# 第5章　プロジェクトの評価と提言

# 第５章　プロジェクトの評価と提言

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### ５－１　裨益効果

この基本設計による機材整備計画が実施され、計画した機材類が適切に使用された場合、アンデラプラデッシュ 州のトップレファレル病院として、当該病院は診療機能・教育機能の改善が促進される。以下の表の様な効果が期待できる。

| 現状と問題点 | 本計画での対策 | 計画の効果・改善程度 |
|---|---|---|
| 1.当該病院はｱﾝﾃﾞﾗﾌﾟﾗﾃﾞｯｼｭ州におけるﾄｯﾌﾟﾚﾌｧﾚﾙ病院であり、その上医科大学の臨床実習及び卒後研修の任務を持っている。創設以来約70年を経過しており、建物設備の老朽化、基礎的医療機材の陳腐化が進んでいる。 | 診療需要の多い症例に対する設備機材の整備を実施し、診療機能の充実・改善を行う。 | ｲ.不足していた診療能力の向上につながる。<br>ﾛ.入院患者の滞在期間の短縮が見込める。<br>ﾊ.診療効率が向上し、位置づけに見合った本格的医療の実施が容易となる。 |
| 2.地域患者の80%と云われる貧困層が求める高度医療需要に応えることが困難な状況にある。 | 同種機能を持った民間病院を利用できない住民に対し、これらの医療需要に応えられる機材・設備の効果効率的な導入を計画する。 | 今迄他の同格の民間及び有料の公共医療機関への移送患者を充実した内容で直接診療ができるようになるから受診者(貧困層)の利益につながる。 |
| 3.医療要員の質的向上に係る教育機能が不足している。(現代の医療技能を取得するための) | 質量共に地域医療を担当すべき要員の養成に必須な既に開発され定着している機材設備を設置する。 | 年間研修者として<br>看護婦　220名<br>医学生　216名<br>卒後研修医　162名<br>高級研修医　14名<br>等の充実した教育研修効果が見込める。 |
| 4.病院機能の基本的な消毒滅菌、清潔維持に係るマイナスの問題を抱えている現状にある。 | 滅菌設備、清潔維持、医療排棄物処理に必要な機材設備の導入計画を行い、院内環境の整備に努力させる。 | 院内環境の向上と滅菌作業の確実化が図られ、今まで以上の院内感染の危険性の排除が見込まれ、１日約 300Kg以上の医療サービス品の洗濯が可能となる。 |

## ５－２　妥当性に係る実証・検証

本計画はアンデラプラデッシュ州のトップレラレル病院としての位置づけにある当該病院の、老朽化している設備機材の整備計画である。

この計画の目標は、

１．当該病院の患者の80%を占めると云われる貧困層住民へ、民間病院と同様な質の医療サービスを安価に提供することである。

２．短期及び中長期の目標は、現代的・効果的な診療機能を住民に提供すると共にそれの実施に必要な機材設備の改善を通して、医療要員の技能的効用の実現を促進すること、そのための研修プログラム実施を通じて医師のみならず、看護婦、医療技術者（Ｘ線技師、検査技師、臨床工学士等）等の養成を図り、地域の保健セクターの充実を目指すことにある。

尚、本計画実施に対して、アンデラプラデッシュ州政府担当局は、現在の病院の歴史的背景と長年に亘る医療実績を踏まえ、強力に支持する用意がある。

本計画に対する日本の無償資金協力の妥当性を確認するに当たって検討した結果は、以下に集約される。

①計画の裨益対象が一般地域住民であり、且つ患者の80%以上とされる貧困層に属する人々である。

②本計画の内容が、併行して実施が予定されている世銀ローンによる第一次、第二次医療分野整備が掲げるH.H.C.P.(HUMAN HEALTH CARE PROGRAMM)に合致し、包括的に民生の安定に役立つ。

③対象病院の活動に対し、アンデラプラデッシュ州政府保健家族福祉省は支持を与えており、良好な管理運営努力が見込める計画となっている。

④環境面での影響を排除するための設備機材の供給整備が計画に含まれている。

⑤日本の無償資金協力制度により、同一市内にあるＭＮＪガンセンター病院に医療機器装置の供与実績があり、このことを参考に計画機材の運営計画を立てており、特段の困難なく実施が可能である。

## 5－3　提言

調査団との協議の結果、以下の早急に解決できる問題について、インド側は早急に対処することが確認されている。

A．組織・人材面

(1) 短期的な課題・提言

施設面については環境整備について以下に示す問題が見られる。

1)院内廃棄物の処理について系統だった処理基準が未設定である。

医療廃棄物の分別収集システムの確立、病室における生活廃棄物の処理方法、洗濯部門における廃水・汚水処理にかかる基本設備を早急に整備することを提言する。

2)手術部門に必要な清潔維持にかかる設備を緊急に整備すべきである。

現在、実質内容は別として一応の無菌手順で手術室の入退室・業務手順を実施しているが手洗水の滅菌精度も不完全・換気空調の不良などが散見されることから清潔維持が適切でなく、これらの改善を早急に実施することを提言する。

3)病院内外の清掃業務が完全に行われていない。

清掃業務を徹底すると雰囲気的に病院を汚すことが出来にくくなり、清掃度が向上・維持される。清掃の徹底化の費用は従来と変わらないはずであるから強力に実施することを提言する。

4)医療機材のメンテナンス体制の確立を早急に実現することが肝要である。

即ち、アンデラプラデッシュ州政府に配属されている臨床工学士 (Bio-Medical Engineer) と同格である技術者を業務担当者として常駐する制度を確立し、今後の病院活動の発展に備えることを提言する。

(2) 中長期的な課題・提言

1)本病院はオスマニア総合病院であると共に、オスマニア医科大学の教育実習病院で、各講座が独立しており病院管理が系統立っていない。即ち現状においては院長室の事務担当者が病院の管理業務を担当しているが、病院管理補助業務についてはそれぞれ担当責任の医師 (R.M.O)(部門別６人、総括１名　計７名)の指示により、電気部門、機械部門、電話交換部、倉庫部門、洗濯部門、中央消毒部門等は各個に管理され、又、看護部門 も各専門診療科毎に管理され、全体の管理体制下にない。

総合病院運営の観点から、病院全体管理システムを確立する事、更に教育研修の管理システムは切り離し別個の管理体制下におくことを提言する。

2)医師に比して、医療従事者の地位が低く、加えて技術水準は余り高いものでない。例をあげれば、看護婦の業務に入る清潔汚染の実務については多くの問題があり、物品管理については乱雑な状況にある。

看護婦の教育・管理について至急改善する事を提言する。

3)病歴管理については殆どが人手処理で、各診療部門よりの病歴表を集計し、疾病分類は、ＷＨＯ基準に依って実施している。医師の研究等に患者カルテは貸し出しされているが、その成果は病歴室には戻らず、病院全体の活動実態の改善や内容充実に反映させることが困難と見られる。各部門ごとに取りまとめる疾病毎の集計分析等についても同様である。病歴管理の内容を整理統合し、今後の病院運営に活用するシステムを確立させることを提言する。

Ｂ．財務・資金計画面

財政面の問題は、当該病院の自立発展的運営にとって重大な事項である。短期的には、州政府当局の支援による病院運営をはかり、その間に病院財政の自立を目指した中・長期計画を立案、実施すべきである。即ち、

1)費用を回収し得る検査料、診療費の設定を早急に計画し、行政府の認可を求めると共に実施に当たっては、貧困層に対する配慮（例えば、社会保障にかかる制度・ケースワーカー制度の確立等）を並行して規定すべきである。

2)高度先進医療機材を当該病院は診療上必要とされるので、これらの機材にかかる保守管理契約（有償）を締結する事が必要である。これに必要な所要資金は、毎年次、設定すると共に前述した維持管理の項に試算した金額例（病院活動データを基礎にした。主なものとして、現在使用中の心臓内科のコロナリーアンギオ装置は、償却10年として年間約 8,254千円・大動脈補助循環装置は償却５年、年間約15,000千円・血液ガス分析装置は償却６年、年間約 3,100千円等の費用が見込まれる。その上、日常の診療活動に必要な直接材料費として、臨床検査部門用として約54,780千円・生理機能診断(ECG,EEG,EMG,RF等)部門用として約2,270千円・Ｘ線診断部門用として約77,799千円・超音波診断部門用として約2,400千円・手術部門用として約164,700千円等が試算される。）を参考に、資金計画を立案し、州政府よりの支援を確保する努力をすべきである。

3)当病院で活用される機材は、物理的な耐用年数とは別に機能的な面からの耐用年数を設定する条件下にあるものが含まれている。この為、機材更新に備えて積立を行うこと、及び経年劣化による取り替えを予測した財務計画の確立が必要である。

4)病院運営のモニタリング体制の確立をするためには、アンデラプラデッシュ州政府の監督及び支援が必要である。

# 資　料　編

# 資　料　編

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## 1．調査団氏名

### 1－1　基本設計調査団員の構成

**官ベース団員**

1)　建野　正毅　(Dr.Seiki TATENO)　　(総　括)
国立国際医療センター国際医療協力局・派遣協力課
(平成６年１０月１日～１０月１３日　１３日間)

2)　黒川　清登　(Mr.Kiyoto KUROKAWA)　(計画管理)
国際協力事業団　無償資金協力調査部　基本設計調査第一課
(平成６年１０月１日～１０月１３日　１３日間)

**コンサルタント団員**

3)　伊澤　恭一　(Mr.Kyoichi IZAWA)　　(業務主任)
株式会社　第一医療施設コンサルタンツ
(平成６年１０月１日～１０月２１日　２１日間)

4)　村尾　耕一　(Mr.Koichi MURAO)　　(機材計画)
株式会社　第一医療施設コンサルタンツ
(平成６年１０月１日～１０月２１日　２１日間)

5)　小田　時夫　(Mr.Tokio ODA)　　(設備計画)
株式会社　第一医療施設コンサルタンツ
(平成６年１０月１日～１０月２１日　２１日間)

国際協力事業団(JICA)

〒163-04　東京都新宿区西新宿２丁目１番１号
新宿三井ビル内私書箱２１６号４５階
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第一医療施設コンサルタンツ(DHFC)

〒113　　東京都文京区本郷３丁目１５番４号
本郷小林ビル２階
TEL (3) 3817-0830　FAX (3) 3817-0820

## １－２　ドラフトレポート説明調査団員の構成

官ベース団員

1）朝日　茂樹　(Dr.Shigeki ASAHI)　　(総　括)
国際国立医療センター国際医療協力局・派遣協力課
(平成６年１２月７日～１２月１７日　１１日間)

2）黒川　清登　(Mr.Kiyoto KUROKAWA)　(計画管理)
国際協力事業団　無償資金協力調査部　基本設計調査第一課
(平成６年１２月７日～１２月１７日　１１日間)

コンサルタント団員

3）伊澤　恭一　(Mr.Kyoichi IZAWA)　　(業務主任)
株式会社　第一医療施設コンサルタンツ
(平成６年１２月７日～１２月１７日　１１日間)

4）村尾　耕一　(Mr.Koichi MURAO)　　(機材計画)
株式会社　第一医療施設コンサルタンツ
(平成６年１２月７日～１２月１７日　１１日間)

## 2．調査日程　オスマニア総合病院医療機材整備計画基本設計調査団

### 2－1　基本設計調査日程表

| 日数 | 日　付 | 内　容 | |
|---|---|---|---|
| 1 | 10／1（土） | 成田発　→　ﾊﾞﾝｺｯｸ着 | |
| 2～5 | 2(日)～5（木） | ペストによるﾌﾗｲﾄｷｬﾝｾﾙのためﾊﾞﾝｺｯｸにて待機<br>国立感染症センター視察 | |
| 6 | 6（木） | ﾊﾞﾝｺｯｸ発　→　ﾆｭｰﾃﾞﾘｰ着<br>JICA・大使館表敬、協議、<br>中央政府大蔵省、保健省表敬、協議<br>ﾆｭｰﾃﾞﾘｰ発　→　ﾊｲﾃﾞﾗﾊﾞｰﾄﾞ着 | |
| 7 | 7（金） | 州保健省、関係機関表敬・協議（ｲﾝｾﾌﾟｼｮﾝﾚﾎﾟｰﾄ説明他） | |
| 8 | 8（土） | 対象施設調査・協議、関連施設調査 | |
| 9 | 9（日） | 団内会議 | |
| 10 | 10（月） | 対象施設協議 | |
| 11 | 11（火） | 州保健省協議、対象施設協議 | |
| | | 官　側 | |
| 12 | 12（水） | ﾆｭｰﾃﾞﾘｰへ移動、JICA・大使館報告 | 対象施設協議 |
| 13 | 13（木） | ﾐﾆｯﾂ調印、ﾆｭｰﾃﾞﾘｰ発　→　ﾊﾞﾝｺｯｸ着 | |
| 14 | 14（金） | ﾊﾞﾝｺｯｸ発　→　成田着(官側) | |
| 15 | 15（土） | 対象施設協議 | |
| 16 | 16（日） | 対象施設協議 | |
| 17 | 17（月） | 対象施設協議 | |
| 18 | 18（火） | 対象施設協議 | |
| 19 | 19（水） | 医療機材インド国内市場調査 | |
| 20 | 20（木） | ﾊｲﾃﾞﾗﾊﾞｰﾄﾞ発　→　ﾆｭｰﾃﾞﾘｰ着、ＪＩＣＡ報告 | |
| 21 | 21（金） | ﾆｭｰﾃﾞﾘｰ発　→　成田着 | |

### 2－2　ドラフトレポート説明

| 日数 | 日　付 | 内　容 |
|---|---|---|
| 1 | 12／　7（水） | 成田発　→　ﾆｭｰﾃﾞﾘｰ着 |
| 2 | 8（木） | 大使館、JICA、中央政府保健省表敬、協議<br>ﾆｭｰﾃﾞﾘｰ発　→　ﾊｲﾃﾞﾗﾊﾞｰﾄﾞ着 |
| 3 | 9（金） | 州保健家族福祉省表敬、協議(ﾄﾞﾗﾌﾄﾚﾎﾟｰﾄ説明)<br>ｵｽﾏﾆｱ総合病院訪問、協議 |
| 4 | 10（土） | 州保健家族福祉省協議 |
| 5 | 11（日） | 団内会議 |
| 6 | 12（月） | 州保健家族福祉省協議<br>ｵｽﾏﾆｱ総合病院協議 |
| 7 | 13（火） | ﾆｭｰﾃﾞﾘｰへ移動 |
| 8 | 14（水） | JICA報告、協議 |
| 9 | 15（木） | ﾐﾆｯﾂ調印(大蔵省) |
| 10 | 16（金） | 日本大使館報告 |
| 11 | 17（土） | ﾆｭｰﾃﾞﾘｰ発　→　成田着 |

## 3．相手国関係者リスト

日本大使館

| | |
|---|---|
| 岡部　孝道 | 在インド日本国大使館　参事官 |
| 廣瀬　道雄 | 在インド日本国大使館　一等書記官 |

ＪＩＣＡ

| | |
|---|---|
| 笹子　実 | ＪＩＣＡインド事務所　所長 |
| 野村　昌弘 | ＪＩＣＡインド事務所　次長 |
| 酒井　利文 | ＪＩＣＡインド事務所　所員 |

GOVERMENT OF INDIA（インド国政府）

MINISTRY OF FINANCE（大蔵省）

| | |
|---|---|
| Mrs. Rama Murali<br>(Mrs. ﾗﾏ　ﾑﾗﾘ) | Dept. of Economic Affair, Joint Secretary<br>（経済協力局、次官補） |
| Mr. D.N.N.Raju<br>(Mr. D.N.N. ﾗｼﾞｭ) | Dept. of Economic Affair, Deputy Secretary<br>（経済協力局、次官補） |

MINISTRY OF HEALTH & FAMILY WELFARE（保健家族福祉省）

| | |
|---|---|
| Mr. Ashok Mehta<br>(Mr. ｱｼｮｸ　ﾒｳﾀ) | Dept. of Health, Under Secretary<br>（保健局、次官補） |
| Mrs. Namita Pradhan<br>(Mrs. ﾅﾐﾀ　ﾌﾟﾗﾀﾞﾝ) | Dept. of International Health, Director<br>（国際保健局、局長） |

STATE GOVERMENT OF ANDHRA PRADESH (アンドラプラデシュ州)

MR. KOTLA VIJAYA BHASKARA REDDY HONOURABLE CHIEF MINISTER
(Mr. ｺﾄﾗ ｳﾞｨｼﾞﾔﾔ ﾊﾞｽｶﾗ ﾚﾃﾞｨ) 首相

MINISTRY OF HEALTH & FAMILY WELFARE (保健家族福祉省)

| | |
|---|---|
| Mr. K. Rosaiah<br>(Mr. K. ﾛｻｲｱ) | Honorouble Minister<br>(大臣、大蔵大臣兼務) |
| Mr. B.V. Rama Rao<br>(Mr. B.V. ﾗﾏ ﾗｵ) | Dept. of Health, Medical and Family Welfare, Spl. Chief Secretary<br>(保健家族福祉局、首席次官) |
| Ms. K. Sujatha Rao<br>(Ms. K. ｽｼﾞｬﾀ ﾗｵ) | Dept. of Health, Medical and Family Welfare, Secretary<br>(保健家族福祉局、次官) |
| Mr. K.L. Narayanan<br>(Mr. K.L. ﾅﾗﾔﾅﾝ) | Dept. of Health, Medical and Family Welfare, Deputy Secretary<br>(保健家族福祉局、次官補) |
| Dr. Nandaraj Singh<br>(DR. ﾅﾝﾀﾞﾗｼﾞ ｼﾝ) | Health Service, Director<br>(保健局、局長) |
| Dr. C.M. Habibullah<br>(Dr. C.M. ﾊﾋﾞﾌﾞﾗ) | Medical Education, Director<br>(医療教育局、局長) |

MNJ Institute of Oncology (MNJガン研究所)

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|---|---|
| Dr. J. Mandapal<br>(Dr. J. ﾏﾝﾀﾞﾊﾟﾙ) | Professor of Dept. of Radiology<br>(放射線科教授) |

NIZAM'S INSTITUTE OF MEDICAL SCIENCE (ニザム医学研究所病院)

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|---|---|
| Dr. I. Sattapralada rao<br>(Dr. I. ｻｯﾀﾌﾟﾗﾗﾀﾞ ﾗｵ) | Director<br>(院長) |

OSMANIA GENERAL HOSPITAL（オスマニア総合病院）

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|---|---|
| Dr. D. Satyanarayana<br>(Dr. D. ｻﾃｨｱﾅﾗﾔﾅ) | Superintendent, Professor & Head of the Dept. of Endocrinology<br>（院長、内分泌科主任教授） |
| Dr. Sudhir R. Naik<br>(Dr. ｽﾃﾞｨﾙ R. ﾅｲｸ) | Professor & Head of the Dept. of Cardiology<br>（心臓内科主任教授） |
| Dr. T.E. Anandavalli<br>(Dr. T.E. ｱﾅﾀﾞｳﾞｧﾘ) | Professor & Head of the Dept. of Neurology<br>（神経内科主任教授） |
| Dr. Jayapel Reddy<br>(Dr. ｼﾞｬﾔﾍﾟﾙ ﾚﾃﾞｨ) | Professor & Head of the Dept. of Cardiothoracic<br>（胸部外科主任教授） |
| Dr. P. Kantha Reddy<br>(Dr. P. ｶﾝﾀ ﾚﾃﾞｨ) | Professor & Head of the Dept. of Neurosurgery<br>（脳外科主任教授） |
| Dr. A.V.S. Reddy<br>(Dr. A.V.S. ﾚﾃﾞｨ) | Professor & Head of the Dept. of Genito-Urology<br>（泌尿器科主任教授） |
| Dr. N.R.S. Iyengar<br>(Dr. N.R.S. ｲｴﾝｶﾞｰ) | Professor & Head of the Dept. of Anaesthesiology<br>（麻酔科主任教授） |
| Dr. C.S.K. Bhagavanulu<br>(Dr. C.S.K. ﾊﾞｶﾞｳﾞｧﾇﾙ) | Professor & Head of the Dept. of Radiology<br>（放射線科主任教授） |
| Dr. T.S.S. Laxmi<br>(Dr. T.S.S. ﾗｸｼｭﾐ) | Professor & Head of the Dept. of Dermatology<br>（皮膚科主任教授） |
| Dr. R. Vidyasagar<br>(Dr. R. ｳﾞｨｼﾞｬｻｶﾞﾙ) | Head of the Dept. of Gastroenterology<br>（消化器科主任） |
| Dr. Nandan Singh<br>(Dr. ﾅﾝﾀﾞﾝ ｼﾝ) | Professor & Head of the Dept. of Microbiology<br>（微生物科主任教授） |
| Dr. Farhatunnissa<br>(Dr. ﾌｧﾗﾄｳﾆｯｻ) | Professor & Head of the Dept. of Biochemistry<br>（生化学科主任教授） |
| Dr. Gajanand Rao<br>(Dr. ｶﾞｼﾞｬﾅﾝﾀﾞﾗｵ) | Assistant Professor of the Dept. of Pathology<br>（臨床病理科助教授） |
| Dr. K.M.Lakashman Rao<br>(Dr. K.M. ﾗｶｼｭﾏﾝ ﾗｵ) | Professor & Head of the Dept. of Surgry<br>（一般外科主任教授） |
| Dr. A. Prakasham<br>(Dr. A. ﾌﾟﾗｶｼｬﾑ) | Professor & Head of the Dept. of Medicine<br>（内科主任教授） |
| Dr. Venkata Raghava Reddy<br>(Dr. ｳﾞｪﾝｶﾀ ﾗｶﾞﾊﾞ ﾚﾃﾞｨ) | Professor & Head of the Dept. of Plastic Surgery<br>（形成外科主任教授） |
| Dr. Paul Richmond Peters<br>(Dr. ﾎﾟｰﾙ ﾘｯﾁﾓﾝﾄﾞ ﾋﾟｰﾀｰ) | Chief Blood Bank Officer<br>（血液銀行主任） |

4. 討議議事録

MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY
ON
THE PROJECT FOR THE IMPROVEMENT OF MEDICAL EQUIPMENT
AT OSMANIA GENERAL HOSPITAL IN INDIA

In response to a request of the Government of India, the Government of Japan has decided to conduct a Basic Design Study on the Project for THE IMPROVEMENT OF MEDICAL EQUIPMENT AT OSMANIA GENERAL HOSPITAL IN INDIA (hereinafter reffered to as "the Project"), and entrusted the study to the Japan International Cooperation Agency (JICA). JICA sent to India a study team, headed by Dr. Seiki TATENO, Bureau of International Cooperation International Medical Center of JAPAN, Ministry of Health and Welfare, from October 6 to October 21, 1994.

The Team held discussions with the officials concerned of the Government of India and conducted field surveys at the study area.

In the course of discussions and field survey, both parties have confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Delhi October 13, 1994

| | | |
|---|---|---|
| Dr. Seiki TATENO<br>Leader<br>Basic Design Study Team<br>JICA | Dr. C. Surya Prakasara RAO<br>Incharge Director of<br>Medical Education<br>Government of<br>Andhra Pradesh | Dr. D. Satyanarayana<br>Superintendent<br>OSMANIA GENERAL HOSPITAL |
| Mr. K. L. Narayana<br>Deputy Secretary<br>Health, Medical & Family<br>Welfare, Dept.<br>Government of<br>Andhra Pradesh | Mr. Ashok Mehta<br>Under Secretary<br>Dept. of Health<br>Ministry of Health<br>& Family Welfare<br>Government of India | 13/10/94<br>Mr. D. N. N. Raju<br>Deputy Secretary<br>Department of<br>Economic Affairs<br>Ministry of Finance<br>Govt of INDIA |

ATTACHMENT

1. Objectives of the Project

The objective of the Project is to improve the essential function at OSMANIA GENERAL HOSPITAL through provision of essential equipment.

2. Project sites

OSMANIA GENERAL HOSPITAL in Andhra Pradesh

3. Executing Agency

Health, Medical & Family Welfare Dept., Goverment of Andhra Pradesh is responsible for the administration and execution of the Project.

4. Items requested by the Government of India

After the discussions with the Basic Design Study Team, the following items were finally requested by the Indian side.

Provision of the equipment described in Annex I
(Note: A=1st priority B=2nd priority C=3rd priority)
However, the final components of the Project will be decided after further studies.

5. Comments by the Japanese side on the items in 4 above

The equipment to be given high priority in the Project is;

1) the equipment to be utilized for treatment of the common deseases.
2) the equipment to be replaced with the existing equipment which is already deteriorated.
3) the essencial equipment for primary health care identified by the World Bank, WHO, UNICEF etc.

While, the equipment to be given low priority in the Project is;

1) the equipment not required for health care services such as diagnosis treatment and prevention.
2) the simple equipment/furniture available locally.
3) the most advanced equipment to be utilized for research activities.
4) the equipment with some difficulties on installation/infrastructure conditions,
5) The expensive equipment less utilized because of small number of testing/less number of patients,
6) the equipment hazardous to enviromental control,
7) the equipment only utilized with exclusive reagent kit available from the specific manufacture, and
8) the equipment with financial/marketing difficulties on the procurement of consumable and spare parts etc.

6. Japan's Grant Aid Program

(1) The Govenrment of India & the Government of Andhra Pradesh have understood the system of Japanese Grant Aid explained by the team.
(2) The Govenrment of India & the Government of Andhra Pradesh will take necessary measures described in ANNEX II, for smooth implementation of the Project on condition that the Grant Aid assistance by the Government of Japan is extended to the Project.

7. Schedule of the study

(1) The consultants will proceed to further studies in India until October 21st, 1994.
(2) JICA will prepare the draft report and dispatch a mission in order to finalize the contents of the report around December 1994.
(3) In case the contents of the report is accepted in principle by the Indian side, JICA will complete the final report and send it to the Government of India by April, 1995.

8. The relationship between Japanese Project and World Bank Project.

(1) Indian side will coordinate the above relation and make no overlappings and conflicts between these two donors.
(2) In case the World Bank prepare the basic equipment, Japanese Project should be suspended until the concreate plan be provided.
(3) The Government of Andhra Pradesh confirmed that the World Bank Project does not extend any assistance to Osmania General Hospital.

9. Financial problem.

(1) Japanse side stressed the importance of tackling the financial plan of the hospital and requested to make clear picture of the hospital including operation and maintenance cost of the sophisticated equipment, which was presented by the Study Team, until 30, Oct. 1994.
(2) The hospital shall work out the mechanizum for recovery of charges of costs involving mordern sophisticated investigation and treatment.

10. Avoid duplication of the equipment.

To avoid duplication, the hospital will submit the list of existing equipment and plan of new equipment which will be purchased by themselves and other donors until 20, Oct. 1994.

11. Reply to the questionnaire.

Indian side will submit the reply to the questionnaire until the end of Octorber 1994 to the office of JICA in India, New Delhi.

12. Priority of the grant aid.

The fund of the grant aid is come from the contribution of the tax payer. The first priority of the fund should be given to the suffering poor patient.
The Government of Andhra Pradesh responded that Osmania General Hospital is catering to the needs of poor patient.
The Study Team did understand the needs for the latest sophisticated equipment. However, it is not suitable as grant aid because of less cost effectiveness and less urgency.

ANNEX-I

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 100 | RADIOLOGY DEPARTMENT | | |
| 101 | MRI | 1 | C |
| 102 | X-RAY CT SCANNER, WHOLE BODY | 1 | B |
| 103 | MAMMOGRAPHIC X-RAY SYSTEM | 0 | B |
| 104 | X-RAY PHOTGRAPHIC SYSTEM W/TV, D.S.A | 1 | A |
| 105 | X-RAY SYSTEM | 2 | C |
| 107 | MOBILE X-RAY SYSTEM | 0 | A |
| 108 | COLLOR DOPPLER USG | 1 | A |
| 109 | ULTRA SONOGRAPHY | 0 | A |
| 110 | PROCESSING TANK | 1 | A |
| 111 | AUTO FILM DEVELOPER | 1 | A |
| 112 | FILM DUPLICATOR | 1 | A |
| 113 | ANGIOGRAPHY UNIT WITH D.S.A. | 1 | C |
| 200 | ENDOSCOPY | | |
| 201 | TV VIDEO ENDOSCOPY SET' | 1 | A |
| 202 | ENDOSONOGRAPHY | 1 | C |
| 203 | UPPER GI FIBERSCOPE, TV TYPE (INFANT) | 1 | A |
| 204 | UPPER GI FIBERSCOPE, TV TYPE (ADULT) | 2 | A |
| 205 | UPPER GI FIBERSCOPE, NORMAL (ADULT) | 1 | A |
| 206 | DUODENO FIBERSCOPE, TV TYPE | 2 | A |
| 207 | COLONO FIBERSCOPE, TV TYPE | 2 | A |
| 208 | SIGMOID FIBERSCOPE, NORMAL | 1 | A |
| 209 | LIGHT SOURCE | 1 | A |
| 211 | ENDOSCOPIC ILLUMINATER | 0 | A |
| 212 | ENDOSCOPIC/PROCTOSCOPIC TABLE | 0 | A |
| 213 | FIBERSCOPE CLEANING MACHINE | 1 | A |
| 214 | ENDOSCOPIC TROLLEY | 0 | A |
| 215 | ENDOSCOPIC HANGER | 0 | C |
| 216 | ENDOSCOPIC CABINET | 0 | C |
| 217 | SUCTION PUMP | 0 | C |
| 218 | S.G. DIALATORS SET | 2 | A |
| 219 | PNEUMATIC DIALATORS SET | 9 | A |
| 220 | OESOPHAGEAL MANOMETRY | 2 | A |
| 300 | CLINICAL LABORATORY | | |
| 301 | AUTOANALYZER | 1 | A |
| 302 | BLOOD GAS ANALYSER, FULLAUTOMATIC | 1 | A |
| 303 | ELECTROLYTE ANALYSER | 2 | A |
| 304 | SPECTROPHOTOMETER, DOUBLE BEAM | 1 | A |
| 305 | ELECTROPHORESIS / SCANNER | 1 | A |
| 306 | REFRIGERATED CENTRIFUGE | 1 | A |
| 307 | SPECTROPHOTOMETER, SINGLE | 2 | A |
| 308 | ELECTRICAL BALANCE | 2 | A |
| 309 | PH METER | 1 | A |
| 310 | DEEP FREEZER (-20C) | 1 | A |
| 311 | SEMI AUTOANALYZER | 2 | A |
| 312 | CHLORIDE METER | 2 | A |
| 313 | ICE CUBE MACHINE | 1 | A |
| 314 | PERSONAL COMPUTER / PRINTER | 2 | A |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 400 | MICROBIOLOGY | | |
| 401 | ANALYTICAL BALANCE | 1 | A |
| 402 | U.V. LAMPS | 5 | A |
| 403 | LAMINAR FLOW | 1 | A |
| 404 | BIONUCLAR MICROSCOPE | 5 | A |
| 405 | MONOCULAR MICROSCOPE | 5 | C |
| 406 | FLOURESCENT MICROSCOPE | 1 | A |
| 407 | ELISA READER | 1 | A |
| 408 | THIN LAYER CHROMATOGRAPHY | 1 | C |
| 409 | IMMUNOELECTREOPHORESIS | 1 | A |
| 410 | ANAEROBIC STATION / GAS CYLINDER | 1 | A |
| 411 | DEEP FREEZER (-80) | 1 | A |
| 412 | DEEP FREEZER (-20) | 1 | A |
| 413 | REFRIGERATORS | 4 | A |
| 414 | WATER BATH WITH SHAKER | 1 | A |
| 415 | VERTEX MIXER | 1 | A |
| 416 | FREEZ DRYER | 1 | A |
| 417 | MICRO PIPETTES SET | 1 | A |
| 418 | SONICATOR | 1 | B |
| 419 | INCUBATOR | 1 | A |
| 0 | VERTICAL AUTOCLAVE | 2 | A |
| 421 | HOT AIR STERILIZER | 2 | A |
| 422 | CO2 INCUBATOR | 1 | B |
| 423 | CENTRIFUGE, TABLE TOP | 4 | A |
| 424 | STEREO MICRO SCOPE | 1 | A |
| 425 | LOW TEMPERATURE INCUBATOR | 1 | B |
| 426 | PH METER | 2 | A |
| 427 | ULTRASONIC CLEANER | 1 | A |
| 428 | PCR | 1 | C |
| 429 | GAMMA COUNTER | 1 | C |
| 430 | LIQUID NITROGEN CYLINDER | 1 | B |
| | | | |
| 500 | PATHOLOGY | | |
| 501 | FLUORESCENT MICROSCOPE | 1 | A |
| 502 | TISSUE PROCESSOR | 2 | A |
| 503 | AUTOMATIC STAINER | 1 | A |
| 504 | MICROTOME SEMIAUTOMATIC / SHARPNER | 2 | A |
| 505 | CRYOSTAT | 2 | A |
| 506 | BLOOD CELL COUNTER | 1 | A |
| 7 | COAGULOMETER | 1 | A |
| 8 | LEUCOCYTE COUNTER | 0 | A |
| 509 | CYTOSPIN | 1 | C |
| 510 | BINOCULAR MICROSCOPE | 21 | A |
| 511 | TEACHING MICROSCOPE FOR 5 PERSONS | 0 | A |
| 512 | TRINOCULAR MICROSCOPE / CAMERA | 0 | A |
| 513 | TV MICROSCOPE | 0 | B |
| 514 | PERSONAL COMPUTER / PRINTER | 1 | A |
| 515 | ELECTRON MICROSCOPE SET | 1 | C |
| 516 | DEEP FREEZER (-80) | 1 | A |
| 517 | REFRIGERATOR | 3 | A |
| 518 | TABLE TOP CENTRIFUGE | 8 | A |
| 519 | HEMATOCRIT CENTRIFUGE | 1 | A |
| 520 | HIGH SPEED CENTRIFUGE | 1 | A |
| 521 | SPECTROPHOTOMETER (DOUBLE BEAM) | 1 | A |
| 522 | ELECTROPHORESIS WITH DENSITOMETER | 2 | B |
| 523 | H.L.A. LAB | 1 | B |
| 524 | PLATLET AGGREGOMETER | 1 | B |
| 525 | ELECTRONIC BALANCE | 1 | A |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 526 | REFRIGERATOR CENTRIFUGE | 1 | A |
| 527 | DOUBLE DISTILLATION PLANT | 1 | A |
| 528 | FLOW CYTOMETER | 1 | C |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 600 | BLOOD BANK | | |
| 601 | CENTRIFUGE | 2 | A |
| 602 | CENTRIFUGE REFRIGERATOR | 1 | A |
| 603 | CENTRIFUGE HEAVY DUTY | 1 | A |
| 604 | INCUBATOR | 1 | A |
| 605 | REFRIGERATOR 120PCS | 2 | A |
| 606 | REFRIGERATOR MEDIUM | 2 | A |
| 607 | MICROSCOPOE BINOCULAR | 1 | A |
| 608 | B.P. APPARATUS | 2 | A |
| 609 | BLOOD SCALE | 4 | A |
| 610 | MICRO PIPPETTE | 2 | A |
| 611 | B.P. APPARATUS BED SIDE | 2 | A |
| 613 | DEEP FRREZER -70°C | 1 | A |
| 614 | GENERATOR MINI | 1 | A |
| 615 | PLATELET AGITATOR | 1 | A |
| 616 | DOUBLE DISTILLATION PLANT | 1 | A |
| 617 | LAMINA FLOW | 1 | B |
| 618 | PERSONAL COMPUTER / PRINTER | 1 | A |
| 619 | PPP & PRP COLLECTION | 1 | C |
| 700 | ANESTHESIOLOGY (OPERATION THEATER) | | |
| 701 | VENTILATOR(ADULT) | 6 | A |
| 702 | VENTILATOR(INFANT) | 2 | A |
| 703 | PULSE OXIMETERS | 6 | A |
| 704 | MULTI-CHANNEL TEMPERATUIRE MONITOR | 6 | A |
| 705 | CO2 MONITOR | 6 | A |
| 706 | BLOOD GAS ANALYSER, 3P | 1 | A |
| 707 | TEMPERATURE CONTROL BLANKET | 6 | A |
| 708 | INTRA-AORTIC BALOOM PUMP | 1 | C |
| 709 | C-ARM FOR GUIDED LONG TERM NERVE BLOCK FOR | 1 | A |
| 710 | PULMONARY FUNCTION MONITOR | 1 | A |
| 711 | ANESTHESIA APPARATUS / VENTILATOR | 29 | A |
| 712 | C-ARM X-RAY UNIT /MOBILE | 1 | A |
| 713 | OPERATING TABLE, UNIVERSAL | 29 | A |
| 714 | OPERATING LIGHT / MOBILE | 29 | A |
| 715 | DIATHERMY (ELECTRO SURGICAL UNIT) | 6 | A |
| 716 | DEFBRILATOR | 7 | A |
| 717 | REFRIGELATOR | 7 | A |
| 718 | PATIENT MONITOR | 29 | A |
| 719 | STRETCHER | 10 | A |
| 720 | SURGICAL SCRUB STATION, 2 | 6 | B |
| 800 | CSSD | | |
| 801 | STEAM STERILIZER (LARGE) | 2 | A |
| 802 | STEAM STERILIZER (SMALL) | 1 | A |
| 803 | ULTRASONIC CLEANER | 1 | A |
| 804 | TUBE DRYER | 1 | A |
| 805 | STERILIZER PACK SEALER | 1 | B |
| 806 | INSTRUMENT CABINET | 6 | A |

| | | | |
|---|---|---|---|
| 807 | SHELVES | 6 | A |
| 808 | CARRING CART | 6 | A |
| 809 | EOG STERILIZER | 1 | A |
| 810 | EO GAS AERATOR | 1 | A |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 900 | EMERGENCY | | |
| 901 | OPERATING TABLE / STRETCHER | 2 | A |
| 902 | MINOR OPERATING LIGHT /FIXED STAND | 2 | A |
| 903 | ANESTHESIA APPARATUS WITHOUT VENTILATOR | 2 | A |
| 904 | BEDSIDE MONITOR / 4 CH | 2 | A |
| 905 | DEFEBRILATOR | 2 | A |
| 906 | VENTILATOR | 2 | A |
| 907 | EMERGENCY CART | 2 | A |
| 908 | MOBILE X RAY MACHINE | 1 | A |
| 1000 | CARDIOLOGY | | |
| 1001 | BED CARDIAC I.C.U | 24 | A |
| 1002 | CENTRAL MONITORS | 3 | B |
| 1003 | TELEMETRY MONITOR SET | 3 | B |
| 1004 | CATH.LAB | 1 | C |
| 1005 | CATH. ABLATOR SET | 1 | C |
| 1006 | I.A.B.P. | 2 | C |
| 1007 | VENTILATORS | 6 | A |
| 1008 | 2-D ECHO | 2 | C |
| 1009 | INTRA VASCULAR ULTRA SOUND | 1 | C |
| 1010 | CORONARY ANGIOSCOPE | 1 | C |
| 1011 | BIOPTOMES FOR MYOCARDIAL BIOPSY | 2 | C |
| 1012 | NUCLEAR CARDIOLOGY | 1 | C |
| 1013 | HOLTER MONITORING SYSTEM | 2 | B |
| 1014 | AMBULATORY B.P. MONITOR, NON INVASIVE | 4 | A |
| 1015 | BLOOD GAS ANALYSER, 3P | 2 | A |
| 1016 | EOG STERILIZER | 1 | C |
| 1017 | PATIENT TROLLEYS | 25 | A |
| 1018 | COMPUTER /COLOR XEROX | 4 | C |
| 1019 | C-ARM BEDSIDE IMAGE INTENSIFIER | 2 | B |
| 1020 | ACTIVATED CLOTING TIME UNIT | 2 | A |
| 1021 | AUTOANALYSER /CHEMISTRY | 1 | C |
| 1022 | LIQUID/GAS CHROMATOGRAPHY | 1 | A |
| 1023 | MOBILE CORONARY CARE | 2 | C |
| 1024 | PAGING SYSTEM FOR MEDICAL PERSONNEL | 25 | C |
| 1025 | ECG, 6-CH | 1 | A |
| 1026 | ECG/PCG/PULSE RECORDER | 1 | A |
| 1027 | LONG TERM ECG RECORDER/ANALYZER | 1 | C |
| 1028 | STRESS TEST SYSTEM | 1 | A |
| 1029 | TREADMILL | 1 | A |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 1100 | CARDIO & THORACIC SURGERY | | |
| 1101 | CARDIAC MONITOR | 10 | A |
| 1102 | DEFRIBRILLATOR | 10 | A |
| 1103 | MECHANICAL VENTILATOR | 6 | A |
| 1104 | HEART LUNG MACHINE | 2 | B |
| 1105 | BLOOD AUTO TRANSFUSION PUMP | 2 | A |
| 1106 | DEEP FREEZER | 2 | A |
| 1107 | FINE VASCULAR INSTRUMENTS SET | 4 | A |
| 1108 | 4 CHANNEL MONITOR | 4 | A |
| 1109 | BLOOD GAS ANALYZER | 2 | C |
| 1110 | OPERATING TABLE | 4 | A |
| 1111 | OPERATING ROOM CELING LIGHTS | 4 | A |
| 1112 | SUCTION | 6 | A |
| 1113 | DIATHERMY MACHINE | 4 | A |
| 1114 | BRONCOSCOPE SET / LIGHT SOURCE | 2 | A |
| 1115 | OESOPHAGOSCOPE SET | 2 | A |
| 1116 | SPIROMETER | 1 | A |
| 1200 | ORTHOPEDIC | | |
| 1201 | ORTHOPEDIC OPERATION TABLE | 3 | A |
| 1202 | SPINAL STABILISATION INSTRUMENTATION SET | 1 | A |
| 1203 | SCOLIOSIS CORRECTION INSTRUMENTATION SET | 1 | A |
| 1204 | PNEUMATIC POWER DRILL | 3 | A |
| 1205 | TOTAL KNEE REPLACEMENT INSTRUMENTATION SET | 1 | A |
| 1206 | HYPERBARIC OXGEN THERAPY TENT | 1 | B |
| 1207 | OPERATING MICROSCOPE | 1 | A |
| 1208 | FRAGMENT FIXATION SETS MINI | 1 | A |
| 1209 | FRAGMENT FIXATION SETS MAXI | 1 | A |
| 1210 | ILLIZAROV EXTERNAL FIXATOR SYSTEMS | 20 | A |
| 1211 | ELECTRIC BONE STIMULATOR | 3 | A |
| 1212 | FREEZER | 2 | A |
| 1213 | REFRIGERATOR | 1 | A |
| 1214 | EXTRACTION BED SET (MADE IN INDIA) | 10 | C |
| 1215 | PHOTOCOPIER | 1 | C |
| 1216 | ARTHROSCOPE WITH SURGERY INSTRUMENTATION | 1 | A |
| 1217 | OZONE THERAPY UNIT | 1 | B |
| 1218 | BIO FEED BACK INSTRUMENT | 1 | B |
| 1219 | TRANSCUTANEOUS NERVE STIMULATOR | 3 | A |
| 1220 | SHORT WAVE DIATHERMY SET | 3 | A |
| 1221 | ULTRTASONIC AND LOW FREQUENCY COMBINATION | 3 | A |
| 1222 | TRACTION UNIT | 6 | A |
| 1223 | ULTRA VIOLET THERAPY UNIT | 3 | A |
| 1224 | MUSCLE AND NERVE STIMULATOR | 4 | A |
| 1225 | HIGH FREQUENCY THERAPY UNIT | 4 | A |
| 1226 | ULTRA SOUND THERAPY UNIT | 4 | A |
| 1227 | ELECTRIC BODY VIBRATORS | 2 | A |
| 1228 | HYDROTHERAPY TANKS | 2 | A |
| 1229 | WHIRL PHOOL BATH | 1 | A |
| 1230 | MOTORIZED WHEEL CHAIR | 20 | C |
| 1231 | REFRIGERATOR | 2 | A |
| 1232 | ANKLE ROTATING FRA-SEA MACHINE | 3 | A |
| 1233 | HYDRO COLLATOR UNIT | 1 | A |
| 1234 | QUADRICEPS EXERCISE TABLE | 5 | A |
| 1235 | STATIC BICYCLE EXERCISER | 2 | A |
| 1236 | OPERATING RETRACTOR LIGHT | 1 | A |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 1300 | MEDICINE | | |
| 1301 | COLORIMETER (SPECTROPHOTOMETER) | 1 | C |
| 1302 | SPECTOMETER | 1 | C |
| 1303 | ANALYTICAL BALANCE | 1 | A |
| 1304 | CENTRIFUGE | 2 | A |
| 1305 | BINOCULAR MICROSCOPE | 8 | A |
| 1306 | WBC CELL COUNTER | 2 | C |
| 1307 | HEMOGLOBINOMETER | 2 | A |
| 1308 | AUTOANALYSER | 2 | C |
| 1309 | FLAME PHOTOMETER | 2 | C |
| 1310 | B.P. APPARATUS | 10 | A |
| 1311 | ECHOGRAPHY, PORTABLE | 1 | A |
| 1312 | PULSE OXYMETER | 1 | A |
| 1313 | DEFIBRILLATOR | 2 | A |
| 1314 | VENTILATOR | 6 | A |
| 1315 | CENTRAL CARDIAC MONITOR FOR 8 BEDS | 1 | B |
| 1316 | COLOUR DOPPLER | 1 | C |
| 1317 | 4 CHANNEL BEDSIDE MONITOR | 25 | B |
| 1318 | COMPUTARIZED PULMONARY FUNCTION TEST | 2 | C |
| 319 | NEBULIZER, NORMAL TYPE | 24 | A |
| 1320 | PORTABLE X-RAY MOBILE | 2 | C |
| 1321 | INFUSION PUMPS | 24 | A |
| 1322 | BLOOD GAS ANALYSER | 2 | C |
| | | | |
| 1400 | ENDOCRINOLOGY | | |
| 1401 | BETA COUNTER | 1 | C |
| 1402 | DEEP FREEZER | 2 | A |
| 1403 | REFRIGERATED CENTRIFUGE | 2 | A |
| 1404 | SEMI AUTO ANALYZER | 1 | B |
| 1405 | LABORATORY CENTRIFUGE | 2 | A |
| 1406 | SINGLE PAN BALANCE | 1 | A |
| 1407 | PHOTOELECTRIC COLORIMETER | 1 | A |
| 1408 | PH METER | 1 | A |
| 1409 | AUTO PIPETTER | 4 | A |
| 1410 | VERTEX MIXTURE | 5 | A |
| 1411 | MAGNETIC STIRRER | 2 | A |
| 1412 | MULTI WELL AUTO GAMMA COUNTER | 1 | C |
| 1413 | ELISA READER | 1 | A |
| 414 | PERSONAL COMPUTER / PRINTER | 1 | A |
| 415 | INFUSION PUMP | 2 | A |
| 1416 | DOUBLE DISTILATION PLANT | 1 | A |
| | | | |
| 1500 | NEPHROLOGY | | |
| 1501 | HAEMODIALYSIS MACHINES | 2 | A |
| 1502 | BLOOD GAS ANALYSER | 1 | C |
| 1503 | AUTO ANALYSER - SEMI | 1 | A |
| 1504 | PHASE CONTRAST MICROSCOPE W/CAMERA | 1 | A |
| 1505 | ELECTROLYTE ANALYSER | 1 | B |
| 1506 | BINOCULAR MICROSCOPE | 2 | A |
| 1507 | PH METER | 1 | A |
| 1508 | NEEDLE BIOPSY SET | 1 | A |
| | | | |
| 1600 | NEUROLOGY | | |
| 1601 | EEG MACHINE, 2 CH | 1 | B |
| 1602 | EMG / EVOLVED POLENLET, 8 CH | 1 | B |
| 1603 | AUBULATORY EEG | 1 | A |
| 1604 | EEG TELEMETRY | 1 | A |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 1700 | NEUROSURGERY | | |
| 1701 | OPERATING MICROSCOPE | 2 | A |
| 1702 | LASER CO2 & NdYAG | 1 | A |
| 1703 | C.U.S.A | 1 | A |
| 1704 | OPERATING LOUPES | 4 | A |
| 1705 | RADIO FREQUENCY LESION MAKER | 1 | B |
| 1800 | UROLOGY | | |
| 1801 | CYSTOSCOPE, FLEXIBLE SET | 1 | A |
| 1802 | PAEDIATRIC CYSTOSCOPE, RESECTOSCOPE SET | 1 | A |
| 1803 | LASER LITHOTRIPTOR | 1 | B |
| 1804 | URODYNAMICS, COMPUTERISED | 1 | B |
| 1805 | UROLOGY OPERATING TABLE | 1 | A |
| 1900 | PLASTIC SURGERY | | |
| 1901 | OPERATING MICROSCOPE FOR PLASTIC SURGERY | 1 | A |
| 1902 | INSTRUMENTS FOR MICROSURGERY | 1 | A |
| 1903 | ELECTRIC DIATHERMY | 2 | C |
| 1904 | OPERATION THEATRE LIGHTS - LUX | 1 | B |
| 1905 | TISSUE EXPANDERS SET | 1 | A |
| 1906 | LIPOSUCTION UNIT | 1 | A |
| 1907 | INTERNAL FIXATION SYSTEM FOR M.F. SURGERY | 2 | A |
| 1908 | DOPPLER UNIT FOR MAPPING | 1 | A |
| 1909 | RIPPLE BEDS & AIR FLUIDISHED BEDS | 10 | A |
| 1910 | SKIN GRAFTS MESHER | 1 | A |
| 1911 | NASENDOSCOPE | 1 | A |
| 1912 | INFRA-RED LAMP | 1 | A |
| 2000 | GENERAL SURGERY | | |
| 2001 | OPERATING TABLES, UNIVERSAL | 6 | C |
| 2002 | OPERATION THEATER LIGHTS, CEILING | 6 | C |
| 2003 | DIATHERMY | 6 | C |
| 2004 | TV VIDEO ENDOSOPY | 3 | C |
| 2005 | KENTO LIFT RETRACTOR FOR LIVER SURGERY | 3 | A |
| 2006 | SILICON RUBBER CLAMPS FOR HEPATIC SURGERY | 3 | A |
| 2007 | ULTRASOUND FOR SURGERY | 2 | A |
| 2008 | TV SYSTEM FOR OPERATION THEATER / VIDEO | 2 | A |
| 2009 | CYSTO-URETHEROSCOPIC EQUIPMENT | 1 | C |
| 2010 | PORTABLE ULTRASOUND MACHINE | 1 | A |
| 2100 | DERMATOLOGY | | |
| 2101 | FLUORESCENT MICRSCOPY | 1 | C |
| 2102 | BINOCULAR MICROSCOPE | 1 | A |
| 2103 | BINOCULAR MICROSCOPE / DARK FIELD | 1 | A |
| 2104 | WOODSLAMP | 1 | A |
| 2105 | DIATHERMY FOR DERMATOLOGY | 2 | A |
| 2106 | IONTOPHORESIS APPARATUS (MADE IN INDIA) | 1 | A |
| 2107 | DERMABRADARS | 1 | A |
| 2108 | ULTRAVIOLET CHAMBERS UVA & UVB LAMPS | 1 | A |
| 2109 | CARBONDIOXIDE LASER NdYAG | 1 | B |

| NO | DESCRIPTION | Q'TY | PRIORITY |
|---|---|---|---|
| 2200 | ADMINISTRATION | | |
| 2201 | AMBULANCE CAR / FULL EQUIPED | 2 | A |
| 2202 | PERSONAL COMPUTER / PRINTER | 1 | A |
| 2203 | COPIER | 1 | A |
| 2204 | FAX MACHINE | 1 | A |
| 2205 | PAGING SYSTEM (FOR HOSPITAL) | 1 | B |
| 2206 | AUTOMATIC WASHER WITH EXTRACTOR | 1 | A |
| 2207 | HOT AIR DRYER (LAUNDRY) | 1 | A |

ANNEX-II

Necessary measures to be taken by the Government of India & the Government of Andhra Pradesh in case Japan's Grant Aid is executed.

1. To provide the land for temporary site office, warehouse and stock yard during the implementation period

2. To exempt taxes and to take necessary measures for customs clearance of the materials and equipment brought for the Project at port of disembarkation

3. To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contract such facilities as may be necessary for their entry in India and stay therein for the performance of their work.

4. To maintain and use properly and effectively that the facilities constructed and equipment purchased under the Grant.

5. To bear all the expenses other than those to be borne by the Grant

6. To bear commissions to the Japanese foreign exchange bank for the banking services based on Banking arrangement.

MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY
ON
THE PROJECT FOR THE IMPROVEMENT OF MEDICAL EQUIPMENT
AT OSMANIA GENERAL HOSPITAL IN INDIA
( CONSULTATION ON DRAFT REPORT )

In October 1994, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study on the Project for THE IMPROVEMENT OF MEDICAL EQUIPMENT AT OSMANIA GENERAL HOSPITAL IN INDIA (hereinafter referred to as "the Project"), and through discussions, field survey, and technical examination of the results in Japan, has prepared the draft report of the study.

In order to explain and consult the Indian side on components of the draft report, JICA send to India a study team, headed by Dr. Shigeki ASAHI Bureau of International Cooperation, International Medical Center of JAPAN, Ministry of Health and Welfare, from December 7 to December 17, 1994.

As a results of discussions, both parties confirmed the main items described on the attached sheets.

New Delhi December 15, 1994

Dr. Shigeki ASAHI
Leader
Basic Design Study Team
JICA

Dr. D. Satyanarayana
Director of
Medical Education
Government of
Andhra Pradesh

for Dr. A. Prakasham
Superintendent
OSMANIA GENERAL HOSPITAL

Mr. K. L. Narayana
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Mr. Ashok Mehta
Under Secretary
Dept. of Health
Ministry of Health
& Family Welfare
Government of India

15/12/94
Mr. D. N. Narasimha Raju
Deputy Secretary
Ministry of Finance
Department of
Economic Affairs
Government of India

ATTACHMENT

1. Components of draft report.
The Government of India has agreed and accepted in principal the components of the draft report proposed by the Team.
And main items discussed by both sides are described in ANNEX-I and the Team has understood the needs, which are described in the revised equipment list in ANNEX-II., and recommend it to the Government of Japan.

2. Japan's Grant Aid Program
(1) The Government of India & the Government of Andhra Pradesh have understood the system of Japanese Grant Aid as explained by the team. (See ANNEX-III)
(2) The Government of India & the Government of Andhra Pradesh will take necessary measures described in ANNEX-III, for smooth implementation of the Project on condition that the Grant Aid assistance by the Government of Japan is extended to the Project.

3. Schedule of the study
JICA will complete the final report and send it to the Government of India by March, 1995.

4. Monitoring
Health, Medical & Family Welfare, Dept. Government of Andhra Pradesh and the OSMANIA General Hospital have the responsibility of monitoring progress of all phases of the Project such as allocation of funds and utilization of equipment purchase, distribution, quality control, maintenance and utilization of equipment, manpower development, training based upon the indicators given in ANNEX-IV and reporting it to the Embassy of Japan and JICA India Office annually through Ministry of Finance, the Department of Economic Affairs,

5. Other relevant issues.
1) Health, Medical & Family Welfare, Dept. Government of Andhra Pradesh will allocate the necessary budget (including counter part funds) and personnel for the Project.
2) Health, Medical & Family Welfare, Dept. Government of Andhra Pradesh will get various internal clearances and also from the Government of India, as applicable, including expenditure /financial clearances.

ANNEX-I

Main item discussed by the Team and Indian side ( The Government of India , the Government of Andhra Pradesh and the OSMANIA General Hospital )is as follows.

1. The proper utilization of equipmet.

The Study Team requested the proper and efficient utilization of equipmet.
The equipment should be used commonly , mutually and should be centrally managed by the Hospital.

The OSMANIA General Hospital will arrange and be responsible for the proper and efficient utilization of the equipment, and modernize the management of the Hospital.

2. Comment for the main requested equipment.

X-ray CT scanner,MRI

The OSMANIA General Hospital has requested CT and MRI because of the needs for immediate , detailed and fine diagnosis.
The Team explained that the renovation of the OSMANIA General Hospital should be done step by step manner.
First of all, the needs of essential equipment should be emphasized in the Hospital.
The Study Team has arranged the modernized essential equipment according to the Minitues of Discussions on Octorber 13,1994 Annex-I, which has agreed priority of the provision of the equipment.

Second,the maintaining and operating of sophisticated equipment requires annual and concrete financial support of a substantial nature. Maintaining a patient in a hospital has also become quite expensive because of innovations in diagnostic and therapeutic techniques.
So,the Team has stressed the importance of tackling the financial plan of the Hospital and requested to make clear picture of the hospital including operation and maintenance cost of the sophisticated equipment ,which was presented by the Study Team at the previous study. (See Minitues of Discussions on Octorber 13,1994 Attachment,Item No.9)
But, the Team has not yet received the clear financial plan of the Hospital.
In view of the high costs involved ,there is an immence need for proper and scientific planning of hospital facilities as well as for the proper utilization of hospital resources. That is why the Team requested the step by step renovation.
The hospital has also agreed to work out the mechanism for recovery of charges of costs involving modern sophisticated investigation and treatment. So,these kinds of equipment , which require huge ,concrete and clear financial planned operation and maintenance cost with specified by annual basis , should be considered after the modernization of the Hospital.
The Government of Andhra Pradesh may consider certain measures to reduce the number of accidents deaths.
For example,making it compulsory for two wheeles riders to wear the helmets can substantially bring down the number of death of accident victims.

ANNEX II

EQUIPMENT LIST

| NO | DESCRIPTION | Q'TY |
|---|---|---|
| 100 | RADIOLOGY DEPARTMENT | |
| 108 | COLOR DOPPLER USG | 1 |
| 109 | ULTRA SONOGRAPHY | 1 |
| 110 | PROCESSING TANK | 1 |
| 112 | FILM DUPLICATOR | 1 |
| | | |
| 200 | ENDOSCOPY | |
| 201 | TV VIDEO ENDOSCOPY SET | 1 |
| 203 | UPPER GI FIBERSCOPE, TV TYPE (INFANT) | 1 |
| 204 | UPPER GI FIBERSCOPE, TV TYPE (ADULT) | 2 |
| 205 | UPPER GI FIBERSCOPE, NORMAL (ADULT) | 1 |
| 206 | DUODENO FIBERSCOPE, TV TYPE | 1 |
| 207 | COLONO FIBERSCOPE, TV TYPE | 1 |
| 208 | SIGMOID FIBERSCOPE, NORMAL | 1 |
| 209 | LIGHT SOURCE | 1 |
| 211 | ENDOSCOPIC FILM VIEWER | 1 |
| 212 | ENDOSCOPIC/PROCTOSCOPIC TABLE | 1 |
| 213 | FIBERSCOPE CLEANING MACHINE | 1 |
| 214 | ENDOSCOPIC TROLLEY | 2 |
| 218 | S.G. DILATORS SET | 2 |
| 219 | PNEUMATIC DILATORS SET | 1 |
| 220 | ESOPHAGEAL MANOMETER | 1 |
| | | |
| | CLINICAL LABORATORY | |
| 300 | BIOCHEMICITY | |
| 301 | AUTOANALYZER | 1 |
| 302 | BLOOD GAS ANALYZER, AUTOMATIC | 2 |
| 303 | ELECTROLYTE ANALYZER | 2 |
| 304 | SPECTROPHOTOMETER, DOUBLE BEAM | 1 |
| 305 | ELECTROPHORESIS / SCANNER | 1 |
| 306 | REFRIGERATED CENTRIFUGE (20,000RPM) | 1 |
| 307 | SPECTROPHOTOMETER, SINGLE | 2 |
| 308 | ELECTRICAL BALANCE | 2 |
| 309 | pH METER | 2 |
| 310 | FREEZER (-20°C) | 1 |
| 311 | SEMI AUTOANALYZER | 1 |
| 312 | CHLORIDE METER | 1 |
| 313 | ICE CUBE MACHINE (70KG/DAY) | 1 |
| 314 | PERSONAL COMPUTER / PRINTER | 2 |
| | | |
| 400 | MICROBIOLOGY | |
| 401 | ANALYTICAL BALANCE | 1 |
| 402 | UV. LAMPS | 5 |
| 403 | LAMINAR FLOW (100CM WIDE) | 1 |
| 404 | BINOCULAR MICROSCOPE FOR CLINICAL TEST | 10 |
| 406 | FLUORESCENT MICROSCOPE W/PHOTO ATTACH. | 1 |
| 407 | ELISA READER | 1 |
| 409 | IMMUNOELECTREOPHORESIS | 1 |
| 410 | ANAEROBIC STATION / GAS CYLINDER | 1 |

EQUIPMENT LIST

| NO | DESCRIPTION | Q'TY |
|---|---|---|
| 412 | FREEZER (-20°C) | 1 |
| 413 | REFRIGERATORS (CAP 200L) | 4 |
| 414 | WATER BATH WITH SHAKER | 2 |
| 415 | VERTEX MIXER | 1 |
| 416 | FREEZE DRYER | 1 |
| 417 | MICRO PIPETTES SET | 1 |
| 419 | INCUBATOR (60CM WIDE) | 2 |
| 420 | VERTICAL AUTOCLAVE | 2 |
| 421 | HOT AIR STERILIZER (60CM WIDE) | 2 |
| 423 | CENTRIFUGE, TABLE TOP (4,000RPM) | 3 |
| 424 | STEREO MICRO SCOPE | 1 |
| 426 | pH METER | 1 |
| 427 | ULTRASONIC CLEANER (TABLE TYPE) | 1 |
| | | |
| 500 | PATHOLOGY | |
| 501 | FLUORESCENT MICROSCOPE | 1 |
| 502 | TISSUE PROCESSOR | 1 |
| 503 | AUTOMATIC STAINER | 1 |
| 504 | MICROTOME SEMIAUTOMATIC / SHARPENER | 1 |
| 505 | CRYOSTAT | 1 |
| 506 | BLOOD CELL COUNTER | 2 |
| 508 | LEUKOCYTE COUNTER | 1 |
| 510 | BINOCULAR MICROSCOPE FOR STUDENT | 20 |
| 511 | TEACHING MICROSCOPE FOR 5 PERSONS | 1 |
| 512 | TRINOCULAR MICROSCOPE / CAMERA | 1 |
| 514 | PERSONAL COMPUTER / PRINTER | 1 |
| 516 | DEEP FREEZER (-80°C) | 1 |
| 517 | REFRIGERATOR (CAP 200L) | 3 |
| 518 | TABLE TOP CENTRIFUGE (4,000RPM) | 3 |
| 519 | HEMATOCRIT CENTRIFUGE | 1 |
| 520 | HIGH SPEED CENTRIFUGE (12,000RPM) | 1 |
| 525 | ELECTRONIC BALANCE | 1 |
| 526 | REFRIGERATED CENTRIFUGE (20,000RPM) | 1 |
| 527 | DOUBLE DISTILLATION PLANT | 1 |
| | | |
| 600 | BLOOD BANK | |
| 601 | TABLE TOP CENTRIFUGE (4,000RPM) | 1 |
| 602 | REFRIGERATED CENTRIFUGE (20,000RPM) | 1 |
| 603 | CENTRIFUGE HEAVY DUTY (5,000RPM) | 1 |
| 604 | INCUBATOR (60CM WIDE) | 1 |
| 605 | REFRIGERATOR (CAP 450G BLOOD PACK 120PACKS) | 2 |
| 606 | REFRIGERATOR MEDIUM (CAP 250L) | 2 |
| 607 | MICROSCOPE BINOCULAR | 1 |
| 608 | B.P. APPARATUS | 2 |
| 609 | BLOOD SCALE (4KG/10G SENSITIVE) | 4 |
| 610 | MICRO PIPETTE | 2 |
| 611 | B.P. APPARATUS BED SIDE | 2 |
| 613 | DEEP FREEZER (-70°C) | 1 |
| 614 | GENERATOR MINI (15KW) | 1 |

EQUIPMENT LIST

| NO | DESCRIPTION | Q'TY |
|---|---|---|
| 615 | PLATELET AGITATOR | 1 |
| 616 | DOUBLE DISTILLATION PLANT | 1 |
| 617 | LAMINA FLOW BENCH | 1 |
| 618 | PERSONAL COMPUTER / PRINTER | 1 |
| | | |
| 700 | ANESTHESIOLOGY (OPERATION THEATER) | |
| 701 | VENTILATOR(ADULT) | 2 |
| 703 | PULSE OXIMETERS | 3 |
| 704 | MULTI-CHANNEL TEMPERATURE MONITOR | 6 |
| 705 | CO2 MONITOR | 3 |
| 706 | BLOOD GAS ANALYZER | 1 |
| 707 | TEMPERATURE CONTROL BLANKET (BLANKET, 3 SIZES) | 4 |
| 710 | PULMONARY FUNCTION MONITOR | 1 |
| 711 | ANESTHESIA APPARATUS / VENTILATOR | 6 |
| 712 | C-ARM X-RAY UNIT MOBILE | 1 |
| 713 | OPERATING TABLE, UNIVERSAL TYPE | 6 |
| 714 | OPERATING LIGHT / MOBILE | 6 |
| 715 | DIATHERMY (ELECTRO SURGICAL UNIT) | 6 |
| 716 | DEFIBRILLATOR | 3 |
| 717 | REFRIGERATOR (CAP 250L) | 7 |
| 718 | PATIENT MONITOR (4CH TYPE) | 6 |
| 719 | STRETCHER | 10 |
| 720 | SURGICAL SCRUB STATION (3 UNIT ASSEMBLY) | 6 |
| | | |
| 800 | CSSD | |
| 801 | STEAM STERILIZER (LARGE) 27CM DIA.DRUM 12PCS | 2 |
| 802 | STEAM STERILIZER (SMALL) 27CM DIA.DRUM 6PCS | 1 |
| 803 | ULTRASONIC CLEANER | 1 |
| 804 | TUBE DRYER | 1 |
| 805 | STERILIZER PACK SEALER | 1 |
| 806 | INSTRUMENT CABINET | 6 |
| 807 | SHELVES | 6 |
| 808 | CARRYING CART | 6 |
| 809 | EOG STERILIZER | 1 |
| 810 | EO GAS AERATOR | 1 |
| | | |
| 900 | EMERGENCY | |
| 901 | OPERATING TABLE / STRETCHER | 2 |
| 902 | MINOR OPERATING LIGHT /FIXED STAND | 2 |
| 903 | ANESTHESIA APPARATUS WITHOUT VENTILATOR | 2 |
| 904 | BEDSIDE MONITOR /2 CH | 2 |
| 905 | DEFIBRILLATOR | 2 |
| 906 | VENTILATOR | 2 |
| 907 | EMERGENCY CART | 2 |
| 908 | MOBILE X RAY MACHINE | 1 |
| | | |
| 1000 | CARDIOLOGY | |
| 1001 | BEDSIDE MONITOR CARDIAC FOR I.C.U (ASSEMBLY) | 1 |
| 1007 | VENTILATORS | 2 |

EQUIPMENT LIST

| NO | DESCRIPTION | Q' TY |
|---|---|---|
| 1008 | 2-D ECHO | 1 |
| 1013 | HOLTER ECG SYSTEM (2 ECG RECORDER) | 1 |
| 1014 | AMBULATORY B.P. MONITOR, NON INVASIVE | 2 |
| 1015 | BLOOD GAS ANALYZER, 3P | 1 |
| 1017 | PATIENT TROLLEYS | 3 |
| 1020 | ACTIVATED CLOTING TIME UNIT | 1 |
| 1025 | ECG, 6-CH | 1 |
| 1028 | STRESS TEST SYSTEM | 1 |
| 1029 | TREADMILL | 1 |
| 1100 | CARDIO & THORACIC SURGERY | |
| 1101 | CARDIAC MONITOR FOR OPERATION THEATRE TYPE | 1 |
| 1105 | BLOOD AUTO TRANSFUSION PUMP | 2 |
| 1106 | FREEZER (-20°C) | 1 |
| 1107 | FINE VASCULAR INSTRUMENTS SET | 2 |
| 1108 | 4 CHANNEL MONITOR | 2 |
| 1110 | OPERATING TABLE (UNIVERSAL TYPE) | 4 |
| 1111 | OPERATING ROOM CEILING LIGHTS 9 BULB TYPE | 4 |
| 1112 | SUCTION FOR OPERATION THEATRE TYPE | 6 |
| 1113 | DIATHERMY MACHINE (ELECTRIC SURGICAL UNIT) | 2 |
| 1114 | BRONCHOSCOPE SET / LIGHT SOURCE | 1 |
| 1116 | SPIROMETER | 1 |
| 1200 | ORTHOPEDIC | |
| 1201 | ORTHOPEDIC OPERATION TABLE | 1 |
| 1202 | SPINAL STABILIZATION INSTRUMENTATION SET | 1 |
| 1203 | SCOLIOSIS CORRECTION INSTRUMENTATION SET | 1 |
| 1204 | PNEUMATIC POWER DRILL | 2 |
| 1205 | TOTAL KNEE REPLACEMENT INSTRUMENTATION SET | 1 |
| 1208 | FRAGMENT FIXATION SETS MINI | 1 |
| 1209 | FRAGMENT FIXATION SETS MAXI | 1 |
| 1210 | ILLIZAROV EXTERNAL FIXTURE SYSTEMS | 3 |
| 1212 | FREEZER (-20°C) | 1 |
| 1213 | REFRIGERATOR FOR ORTHOPEDIC | 1 |
| 1216 | ARTHROSCOPE WITH SURGERY INSTRUMENTATION | 1 |
| 1219 | TRANSCUTANEOUS NERVE STIMULATOR | 1 |
| 1221 | ULTRASONIC AND LOW FREQUENCY COMBINATION THERAPY | 2 |
| 1222 | TRACTION UNIT | 2 |
| 1223 | ULTRA VIOLET THERAPY UNIT | 1 |
| 1224 | MUSCLE AND NERVE STIMULATOR | 1 |
| 1225 | HIGH FREQUENCY THERAPY UNIT | 1 |
| 1226 | ULTRA SOUND THERAPY UNIT | 1 |
| 1227 | ELECTRIC BODY VIBRATORS | 1 |
| 1231 | REFRIGERATOR FOR REHABILITATION | 1 |
| 1236 | OPERATING RETRACTOR LIGHT | 1 |
| 1300 | MEDICINE | |
| 1303 | ANALYTICAL BALANCE (CAP 200MG) | 1 |
| 1304 | CENTRIFUGE (4,000RPM) | 1 |

EQUIPMENT LIST

| NO | DESCRIPTION | Q'TY |
|---|---|---|
| 1305 | BINOCULAR MICROSCOPE | 2 |
| 1307 | HEMOGLOBINOMETER | 1 |
| 1310 | B.P. APPARATUS (TABLE TOP TYPE) | 10 |
| 1311 | ECHOGRAPHY, PORTABLE | 1 |
| 1312 | PULSE OXYMETER | 1 |
| 1313 | DEFIBRILLATOR | 1 |
| 1314 | VENTILATOR | 2 |
| 1319 | NEBULIZER, NORMAL TYPE | 5 |
| 1321 | INFUSION PUMPS | 3 |
| 1400 | ENDOCRINOLOGY | |
| 1402 | FREEZER (-20°C) | 1 |
| 1403 | REFRIGERATED CENTRIFUGE (20,000RPM) | 1 |
| 1405 | LABORATORY CENTRIFUGE (4,000RPM) TABLE TOP TYPE | 1 |
| 1406 | SINGLE PAN BALANCE (CAP 200G) | 1 |
| 1407 | PHOTOELECTRIC COLORIMETER | 1 |
| 1408 | pH METER | 1 |
| 1409 | AUTO PIPETTE | 4 |
| 1410 | VERTEX MIXTURE | 5 |
| 1411 | MAGNETIC STIRRER | 2 |
| 1413 | ELISA READER | 1 |
| 1414 | PERSONAL COMPUTER / PRINTER | 1 |
| 1415 | INFUSION PUMP | 2 |
| 1416 | DOUBLE DISTILLATION PLANT | 1 |
| 1500 | NEPHROLOGY | |
| 1501 | HAEMODIALYSIS MACHINES (FOR SINGLE PATIENT) | 2 |
| 1504 | PHASE CONTRAST MICROSCOPE W/CAMERA | 1 |
| 1506 | BINOCULAR MICROSCOPE | 2 |
| 1507 | pH METER | 1 |
| 1508 | NEEDLE BIOPSY SET | 1 |
| 1600 | NEUROLOGY | |
| 1601 | EEG MACHINE (18CH TYPE) | 1 |
| 1603 | EMG MACHINE | 1 |
| 1700 | NEUROSURGERY | |
| 1701 | OPERATING MICROSCOPE | 1 |
| 1703 | C.U.S.A | 1 |
| 1704 | OPERATING LOUPES | 2 |
| 1800 | UROLOGY | |
| 1801 | CYSTOSCOPE, FLEXIBLE SET | 1 |
| 1802 | PEDIATRIC CYSTOSCOPE, RESECTOSCOPE SET | 1 |
| 1803 | LASER LITHOTRIPTOR OUTPUT 60W(Nd YAG 10.6) | 1 |
| 1805 | UROLOGY OPERATING TABLE | 1 |
| 1900 | PLASTIC SURGERY | |
| 1901 | OPERATING MICROSCOPE FOR PLASTIC SURGERY | 1 |

EQUIPMENT LIST

| NO | DESCRIPTION | Q'TY |
|---|---|---|
| 1902 | INSTRUMENTS FOR MICROSURGERY | 1 |
| 1905 | TISSUE EXPANDERS SET | 1 |
| 1906 | LIPOSUCTION UNIT | 1 |
| 1907 | INTERNAL FIXATION SYSTEM FOR M.F. SURGERY | 2 |
| 1908 | DOPPLER UNIT FOR MAPPING | 1 |
| 1909 | RIPPLE BEDS & AIR FLUIDISHED BEDS | 2 |
| 1910 | SKIN GRAFTS MESHER | 1 |
| 1911 | NASENDOSCOPE W/LIGHT SOURCE | 1 |
| 1912 | INFRA-RED LAMP STAND TYPE | 1 |
| 2000 | GENERAL SURGERY | |
| 2005 | KENTO LIFT RETRACTOR FOR LIVER SURGERY | 2 |
| 2006 | SILICON RUBBER CLAMPS FOR HEPATIC SURGERY | 2 |
| 2007 | ULTRASOUND INTRAOPERATIVE FOR SURGERY | 1 |
| 2008 | TV SYSTEM FOR OPERATION THEATER / VIDEO | 1 |
| 2010 | PORTABLE ULTRASOUND MACHINE | 1 |
| 2100 | DERMATOLOGY | |
| 2102 | BINOCULAR MICROSCOPE | 1 |
| 2103 | BINOCULAR MICROSCOPE / DARK FIELD | 1 |
| 2104 | WOODSLAMP | 1 |
| 2105 | DIATHERMY FOR DERMATOLOGY | 2 |
| 2106 | IONTOPHORESIS APPARATUS (MADE IN INDIA) | 1 |
| 2107 | DERMABRADARS | 1 |
| 2108 | ULTRAVIOLET CHAMBERS UVA & UVB LAMPS | 1 |
| 2200 | ADMINISTRATION | |
| 2201 | AMBULANCE CAR / STANDARD EQUIPPED | 2 |
| 2202 | PERSONAL COMPUTER / PRINTER | 1 |
| 2203 | COPIER | 1 |
| 2204 | FAX MACHINE | 1 |
| 2206 | AUTOMATIC WASHER WITH EXTRACTOR | 1 |
| 2207 | HOT AIR DRYER (LAUNDRY) /HEAT SOURCE | 1 |
| 2208 | INCINERATOR | 1 |
| 2209 | ELECTRIC TYPEWRITER | 1 |

ANNEX-III

Japan's Grant Aid

1. Japan's Grant Aid Procedures

The Japan's Grant Aid Program is executed through the following procedures.

(1) Application ( Request made by a recipient country)
Study ( Basic Design Study conducted by JICA )
Appraisal & Approval ( Appraisal by the Government of Japan and Approval by Cabinet.)
Implementation ( The Notes exchanged between the Government of Japan and the recipient country.)

(2) At the First step, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affirs) to determine whether or not it is eligible for Grant Aid.

If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

At the second step, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

At the third step, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

At the fourth step, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

2. Basic Design Study

(1) Content of the study

The aim of the Basic Design Study (hereinafter referred to as "the Study") conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

1) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the

recipient country necessary for the Project's implimentation.

2) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid scheme from a technical ,social and economic point of view.

3) Confirmation of items agreed on by both parties concerning the basic concept of the Project.

4) Preparation of a basic design of the Project

5) Estimatation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the grant aid project.The basic design of the Project is confirmed considering the guidelines of Japan's Grant Aid scheme.

The Government of Japan requests the Government of recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project.Therefore,the implementation of the Project is confirmed by all relevant organization of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study,JICA uses (a)registered consultant firm(s).JICA selects (a)firm(s) based on proposals submitted by interested firms.The firm(s) selected carry(ies) out Basic Design Study and write(s) a report,based upon terms of reference set by JICA.

The consulting firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work on Project's implimentation after the Exchange of Notes, in order to maintain technical consistency and also avoid any undue delay in implementation should the selection process be repeated.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid ?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities,equipment and services ( engineering services and transportation of the products,etc) for economic and social development of the country under principals in accordance with the relevant laws and regulations of Japan.Grant Aid is not supplied through the donation of materials as such.

(2)Exchange of Note (E/N)

The Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objective of the project, Period of execution , conditions and amount of the Grant Aid ,etc., are confirmed.

(3)"The period of the Grant" means the one fiscal year which the Cabinet approves the Project for . Within the fiscal year, all procedures such as Exchange of Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and financial payment to them must be completed.
Hoever in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the grant aid can be further extended for a maximum of one fiscal year at most by mutual agreement betweeen the two Governments.

(4)The Grant is used properly and exclusively for the purchase of products.
Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.
When the two Governments deem it necessary, grant aid may be used for the purchase of the products or services of a third country.
However the prime contractors, namely, consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term"Japanse nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(5)Necessity of the " Verification ".
The government of the recipient country or its designated authority will conclude contracts in Japanese yen with Japanese nationals.
Those contracts shall be veified by the Government of Japan. The"verification" is deemed necessary to secure accountability to Japanese taxpayers.

(6) Undertaking required of the Government of recipient country.
In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

1)To secure land necessary for the sites of the Project and clear, level and reclaim the land prior to commencement of the construction.
2)To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the site.
3)To secure buildings prior to the procurement in case the installation of the equipment.

4) To ensure all the expenses and prompt execution for unloading ,customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.

5) To exempt Japanese nationals from customs duties ,internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.

6) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therin for the performance of their work.

(7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(8) " Re-Export "

The products purchased under the Grant should not be re-exported from the recipient country.

(9) Banking Arrangement ( B/A )

1) The government of the recipient country or its designated authority should open an account in the name of Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank") The Government of Japan will execute the Grant Aid by making payments in Japanese Yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.

2) The payment will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the government of the recipient country or its designated authority.

ANNEX-IV

## Monitoring of the Project.

It is proposed that Monitoring and Evaluation be in-built in the Project right at the planning stage. Initially the focus will be to monitor the progress of the Project in terms of inputs from the Government of Japan and Government of India and Government of Andhra Pradesh . Major components of the project to be monitored will be:

1. INPUTS
   1) Funds allocated, released, utilized

   2) Infrastructual development.

   3) Equipment.

2. Monitoring
   A system to check the supplies in terms of quality / quantity / specifications will be established in the Health , Medical & Family Welfare Dept., Government of Andhra Pradesh .

   1) Time gap in supply and installation.

   2) Training of the manpower handling the equipment.
      Category of staff training.
      Duration of training.
      Place of trainning.
      Satisfaction of trained people.
        Knowledge.
        Skills how to use the equipment.
        Theoretical lectures or On the Job training ?
        Job aids available ?
        Is the Log book being maintained ?
        ·responsible person for the Log book.

   3) Maintenance contracts.
      Break down notice and the action.
      Interval between break down and repairs.
      Number of investigation done during the last 1 year.
      Charged money for the investigation and repairs.

   4) Manpower development.
      New jobs created for each section.
      Employed new staff.
      Pre-service training, In service training.
      New training for existing staff.

   5) Training
      Funds allocated.
      Trained person by category.
      Arrangement for the absence/leave of technical staff.

   6) Financial data
      Expenditure and revenue, donation etc.

MEASURE OF

(Example)

| EFFICIENCY | EFFECTIVENESS | IMPACT |
|---|---|---|
| ·Base line data | | |
| | - duration of stay<br>- outcome of admision<br>- admision<br>- cost of treatment<br>- case fatality | -fatality<br>-Health services utilization |
| | - No. of referred cases<br>- Improved attendance in OPD | |
| ·Staffing<br>·Staff presence | | |
| ·Availability of drugs | | |
| ·Basic knowledge<br>·Skills | | |
| ·Imm. coverage. | | |
| ·Supervision<br>·Regularity of staff /Board meeting | | |
| ·Availability of transport. | | |
| ·Job aids available. | | |
| ·Regular continuous supportive services.<br>-Water supply.<br>-Electricity<br>-Oxygen supply | | |
| -Voluntary blood donation. | | |