COMPANY PROFILE

iammies Landscapes

Landscape architecture, Garden Design,
Horticulture, Architecture, Interior Design.

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Conceptual Planning
Design & Estimation
Architecture & Interiors
Project Execution
Turn-key & Maintenance
National Winners
HYDERABAD METRO RAIL

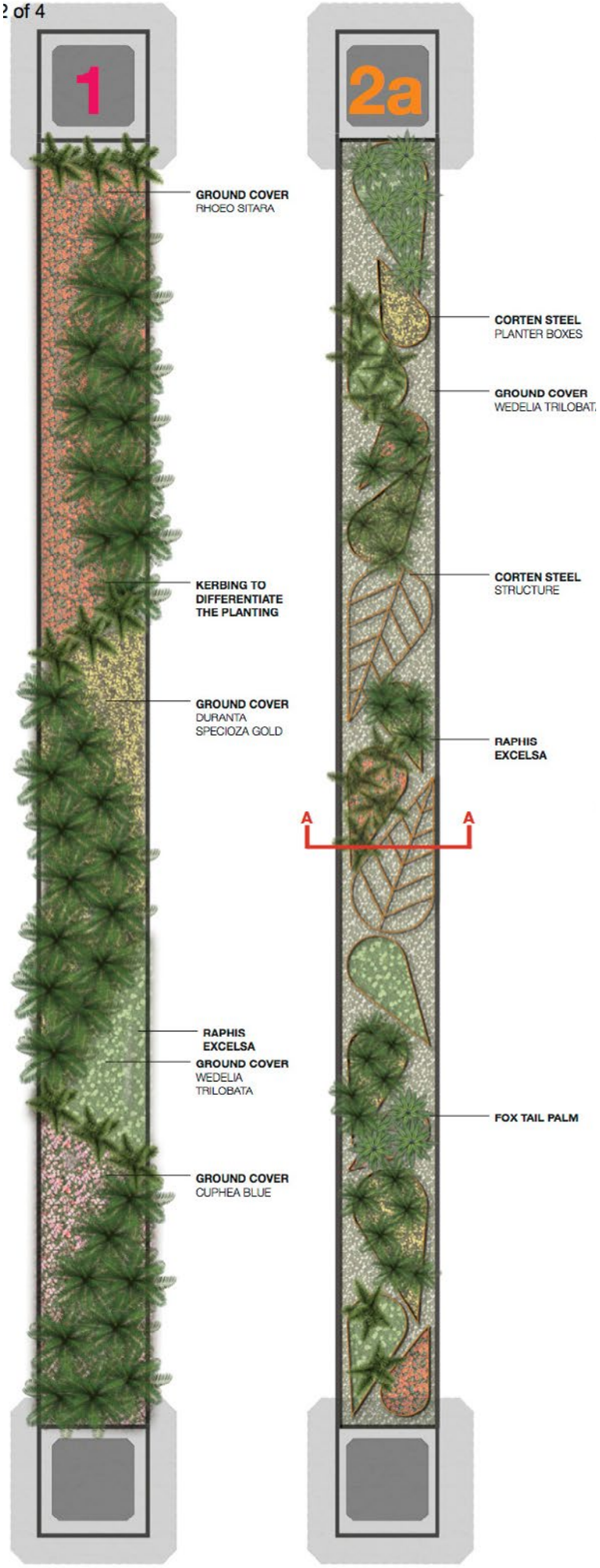
NATIONAL AWARD FOR LANDSCAPING UNDER THE HMR VIA DUCT.

MODULARITY

ONE IDEA *MANY USES*

The project features remarkable landscape design is a people' project for all age groups which encourages walking and cycling as a healthy practice. The other unique features include: better signage, appealing spaces, secure zones; parking provision, seating arrangements for relaxation and emergency spots. But more importantly excel in Landscape Design.

Modularity is the solution.



In Hyderabad, the current scenario of traffic jams; pollution from the vehicles not only has degraded the environment but also has shown significant change in the life span of a normal human being.

Because of the elevated metro rail, the medians on the ground have created an opportunity to reverse the consequence.

A solution needs to be invented which will optimize the sound and air pollution caused, water lost in rains, time lost in traffic jams, and eventually improve the quality of life.

Hyderabad's Metro Rail aims to make that quality of life higher and enjoyable. Thus an eco-friendly and end-to end transportation solution is devised.

GREENER MODULE

Naturalistic planting methods are used in this section. It mimics nature, purifying the air in the surroundings and controlling noise and sound pollution. It's best used in sound and atmospherically polluted areas

AESTHETIC MODULE

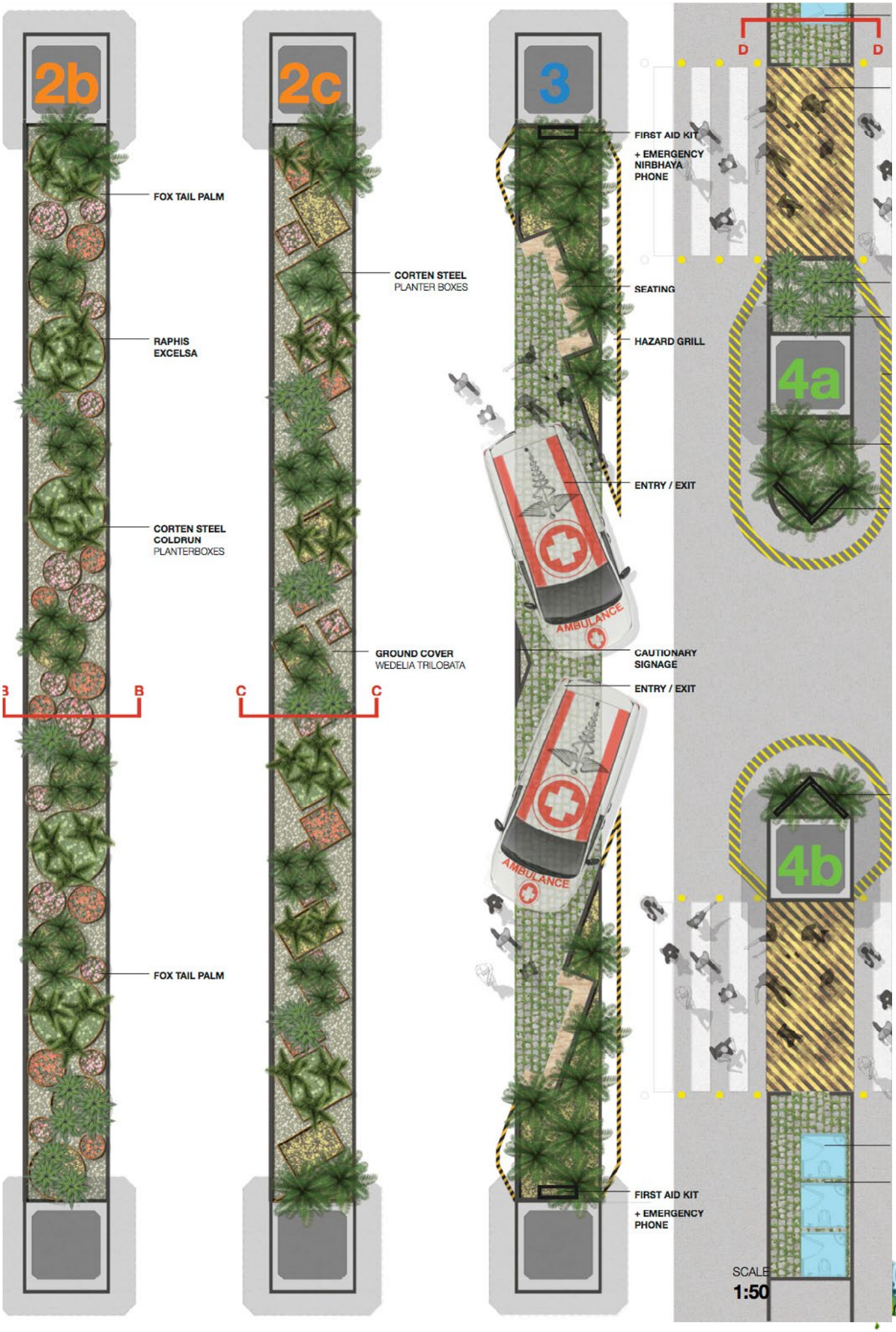
They are less functional and more aesthetic modules. Use of corten steel planterboxes which is not only sustainable but also helps in creating multiple patterns and instances and gives an aesthetic appeal.

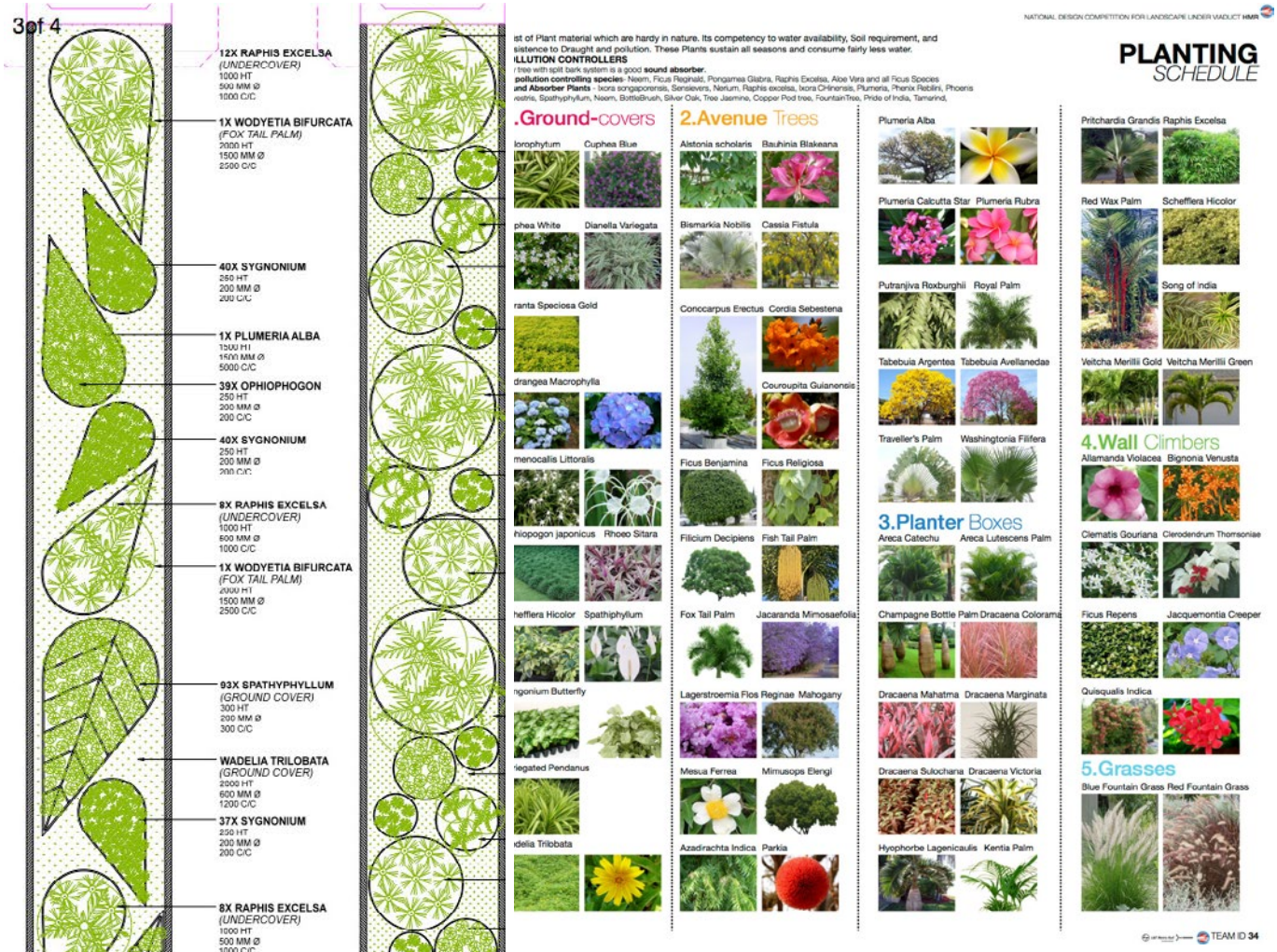
FUNCTIONAL MODULARITY

A module that can be used at high-accident prone or Health-monitoring zones is a must. Ambulances and fire-brigade vehicles can be parked under the viaduct.

JUNCTIONAL MODULE

An intelligent solution to control is by pedestrianisation and smart signage systems. Incorporating L.E.D signages for navigation and information saves energy. Here, zebra crossings have been brought to a lot more convenient threshold for the vehicular movement to incorporate pedestrian and cyclist movements. At nights the junctions have to be well lit both for Landscape prominence and safety issues


2b
2c
3
4a
4b
FOX TAIL PALM
RAPHIS EXCELSA
CORTEN STEEL COLDRUN PLANTERBOXES
FOX TAIL PALM
CORTEN STEEL PLANTER BOXES
GROUND COVER WEDELIA TRILOBATA
FIRST AID KIT + EMERGENCY NIRBHAYA PHONE
SEATING
HAZARD GRILL
ENTRY / EXIT
CAUTIONARY SIGNAGE
ENTRY / EXIT
FIRST AID KIT + EMERGENCY PHONE
AMBULANCE
AMBULANCE
B
B
C
C
D
D
SCALE
1:50



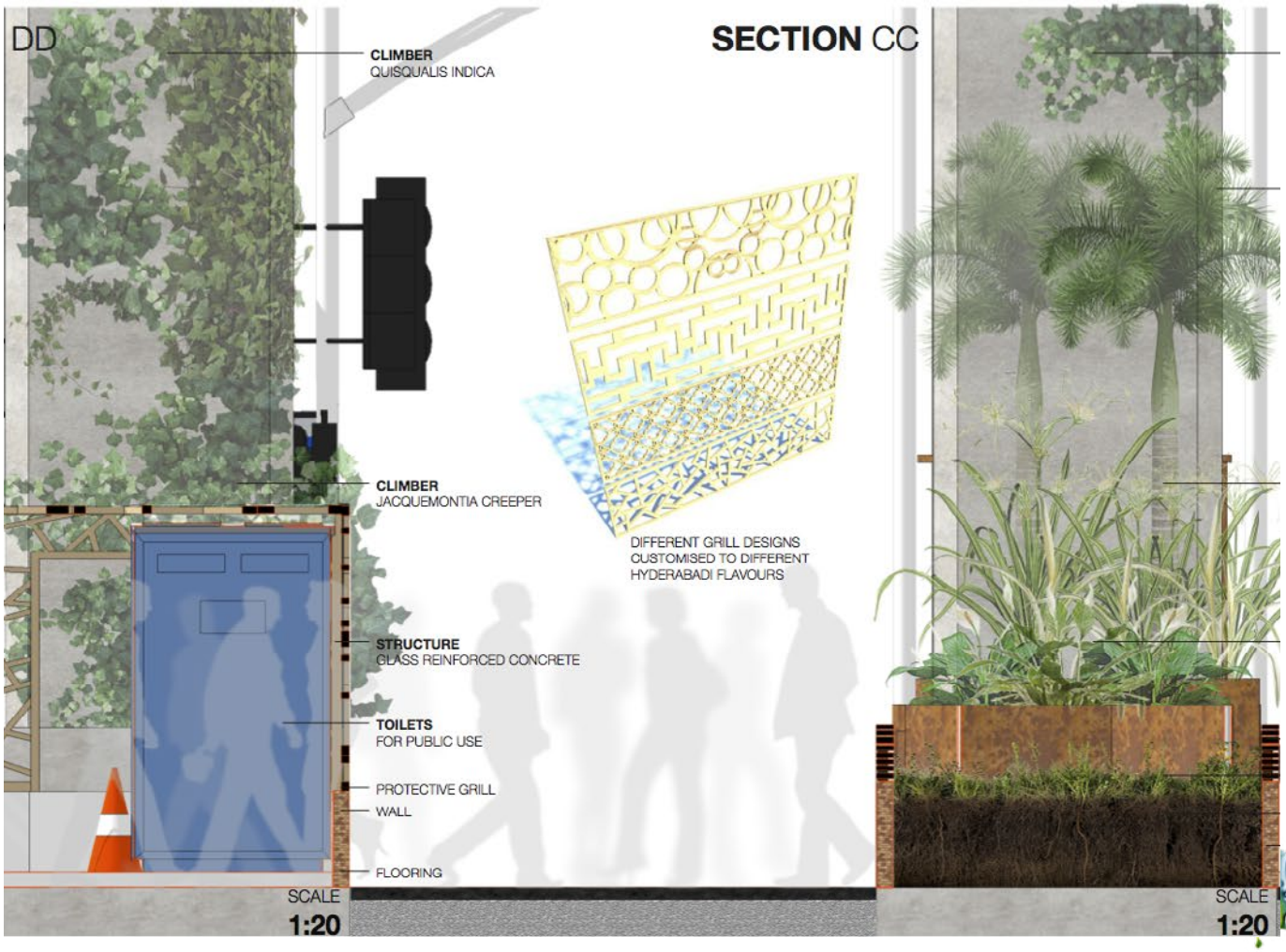
The Idea is to customize it to Hyderabad.

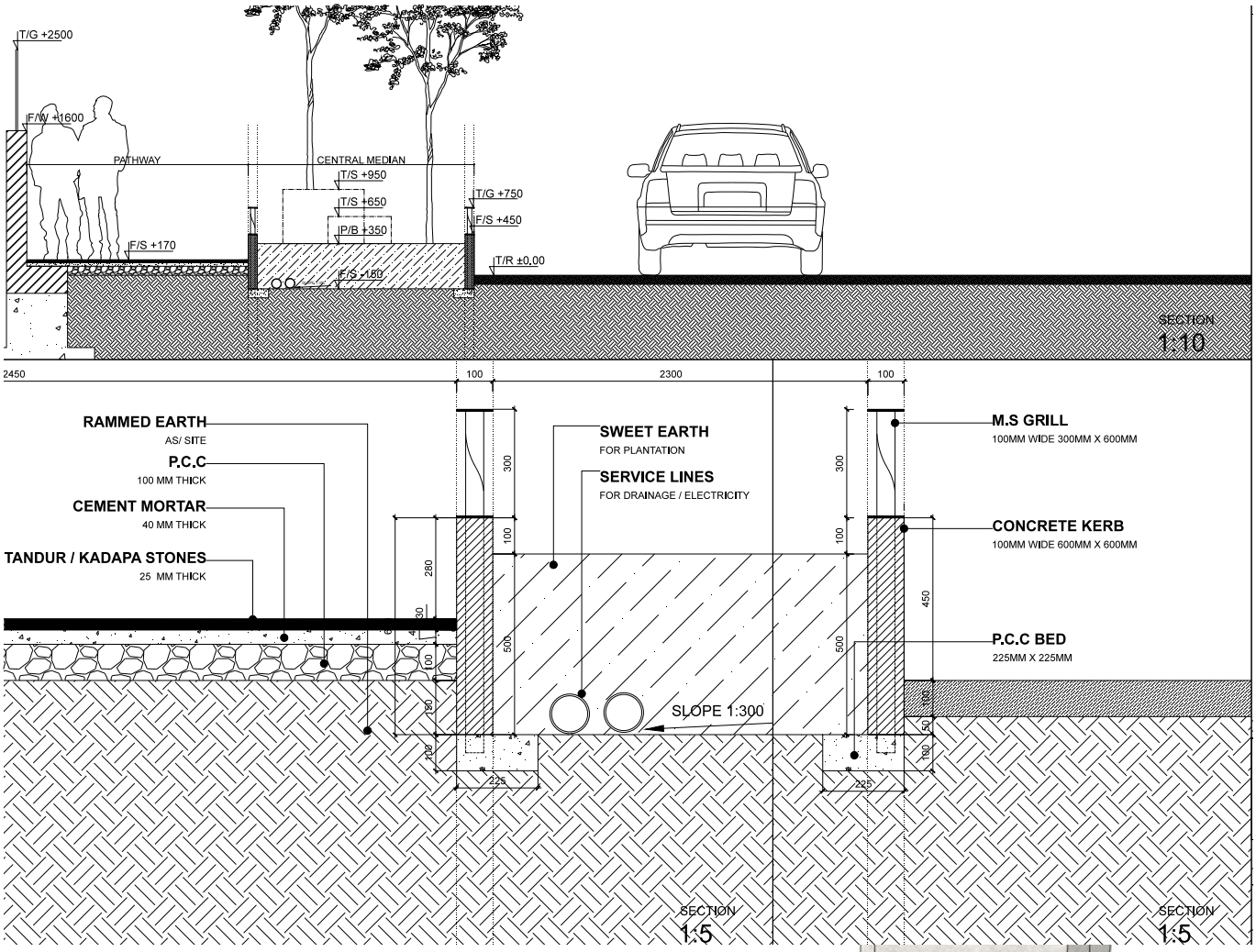
Customization in bio-diversity;
Customized slender columns;
Public use;
Aesthetic quality;
Intelligent navigation systems,
Decentralized Wastewater Treatment Systems,
Effecient plantation systems,
and smart energy solutions everywhere.

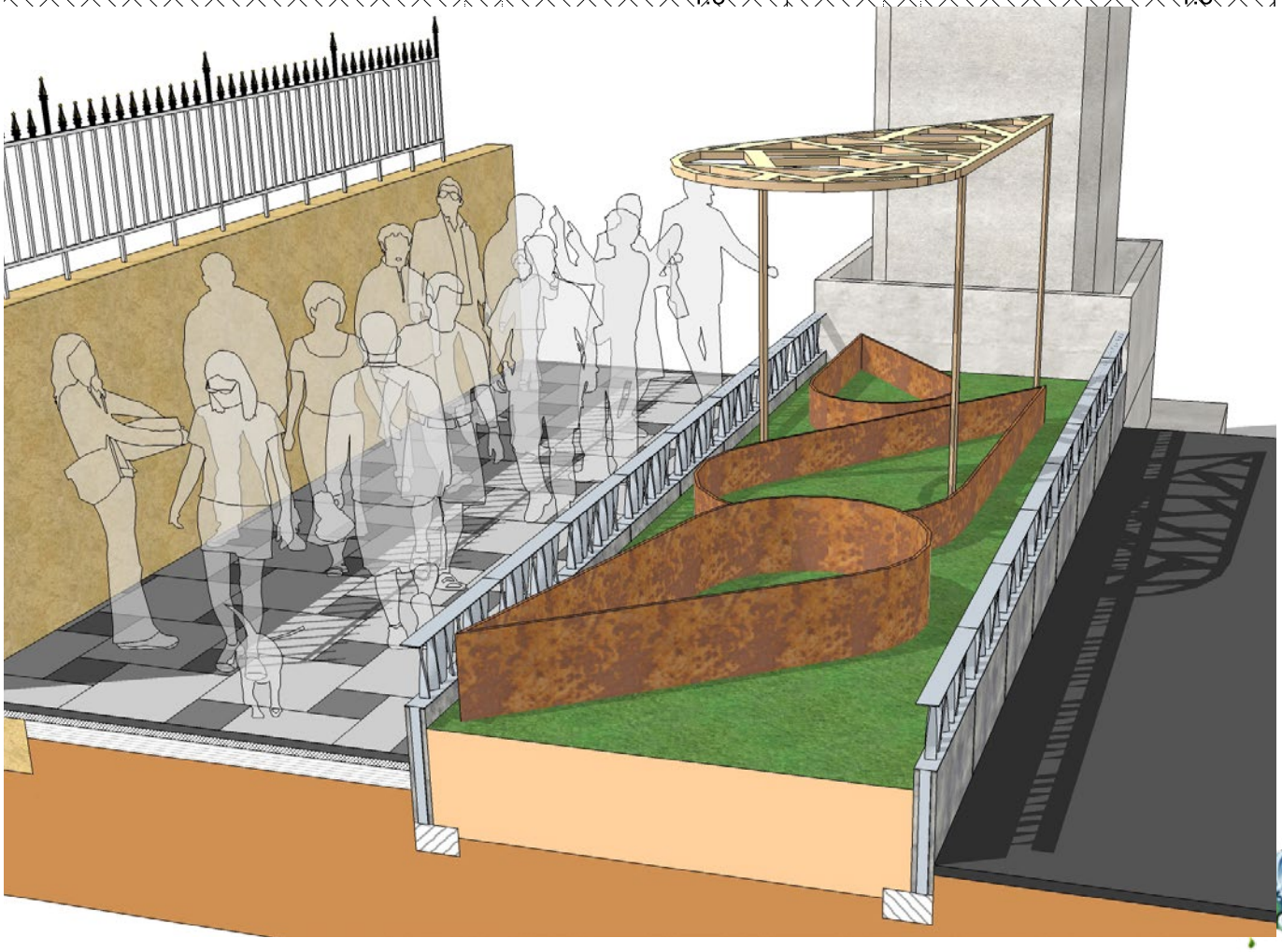
One has to use these to make oneself believe that quality of life would definitely go up.

It is a hands-on experience that will parallelly be learnt from the global standards HMDA have set


AA
SECTION BB
CLIMBER
FICUS REPENS
PALM
FOX TAIL
CORTEN STEEL
TRELLIS STRUCTURE
CLIMBER
BIGNONIA VENUSTA
RAPHIS EXCELSA
SPATHIPLYLLUM
CORTEN STEEL
PLANTER BOX
PROTECTIVE GRILL
GROUND COVER
WEDELIA TRILOBATA
SWEET EARTH
WALL
DIFFERENT GRILL DESIGNS
CUSTOMISED TO DIFFERENT
HYDERABADI FLAVOURS
SCALE
1:20
SCALE
1:20


DD
SECTION CC
CLIMBER
QUISQUALIS INDICA
CLIMBER
JACQUEMONTIA CREEPER
DIFFERENT GRILL DESIGNS
CUSTOMISED TO DIFFERENT
HYDERABADI FLAVOURS
STRUCTURE
GLASS REINFORCED CONCRETE
TOILETS
FOR PUBLIC USE
PROTECTIVE GRILL
WALL
FLOORING
SCALE
1:20
SCALE
1:20


T/G +2500
F/W +1600
PATHWAY
CENTRAL MEDIAN
T/S +950
T/S +650
IP/B +350
T/G +750
F/S +450
F/S +170
F/S -180
T/R ±0.00
SECTION
1:10
2450
100
2300
100
RAMMED EARTH
AS/ SITE
P.C.C
100 MM THICK
CEMENT MORTAR
40 MM THICK
TANDUR / KADAPA STONES
25 MM THICK
SWEET EARTH
FOR PLANTATION
SERVICE LINES
FOR DRAINAGE / ELECTRICITY
M.S GRILL
100MM WIDE 300MM X 600MM
CONCRETE KERB
100MM WIDE 600MM X 600MM
P.C.C BED
225MM X 225MM
SLOPE 1:300
300
100
280
30
500
100
150
700
225
450
150
50
700
SECTION
1:5
SECTION
1:5

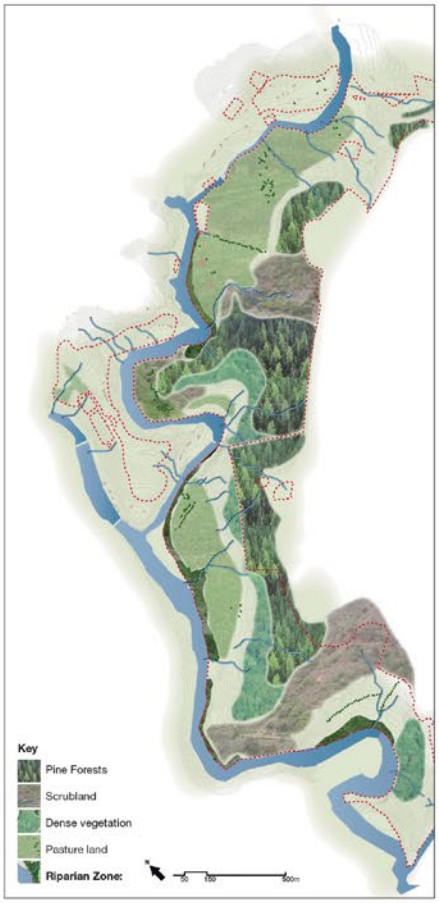


WORKING WITH BDP, INDIAN INSTITUTE OF TECHNOLOGY, MANDI.
550 HECTARES, WINNING PROJECT-2010

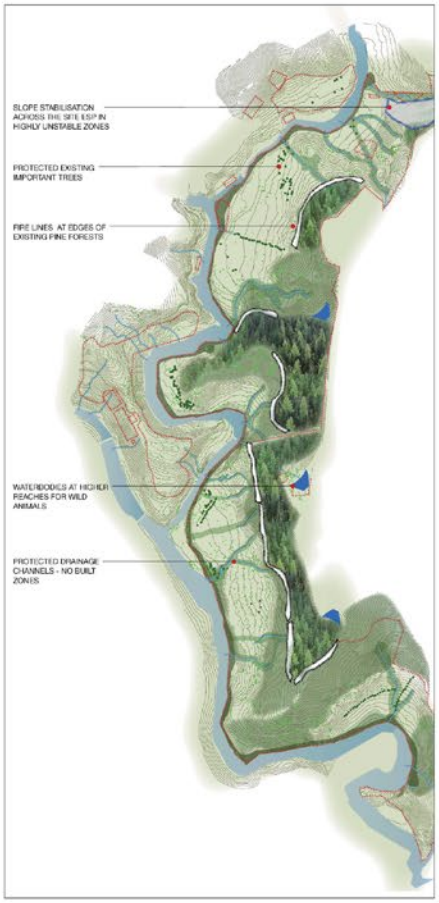
AN ECOLOGICALLY SENSITIVE SITE

HEALING : PROTECTING : ENHANCING : SUSTAINING

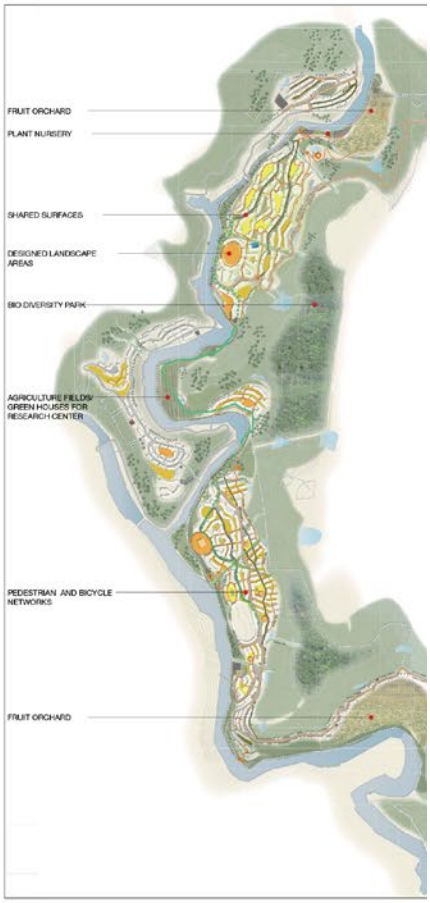
Ecological Study



Healing & Protecting



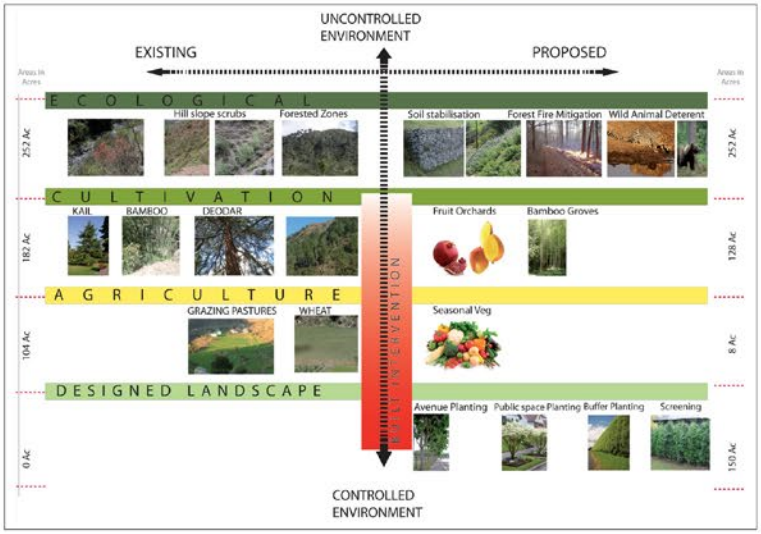
Sustaining & Enhancing



SITE AREA:	538 ACRES
Area as per masterplanning proposal are:	
AREA UNDER PRESERVED FORESTS:	141.5 ACRES
AREA UNDER STEEP SLOPES:	91.7 ACRES
AREA ON RIVERFRONT WITH HEAVY VEGETATION:	18.1 ACRES
AREA WITH IMPORTANT DRAINAGE CHANNELS:	9.1 ACRES
AREA UNDER SCRUBLANDS:	46.0 ACRES
AREA AVAILABLE FOR DEVELOPMENT:	**230 ACRES**
SITE AREA UNDER INTENSIVE DEVELOPMENT:	150 ACRES
AREA UNDER AGRICULTURE/ ORCHARDS:	35 ACRES
AREA AVAILABLE FOR FUTURE EXPANSION:	45 ACRES

A sensitive approach to the landscape and site conditions - to heal, protect, enhance and sustai the landscape, creating a more diverse environment which establishes an attractive setting for th buildings and amenities and which naturally integrates with its environs.

The site's setting is unique and has a compelling intrinsic natural landscape which requires minimal design intervention. Like the terrain itself, the landscape design is proposed to be dynamic in nature with the ability to continuously evolve throughout the life of the campus keeping pace with the changing situations and building pressures. The landscape design is intended to work 'with' the land rather than 'on' the land.



Landscape Interventions

Stabilising Slopes:
- indigenous species to strengthen and stabilize hill slopes - Scrub, Chir, Deodar & Sil cotton.
- gabion walls / dry retaining walls made of local stone
- crescent shaped landscape holding areas

Riparian Zone:
Along river edge, species like ivy, fig, wild pepper to bind the soil.

Water Management:
- Existing water run-off channels have been maintained
- Collection from hill slopes through check dams, ponds and percolation tanks

Wild life- flora & fauna:
- Indigeneous planting palette
- Wildlife threat- alternate sources of fresh water created at higher levels by diverting the natura run off to cater to some of the wild life, thereby reducing threat to life and property.

Forest Fires:
- adopt measures for spreading awareness - creation of 'fire lines' - 6-10 m wide strip around development - cleared of all elements which can sustain a fire.
- Planting of moisture retaining species of vegetation in certain areas to mitigate fire risk.

Enhancing and Sustaining the landscape:
- areas demarcated for cultivation of fruit orchards and agriculture
- nurseries to develop and enhance the proposed planting
- bio-diversity park at the upper levels: Conservation zone for protection of native species.

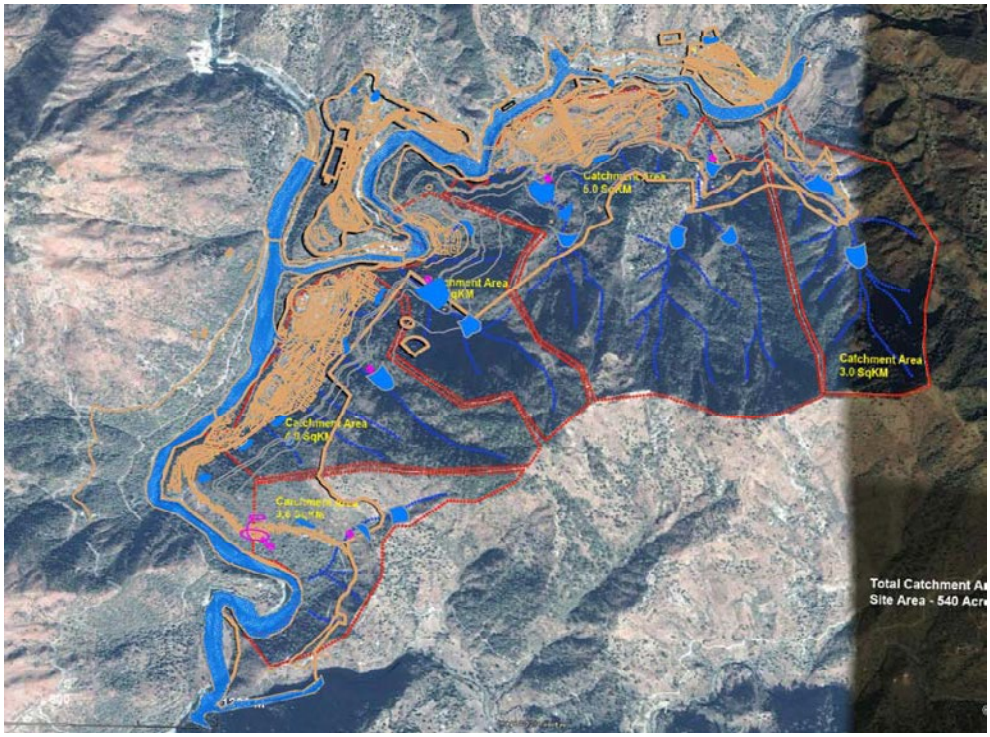
3. Resource Management:

A. Water management:

Management of water resources, including water conservation, integrated rainwater collection, efficient irrigation schemes and waste water recycling and re-use systems will be incorporated.

Rain water from the catchment area will be collected in ponds constructed along the natural flow lines of water. These ponds are located at level higher than the buildings and hence treated water will be supplied through gravity. Ponds will interconnected for efficient management and sized to provide water security for entire year.

Water from STP will be used for orchards and landscape. Water from STPs of Phase 1 can be used for orchards, landscape and building supply – all located downstream. This This would eliminate the need for pumping water to higher level and thus reduce carbon footprint of water supply system. Decentralized collection and treatment of waste water will certainly reduce the burden on the *nallah* and river.



Tentative Rain Water Collection strategy:
Ponds along rain water flow in catchment area.

B. Waste Management:

The campus has been designed targeting towards zero waste.
Waste minimization is the first step in achieving this goal. The same has been envisaged through the life cycle of the project design, construction and occupancy phases.
100% of the construction waste will be diverted from landfill. The construction waste such as excavated soil will be used on the roof tops for “BROWN ROOFS”.
Construction waste will also be used for backfilling purposes, landscape features such as mounds, hard surfaces, water proofing infill on terraces and toilets.

Sustainable Approach

4. <u>Plantation / biodiversity planning:</u>

Landscape planning will be in consideration to the site terrain, geology, microclimate, indigenous vegetation. Plantation schemes will aim towards biodiversity enhancement and enrichment of the ecology. Incorporation of "BROWN ROOFS" with the built forms will aim at enhancing the biodiversity living on roof top. BROWN ROOFS would allow for native species to colonize over the roof over a period of time with minimum human intervention. This strategy helps rejuvenate the local species that are disturbed due to construction activities.

Trees that have to be felled for construction activities will be marked and for every tree cut, three more trees of native species will be planted within the site. Efforts will also be made to stabilize the slopes with additional not within the project boundary.

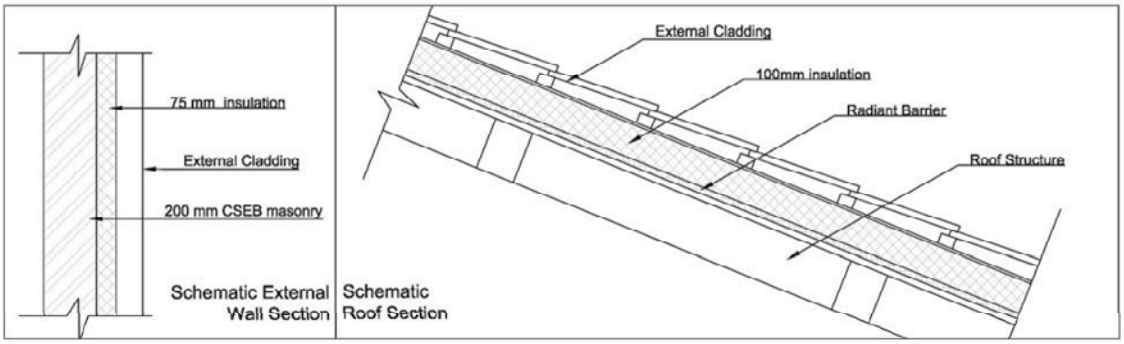
5. <u>Building materials and construction techniques:</u>

Use of low embodied energy building materials with due consideration for appropriate U-values and SHGC as per climatic parameters has been suggested in ECBC.

Roof : Over-deck roof insulation with radiant barrier to reduce heat loads from direct solar radiation. Brown roof will also be provided at strategically.

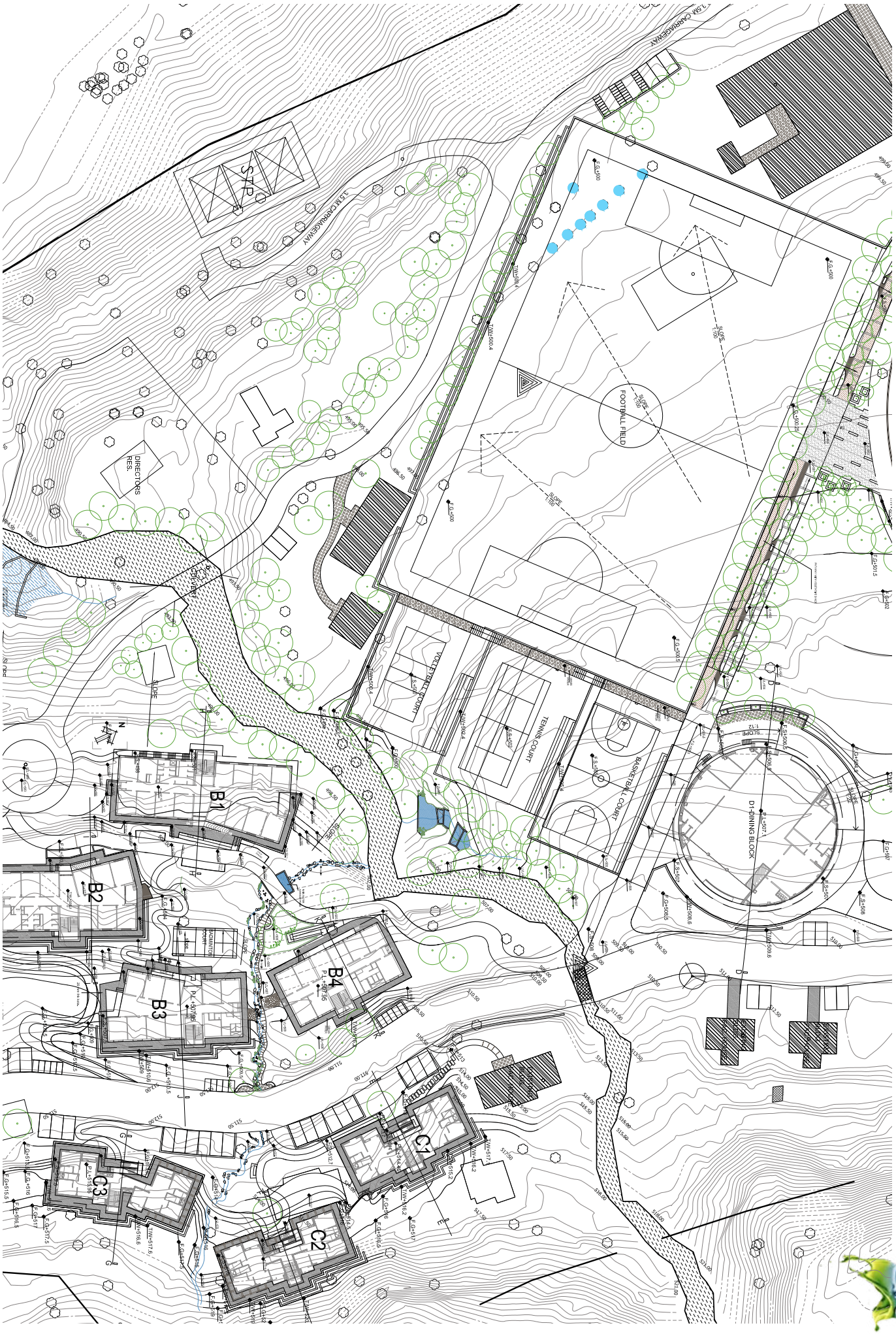
Wall: Wall section is composed of Compressed Stabilized Earth Blocks on inside, followed by 75mm insulation and external cladding as per architectural details. CSEBs would provide necessary thermal mass to the building while insulation along with cladding will help reduce heat transfer.

Glazing: Double glazed units with ample shading for summer sun.



6. Other important parameters that will be assessed while considering green building principles and technology systems:

- Cost benefit ratios and pay back periods
- Environmental benefits
- Comparison with conventional practices
- Management and maintenance


FOOTBALL FIELD
VOLLEYBALL COURT
TENNIS COURT
BASKETBALL COURT
DINING BLOCK
B1
B2
B3
B4
C1
C2
C3
DIRECTORS RES:
3.5M CARRIAGEWAY
SLOPE

WORKING WITH BDP, INDIAN INSTITUTE OF TECHNOLOGY, JODHPUR WINNING PROJECT-2010

SECTION A-A' LOOKING WESTWARDS

Landscape Masterplan

Enhancing existing agriculture with additional moisture captured from dew Catchers

Bamboo and geo-fabric **Dew Catchers** to capture moisture from NE winter winds

Bio-Swale for capture, storage and percolation of excess water in 1st Phase.

Ground Covers and shrubs for **soil stabilization** on the berms

Agro Forestry

Testing Grounds for Desert Research Center (One Acre each)

Scrub Land near the Desert Research Centre.

Dust and Noise buffer planning along the Highway

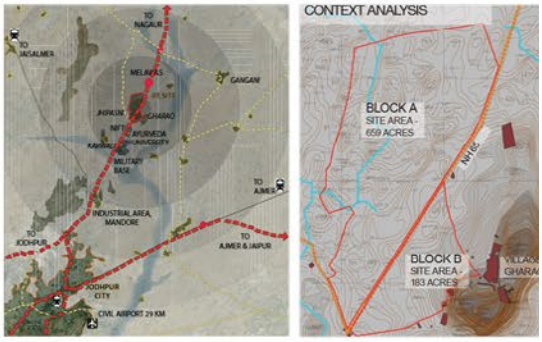
Bio-Diversity Park located south of the Campus near Jhipasini Village. This can serve as habitat to various species of birds and local flora.

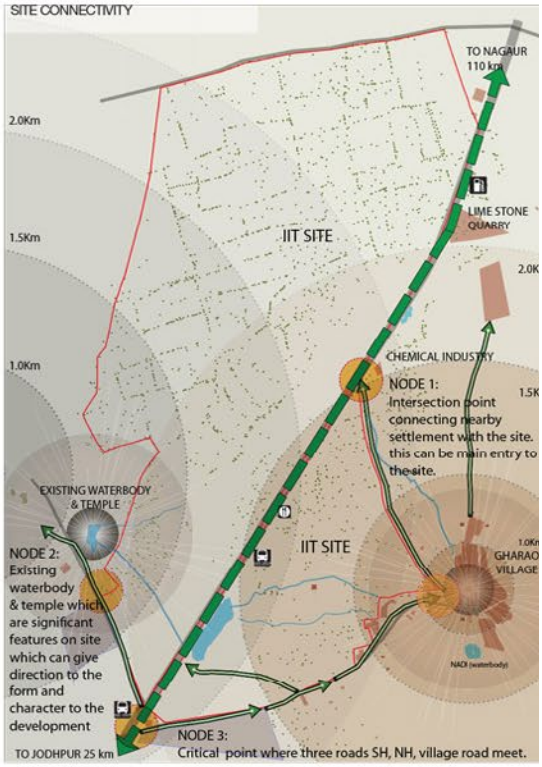
Herbs and medicinal planting integrated under the Solar Farm

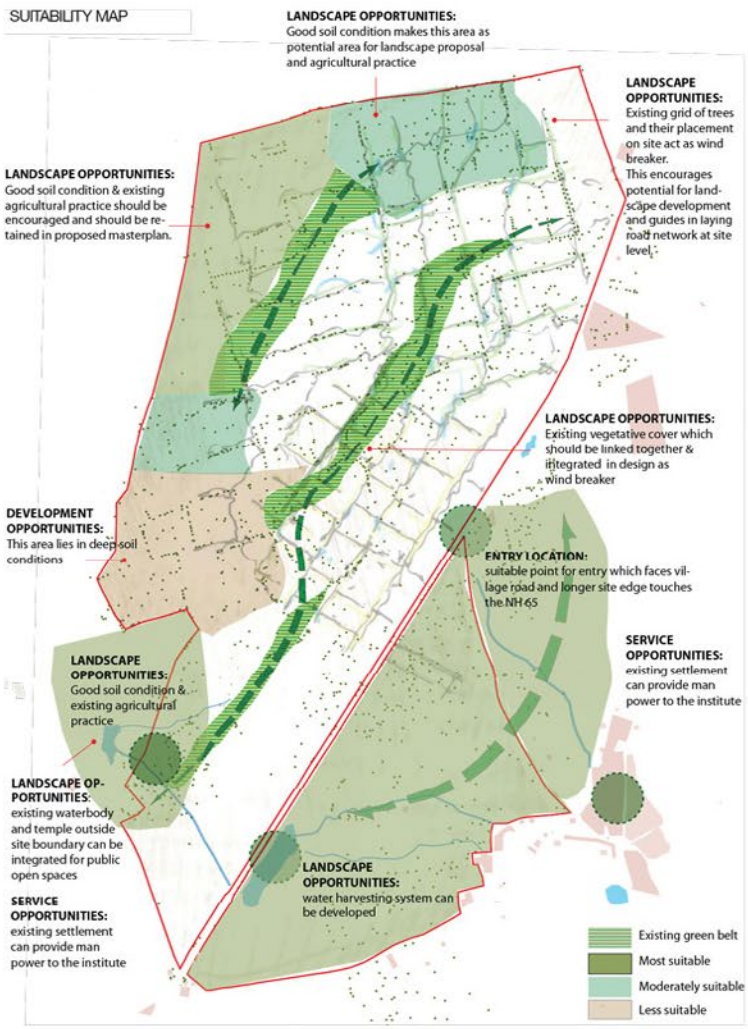
Environmental and Site Planning Issues

The new campus will be a physical manifestation of the aims and ambition and character of IIT Rajasthan. The built form will need to be designed to become a beacon of engineering excellence which is inspiring and sensitive to its natural surroundings, together creating a place which will leave a very strong impression on everyone who will live, work or visit. Key features of our approach include:

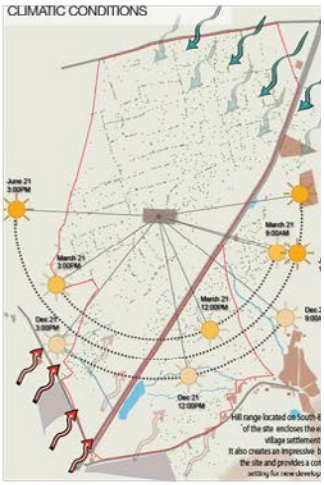
- The campus will be designed to act as a **living laboratory**, taking opportunity to use all aspects of the campus as a research centre, putting best practice into operation, then monitoring and evaluating the results with a view to promoting the solutions for use in the wider world.
- The landscape approach will heal and repair the ground, and create better natural habitats, which in turn improve bio-diversity.
- The master plan must integrate a good transport infrastructure including bus links to the city and outlying settlements and safe and attractive pedestrian and cycle links to surrounding settlements.
- The master plan and the buildings, routes and spaces between and around them, have been carefully considered to ensure maximum passive measures are designed into the design.



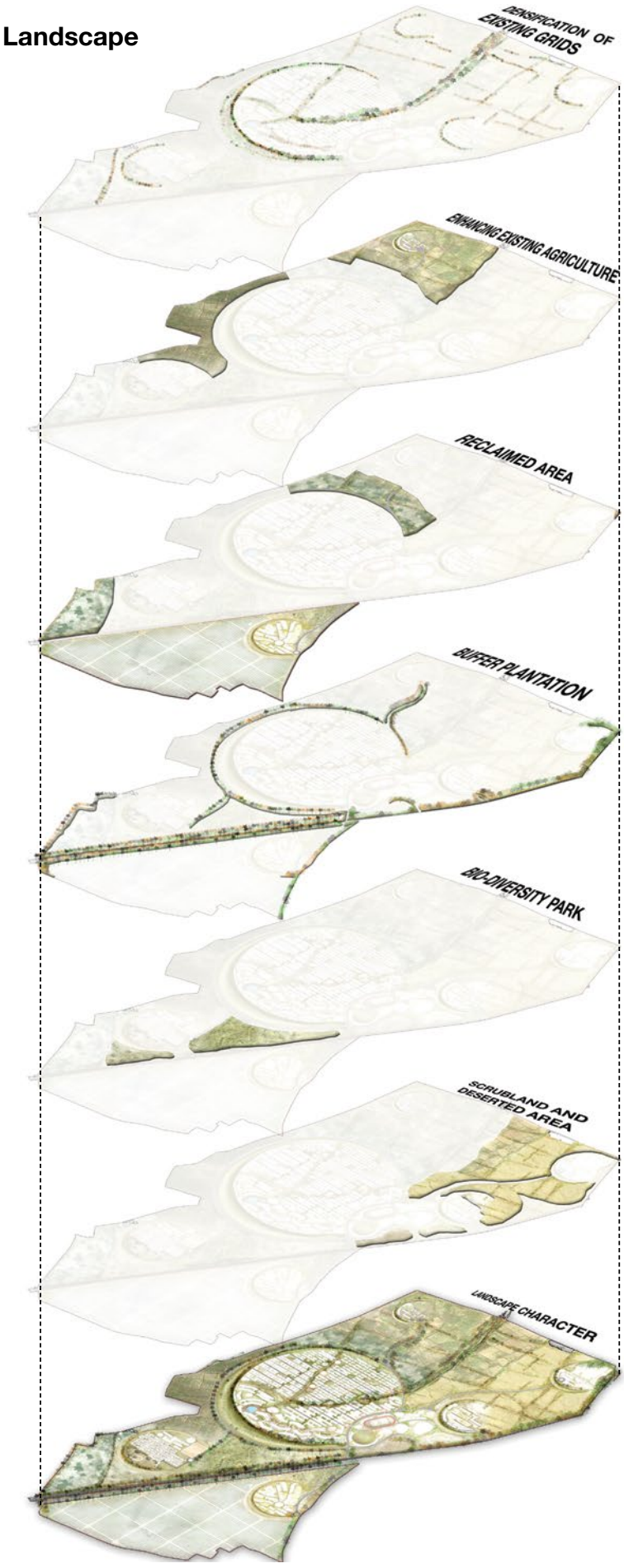




The predominant summer wind direction is from the south west heading diagonally parallel to the highway towards the north east. These are hot winds (loo) and carry a lot of dust. For a small duration during the winter, cold winds head in the opposite direction.



Landscape



The site's setting is unique and has a compelling intrinsic natural landscape which requires minimal design intervention. A conventional approach to landscape design would not work in this context as it would take away from the site's inherent natural beauty and jeopardize it's ecological balance. Our proposal focuses on a defining a 'functional' landscape where the major interventions revolve around connectivity and movement within the campus. Like the terrain itself, the landscape design is proposed to be dynamic in nature with the ability to continuously evolve throughout the life of the campus keeping pace with the changing situations and building pressures. The landscape design is intended to work 'with' the land rather than 'on' the land.

The Masterplan proposed a free-flowing, loosely knit structure of open spaces around the built. The majority of the site has been retained in its existing natural setting with minor interventions that help heal and protect the natural ecology. The hierarchy of circulation, encourages pedestrian and bicycle movements that connect and bind the proposed development without imposing on the land.

Our landscape strategies include a number of zones which are:

1. Densification of existing grids- there are some existing grids of trees on prior agricultural field divisions. It forms the grain of the site's landscape which should be densified and enhanced. This acts as a thread that ties up the entire plan.

2. Enhancing existing agriculture - existing agriculture should be encouraged and enhanced by involving the community and introducing new technologies. These can be subdivided into agri-silviculture, agri-horticulture, horti-pasture & water-less agriculture.

3. Reclaimed Area - existing scrubland needs to be reclaimed in different stages to achieve sustainable growth and development in the future.

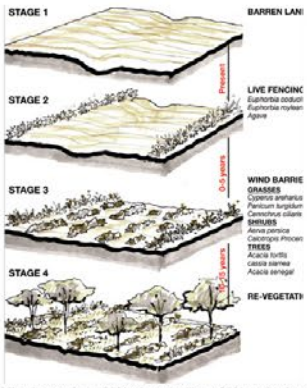
4. Buffer Plantation - 20 m wide along the main highway to screen campus from noise and pollution.

5. Biodiversity Park - located south of campus near existing water body in village Jhipasini, due to which there is a lot of bird movement from different areas. This area can become a suitable habitat for these species.

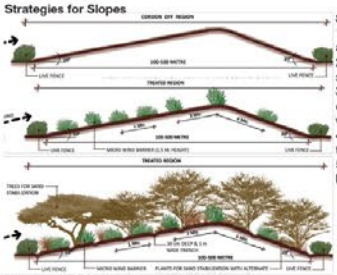
6. Scrubland & Deserted area - located to the north-eastern corner of the campus. This space has been left in its natural condition, at the centre of which exists the Desert Research Institute and existing fauna adn flora typical to the desert regionw ill be encouraged here.

Biodiversity & Ecology

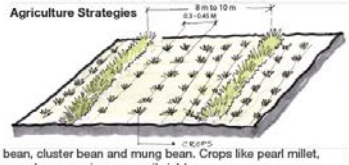
Phasing Plan for Open Areas



Strategies for Slopes



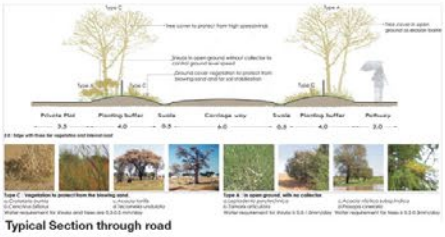
Agriculture Strategies



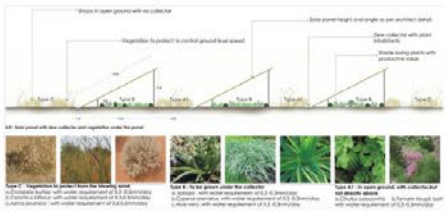
Strategies to be followed in all phases

1. Densification of existing trees on agricultural bunds.
2. Plantation scheme in different areas on site.
3. Reclamation process on different parts of site (Live fencing - Wind Barrier - Re-vegetation)
4. Encourage the existing agriculture through various strategies in all phases
5. Construction of small berms as part of landscape element.

Importance of Biodiversity Park
Avi fauna - Bio Diversity Zone - Existing Waterbodies



Typical Section through road

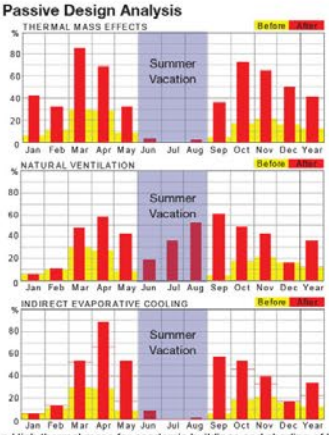


Typical Sections through Solar Park

Mixed cropping - 75% of pearl millet + 25% each of moth bean, cluster bean and mung bean. Crops like pearl millet, sorghum and maize with legumes like clusterbean moth bean and cowpea increase soil yield
Intercropping - Grasses like dhaman (Cenchurus ciliaris) and sewan (Lasiurus sindicus) with grain legumes like moth bean, clusterbean or mung bean increases the fodder yield.

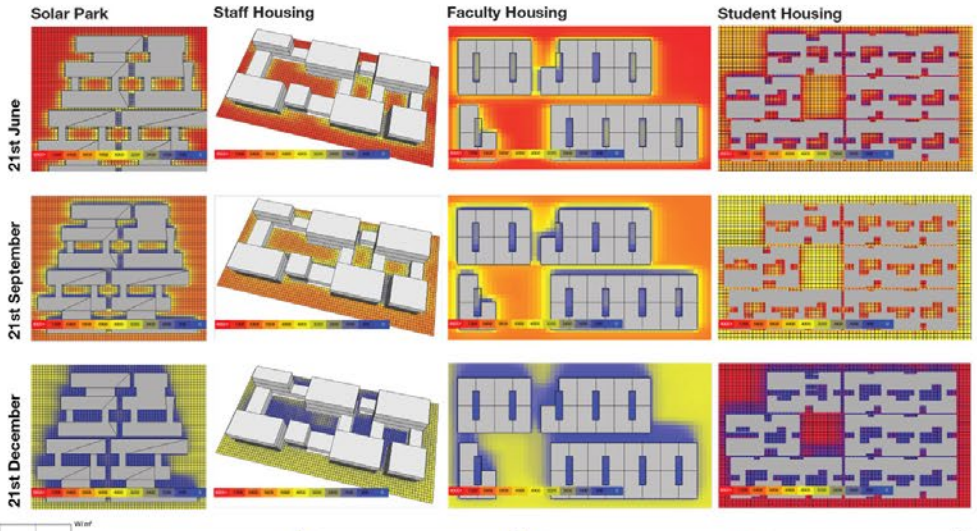
Microclimate

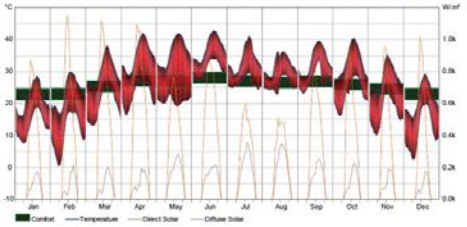
Passive Design Analysis



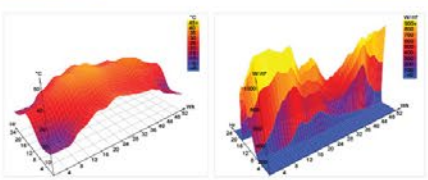
- High thermal mass for academic buildings and shading of built mass, especially for windows will be important.
- Air-conditioning will be required for academic buildings as they will be occupied during the day when the temperatures are highest.

Solar Insolation Per Design Typology Showing Shaded Streets and Beginnings of Outdoor Thermal Comfort Analysis

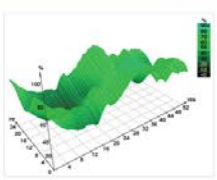




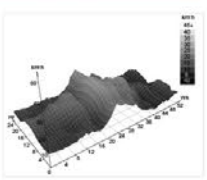
Monthly Diurnal Averages
For most times of the year, temperatures are above the green comfort band - with large diurnal variations, typical of a desert climate.



Temperatures and Direct Solar Radiation
- Landscape shading from trees and vegetation is desirable. This has the added advantage of cooling from evapotranspiration of plants.
- Direct solar radiation is available in abundance throughout the year. This presents an opportunity to use solar photovoltaic panels for renewable power generation on site on a continuous basis.



Relative Humidity
Jodhpur has a very low relative humidity (between 15 – 35%) during the day. Humidification will be required in controlled environments for thermal comfort.



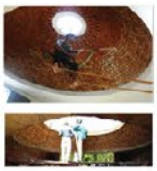
Wind Speed
The current site layout deflects the hot dusty winds away from the buildings through the use of large crescent-shaped berms.

Sustainable Building Guidelines

Building Construction Methods

These construction methods are endemic to the area, these effectively reduce the steel usage in the buildings reducing the ecological foot print of the buildings. Their use helps build sustainably strong relationships with the local population and bring them benefits like employment and security.

Vaults/Domes



Rammed earth block construction

Stone Lintels and arches

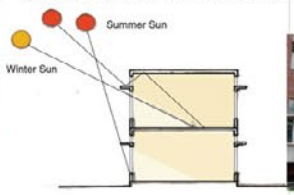
Stone patti roof slabs / Precast Reinforced concrete slabs

Gabion walls

Sandstone cladded walls

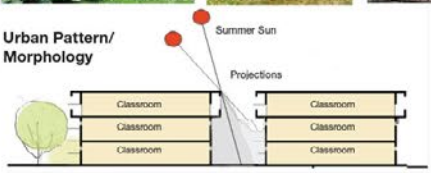
Thermal comfort oriented features

Appropriately designed shading devices - along with suitably placed lightshelves, vertical fins help cut off the unwanted radiation and glare, and aid better diffused lighting inside the usable space.



Earth coupled buildings - Earth Berms help insulate the buildings and reduce heat gain, effectively maintaining thermal comfort inside the built envelope.

Urban Pattern/ Morphology



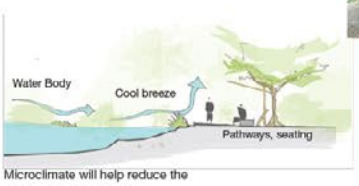
Section through the courtyard

Insulation - Insulation on roof and in walls will help reduce the heat load of the building

Colour of Roofs

Solar Chimneys aid ventilation without the need of electrically powered exhaust systems these along with wind catchers coupled with indirect Evaporative Cooling (in limited areas) aid thermal comfort.

The streets will be narrow, suitably shaded in the summers to allow for comfortable pedestrian movement. The mutual shading of the streets is possible due to compact, dense settlement pattern.
Courtyards with waterbodies and planted trellis at the roof level will keep the street shaded. The planted trellis on top helps in evapotranspiration and maintain good thermal comfort.
The various roofs will be either green (vegetated), blue with Solar photovoltaic panels, black with solar hot water panels or white with high albeido finish. These roofs help mitigate urban heat island effect.



Microclimate will help reduce the surrounding temperatures

HVAC System Strategies

System	Strategy	Features
Radiant cooling		● Low energy ● High Efficiency ● High Thermal Comfort ● More Healthful than Air-Based Systems ● Low overall lifecycle cost ● Local lack of familiarity with the system
Displacement ventilation		● Much cleaner air for occupants (IEQ) ● Reduced cross contamination between occupants ● Greater ventilation effectiveness ● Reduced power consumption ● Better acoustics (less air noise) ● No drafts ● Lower equipment cost ● Higher initial cost
Enthalpy wheels		● These wheels are quite compact and can achieve high heat transfer effectiveness ● Heat wheels have a relatively low air pressure drop, typically 0.4 to 0.7 in. of water ● Adds to the first cost (and maintenance) and to the fan power to overcome its resistance ● Requires that the two air streams be adjacent to each other
VRV / VAV		● Fan energy savings ● Modularity (good for future expansion) ● Simultaneous heating and cooling possible without a seasonal changeover ● Reduced air circulation can cause IEQ issues ● Indoor mechanical noise changes frequently
Chilled beams and chilled ceilings		● Reduced Ductwork ● Reduced AHU sizes and Fan Energy ● Reduced deck to deck height ● Quiet Operation ● Multi-service chilled beams possible ● High costs ● Limited experience and limited vendors
Heat pumps		● High Efficiency ● Less Maintenance ● Performance changes with outdoor temperature ● Can be noisy

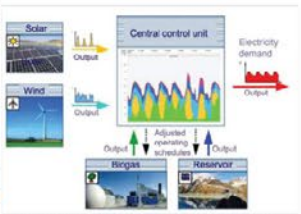
Energy Efficient System Guidelines

Some of the key features for energy efficiency on campus will include smart choices for efficient systems as well as the use of ICT to monitor and benchmark the energy use constantly. This contributes to the campus being a "Living Campus" where the energy using systems are monitored by the Operations and Maintenance team as well as making the campus itself an educational tool for all stakeholders.

Solar Powered Street Lighting

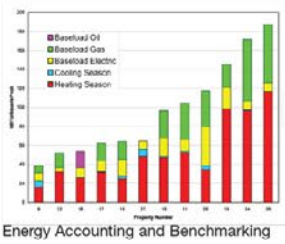
Sensor Based Outdoor Lighting Controls

Central Plant

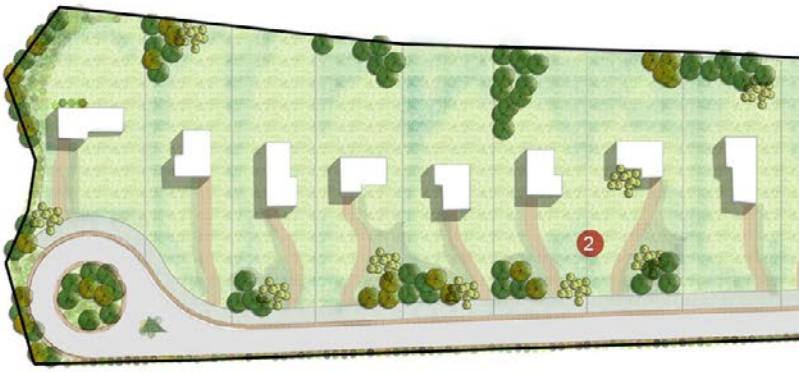


Central Controls for Energy Monitoring

Efficient Cooling Towers



Energy Accounting and Benchmarking



LARGE SCALE RESIDENTIAL

Kondhwa Master Plan, Maharastra
Scope: Landscape Architecture
Project year : 2013-2014
Total LA Area : 5,60,350 sft.
Project Cost : Undisclosed
Project Duration : 10 months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11
14

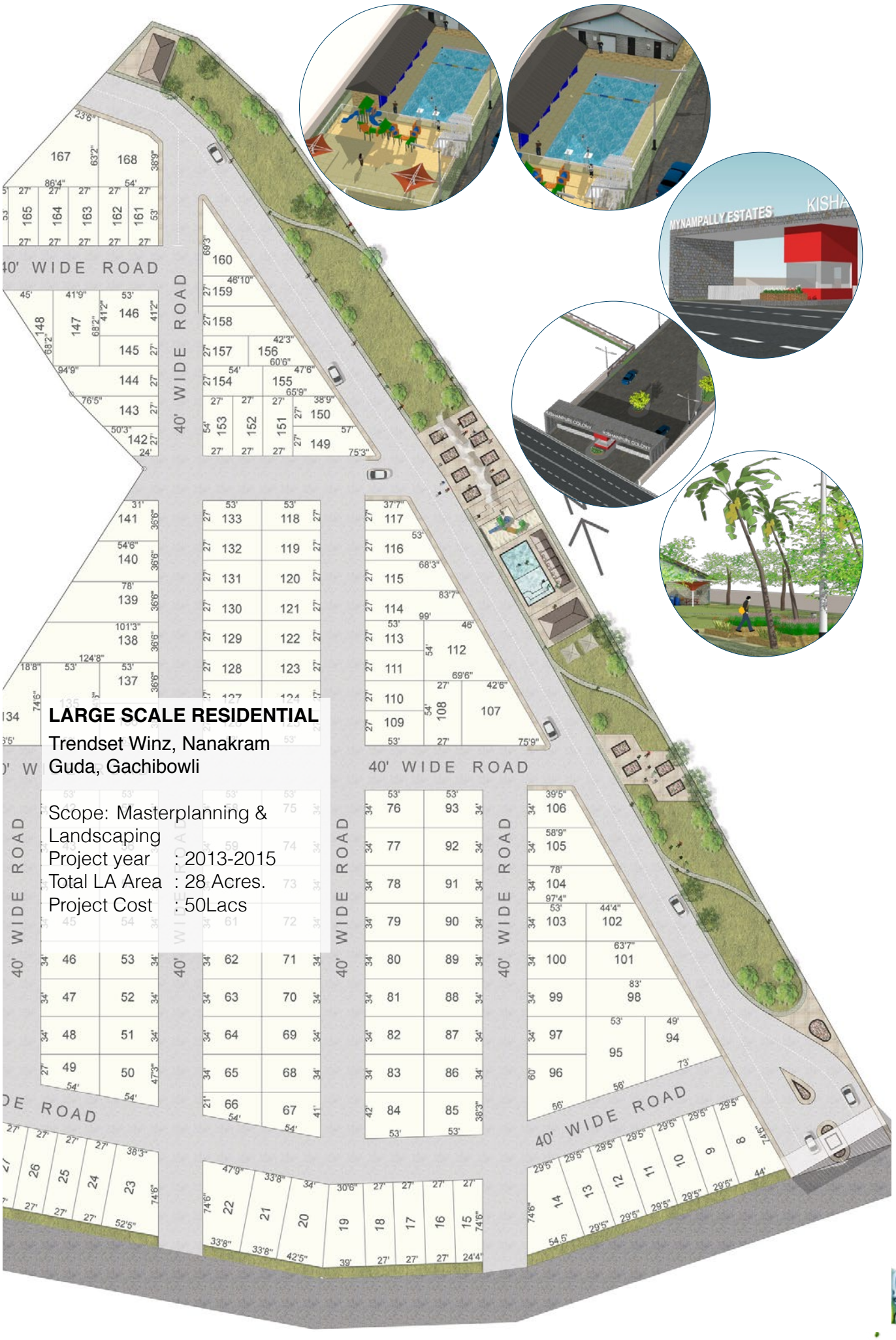
LARGE SCALE RESIDENTIAL
Amstoria Villas, Gurgaon.

Scope: Landscape Architecture
Project year : 2011-2012
Total LA Area : 50 Acres sft.
Project Cost : 10 Crores
Project Duration : 12 months

LARGE SCALE RESIDENTIAL

Trendset Winz, Nanakram Guda, Gachibowli

Scope: Landscape Architecture
Project year : 2011-2012
Total LA Area :40,350 sft.
Project Cost : 70 Lacs
Project Duration : 9 months



LARGE SCALE RESIDENTIAL

Trendset Winz, Nanakram
Guda, Gachibowli

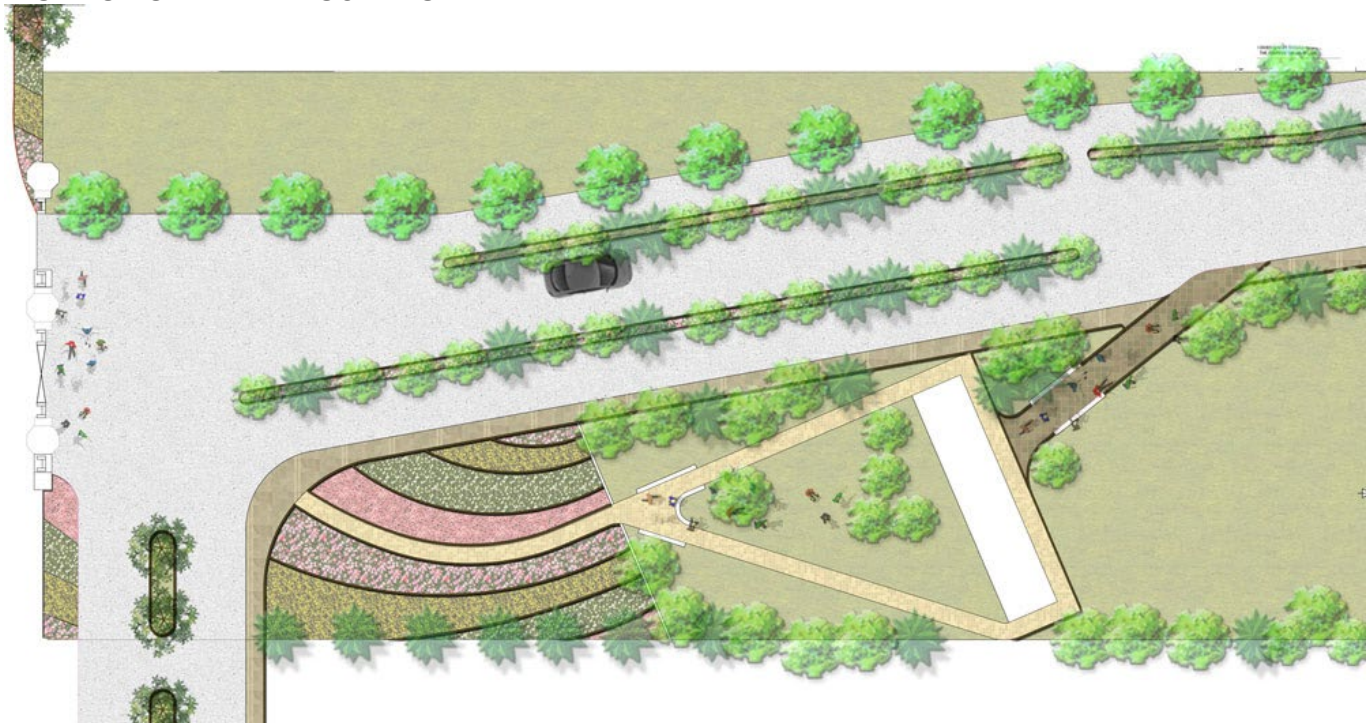
Scope: Masterplanning & Landscaping
Project year : 2013-2015
Total LA Area : 28 Acres.
Project Cost : 50Lacs

INDUSTRIAL LANDSCAPES

Vega conveyors and automation Ltd.

Scope: Landscape Architecture
Project year : 2012-2013
Total LA Area :25,000 sft.
Project Cost : 12 Lacs
Project Duration : 5 months

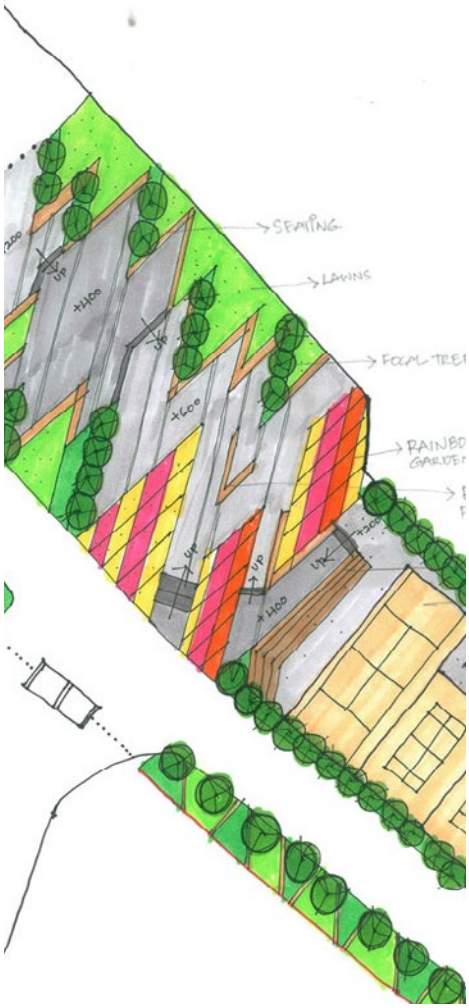
INSTITUTIONAL LANDSCAPES

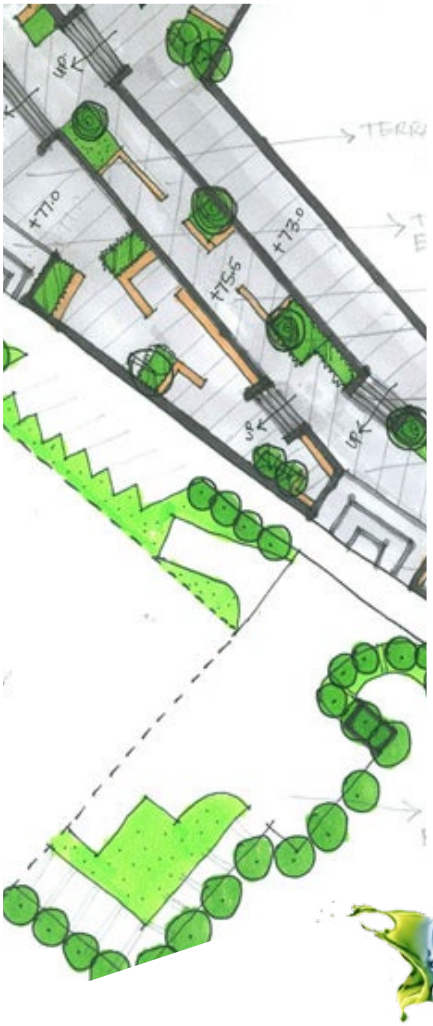


Global and Vivekananda Engineering

Scope: Landscape, Architecture
Project year : currently running
Total LA Area :6 Acres
Project Cost : -
Project Duration : 36 months

Orient cement Pvt Ltd.
Scope: Landscape, Architecture
Project year : currently running
Total LA Area :100 Acres
Project Cost : -
Project Duration : -





COMMERCIAL LANDSCAPE

Rudrasree Housing, Shad Nagar

Scope: Landscape, Architecture
Project year : currently running
Total LA Area :4 Acres
Project Cost : 14 Crores.
Project Duration : 36 months

RV Nirman, Madhapur

Scope: Landscape
Project year : 2012-2013
Total LA Area :10,350 sft.
Project Cost : 12 Lacs
Project Duration : 6 months

Thank you for your patience