

**FORM – I  
FORM – IA  
&  
ENVIRONMENTAL MANAGEMENT PLAN**

of

**“Amaravati Happy Nest Project”  
Amaravati Capital City, Andhra Pradesh**



**October – 2018**

<b>PROJECT PROPONENT</b>	<b>ENVIRONMENTAL CONSULTANT</b>
<b>Andhra Pradesh Capital Region Development Authority Vijayawada, Andhra Pradesh</b>	<b>Sri Sai Manasa Nature Tech Pvt Ltd, Hyderabad. NABET Accreditation No : 142</b>

**Form - I**

**(As Per New Notification of Mo.E.F dated 1-12-2009 vide SO 3067 (E))**

<b>BASIC INFORMATION</b>		
<b>S. No</b>	<b>Item</b>	<b>Details</b>
1	Name of the Project/s	<b>“Amaravati Happy Nest” at Capital City, Amaravati, Andhra Pradesh.</b>
2	S. No. in the schedule	8(a)
3	Proposed capacity/ area/ length/ tonnage to be handled/ command area/ lease area/ number of wells to be drilled	APCDRA proposes to build <b>Amaravati Happy Nest Project</b>  Total plot area of the proposed project is 5.78 Ha. (14.29 Acres) with built-up area of 1,40,756.19 Sq.m. and the details are furnished in the <b>Annexure - 1.</b>  Proposed Project consist of 6 Towers & 2 Amenities Blocks
4	New/ expansion/ modernization	New
5	Existing capacity/ Area etc.	Not Applicable
6	Category of Project i.e ‘A’ or ‘B’	Category ‘B2’
7	Does it attract the general condition? If yes please specify.	No
8	Does it attract the specific condition? If yes please specify.	No
9	Location	Location Map of the proposed project site is given in <b>Annexure - 2.</b>  The location of proposed building projects on APCRDA master plan is given in <b>Annexure - 3</b>  The proposed plot is falling in <b>S3 Zone</b> as per the Master plan of Amaravati Capital City by Andhra Pradesh Capital Region Development Authority (APCRDA).  The <b>S3 Zone</b> as per master plan is for special development which permits residential, commercial and

		institutional land use.
	Plot/ Survey/ Khasra No	153(p), 154(p), 155(p), 156(p), 157(p)
	Village	Nelapadu Village
	Tehsil	Thullur
	District	Amaravati Capital City, Guntur District
	State	Andhra Pradesh
10	Nearest railway station/ airport along with distance in Kms.	Krishna Canal Railway Station – 13.5 km E Gannavaram Airport (Vijayawada) – 33.3 km ENE
11	Nearest town, city, district headquarters along with distance in kms.	Vijayawada – 11 km NE
12	Village panchayaths, Zilla parishad, Municipal Corporation, Local body (Complete postal addresses with telephone nos to be given)	Thullur (M), Amaravati Capital City, Guntur District.
13	Name of the applicant	<b>Andhra Pradesh Capital Region Development Authority (APCRDA).</b>
14	Registered address	Lenin Centre, Governorpet, Vijayawada- 520002 Andhra Pradesh
15	Address for correspondence	Lenin Centre, Governorpet, Vijayawada- 520002 Andhra Pradesh
	Name	<b>Sri. Shan Mohan –I.A.S</b>
	Designation (Owner /Partner/ CEO)	<b>Additional Commissioner (CCP)</b>
	Address	Lenin Centre, Governorpet, Vijayawada- 520002 Andhra Pradesh.
	Pincode	520002
	E- mail	<a href="mailto:shan@apcrda.org">shan@apcrda.org</a> , <a href="mailto:dorababu@apcrda.org">dorababu@apcrda.org</a>
	Telephone no.	7995084172
	Fax no.	+91 - 866-2577357
16	Details of Alternative sites examined, if any location of these sites should be shown on a topo sheet.	Not Applicable, since it is an inter linked project of Amaravati Capital City.
17	Interlinked projects	This project is being developed as a part

		of the Amaravati City Development in Andhra Pradesh. The Greenfield Capital City Amaravati has received EC vide order No. SEIAA/AP/GNT-151/2015, Dt. 09.10.2015
18	Whether separate application of interlinked project has been submitted?	Not Applicable.
19	If yes, date of submission	Not Applicable.
20	If no, reason	Not Applicable.
21	Whether the proposal involves approval/ clearance under: if yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980 (b) The Wild Life (Protection) Act, 1972 (c) The CRZ Notification, 1991	Not Applicable.
22	Whether there is any Government Order/ Policy relevant/ relating to the site?	Nil.
23	Forest land involved (hectares)	Nil.
24	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up? (a) Name of the court (b) Case No (c) Orders/ directions of the court, if any and its relevance with the proposed project.	No

<b>(I) Activity</b>			
<b>1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (Topography, land use, changes in water bodies, etc.)</b>			
<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities /rates, wherever possible) with source of</b>

			<b>information data</b>										
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	<b>Yes</b>	<p>APCRDA proposes to construct Amaravati Happy Nest Project in S3 Zone of Approved Master Plan of Amaravati Capital City on a plot area of 5.78 Ha. (14.29 Acres) and total Built-up area of 1,40,756.19 Sq.m.</p> <p>The details as follows</p> <table border="1"> <thead> <tr> <th></th> <th><b>Quantity (No.)</b></th> </tr> </thead> <tbody> <tr> <td>No. of Towers</td> <td>6</td> </tr> <tr> <td>No. of Floors</td> <td>Basement + Podium + Ground + 18 Floors</td> </tr> <tr> <td>Amenities</td> <td>2 Blocks</td> </tr> <tr> <td>No. of Floors</td> <td>Ground + 3 Floors</td> </tr> </tbody> </table> <p>The details are furnished in the <b>Annexure - 1.</b></p>		<b>Quantity (No.)</b>	No. of Towers	6	No. of Floors	Basement + Podium + Ground + 18 Floors	Amenities	2 Blocks	No. of Floors	Ground + 3 Floors
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No. of Towers	6												
No. of Floors	Basement + Podium + Ground + 18 Floors												
Amenities	2 Blocks												
No. of Floors	Ground + 3 Floors												
1.2	Clearance of existing land, vegetation and buildings?	<b>No</b>	Not required. The site is vacant land.										
1.3	Creation of new land uses?	<b>Yes</b>	The proposed plot is falling in <b>S3 Zone</b> as per the Approved Master plan of Amaravati Capital City by APCRDA.										
1.4	Pre-construction investigations e.g. bore houses, soil testing?	<b>Yes</b>	Geo-technical investigations will be done for designing the various building.										
1.5	Construction works?	<b>Yes</b>	Built-up area : 1,40,756.19 Sq.m										
1.6	Demolition works?	<b>No</b>	No demolition work is envisaged.										
1.7	Temporary sites used for construction works or housing of construction workers?	<b>No</b>	<p>A temporary labour colony will be developed for undertaking the construction activity with following minimum features:</p> <ul style="list-style-type: none"> <li>• Safe &amp; secure accommodation</li> <li>• Clean drinking water</li> <li>• Hygienic sanitation facility</li> </ul>										

1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	<b>Yes</b>	The proposed project will have Basement + Podium and 6 Towers with Ground + 18 Floors and 2 Amenities Blocks with Ground + 3 Floors
1.9	Underground works including mining or tunneling?	<b>Yes</b>	Basement and underground tanks will be constructed.
1.10	Reclamation works?	<b>No</b>	Not Applicable.
1.11	Dredging?	<b>No</b>	Not Applicable.
1.12	Offshore structures?	<b>No</b>	Not Applicable.
1.13	Production and manufacturing processes?	<b>No</b>	No production / manufacturing process are involved. This is a residential building construction project.
1.14	Facilities for storage of goods or materials?	<b>Yes</b>	<p>Temporary storage facility of construction material during construction will be provided.</p> <p>Cement bags will stored separately under cover in bales.</p> <p>Bricks and steel will be laid in open. The storage yard will be located within the project site.</p>
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	<b>Yes</b>	<p><b>Liquid Waste:</b></p> <p><b>Construction Phase:</b> Domestic wastewater generated during construction phase will be disposed off to fabricated STP.</p> <p><b>Operation Phase:</b> The wastewater generated during operation phase will be treated in a sewage treatment plant. Treated wastewater will be reused for flushing, landscaping, car wash and excess will be stored in a temporary storage pond within the site.</p> <p><b>Solid Waste</b></p> <p><b>Construction Phase:</b> The</p>

			<p>construction debris will be used to a maximum extent for leveling within the site and other capital city development works. Other used material will be suitably disposed.</p> <p><b>Operation Phase:</b> The solid wastes generated during operation phase will consist of domestic waste, which contains organic and inorganic waste and will be handled as per the Solid Waste Management Rules, 2016.</p> <p>Solid waste generation details are given in <b>Annexure - 4</b>.</p>
1.16	Facilities for long term housing of operational workers?	<b>No</b>	Not Applicable.
1.17	New road, rail or sea traffic during construction or operation?	<b>No</b>	Not Applicable.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	<b>Yes</b>	The proposed project is as per the master plan. The master plan includes development of roads, etc. and all the connecting roads to the project site are under development
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	<b>No</b>	Not Applicable.
1.20	New or diverted transmission lines or pipelines?	<b>No</b>	Not Applicable.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	<b>No</b>	Not Applicable.
1.22	Stream crossings?	<b>No</b>	Not Applicable.
1.23	Abstraction or transfers from ground or surface waters?	<b>No</b>	No ground water will be used for the project.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	<b>No</b>	Surface drainage will not be affected. The landscaping and implementation of storm water management plan will have positive impact.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	<b>Yes</b>	There will be transport of personnel and material during construction phase.

1.26	Long-term dismantling or decommissioning or restoration works?	<b>No</b>	Not Applicable.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	<b>No</b>	Not Applicable.
1.28	Influx of people to an area in either temporarily or permanently?	<b>Yes</b>	There will be influx of people during construction which is temporary.
1.29	Introduction of alien species?	<b>No</b>	Local/Native species will be planted in the proposed project site.
1.30	Loss of native species or genetic diversity?	<b>No</b>	Not Applicable.
1.31	Any other actions?	<b>No</b>	Not Applicable.

**2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):**

<b>S. No.</b>	<b>Information/checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities /rates, wherever possible) with source of information data</b>
2.1	Land especially undeveloped or agricultural land (ha)	<b>No</b>	<p>The proposed plot is falling in <b>S3 Zone</b> as per the Approved Master Plan of Amaravati Capital City by APCRDA.</p> <p>The <b>S3 Zone</b> as per master plan is for special development which permits residential, commercial and institutional land use.</p>
2.2	Water (expected source & competing users) unit: KLD	<b>Yes</b>	<p>The average consumption of water per day during peak construction period is estimated to be about 300-500 KLD which will be sourced from Thulluru lift irrigation scheme.</p> <p>Total water requirement of the project in operation phase is 639 KLD.</p> <p>Water will be sourced from Thulluru lift irrigation scheme which is already supplying to IGC and other educational institutes in APCRDA region. This will be primary source of water for both construction and operation phase till the trunk infrastructure of capital city is in</p>

			place.  The estimated details of the water requirement are furnished in the <b>Annexure - 5.</b>																		
2.3	Minerals (MT)	<b>Yes</b>	Mineral based construction material like cement, sand, steel, course aggregates etc. will be used from the approved quarries, sand reaches and steel from the open market.																		
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	<b>Yes</b>	The construction material is procured locally <table border="1"> <thead> <tr> <th>S.No.</th> <th>Description</th> <th>Quantity (Approx.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Reinforcement steel (MT)</td> <td>8,320</td> </tr> <tr> <td>2</td> <td>Cement (Bags)</td> <td>12,75,000</td> </tr> <tr> <td>3</td> <td>Sand (Cft)</td> <td>67,691</td> </tr> <tr> <td>4</td> <td>Course Aggregates (Cft)</td> <td>1,38,394</td> </tr> <tr> <td>5</td> <td>Bricks (Nos)</td> <td>11,20,000</td> </tr> </tbody> </table>	S.No.	Description	Quantity (Approx.)	1	Reinforcement steel (MT)	8,320	2	Cement (Bags)	12,75,000	3	Sand (Cft)	67,691	4	Course Aggregates (Cft)	1,38,394	5	Bricks (Nos)	11,20,000
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2.5	Forests and timber (source – MT)	<b>No</b>	Not required.																		
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	<b>Yes</b>	Source: APCPDCL. The estimated power requirement for the project during operation is 5 MVA. The details of the power requirement are furnished in <b>Annexure - 6.</b>																		
2.7	Any other natural resources (use appropriate standard units)	<b>No</b>	Not Applicable, since it is a building project.																		

<b>3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.</b>			
<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	<b>Yes</b>	Used batteries, used lube oil from DG sets.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	<b>No</b>	Nil.
3.3	Affect the welfare of people e.g.	<b>No</b>	Nil.

	by changing living conditions?		
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	<b>No</b>	Nil.
3.5	Any other causes	<b>No</b>	Nil.

<b>4. Production of solid wastes during construction or operation or decommissioning (MT/month)</b>			
<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
4.1	Spoil, overburden or mine wastes	<b>No</b>	No such spoil, overburden or mine wastes will be generated.  The top soil will be separated and stored. The excess excavated soil will be reused for the capital city greenery development.
4.2	Municipal waste (domestic and or commercial wastes)	<b>Yes</b>	The solid wastes generated during operation phase will consist of domestic waste, which contains organic and inorganic waste and will be handled as per the Solid Waste Management Rules, 2016.  Solid waste generation details are given in <b>Annexure - 4</b> .
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	<b>Yes</b>	There will be generation of hazardous waste such as used oil/lube oil from the DG sets, which will be disposed as per Hazardous Waste Management Rules, 2016
4.4	Other industrial process wastes	<b>No</b>	Not Applicable.
4.5	Surplus product	<b>No</b>	Not Applicable.
4.6	Sewage sludge or other sludge from effluent treatment	<b>Yes</b>	There will be generation of about 118 kg/day Dewatered/dried sludge from STP (Sewage Treatment Plant), will be disposed as per the norms.

4.7	Construction or demolition wastes	<b>Yes</b>	During construction phase, used construction materials like boxes, paint tins, metal scrap, plastic scrap, glass scrap etc. will be disposed to local vendors. The construction debris will be used to a maximum extent for leveling and the surplus, if any will be used in other areas of the Capital city for leveling or backfilling.
4.8	Redundant machinery or equipment	<b>No</b>	Not Applicable
4.9	Contaminated soils or other materials	<b>No</b>	Not applicable
4.10	Agricultural wastes	<b>No</b>	Not Applicable
4.11	Other solid wastes	<b>Yes</b>	Recyclable waste generated will be disposed to authorized vendors.

<b>5. Release of pollutants / hazardous, toxic or noxious substances to air (Kg/hr)</b>			
<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/ No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	<b>Yes</b>	The operation of proposed project does not envisage any air pollution sources except emission from DG sets which are used for emergency power supply only. It will be mitigated by providing adequate stack height as per CPCB norms.
5.2	Emissions from production processes	<b>No</b>	Not Applicable, since it is a residential building project.
5.3	Emissions from materials handling including storage or transport	<b>Yes</b>	Construction material like sand, cement etc. will be properly covered with tarpaulins to minimize the fugitive dust emission.
5.4	Emissions from construction activities including plant and equipment	<b>Yes</b>	Fugitive dust will be controlled by spraying water and erecting barricades during construction period. Some emissions are envisaged from construction equipment such as earth moving equipment, tractors, lorries, DG sets etc., during construction phase.
5.5	Dust or odours from handling of materials including	<b>Yes</b>	Construction activities may lead to temporary increase in dust

	construction materials, sewage and waste		levels. Sprinkling of water will be done to minimize the fugitive dust emission.
5.6	Emissions from incineration of waste	<b>No</b>	Not Applicable.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	<b>No</b>	Not Applicable.
5.8	Emissions from any other sources	<b>No</b>	Not Applicable.

**6. Generation of Noise and Vibration, and Emissions of Light and Heat:**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data with source of information data</b>
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	<b>Yes</b>	There will be generation of noise due to the operation of concrete mixers and other associated machinery during the construction phase and will be limited to <75 dB (A).
6.2	From industrial or similar processes	<b>No</b>	Not applicable
6.3	From construction or demolition	<b>Yes</b>	During construction work noise will be generated from construction machinery, however, adequate precautions shall be taken to reduce the noise generation.
6.4	From blasting or piling	<b>No</b>	Not Applicable
6.5	From construction or operational traffic	<b>Yes</b>	Some noise pollution may be there due to the vehicular traffic. However this is limited to construction period. Suitable traffic management plan will be implemented so as to mitigate the noise to acceptable limits.
6.6	From lighting or cooling systems	<b>No</b>	Not applicable
6.7	From any other sources	<b>No</b>	Not applicable

<b>7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:</b>			
<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
7.1	From handling, storage, use or spillage of hazardous materials	<b>No</b>	Not applicable
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	<b>Yes</b>	There will be 460 KLD waste water generation. Wastewater will be treated in STP. Treated wastewater will be reused for flushing, landscaping, car wash and excess will be stored in a temporary storage pond within the site.
7.3	By deposition of pollutants emitted to air into the land or into water	<b>Yes</b>	Mitigation measures will be put in place for both air and water.
7.4	From any other sources	<b>No</b>	The waste water is treated in STP and reused.
7.5	Is there a risk of long term buildup of pollutants in the environment from these sources?	<b>No</b>	None.

<b>8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment</b>			
<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	<b>No</b>	Not Applicable
8.2	From any other causes	<b>No</b>	None.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc.)?	<b>No</b>	The proposed project is in inland area. The proposed project site falls under Zone III (Moderate Damage risk zone), according to the Seismic Zone Map of India (IS: 1893, 2002). The structures shall be designed with adequate safety factors.

<b>9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality</b>			
<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes /No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
9.1	Lead to development of supporting utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:  Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)	<b>Yes</b>	The project is part of the Amaravati capital city. The entire necessary infrastructure like roads, power supply, water and waste water management, solid waste management will be created by APCRDA.
	✓ Housing development	<b>Yes</b>	The development of Amaravati capital city will spur the development of entire region.
	✓ Extractive industries	<b>No</b>	Not Applicable
	✓ Supply industries	<b>No</b>	Not Applicable
	✓ Other	<b>No</b>	Not Applicable
9.2	Lead to after-use of the site, which could have an impact on the environment	<b>No</b>	There is no negative impact.
9.3	Set a precedent for later developments	<b>Yes</b>	The project will improve the aesthetics in the area and also support the development of the area.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	<b>No</b>	Not Applicable.

<b>(II) Environmental Sensitivity</b>			
<b>S. No.</b>	<b>Areas</b>	<b>Name/ Identity</b>	<b>Aerial distance (within 15 km.) Proposed project location boundary</b>
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	<b>No</b>	Undavalli Caves – 10.7 km E Uppalapadu Bird Sanctuary – 22 km S
2	Areas which are important or	<b>Yes</b>	Krishna River – 6.6 km N

	sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	<b>Reserved Forest (RF)</b> Yes	Karlapudi RF – 8.5 km W Motadaka RF – 9.0 km WSW Pedda Madduru RF – 9.6 km NW Tadepalli RF – 9.9 km SE Kondapalle RF – 11.0 NNE
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Yes	Uppalapadu Bird Sanctuary – 22 km S
4	Inland, coastal, marine or underground waters	No	Not Applicable.
5	State, National boundaries	No	Not Applicable
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	NH 65 – 9.5 km NE NH-16 – 14.7 km E
7	Defence installations	No	None within 15 km radius
8	Densely populated or built-up area	Yes	Vijayawada – 11 km E
9	Areas occupied by sensitive man-made land uses ( <i>hospitals, schools, places of worship, community facilities</i> )	No	Not Applicable
10	Areas containing important, high quality or scarce resources ( <i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i> )	<b>Water Bodies</b>	Krishna River – 6.6 km N
		<b>Tourism Places</b>	Undavalli Caves – 10.7 km E Uppalapadu Bird Sanctuary – 22 km S
		<b>Reserved Forest (RF)</b> Yes	Karlapudi RF – 8.5 km W Motadaka RF – 9.0 km WSW Pedda Madduru RF – 9.6 km NW Tadepalli RF – 9.9 km SE Kondapalle RF – 11.0 NNE


11	Areas already subjected to pollution or environmental damage. <i>(those where existing legal environmental standards are exceeded)</i>	None	Not Applicable
12	Areas susceptible to natural hazard which could cause the project to present environmental problems <i>(earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)</i>	No	The proposed project is in inland area. The proposed project site falls under Zone III (Moderate Damage risk zone), according to the Seismic Zone Map of India (IS: 1893, 2002). The structures shall be designed with adequate safety factors.

***\*All distances mentioned in the above table are aerial distances from the Boundary of Proposed Project.***

I hereby give undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Date: 08.10.2018

Place: Vijayawada

<b>Signature of the Applicant</b> (Project proponent/ Authorized signatory)	
<b>Name</b>	<b>Shan Mohan I.A.S</b>
<b>Designation</b>	<b>Additional Commissioner (CCP)</b>
<b>Address</b>	<b>Andhra Pradesh Capital Region Development Authority</b> Lenin Centre, Governorpet, Vijayawada-520002, Andhra Pradesh.

### Amaravati Happy Nest Project

#### Plot Area

**Total Plot area: 57,835.21 Sq.m = 5.78 Ha. = 14.29 Acres**

**Total Built-Up Area: 1,40,756.19 Sq.m**

**Landscape Area = 16451.82 Sq.m**

#### Tower Built-Up Area (Sq.m)

<b>Block-A</b>			
<b>S.No</b>	<b>Floors</b>	<b>No.of Flats</b>	<b>Built Up Areas in Sq.m</b>
1	Ground Floor	5	820.24
2	1st Floor	5	791.37
3	2nd Floor	6	879.24
4	3rd Floor	6	879.24
5	4th Floor	6	879.24
6	5th Floor	6	879.24
7	6th Floor	6	879.24
8	7th Floor	6	879.24
9	8th Floor	6	879.24
10	9th Floor	6	879.24
11	10th Floor	6	879.24
12	11th Floor	6	879.24
13	12th Floor	6	879.24
14	13th Floor	6	879.24
15	14th Floor	6	879.24
16	15th Floor	6	879.24
17	16th Floor	6	879.24
18	17th Floor	6	879.24
19	18th Floor	6	879.24
21	Terrace Floor		73.1
<b>Total</b>		<b>112</b>	<b>16631.79</b>

<b>Block-B</b>			
<b>S.No</b>	<b>Floors</b>	<b>No.of Flats</b>	<b>Built Up Areas in Sq.m</b>
1	Ground Floor	5	695.73
2	1st Floor	5	675.33
3	2nd Floor	6	746.09
4	3rd Floor	6	746.09
5	4th Floor	6	746.09
6	5th Floor	6	746.09
7	6th Floor	6	746.09
8	7th Floor	6	746.09
9	8th Floor	6	746.09
10	9th Floor	6	746.09

11	10th Floor	6	746.09
12	11th Floor	6	746.09
13	12th Floor	6	746.09
14	13th Floor	6	746.09
15	14th Floor	6	746.09
16	15th Floor	6	746.09
17	16th Floor	6	746.09
18	17th Floor	6	746.09
19	18th Floor	6	746.09
21	Terrace Floor		73.28
<b>Total</b>		<b>112</b>	<b>14127.87</b>

<b>Block-C</b>			
<b>S.No</b>	<b>Floors</b>	<b>No.of Flats</b>	<b>Built Up Areas in Sq.m</b>
1	Ground Floor	4	753.49
2	1st Floor	4	724.15
3	2nd Floor	4	757.76
4	3rd Floor	4	757.76
5	4th Floor	4	757.76
6	5th Floor	4	757.76
7	6th Floor	4	757.76
8	7th Floor	4	757.76
9	8th Floor	4	757.76
10	9th Floor	4	757.76
11	10th Floor	4	757.76
12	11th Floor	4	757.76
13	12th Floor	4	757.76
14	13th Floor	4	757.76
15	14th Floor	4	757.76
16	15th Floor	4	757.76
17	16th Floor	4	757.76
18	17th Floor	4	757.76
19	18th Floor	4	757.76
21	Terrace Floor		67.13
<b>Total</b>		<b>76</b>	<b>14426.69</b>

<b>Block-D</b>			
<b>S.No</b>	<b>Floors</b>	<b>No.of Flats</b>	<b>Built Up Areas in Sq.m</b>
1	Ground Floor	4	753.49
2	1st Floor	4	724.15
3	2nd Floor	4	757.76
4	3rd Floor	4	757.76
5	4th Floor	4	757.76
6	5th Floor	4	757.76
7	6th Floor	4	757.76
8	7th Floor	4	757.76

9	8th Floor	4	757.76
10	9th Floor	4	757.76
11	10th Floor	4	757.76
12	11th Floor	4	757.76
13	12th Floor	4	757.76
14	13th Floor	4	757.76
15	14th Floor	4	757.76
16	15th Floor	4	757.76
17	16th Floor	4	757.76
18	17th Floor	4	757.76
19	18th Floor	4	757.76
21	Terrace Floor		67.13
<b>Total</b>		<b>76</b>	<b>14426.69</b>

<b>Block-E</b>			
<b>S.No</b>	<b>Floors</b>	<b>No.of Flats</b>	<b>Built Up Areas in Sq.m</b>
1	Ground Floor	5	695.73
2	1st Floor	5	675.33
3	2nd Floor	6	745.03
4	3rd Floor	6	745.03
5	4th Floor	6	745.03
6	5th Floor	6	745.03
7	6th Floor	6	745.03
8	7th Floor	6	745.03
9	8th Floor	6	745.03
10	9th Floor	6	745.03
11	10th Floor	6	745.03
12	11th Floor	6	745.03
13	12th Floor	6	745.03
14	13th Floor	6	745.03
15	14th Floor	6	745.03
16	15th Floor	6	745.03
17	16th Floor	6	745.03
18	17th Floor	6	745.03
19	18th Floor	6	745.03
21	Terrace Floor		73.10
<b>Total</b>		<b>112</b>	<b>14109.67</b>

<b>Block-F</b>			
<b>S.No</b>	<b>Floors</b>	<b>No.of Flats</b>	<b>Built Up Areas in Sq.m</b>
1	Ground Floor	5	820.24
2	1st Floor	5	791.37
3	2nd Floor	6	879.38
4	3rd Floor	6	879.38
5	4th Floor	6	879.38
6	5th Floor	6	879.38

7	6th Floor	6	879.38
8	7th Floor	6	879.38
9	8th Floor	6	879.38
10	9th Floor	6	879.38
11	10th Floor	6	879.38
12	11th Floor	6	879.38
13	12th Floor	6	879.38
14	13th Floor	6	879.38
15	14th Floor	6	879.38
16	15th Floor	6	879.38
17	16th Floor	6	879.38
18	17th Floor	6	879.38
19	18th Floor	6	879.38
21	Terrace Floor		73.10
<b>Total</b>		<b>112</b>	<b>16634.17</b>

<b>Amenities Block-1</b>		
S.No	Floors	Built Up Areas in Sq.m
1	Ground Floor	478.56
2	1st Floor	447.68
3	2nd Floor	545.22
4	3rd Floor	501.75
5	Terrace Floor	92.18
<b>Total</b>		<b>2065.39</b>

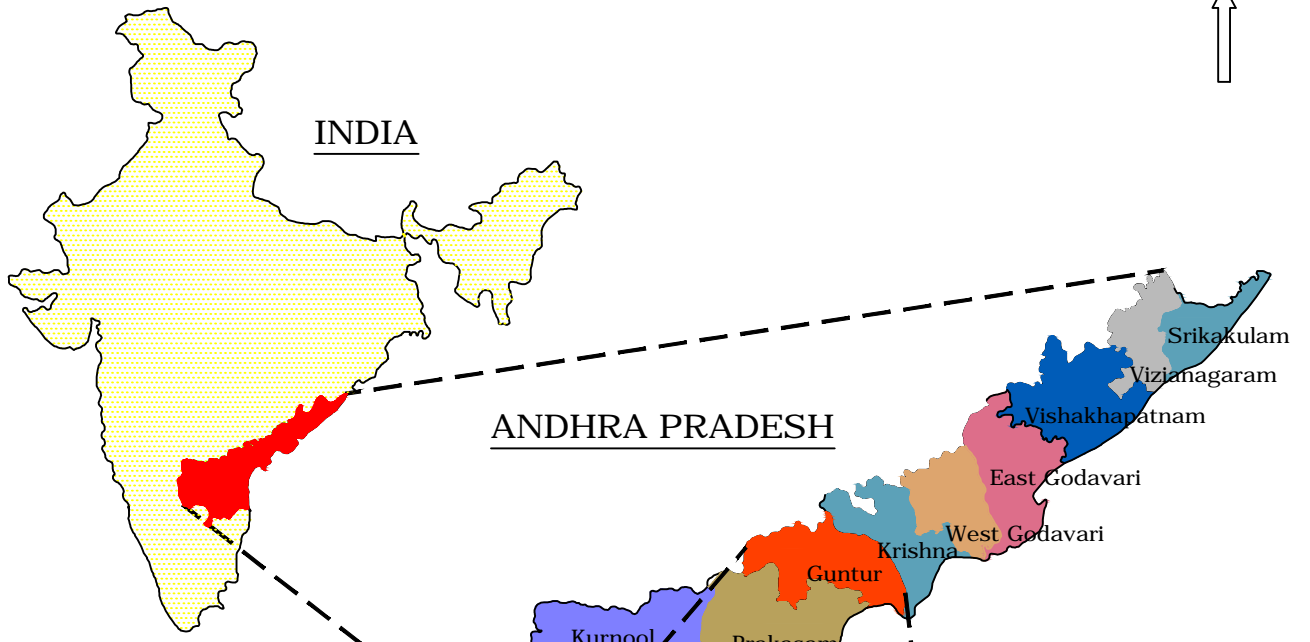
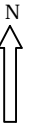
<b>Amenities Block-2</b>		
S.No	Floors	Built Up Areas in Sq.m
1	Ground Floor	521.55
2	1st Floor	534.31
3	2nd Floor	508.48
4	3rd Floor	91.8
5	Terrace Floor	59.84
<b>Total</b>		<b>1715.98</b>

### Summary

Total No. Of Towers Proposed	6
Built Up Area Of Towers (Sq.m)	90356.88
Built Up Area of Amenities Block 1 (Sq.m)	2065.39
Built Up Area of Amenities Block 2 (Sq.m)	1715.98
Covered/ Basement Parking Area (Sq.m)	46617.94
<b>Total Built Up Area (Sq.m)</b>	<b>140756.19</b>

<b>Parking Area</b>	
No. of Two wheelers	600
No. of Four wheelers	942

# LOCATION MAP

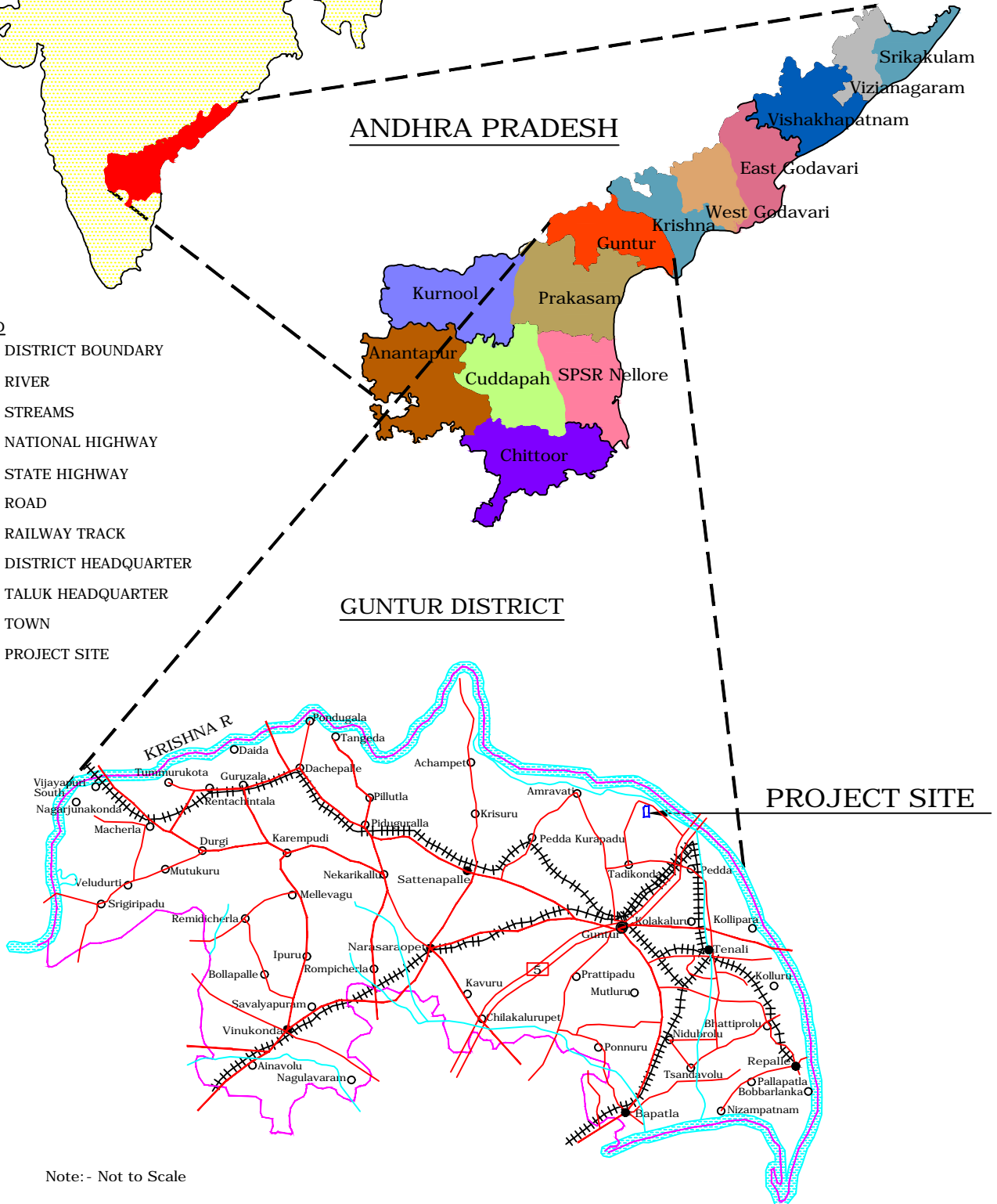


## ANDHRA PRADESH

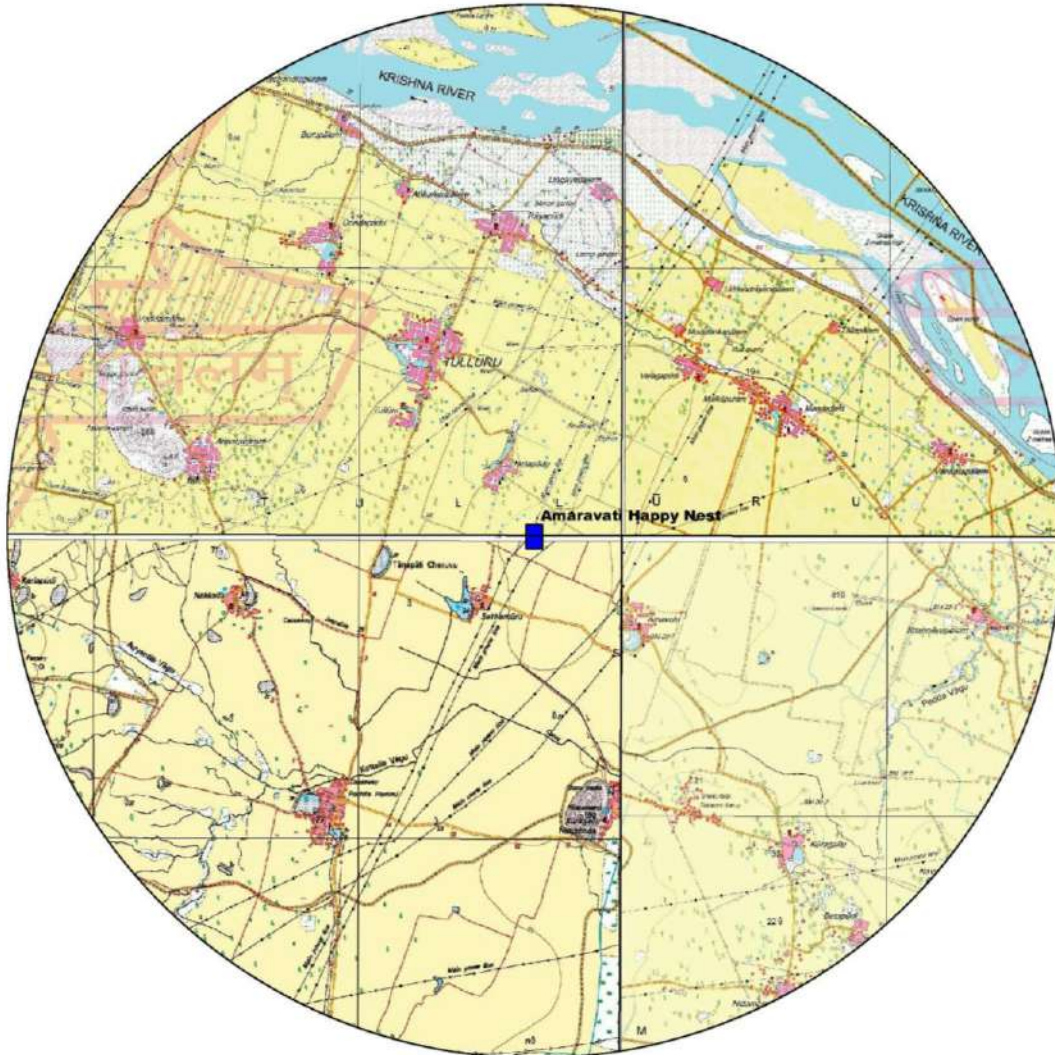
## GUNTUR DISTRICT

### LEGEND

-  DISTRICT BOUNDARY
-  RIVER
-  STREAMS
-  NATIONAL HIGHWAY
-  STATE HIGHWAY
-  ROAD
-  RAILWAY TRACK
-  DISTRICT HEADQUARTER
-  TALUK HEADQUARTER
-  TOWN
-  PROJECT SITE



Note: - Not to Scale

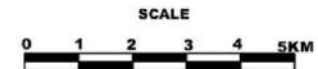


- LEGEND
- ROAD
  - STREAMS/ TANKS
  - SETTLEMENTS
  - Project Site
  - CONTOURS
  - FOREST



INDEX TO  
SURVEY OF INDIA TOPOSHEETS

65D1	65D10	65D9
65D2		65D10
65D3	65D7	65D11



PROJECT :

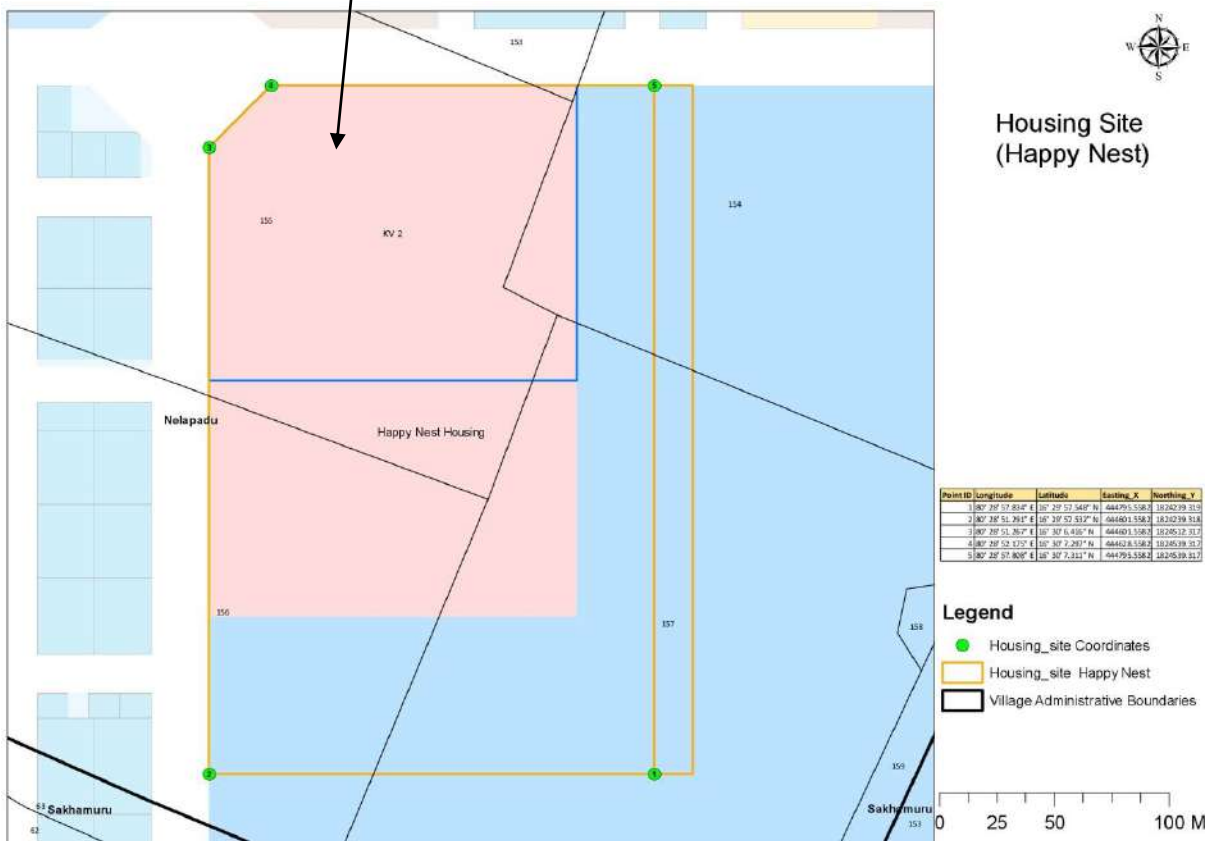
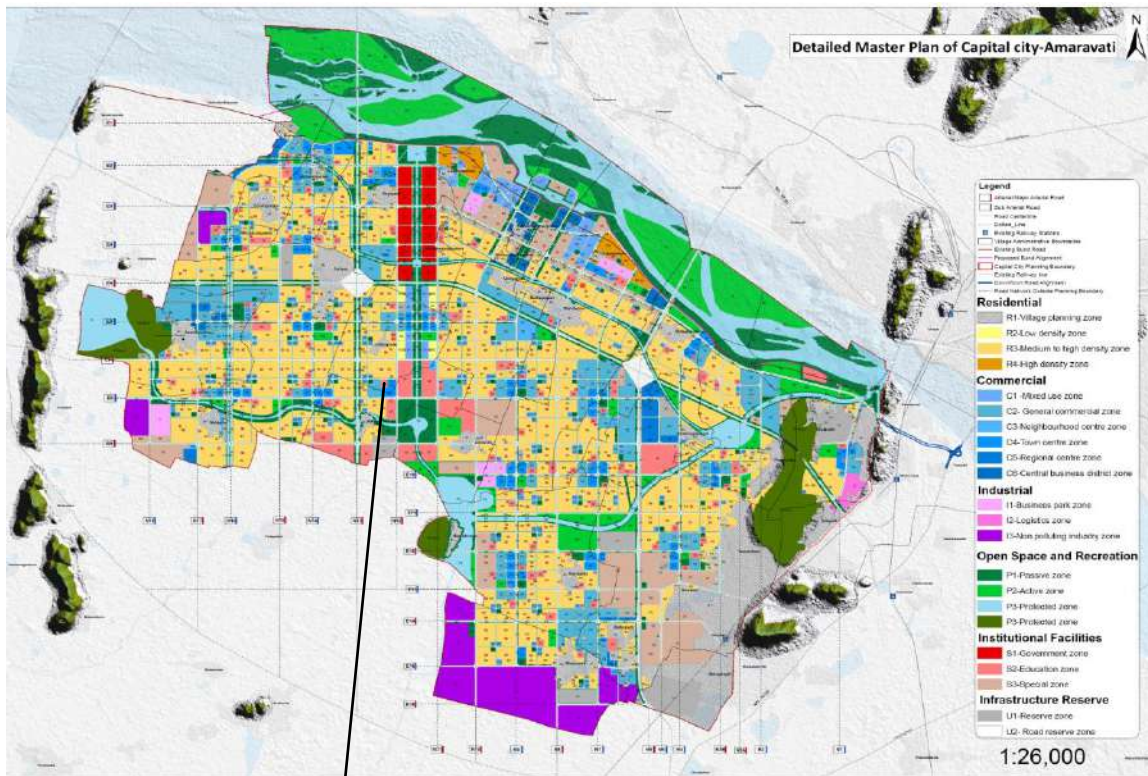
**"Amaravati Happy Nest" by APCRDA**

Sy.No: 153(p), 154(p), 155(p), 156(p), 157(p) of Nelapadu Village,  
Guntur district, Amaravati capital city. Andhra Pradesh.

TITLE :

**TOPOGRAPHICAL MAP  
SHOWING 10KM RADIUS**

### MASTER PLAN & MAP SHOWING LOCATION OF AMARAVATI HAPPY NEST PROJECT



**AMARAVATI HAPPY NEST PROJECT**

**A.**

	<b>Number of Persons</b>	<b>Per-capita Waste Generation kg/person/day</b>	<b>Organic waste in kg/day</b>	<b>Inorganic waste in kg/day</b>	<b>Total waste in kg/day</b>
Apartments	3376	0.5	928	760	1688
Club house	1350	0.05	223	182	405
Garden waste	4.06 Acres	15 kg/Acres	61	0	61
<b>TOTAL</b>			<b>1212</b>	<b>942</b>	<b>2154</b>

*Source: NBC Code, 2016*

**B. Solid waste from STP = 118 Kg/day (@ 0.035 Kg/person/day)**

**SUMMARY OF SOLID WASTE GENERATION (Kg/Day)**

Organic Waste Generation	:	1212.0
Inorganic Waste Generation	:	942.0
STP Sludge	:	118.0
<b>Total Waste generation</b>	<b>:</b>	<b>2272.0</b>

**SOLID WASTE DISPOSAL**

- ❖ The Solid waste will be disposed as per the Solid Waste Management Rules, 2016

**AMARAVATI HAPPY NEST PROJECT****a. WATER REQUIREMENT (KLD)**

<b>S. No</b>	<b>Description</b>	<b>Number of persons</b>	<b>Domestic Water</b>	<b>Flushing/ Treated Water</b>	<b>Total Water Requirement</b>
1	Population	3376	354	152	506
2	Filter Backwash	-	30	-	30
3	Club House	-	2.5	2.5	5
4	Swimming Pool	-	15	-	15
5	Greenbelt requirement @ 16451.8 Sq.m	-	-	83	83
<b>TOTAL</b>		<b>3376</b>	<b>401.5</b>	<b>237.5</b>	<b>639</b>

*Basis: Working staff (Domestic: 105 LPCD/Flushing: 45 LPCD)*

**b. Waste water generation**

<b>S. No</b>	<b>Description</b>	<b>Water Requirement</b>	<b>Waste Water Generation ( 90% of Domestic &amp; Flushing)</b>
1	Population	506	455.5
2	Club House	5	4.5
<b>TOTAL</b>		<b>511</b>	<b>460</b>

- **Total waste water generation = 460 KLD**
- **Proposed STP Capacity = 520 KLD**
- **Treated Waste Water from STP= 414 KLD**

Treated waste water is 414 KLD and around 238 KLD will be utilized for flushing and landscaping and excess or surplus treated wastewater of 176 KLD will be sent to the nearest sewer line.

## AMARAVATI HAPPY NEST PROJECT

### **Power Supply:**

Maximum Demand: 5 MVA

### **Transformers**

Capacity and Number of Transformer to be used:

1. 500 kVA – 11 Nos for Apartments
2. 315 kVA – 1 No for Club House

### **DG Set:**

Capacity and Number of DG sets to be used:

- 4 x 500 kVA
- 1 x 320 kVA

HSD type of Fuel used for DG sets

### **Energy Saving & Conservation Measures:**

- Power factor of the complete electrical system shall be maintained close to unity. This will reduce electrical power distribution losses in the installation.
- An APFC Relay based on thyristor switching is proposed to effect the power factor correction / improvement within a few cycles of deviation from the setting & also to reduce the inrush currents.
- All Luminaries are specified as Energy efficient LED lights which give approx. 35-40% more light output for the same watts consumed and therefore require less no of fixtures and corresponding lower point wiring costs.
- Timers and photo - Electric sensors shall be used to switch ON / OFF external landscape and Street lighting.
- Specified 3 Star rated, energy efficiency equipments as per BEE/IGBC.
- Specified VFD driven Energy efficiency lifts.
- Provision of Non-Conventional energy by use of Solar Photovoltaic Panels of required rated capacity for common area lighting.
- Specified High Efficiency UPS with 95%.
- Copper conductor cables are specified for sizes of 6 sq mm and below. This will reduce losses and improve reliability.
- All cables shall be derated to avoid heating during use. This also indirectly reduces losses and improves reliability.
- Bus bars in all HT Panels are specified as copper bus bars to reduce losses and improve reliability.
- Specified Copper wound Transformer with High Efficiency 99.5%

### **Energy Conservation Features**

"Energy conservation features will be one of the focuses during the design and operation stages.

The conservation efforts would consist of the following:

#### **Architectural Design**

- Maximize the use of natural lighting through design
- Passive solar cooling utilising building shading.

#### **Energy Saving Practices**

- Energy efficient light fixtures shall be used (LEDs).
- Power factor of the complete electrical system shall be maintained close to unity. This will reduce electrical power distribution losses in the installation.
- Energy Efficient V3F lifts
- Higher efficient UPS shall be used (95%)
- All ceiling fans shall be minimum BEE 3 star rated
- Timers and Photo-electric sensors shall be used to switch ON/OFF lights used for landscaping
- Creating awareness to building users

(i) Sign boards shall be provided for promoting energy conservation where ever required

(ii) Training staff on methods of energy conservation and to be vigilant to such opportunities".

**ECBC COMPLIANCE:**

S. No.	ECBC Code No	Code Description	Code Compliance
<b>Mandatory Provisions</b>			
1	7.2.1	Lighting Control	Automatic Lighting controls - Internal Basement & Common Area lighting control through timer switches and External Lighting control through PV sensor & Astronomical time switches
2	7.2.1.1	Automatic Lighting Shut Off	Scheduling Control: Using a time scheduling device to control lighting systems according to pre-determined schedules for all Basement Areas
3	7.2.1.4	Exterior Lighting Control	External Lighting spaces are controlled by Photo Voltaic sensor or astronomical time switch that is capable of automatically turning On / Off the lights depending on the day light
4	7.2.2	Exit Signs	LED exit signs considered with built in backup power supplies
5	7.2.3	Exterior Building Lights	High Pressure Sodium Vapour Lights considered with efficacy more than 70%
<b>Prescriptive Interior Lighting Power Compliance</b>			
6	7.3.1	Interior Lighting Power	As per ECBC Table 7.1, Building Area method the LPD level of Office spaces is achieved 7.5 W/Sqm against to 10.8 W/Sqm recommended
			The parking area LPD level is achieved 1.4 W/Sqm against recommended level of 3.2 W/Sqm
<b>Prescriptive Exterior Lighting Power Compliance</b>			
7	7.3.5	Exterior Lighting Power	1 W/ sft LPD considered and achieved for Building Entrances with canopy
			For Building Facades - 0.1 W/Sft LPD Considered
<b>Electrical Power</b>			
8	8.2.1.1	Transformer Losses	Dry type Transformers meeting the requirements as per IS 2026/1180, Part - 2 and meeting

<b>S. No.</b>	<b>ECBC Code No</b>	<b>Code Description</b>	<b>Code Compliance</b>
			the requirements as per ECBC Table 8.2, with Efficiency of 98.4 %
9	8.2.2	Energy Efficient Motors	Efficiency more than 92% and meeting the requirements of Table 8.4
10	8.2.3	Power Factor Correction	Power Factor Improvement up to 0.99
11	8.2.4	Check Metering & Monitoring	All the Energy Meters considered In Main & Sub LT Panels will provide the complete information regarding Demand Load (in KVA), Energy Consumption (kWH), Line to Line & Line to Neutral Voltages, Current Consumption (Amps), Reactive Power (kVARh), THD etc.
12	8.2.5	Power Distribution Losses	Cable size selection considering the Voltage Drop limited to 3% at farthest point and max. distribution losses limited to 1% of total power usage