation is about 2,000 watering an area of 5,000 acres. The distribution is uneven. There are few in the Parli area. The majority are along the Krishna river and along the lower reaches of the Urmodi and Vena rivers. Most of the wells are situated on nullahs at some distance from the rivers proper as the banks of the latter are high. A map indicating the distribution of wells and Bandharas has been prepared and is on record.

(2) The difficulties in the way of extending well irrigation are :—

(i) In the neighbourhood of the large rivers the lift is uneconomical and on the Krishna it is seldom less than 50 feet.

(ii) The results of well sinking are uncertain and the capital required is large. Nearly one-fifth of the wells in the Taluka are disused.

(iii) There is a danger that if the number of wells is increased or the amount of water extracted by pumping or otherwise from the existing wells also increased water supplies will fail.

(b) *Rivers and Nullahs.*—Except in the higher reaches of the Urmodi river and a few lifts working direct there is no irrigation in the Taluka from the Krishna, Vena and Urmodi rivers direct. But Bandharas are constructed yearly on many nullahs and springs and the water led by flow on to the land. The number of *Pats* is about 1,000 and the area irrigated about 5,800 acres.

VI. *Increase in irrigated area.*—(1) In my preliminary report on this subject I gave as my view that a comprehensive technical survey of the water resources of the Taluka is required to ascertain the possibility of expanding small scale irrigation in the Taluka. I suggested that the objects of such a survey should be :—

(a) to ascertain how and where well and Bandhara irrigation can be increased and improved ;

(b) to investigate the possibilities of pumping from rivers, wells and tube wells by oil engine or electricity and to select sites ;

(c) to investigate the equipment necessary and its costs ;

(d) to work out the possibilities of prolonging the flow of rivers in the dry season by means of storage in the upper reaches of the Krishna and Vena rivers ;

(e) to provide a plan for the exploitation of the available and potential water resources.

(2) Government in the P. W. D. ordered such a survey to be made but these orders were later amended and the Executive Engineer was instructed to limit his inquiries to the Krishna, Urmodi and Vena rivers. That inquiry is now being carried out. Readings of the flow in these rivers over a period of years must necessarily precede any construction of weirs or large bandharas in the rivers.

(3) Though a survey of the sort suggested in sub-paragraph 1 above is ultimately necessary, I think that it is not at present justifiable to divert the staff required for such a survey from other P. W. D. duties. Such a survey should ordinarily follow the completion of a large scale land improvement programme especially in the villages in the west where the rainfall is heavy. Land improvement will increase potential water supplies by prolonging the flow of rivers and bandharas and raising the level of the water table.

VII. *Recommendations*—(a) *Rivers*.—(1) The success of the proposed electrification scheme depends largely on the development of agricultural pumping load. If sites can be found on the rivers where the construction of a pukka bandhara or weir capable of holding up sufficient water to support a pumping plant, a significant increase in the irrigated area might be obtained.

(2) The Executive Engineer is investigating possible sites (one near Apshinga village on the Urmodi river is included). His report has not yet been received but the flow in all these rivers is very small during the hot weather months and it is unlikely that sufficient storage will be available.

(3) The Executive Engineer has asked to be permitted to gauge these three rivers and this is a necessary preliminary to any irrigation project of this character. Approval should be given to this proposal.

(4) Until these inquiries are completed it is impossible to estimate possibilities exactly, though the possibilities of any great expansion in irrigation are not great.

(b) *Well Improvement*.—(1) I do not consider that a large increase in the number of wells is practicable now. At present cultivators in the Taluka have not taken much advantage of the facilities of tagai and subsidies offered by the Agricultural Department. The high cost of digging wells is doubtless partly responsible for this.

(2) But when costs come down it may be possible to stimulate well construction again. Technical advice, tagai loans and the loan of well-boaring machinery should help. When the additional Taluka Demonstration Centres are opened it will be easier for the Agricultural Department to make its propaganda effective and to advise cultivators willing to use mechanical or electrical pumping machinery ; and this should be made part of the duties of the Agricultural Kamgars.

(c) *Bandharas*.—(1) These are mainly katcha bandharas constructed every year with comparatively little trouble and expense. I have received few applications for grants for making existing Katcha Bandharas Pukka and only one application for permission to extend the area watered by a bandhara. This probably indicates that the scope for extension of bandhara irrigation is not great.

(2) The flow of bandharas will be prolonged and increased as the result of land improvement.

In the meanwhile the existing arrangement whereby the Commissioner allots funds for the improvement of bandharas seems to be satisfactory. It should be coupled with more prompt investigation into all applications by the Revenue, Agricultural and P. W. D., staff who should of their own initiative investigate bandharas which come to their notice and seem to be capable of improvement.

(3) A register maintained in every village showing the area commanded by each bandhara, the area irrigated by it in each year, the date it commenced flowing and the date it ceased flowing should in my view replace the existing lists which are of no value in deciding whether a bandhara is worth improving or not.

(4) Inspection of wells and bandharas and propaganda about irrigation should form an important part of the duties of the Kamgars in charge of the 10 T. D. Cs. which it is proposed to open in the Taluka.

(5) When bridges and culverts are constructed as part of the road programme provision must be made for carrying bandhara water under the roadway. It should sometimes be possible to construct a pukka bandhara as part of the bridge or culvert fabric.

VII. *Conclusions.*—Pending the completion of the Executive Engineer's investigation referred to in paragraph 4 above no important development is possible. Any expansion of irrigation in the Taluka must be gradual.

SECTION No. VI

I. *Schemes*.—Agricultural Development and Improvements.
(Scheme Nos. 48-53, 79 and 81).

II. *Department*.—Agricultural.

III. *Existing facilities*.—(1) There is at present one *Taluka Demonstration Centre* at Karanje near Satara. The usual agricultural staff is stationed in the District.

(2) The lands situated in the Krishna and Vena valleys and in the lower reaches of the Urmodi valley are mainly dry crop, the chief crops being in Kharip, bajri and to a lesser extent jowar; and in the rabi season jowari. The higher reaches of the Urmodi are intermediate in character much of the area being double cropped with rice and hill millets followed by rabi jowar. The hill top villages grow hill millets and other crops suited to the heavy rainfall.

(3) Ground-nut, gram etc. are grown in rotation with grain crops. The area under tobacco is negligible. No cotton is grown.

(4) Owing to the heavy rainfall in the hills in the west and the steepness of the valley sides, land in the upper half of the Urmodi Valley is subject to heavy erosion. The cultivated area elsewhere is in better condition but generally speaking agricultural methods are backward despite the fact that the rainfall is normally adequate over the whole Taluka.

IV. *The Agricultural Department's Proposals* are more advanced than those of any other Department. The following is a brief summary.—(1) *Opening of Additional Taluka Demonstration Centres* (Scheme No. 79) at Kanher, Nimb, Waduth, Chinchner Vandan, Angapur-Vandan, Nagthana, Shendra and Parli in addition to the one at Karanje. These will if possible all be opened during the year 1945-46. They are required for the seed improvement programme below.

(2) *Improved Seed*.—Arrangements are being made to cover the whole Taluka with improved varieties of bajri, wheat (irrigated and dry), gram and jowar within the next three years.

(3) Provision of 3,800 tons of *ground-nut cake manure* each year for paddy and other irrigated crops with a subsidy of Rs. 35 per ton.

Total cost—Rs. 1,33,175 per annum. The Area that will benefit will be about 42,000 acres.

(4) Preparation of *Compost Pits* in 50 villages in the first year and 100 villages in the second year. There will be two pits in each village selected for the application of the scheme.

(5) Opening of *Supplementary Breeding Centres for cattle*.—One bull and 10 cows will be provided in the following villages :—

Khillar Breed.—Apshinga, Borgaon, Varna, Angapur Budruk and Khur.

Dangi Breed.—Parali, Ashta, Gojewadi, Kamthi and Kari.

It is proposed to start these centres in November 1945.

(6) *Establishment of Supplementary Sheep Breeding and Rearing Centre*.—The Taluka is not an area where much sheep breeding is done at present as the rainfall is too heavy. The location of the Centre has not been finally decided though *Shivathar* in the east of the Taluka will probably prove suitable. If a Rural Development Centre is established near the Taluka (a site in Koregaon Taluka just outside Satara Taluka is under consideration) it has been suggested to the Director that the Sheep Breeding Centre should be established near that in preference to *Shivathar*. This is being examined by the Department.

The objects of the centre will be (a) Instruction in improved methods of Breeding and Management ; (b) Issue of improved Rams ; (c) Wool utilisation.

The cost is : Capital	Rs. 14,000	} Over a 3-year period.
Recurring	.. 27,000.	

(7) *The Premium Bull and Cow Scheme* will be extended at a cost of Rs. 4,100 per year.

(8) *A District Nursery* will be established at Satara. The staff provided will advise on the suitability of lands and sites for vegetable and fruit plantations with the object of doubling within 3 years the area of 1,200 acres at present under cultivation with vegetable and fruit. The nursery will probably be situated on 3 or 4 acres of land in the Municipal Garden at Satara. Full Particulars have not been received from the Agricultural Department.

Cost Capital .. Rs. 9,000.

Recurring .. Rs. 8,000 per annum.

(9) Government have recently ordered that an experimental vegetable and potato farm should be started on about 40 acres of land in the south-west of the Taluka. If investigation shows that it is possible to construct a bandhara over the Urmodi River near Apshinga the land and water available there might provide a suitable site.

V. *Cost and Staff.*—The estimated expenditure (both capital and recurring) required to implement these schemes is roughly Rs. 6,25,000 spread over 3 years :—

The table below shows also the approximate recurring cost of keeping the T. D. C. and other activities going. The ground-nut cake and manure schemes can be expanded or reduced in accordance with the availability of funds :—

Activity.	Total cost over three years.	Recurring cost per annum.
	Rs.	Rs.
Taluka Demonstration Centres ..	23,000	7,500
Seed Extension Scheme ..	27,000	....
Ground-nut Cake Manuring (Subsidy) ..	4,60,000	....
Compost Pits ..	8,000	....
Cattle Breeding Centres ..	35,000	3,900
Sheep Breeding Centre ..	27,000	4,350
Premium Bulls and Cows ..	14,500	1,800
Horticultural Development ..	30,000	8,000
Total ..	6,24,500 (over 3 years)	25,550 (per annum)

The table excludes land improvement schemes.

VI. *Extent to which the Schemes can be immediately implemented.*—The important work of starting the T. D. Cs. and beginning the Seed Multiplication Programme is in hand. Government have also been asked to provide funds in the year 1945-46 for ground-nut cake, compost-pits and for agricultural development. The livestock improvement work will also probably be begun this year. Simple buildings will be required for the Sheep Breeding Centre and for the Horticultural Schemes.

Staff.—The necessary staff can be provided by the Department. The scheme will be supervised by the existing Agricultural staff.

The Agricultural Department's Schemes are, therefore, in a forward state of preparation.

VII. *Land Improvement*.—The programme originally submitted by the Agricultural Department for consideration at the meeting on the 22nd of January included a provision of Rs. 4 lakhs (of which Rs. 2,17,000 would be recoverable) to be spent on land improvement over a period of 3 years. Satara Taluka is not a tract subject to scarcity and the Land Improvement Officer has found exceptional difficulty in obtaining the labour required for land improvement works. In view of the eroded state of much of the area especially in the West, there can be no doubt that if the maximum benefit is to be obtained from the Seed Multiplication Schemes land improvement works on a large scale are necessary and should be put in hand when the labour situation improves. They will have to be associated with corresponding land improvement works in the Forest areas which cover the higher portions of practically every water-shed. In view of the difficulty of getting labour large scale land improvement will have to be postponed for the present.

VIII. *Miscellaneous*.—There is an *Agricultural High School* in Satara City with 150 boys and a farm. This school is capable of further expansion though there is no demand at present.

(2) *A Rural Development Head-quarters* is to be developed in the District though not in the Taluka. Demobilised soldiers from Satara Taluka will be able to go to this Centre for training in agricultural subjects. It has been suggested above that the Sheep Breeding Centre should be associated with this Rural Development Centre.

SECTION No. VII

I. *Scheme*.—Forest Development (Schemes Nos. 58, 59, 60 and 88).

II. *Department*.—Forest Department.

III. *The Present Position*.—The organised forest area in Satara Taluka covers 21,035 acres, mostly in the west. The quantity of large timber extracted is negligible but the forests are important for their fuel yields, the grazing they provide and for the conservation of soil and rainfall.

IV. *The Forest Department's Proposals*—(1) *Revision of working plans*.—(Scheme No. 58). No special fellings have been carried out for war supplies but working plans will be revised at a cost of Rs. 1,410 with the object of increasing fuel yields and improving the working of the forests.

(2) *Reconstruction of Forest Roads*.—(Scheme No. 59). The proposed improvement of roads in the Parli area and that from Satara to Kas will facilitate the extraction and transport of wood and charcoal to Satara and will increase the prices fetched by coupes. No special road development is considered necessary by the Department.

(3) *Reconstruction of Buildings and Wells*.—(Scheme No. 60). Quarters for the R. F. O. at Satara and for a forester and guards at Satara, Rohot and Kuswade costing in all Rs. 25,563 are contemplated. No wells are proposed. Construction can be postponed.

(4) *Improvement of Denuded areas*.—(Scheme No. 88). Of the total of 21,000 acres 12,000 acres of Forest situated in the dry zone and a further 184 acres in charge of the Revenue Department, together with some waste lands the approximate area of which is 359 acres, will be taken up for general improvement.

The improvement work contemplated includes reforestation, gully plugging and contour-bunding. It is also proposed to introduce the rotational grazing schemes in parts of the Forest areas used for grazing.

These schemes are designed to improve the forest area and the fodder supply by closing part of each branch and controlling, on

a rotational basis, grazing in the remainder. The cycle is completed in a period of years depending on the scheme adopted. The cost is estimated at about Rs. 12 per acre—total Rs. 1,46,000.

V. *Staff*.—The following additional staff will probably be necessary to implement the rotational grazing and land improvement schemes :—

		Pay.
		Rs.
1 Range Forest Officer .. ..	.. ..	80—150.
1 Forester .. ..	.. ..	30—1—40.
2 Guards .. ..	.. ..	15— $\frac{1}{2}$ —20.

They will be employed as required and are not immediately necessary.

VI. *Cost*.—

Scheme No.	Estimated amount required.	Remarks.
1	2	3
	Rs.	
58	1,410	
59	- Nil.	
60	24,564	For buildings.
88	1,46,220	To be spent during period of grazing rotation (Probably 36 years).
Total	1,73,194	

VII. *Extent to which the Scheme can be immediately implemented*.—

It is proposed that the revision of working plans and the construction of buildings, neither of which is urgent, should be postponed until the end of the War.

The Department proposes also to postpone the introduction of rotational grazing schemes in the Taluka until more experience of their working elsewhere has been accumulated. Preliminary data will in the meantime be collected.

No forest development is, therefore, to be expected during the next few years.

VIII. *Remarks.*—Forest areas cover many of the watersheds in the Taluka and will have to be taken up for improvement when other land development work on land further down is begun by the Land Development Officer. Village lands to the foot of the forest in the hilly area in the west of the Taluka is severely eroded and from this point of view the sooner the work of land improvement is begun the better. Labour is, however, unobtainable at present.

SECTION No. VIII

I. *Scheme—Extension of Veterinary Arrangements*—(Schemes Nos. 85 and 87)

II. *Department.—Veterinary.*

III. *Existing Arrangements.*—(1) There is at present one Veterinary Hospital in Satara City. The average daily attendance is 35. The Veterinary Assistant Surgeon visits Limb, Shivathar, Nagthana and Kanher monthly but little use is made of this facility. The taluka is not an important cattle breeding Centre.

IV. *The Department's Proposals*—(1) *Opening of two Veterinary Dispensaries (Scheme No. 85).*—The cattle population of the Taluka is 75,000 and the standard proposed is one dispensary for every 25,000 head of cattle. Two new dispensaries at Parali and Nagthana are proposed. The remainder of the Taluka is adequately served by the dispensaries at Satara and by the dispensaries in the adjoining Talukas at Medha and Rahimatpur.

(2) *Provision of a Dipping Tank (Scheme No. 87).*—This it is proposed to build at Parali.

V. *Cost and Staff*—(a) *Recurring.*—The cost of maintaining each of these additional dispensaries with a staff of one Veterinary Assistant Surgeon, one compounder and one dresser is about Rs. 6,100 annually.

The cost of maintaining a dipping tank is about Rs. 1,600 annually.

The cost of these Schemes is therefore :—

	Rs.
Recurring cost of 2 dispensaries ..	2 × 6,100
	=12,200
Cost of tank recurring ..	600

Total ..	12,800 p. a.

(b) *Capital.*—Type designs for dispensaries and quarters are still being worked out. The cost is likely to be about Rs. 10,000 for each dispensary and Rs. 1,000 for the tank. Total Rs. 21,000 for the Taluka.

VI. *Extent to which the Scheme can be immediately implemented—*

(a) *Staff.*—The two Veterinary Assistant Surgeons, or adequate substitutes can be made available within a few months. The remaining staff will be trained locally.

(b) *Buildings.*—Rented buildings have been provisionally selected at Nagthana and Parali. Those at Nagthana require small additions to make them suitable. The construction of buildings can, be postponed for the present.

The supervisory staff working in the Taluka requires no addition. The scheme can, therefore, be implemented in the near future and should suffice to bring the Veterinary staff and equipment in the Taluka up to standard.

SECTION No. IX

I. *Scheme*.—Co-operative Development.

II. *Department*.—Co-operative.

III. *Existing Arrangements*.—The usual Co-operative Department staff is stationed in the District. There are six Multi-purpose Societies working ; but generally the movement is not as strong in the Taluka as it is in the southern half of the District. In the west bad communications and the general backwardness of the people make development difficult. Cash crops such as cotton and tobacco are not grown and the area under ground-nut is also comparatively small. On the other hand Satara City with its population of over 30,000 provides a large market for vegetables, milk and, in normal times, grain. It should provide considerable scope for co-operative enterprise.

IV. *The Co-operative Department's Proposals*.—The following Schemes have been worked out :—

(1) *Organisation of Multi-purpose Societies (Scheme No. 27)*.—The Agricultural Debtors' Relief Act (Scheme No. 26) is to be applied to Satara Taluka in the near future. The surplus produce of debtors given crop finance under the Act has to be sold through co-operative agency and multi-purpose societies will have to be organized for the purpose.

(2) *Multi-purpose Societies* already exist at Nagthana, Javalwadⁱ (near Venegaon), Kodoli, Kanher, Kondave and Kumtha-Asangaon and a Sale and Purchase Society at Satara. A Society has still to be organised at Parli to serve the backward hill villages.

The Multipurpose societies at Nagthana, Kanher, Kondave and Asangaon and the Sale and Purchase Society at Satara will be responsible for the bulk of this work. As they are newly formed it is proposed to give them a secretary or manager for the first 3 years at Government cost.

Godowns are required by each of these societies. The Registrar's proposals include Government finance for them by way of interest-free loans amounting to Rs. 8,625 and grants amounting to Rs. 2,875.

At all of these places except Satara old school buildings will be available and may be suitable for use as godowns when the suggested

school construction propaganda is carried out. Nagthana and Kanher also contain buildings at present used for the storage of Government grain.

I recommend that the construction of new godowns for the Co-operative Department be postponed for the present unless they are required for use in the procurement scheme now being operated for the reasons that—

(a) It is not known what buildings will be made available by the new building programme ;

(b) grain is the main marketable crop in the Taluka and this is at present subject to the Government monopoly ;

(c) they will not be essential until the Debtors Relief Act has been working for some time.

(2) *District Industrial Association (Scheme No. 55).*—The headquarters of this association will, it is contemplated, be at Karad. The only village industry sufficiently developed at present to be affiliated to the Association is the colony of hand weavers at *Atit*. These it is proposed to organise into a Weavers' Society. Government will pay half the cost of a secretary for the first 3 years working at a total cost of Rs. 540. It may also be necessary to provide a loan for the construction of a weaving and dyeing shed. The details are being worked out.

(3) *Milk Supply Union—(Scheme 57).*—

(i) The Union will organise the collection of milk from out-lying villages and its subsequent sale in Satara. At present it is operating through three dairy societies at Anewadi, Padali-Dhanyachi and Padali (Satara Road) each of which is just outside the boundary of Satara Taluka proper.

(ii) When suitable villages are found inside the Taluka, the scheme can be extended to them.

(iii) The milk sold is buffalo milk and a necessary part of the scheme is the improvement of buffalo stocks by providing buffalo bulls on the premium system.

(iv) Other assistance in the form of loans etc. for the purchase of cattle and equipment will also be necessary.

(v) This scheme will ultimately be combined with scheme No. 56—*Co-operative Creameries*—in which development is not possible at present.

(vi) A Manager will be required for the first 3 years at a total cost of Rs. 2,760 for the operation of the Milk Supply Scheme.

(4) *Consolidation of Holdings*.—Owing to the large variations in soil and water and irrigation facilities between holdings in each village any consolidation scheme will be difficult to apply in the Taluka. The Registrar proposes to make a survey in one village in the Taluka in the near future. The development of Joint Farming Societies is likely to be held up for the same reason.

The possibility of establishing a *Joint Farming Society* at Apshinga on land at present included in the reserved forest is being considered. Preliminary investigation is not favourable as the land is poor, and there is not much likelihood of finding good water. The scheme is being further examined.

V. *Staff and cost of all the schemes :—*

Scheme.	Staff required.	Cost.	Other grant	Assistance.
			Grants.	Loans.
1	2	3	4	5
(1) Multipurpose Societies ..	4 Secretaries for three years. 1 Manager, Sata-ra Society.	Rs. 5,280 (over 3 years). 2,760 (over 3 years).	Rs. 1,875 For godowns. 1,000 For godowns.	Rs. 5,625 3,000
(2) Weavers' Society, Atit ..	1 Society (half cost).	540 (over 3 years).	....	....
(3) Milk Supply Union ..	1 Manager. 3 Secretaries	2,760 3,240	3,000	((or deficit).
Total ..	14,580 (over 3 years).	5,875	8,625	

The expenditure on godowns can be postponed for the present. The cost above does not include the cost of the District Industrial Association. (Rs. 2,160 per annum recurring which is a District Charge).

Supervising Staff.—An additional Co-operative Officer in the grade of Rs. 95-5-130 will be required to supervise these schemes in the Taluka.

VI. *Extent to which the Schemes can be immediately implemented.*—The Schemes are on the lines of those proposed in the Government Blue Book and have, I understand, received Government sanction. A start has already been made with all of them. The non-availability of equipment needed for the proposed creamery prevents that scheme being developed at present. Staff can be provided by the Department.

VII. *Remarks* :—

- (i) The schemes appear very adequately to provide for the development of the Co-operative movement in the Taluka. The advantages, of the Milk Supply Union are already being felt. Provision has been made for strengthening the existing supervisory staff employed by Government.
- (ii) *No regulated markets* are proposed at present though one may later be established at Satara. There will be ground-nut markets at Koregaon and Rahimatpur and one is already working at Umbraj 4 miles to the south of the Taluka boundary. The multipurpose societies in Satara Taluka will be able to send their produce for sale there.
- (iii) The Municipal marketing facilities for vegetables etc. in Satara City are very bad and the Department should persevere in its effects to get them improved as Satara is the chief market for all kinds of agricultural produce.

SECTION X

I. *Scheme.*—Introduction of compulsory elementary education (Scheme Nos. 103 and 104).

II. *Department.*—Education.

III. *The present position* is summarised in the following table:—

TABLE I
Schools in Satara Taluka

Managing body.	No. of Schools.	Standards				No. of teachers.	
		I—IV		V—VII		Trained.	Un-trained
		Boys.	Girls.	Boys.	Girls.		
1	2	3A	3B	4A	4B	5	6
District Local Board ..	88	5,182	1,224	1,223	81	94	134
Voluntary Societies ..	64	1,553	433	34	2	6	56
Total ..	152	6,735	1,657	1,257	83	100	190
		8,392		1,340		290	

(1) The total school population that can be expected if lower primary education (Standards I—IV) is made compulsory is (at 15 per cent. of the population) :—

Boys.	Girls.	Total
7,840	8,540	16,380

The present school population is 9,700.

(2) *Villages without schools* are as follows :—

TABLE II

Number.	Total.		Total.	15 per cent. of population.		
	Males.	Females.		Boys.	Girls.	Total.
1	2	3	4	5	6	7
35	2,973	3,270	6,243	442	493	935

Situated in villages with population.

0—100	8	201—300	9	826	1
101—200	10	301—400	1	Total	35

(3) Of the total of 152 schools in the Taluka (many are situated in Wadis and some villages have two or more schools) 64 are run by voluntary societies of which the main are the Rayat Shikshan Sanstha (26) and the Jawalwadi Co-operative Society (29), with the aid of Government grants. They work mostly in the smaller villages and Wadis and have been responsible for a remarkable increase in the number of schools during the past six years. Their work is to be expanded both as regards the opening of new schools and the training of teachers.

(4) The figures given in Table I are the numbers of pupils on the registers. Probably only about two-thirds attend regularly. At first sight the conclusion to be drawn is that only 1,100 boys (7,840—6,735) are not attending school in the primary stage (age 6—11). Cf these 442 live in villages without schools. But the primary classes often contain boys older than the age groups appropriate to them and the figures require detailed analysis before any firm conclusion can be drawn from them. That is now being done by the Department's Officers.

(5) Of the 88 District Local Board Schools 34 have some provision for *Play-grounds*.

(6) About one-third of the teachers are trained.

(7) Of the total rural population of 109,000 only 6,000 or 5½ per cent. live in villages without schools. Even allowing for the fact that some of the voluntary schools do not function regularly this is a small figure.

(8) The District Local Board has 14 school buildings in the Taluka. The remaining schools are housed in rented buildings or, in many cases, in temples. Generally speaking the buildings are very bad.

IV. *Introduction of Compulsory Elementary Education Scheme No. 103*.—(1) The Department originally proposed to introduce free and compulsory education in villages with a population of more than 1,500 only during the first five years period. This policy did not allow schools to be developed in every case in places in which they were required. It has, therefore, now been decided to bring under compulsion about one-third of the population of the Taluka during each five years period, the areas chosen for the introduction of the scheme being those which have sent a large

number of recruits ; or in which there is at present a large school-population ; or which are suitable on other grounds.

(2) Children in the 6 to 7 age group will be brought to school in the first year ; the age group 6 to 8 in the second year and so on. The total number of children in the 6 to 7 age group is about 3,000 and about one-third, or about 1,000 will be compulsorily brought to school in the first year. Figures of the number of children in this age group at present attending school are being collected.

V. *Selection of areas for application of the Scheme.*—(1) The number of schools in the Taluka is large and owing to plague and other difficulties full statistics regarding the existing school population, its age distribution, and the other particulars necessary for preparing in detail the educational programme have not been collected by the Educational Department. What follows is based on the material available at present.

(2) Scheme No. 104 provides for the erection of a large number of *Full-grade Primary Schools*. It is suggested that these schools should be built in places where they will serve as *Central Schools*. They will then form a frame-work on which the remainder of the educational machine in the rural areas can be built. The central schools need not always be in large villages but they should be so situated that ordinarily no village is further than 4—5 miles from one. This is a distance which a boy or girl can walk or bicycle without difficulty.

(3) The schools will serve in the lower primary state (I to IV) the population of the village in which they are situated. Those who wish to take higher primary education (V to VII) will also go to them from the surrounding villages.

(4) It will continue to be necessary to provide buildings and teachers for the younger children in standards I to IV in the villages and Wadis in which they live. In the smaller villages (and specially in Wadis) many of these schools must continue to be one teacher schools.

(5) A new school building is required in practically every village and Wadi. At Appendix I (i) and I (ii) is a list of 18 villages suggested as suitable for the construction of full grade primary schools which will serve as *Central Schools*. Appendix I (iii) gives

a list of nine villages in which lower (I to IV) primary school buildings are required immediately either on the ground that the school going population will be large on the introduction of compulsion, or that a large number of recruits have been supplied.

(6) *Cost.*—The *additional* cost of introducing this measure of free and compulsory education (i.e. the completion of the first 5 years plan only) is estimated very roughly as follows :—

(1) Capital	.. Rs. 5 lakhs about.
(2) Recurring	.. About Rs. 55,000 per annum.

Details are given in the Appendix.

(7) *Staff.*—The additional number of teachers that will be required in this first stage is about 100 or about 20 per year. They will be found by diluting the existing staff with untrained teachers in the first instance. Training colleges are being opened this year at Wai in Satara district and at other places, the output of which will be available for employment from 1947 onwards.

VI. *Education in villages in which compulsory education is not introduced during the first 5-year period.*—In these villages the existing arrangements will have to continue for the present. Nearly all the existing school buildings are unsuitable for one reason or another. I suggest that grants should be made to managing bodies of temples, etc., where schools are held, to encourage them to modify or otherwise improve public buildings used as primary school-buildings in villages. By this means some primary schools could be brought up to standard at small cost. The voluntary societies should be encouraged to open schools in the villages that are still without them.

VII. *Miscellaneous proposals*—(1) *Medical Inspection of school-children (Scheme 106).*—School children will be examined on admission in schools and again at ages 11, 14 and 17. Those found defective will be re-examined every year. Three doctors for every 25,000 children is the standard. For the examination of the elementary school children in the Taluka about 2 doctors will be required.

The Medical Officers will be B.M.S. Class II Officers and each will have a compounder. Cost Capital 2,000 ; Recurring 5,600 per annum.

These doctors are, of course, not immediately available and their provision must, I think, rank in priority below the staff required for the general medical services. It is, however, proposed to establish 5 S.M.P. Centres in the Taluka. I suggest that these doctors should carry out the examination of school-children in the main villages until special doctors are available. They are in fact obliged to do this under the present Subsidised Practitioners' Rules.

The obligation is not enforced in this District and the one S.M.P. at present working in the Taluka at Parli has failed to carry out these inspections as the School Board has been unable to provide the simple equipment (weighing machine, a tape measure and the necessary forms) required for the purpose. This has been brought to the notice of the Civil Surgeon, and is an illustration of the sort of difficulty that arises from dual control.

(2) *Assistant Deputy Education Inspectors (Scheme 105)* will have to be provided for every 50 schools. Two men will have to be provided for the Taluka in addition to the two already working. Third-year trained primary teachers can be employed until suitable graduates are available. Additional cost about Rs. 1,600 per annum.

(3) *Attendance Officers*.—One will be required in the first stage; ultimately two will be necessary. Additional cost of about Rs. 800 per annum in the first place.

(4) *One Full Grade Agricultural Bias School (Scheme 98)* is to be provided for the Taluka. Further investigation has shown Degaon to be more suitable for the purpose than Chinchner. This decision is a reversal of that tentatively arrived at the meeting of the 22nd January (conclusion 12). A site has been selected for the school building and the farm. It is understood that suitable trained staff is available.

(5) *English Classes*.—There is a demand for English Classes to be attached to some of the schools. In these standards I—III are taught in one year. Those who wish to pursue their English education will have to go to a High School in Satara or elsewhere. It should ultimately be possible to arrange these classes in all places where there is demand for them.

(6) *District Staff necessary for the scheme.*—The scheme can be put into effect by the existing Administrative Officer of the Local Board and the existing Deputy Educational Inspector appointed by Government. It is possible that the temporary assistance of two or three additional Deputy Inspectors will be necessary in the early stages.

VIII. *Extent to which scheme can be immediately implemented.*—

(1) The introduction of free and compulsory education is not possible unless and until buildings to house the additional school population are provided. Appendix I indicates roughly the priority in which it is suggested schools should be constructed in each group.

(2) At present the main responsibility for education rests with the Local Board. This expansion is to be the responsibility of Government. I understand that the division of function between Government and the District Local Board in the future has still to be settled. Though the Satara District School Board will doubtless co-operate in whatever is proposed by Government the position of the Administrative Officer is an awkward one so long as his divided responsibility continues and an early decision on the question is desirable.

(3) Staff, much of it untrained in the first instance, can be made available to operate the scheme as soon as the other preliminaries are completed.

(4) In the meantime, as Government has already announced the voluntary societies are being encouraged to extend their activities especially in villages without schools.

(5) *Buildings.*—Sites have been preliminarily selected for most of the Central Schools. It is essential that they should be large enough to allow for future expansion and should provide adequate play-ground space.

IX. *Miscellaneous*.—(1) The following are the figures of population by age groups in the Satara District at the last three censuses :—

	1921	1931	1941
Total ..	1,026,259	1,179,712	1,327,249
Age 0—5 ..	128,251	178,548	188,000
5—10 ..	155,994	159,339	207,000
10—15 ..	124,407	140,144	154,000

(Note.—The figure of age distribution in 1941 are deduced from the sample table No. VII on page 131 of Census Report, and do not represent an actual count.)

(2) The figures show that the number of children of lower primary school age (roughly 6—11 or 5—10) has increased by nearly 50,000 since 1931. This number of school-children requires roughly 1,600 additional teachers and a corresponding number of school-rooms. An increase in the number of children in the lower primary stages will ultimately increase the number demanding admittance to Standard V—VII. This will also have to be allowed for.

(3) The figures make it clear that—

- (a) An analysis of population trends is necessary in each area before its needs are finally decided upon. The Department, in the form of a questionnaire that has been sent out to collect information regarding individual schools, has attempted to make allowances for population increases. But I suggest that the matter is sufficiently important to warrant detailed and expert examination.
- (b) If the school building programme is not to be out of date almost as soon as it is begun it is clear that as far as possible new school buildings should be so sited, and the land acquired sufficient, to allow them to be expanded by the addition of more class rooms as required. All the type designs now being prepared should be examined from this point of view and the lines on which the buildings can be expanded indicated on the design. It should be possible to do this without giving buildings an unfinished appearance.

(4) The building of schools on small sites when the original school building programme was carried out in Satara Taluka has made it possible to extend very few of the schools in the Taluka with the result that classes have often to be held in other buildings scattered all over the village.

(5) It was accepted at the meeting of the 22nd January, that as far as possible schools should be provided with gardens for vegetable growing, etc. At the same time it was recognized that owing to the difficulty of irrigation, it would be better first to concentrate garden plots included in Taluka Demonstration Centres where water and supervision will be available. Several of the proposed Central Schools are near these T.D.Cs.

APPENDIX I

Introduction of free and compulsory Primary Education (First Phase)

(i) List of villages with populations larger than 1,500 requiring Full-grade Primary School buildings to serve as Central Schools.

Name.	Popula- tion.	Recruits.	Estimat- ed No. of pupils 15 per cent. of the popu- lation.	No. of teachers necessary.	Remarks.
1	2	3	4	5	6
				<i>Existing Addl.</i>	
1. ApsHINGE ..	1,612	168	242	5 + 3	
2. Kodoli ..	1,934	136	290	4 + 5	
3. Nagthane ..	2,469	66	370	6 + 6	C. O. R.
4. Degaon ..	2,375	59	356	7 + 5	Agricultural Bias School.
5. Venegaon ..	2,068	84	310	5 + 5	
6. Atit ..	1,632	46	245	5 + 3	Will serve also Kashil (1,582)
7. Saspede ..	1,845	43	277	4 + 5	
8. Padali ..	2,119	28	318	6 + 4	
9. Angapur B. & K. ..	2,328	29	349	6 + 5	Serves also Varna (1,617)
10. Arale ..	1,735	27	260	7 + 1	Extension Neces- sary. Will also serve Vaduth and Pathkhal (1,500)
11. Limb ..	3,788	29	568	9 + 9	C. O. R.
Total ..	23,905	715	3,585	64 + 51	
				115	

Note 1.—The list above, and those below, are approximately in order of priority in which buildings are required.

Note 2.—Many of the villages listed have Wadis attached to them which will require separate small school houses.

(ii) List of villages with population less than 1,500 in which Full-grade Primary Schools should be developed to serve as Central Schools.

Name.	Population.	Recruits.	Estimated No. of pupils (15% of population.)	No. of teachers required.	Remarks.
1	2	3	4	5	6
				Existing	
				Addl.	
1. Chinchner Vandan ..	1,319	92	198	6 + 0	C. O. R.
*2. Parali ..	1,088	13	163	4 + 1	C. O. R.
3. Kondve ..	1,309	59	196	6 + 0	
4. Vele ..	1,003	21	150	5 + 0	
5. Gowa ..	1,493	32	224	4 + 3	
6. Kshetra Mahuli ..	1,405	26	211	11 + 0	
*7. Asangaon ..	1,643	17	246	1 + 7	
Total ..	9,260	260	1,388	37 + 11	
				48	

*Should be taken up after communications have been developed.

Note.—The schools in the two tables above will provide higher elementary (Standards V—VII) education for children in surrounding villages as well as the ones in which they are situated. The estimated number of pupils will be increased when the details of the scheme have been worked out and the figures analysed in detail.

(iii) List of villages in which lower elementary Primary School-buildings are required (Standards I—IV)

Name.	Population.	Recruits.	Estimated No. of pupils (12½% population.)	No. of Teachers.	Remarks.
1	2	3	4	5	6
				Existing	
				Addl.	
1. Nigadi Tarf Satara	1,385	139	173	3 + 3	
2. Patkhal ..	1,501	27	188	3 + 3	
3. Varna ..	1,617	36	202	1 + 5	
4. Kashi ..	1,582	29	198	2 + 4	
5. Tasaon ..	1,776	56	222	2 + 5	
6. Nandgaon ..	1,500	18	188	2 + 4	
7. Shahapur ..	1,551	30	194	1 + 5	
8. Chinchner S. Nimb..	1,024	43	128	5 + 0	
9. Ashta ..	419	26	51	1 + 1	
Total ..	12,355	404	1,544	20 + 30	
				50	

Free and Compulsory Education—First Phase.

Total Population Served 45,520 or 40 per cent.

Estimated number of pupils=6,517 or 7,000 in round figures.

Number of additional teachers required = 92 or 100 in round figures.

Cost.—(a) Buildings—

Buildings at Rs. 50 per head = $7,000 \times 50 = 3\frac{1}{2}$ Lakhs.

Land $25 \times 6 \times 1,000 = 1\frac{1}{2}$ Lakhs.

(at Rs. 1,000 per acre, 6 acres for each school).

Total = 5 Lakhs.

(b) The average recurring cost of primary education estimated in terms of the number of teachers employed is estimated at Rs. 540 per teacher per annum.

The approximate additional recurring cost of introducing this measure of compulsion is approximately Rs. $100 \times 540 =$ Rs. 5,400 per annum.

Total Cost.	Recurring.		Capital.
	Rs.		Rs.
100 Teachers at Rs. 540 per annum	54,000		....
2 Doctors at Rs. 2,800 and compounders	5,600		2,000
2 Assistant Deputy Educational Inspectors	1,600		....
41 Attendance Officer	800		....
	<hr/>		
Total ..	62,000		2,000

Making in all Capital 5.2 lakhs Recurring Rs. 2,000 per annum.

Note.—The estimate for buildings given above assumes that new buildings will have to be provided everywhere it will be possible to use existing buildings at Angapur, Arale and possibly Waduth though in all these places expansion is necessary.

The cost of buildings is however likely to be slightly greater than Rs. 50 per head and the figures given can be regarded as approximately correct.

SECTION No. XI

I. Secondary Education.

II. *Department.*—Educational.

III. *Existing Arrangements.*—There are in all seven secondary schools in Satara City including an Agricultural High School run by Government. The number of pupils is 2,491 (Boys 2,092, Girls 399) of whom about 400 come from villages in Satara Taluka outside Satara City. There are no secondary schools in the Taluka proper.

Buildings and play-ground space are generally inadequate.

IV. *Extension and Improvement.*—(1) With the exception of the Agricultural School the managing bodies of the various schools are non-Governmental. They all have plans for expansion and improvement after the war. It is contemplated that this expansion will be left to private effort assisted by Government grants. Direct intervention by Government is not proposed.

V. *Comment.*—

“The High School is in one sense the backbone of a national educational system for it is to the High School that the country must look for the preparatory training of its leaders and experts in all walks of life.” (Sargent Report p. 21).

If the above statement is accepted as correct it is, I think, very desirable that steps should be taken with the object of ensuring that a larger number of young men from the villages find places in secondary schools.

The number of children from Satara Taluka in the secondary schools is about 400. Even if this figure is increased to 600 to allow for those who take their education elsewhere only 1 in 180 of the rural population is being educated in a secondary school at any one time. The proportion of Marathas is certainly much smaller.

The introduction of compulsory primary education is certain to increase the demand for secondary education and in my view the Educational Department should try in the future to establish a school in the rural area (for instance at Nagthana) to meet this demand.

SECTION No. XII

I. *Scheme*.—Improvement and Extension of Medical facilities.

II. *Department*.—Medical.

III. *Existing Arrangements*.—(1) There is a Civil Hospital at Satara with 50 beds and one Subsidised Allopathic Medical Practitioner at Parli. The following table is a brief summary of the position :—

—	No. of beds.	No. of practitioners.		Population per practitioner.
		Allopathic.	Ayurvedic.	
Satara City	145	35	31	500
Rural Area	3	3	1	25,000

(2) The table includes beds available in the Civil Hospital and Municipal and private dispensaries and Maternity homes. The three beds in the rural area are in the American Mission Child Welfare and Maternity Centre at Vaduth and are reserved for Maternity cases. Allopathic practitioners visit Tasgaon, Nandgaon and an Ayurvedic practitioner from Satara goes regularly to Limb. Other doctors from Satara visit the neighbouring villages on bazaar days ; but the table shows that little medical relief is available in the rural area.

IV. *Proposed Expansion*.—(1) The following improvements will be made in the Civil Hospital in Satara City :—

- (i) Increase in beds from 50 to 75 ;
- (ii) The provision of an ambulance ;
- (iii) The opening of a college of nursing to provide short courses of instruction to nurses.

(2) *Extension of Subsidised Medical Practitioner Scheme*—(Scheme No. 90).—It is envisaged that the main development in the rural area will be by means of these Subsidised Medical Practitioners. Under Scheme No. 90 the number of additional Subsidised Medical Practitioners to be appointed is 47 in the whole of the concentrated area of 67 Talukas and Petas ; but the Surgeon General is prepared to make provision for 4 Subsidised Medical Practitioners' Centres in Satara Taluka in addition to the one already operating at Parli.

It is suggested that these should be located at *Nagthana, Chinchner, Vaduth* and *Nimb* in that order of priority. *Vaduth* is chosen in preference to *Kanher* owing to the larger population there and the greater probable demand for medical services.

(3) *Buildings*.—Scheme No. 90 provides that an S. M. P. shall be granted an allowance of Rs. 180 per annum as rent for his dispensary and buildings have hitherto not been provided by Government. I understand that if the Scheme is to succeed it is now accepted that buildings and quarters for the S. M. P. and his staff are essential. Type plans are being worked out by the Surgeon General. No indication of cost is available. Rs. 15,000 for each Centre has been included in the estimate of cost. Total Rs. 75,000 for 5 Centres (including *Parli*).

(4) *Cost*.—The recurring cost for an Allopathic practitioner is Rs. 1,890 per annum and for an Ayurvedic practitioner Rs. 1,270 per annum. Assuming that 2 Allopathic doctors and 2 Ayurvedic doctors are appointed the *total recurring cost* will be Rs. 6,330 per annum. If it is decided to provide buildings considerable capital expenditure will be necessary. Details are not at present available.

V. *Extent to which the Scheme can be immediately implemented*.—

(1) The Civil Surgeon has circularised the practitioners working in *Satara City* to ascertain whether they are willing to accept engagements as S. M. Ps. It is unlikely that there will be any response from Allopathic practitioners but it will probably be possible to obtain the services of two or three Ayurvedic doctors for immediate appointment.

(2) Whatever doctors can be recruited in the near future will have to work in rented buildings in the first instance. Except at *Limb* suitable accommodation for Allopathic doctors will be hard to find. The requirements of an Ayurvedic practitioner are simpler and inquiries are being made whether the necessary accommodation is available in the Centres suggested.

VI. *General Remarks*.—I understand that the Medical Department's Post-war Plans are being revised. The ideal is doubtless the provision of beds for a few in-patients at each main Centre of Reconstruction from which serious cases can be sent to the Civil Hospital. The staff and training likely to be available will not make it possible to do this in the near future.

(2) In Satara Taluka I suggest that at Nagthana a Medical Centre of this type, rather larger than the ordinary S. M. P. dispensary, should if possible be established in the near future. There is a population of 10,000 within a radius of 3 or 4 miles and the village is situated in an area which has provided a large number of recruits.

(3) When communications have been developed it should be possible for a doctor in charge of a S. M. P. Dispensary to visit the surrounding villages occasionally though as distances are small the majority of the patients should be able to travel to the dispensary when they wish to see a doctor.

(4) The S. M. P. will also have to undertake the medical examination of school-children until the Educational Department is able to provide special doctors for the purpose. The necessary equipment should be provided.

(5) Additional comments are contained in the Sections that follow.

SECTION No. XIII

Scheme.—Public Health.

Department.—Public Health.

General.—The following are the Public Health Department Schemes applicable in Satara Taluka :—

- (i) Improved Sanitation of bigger towns and villages (Scheme No. 92).
- (ii) Village Water-supply (Scheme No. 93).
- (iii) Maternity and Child Welfare Scheme (Scheme No. 94).
- (iv) Establishment of District Health Organisation (Scheme No. 63).

Government has not passed orders on the Department's proposals embodied in Schemes Nos. 92 and 94. The schemes are explained and examined in detail below.

A further Sub-section V commenting on the Medical and Public Health Department Schemes in general terms has been added.

SECTION No. XIII

SUB-SECTION No. I

*Improved Sanitation in bigger towns and villages
(Scheme No. 92)*

It is proposed to station the following sanitary staff in the Taluka :—

2 Sanitary Inspectors.

6 Sub-Sanitary Inspectors.

25 Mukadams.

100 Sweepers and Coolies.

They will be organised into squads. The headquarters of each squad is indicated in the table below together with the number of villages and approximate population with which each will deal :—

Head quarters.	No. of villages in jurisdiction.	Population.	No. of squads.
1	2	3	4
1. Kanher	21	14,917	3
2. Vaduth	18	21,956	5
3. Parali	46	16,432	5
4. Churchner	18	19,095	4
5. Nagthana	16	19,675	4
6. Padali	30	17,180	4
Total	141	1,09,255	25

At each headquarters there is to be a Sub-Sanitary Inspector. Under him 3, 4 or 5 squads each squad consisting of 4 coolies (Pay Rs. 20—1—30) and 1 Mukaddam (Pay Rs. 25—1—40).

The six Sanitary Sub-Inspectors (Pay Rs. 70—5/2—90) are to be supervised by two Sanitary Inspectors (Pay Rs. 75—10 2—150).

2. *Duties.*—The Sanitary staff will be responsible for the general sanitation of the villages in their charge including conservancy, disposal of excreta, cleaning up village sites, inspection of water supply, anti-malaria measures and health propaganda. They will also check births and deaths registers and be available for use during epidemics.

2. *Village Panchayats.*—Where Village Panchayats have been formed the Sanitary staffs will co-operate with them and advise them. The Department recommend the formation of village Panchayats in every village with a population over 1,000. Under the existing Act Panchayats are formed in villages with a population of 2,000 and over. There are 7 of them in the Taluka. Few of them do anything appreciable to improve the sanitation of the villages and they are undoubtedly the occasion of many disputes. On the other hand there are no other means at present of creating a feeling of responsibility in the village community, the absence of which severely handicaps Government efforts in this direction.

3. I suggest that in villages with a population of 1,500 and over (there are 18 in the Taluka) Village Panchayats should ordinarily be started in the hope that thereby some civil consciousness will grow. Villages of 1,000 (excluding Wadis this will mean, a population of about 700) in the village proper are in my view too small for the successful development of these bodies at present.

4. *Summary of cost*—

			Rs.
Cost—Recurring	..	..	80,800
Non-recurring	..	..	6,000
		Total	86,800

The details have been submitted to Government by the Department for approval under the Director of Public Health's letter No.272-A of 9th February 1945.

It is contemplated that the staff will ultimately be provided with quarters. The cost of this has not been worked out.

5. *Extent to which Scheme can be immediately implemented.*—Government sanction has not been received. The staff is understood to be available for immediate employment when its sanction is received. Coolies will be recruited locally.

6. *Comments on the Scheme.*—(1) I understand schemes similar to this have been started elsewhere in the Province. The recurring cost of the scheme is Rs. 80,800 a year. If it were applied to the remaining Talukas and Petas in the concentrated area, the total recurring cost would be about 55 lakhs a year as contrasted with the Rs. 2,49,000 which it is proposed to spend on the provision of subsidised medical practitioners who will be largely responsible for curative medicine in the concentrated area.

(2) The schemes as a whole should not be applied until roads in the Taluka have been put fully in order. Supervision will in any case be difficult.

(3) Although the scheme is stated to be applied to the *larger* towns and villages the present scheme submitted by the Department is applicable to *all* villages in the Taluka.

(4) Considerable capital expenditure on buildings and quarters will be necessary if the scheme is proceeded with. No estimates has been made pending the decision of Government on the scheme.

(5) *Suggested curtailment of the Scheme.*—If expenditure on the scale proposed is not practicable the scheme can be limited in its application to the Centres of reconstruction and the villages in the immediate neighbourhood and the staff required proportionately reduced.

An alternative would be to strengthen the staff placed at the disposal of the District Health Officer and his organisation under Scheme No. 63 (See Sub-Section IV below) and to employ this staff where it is not required for epidemic or other special duty elsewhere, on duties similar to those suggested in this scheme but on, of course, a more limited scale.

7. *Miscellaneous*—(a) *Leprosy.*—A rough survey carried out in 1941 by a Medical Officer produced an estimate of 4.5 per thousand of population as the number of lepers in the Satara Taluka. An inquiry made by the Revenue Staff in February 1945, at my

instance, produced a total of 394. This is certainly an underestimate. The Leprosy Officer (appointed by the British Empire Leprosy Relief Association) treated last year at Centres in Satara and Nagthana 195 lepers. He estimates the total to be about 2,000. It is clear that the disease is a menace but the exact incidence is not known.

(2) The following measures are said to be necessary to control this disease the incidence of which is generally believed to be increasing :—

- (i) A preliminary survey to ascertain the number of lepers ;
- (ii) Inspection of schools by experts ;
- (iii) Compulsory education and treatment at an increased number of centres ;
- (iv) The establishment of colony for the segregation and treatment of infectious cases. Shendra on the Poona-Bangalore road a few miles from Satara has been suggested as a suitable site.

(3) The British Empire Leprosy Relief Association is a non-official body and its medical officer (whose work is carried on all over the District) is largely independent of official control. When the number of S. M. Ps. is increased the Medical Department should consider whether they should be required to treat leprosy cases.

(b) *An Isolation Hospital* is required at Satara. The recent plague epidemic has demonstrated the necessity for it.

Neither of the above two items is included in the reconstruction plan but both are important from the public health point of view and should receive further consideration from the Department.

SECTION No. XIII

SUB-SECTION II

I. *Scheme*.—Village Water Supply.

II. *Departments*.—Public Health and P.W.D. (Scheme No. 93).

(1) The position in the Taluka is summarised as follows :— 29 villages and Wadis have draw-wells, 69 villages get their water from rivers or streams, 13 villages have step-wells owned by the District Local Board, 34 villages obtain their supply from Nallas.

(2) During the 2 or 3 months preceding the monsoon in June drinking water is short in practically every village in the Taluka not situated on the banks of one of the three major rivers. Guineaworm is prevalent in 57 villages and is responsible for much sickness and debility. In addition, the Taluka is liable to epidemics of cholera. This disease affects mainly the villages which draw their water direct from the rivers Krishna, Venna and Urmodi. Nearly all the draw-wells require minor improvements.

(3) In the minds of the villagers there is no doubt that the provision of good drinking water ranks with, and in some villages above, education and roads as the first need of the Taluka. As the improvement of the existing wells and the construction of new ones can be carried out without the use of scarce materials (a limited amount of cement, explosives and iron for Rahats, etc., is required), I recommend that a start should be made at once. Until the water supply is improved the benefit of medical and other public health facilities is largely negated.

III. *Methods of Water Supply*.—(1) Ordinary masonry draw-wells must ordinarily suffice for villages away from the banks of rivers. For villages situated on the high banks of rivers special measures will be necessary or people will continue to draw their water from the rivers in preference to taking it from the deep wells that will usually be required. I think it probable that in these villages tube wells sunk within a short distance of the river may be found cheaper and more convenient than ordinary open draw-wells. A detailed examination of the circumstances of each village is necessary. But it should be possible to use one of the pumps made by the Kirloskar Engineering Works and similar firms after

the design has been modified where necessary to ensure that it is sufficiently robust ; the defect of many of these pumps is that the handle and other mechanism is not strong enough to stand up to rough use.

(2) Where pumps are installed regular *inspection* and *maintenance* are necessary. This should, I suggest, be supplied by the Public Health Department's Sanitary staff if the Public Health Scheme (see Sub-Section I) is approved, one member in each squad of which should be trained in the work. Alternatively the Public Health Department or the P. W. D. should employ one or two fitters in each Taluka whose business it would be to keep the pumps in good order.

(3) In the larger villages, especially those on the banks of rivers the provision of a small reservoir feeding taps at central points is the ideal. But with the restricted water supply at present available in the wells even the larger villages must depend for many years to come upon ordinary draw-wells. Efforts should be concentrated for the present on providing at least one reliable and sufficient source of water supply in each village.

(4) Caste prejudice is still very strong in the Taluka and 3 or 4 wells are commonly used in every village. It is evidently impossible for Government to improve all these wells and the scheduled caste people must wait for a change in public opinion brought about by their own efforts and general education. When taps fed by a central reservoir can be provided this caste difficulty will be overcome.

(5) Care should be taken to see that adequate drainage is provided for waste water from each well and pump. The P. W. D. Officer responsible for each work should visit it again 3-4 months after it has been completed and see that any additions or alterations required are carried out. Places where people can wash their clothes at some distance away from the wells should be provided where possible.

IV. *Priority*.—(1) In 1943 a Special P. W. D. Sub-Division prepared estimates for the improvement and construction of wells in 19 villages in which guinea-worm was particularly prevalent. In 9 cases successful trial bores were made. The estimated cost then was Rs. 27,503. But the cost of executing these works

today will be about Rs. 50,000. These works should be carried out first.

(2) The District Health Officer has in his office a list of villages in which guinea-worm is prevalent. This disease is nearly always an indication of inadequate as well as impure water supply and these should be taken up next, good recruiting villages being given preference.

(3) Villages which have an adequate but impure water supply (roughly those on the river banks) should be taken up last together with villages with draw-wells where generally speaking minor improvements only are required.

(4) The Director of Public Health is of the opinion that (3) should precede (2). I differ from this view for the following reasons :—

(a) Because the villages on the banks of rivers require special measures, pumps, bores, etc., which are not at present obtainable. They are also villages in which it is proposed to make electricity available in due course and in which special measures may be practicable on that account. Electric pumping should provide a useful basic load for the grid scheme.

(b) It is probable that greater hardship results from bad water and insufficient water supply in the villages in group (2) than from the occasional epidemics of cholera that occur in group (3).

(5) At the same time some water supply projects using pumps, etc., could well be carried out in the river-side villages, to gain experience on the best methods and apparatus that should be used. The priority suggested above is of course subject to a convenient grouping of the works to secure economical construction and adequate supervision.

V. *Cost.*—The present cost of the 19 projects mentioned is about Rs. 50,000. Assuming that 150 wells require construction or repair at an average of Rs. 2,000 per well, the minimum sum required will be Rs. 3 lakhs. This should provide one good source of water supply in each village.

VI. *Extent to which the scheme can be immediately implemented.*—These works can be carried out by the P. W. D. Sub-division required for the execution of other works in the Taluka. The materials needed are generally obtainable locally. Tube wells, etc., have to wait for the present.

VII. *Miscellaneous.*—(1) Scheme No. 93 provides a total sum of only Rs. 50 lakhs or less than 1 lakh for each Taluka, for the improvement of water supply in the concentrated areas apparently on the assumption that only those villages for which estimates were prepared by the P. W. D. Sub-division require improvement. In Satara Taluka, the villages examined were a small proportion only of the villages in which works of some sort are required.

(2) In my view water supply improvement deserves a very high priority in the works to be carried out by Government in the Taluka.

(3) Water supply grants made by Government are administered by the Commissioner. In some villages wells have been improved out of the grant by Government or by the D. L. B. although a satisfactory alternative water supply already exists in the village. Close co-operation between the District Health Staff, the Revenue authorities and the D. L. B. is necessary to avoid money being misapplied in this way in the future.

(4) The responsibility for the repair and maintenance of wells constructed at the cost of Government has to be decided.

SECTION No. XIII

SUB-SECTION No. III

PUBLIC HEALTH DEPARTMENT

Maternity and Child Welfare Scheme

1. *Existing facilities.*—(1) The Satara Health Association operates in Satara Town, under the general supervision of the Bombay, Mofussil Maternity and Child Welfare Council, a Maternity Hospital, one Infant Welfare Centre and a Women's and Children's Hospital. In co-operation with the Association the American Marathi Mission is responsible for Maternity Centres at Satara and Waduth.

(2) The Centre at Waduth serves the rural population exclusively. Those in Satara serve mainly the urban population though there is a some attendance from the rural area. The training of dais is an important part of the Association's work.

(3) The Association runs centres at five other places in the District. Its income is mainly derived from Government grants, from fees and from public contributions.

2. *Proposed Extension.*—When it was learned that Government proposed to begin its reconstruction activities in Satara the Bombay Mofussil Council decided to extend its activities in Satara Taluka with the help of a Government grant and to curtail them in other parts of the District. They proposed that sub-centres should be opened in the Taluka for Maternity and Child Welfare work, each of which would deal with a maximum of 8,000 population. Each sub-centre to be staffed by a Health Visitor, a midwife and 2 trained dais, and to be visited once or twice a week by a lady doctor with 3 or 4 such sub-centres in her charge.

A *Main Centre* having a resident lady doctor would control each unit of 3-4 sub-centres.

(2) It has been accepted by the Public Health Department that the execution of a Scheme of this sort is beyond the resources of a voluntary body and that it would have to be put into effect and run by Government under the local control of the District Health Officer with the help and advice of the Bombay Mofussil Council.

(3) An ideal scheme has been submitted by the Director of Public Health to Government for approval. This would make a complete

Maternity and Child Welfare service available in the Taluka and would involve the opening of the following centres :—

1. *Main Centre, Satara.*—

Name of Sub-centre.				No. of villages served.	Population.
1				2	3
1.	Satara Suburban (Welfare Centre)	..	..	9	8,435
2.	Chinchner	..	..	8	9,502
3.	Varya	..	..	8	6,257
4.	Nimb	..	..	6	8,088
5.	Kanher	..	..	10	7,827
6.	Vaduth	..	..	7	8,577

2. *Main Centre, Nagthana.*—

1.	Nagthana (Welfare Centre)	..	..	5	7,692
2.	Nandgaon (or Venegaon)	..	..	7	7,699
3.	Padali	..	..	5	6,307
4.	Vechla	..	..	12	8,893

(4) Ultimately additional sub-centres at Angapur and Parali will be required to complete the Scheme ; but pending improvement of roads in these areas the opening of these Centres would have to be postponed.

(5) *The Main Centres* at Nagthana and Satara will have 12 beds and an outdoor dispensary for women and children. Child Welfare work will be done by the staff attached to the Welfare Centre which would be attached to the Main Centre. Each Main Centre will be the headquarters of the additional Lady Doctor required to supervise the sub-centres. She will tour. Except for Padali, 2 miles from Nagthana, and Nandgaon all the sub-centres in the table above are on or near existing motor-bus routes. No special arrangement for transporting the Lady Doctor need be made. If she has to visit a village off the main roads she can hire a bullock cart. Each Sub-centre will have 4 beds for maternity cases.

3. The total *staff* required for the scheme is :—

4 Lady Doctors.	2 Sweepers.
11 Health Visitors.	2 Peons.
16 Midwives.	2 Attendants.
31 Dais.	2 Orderlies.
2 Compounders.	

4. *Cost.*—The *recurring* cost of the full scheme (including rent of buildings) is estimated at Rs. 73,500 per annum. The initial capital expenditure (excluding buildings) is Rs. 16,200 excluding rent the recurring cost is Rs. 67,000 per annum.

But it is essential that a scheme of this sort should be provided with buildings including residential accommodation for the female staff. The approximate cost of buildings in accordance with type designs prepared is :—

(1) Main Centre (Satara and Nagthana)—		(2) Sub-centre (eight)—	
	Rs.		Rs.
Centre ..	30,000	Sub-centre ..	18,000
Quarters ..	43,200	Quarters ..	20,000
	<hr/>		<hr/>
Total ..	73,200	Total ..	38,000
	<hr/>		<hr/>
3) Welfare Centre (Satara & Nagthana)—			
	Rs.		
Centre ..	18,000		
Quarters ..	30,000		
	<hr/>		
Total ..	48,000		
	<hr/>		

Thus the cost of the Main Centres and Welfare Centres at Satara and Nagthana—

$$\begin{aligned}
 &= 2 + (48,000 + 73,000) \\
 &= 2 + 1,21,000. \\
 &= \text{Rs. } 2,42,000
 \end{aligned}$$

Cost of 8 Sub-centres = 8 × 38,000	Rs.
	.. 3,06,000
	<hr/>

Total Cost of buildings = Rs. 5,48,000 (Non-recurring).

The *recurring* cost is estimated at Rs. 67,000; excluding rent but including dearness allowance of Rs. 10,000. Full details have been sent to Government by the Director of Public Health in his letter No. 272-A of 22nd February 1945.

5. *Extent to which the Scheme is immediately applicable:* (1) The scheme is a very much more ambitious one than that provided by Scheme No. 94; and it has not yet been approved by Government.

(2) It is understood that the three lady doctors could be made available in the near future. The other staff could be recruited or trained fairly soon.

(3) It will be possible to rent buildings for these Centres at Nimb and Chinchner as a temporary measure. The existing Centre at Vaduth can continue to be used for the present but the building is not suitable and will not be at the disposal of Government. Ultimately buildings will be required at every Main Centre and Sub-centre.

6. *Supervisory Staff.*—The staff will be under the general control of the District Health Officer. His position is described in Sub-Section IV below.

7. *Suggested curtailment of the Scheme.*—(1) I think it possible that Government will consider the ideal Scheme described above to be too costly. The alternative scheme described below is therefore put forward :—

The extent to which the full scheme should be curtailed depends mainly on the money available. At present the Child Welfare and Maternity Centre at Satara, which has 10 Maternity beds and 14 beds in a general Ward with a yearly average of 200 deliveries, serves mainly the urban area. The Health Visitor connected with this Centre works exclusively in the Municipal area so far as Satara Taluka is concerned. The Municipality, which maintains a small Maternity Hospital does no Child Welfare Work in Satara City.

(2) Any extension of Child Welfare Work in the rural area should in my view be accompanied by improvement in the facilities available at the headquarters parallel to the improvements proposed for the Civil Hospital. In the case of the Child Welfare and Maternity work done at Satara the matter is of peculiar importance because the Central institution trains the Dais and Midwives who form the major part of the staff in the rural area.

(3) The development of the Satara Maternity and Child Welfare Centre should in my view be provided for even in a curtailed scheme the construction of new buildings both for training of dais etc. and for the treatment of patients on the most modern lines. Without such a Central Institution to which difficult or unusual cases can be sent, the growth of the work in the District will be retarded. The outpatient Department and the general hospital of 14 beds should

also be expanded even though this will mainly be used by patients from Satara City.

(4) From this Centre Health Visitors should do Child Welfare work in villages within a few miles from Satara. In the Municipal area the Municipality should maintain its own Child Welfare Centre with the connected staff of Health Visitors etc.

(5) Expansion in the rural area outside the neighbourhood of Satara should, I suggest, be limited in the first instance to the development of Sub-Centres at Vaduth, Nagthana, Chinchner and Limb each with the following staff :—

1 Health Visitor 1 Midwife 2 Trained Dais

and with accommodation for a few indoor patients. These Centres would be visited once or twice weekly by a Lady Doctor with head quarters in Satara. The Nagthana Sub-Centre which should be opened first should be so designed as to be capable of expansion when the need arises or funds are available into a full main Centre with a resident Lady Doctor and considerable in-door accommodation.

(6) The Sub-centre at present worked by the American Mission at Vaduth is not fully up to the standard required as regards accommodation and staff and would have to be taken over. I understand that the Mission would probably not object to this course. The building would also have to be replaced ultimately.

(7) The four Sub-centres suggested are all easily accessible by bus and are sufficiently close to Satara for supervision. They would form a foundation on which the scheme could be expanded into areas which are at present difficult of access.

(8) The Sub-centres suggested could be started soon using rented buildings (except at Nagthana, where a suitable building is unlikely to be available) and the existing building at Vaduth at first. The improvement of the Main Centre at Satara should be carried out at the same time as the projected expansion into the rural areas. The extent to which this can be done depends largely on the amount of money that Government are prepared to allot to this Scheme and the division of responsibility for the general health of women between the Medical Department (at the Civil Hospital and through the S. M. Ps.), and the Public Health Department (through this Scheme).

9. *The cost and staff required to operate the truncated Scheme.*—
The staff at present employed by the Association in its Satara Centre and Hospital is :—

1 Lady Doctor.	1 Compounder.
1 Superintending Nurse.	3 Dais Nurses.
2 Health Visitors.	1 Cook woman.

And the total cost of maintaining the Institution in 1944 was Rs. 12,077 .

The staff required to operate the truncated Scheme suggested will be :—

For Main Centre at Satara.	For Welfare Centre at Satara.
1 Lady Doctor.	1 Touring Lady Doctor.
2 Midwives.	1 Health Visitor.
4 Trained Dais.	1 Midwife.
1 Compounder.	2 Trained Dais.
1 Sweeper.	1 Peon for the Lady Doctor.
1 Peon.	
1 Woman attendant.	

For the Sub-Centres at Vaduth, Limb, Chinchner and Nagthana :—
4 Health Visitors. 4 Midwives. 8 Trained Dais in all.

The Staff required to work the whole scheme is :—

2 Lady Doctors.	1 Compounder.
7 Midwives.	1 Sweeper.
5 Health Visitors.	2 Peons.
14 Dais.	1 Woman attendant.

Cost of Truncated Scheme.—Will be approximately :—
Rs.

Capital	.. 2,61,000	
Recurring	.. 3,500	p. a. (Reduced to Rs. 30,000 when buildings are provided).

(for details see statement attached).

As the activities of the Health Association in Satara would be transferred elsewhere the whole of this cost would be additional to what is now being paid by Government.

(10) *General Remarks.*—(1) This alternative scheme is much less costly than the full scheme and requires a smaller number of staff

then the original scheme. Its defect is that it does not cater for the Parli area and for a number of villages along the road to Kanher. But development of new schemes of this type is bound to be slow and difficult and there is advantage in starting in places where there is greater likelihood of the people accepting the scheme and making use of it. The hill villages in the Parli area are not a promising field. Satara Taluka is relatively backward and it will take some time before the village people appreciate the value of this scheme.

(2) Type designs of buildings have been prepared. But the internal arrangements of buildings with a specialist function is a matter for detailed consideration by experts and I recommend that the designs should be examined by a Committee of the Bombay Mofussil Council and other persons experienced in Child Welfare and Maternity work before they are finally approved.

(3) Points of administrative importance regarding this scheme are emphasised in Sub-Section V below.

APPENDIX

Estimate of Cost of runnings one Main Centre at Satara and Sub-Centres at Vaduth, Chinchner, Nimb and Nagthana :—

	Rs.
<i>Pay</i> —	
2 Lady Doctors on Rs. 150—10—250	3,600
5 Health Visitors on Rs. 75—10/2—175	4,500
7 Midwives on Rs. 60—3—75	5,040
14 Dais on Rs. 30—2—50	5,040
1 Compounder on Rs. 30—5—70	360
1 Sweeper on Rs. 20—1—25	240
2 Peons on Rs. 20—1—25	480
1 Woman attendant on Rs. 20—1—25	240
	<hr/>
Total ..	19,500
	<hr/>
<i>Dearness Allowance</i> —	
2 Medical Officers at Rs. 14 p.m.	336
5 Health Visitors at Rs. 14 p.m.	840
7 Midwives at Rs. 14 p.m.	1,176
14 Dais at Rs. 11 p.m.	1,848
1 Compounder at Rs. 11 p.m.	132
1 Sweeper at Rs. 11 p.m.	132
2 Peons at Rs. 11 p.m.	264
1 Woman Attendant at Rs. 11 p.m.	132
Allowance in lieu of daily allowance to Touring Lady Doctor at 15 p.m.	180
	<hr/>
Total ..	5,040
	<hr/>
<i>Contingencies</i> —	
Postage Stamps	200
Petty Supplies	350
Medicines	1,500
Milk etc.	1,500
Mileage Allowance for Lady Doctor at Rs. 60 p.m.	720
Rent—Satara Rs. 75 p.m.	750
Sub-Centres Rs. 5 p.m.	1,140
Quarters for 2 Lady Doctors at Rs. 20 each	480
Quarters for Health Visitors etc. at Rs. 5 p. m. each Rs. 5 × 12 × 27	1,620
Quarters for Sweepers etc. Rs. 3 p.m. each 3 × 12 × 4	144
Hire of bullock carts for Health Visitors occasionally Rs. 5 × 12 × 12	1,200
	<hr/>
Total ..	8,854
	<hr/>
Total Recurring ..	33,394

Non-Recurring :—

<i>Buildings—</i>		Rs.	<i>Welfare Centre at Satara—</i>		Rs.
<i>Main Centre at Satara—</i>					
Centre ..	..	30,000	Centre ..	..	18,000
Quarters ..	..	34,000	Quarters ..	..	20,000
		<hr/>			<hr/>
Total ..		64,000	Total ..		38,000
		<hr/>			<hr/>

Sub-Centres (Four)—

Sub-Centre ..	..	18,000
Quarters ..	..	20,000
		<hr/>
Total ..		38,000 each.
		<hr/>

Equipment and Furniture—

Maternity ..	..	3,000
Welfare and Sub-Centres		4,000
		<hr/>
Total ..		7,000
		<hr/>

Summary of Total Cost.

<i>1. Capital—</i>		Rs.	
Main Centre	..	64,000	
Welfare Centre	..	38,000	
4 Sub-Centres	..	1,52,000	
Equipment ..	..	7,000	
		<hr/>	
Total Capital ..		2,61,000	
		<hr/>	
<i>2. Recurring.—</i>		.. 33,394	p. a. including rent if buildings are not provided.
		<hr/>	
		30,000	p. a. if buildings are constructed.

SECTION No. XIII

SUB-SECTION IV

PUBLIC HEALTH DEPARTMENT

(Scheme No. 63)

(1) *Establishment of District Health Organisation.*—There is at present working in the district a *District Health Officer* responsible to the District Local Board for the Public Health arrangements in the District.

(2) If the Public Health Department Schemes of (I) Improved Sanitation in towns and villages ; (II) Village Water supply and (III) Maternity and Child Welfare are put into effect they will have to be organised and supervised by the District Health Officer. His position and the adequacy of the machinery he controls affect the working of the Public Health machinery in the whole District but also require a consideration from the limited aspect with which I am now concerned.

(3) These Schemes involve the expenditure of considerable sums of Government money and the District Local Board may well object to one of their officers being responsible for schemes over which they have no control ; the interests of Government and those of the Local Board are not always the same. In any case the position of the District Health Officer becomes invidious if he is responsible both to the Local Board through its Chief Officer and to Government through the Director of Public Health.

(4) I understand that the application of *Scheme No. 63* to Satara District is under the consideration of Government. A decision on the relative responsibility of the District Local Board and Government for the Public Health Schemes is an essential pre-requisite to the extension of Public Health activity in Satara Taluka.

(5) The staff available under this Scheme could displace the staff required under *Scheme No. 92* (Sub-Section I) to a limited extent only. It might be increased if *Scheme No. 92* is not sanctioned in its entirety.

2. *Additional Staff required.*—If the District Health Officer is to be responsible for the schemes in the form they have been

submitted to Government he will require the following additions to his office :—

	Rs.
1 Senior Clerk. 80—5/2—95. Dearness Allowance Rs. 14	1,128
1 Junior Clerk. 25—5/2—55—60—5/2—75. Dearness allowance Rs. 14	468
1 Peon. Rs. 14. P. T. A. Rs. 6. Dearness allowance Rs. 11 p.m.	372
Total ..	1,968

The present District Health Officer considers that so long as the various schemes are limited to Satara Taluka he will himself be able to provide the higher supervision and control required.

3. *Cost.*—The approximate cost of scheme No. 63 is estimated at :—

	Rs.
Capital	1,18,450
Recurring	5,62,110
Total ..	6,80,000 for nine Districts.

or about Rs. 76,000 recurring for each District.

The *proportionate* cost in Satara Taluka will be about Rs. 7,600 (Capital Rs. 1,300 : Recurring Rs. 6,300).

4. *Extent to which scheme can be immediately implemented* :—

See Paragraph 1(3) and (4) above.

SECTION No. XIII

SUB-SECTION V

General Remarks on the Medical and Public Health Scheme :—

1. *Cost.*—(1) The approximate cost of the various Schemes (excluding water supply) proposed by the two departments is :—

	Capital.	Recurring per annum.
	Rs.	Rs.
<i>(a) Public Health—</i>		
Improved Sanitation in villages ..	6,000	80,800
Additional Staff in D. H. O.'s office ..	....	1,900
Maternity and Child Welfare ..	5,48,000	67,000
Total ..	5,54,000	1,49,700

(b) Alternative.—If the District Health Officer's Scheme No. 63 replaces the scheme of Improved Sanitation in villages (Scheme No. 92) (the scale of the two schemes is quite different) : and the curtailed Maternity and Child Welfare Scheme proposed in subsection III above replaces the full scheme the cost of the Public Health Schemes will be approximately :—

	Capital.	Recurring per annum.
	Rs.	Rs.
District Health Officer (Scheme No. 63) (Proportionate cost for Taluka)	1,300	6,300
Truncated Child Welfare Scheme ..	2,61,000	33,500
Total ..	2,62,300	39,800

(c) The cost of the Medical Department Schemes (excluding expansion of Civil Hospital) is :—

	Capital.	Recurring per annum.
	Rs.	Rs.
5 Subsidised Medical Practitioners (Including one already working at Parli)	75,000	8,220
	(Estimated)	

The capital expenditure of Rs. 75,000 is estimated. Buildings are not at present provided for in the Medical Department's Plans.

(2) The expenditure proposed by the Medical Department excludes expenditure on the Civil Hospital while the Maternity and Child Welfare Scheme includes the cost of the Hospital and Main Centre at Satara. But even allowing for this, the disparity between the recurring cost of the two schemes is very large. The expenditure proposed for rural medical relief is in fact considerably less than the figure of Rs. 12,800 proposed by the Veterinary Department for recurring expenditure on two additional Veterinary Dispensaries in the Taluka. The Veterinary Department provides quarters and staff for its Veterinary Assistant Surgeons whereas the Medical Department Scheme, as it stands at present, makes provision only for renting quarters.

(3) The Public Health Department Schemes have not yet been approved by Government and the Medical Department Schemes are under revision. None of them can be regarded as final and one is accordingly handicapped in considering them.

(4) The present division of function between the Public Health and the Medical Department also seems to require redistribution if the proposed expansion is carried out. If a total of five S. M. Ps. is employed in the Taluka it seems likely that until the public has learnt to make fuller use of medical facilities than it does at present the doctors will not have enough to keep them occupied and should be able to superintend some aspects of village sanitation, purity of water supply, etc., attention to which is mainly the duty of the Public Health staff. The superior education and training of the S. M. Ps. should make them suitable for this work and there should be considerable scope for their services in what is now the Public Health field. In any case the relationship between the two sets of officials responsible for the health (in the widest sense) of the countryside requires clarification if the work of the two Departments in the villages is to be fully co-ordinated.

(5) If the Maternity and Child Welfare Scheme is sanctioned another complicating factor is introduced for the work of the Sanitary Inspectors in charge of the Sanitation Scheme is apparently to be closely associated with the Maternity Centres. In fact the type plans prepared by the Public Health Department provide for the Sanitary Inspector's office to be situated in the Child Welfare and

Maternity Centre and his quarters are to be within the same compound. The wisdom of so closely associating male officials with work being done by women for women seems to me questionable.

(6) The main Centre at Satara at present being run by the Satara Health Association incorporates a small hospital in which all diseases of women are treated. The main Centres proposed under the Maternity and Child Welfare Scheme will not confine their attention to maternity cases : the doctors in charge will treat all female complaints. It would seem that advantages would result from the administrative combination in some degree of the facilities (both ordinary and specialised) available for women and those available to the public generally at the Civil Hospital, especially as it is impossible to duplicate at present such services as laboratories, X-ray equipment, ambulances and the advice of specialists.

(7) It is proposed to combine the buildings in the Centres into compact units where possible. The Medical and Public Health Buildings should be particularly well adapted to treatment in this fashion. But before designs can be prepared some decision on these points raised above is clearly necessary.

(8) *General.*—In this technical and controversial matter I have attempted to point out the difficulties which consideration of the proposals of the two Departments present when their detailed application to Satara Taluka is considered. As a layman it is impossible to express any authoritative opinion ; but as far as Satara Taluka is concerned it is clear that further detailed consideration of the schemes proposed by the Departments by persons competent to do so is necessary, in order to resolve the anomalies that have been mentioned and to decide the proportion in which money available should be spent on the activities of each Department and the relation of the two Departments to the local bodies.

SECTION No. XIV

I. *Village Improvement and the provision of village Amenities.*

II. *Existing Arrangements.*—(1) One Assistant Rural Development Inspector is stationed in the Taluka. Under the general supervision of the Revenue officers and the District Rural Development Board he is responsible for rural development work in all its branches including propaganda on agriculture, health, village approach roads, water-supplies, manure-pits, etc. He is also responsible for the preparation of schemes for the expenditure of grants allotted by the Rural Development Board and of the discretionary grants at the disposal of the Collector.

(2) The effectiveness of the work depends largely on the personality and energy of the Assistant Rural Development Inspector. When schemes put forward by the various Departments come to fruition much of the work at present performed by the A. R. D. I. will become the responsibility of the subordinate staff of the Public Health, Medical, Agricultural, Co-operative and Industries Departments. Until those organisations have been fully established, the A. R. D. I. must remain the chief agency for rural development propaganda.

(3) The development of each of the Departmental Schemes will bring about some measure of village improvement and the cumulative effect should be considerable. The various items have been dealt with in the appropriate parts of this report and the only specific measures that remain to be mentioned are the following :—

(A) *The Provision of Chawdis** (SCHEME No. 113).—(1) The Central Chawdi design approved for the Central Division in 1941 (some have been constructed) is unsuitable for general adoption as it is in fact a small rest house and not a chawdi. The main rooms are small and the building is not of any use to the villagers as a meeting place.

(2) The designs of a chawdi should include if possible :—

(i) A large meeting-hall in which the villagers can collect to listen to the village radio-set, etc. ;

(ii) A smaller room which will serve as a reading-room and club ;

(iii) Simple living accommodation for inspecting officers. This need consist normally of only a combined living room and an office, a bath-room and a kitchen ;

*A 'chawdi' is a village meeting hall and office.

(iv) A store for the village record. This can ordinarily serve also as the Talathi's office.

(3) Inspecting officers will normally occupy the chawdi for one or two nights only. They are not usually accompanied by clerks nor do they carry a lot of records about with them; their main work should be inspection and moving about in the village proper. It should not be necessary to provide separate office accommodation; such officers will ordinarily do their office work in the same room as they sleep. The central meeting room or the village reading-room can if necessary be made use of.

(4) The Superintending Engineer's designs with slight alterations fulfil these criteria. Before the plans are finally approved the following considerations should be borne in mind. It may be possible to modify the designs to make them still more suitable for the purpose for which they are intended.

(a) Chawdis should ordinarily be situated within the village site; if (and there will be considerable temptation to do so) they are placed *outside the village* there is a danger that the villagers will not use them to the extent that they would if they were centrally placed within the village. As space within most village sites is limited the designs should be made as compact as possible. In the lower rainfall areas two-storied chawdis can be constructed and alternative designs for them should be prepared.

(b) Where it is not possible to build the chawdi in a central place within the village care should be exercised in choosing a site to ensure that it is as central as possible. It will often be worthwhile acquiring land covered by derelict buildings and putting up a chawdi there.

(c) The internal fittings of the chawdi are worth attention. Built-in cupboards, etc., should be provided for storage of books and records.

(d) Central Chawdis at places where no doctor is stationed should have a village medicine chest in charge of the Patil or school-master trained in its use.

The ideal would be to have a chawdi of some sort in each of the 40 Saza headquarters in the Taluka. Twelve already have chawdis though most of them are not in good repair. But every village

has a temple or other public building which can be used for the purpose and any widespread building programme at present would be unjustifiable. Chawdi construction should at present be limited to the provision of Central Chawdis at the Centres of Reconstruction mentioned below.

(5) Scheme No. 113 provides for the construction of 100 Chawdis in concentrated areas in the Central Division. It is suggested that these chawdis should be situated at Centres of Reconstruction and that they should be provided at the following places in Satara Taluka :—

Centre of Reconstruction.	Type to be provided.	Cost.
		Rs.
1. Nagthana	" D "	12,000 (8,000)
2. Chinchner Vandan	" A "	7,950 (5,400)
3. Parali	" A "	7,950 (5,400)
4. Limb	" A "	7,950 (5,400)
5. Kanher	" A "	7,950 (5,400)
6. Vaduth	" A "	7,950 (5,400)
Total ..	....	51,750 (35,400)

The figures in brackets are for a cheaper method of construction. Detailed comments on the type designs have been forwarded to the Superintending Engineer, Project Circle. The type designs have been sent to Government by the Superintending Engineer for consideration.

(6) *Maintenance, etc., of Chawdis.*—Regular provision for the repair and maintenance of buildings of this size and cost is clearly necessary. It is suggested that Central Chawdis should be put on the books of the Public Works Department and maintained by Government as they are required for, and largely used by, Government officers.

Whether other chawdis, intended mainly for use by the villagers themselves, should be built and maintained partly by the Local Board, partly by the villagers and partly by Government as they are at present, depends on the amount of money available and the extent to which Government is prepared to take over responsibilities at

present held by the District Local Board. In the meantime the present practice, unsatisfactory though it is, will have to continue.

(B) *Accommodation for Taluka Development Association.*—(1) Type design "D" contains a room and store intended for the Taluka Development Association. I am not sure that this is sound. The Taluka Development Association is an unofficial body the members of which are usually the leaders of the co-operative movement. Most of the work of the Association is, or should be, done through the Co-operative Sale and Purchase Society (there will ordinarily be one of these in a village important enough to have a chawdi of this size) and the other Co-operative societies and its office and store should, I think, be situated near the local Co-operative Society.

(2) These bodies will normally be housed in rented buildings though they may be provided by Government with godowns in the beginning.

(3) Usually the stock of seeds, implements, sugar-crushers, etc., in stock with the Taluka Development Association is too large to be kept in a store 12' × 10'. I think that the Taluka Development Association office and store should be near the Central Chawdi if possible but need not form part of it.

(4) I would, therefore, earmark this space in the Central Chawdi for officials such as the Kamgar in charge of the Local Taluka Development Centre, visiting Veterinary Officer and other people of that sort for whom separate accommodation is not necessary.

(C) *Village Broadcasting Scheme.*—(1) The chawdi is the proper place for the village wireless set and one will doubtless ultimately be provided in every village. The following is an extract from a letter from the Director of Information on this point :—

"Regarding the design for the combined chawdi and club house, a built-in cupboard would be quite suitable. The internal dimensions of the cupboard should not be less than : height 3'; breadth 2' 6"; depth 1' 6". These measurements will enable it conveniently to accommodate a radio-set, a battery and a time switch. The cupboard will have to contain a shelf, so that the set can be kept in the upper portion and the battery and time switch in the lower."

The Director of Information has asked to be consulted before chawdi designs are finally approved.

(2) Village wireless sets should play an important part in village improvement and adult education in the post-war period though the shortage of equipment makes it impossible for large scale planning to be undertaken now. Wireless sets are shortly to be provided in 6 and possibly 11 villages in the Taluka including the Centre and good recruiting villages. The scheme is evidently capable of extension to every village and every Chawdi design should include provision for a wireless set.

Miscellaneous.—(a) The scope for building improved houses, cowsheds, gutters, latrines, etc., in villages is limitless ; and the lines on which action should be taken are well known. The improvements recently made by the Cement Marketing Co. at Virar indicate what is required. But to get people to adopt these measures at their own expense requires propaganda on a large scale and progress must necessarily be slow. When the Public Health and Medical staff is in position it should be possible to show some results and to relieve the A. R. D. I. and the Revenue staff of part of their responsibility for this work. In the meantime the cost of cement and all building materials is so high and demands for school buildings, dispensaries, roads, etc., must receive priority and no immediate improvement can be expected. Grants to ex-servicemen for the construction of houses should be made only on condition that they are constructed to approved designs.

(b) *Postal and Telegraph Services.*—17 villages in the Taluka (including the proposed Centres of Reconstruction except Kanher and Chinchner) already have branch post offices. The Postal Department's plans for extension include the following :—

- (i) The elimination of no-dak villages ;
- (ii) The interval between two deliveries not to exceed one week especially in villages with a population of 500 and over.

The postal service in the parts of the Taluka where communications are good is already of a fairly high standard and the improvement of roads and the extension of motor bus service should help in its development.

There are no *telegraph or telephone offices* in the rural area and the Department's plans, which are limited at present to extending the telephone service in Satara City and to providing telegraph offices in villages with a population of more than 5,000, will not affect the rural area.

III. *Cost.*—The cost of building the 5 Chawdis mentioned will be Rs. 51,750 or Rs. 35,400 if a cheaper method of construction is used. The cost of village improvement works such as houses will have to be met by the villagers themselves.

IV. *Extent to which schemes should be immediately implemented.*—

(1) There are small Chawdis at Limb and Nagthana but neither is capable of expansion or development into a Central Chawdi of the type proposed. Accommodation can be fairly easily obtained at Limb. I recommend that Central Chawdis be constructed immediately at Nagthana, Parli and Chinchner. They can be used as offices and residential quarters for the Public Works Department staff supervising and carrying out the various works necessary in Satara Taluka.

At *Kanher* there is a Dharmashala and the Central Chawdi there might wait for the present. It can be built later to plans incorporating any lessons learnt from the construction of the other Chawdis. There is also no immediate need of a Central Chawdi at *Vaduth* which, being on the road to a Station, is comparatively accessible.

(2) The village broadcasting scheme is shortly to be begun in the Taluka in accordance with plans already made.

SECTION No. XV

I. *Scheme*.—Improvement and Extension of Village Industries.

II. *Department*.—Industries.

III. *Existing Arrangements*.—(1) The survey carried out by the Sir Purshotamdas Thakurdas Committee in 1940 did not disclose any great possibility of developing small scale industries in Satara District. The expansion of the following activities were suggested :— Soap-making, bee-keeping, blanket-making and growing of cashew-nuts.

(2) At present there is a small power factory at *Limb* containing 20 looms employing 50 workers. Coarse quality cotton goods are prepared for sale in Satara City.

At *Atit* 26 weavers owning 38 handlooms turn out about 5,000 Saris per year. These are sold in the local bazaars and in Satara by the weavers themselves. The Co-operative Department is trying to organize the co-operative management of this industry.

Sisal is grown in nearly all villages in the Taluka and is made into ropes, etc. The American Marathi Mission and some other concerns in Satara have developed the manufacture of mats and other products on a small scale.

This industry seems to be capable of expansion and organisation to an extent that the other village industries in the Taluka are not. The treatment of sisal fibre is widely known among the scheduled caste Mangs who at present lack the experience and capital necessary to exploit their craft commercially. The Co-operative Department is contemplating the co-operative organisation of this cottage industry.

There is a small *Silk Weaving* factory in Satara City and one or two small Textile factories.

IV. *The Department's Proposals for expansion*.—(1) The main is a proposal to establish an *Industrial School* for the teaching of carpentry, black-smith's work and handloom weaving. In connection with this apprentice scheme will be run (Scheme No. 64).

(2) The Industrial School, with objects similar to this, at present run by the District Local Board is not working satisfactorily. The reasons given are that the scholarships provided are inadequate and that the courses do not attract educated middle-class youths. It is considered by the public that generally the subjects taught can be learnt just as well at smaller cost by working direct under village craftsmen.

(3) A site has been selected for the school and the plans are under the consideration of Government. In deciding to locate it in Satara City full consideration has presumably been given to the fact that there is at present no industry in Satara City to provide jobs for those who take courses at the school and that it will for that reason be difficult for the school to build up connections with industrial concerns. In addition training in rural crafts will form part of the training available in the Rural Development Centre to be established in the District. The proposed School and the peripatetic demonstration parties will in any case serve the needs of Satara Taluka.

(4) *Cottage Industries*.—(Scheme No. 108).—Under the Scheme peripatetic Demonstration parties will be organized to give instructions in cotton-weaving, tanning, carpentry, fibre manufacture, etc. They should help to raise the standard of craftsmanship among the village artisans unable or unwilling to attend a school.

A *District Industrial Association* (Scheme No. 55) is also being started in the district by the Co-operative Department for the marketing of handloom products, etc. The headquarters of the Association will be in Karad but it will work in the Taluka.

V. *Cost*.—The Schemes are all organised on a District Basis. The cost is as follows :—

	Capital.	Recurring.
	Rs.	Rs.
Industrial School, Satara ..	.. 1,14,000	7,792
Cottage Industries (Scheme No. 108) ..	.. 12,000	20,000
	<hr/>	<hr/>
Total ..	1,26,000	27,792
	<hr/>	<hr/>

The *proportionate* cost of these facilities for Satara Taluka is approximately 1/10th of these figures, i.e.,

	Rs.
Capital ..	12,600
Recurring ..	2,800 per annum.

VI. *Extent to which Schemes can be immediately implemented*.—It is proposed to start all these schemes after the end of the War and no development is possible now. In the meantime the Department might consider the measures necessary for the extensive development of sisal manufacture and the suitability of Satara City as a site for the proposed Industrial School.

SECTION No. XVI

1. *Special measures in good recruiting villages.*—(1) The main recruiting area is situated in the triangle lying between the Urmodi and Krishna rivers in the south-east of Satara. The total number of recruits enrolled from the Taluka up to the 1st of January 1945 is about 2,858 including 269 from Satara City.

(2) The best recruiting villages are :—

	Population.	Recruits.	Percentage.
1. Apshinge	1,612	168	10·5
2. Karanje	570	94	16
3. Chinchner S. Nimb	1,024	43	4
4. Kodoli	1,934	136	7
5. Chinchner Vandan	1,319	92	7
6. Kondave	1,309	59	4·5
7. Godoli	386	49	12·5
8. Tasgaon	1,776	56	3
9. Degaon	2,375	59	2·5
10. Nagthane	2,467	66	2·7
11. Nigadi T. Satara	1,385	139	10
12. Ashta	428	26	6
13. Pangare	257	25	10

The following Wadis have sent a large number of recruits and deserve priority in the provision of lower grade primary schools and water-supply :—

- (1) Khindwadi under Degaon ;
- (2) Dongarwadi under Nigadi ; and
- (3) Jambewadi under Ashta.

(3) It is the accepted policy of Government that the returned soldier is not, generally speaking, to be given special treatment apart from the remainder of the community and in the general Plan for Satara Taluka recruiting villages have not been given a prominence in the scheme which their natural position does not warrant. For instance, although Apshinge—population 1,612, recruits 168—has sent a high proportion of recruits into the Army, Nagthane a mile away has been chosen as a Centre of Reconstruction because it is a centrally situated bazaar place to which people naturally come, which Apshinge is not.

(4) This position was also accepted at the meeting on the 22nd of January subject to the qualification that good recruiting villages

should generally receive priority in improvement measures carried out as part of the general scheme. I have accordingly suggested that in the school construction programme they should be given a prominent place in the first five-year programme. All the villages listed in paragraph 2 above (except Pangare) have for instance been suggested for the introduction of free and compulsory education and for the construction of new school buildings in the first five years. I think that this will be in the general interest also as the returned soldiers, because of the new contacts and experience they have accumulated during the War and their improved economic condition, are particularly likely to welcome the provision of educational facilities for their children.

(5) The drinking water supply Scheme and the Scheme for the construction of Chawdis incorporating club-houses and reading rooms also benefit recruiting villages.

II. *Measures for Returned Soldiers.*—(1) *A Rural Development Centre* is to be started in the District, though probably not in Satara Taluka. Ex-soldiers from the Taluka will, however, be able to go there for training, etc., before they return to civil life.

I have not been able to obtain even an approximate estimate of the money which will be available (out of the reconstruction funds deferred pay, etc.) for the benefit of individual returned soldiers. I find that there is a natural demand that this money should be absolutely at the disposal of the individual to spend as he pleases. This will doubtless not be permitted.

(2) The following special measures for the benefit of individual soldiers have been suggested :—

(a) Assistance in building houses and in the starting of *Housing Societies*.

(b) Assistance in the form of loans or grants for *Land Improvement* such as bunding, well-boring, purchase of implements, etc.

(c) The granting of priority to soldiers whose debts come before the *Debt Conciliation Board* for settlement. The procedure of these Boards is ordinarily very slow and ex-servicemen will be helped if special provision to secure the early disposal of their cases can be made. *Legal assistance* in the preparation and representation of the cases would also be valuable.

(d) *The provision of special educational facilities* by means of scholarships, hostels, etc. There is at present a hostel with accommodation for 25 boys situated in Satara. It can be expanded to accommodate in all 40 boys and is at present sufficient for the needs of Satara Taluka. Government has already ordered that the children and other near relations of serving and discharged soldiers should be given educational concessions.

(e) The suggested provision of *English Classes* at some of the central schools should relieve to some extent the pressure on this hostel. These classes will also meet the need, in the beginning at any rate, for English education among the female children of ex-servicemen and should make it necessary to start a separate hostel for them.

(f) *Good arrangements for finding employment* for ex-servicemen by means of an Employment Board or otherwise are essential. The District Soldiers' Board has recently established a Sub-Committee to go into this question.

The disposal of money intended for the benefit of returned ex-servicemen will require detailed consideration of the circumstances of each individual. The work will I think have to be done by a Special Committee of the District Soldiers' Board under the direction of a competent officer. The extent to which the existing staff of the Board will require expansion depends on the rapidity of demobilisation and the money available—factors that cannot be estimated at present.

(3) *Village Amenity Centres for Ex-soldiers.*—(Schemes Nos. 111 and 112).—(1) I do not think that it is necessary to establish Special Centres except possibly at Taluka headquarters for the exclusive use of ex-servicemen. Any facilities that are provided should be available to the whole of the village though the District Soldiers' Board might well arrange special radio and cinema programmes, lectures, etc., of particular interest to soldiers. At present the number of discharged soldiers and soldiers on leave is small and there is no need to make special arrangements of this sort for them.

(2) Omitting Nagthana and Chinchner Vanden for which it is proposed to provide Central Chawdis (see Section 14) and the village of Godoli and Karanje in the suburbs of Satara City which will be

served by any arrangements provided by the Soldiers' Board in Satara, there remain the following villages that have sent 50 or more recruits to the Army up to 1st January 1945 and which are therefore eligible for consideration under this Scheme as it stands at present:—

Name.					Population.	Number of recruits.
1.	Apshinge	..	..	..	1,612	168
2.	Kodoli	..	..	..	1,934	136
3.	Kondave	..	..	..	1,309	69
4.	Tasgaon	..	..	..	1,776	56
5.	Degaon	..	..	..	2,375	59
6.	Nigadi, taluka Satara	..	..	..	1,385	139

(3) Of these Apshinge, Kodoli and Tasgaon already have small Chawdis consisting of an open hall and a store-room. The Chawdi in Apshinge is small and might be handed over to the villagers for use as a dharmashala, a new Chawdi-cum-club-house being built on a neighbouring site in the village. The Chawdi at Tasgaon is similar but in view of the smaller number of recruits that have gone from the village no special arrangements are necessary.

(4) At the remaining places club house-cum-Chawdis consisting of a meeting room 30' × 20' (including verandah) flanked by a single room 14' × 10' for use as a reading room should ultimately be constructed.

(5) *Cost.*—The cost of such a building at Rs. 5 per square foot is about Rs. 4,000. Five will be required at a total cost of Rs. 20,000.

If the money is available type "A" Chawdis costing Rs. 5,400 each at present rates, in which the residential portion could be used either as a Dharmashala for visitors to the village or for a consulting room, small dispensary etc. for the S. M. P. when he visits the village.

Schemes Nos. 111 and 112 provide Rs. 1,000 for each Amenities Centre. At present rates this sum is quite inadequate. Part of the cost might be debited to Chawdis (Scheme No. 113).

(4) *Dharmashala etc. at Taluka Headquarters.*—At present the relatives of soldiers and soldiers themselves who have to go to the headquarters to draw pensions and allowances often find difficulty in getting back to their villages and have to stay the night in Satara. A place where they can stay combined with a reading-room and

club would be useful. It should be situated near the centre of the town and the Taluka Kacheri. An earlier attempt in this direction failed partly because the building was too far away from the City. Such a Centre would also serve the town of Satara and the neighbouring villages of Karanje and Godoli as a Club-house. The extension of bus services that can be expected after the War, coupled with the improvement in the postal service, may however cause a decrease in the demand for such a centre.

There is also a possibility that buildings at present used for storage of Government grain and for such purposes as the Industrial School can be used for the purpose. I have, therefore, not suggested the construction of such a building in Satara at present though the matter is one that the Soldiers' Board should keep in mind.

(5) Among other *special measures* there is a possibility of constructing a *bandhara* over the Urmodi river near Apshinga that would be of particular benefit to soldiers in that village as out of a total area of 132 acres of land, 85 are held by Military Pensioners or men on War service. The project is still being investigated by the Executive Engineer but it is doubtful whether a final decision on its practicability can be arrived at in the near future.

(6) Out of 200 acres of *Forest* land available for cultivation near Apshinga village 46 acres is reported by the Agricultural Department to be of a fair quality. The Agricultural and Co-operative Departments are looking into the possibility of utilizing this land for some purpose which may be of general benefit to soldiers and their relatives such as combined farming etc. But the area is small and the soil poor and the scheme does not look very promising. Further inquiries are being made.

(7) No other schemes capable of special exploitation in the interest of returned soldiers have come to my notice.

III. *Extent to which schemes should be immediately implemented* --- The details of what is proposed under these schemes have not been worked out by the Provincial Soldiers Board. In my view the Scheme for the provision of Club-rooms etc. must rank in priority below all other improvement schemes. With building costs as high as they are at present no money should be spent now. The central Chawdis (in which reading rooms are incorporated) proposed for Naxthana, Chinchner, Parli, Limb and Karher can be used for the

experimental development of this scheme in the first instance. Schools, roads and water-supply are more important.

The various suggestions for the resettlement of soldiers should be closely watched by the District Soldiers' Board and taken up as opportunity offers.

IV. *Conclusion.*—Besides schemes of general application special measures for the benefit of returned soldiers, to be paid out of funds earmarked for the purpose, can be undertaken. Some suggestions have been made. The case of each individual will have to be considered on its merits by the District Soldiers' Board acting in co-operation with the other authorities. The men concerned are not in the village now and it is not possible to ascertain in detail their wishes and needs until demobilisation begins and until the money available is known. In the meantime full particulars of the resources of recruits are being collected.

SECTION No. XVII

The Programme of Buildings and Works.—1. Mention of the various works and buildings required has been made in the Sections of the report preceding this. The following is a summary of the works necessary and their approximate cost :—

Name	Situation	Approximate Cost
1. Road Programme ..	All over Taluka ..	Not known.
2. Well construction and repair ..	Do. do. ..	Rs. 3 Lakhs.
3. School Buildings ..	For list see Section Appendix I	Rs. 3½ Lakhs.
4. Central Chowdis and Clubs ..	Nagthana, Parli, Chinchner, Vandan, *Limb, *Kanher and Vaduth.	Rs. 36,000
5. Chowdis cum Club-Houses in Recruiting villages.	Nigadi, T. Satara, Degaon, *Tasgaon, Kondve, Kodoli, ApsHINGA.	20,000
6. Dispensary Buildings ..	Nagthana, Parli, *Chinchner, Limb, *Vaduth.	75,000
7. Maternity and Child Welfare Centres.	*Satara, Nagthana, Limb, *Chinchner, *Waduth.	2,58,000
8. Veterinary Hospitals and Dipping Tanks.	*Nagthana and *Parli ..	21,000
TOTAL: (Excluding roads) ..		9,70,000

*Can be postponed at first as rented accommodation is likely to be available or buildings present in use can be continued.

The above table excludes also the Electric Grid Scheme.

Staff Requirements—(a) *Works.*—For the execution of this programme an additional Public Works Department Sub-Division is clearly necessary.

(b) *Land Acquisition.*—Land will have to be acquired for nearly all the buildings mentioned above. A substantial area of land will have to be acquired for the road programme even though existing road alignments are followed as far as possible. Special staff will be required for this purpose. The size will depend on the rate at which plans can be prepared and executed and the total area required for road construction.

3. *Priority.*—(a) Detailed surveys of the roads to Parli and from Apshinga to Nandgaon will shortly be completed as will also the necessary estimates. These roads can be begun first. If, as is suggested, buildings are constructed at Chinchner and Nagthana first the roads in these areas should then be taken up.

(b) *Wells.*—The priority has been indicated in the village Water-supply Section. The projects for which plans have been completed should be begun first.

(c) *Buildings.*—When type designs have been decided upon those at Nagthana Chinchner should be given priority.

4. *Building Construction.*—(a) *Plans.*—Type plans so far prepared cannot be regarded as final.

(b) The preparation of suitable designs is a matter of the first importance and no type design should be finally decided upon until it has been examined by an architect.

(c) In addition it is suggested that all type designs and layouts especially those of buildings used as maternity homes, dispensaries etc. whatever their size or cost, should be examined in detail by a Committee of experts including men unconnected with the Department concerned. The mistakes that sometimes occur in buildings designed departmentally are sufficient indication of the necessity of this.

(d) That adequate provision should be made for expansion has been stressed in the educational section. It is almost as important as regards buildings used by other departments.

(e) *Sites.*—Except for Chawdis, which for the reasons already stated should be inside villages, sites at a distance from the village proper should be chosen. School buildings can ordinarily be upto $\frac{1}{2}$ mile outside a village and dispensaries and Maternity homes some distance away. A preliminary selection of sites at the Centres has been made. Final selection depends on the designs ultimately selected and the arrangements for water-supply.

(f) *Building Methods.*—A katcha-pakka method of construction has provisionally been decided upon by the Public Works Department. This will consist of pillars of stone in lime mortar with a filling of katcha masonry in mud mortar. Stone is freely available in Satara Taluka. Timber will have to be imported. Roofing material will also have to be imported from outside the Taluka as the prevailing shortage of firewood makes it undesirable to burn a large number of sticks and tiles.

(g) *Water Supply and Sanitation.*—It is suggested that buildings and residential quarters in the Main Centres should have a piped water supply and should be provided with some sort of aqua-privy. Several satisfactory designs are available. Water is available at all the Centres though in some cases at a distance from sites suitable for the location of combined buildings. Here it may be cheaper to pump water from an existing well rather than build separate wells.

(h) *Surplus Building.*—The school construction programme will make a number of small school buildings available. In most cases they will be suitable for use only as godowns by Co-operative Societies. Care must be taken to see that buildings are not erected unnecessarily.

5. *The shortage of Labour* is a serious obstacle to the carrying out of the programme. In my view if substantial progress is to be made on road construction before the end of the war machinery will have to be used. These improvements are, however, being carried out for the benefit of the rural population and I think that before any work benefitting a particular village is taken up, the villagers concerned should guarantee that a reasonable number of men and carts will be made available at the usual rates until the construction is finished. Villages that refuse to give this undertaking, unless they are villages from which a large majority of the able-bodied men have gone into the Army or unless there is some other good reason, need not be provided with roads, wells and schools for the present. In many villages that I have visited, the villagers have said that they are willing to provide the necessary labour and I think that there is a chance that labour will be forthcoming for purposes which clearly benefit individual villages.

Any large scale construction programme is bound to produce a further fall in *recruiting figures* for the Taluka.

6. *Summary.*—It is recommended that a Public Works Department Sub-Division should be sanctioned to plan and carry out the works detailed above. An immediate start can be made on the well and road projects for which estimates are ready. Type plans so far prepared require further consideration and it will probably not be possible to begin building until after the monsoon.

Staff for *Land Acquisition* will be required.

SECTION No. XVIII

Cost of Reconstruction Proposals.—The table attached as an Appendix gives in detail the cost of the preceding proposals. Column No. 4 of the table is the capital cost required (provision of buildings, equipment, purchase of livestock etc.).

Column No. 5 represents extraordinary expenditure, mostly of a recurring character, which will have to be incurred, in most cases during the first 3 years only, to start the Schemes going. This expenditure includes the cost of secretaries and managers required to assist newly formed Co-operative Societies which can be discontinued when the projects are working properly after 3 or 4 years and will not have to be continued thereafter.

Column No. 6 is the recurrent expenditure required to keep all the schemes running. The proportion of this expenditure necessary during the first five year period depends on the rate at which the Schemes are put into operation.

2. The following have been omitted entirely from the table :—

(a) The cost of the Electric Grid Scheme ;

(b) The cost of land improvement and bunding (except forest development).

The cost of these items cannot be estimated at this stage.

3. The table below is a summary :—

Summary of cost.—

Department.	Capital.	Extraordinary expenditure in 1st 3 years (non-capital).	Recurring.
1	2	3	4
Road Development (P. W. D.) ..	Rs. 31,72,000*	Rs.	Rs. Not yet worked out.
Agricultural Department	5,17,750	35,000	25,850
Forest	1,72,190	....	....
Veterinary	21,000	....	12,800
Co-operative	2,875	17,500	215
Education	5,02,000	....	62,000
Medical	75,000	....	6,330
Village Water Supply	3,00,000	....	....
Chawdis etc. .. ..	....	....	....
TOTAL ..	48,18,215	52,580	1,07,196
Rs. Per head ..	44 0 0	0 8 0	1 0 0

* Excluding National Highways cost of construction of which is proposed to be borne by the Government of India.

Department.	Capital.	Extraordinary expenditure in 1st 3 years (non-capital).	Recurring.
1	2	3	4
	Rs.	Rs.	Rs.
I. Add:— Full Public Health Schemes ..	5,55,300	....	1,56,000
TOTAL I ..	53,73,515	52,580	2,63,196
Rs. Per head ..	49 0 0	0 8 0	2 8 0
II. Alternative Including Truncated Maternity and Child Welfare Schemes (Item 26 (a))	2,68,300	....	1,22,000
TOTAL II ..	50,86,515	52,580	2,29,196
Rs. Per head ..	46 10 7	0 8 0	2 2 0
III. Above Omitting Improved Sanitation Scheme (Item No. 24).			
TOTAL III ..	50,80,515	52,580	1,48,396
Rs. Per head ..	46 9 9	0 8 0	1 6 0

NOTE.—The expenditure required per head is based on a rural population of 109,000 omitting the population of Satara City.

Total (I) gives the total cost including the Maternity and Child Welfare Scheme and the Scheme for the improved sanitation for towns and villages as proposed by the Public Health Departments. The capital expenditure required is about 53 lakhs and the recurring expenditure is Rs. 2,65,000; or Rs. 49 and Rs. 2-8-0 per head of population respectively.

Total (II) includes the whole cost of the Scheme of Improved Sanitation in towns and villages (Scheme No. 93) and the alternative Maternity and Child Welfare Scheme. The capital cost is about 50 lakhs and the recurring cost about Rs. 2,30,000, or about Rs. 46-10-7 and Rs. 2-2-0 per head respectively.

Total (III) is the total of the other Departments' Schemes omitting entirely Item No. 24 (Improved Sanitation of towns and

villages) but including the Truncated Maternity and Child Welfare Scheme. This works out at about 50 Lakhs capital and Rs. 1,50,000 recurring, or about Rs. 46-9-9 and Rs. 1-6-0 per head respectively.

4. It must be emphasised in each case that the money required is *in addition* to what is already being spent in the Taluka on the services in question. The provision for education includes only the first 5-year programme and not the whole programme which envisages the introduction of primary and compulsory education throughout the Taluka within 15 years. The capital and recurring cost of the whole educational programme will require about three times the provision made in the table above.

5. The land revenue of the Taluka at present is Rs. 2,53,231. The recurring additional cost of the full schemes in all departments is, therefore, in excess of the existing land revenue. The recurring additional cost of the alternative No. III is about 60 per cent. of the present land revenue.

6. In this Report I am not concerned with how this money is to be provided or whether the expenditure is excessive in consideration of the fact that Government have to undertake similar Reconstruction activities in other Talukas in the Province. The expenditure on the Medical and Education Departments, certainly as far as the recurring cost is concerned, seems to me to be incapable of reduction. The Taluka is predominantly agricultural and expenditure on agricultural improvement should effect a considerable increase in agricultural income and thereby make a rise in the standard of living of the people possible. In the booklet on Post-War Reconstruction Planning Agriculture has been placed second to communications in priority and the money provided for the Department in the Taluka should be kept at the highest possible level.

7. Some reductions may be necessary in the cost of the Public Health Department's proposals. In Section XIII I have given my view that a decision is required on the relative provision that should be made for the expenditure of the Public Health and Medical Departments and the relation it should bear to the expenditure necessary for other reconstruction activities.

SECTION No. XVIII.
COST.

No-11 B. H. 34-12

Section No. & Item No.	Brief Description.	Blue-book No.	Capital.	Extraordinary expenditure in first 3 years.	Recurring permanent p. a.	Remarks.
1	2	3	4	5	6	7
III. Road Development.	Length miles		Rs.	Rs.	Rs.	*The capital cost excludes National Highways cost of construction of which is to be borne by the Government of India. Subsidy of Rs. 35 a Ton. Can be discontinued. Recurring charges include pay of staff etc.
	Provincial Highways 24	45	31,72,000*	....	Not yet worked out.	
	Major District Roads 14	..	-	....	....
	Other District Roads 15	..	..	....	....
	Village Roads 114	..	..	....	....
VI. Agricultural:—						
1	Application of ground-nut cake Manure.	48	4,60,000 (Over 3 years).	....	....
2	Horticultural Development ..	50	9,000	....	8,000	
3	Opening of 10 Taluka Demonstration Centres.	79	1,250	....	7,800	
4	Seed Extension Schemes ..	21	....	27,000 (Over 3 year period).	....
5	Compost Pits and Potato Manuring ..	..	....	8,000 (Over 3 years)	....
6	Establishment of Supplementary Cattle Breeding Centres.	..	23,000 (Over 3 years)	....	3,900	
7	Establishment of Sheep Breeding Centre.	..	14,000 (Over 3 years).	....	4,350	
8	Premium Bulls and Cows Scheme ..	..	10,500 (Over 3 years).	....	1,800	
TOTAL ..			5,17,750	35,000	25,850	

Section No. & Item No.	Brief Description.	Blue-book No.	Capital.	Extraordinary expenditure in first 3 years.	Recurring permanent p. a.	Remarks
1	2	3	4	5	6	7
VII. Forests —						
9	Revision of Working Plans ..	58	Rs. 1,410	Rs.	Rs.	
10	Forest Buildings and Wells ..	60	24,564	....	....
11	Forest Improvement and Improvements of Grazing areas.	88	1,46,220 (Over 36 years)	....	....
	TOTAL ..	..	1,72,190	....	....
VIII. Veterinary —						
12	2. Additional Veterinary Dispensaries.	85	20,000 (Estimated)	....	12,200	
13	Extension of Dipping Operations	87	1,000	....	600	
	TOTAL ..	..	21,000	....	12,800	
IX. Co-operative —						
14	Organisation of Multipurpose Societies.	27	*2,875	8,040 (Over 3 years)	....	*Grant for construction of Godowns. Loan of Rs. 8,625 to be made in addition. This is for the District.
15	Industrial Association Scheme (Weaver Society at Atit.)	55	....	540 (Over 3 years)	....
16	Industrial Association. Proportionate costs. Satara Taluka 1/10th of total.	55	....	....	216	
17	Milk Supply Union ..	57	....	6,000 Staff 3,000 Deficit (Over 3 years)		
	TOTAL ..	..	2,875	17,580	216	

X. <i>Primary Education</i> :-						
18	Introduction of free and Compulsory education (first 5 years Programme)—					
	Buildings	104	5,00,000	....	....	Buildings.
19	Teachers	103	....	....	54,000	100 Teachers.
20	2 Doctors and Compounders	106	2,000	....	5,600	2 Doctors and Compounders.
21	2 A. D. E. I's	105	....	....	1,600	2 A. D. E. I's
22	Attendance Officers .. .. .	..	....	....	800	1 Attendance Officer.
TOTAL .. .. .		..	5,02,000	....	62,000	
XII. <i>Medical</i> :-						
23	4 Subsidised Medical Practitioners	90	75,000 (Estimated)	....	6,330	2 Ayurvedic and 2 Allopathic Doctors, 5 quarters etc. estimated at Rs. 15,000 each.
XIII. <i>Public Health</i> :-						
24	Improved Sanitation of Towns and Villages.	92	6,000	....	80,800	Full Scheme.
25	Additional Staff in D. H. O.'s Office.	..	....	....	1,900	....
26(III)	Child Welfare and Maternity Scheme.	..	5,48,000	....	67,000	Full Scheme.
26A.	(Truncated Child Welfare and Maternity Scheme).	..	(2,61,000) (Alternative) }	....	{ (33,000) (Alternative to above)	(Alternative to the above.)
27	District Health Organisation	63	1,300	....	6,300	Proportionate cost for Satara Taluka.
TOTAL .. .. .		..	5,55,300 (2,68,300)	....	1,56,000 (1,22,000)	

Section No. & Item No.	Brief Description.	Blue-book No.	Capital.	Extraordinary expenditure in first 3 years.	Recurring Permanent p. a.	Remarks.
1	2	3	4	5	6	7
28(II)	Improvement in village water-supply.	93	Rs. 3,00,000	Rs.	Rs.	Construction and repair of wells.
XIV. <i>Village Improvement</i> :—						
29	Central Chawdis	113	35,400	....	....	If better method of construction cost will be Rs. 51,750 .
XVI. 30	Chawdis etc. in Recruiting villages.	..	20,000 (Estimated).	....	Not known.	
	Chawdi Total	..	55,400	....	....	....