



G O S S Y P I U M

ANDC 2020-21

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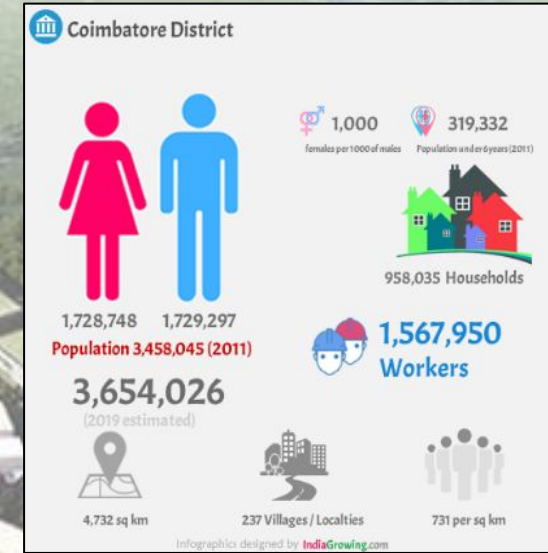
COIMBATORE

It is also known as Kovai, is a major city in the Indian state of Tamil nadu and located on the banks of the noyyal river and surrounded by the western ghats. It is also referred to as "Pump City" for supplying nearly half of India's requirements of motors and pumps. The city is one of the largest exporters of jewellery, wet grinders, poultry and auto components.



POPULATION

Ratio of population:
 Males – 50.08%
 Females -- 49.92%
 Literacy rate – 89.23%



LOCATION

It is located in gandhipuram. The bus terminal has a north facing entrance. It is the hub of the city.



SITE DELINEATION

The study area includes:
 Thandumariamman temple



Coimbatore central railway station



Government hospital
 KG cinemas
 Government arts college

INFORMATION

50,000 passengers/day. About 576 buses making 1665 trips a day with a peak no. of trips of 69 / per hour. It covers almost 14 different destinations.

Moffusil routes
Avinashi
Andhiyur
Anaikatti
Tirupur
Sathiyamangalam
Erode
Salem
Mettupalayam
Dharapuram
Bhavani
Palladam

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FACILITIES

- Paved with tiles on the platform for the comfort passengers
- Plenty of restaurants surrounded by for ex:Annapurna,covai mess
- Cloak room
- Drinking water facility
- Municipal transport office
- Atm
- Pharmacy



SWOT ANALYSIS

STRENGTH:

It is located in the centre of the city.
It serves a distance of minimum 2km from main junction of the city

WEAKNESS:

Lack of infrastructure facilities
Location of two separate terminals make itdisguisive

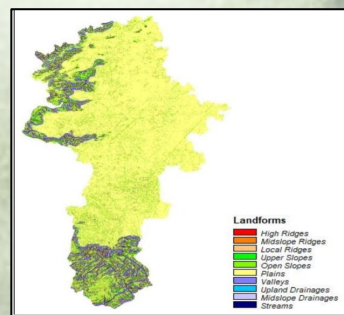
OPPORTUNITIES:

Construction of G+1 STOREY bus stand would serve the purpose
Sustainable buildings

THREATS:

Too much of noise pollution
Accident prone zone due to improper allocation of bus bays

TOPOGRAPHY



S. No	Classes	Area (ha)	Area (%)
1	High ridges	14460.84	2.87
2	Midslope ridges	22352.31	4.44
3	Local ridges	4064.94	0.80
4	Upper slopes	23222.88	4.62
5	Open slopes	304987.68	60.70
6	Plains	76952.16	15.31
7	Valleys	14137.56	2.81
8	Upland drainages	2143.26	0.42
9	Midslope drainages	23356.17	4.64
10	Streams	16707.96	3.32
	Sum	502385.76	100

WIND DIRECTION

It has wind direction in south east at a speed of max of 22 km/hr.

every 6 hours	hourly	Speed	Peak	Direction
Local Time	19:30 IST - 19:30	km/h	km/h	degree
2020-07-17 17:30	22	4	-	200° S
2020-07-17 11:30	15	3	-	230° SW
2020-07-17 05:30	22	4	-	200° S
2020-07-16 23:30	11	2	-	200° S
2020-07-16 17:30	19	3	-	200° S
2020-07-16 11:30	22	4	-	200° S
2020-07-16 05:30	9	2	-	200° S
2020-07-15 23:30	19	3	-	200° S
2020-07-15 17:30	28	4	-	230° SW
2020-07-15 11:30	15	3	-	180° S

Temperature Humidity/Visibility Wind Show
Precipitation Clouds Pressure

Last updated: Fri, 17 Jul, 17:52 IST

SUN ORIENTATION

The building retains maximum heat at the time of 3.00 pm – 5.00 pm in north west direction

Daylight
06:07 – 18:49
12 hours, 42 minutes

Current Time: 17 Jul 2020, 23:00:24
Sun Direction: 325.96° NW ↙
Sun Altitude: -51.37°
Sun Distance: 152.044 million km

Next Equinox: 22 Sep 2020 19:00 (Autumnal)
Sunrise Today: 06:07 → 68° East
Sunset Today: 18:49 ↙ 292° Northwest

PRECIPITATION

October and november recieves the maximum amount of rainfall of 151 mm and 172 mm.

	Avg. Temperature (°C)	Avg. Temperature (°F)	Precipitation/ Rainfall (mm)
January	24.5	76.1	8
February	26.1	79.0	9
March	28.3	82.9	12
April	28.9	84.0	53
May	28.4	83.1	75
June	26.3	79.3	35
July	25.3	77.5	41
August	25.8	78.4	30
September	26.1	79.0	44
October	26	78.8	151
November	25.1	77.2	172
December	24.3	75.7	39

NOISE POLLUTION

It has noise pollution in south direction due to the location of public bus stand opposite.

IMPORTANCE OF BUS TERMINAL

Transportation sector is the second largest sector in India and it consumes 18 – 20% of national primary energy. So it is important to develop a sustainable bus terminal for the people. A bus terminal should be aesthetically pleasing to increase ridership.



WHY REDESIGN ?

Being the hub of the city, it lacks in intermodal facilities make it tough for the passengers to have a seamless journey. Inadequate shelter is a major demerit of the bus terminal as people face hard times in summer. As well the terminal can accommodate only 100 buses but there are 576 in total that fleet each and every day. Lack of sanitation facilities and cleanliness. Road congestion leads to frequent traffic.

WHY COTTON AS CONCEPT?

Cotton has been the pride of Coimbatore. The name Manchester of India has been entitled to Coimbatore because of cotton production and so we decided to bring up the concept of cotton in to the infrastructure of Coimbatore busstand.

The concept of cotton has been used in construction materials and structure to emphasize it magnificently.

It is a soft, fluffy, staple, natural fibre. It has a property of breathability.

MANCHESTER OF SOUTH INDIA

It was around this time that spices, agricultural implements, cornelian jewellery and cotton textiles were exported from Kongunad to Rome.

Over a hundred ports continued to export textiles from southern India, and India was a leading producer of textile goods for centuries.

They came along with their seeds and began cultivating cotton in the black cotton soil of the region .

By this time, Coimbatore came to be known as " the Manchester of South India".

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PUBLIC FACILITIES

Total no. of person at peak hours : $78 * 576 = 44,928$ approx.

No of WCS required as per NBC :

Male : 4 for first 1000 persons and 1 for every subsequent 1000 persons

Female : 5 for first 1000 persons and 1 for every subsequent 1000 persons

No of wash basins required as per NBC : 25 wash basins for first 1000 persons

Seating space : $100' * 50' = 5000'$

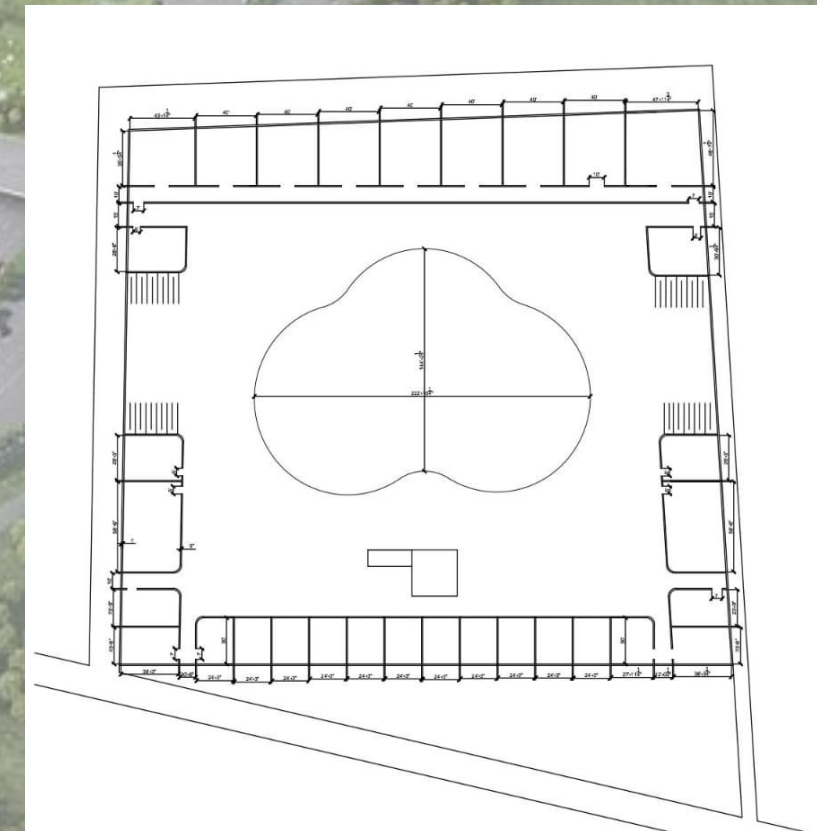
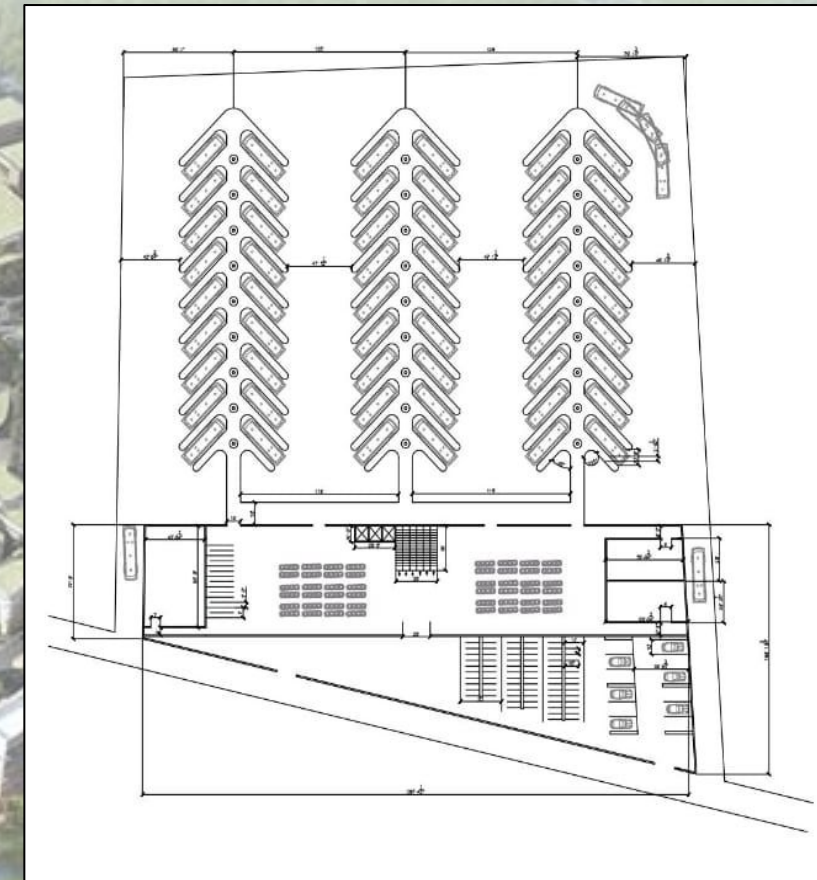
No. of seats = 120 seats with social distance of 3'

GROUND FLOOR AREA

PARKING AREA	65'X165'
WAITING AREA	50'X180'
TICKET BOOTH AREA	70'X45'
TOILET AREA	60'X120'
ESCALATOR AREA	30'X30'
BUS BAYS AREA	320'X400'

FIRST FLOOR AREA

WAITING AREA	180'X320'
TOILET AREA	100'X80'
FOOD COURT AREA	160'X50'
ESCALATOR AREA	30'X30'
BUS TERMINAL STAFF AREA	60'X380'
SHOPS AREA	30'X300'
COTTON STRUCTURE AREA	145'X220'



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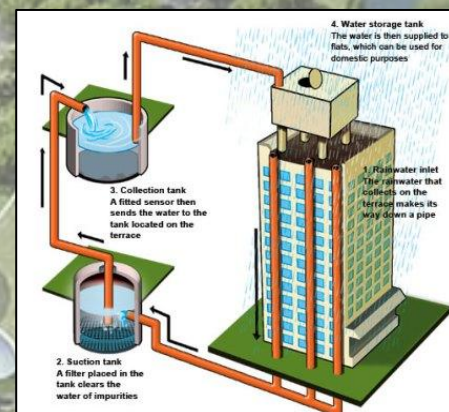
SCOPE OF THE DESIGN

To achieve design excellence and to come up with a prototype design for a bus terminal for future and post pandemic urban scenario where space will become precious commodity and high bus trip will have to support from small site further to save space for commercial activities will be incorporate with bus terminal and to give COIMBATORE a missing landmark building.
 To promote fast and understanding flow of traffic
 To create clear segregation of different types of traffic no congestion at peak hour
 To promote optimum connections between all elemnts and spaces i.e., clear connection of functions.
 To incorporate today's communication system ,surveillance system,healthier environment,safety technology,etc into design.

MATERIALS AND STRATEGIES

RAINWATER HARVESTING :

Rainwater is collected from roofs and also surface drained water is redirected to collecting chamber provided to store rain water. The stored water is used for ground water recharge,irrigation,purpose and also supplied for washrooms for flushing .



WASTE MANAGEMENT :

Waste is managed at site level by segregating types of waste in paper, glass, organic and plastic. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.



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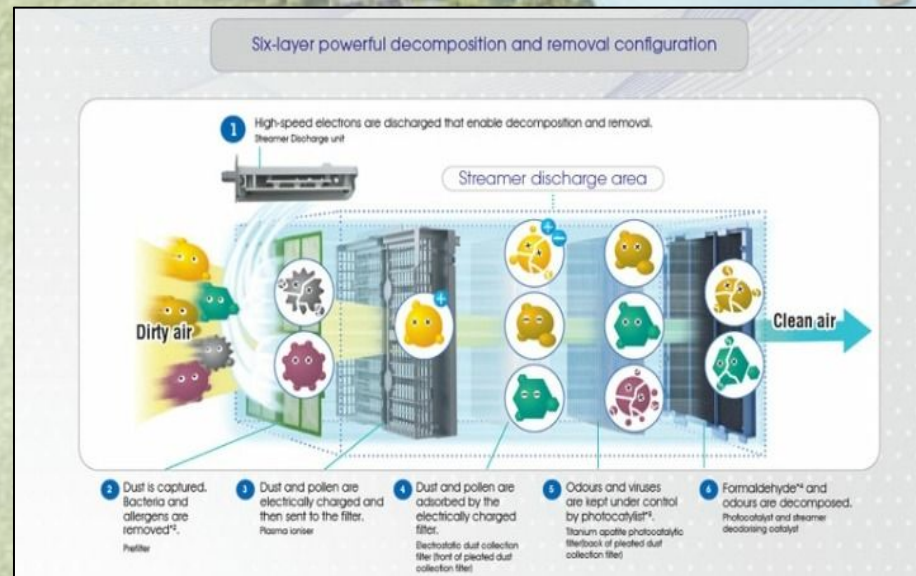
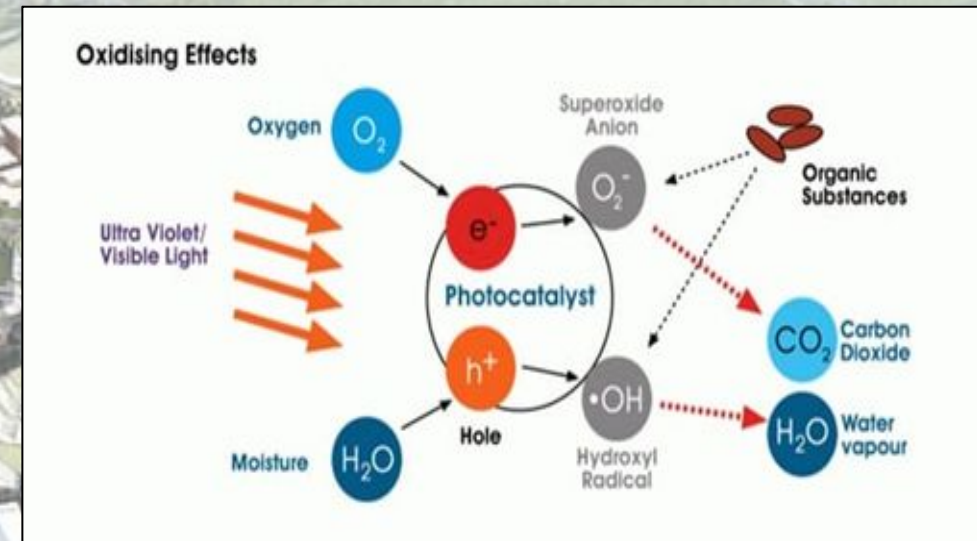
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CONTROL OF PANDEMIC SITUATION

TITANIUM DIOXIDE

To protect from virus affected surfaces. Titanium dioxide is as an antibacterial substance due to its photocatalytic effect. A significant reduction of up to 60% in bacterial adhesion to TiO₂-coated and -micropatterned surfaces was observed.



PLASMA AIR PURIFIER FIXED IN AC & AIR CIRCULATION

Plasma air purifiers are equipped with very small filters that have the capability to catch small particles that other types of filters easily miss. This means that plasma air purifier is able to reduce/eliminate the amount of not only bacteria and viruses but other harmful particles, such as dust, smoke, and pollen.

ULTRAVIOLET LIGHT

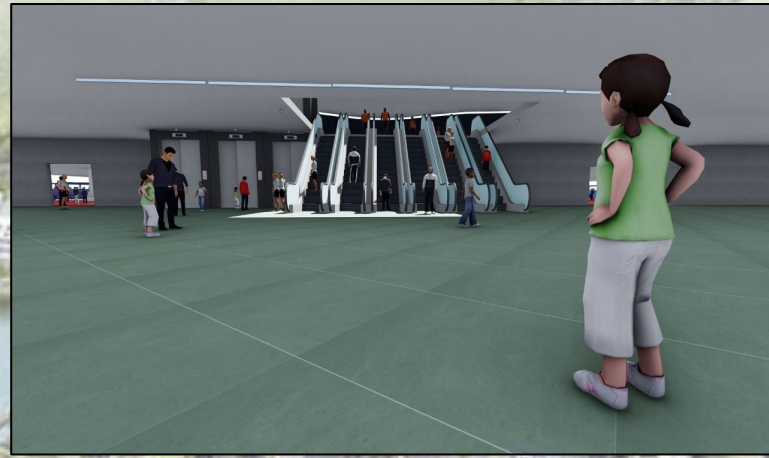
UV light disinfection is now widely used in hospitals and laboratories to sanitize instruments and work surfaces and to prevent the spread of potentially lethal airborne infectious diseases, Bacteria, Viruses. In scientific studies UV light has been proven to kill 90% of microbial contaminants after 10 mins of exposure and 99% after one hour of time.



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While the COVID -19 pandemic is tragically affecting people's health,lives,livelihoods,it has also had a noticeable positive impact on our environment in just few months.But then it's more important to maintain social distance and keep our environment and ourselves clean to get over this vicious spread of virus.This design was ultimately planned to make a proper post effective utilisation of resources with hygiene and high protective means and also to prosper the future efficient constructions and designs with this kind of pandemic prevention system.



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