

# ARAVIND EYE HOSPITAL, THENI

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### **A. Background Information**

Aravind Eye Hospital at Theni is a part of the network of Aravind Eye Hospitals. It is located 80 km due west of Madurai city. This hospital was started in August 1985 to meet the eye care needs of the community in and around Theni. This 180 bedded hospital has 30 paying beds and 150 free beds. This Hospital receives direct paying and free patients as well as patients from screening eye camps. This hospital is efficiently run by a small team. This cohesive work force has been serving its community well, by doing about 7000 surgeries in a year.

### **Location and service area**

Theni Aravind Eye Hospital is located in Theni - Allinagaram Municipality, a town with a population of 70,000. This is in Theni Taluk of Theni District. This also serves Andipatty and Uthamapalayam, Periyakulam, Bodinayakannur, Taluk of Theni District, all within a radius of 50 km and covers a population of 1 million. Besides this primary service area the hospital also serves a secondary service area covering the neighbouring areas in Kottayam and Idukki district of Kerala state with a population of another 1 million.



Aravind - Theni is well equipped with diagnostic and surgical facilities to handle cataract, glaucoma and other minor surgeries. The hospital is staffed by a team of dedicated doctors, paramedical staff and technicians to provide quality service at par with the base hospital at Madurai.

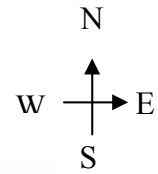
The in-patients admitted in free wards, will be given free surgery, treatment and lodging. The cataract patients who are brought from eye camps get free food during their hospital stay, free aphakic glasses and transport too. If any of the free direct patient want an IOL surgery, he/she has to pay Rs.500/-, which covers cost of lens, sutures and medicines. The number of patients opting for IOL surgery has been increasing for the last few years that the quality of life is better after an IOL surgery in comparison with that of conventional method ie. ICCE.

Aravind - Theni is able to generate sufficient revenue to meet operating expenses. In spite of providing 80% free service, the hospital is financially viable. This could be a model peripheral eye hospital to serve in rural areas. With an efficient management it is possible to run the hospital professionally.

Eighty percent of the population is living in rural areas but only 20% of infrastructure is based in these areas. There is a disparity between the resources available and target population to be served. So there is an urgent need to build peripheral eye hospitals to serve rural areas to reduce huge backlog of cataract.

**B. Map of Catchment Area**

**THENI DISTRICT**



	<b>RURAL</b>	<b>URBAN</b>	<b>TOTAL</b>
Periyakulam	224,085	112,697	336,782
Andipatty	164,239	29,101	183,340
Uthamapalayam	315,424	212,978	527,604
<b>Total</b>	<b>703,748</b>	<b>343,978</b>	<b>1,047,726</b>

## C. Detailed Building Plans and Measurements

### Paying Section

**Total Building Area : 9768 sq. ft.**

#### **Ground Floor:**

**Outpatient Area : 1760 sq. ft.**

Waiting Area : 209 sq. ft.

Reception : 55 sq. ft.

Preliminary Vision Testing : 44 sq. ft.

Doctor's Examination Room : 88 sq. ft.

Refraction, Waiting : 220 sq. ft.

Laboratory : 77 sq. ft.

#### **It also includes**

Septic Theatre : 110 sq. ft.

Duty Room : 110 sq. ft.

Office : 100 sq. ft.

Optical Shop : 55 sq. ft.

Drug Store : 55 sq. ft.

**Wards Area : 1452 sq. ft.**

In the Ground Floor there are 4 C class wards.

'C' class ward : 242 sq. ft. (One room)

#### **First Floor:**

**Theatre Area : 1325 sq. ft.**

Operation Theatre : 352 sq. ft.

Sub Sterilization : 77 sq. ft.

Preparation & Store : 352 sq. ft.

Dress Changing : 160 sq. ft. (40 Sq. Ft. X 4 Nos.)

Main Sterilization : 176 sq. ft.

**Wards Area : 775 sq. ft.**

In the First Floor there are 3 A class rooms, 8 B class rooms and 1 A-special (Non AC room)

A class room : 230 sq. ft. (One room)

B class room : 68 sq. ft. (One room)

C class ward : 230 sq. ft. (One room)

### Free Section (Inpatients)

A newly constructed building opened in June 2001

**Total Building Area** : 1457 sq.ft

**(Ground Floor) + Outpatient area** : 1197 sq.ft

Reception : 180 sq.ft

Waiting area : 140 sq.ft

Doctor's examination room : 100 sq.ft

**First Floor** : 974 sq.ft

There are 3 rooms in the first floor. It is used for free camp patients

Ward area : 220 sq.ft (one room)

**Second Floor** : 974 sq.ft

There are 3 rooms in the second floor. It is used as a nurses hostel.

Ward area : 220 sq.ft

**Total Building Area** : 2004 Sq.Ft. (Ground Floor) - Old Building

There are 4 general wards in the ground floor

Ward area : 1776 sq.ft

Ward area : 444 sq.ft (One room)

Waiting shed : 290 sq.ft (One room)

**First Floor** : 800 sq.ft

There are 3 general wards in the first floor

Ward area GW - 1 : 144 sq.ft (One room)

Ward area GW - 2 : 323 sq.ft (One room)

Ward area GW - 3 : 276 sq.ft (One room)

There is one separate generator room, one store room and one canteen surrounding the main building.

## **Aravind Illum**

A newly constructed building opened in 1998

**Total Building Area** : 1457 sq.ft

**Ground Floor** : 1220 sq.ft

It is used as a meeting hall.

**First Floor** : 1220 sq.ft

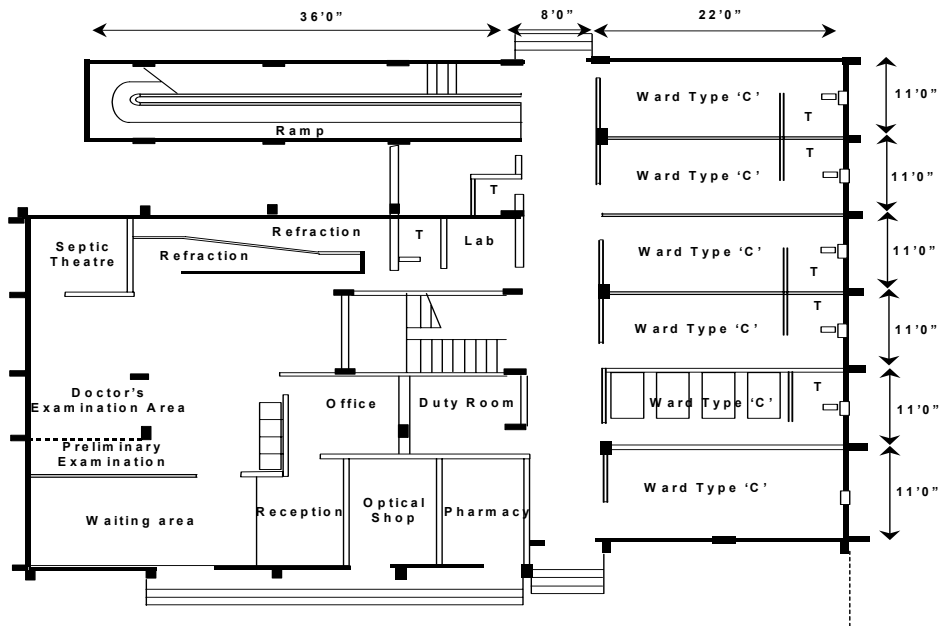
There are 2 houses in this first floor. It is used as quarters for the postgraduate doctors.

**Second Floor** : 1220 sq.ft

There are 2 houses in this floor. It is also used as quarters for the postgraduate doctors.

# Aravind - Theni

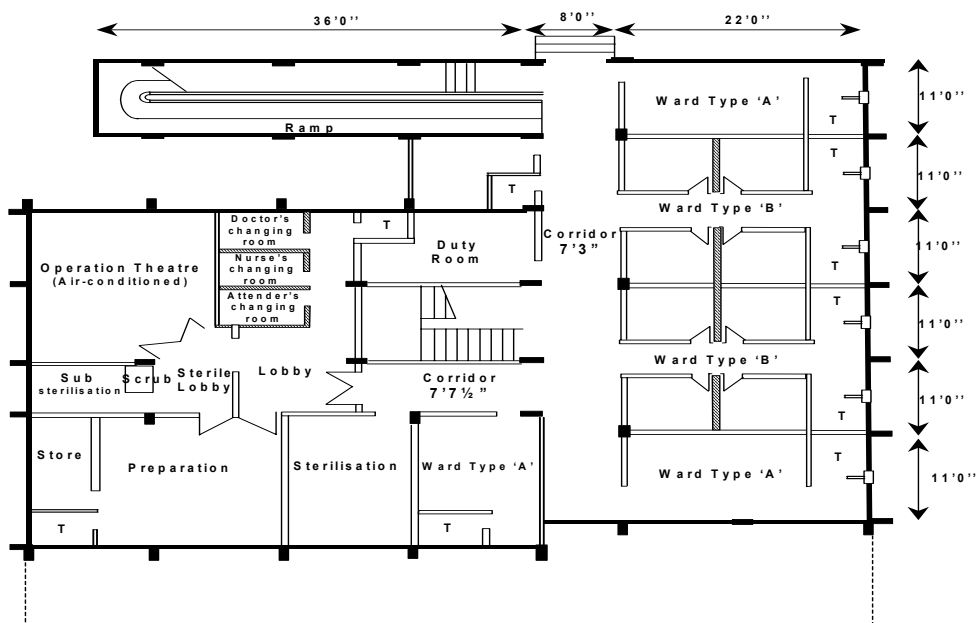
## Ground Floor Plan



Aravind -

# Theni

## First Floor Plan



## D. List of Equipments

Name of Equipment	Number	Manufacturer/Supplier
<b>Outpatient department</b>		
1. Direct Ophthalmoscope	4	Keeler/Zeiss/Heine
2. Indirect Ophthalmoscope	2	Keeler
3. Tonometer	2	Riester
4. Torch (Electric)	5	Everyday
5. Retinoscope streak	4	Keeler
6. Trial frame	5	Baliwalla
7. Trial set	5	Baliwalla
8. Slit Lamp	4	Topcon
9. Keratometer	1	Bausch and Lomb
10. Perimeter	1	Hansraj
11. A scan	1	Coopervision
12. BP apparatus	2	Indian electronics Allied Products
13. Stethoscope	2	Malhotra Surgical Instruments limited
14. Torch cell	3	
15. Gonio lens	2	Volk
16. 90D lens	1	Volk
17. Applanation Tonometer	2	
18. Yag Laser	1	Coherent
19. Humphery Field Analyser	1	
20. Fundus Camera	1	Topcon-Tokyo optical co ltd
21. Diabetic Laser (Iris medical)	1	
22. Autorefractometer	1	Topcon
23. Lensometer	1	Ascon
<b>Theatre</b>		
1. Operating microscope	2	Topcon
2. Operating light	2	Segal optics
3. Cryo unit	2	Ascon
4. Tonometer	1	Riester
5. BP apparatus	2	Allied products
6. Stethoscope	2	Malhotra Surgical
7. Bipolar Coagulator	3	TL instruments
8. Phaco machine	1	OMS OPSYS
9. Vitrectomy machine	1	Allergon
10. OT Care	1	
11. Instaclave	1	Gold's worth
12. Autoclave	2	

**Ward**

1. BP apparatus	1	Allied products
2. Stethoscope	1	Malhotra surgical
3. Tonometer	1	
4. Torch cell	1	

<b>Name of Equipment</b>	<b>Number</b>	<b>Manufacture/Supplier</b>
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**Lab**

1. Microscope	1	Nikon
2. Colorimeter	1	Photochem-5
3. Centrifuge	1	
4. Blood cells counter	1	
5. Syringe cutter		
6. Gluco meter	1	Instanced

**Camp**

1. Direct Ophthalmoscope	1	(Keeler / Zeiss / Heine)
2. Retinoscope Streak	1	(Keeler)
3. Torch (Electric)	5	Everyday
4. Tonometer	2	
5. BP Apparatus	1	
6. Stethoscope	1	
7. Torch Cell	2	

**E. Staff / Organisational Structure**

The hospital is adequately staffed to do the activities such as

- Outpatient care
- Inpatient care
- Surgery
- Administrative work
- Community outreach work
- Vision Centre at Ambasamudram & Andipatty

**Manpower**

<b>Position</b>	<b>Number</b>
<b>Clinical personnel</b>	
1. Chief Medical Officer	1
2. Medical Officer	1
3. Junior doctor (PG resident/Fellows)	6
4. Nurse Co-ordinator	1



5. OP Nurses	2
6. Refractionists	7
7. Theatre Nurses	8
8. Ward Nurses	3
9. Patient Counsellor	3
10. Lab Technicians	1
11. FFA Technician	

<b>Position</b>	<b>Number</b>
<b>Administrative personnel</b>	
1. Manager	1
2. Camp organiser	1
3. Project Co-ordinator	1
4. Accountant	1
5. Computer Operator	1
6. Telemedicine Staff	1
7. Medical records dept./Reception	3
8. House keeper	3
9. Sanitary workers	4
10. Security	4
<b>Other supportive service staff</b>	
1. DR Project Staff - Field workers	8
2. Supervisor	2
3. Itinerant Teachers	2
4. Ophthalmic Assistant (School Screening)	1
5. Vision Centre Staffs	6

The nurses are well trained at Aravind Eye Hospital, Madurai. The posting of nurses is flexible depending on load at outpatient, inpatient and theatre areas.

## **F. Examination Protocol**

After registration a new case sheet is opened for new patient whereas the old medical record is retrieved for the review patient. The doctor will advice relevant tests, which will be done by the paramedical staff. The trained nurses will do tension and duct test, refraction, lab tests and assessment of visual acuity. If the patient is advised for surgery, on the same day, they will complete lab investigations like urine sugar, blood sugar etc.. so that the surgery can be done on next day. The junior doctor will assist the senior doctor during surgery as well as in outpatient examination. The same protocol will be followed in the free section.

<b>Year</b>	<b>Paying</b>	<b>Direct</b>	<b>Camp</b>
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	<b>OP</b>	<b>Operations</b>	<b>OP</b>	<b>Operations</b>	<b>Operations</b>
1985	10418	262	-	173	299
1986	23038	664	-	533	674
1987	20112	704	-	432	975
1988	21585	665	2995	491	774
1989	22335	594	4283	496	676
1990	22179	609	6117	596	1342
1991	23787	492	7472	530	976
1992	17407	482	10439	764	847
1993	21215	701	7982	637	682
1994	23467	915	9858	751	1303
1995	24756	1151	11379	9080	1378
1996	27242	1304	11782	1206	2464
1997	23801	1249	17308	1422	3106
1998	28615	1355	23724	1143	4421
1999	28892	1447	26903	849	4986
2000	33075	1143	23195	1320	5266
2001	37336	1321	17633	801	4201
2002	40653	1386	20427	866	4296
2003	45010	2601	18845	1832	4371
2004	49010	1761	23270	1280	5196

Besides cataract operations (with IOL and without IOL), it includes other major and minor surgeries. The number shows camp and direct patients.

## H. Hospital Rates Effective from 01.04.2000

The Aravind Eye Hospital has got two sections - a free section and a paying section.

**Free Section:** Accommodation and surgery are free. Patients have to pay for their food and some medicines. Patients wanting to have IOL are required to purchase the IOL and medicines at a cost of Rs.500.

**Paying Section:** Patients pay for all services as per the list below and purchases all prescribed medicines for surgery and postoperative use.

### Surgical Charges in Rs.

Surgery	A Class	B Class Specific	C Class	Day care
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#### Hospitalisation Charges

Medical services per day	80	40	20	
Extra bed per day	30	20	10	
Special treatment charges per day	80	40	20	
Diabetic charges per day	10	10	10	

#### Cataract & IOL

Cataract, Lens Removal and Removal of dislocated Lens, Needling & Aspiration	1000	900	700	
Cataract with IOL	3000+500	2200+500	1500+500	
Phaco with IOL	5000	5000	5000	5000
Phaco without IOL	3800	3800	3800	3800
Auro Foldable	6600	6600	6600	6600

#### Cornea

Corneal Injury / Corneal Suturing	900+100	700+100	500+100	
Conj. Resection	450+100	350+100	200+100	
Pterygium Excision	600	450	350	
Pterygium Excision & Conjunctival Transplantation	600+100	500+100	400+100	

#### Orbit / Plastic

Lid Tear Suturing (simple)	1350	1050	650	
Enucleation	950	700	500	
Evisceration	850	750	500	

Ectropion / Entropion Correction	1050	900	650
Orbital Iridectomy	700+100	550+100	400+100
Tarsoraphy	750	500	300

### **Glaucoma**

Trabeculectomy	1250+200	1050+200	650+200
Combined Surgery With IOL	3250+500	2450+500	1850+500

### **Minor OT**

D.C.T	1000	750	500
D.C.R	1500	1000	750
I & D, I & D, Chalazion			150
Mulluscum	.....	.....	..... 150

### **Outpatient Procedures**

<b>S. No.</b>	<b>Procedures</b>	<b>Rate</b>
1.	Consulation fees	Rs.40 (Inc.Urine Sugar)
2.	Yag Capsulotomy (Our cases)	Rs.150 - 250
3.	Yag Capsulotomy (Outside cases)	Rs.500
4.	Yag P.I	Rs.500
5. FFA	Pay	250
	Free	150
6. PRP	1000 (Per one Eye)	
7. Focal	500 (Per one Eye)	
8. HFA	Pay	250
	Free	150

## **I. Comprehensive Eye Care Services**

To provide comprehensive eye care services to the curable and incurable blind, Aravind Theni has launched a unique project with the support of Sight Savers International, UK which commenced on 1st May 1996. It provides preventive, curative, rehabilitative services through comprehensive eye

care services. The programme aims to cover the entire rural areas of Theni district in a phased manner. The objectives of the programme are:

1. To promote and assist in prevention of blindness through community awareness and eye health education.
2. To carry out school eye screening and treatment of children suffering from refractive error, squint and Vitamin a deficiency
3. To provide curative services by conducting eye screening camps and establish a strong community based referral system.
4. To provide effective and appropriate rehabilitation services (social, educational, vocational, & economic) to the incurably blind people.
5. To promote the use of low - vision aids among partially blind.

The programme rehabilitates the incurably blind by teaching them skills in orientation, mobility and activities of everyday living, personal care and economic rehabilitation or vocational rehabilitation. It helps the blind return to work by teaching them a skill they can perform or by engaging them in an income generating activity. The blind children admitted in regular schools are guided by specially trained teachers under integrated education programme.

## **Comprehensive Eye Care Services**

### **Performance Statistics**

<b>Services</b>	<b>First Phase</b>	<b>Second Phase</b>
<b>A. Curable</b>		
1. Out - Patients (in camps)	5718	8757
2. Total cataract surgeries performed	657	894
<b>B. School Eye Screening</b>		
1. No. of Schools covered	48	35
2. No. of Teachers trained	278	244
3. No. of Children screened	19,785	20,056
4. No. of Children treated	542	885
<b>C. Community Based Rehabilitation</b>		
1. Incurable Blind identified	219	192
2. Incurable Blind trained	130	143
<b>D. Integrated Education</b>		
Programme for Blind children	8	8

## **Financial Year 2004 – 2005 of Aravind Eye Hospital, Theni**

<b>Income</b>	<b>Rupees</b>	<b>%</b>
Out patient Revenue	1,57,100	13.6
Inpatient/Surgical Revenue	69,30,595	62.3
Govt. Grant (DBCS)	25,41,714	22.9
Donations Received	53,100	0.5
Interest Received	25,762	0.2
Others	54,672	0.5
<b>Grant Total</b>	<b>1,11,22,943</b>	<b>100</b>

## **Financial Year 2004 – 2005 of Aravind Eye Hospital, Theni**

<b>Expenditure</b>	<b>Rupees</b>	<b>%</b>
Salary and Benefits	1742894	29.4
Medicines and Consumables	863751	14.6
IOL cost	1102325	18.6
Camp Expenses	287742	4.0
Electricity Cost	657771	11.1
Maintenance Cost	610532	10.4
Others	662610	11.3
Total Expenditure	5927625	100.0
Net Income	5195318	53.29

### **SF 742 Diabetic Retinopathy Project**

This is a community based pilot project dealing with various activities related to diabetic retinopathy. This was started in January 2000, supported by Lions Clubs International Foundation under Sight First programme. This project is being implemented in Madurai, Theni and Coimbatore districts of Tamil Nadu, serving a population of 7.5 million. The main objective of the project is “to prevent and reduce blindness resulting from Diabetes mellitus”. Creating awareness in the community, screening diabetic retinopathy patients, providing tertiary care, training of ophthalmologists and developing a comprehensive model to manage diabetic retinopathy in the community are some of the other specific objectives.

Awareness creation is done in various ways like distribution of pamphlets, booklets, health education training, guest lectures and public speaking, seminars and workshops and press meetings. Screening of diabetic Retinopathy was done mainly through exclusive community outreach camps and at the tertiary care centers.

Tertiary care at base hospitals was provided in the form of follow-up, laser photocoagulation, counseling through low vision aids clinic depending on the severity of diabetic Retionopathy. Training was provided in the form of Fellowship training in retinal disease, Indirect ophthalmoscopy and Lasers for ophthalmologists and as comprehensive short term training for medical practitioners to diagnose diabetic retinopathy.

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