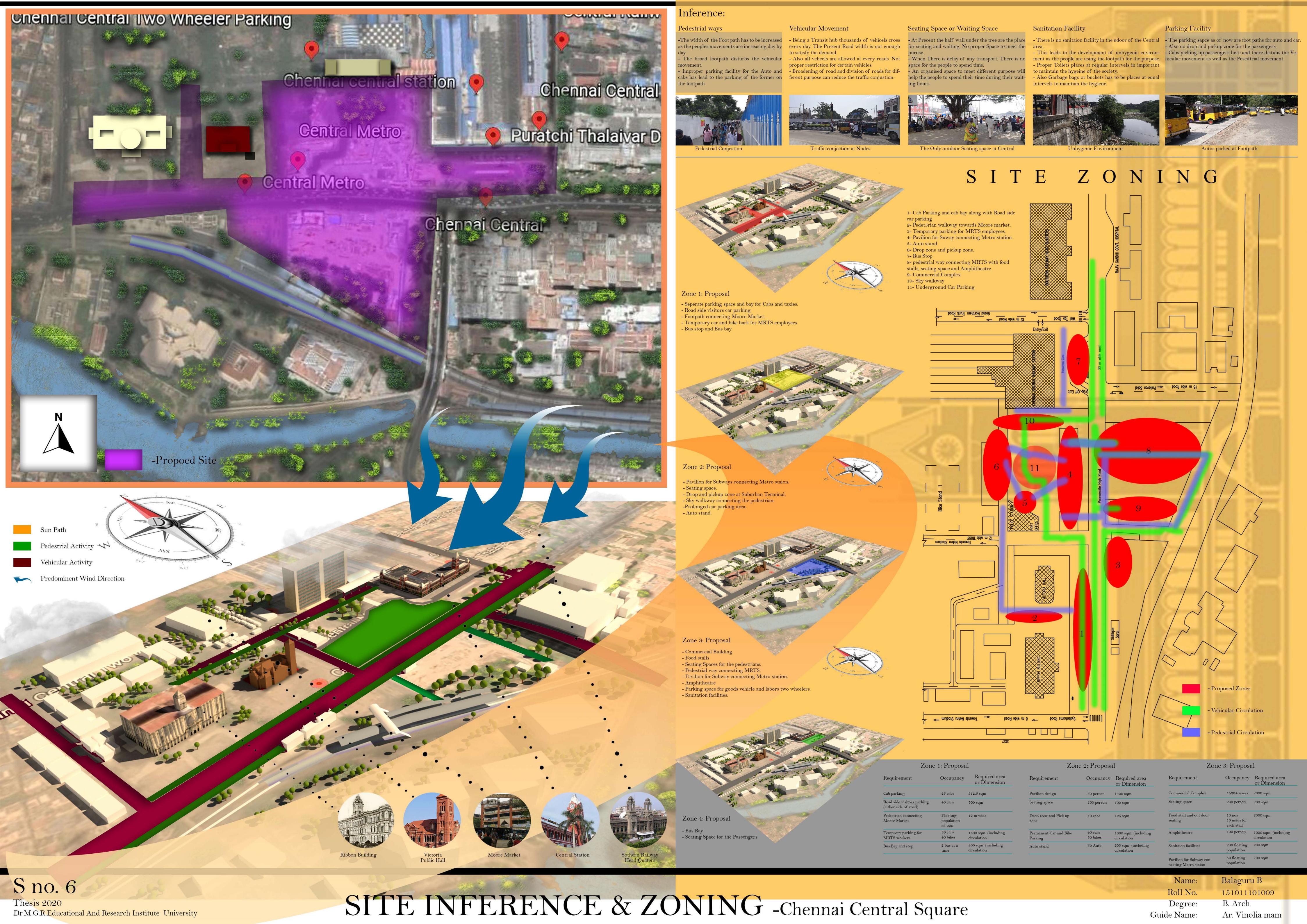
DR.M.G.R.EDUCATIOANAL AND RESEARCH INSTITUTE UNIVERSITY

THESIS ON PUBLIC SQUARE

THE CENTRAL SQUARE - CHENNAI

BY BALAGURU 151011101009





conducive to their survival

Influencing the Micro climate:

treated with vertical Landscapes.

Creating An Ecosystem

By creating the following

Climate

Vegitation

- The is is planted with a total of 210 (Two Hundred and Ten) trees. The major reason for plant as amany trees as possible - Huge pergolas are designed to ensure shade even at the predestrals. Also, to remove the **urban heat effect** , the pergolas are

Vegetation:

designed in the site.

- The Site consist of various plants that has major medical imporatance.

without removing the identity of a square is to provide a cool micro climate at the site.

- Every **Seating space has a tree within them** to ensure a cool breeze at the locality.

- The various plant species helps in **improving the air quality** at the site.
- There will be an massive absortion of carbon di oxide hence reducing the green house gas affecting the environment.

Climate is an important environmental influence on ecosystems. Changing climate affects ecosystems in a variety of ways. For instance, warming may force species to migrate to higher latitudes or higher elevations where temperatures are more

- The Change in micero climate helps in **eleminating the heat from the surrounding elements** as well as the **hardscapes**

- Also Green environment give the space an aesthetic appeal as well.
- Species such as Golden Shower tree, Aegle marmela, Pungamia Pinnata, Delonix regio, Samanea saman, Neem tree and Ashoka tree are plantes at the site. All these together provides a healthy environmnt at the Central Square.
- The Improvement in the vegitation, creates a place for migrent birds and local birds. The case study of connaught Place is one example where bird's population increases marginally due to the improvement of Vegitation.



Water Treatment

Sunlight

Water Treatment:

1. Having a Water Source:

The Concept of Dragonfly Garden

The Buckingham Canal of Chennai area is highly polluted. One major task in the design of central square is the prevention of mosquitoes to a major extend. Hence Dragon flies which feed on mosquitoe egg is brought into the design by the application of Dragonfly garden at the boundries of Buckingham canal.

Ponds are beautiful additions to Urban Design, and they attract dragonflies! Dragonflies are attracted to water because they breed in water. Their young hide among water plants. having a water Source at least 2 feet (0.6 m) deep, will help in attracting dragon flies.

- The water source needs shallow, low edges. The shallow sloping sides allow for plants to grow.









While you are waiting for your plants to grow tall enough for dragonflies to perch on, place sticks in your pond. This gives the dragonflies somewhere to land.



2.6 Plant dragonfly attracting flowers in around your home.

2.1 Add water plants to Water Body. 2.2 Surround the pond with shrubs. 2.3 Spread rocks around your pond.

Migratory Birds:

Dragonflies like sunshine, so they will be more attracted to a pond that is out in the open with full sunshine in the middle of the day than one covered by the shade of tree branches.

ome of the various species of birds found in the various locations are:

Housing more than 200 resident and wintering bird species, Chennai (formerly known as Madras) has long been a haven for bird watchers. It is the one of the few urban areas in India with diverse range of birds including











Owl





Pelican

Geographic Importance of Chennai Zone in Birds Migration

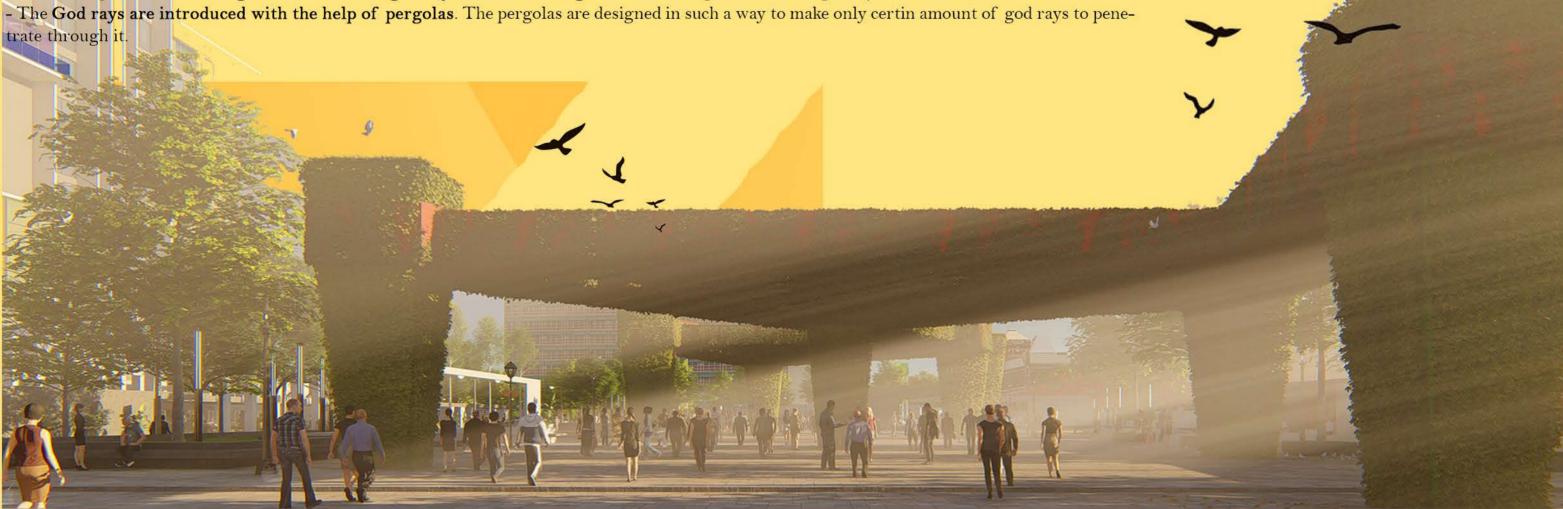
India is a critical country in the Central Asian Flyway Zone (CAF) and supports about 257 species of birds. Of these, 81 species are migratory birds of CAF conservation concern, three critically endangered species, six endangered species and 13 near threatened species.

Sunlight:

- Direct sunlight is of critical importance in architecture — for reasons of aesthetics, experience, and comfort, as well as energy performance. Direct sunlight can reduce winter heating, but can dramatically increase summer cooling.

- Direct sunlight can provide warmth and dynamism to a space, but can also mean visual or thermal discomfort for occupants as diverse as office workers and athletes. And access to direct sunlight is increasingly regulated on both the building and urban scale.

- The Concept deals with using the the beautiful god rays at the morning and also dealing with its hot light rays at the afternoon time.



The picture showcases the Ecological approach to the site and is also the picyotial representation of the ecological approach made.

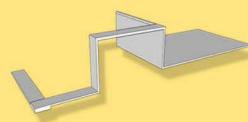
Architectural Approach

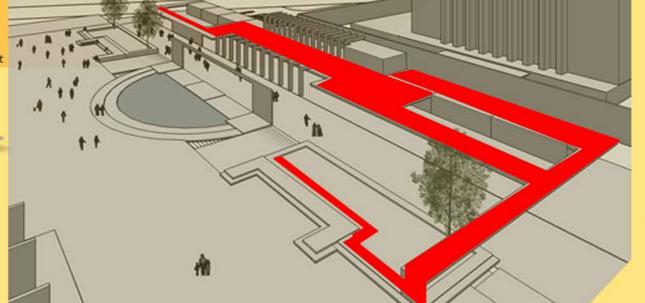
An abstract from clustered organization of logs

- Making a urban space as a whole unit is the task in the design of central square.
- The idea was to connect all kind of spaces into a single unit. This will make the user to feel that they are in a single space, not in two or three different space.













- The obstact was taken from wooden lods

- The composition of the woodwn log and the connectivity of each piece inspired the design. - The concept deals with connecting all kings of spaces into a single element or having a single

element running common throughout the design.

The Concept of Six + One Column resembling the Six fundamental rights of Indian Citizens.

- The Public Squares in its nature is a place of expressing the feeling of people, either social, political etc.. Being a place of social importance the square is designed with large pillers connected with each other under which the people's activity takes place. There are totally 7 (seven) pillers, each representing a fundamental right and one having a inscription of waht these fundamental rights are.. The large scale of the piller is a expression of how big and important are these fundamental rights to every individual Citizen

Six + One Columns of Fundamental Rights

The First Column:

- This Column is located at the beginning of the MRTS way. This will have an inscription of what exactly the fundamental right are, Hence giving the complete information of the uses, needs and importance of Fundamental rights to every Citi-

1. Column of Equality

- This Column represents the idea of equality, which states that the state shall not deny to any person equality before the law or the equal protection of the laws within the territory of India. The equality before the law is guaranteed to all without regard to race, colour, or nationality.

2. Column of Freedom

- This Column represents the Right to Freedom guarantees to the citizens of India six Fundamental Freedoms: 1) Freedom of Speech and Expression, 2) Freedom of Assembly, 3) Freedom to form associations, 4) Freedom of Movement, 5) Freedom to reside and to settle, and 6) Freedom of profession, occupation, trade, or business.

3. Column Against Exploitation

- Column Represents the Article 23 prohibits traffic in human beings, women, children, beggars or other forced labour militate against human dignity. Article 24 prohibits employing children below the age of 14 years in any hazardous profession. This right followed the human rights concepts and United Nations norms.

4. Column of Freedom of Religion

- Column represents the Articles 25 and 26 embody the principles of religious tolerance and serve to emphasize the secular nature of Indian democracy, i.e. equal respect to all religions. Article 25 offers freedom of Conscience and Free Profession, Practice and Propagation of Religion whereas Article 26 helps to manage religious affairs, which is subject to public order, morality and health, every religious denomination or any section.

5. Column of Minorities

- Column represents the Article 29 provides protection of the interests of minorities. A minority community can effectively conserve its language, script, or culture by and through an educational institution. Article 30 states the rights of minorities whether based on religion or language to establish and administer educational institutions.

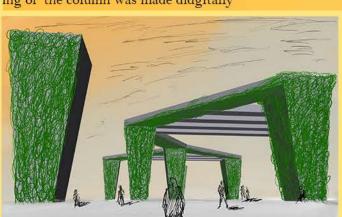
6. Column of Constitutional Remedies

- Column represents the Article 29 provides protection of the interests of minorities. A minority community can effectively conserve its language, script, or culture by and through an educational institution. Article 30 states the rights of minorities whether based on religion or language to establish and administer educational institutions.

The Development of the concept and massing are represented below



- This was the begining stage of the design. The massing of the column was made didgitally



Digital Sketching of Vertical Landscaping idea

The Design was then updated with vertical landscape to provide a cool microclimate for the users.

No. of Columns = 7

Representing the Six Fundamental Rights of The Indian Citizen and One having a inscrption of what fundamental rights are.

Scale of the Columns Represents how imporatnt are those Fundamental Rights to each and Every Citizen

Vertical Landscaping Infulences the mincero Climate of the locality.

Line as an Element:

Line is probably the most fundamental of all the elements of design. ... A more usable deifnition might be that line is the path of a dot, point etc. through space and that is always has more length than thickness.







Pergola Design @ Moore market walkway



Degital sketching of public Toilet Facade



Early Digital sketchings

- The pathway is covered partially with a porous slab and trees. This allows the god rays of the sun to penetrate beautifully during the moring time and winter climate. - This idea also reduces the rainfall into it. so that even in high rain, people can use the walkway.



- The wall seperating the food stall seating area was designed with a projected pergolas. This Act as an shade giving hardscape. And also megomes a prime location for gatherings.



Concept Sheet 2 - Chennai Central Square



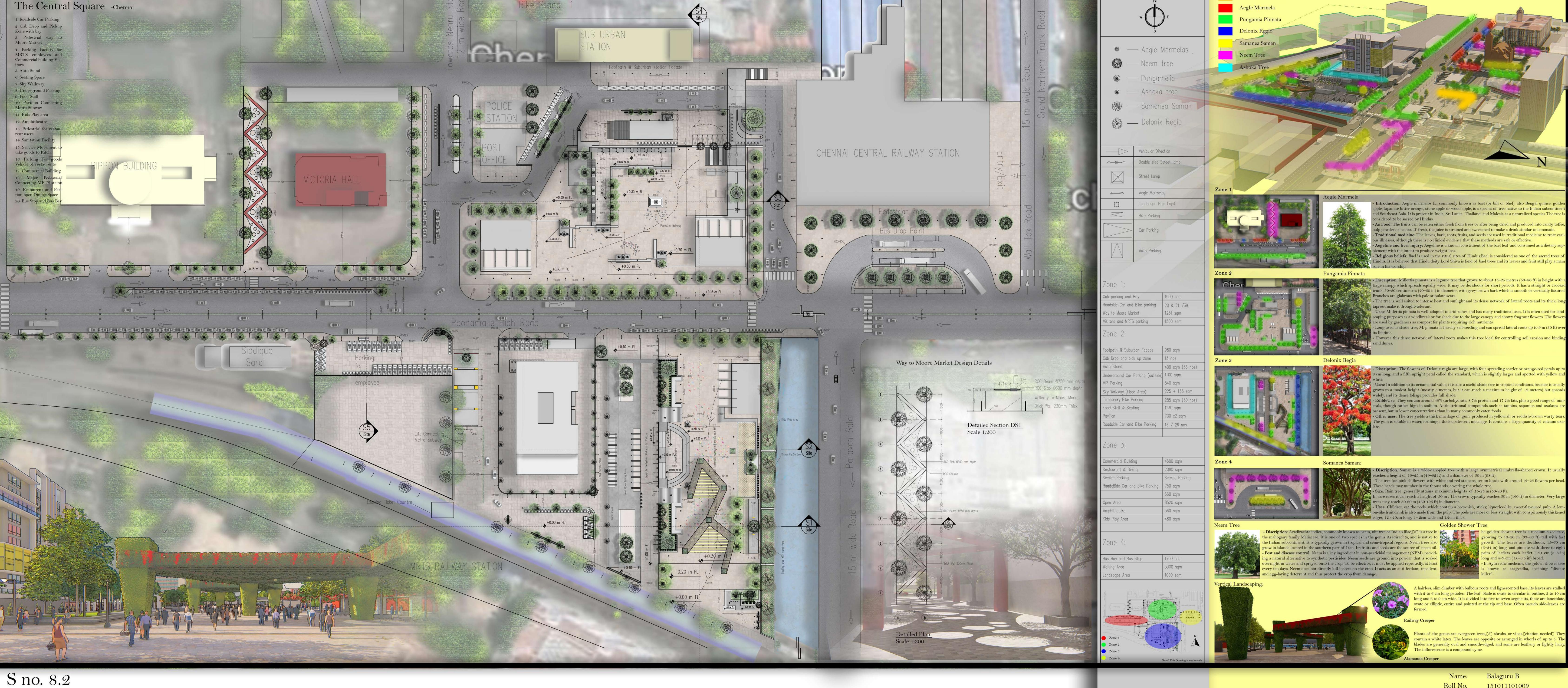
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Thesis 2020

SITE PLAN -Chennai Central Square

Name: Roll No. Degree:

Balaguru B 151011101009 B. Arch Ar. Vinolia mam



Thesis 2020

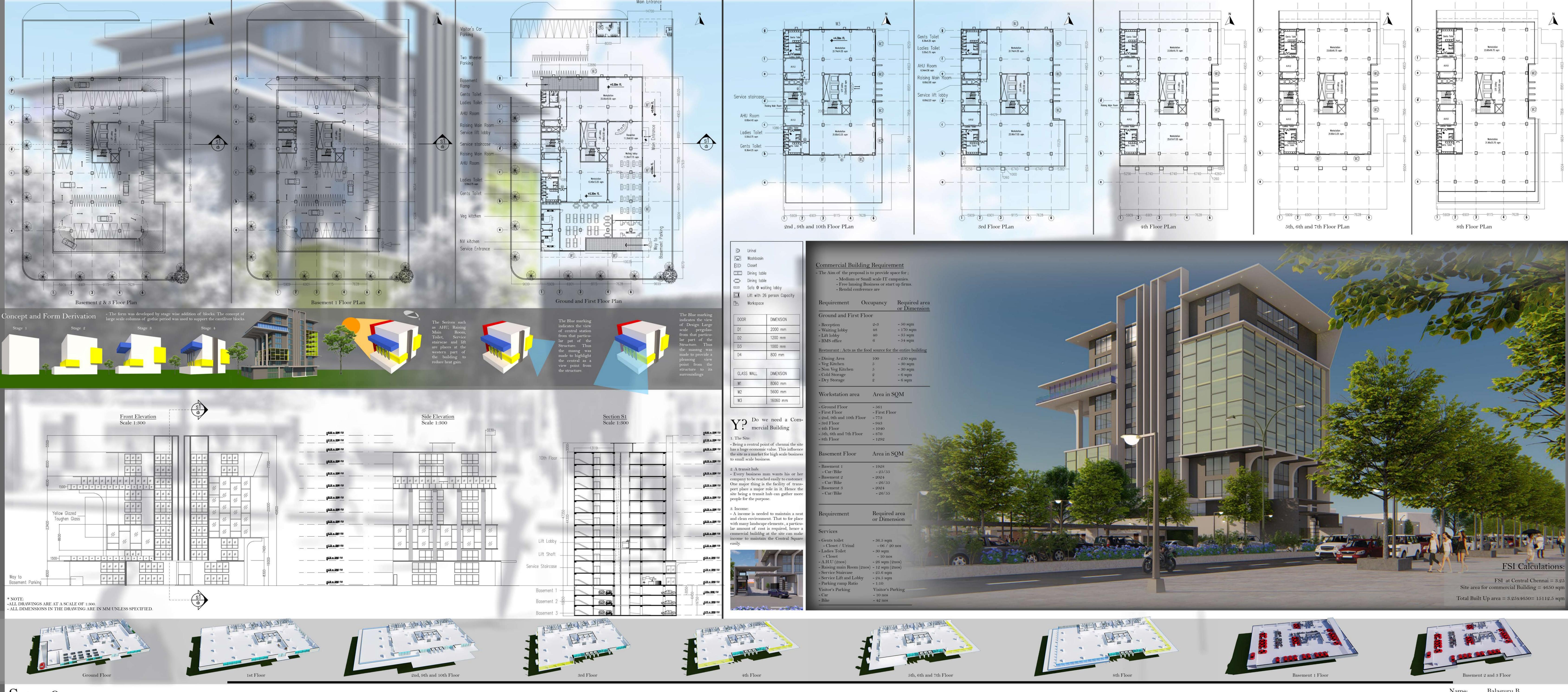
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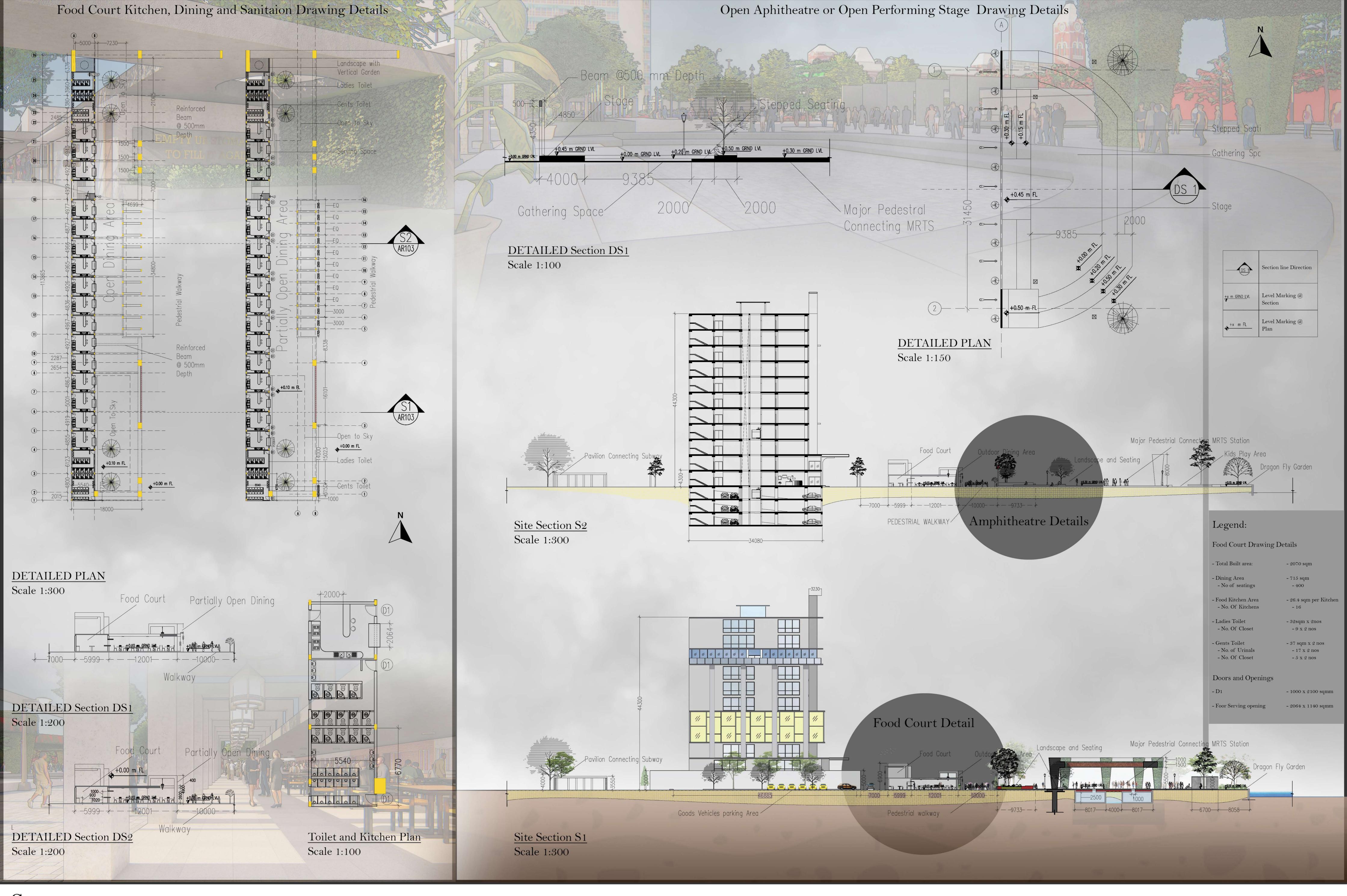
Site Plan Detailed Drawing & Landscape Detail -Chennai Central Square

Golden Shower Tree

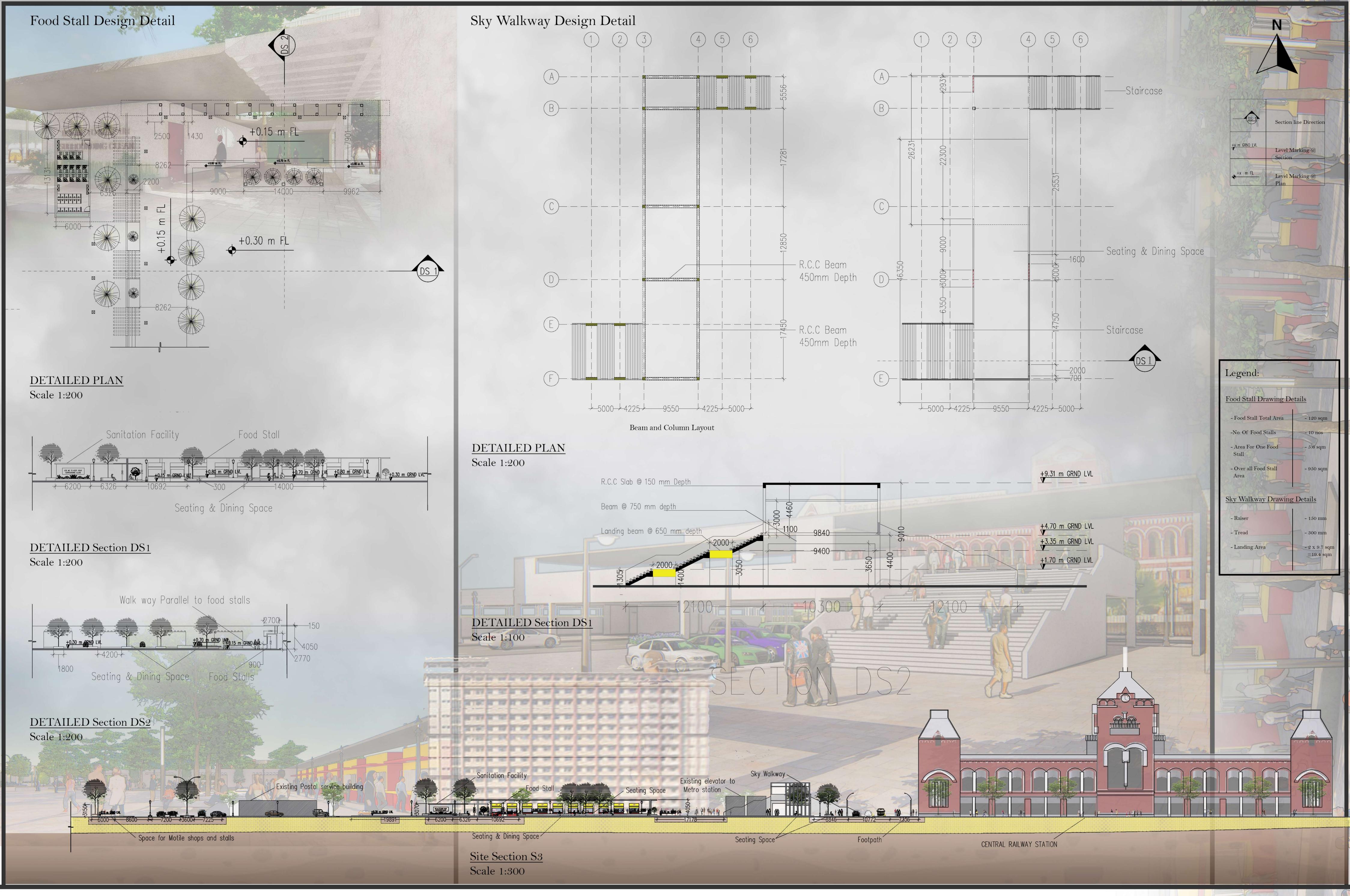
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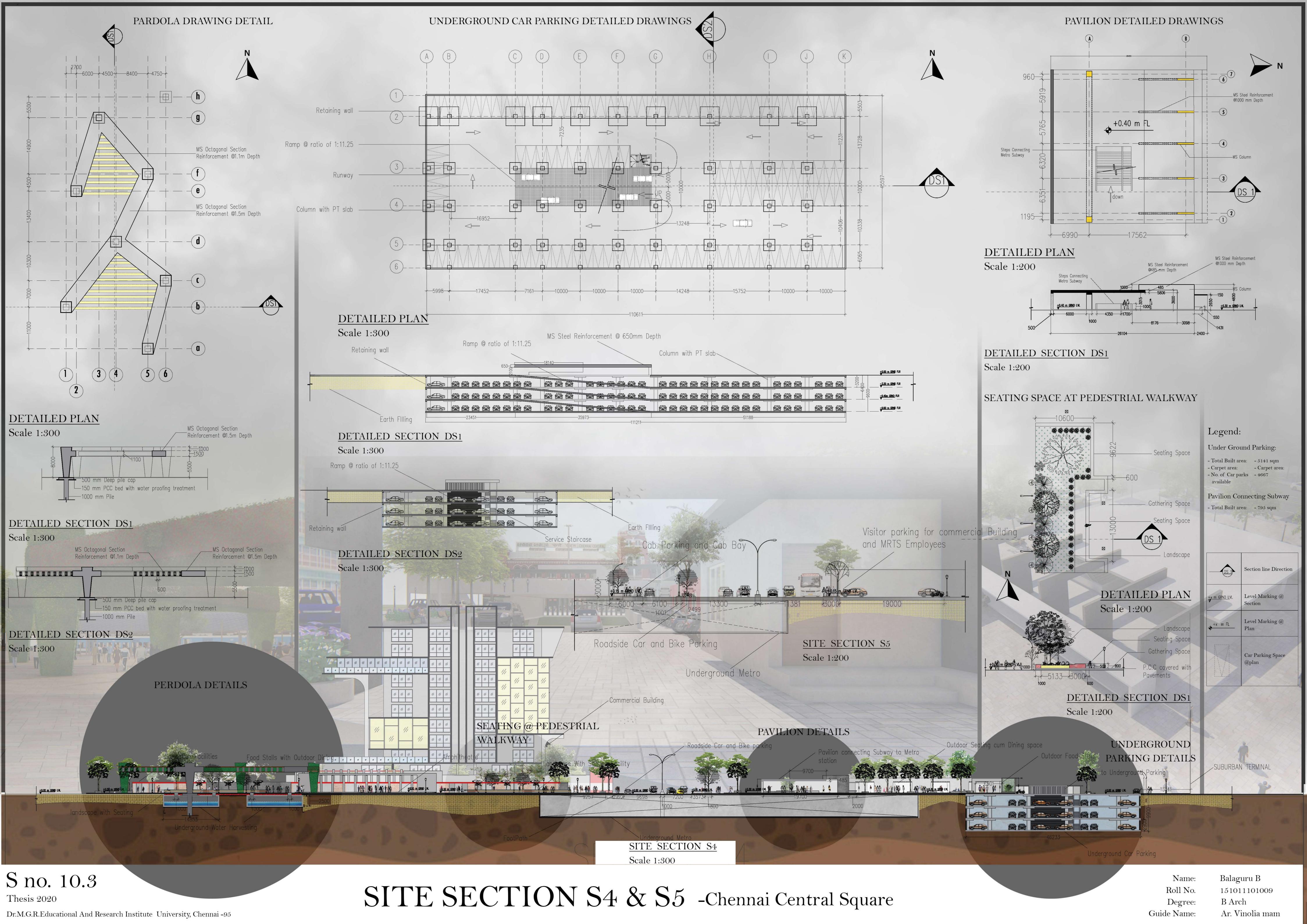
Ar. Vinolia mam

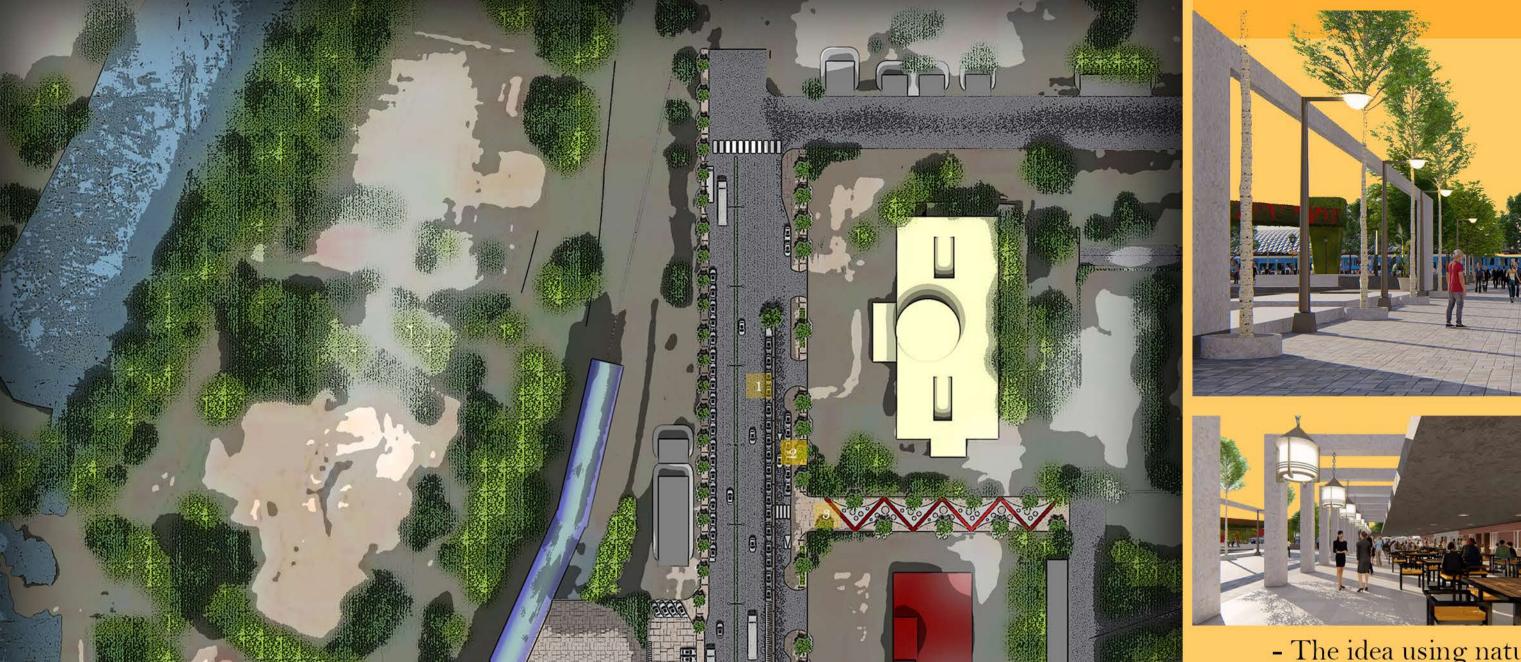




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Roll No. 151011101009
Degree: B Arch
Guide Name: Ar. Vinolia mam







Concrete Architecture

- The concrete is a versatile construction material used all over the world for all types of construction applications. Concrete in its green form can be molded into any shape, size, and finish with the help of different finishing techniques and equipment to give a beautiful and long-lasting surface with a high aesthetic value.



- The broom finish of the concrete is rough textured finished obtained by dragging a broom on the trowelled surface of the concrete while the concrete is still fresh.







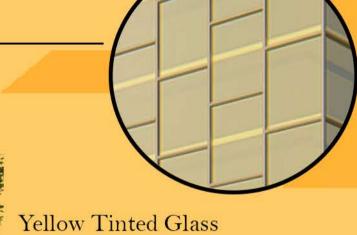




- The idea using natural light and dark grey texture of a concrete is to make the place more live only with the colour of the people and living things

Use of Coloured Tinted glasses in Commercial Building



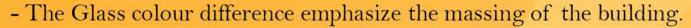


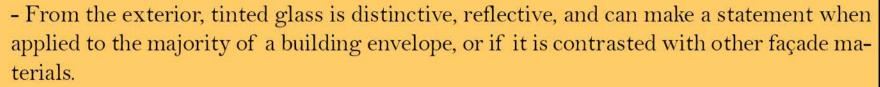
throughout cities and residential areas in general, seeing a design which doesn't conform to this standard is very refreshing as well as inspiring.

- The role of color in architecture is surprisingly underestimated, with the majority of

buildings being neutral-colored and designed to blend in along with the other equally

colorless structures. While that's a nice way to maintain a clean and simple aesthetic





- Performance - wise, tinted glass helps to regulate a building's temperature as it is designed to absorb energy from the visible light spectrum. It has the capability to reduce glare, and offer unobstructed views when looking from the inside out.



Pavements Used:





Permeable Concrete Pavement

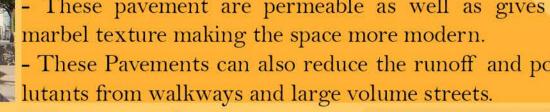
Permeable concrete pavement (PCP) is a durable cost-effective solution for compliance to national, state/provincial and municipal stormwater regulations.

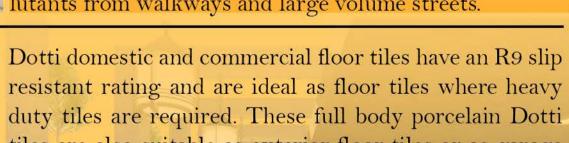
- PCP can reduce runoff and pollutants from walkways, patios, driveways, parking lots, alleys, parking lanes, and low volume streets.

- The surface consists of solid concrete pavers with small, stone-filled joints that allow water to flow into highly permeable, open-graded bedding, base, and subbase aggregates.

- The spaces among the aggregates store water and enable infiltration into the soil subgrade rather than generating surface

These pavement are permeable as well as gives a marbel texture making the space more modern. These Pavements can also reduce the runoff and pol-

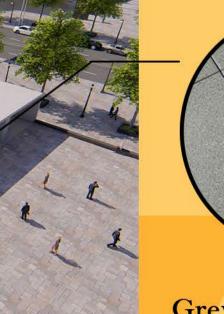




tiles are also suitable as exterior floor tiles or as garage floor tiles. Tile samples are available.









Grey Dotti R9 Rated Anti Slip Floor Tiles for Urban use

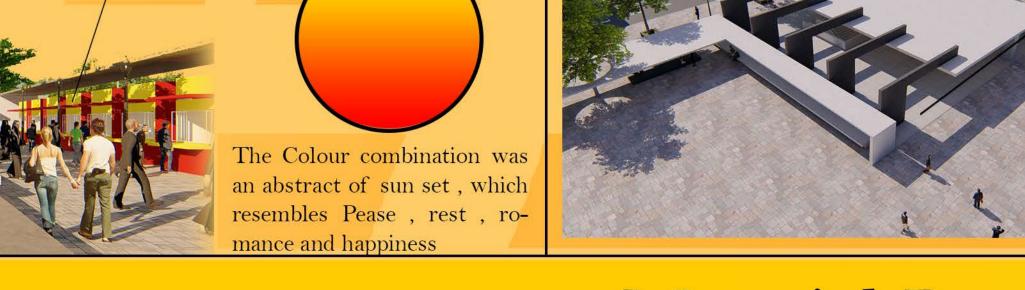


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Modern Floor Grey Marble

Tiles Textured Pavement

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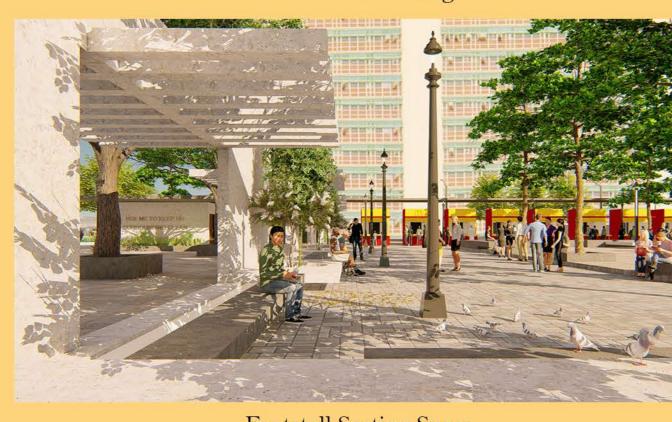


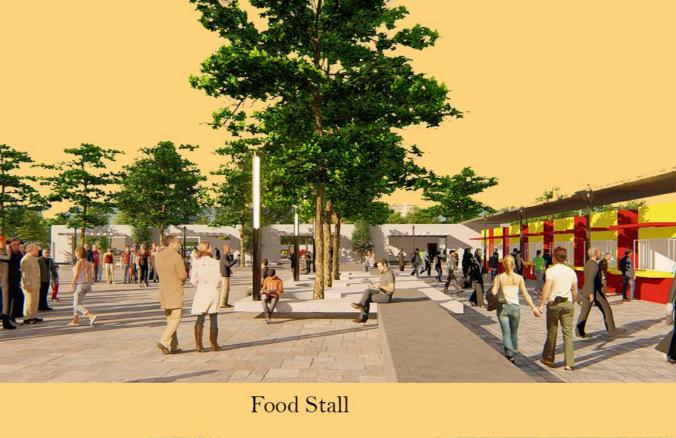


View From the car While Entering

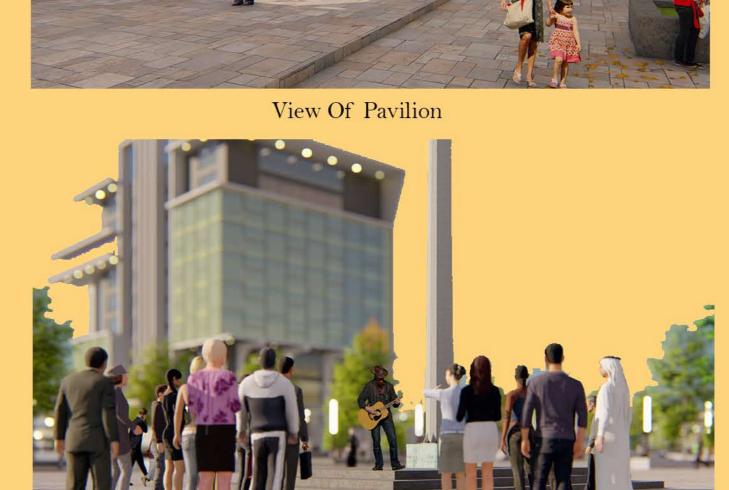


Sanitation @ Zone 2



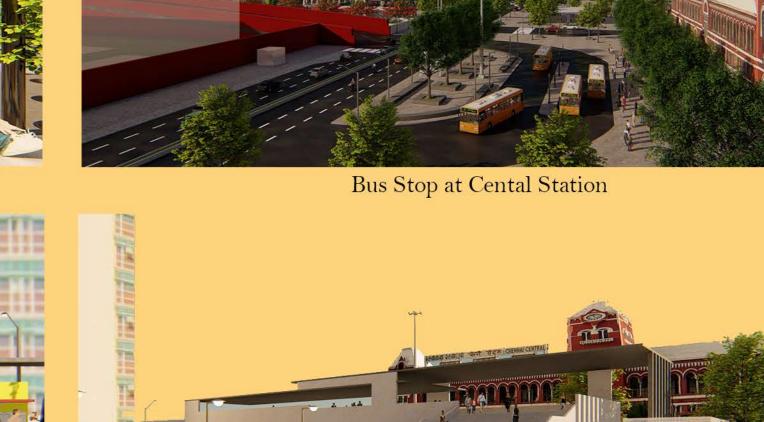


Cab Parking along with foot Path



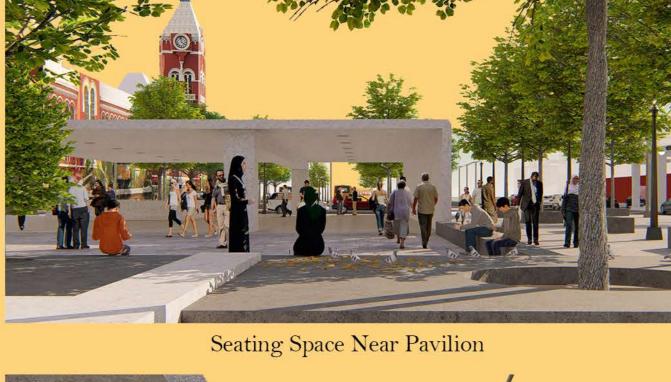
Leisure Activities

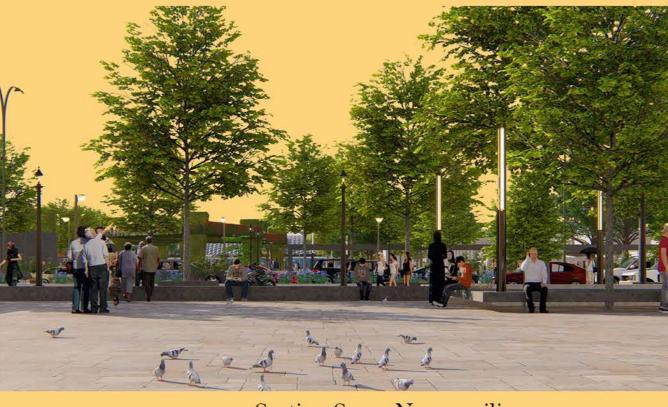






Seating Space near pavilion





Seating Space Near pavilion



Road Side Parking and Foot path @ zone 2



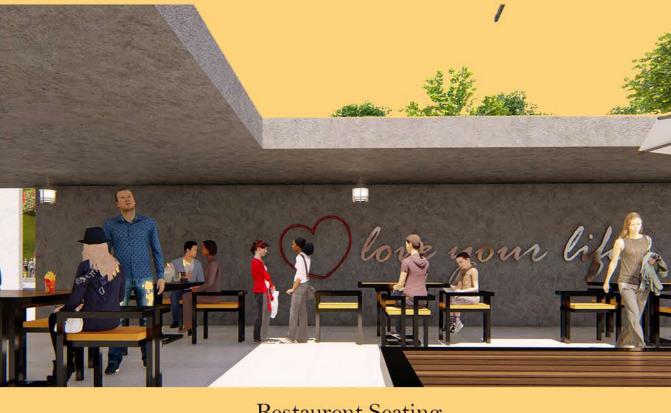
Roadside parking at Zone 3



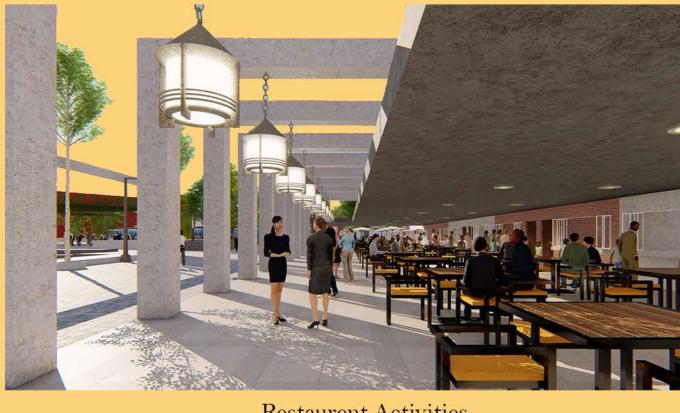
Gathering Spaces



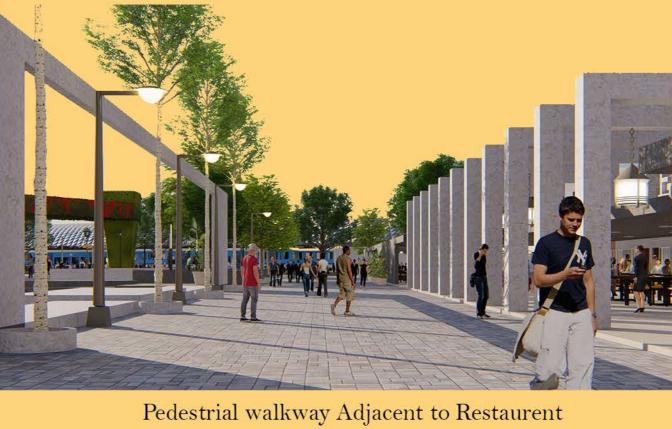
Sanitaion @ Zone 3



Restaurent Seating



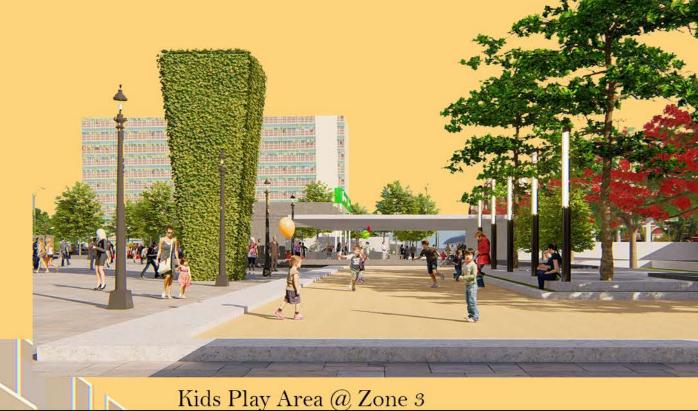
Restaurent Activities



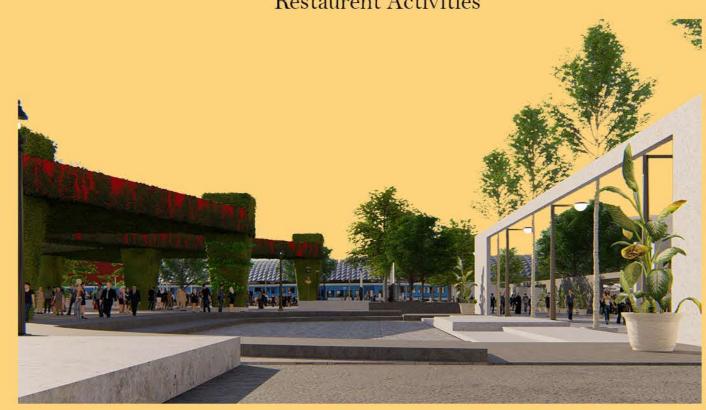


Pedestrial Activities @ Zone 3









Amphitheatre

