Existing Engineering Departments & Corporations:

1. Irrigation Department (Minor, Medium & Major)
2. Roads & Building Department
3. Panchayati Raj Engineering Department
4. Public Health Department
5. Rural Water Supply & Sanitation Department
6. A.P. Tourism Department
7. Tribal Welfare Department
8. A.P. Housing Corporation
9. A.P. Educational Welfare Infrastructure Development Corporation (APEWIDC)
10. Rajiv Vidya Mission (Sarva Siksha Abhiyan)
11. A.P. Police Housing Corporation
12. A.P. Medical Infrastructure Development Corporation (APMIDC)
13. APGENCO
14. AP TRANSCO etc
The activities of Engineering Departments are listed below:

- **Irrigation Department (Minor, Medium & Major):** Construction of Irrigation Projects.
- **Panchayati Raj Engineering Department:** Development works in Rural Areas: Construction of buildings, Roads and other works in Gram Panchayats aided by State or Central Govt. or local funds.
- **Rural Water Supply & Sanitation Department:** Drinking Water Projects & Sanitation Works in Rural Areas
- **Public Health Department:** Drinking Water Projects to Municipal Corporations and Municipalities and district head quarters.
- **A.P. Tourism Department:** Constructional activities relating to Tourism department.
- **Tribal Welfare Department:** Construction of development activities in Tribal Areas (ITDA) like Schools, Residential School buildings, Roads, Public Buildings.
- **A.P. Housing Corporation:** IAY Housing.
The activities of Engineering Departments are listed below:

- **A.P. Educational Welfare Infrastructure Development Corporation (APEWIDC):** Construction of Residential School Buildings, High School Buildings etc.

- **Rajiv Vidya Mission (Sarva Siksha Abhiyan):** Construction of Primary / Upper Primary School Buildings.

- **A.P. Police Housing Corporation:** Construction / renovation to Police states / Police Academy / Police Quarters and deposited works of other departments if any.

- **A.P. Medical Infrastructure Development Corporation (APMIDC):** It involves in construction of Hospitals, Primary Health Centers and staff quarters to Doctors and hospital staff & Hostel for students.
Guiding Codes for Engineering Works:

- A.P. Public Works Department Code (D – Code)
- A.P. Departmental Standard Specifications &
- G.O.s and circulars of Govt. invouge.
To take up any work following are required:

1. Administrative Sanction

2. Technical Sanction

- Administrative Sanction will be accorded based on the line estimate approved by the Competent Authority.

- Technical Sanction: The Technical Sanction powers are illustrated in APPWD Code (Chapter VI Powers of Sanction) & G.O. 1007 TR &B dt.05-11-1976 for both original works and maintenance works.
Procedure involved in taking up of any work is:

- **Object:** Obtaining the requirement of User department.
- **Site:** Based on available site size layout plan, plan of the building to be prepared.
- In planning of any public building provision of ramp of 1:12 slope and PHC Toilet are must and follow National Building Code NBC norms (i.e., for provision of areas, staircase, fire escape facilities etc.) and other guidelines.
- **IS / IRC Codes** to be adopted for designing of Buildings / Roads.
- **Detailed Estimate Preparation:**
  - Site survey.
Procedure involved in taking up of any work is:

- Safe Bearing Capacity (SBC) / California Bearing Ratio (CBR) Values are required for Buildings / Roads respectively.
- Lead chart of materials & its source.
- Current Year Schedule of Rates (SoR) effect from 1\textsuperscript{st} June of year.
- Rates based on Revised Standard Data 2009 and its amendments invouge.
- MoRD (Ministry of Rural Development) & MoRTH (Ministry of Transportation & Highways) data for Roads.
- Preparation of Abstract Estimate
- Technical Sanction.
Execution of Works on:

- Nomination basis (for works costing less than Rs.5 lakhs) ‘or’
- e-Tendering for works.
- Work will be accorded to the L1 Tenderer.
- Work order will be issued and agreement will be concluded.
- Handing over Site (As per APDSS Para 58, if the site to be handed over within 2 months from the date of issue of work order the Contractor can withdraw the contract and EMD to be refunded if this is not done).
- **Tenders:** As per G.O.Ms.No.94 I & CAD (PW-COD) Dept. dt.01-07-2003. Excess Tender Premium up to 5% over estimate cost is allowed. For less Tender Premium more than 15% Additional Security Deposit will be collected.
• **Recording of Measurements:** Site Order Book, Level Field Book, Measurement Book.

• **Measurement Book:** All the measurements of executed work will be recorded by the Engineer – in – Charge i.e., AEE / AE at site in the presence of the Contractor and it will be check measured randomly by the Dy.Executive Engineer. Executive Engineer / Superintending Engineer will super check the works at random as per the guidelines given in APPWD Code.

• **Working Estimate / Completion Report:**
  
a) Working estimates to be prepared for change in specifications or quantities or new items.

  b) Approval from the competent authority required.

  c) Completion report will be prepared after completion of the work.

  d) Price Adjustment clause as per G.O.Ms.No.94 I & CAD (PW-COD) Dept. dt.01-07-2003. & GO Ms No.35. Generally Price Adjustment will be allowed when the variation in rates are more than 5% decrease or increase.
Programmes Existing from Central Govt. & State Govt. are as follows:

- Government of India with State sharing
- 14th Finance Commission
- MGNREGA
- PMGSY
- PMKSY
- ARWS
- Sanitation
- Sarva Siksha Abhiyan
- IAY etc.
• **State Works:**
  • Plan Schemes
  • Maintenance Grants
  • Irrigation works
  • Residential School Buildings
  • Hospitals
  • Police Housing Scheme

❖ **Loans Obtained from:**
  ➢ World Bank
  ➢ NABARD
  ➢ Other Financial Institution
## Technical Sanction Powers:

1. **Assistant Executive Engineers / Assistant Engineers**
   
   - Rs. 50,000/-

2. **Deputy Executive Engineers**
   
   - Rs. 2.00 lakhs

3. **Executive Engineers**
   
   - Rs. 10.00 lakhs

4. **Superintending Engineers**
   
   - Rs. 50.00 lakhs

5. **Chief Engineer / Engineer-in-Chief**
   
   - Above Rs. 50.00 lakhs
General pattern of Engineering Department:
i) State Head - Engineer – in – Chief / Chief Engineer
ii) Circle Head - Superintending Engineer
iii) Division Head - Executive Engineer
iv) Sub – Division Head - Deputy Executive Engineer
v) Field level - Assistant Engineer / Assistant Executive Engineer
MGNREGS in Andhra Pradesh
- **Major Rural Programme:**
  - **MGNREGS:**
    a) Provides minimum 100 days of employment to all identified unemployed.
    b) Job cards to be given to all identified unemployed
  - Material component – not to exceed 40% taking district as unit.
  - **Details of buildings permitted under MGNREGS:**
    i. Gram Panchayat Buildings (with covered area of 130sqm/1400sft)
    ii. Anganwadi Centers (covered area at least 56sqm / 600sft)
    iii. Village Haats
    iv. Crematorias
    v. Women Self Help Groups Federation
    vi. Cyclone Shelters
vii. Common Work sheds for livelihood activities of Self Help Groups

viii. Houses Sanctioned under IAY (Min. built up area 20sqm / 215sft).

MGNREGA component: 90 days in plain areas & 95 days in Hilly areas over and above the funds approved under IAY programme

ix. Food Grains Storage Structures

- **Rural Connectivity:**
  - Roads up to WBM Grade II
  - CC Internal Roads with Drainage System
  - Under Ground Drainage System
Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) was launched on 2\textsuperscript{nd} February, 2006 in Bandlapalli village, Narpala mandal of Anantapur district.

The scheme is being implemented in all rural villages of 13 districts of Andhra Pradesh. The Scheme entered into eleventh year of its implementation.
Objectives of the Act

- Providing not less than one hundred days of unskilled manual work as a guaranteed wage employment in a financial year to every household in rural areas as per demand.
- Creation of productive assets of prescribed quality and durability;
- Strengthening the livelihood resource base of the poor;
- Proactively ensuring social inclusion and
- Strengthening Panchayat Raj Institutions.
Non–Negotiables in Implementation

- No contractors & labour displacing machinery should be engaged
- Every registered rural household shall be provided not less than 100 days of wage employment in a financial year.
- Payment of wages shall be made at least once in a fortnight.
- Equal wages to men and women
- Works approved by the Gram Panchayat (identified in the Gram Sabha) at village level, the Mandal Parishad at Mandal Level and the Zilla Parishad at District level only shall be taken up.
**Salient Features**

- Every year G.o.I. fixes wage rate for labour for every state. Notified wage rate for the year 2017-18 is Rs.197/- for A.P.
- Wages are paid based on the quantity of work turned out.
- Rural Standard Schedule of Rates (RSSR) prepared based on the notified wage rate.
- 60:40 wage and material ratio maintained at District level.
- Atleast 60% of the expenditure shall be towards Agriculture & Allied activities in each district
Funding Pattern

- The Central Government shall pay 100% of the wage payments, 75% of the material payment and 6% Administrative expenditure.
- The State Government shall pay 25% of the material payments, Unemployment allowance and AP State Employment Guarantee Council expenditure.
- The State Government shall bear the expenditure on the wage employment provided over and above 100 days to a household. In case of drought affected areas, Govt. of India will bear additional 50 days of wage employment.
Entitlements to the Wage Seekers

- Wage seekers shall be provided with work site facilities such as crèche, drinking water, shade and first aid box at work site.
- Unemployment allowance shall be paid if the work is not shown within 15 days from the date of application for work.
- Delay compensation shall be paid to the wage seekers, in case the wage payments are not made within 15 days from the date of closure of muster.
- Wage seekers shall be paid with ten percent of the wage rate as extra to meet the additional transportation and living expenses, if the work is provided beyond 5km from the habitation.
List of Permissible Works (Schedule I of the Act)

- **Category A: Public Works relating to Natural Resources Management (NRM)**
  - Water conservation and water harvesting structures
  - Watershed management works
  - Micro and minor irrigation works
  - Renovation of traditional water bodies
  - Afforestation
  - Land development works in common land.
List of Permissible Works contd..

Category B: Individual Assets for Vulnerable Sections

- Providing infrastructure for irrigation, i.e., dug wells, farm ponds and other water harvesting structures
- Improving livelihoods through Horticulture, Plantations
- Fallow / Waste Land Development
- Unskilled wage component in construction of houses
- Promotion of Livestock
- Promotion of Fisheries
List of Permissible Works contd..

- Category C: Common Infrastructure including for National Rural Lively hood Mission (NRLM) Compliant Self Help Groups under Society for Elimination of Rural Poverty (SERP)
  
  - Durable infrastructure required for bio-fertilizers and post-harvest facilities including pucca storage facilities for agricultural produce
  
  - Common work-sheds for livelihood activities of self-help groups
List of Permissible Works contd..

- **Category D: Rural Infrastructure (Durable Assets)**
  - Rural Sanitation
  - All weather road connectivity
  - Play fields
  - Disaster preparedness / restoration
  - Buildings for Gram Panchayats, women self-help groups’ federations, cyclone shelters, Anganwadi centres, village haats and crematoria at the village or block level.
  - Food Grain Storage structures
  - Maintenance of Rural public assets created under MGNREGS.
  - Any other works which may be notified by the Central Government
Key Processes in Implementation

• **Registration:**
  Application for Job cards, issue of Job cards, Organizing wage seekers – Srama Shakti Sangh

• **Planning for Works:**
  Labour Budget, Identification of works, Gram Sabha Approvals, Administrative Approvals by District Programme Co-ordinator (DPC), Application for Work, Allotment of Work
<table>
<thead>
<tr>
<th>Action to be Taken</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram Panchayat level planning process by Gram Sabha/Ward Sabha.</td>
<td>2nd October</td>
</tr>
<tr>
<td>Special Gram Sabha for approval of the Gram Panchayat level annual action plan.</td>
<td>3rd October to 30th November</td>
</tr>
<tr>
<td>Submission of Gram Panchayat Level Plan to the Block Panchayat</td>
<td>5th December</td>
</tr>
<tr>
<td>Approval of Block Level Consolidated Annual Plan by Block Panchayat and submission to District Programme Coordinator /collector</td>
<td>20th December</td>
</tr>
<tr>
<td>Presentation of Block plans by Programme Officer before DPC</td>
<td>19th January</td>
</tr>
<tr>
<td>Action to be Taken</td>
<td>Time</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Presentation of District Annual Plan and Labour Budget (LB) to District Panchayat by the DPC/Collector</td>
<td>20th January</td>
</tr>
<tr>
<td>Approval of District Annual Plan by the District Panchayat and submission of the same to State Government</td>
<td>31st of January</td>
</tr>
<tr>
<td>Submission of Labour Budget to the Central Government</td>
<td>15th February</td>
</tr>
<tr>
<td>Meetings of the Empowered Committee (G.o.I.) and finalisation of the LB</td>
<td>20th February onwards</td>
</tr>
<tr>
<td>Communication of the LB to the States by Ministry and further by the states to Districts, Blocks, and Gram Panchayats</td>
<td>31st March</td>
</tr>
</tbody>
</table>
Key Processes in Implementation contd....

- **Execution of Works**: Muster Management, Measurement & Check Measurement

- **Payment of Wages**: Payment generation, Wage slip distribution, Payment of wages through Banks / Postal dept., Aadhaar based payments

- **Transparency & Accountability**: Extensive use of Information and Communication Technology & Mobile Technology, Social Audit, Vigilance Wing, Quality Control Wing.
Social Audit

Emergence of social audit
• Beneficiaries have the greatest stake in efficient implementation of social sector programmes
• Multiple modes of Citizen Monitoring
• Citizen – State engagement (Institutionalizing platforms for dialogue, planning and redress)
• Our money – our accounts – Social Audit – method of accountability to citizens within the framework of the State

5 Fundamentals of social audit
1. Audit by stakeholders (not implementers)
2. Well trained in reading records, processes
3. Sharing of records – free of cost
4. 100% check – tracking of every rupee spent
5. Reporting in public – open ‘trial’
The Government of Andhra Pradesh established Vigilance cells at the State and District levels to take up follow up action on the Social audit reports with the following objectives:

- Speedy Redressal of deficiencies
- Improve the delivery mechanism
- Ensure Accountability
- Close monitoring of disciplinary action
- Boost up the public confidence
- Ensure people’s faith in Governance.
Vigilance

State Level:
The State Vigilance Cell headed by the Chief Vigilance Officer (CVO) functions under three broad categories viz. Preventive Vigilance, Punitive Vigilance and Surveillance & Detection.

District Level:
District Vigilance Cell headed by the District Vigilance Officer (DVO) takes up follow up action of both social audit reports and quality control reports, monitor recovery process, filing of criminal cases.
Quality Control Team

- For ensuring the quality of works taken up, separate Quality Control cell was formed for *inspecting works* regularly.
- Quality Control Officers not only check the quality of works but also support in *capacity building* of the technical staff.
Public Grievance Redressal System - PGRS

- **Meekosam**: A forum for Public Grievance and Redressal System (PGRS) web portal launched by Government of Andhra Pradesh, integrated with 19 Departments in one single forum for people to report problems, grievances and complaints.

- All the reports and suggestions will be viewed by the respective departments.

- Complainer can track the status of the grievance through www.meekosam.ap.gov.in.
Geo Tagging of Works

- Every work is geo tagged from Identification to Completion
- Field functionaries capture work images with GPS Coordinates through smart phones and sent to Central Server
- work wise images with GPS Coordinates are available in the website
Strategy of GoAP for FY 2017-18

Individual:

- 100 days Wage Employment
- Individual Household Latrine
- Soak Pit
- Home Stead Plantation
- Vermi/NADEP Compost Pits
- Land Development
- Horticulture/Sericulture
- NTR Housing
- LIFE Skills - Trainings
Strategy of GoAP for FY 2017-18

Institutional:

- Levelling of institutions
- Roof Water Harvesting Structures
- Toilets & Drinking Water
- Play Fields
- Bio Fencing
- Plantation
- Approach Roads
Strategy of GoAP for FY 2017-18

Infrastructure: (Durable Assets)

- Anganwadi Centres
- GP Buildings
- Mandal Buildings
- Internal CC Roads with drains
- Solid Waste Management
- Approach Roads to Villages
- Under Ground Drainage System
- Burial Ground
- Mini Stadium
Strategy of GoAP for FY 2017-18

Integrated Natural Resource Management (NRM):

• MI Tanks
• Check Dams
• Water Harvesting Structures
• Soil Moisture Conservation
• Afforestation
• Fisheries
• Animal Husbandry
### Action Plan for the FY 2017-18

<table>
<thead>
<tr>
<th>Activity</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of person days</td>
<td>16.08 Cr (GoI Approved), 24.0 Cr (State Govt. target)</td>
</tr>
<tr>
<td>Farm Ponds</td>
<td>4.0 lakhs</td>
</tr>
<tr>
<td>IHHL</td>
<td>3.0 lakhs</td>
</tr>
<tr>
<td>Vermi/NADEP pits</td>
<td>2.0 lakhs</td>
</tr>
<tr>
<td>Avenue plantation</td>
<td>3000 Km</td>
</tr>
<tr>
<td>Anganwadi Centers</td>
<td>4000 nos</td>
</tr>
<tr>
<td>CC roads</td>
<td>6000 Km</td>
</tr>
</tbody>
</table>
### Convergence with Line Departments:
**Purpose:** To create durable asset by compensating material component

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Type of Convergence</th>
<th>Convergence Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sharing of Funds</td>
<td>The project cost is shared between the line department and EGS depending on the activities permissible under MGNREGA. Ex: Convergence of 14th FC funds for laying of internal CC Roads in villages</td>
</tr>
<tr>
<td>2</td>
<td>Utilisation of Technical Expertise of Line Departments</td>
<td>The services of the Line Department technical staff like Engineers, Agriculture, Horticulture, Sericulture, fisheries officers, Ground Water Dept. APSAC etc. are being utilised for the projects taken up under convergence.</td>
</tr>
<tr>
<td>3</td>
<td>Value Addition</td>
<td>Departmental funds are tapped for further development of assets created under MGNREGS for promotion of sustainable livelihood for the poor. Ex: Horticulture Dept is Providing micro irrigation systems to the beneficiaries whose lands were covered under Horticulture with EGS funds. Procurement of compost by MARKFED to avail central subsidy</td>
</tr>
</tbody>
</table>
Department wise Convergence Works

Animal Husbandry:
• Fodder Development
• Cattle Drinking Water Troughs
• Silo Pits
• Animal Hostel

Fishers
• Fish breading ponds
• Fish Drying Platform

Forest
• Nurseries
• Afforestation
• Soil Moisture Conservation Works
• Water Harvesting Structures

Water Recourse Dept.:
• Restoration of MI Tanks, Cascading of tanks
• Check Dams & Farm ponds (above 5 acres)
• Irrigation Drains & Irrigation Channel

Sericulture
• Mulberry Plantations
• Skill Warm Rearing Shed.
Department wise Convergence Works

School Education:
• Play Fields, Institutional Plantation, Sanitation, Drinking Water

SAAP (Sports Authority of Andhra Pradesh):
• Mini Auditorium

Horticulture:
Horticulture Plantation

Panchayat Raj Dept:
GP/Mandal Buildings, Anganwadi Centers, CC Roads
Burial Grounds

Integrated Watershed Management Programme (IWMP):
• NRM Activities, Productivity System Enhancement (PSP)
• Livelihood Upgradation

Housing:
90 Days of wage employment
Bricks
IHHL
Typical Plans of Buildings under MGNREGS
1. Typical Plan of Gram Panchayat Building

GROUND FLOOR PLAN  BRICK WALL

PROPOSED GRAMAPANCHAYAT BUILDING
FOR POPULATION ABOVE 2000

SITE 2 HEIGHT
Architects, Engineers, Interiors, 3D Animation
Mukhtiar Sultanpur, Architect A.I.A., P.I.C.

PROJ. NO. 2-000-00
SCALE 1:100
DATE 10-00-00

TOTAL AREA = 1394.00 Sqft.
VERANDAH AREA = 56.00 Sqft.
BUILTUP AREA = 1338.00 Sqft.

LEGEND
D1 = 1.20x2.10
D2 = 0.95x2.10
D3 = 0.75x2.10
W = 1.35x1.20
V = 0.60x0.45

TOILET
5'7"x4'0" (1715x1200)

MEETING HALL
28'6"x13'4"
(8690x4220)

ROOM CORRIDOR
12'0"x14'0"
(3680x3660)

VERANDAH
7'-0"x4'-0"
(2100x1200)

TOILET
4'-6"x5'-6"
(1350x1650)

TOILET
6'-0"x4'-0"
(1775x1200)

VERANDAH
7'-0"x4'-0"
(2100x1200)

M.G.S
12'-1"x21'-4"
(3660x6480)}
Components of the building:

1. Sarpanch Room with attached toilet
2. Village Officers Room
3. Meeting Hall with attached toilet
4. Hall with attached Toilet for Mahila Gram Samakya
5. Common toilet
6. Drinking water facility
7. Compound Wall
Gram Panchayat Buildings: Typical Estimate Costs for Different SBCs:

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
<th>Unskilled</th>
<th>Skilled &amp; Semi skilled</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Conventional method - Superstructure with 2nd class bricks &amp; M20 Grade Concrete - SBC &gt;= 100kN/m^2</td>
<td>1338</td>
<td>12.75</td>
<td>1887</td>
<td>28.95</td>
<td>10.50</td>
<td>60.55</td>
<td></td>
</tr>
<tr>
<td>Conventional method - Sub &amp; Super structure with Laterite stone blocks &amp; M20 Grade Concrete - SBC &gt;=150kN/m^2</td>
<td>1494</td>
<td>14.75</td>
<td>2008</td>
<td>26.30</td>
<td>10.95</td>
<td>62.75</td>
<td></td>
</tr>
<tr>
<td>Stub foundations - Super structure using 2nd class bricks &amp; M20 Grade Concrete - SBC = 150kN/m^2</td>
<td>1338</td>
<td>13.50</td>
<td>1949</td>
<td>28.22</td>
<td>10.22</td>
<td>61.56</td>
<td></td>
</tr>
<tr>
<td>Pile foundations - Super structure with 2nd Class bricks &amp; M30 Grade Concrete - SBC = 100kN/m^2</td>
<td>1338</td>
<td>16.00</td>
<td>2338</td>
<td>28.43</td>
<td>8.22</td>
<td>63.35</td>
<td></td>
</tr>
</tbody>
</table>
2. Anganwadi centres:

- Anganwadi Centres are meant to serve the objectives of pre-school, nutrition centre, semi-formal public health unit, community centre located in the heart of settlements i.e., to serve, first out post at the habitation level for nutrition, health, early childhood development and learning & to provide crèche facility to MGNREGA workers.

- The designs/ specifications would adhere to instructions/guidelines issued by the Ministry of Women & Child Development, GOI, from time to time.
• Anganwadi Centres - Components:

1. Sitting Room for children/ women,
2. Separate kitchen
3. Store Room for food items
4. Heath Check up room
5. Verandah
6. Child Friendly toilets
7. Drinking Water Facility
8. Pictorial Compound Wall &
9. Child-friendly elements like sea saw etc. including play ground
10. 2 sqm per child should be maintained

11. Atleast 56sqm suggested for 30 children

AWCs can be constructed with convergence preferably or without convergence if material component suits
2. Typical Plan of Anganwadi Centre
Typical Elevation of Anganwadi Centres
## Anganwadi Centers: Typical Estimate Costs for Different SBCs:

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unskilled</td>
</tr>
<tr>
<td>Conventional method - Superstructure with 2nd class bricks &amp; M20 Grade Concrete - SBC &gt;= 100kN/m²</td>
<td>650</td>
<td>9.25</td>
<td>810</td>
<td>27.71</td>
</tr>
<tr>
<td>Stub foundations - Super structure using 2nd class bricks &amp; M20 Grade Concrete - SBC = 150kN/m²</td>
<td>650</td>
<td>9.50</td>
<td>819</td>
<td>26.96</td>
</tr>
<tr>
<td>Pile foundations - Super structure with 2nd Class bricks &amp; M30 Grade Concrete - SBC = 100kN/m²</td>
<td>650</td>
<td>10.10</td>
<td>1044</td>
<td>30.61</td>
</tr>
</tbody>
</table>
3. Village Haats:

- Why it is required?
- Basic structure facilities proposed in Village Haats are:
  a) Open raised platforms & covered platform
  b) Office block
  c) Storage (small size)
  d) Boundary wall/ fence with two gates one for incoming and second for outgoing
  e) Parking space
  f) Brick soling in the moving space
  g) Garbage pits at corner
  h) Toilets (separate for women and men)
  i) Drinking water facility
  j) Drains
  k) Drinking water facilities for cattle.

- Typical plan of Village Haat is enclosed.
3. Typical Plan of Village Haat:
# Village Haats: Typical Estimate Cost

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
</tr>
</thead>
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<td>7</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
| Conventional method - Superstructure with 2
  nd class bricks - SBC >= 100kN/m² | 5212.41 | 8.75 | 1177 | 27.58 | 8.56 | 63.86 |
4. Crematoria:

1. Location should be outside the village and easily approachable.

2. Crematoria should consist of:
   a. Raised covered platform i.e, with slab, but open from all the sides
   b. Brick soling in the passage
   c. Office & store room
   d. Boundary wall/ fence with gate
   e. Waiting shed
   f. Toilets & bathrooms
   g. Drinking water facility
   h. Garbage pits at corner
   i. Drains

A typical plan of Crematoria is enclosed. It may be suitably modified to suit local traditions.
4. Typical Plan of Crematoria
Crematoria: Typical Estimate Cost

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unskilled</td>
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<td>Skilled &amp; Semi skilled</td>
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<td></td>
<td>Material</td>
<td></td>
</tr>
<tr>
<td>Conventional method - Superstructure with 2nd class bricks &amp; M20 Grade Concrete - SBC (\geq 100\text{kN/m}^2)</td>
<td>3850</td>
<td>11.25</td>
<td>1129</td>
<td>22.16</td>
<td>54.86</td>
</tr>
</tbody>
</table>
5. Women Self-help groups’ federation:

It is to serve the purpose of shelter for the meetings and various activities of WSHGs.

A typical plan of a building for Women Self Group’s federation is enclosed.

Components:

1. Halls for various activities
2. Office Room
3. Toilets
7. Common work-sheds for livelihood activities of Self-Help Groups:

- Serves the same purpose as mentioned in Women Self Help Group federation.
5 & 7 Typical Plan of Women Self-Help Federation & Common work-sheds for livelihood activities of Self-Help Groups:

PROPOSED WOMEN SELF HELP GROUP LAYOUT -6

DATE: 06-06-2014
AREA: 1196 sqft
### 5 & 7 Women Self – Help Federation & Common work-sheds for livelihood activities of Self-Help Groups: Typical Estimate Costs For Different SBCs

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component Unskilled</th>
<th>% of Component Skilled &amp; Semi-skilled</th>
<th>% of Component Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional method - Superstructure with 2(^{nd}) class bricks &amp; M20 Grade Concrete - SBC &gt;= 100kN/m(^2)</td>
<td>1196</td>
<td>10.50</td>
<td>1555</td>
<td>29.41</td>
<td>11.07</td>
<td>59.52</td>
</tr>
<tr>
<td>Stub foundations - Superstructure using 2(^{nd}) class bricks &amp; M20 Grade Concrete - SBC = 150kN/m(^2)</td>
<td>1196</td>
<td>10.50</td>
<td>1533</td>
<td>28.75</td>
<td>10.39</td>
<td>60.86</td>
</tr>
</tbody>
</table>
6. Post-harvest facilities including pucca storage facilities for agricultural produce:

- **Components:**
  1. Drying Platform
  2. Godown – 100MT capacity
  3. Compound Wall
  5. Internal Approach Roads for Drying Platform & Godown
  6. Street lights
  7. Guard Posts
  8. Toilets
  9. Drinking Water
6. Typical Plan of Post Harvesting Structure
6 Typical Estimate Costs for Post Harvesting: For Different SBCs

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Un skilled</td>
</tr>
<tr>
<td>Framed Structure - M20 Grade Concrete</td>
<td>1052.90</td>
<td>14.25</td>
<td>1524</td>
<td>19.39</td>
</tr>
<tr>
<td>- SBC = 100kN/m²</td>
<td></td>
<td></td>
<td></td>
<td>Skilled &amp; Semi skilled</td>
</tr>
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<td></td>
<td>6.65</td>
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<td></td>
<td>Material</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>73.96</td>
</tr>
<tr>
<td>Framed Structure - M20 Grade Concrete</td>
<td>1052.90</td>
<td>13.25</td>
<td>1481</td>
<td>20.40</td>
</tr>
<tr>
<td>- SBC = 200kN/m²</td>
<td></td>
<td></td>
<td></td>
<td>7.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>72.57</td>
</tr>
</tbody>
</table>
6. Food Grains Storage Structures: 250MT & 500MT Capacity:

- **Components:**
  1. Drying Platform
  2. Godown – 250 & 500MT capacities
  3. Compound Wall
  5. Internal Approach Roads for Drying Platform & Godown
  6. Street lights
  7. Guard Posts
  8. Toilets
  9. Drinking Water
6. Typical Plan of Food Grain Storage Structure (Godowns) (250MT)
6. Typical Plan of Food Grain Storage Structure (Godowns) (500MT)

CONSTRUCTION OF 500MT GODOWNS

DATE: 06-12-2013

SITE & HEIGHT

Consultants:
### 6 Typical Estimate Costs for Food Grain Storage Structures: For Different SBCs – For 500MT Capacity

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area (sft)</th>
<th>Estimate (Rs. lakhs)</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framed Structure - M20 Grade Concrete - SBC = 100kN/m²</td>
<td>4118</td>
<td>26.00</td>
<td>2249</td>
<td>15.81</td>
</tr>
<tr>
<td>Framed Structure - M20 Grade Concrete - SBC = 200kN/m²</td>
<td>4118</td>
<td>24.75</td>
<td>2108</td>
<td>15.55</td>
</tr>
<tr>
<td>Stub foundations - Super structure using 2nd class bricks &amp; M20 Grade Concrete - SBC = 150kN/m²</td>
<td>4118</td>
<td>22.50</td>
<td>1866</td>
<td>15.17</td>
</tr>
<tr>
<td>Pile foundations - Super structure with 2nd Class bricks &amp; M30 Grade Concrete - SBC = 100kN/m²</td>
<td>4118</td>
<td>24.25</td>
<td>2199</td>
<td>16.52</td>
</tr>
</tbody>
</table>
### 6 Typical Estimate Costs for Food Grain Storage Structures: For Different SBCs – For 250MT Capacity

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unskilled</td>
<td>Skilled &amp; Semi skilled</td>
</tr>
<tr>
<td>Framed Structure - M20 Grade Concrete - SBC = 100kN/m²</td>
<td>2388.87</td>
<td>16.75</td>
<td>1546</td>
<td>16.80</td>
<td>6.50</td>
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<tr>
<td>Framed Structure - M20 Grade Concrete - SBC = 200kN/m²</td>
<td>2388.87</td>
<td>16.25</td>
<td>1516</td>
<td>16.96</td>
<td>6.40</td>
</tr>
</tbody>
</table>
8. Cyclone Shelters:

- In the areas, where cyclone is common and recurring very frequently, these shelters may be constructed under MGNREGA.
- Location and alignment of the cyclone shelter should be such that it is easily approachable and with respect to the wind direction and intensity of the cyclone occurring in the area.
- Typical plans of Cyclone shelter are enclosed.
8. Typical Plan of Cyclone shelter
8. Typical Plan of Cyclone shelter
8. Typical Plan of Cyclone shelter
8. Typical Plan of Cyclone shelter
9. IAY Houses:

- Two Plans i.e., one with 269sft and another 392sft are enclosed.
- MGNREGA will provide 90 mandays in plain areas & 95 mandays in hilly areas over and above the funds approved under IAY programme.
9. IAY Houses

A MODEL PLAN FOR IAY HOUSES

ELEVATION

SECTION AT A-A'

PLAN

A.P. STATE HOUSING CORPORATION LTD.

AREAS:
PLINTH AREA: 25 Sqm. (269 Sft.)
CARPET AREA: 18.77 Sqm (202 Sft.)

SPECIFICATIONS:

FOUNDATION : OPEN PILE
SUPRESTRUCTURE : BRICK / SC BLOCK / HOLLOW BLOCK / FLY ASH BRICKS

DOORS & WINDOWS : RCC DOOR FRAMES & RCC JALLIES

ROOFING : RCC SLAB / CUDDAPAH SLABS OVER RCC RAFTERS

LINTELS / CHAJAS : NAPA SLAB / PRE-CAST RCC

PLASTERING : CM IN 1:6

SCHEDULE OF
DOOR : D 0.90 X 2.0 m
DOOR : D1 0.75 X 2.0 m
OPENING : O 0.75 X 2.0 m
WINDOWS : W 0.75 X 0.9 m
VENTILATOR : V 0.75 X 0.3 m
9 Typical Estimate Costs for IAY Houses: For Different SBCs – For 269sft Plinth area

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component Unskilled</th>
<th>Skilled &amp; Semi Skilled</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional method - Superstructure with 2nd class bricks &amp; M20 Grade Concrete - SBC &gt;= 100kN/m²</td>
<td>269</td>
<td>2.45</td>
<td>441</td>
<td>31.87</td>
<td>12.72</td>
<td>55.41</td>
</tr>
<tr>
<td>Stub foundations - Super structure using 2nd class bricks &amp; M20 Grade Concrete - SBC = 150kN/m²</td>
<td>269</td>
<td>2.35</td>
<td>422</td>
<td>31.77</td>
<td>12.35</td>
<td>55.88</td>
</tr>
<tr>
<td>Conventional method - Superstructure with Flyash bricks &amp; M20 Grade Concrete - SBC &gt;= 100kN/m²</td>
<td>269</td>
<td>2.15</td>
<td>350</td>
<td>28.78</td>
<td>9.34</td>
<td>61.88</td>
</tr>
<tr>
<td>Stub foundations - Super structure using Flyash bricks &amp; M20 Grade Concrete - SBC = 150kN/m²</td>
<td>269</td>
<td>2.05</td>
<td>329</td>
<td>28.50</td>
<td>8.77</td>
<td>62.73</td>
</tr>
</tbody>
</table>
A MODEL PLAN FOR IAY HOUSES - TELANGANA STATE

GROUND FLOOR PLAN

EAST ROAD

SCHEDULE

(1) OPENING - 750MM x 2000MM
(2) DOORS
   (a) D - 900MM x 2000MM
   (b) D1 - 750MM x 2000MM
(3) WINDOW
   (a) W - 750MM x 900MM
(4) VENTILATOR
   (a) V - 750MM x 300MM
(5) CLEAR HEIGHT - 2700MM
(6) SLAB THICKNESS - 100MM
(7) WALL THICKNESS - 230MM
   (LOAD BEARING WALL)

PLOT AREA - 810SF (90 Sq Yards)
PLINTH AREA - 430SF
### 6 Typical Estimate Costs for IAY Houses: For Different SBCs – For 392sft

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Plinth Area sft</th>
<th>Estimate Rs. lakhs</th>
<th>No. of Mandays @ Rs.169/-</th>
<th>% of Component</th>
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<td>Un skilled</td>
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<td>8</td>
</tr>
<tr>
<td>Conventional method - Superstructure with 2nd class bricks &amp; M20 Grade Concrete - SBC &gt;= 100kN/m²</td>
<td>392</td>
<td>3.30</td>
<td>658</td>
<td>34.18</td>
</tr>
<tr>
<td>Stub foundations - Super structure using 2nd class bricks &amp; M20 Grade Concrete - SBC = 150kN/m²</td>
<td>392</td>
<td>3.00</td>
<td>473</td>
<td>27.79</td>
</tr>
</tbody>
</table>
Sample Specification Report for the typical Estimate prepared for G.P. Building with Appropriate Technologies

Safe Bearing Capacity (SBC) of Soils = 150kN/m²

Depth of foundation - 0.90m below Ground Level

Leveling course - PCC(1:5:10) of 150mm thick below RR Masonry

Type of Foundation - Stub Foundations with RR Masonry in CM(1:6)

Basement Height - 0.60m above Ground Level

Basement with R.R. Masonry

Basement filling with sand / gravel
Super Structure - Rat-trap brick masonry in CM(1:6) with kiln burnt bricks

- Clear floor height - 3.30m
- VRCC M20 grade - Plinth beams, Roof beams, 125mm thick slab, lintels & sunshades
- PCC(1:2:4) for sill level & lintel level bands
- Reinforcement - HYSD - Fe 415
- Bearing Plastering - top of the brick masonry and below slab
- Flooring - Ellis pattern PCC(1:5:10) 100mm thick
Plastering -
  a) for internal walls - plastering with 12mm thick in CM(1:4) single coat
  b) ceiling plastering - plastering with 8mm thick in CM(1:4) single coat

Painting -
  a) External walls - with water proof cement paint in 2 coats over primer of exterior grade one coat - total 3 coats
  b) internal walls and ceiling - with white lime in 2 coats

Doors: D1 & D2 with seasoned wood frame and shutters with door fixtures
• Windows: with seasoned wood frame and shutters with fixtures

• RCC Ventilators

• Impervious coat

• LS provision for Electrification, Water supply & Sanitary items @ 7.5%

• Provision for VAT @ 5% (On Value of Work)

• QC charges @ 0.5% (On Value of Work)

• LS Provision for unforeseen items, variation in depth of foundations, undulations in ground levels etc.