



ACHARYA'S NRV SCHOOL OF ARCHITECTURE
SOLADEVANAHALLI, BENGALURU -560107

OCEANARIUM AT MAHABALIPURAM
ARCHITECTURE DESIGN PROJECT (THESIS) – 2023-24

Submitted in partial fulfillment of the Requirements for the
“Bachelor of Architecture” Degree Course

Submitted by : PAGADALA SAIKIRAN
USN : 1AA18AT036
Guide : Ar. MANU M

A project report submitted to
VISVESHWARAYA TECHNOLOGICAL UNIVERSITY
“Jnana Sangama”, Machhe, Belgaum – 590018

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ - ೫೯೦೦೧೮



DECLARATION

This thesis title **“OCEANRIUM AT MAHABALIPURAM”**, submitted in partial fulfillment of the requirement for the award of the under graduate of Bachelor of architecture is my original work to the best of my knowledge.

The sources for the various information and the data used have been duly acknowledged.

The work has not been submitted or provided to any other institution/ organization for any diploma/degree or any other purpose.

I take full responsibility for the content in this report and in the event of any conflict or dispute if any, hereby indemnify Acharya’s NRV School of Architecture and Visveshwaraya Technological University, Belagavi, and its official representatives against any damages that any raise thereof.

PAGADALA SAI KIRAN

1AA18AT036

ACKNOWLEDGEMENT

This would have not been possible without the blessing and support of my

Parents

I would like to convey my deepest gratitude to my thesis guide, Asst Prof.

Manu. M for guiding me throughout

I am also thankful and would like to express my sincere gratitude to the

Principal Sir Sanjoth Shah

Finally, I would like to express my appreciation to all my friends

Gagandeep ,Sai krishna ,Pranay,who have helped me in any way

During this project and my architectural college life. Your contribution

has been valuable, and I am thankful for your assistance.

Table of Contents

AIM.....	3
INTRODUCTION.....	3
OBJECTIVE	3
SCOPE.....	4
LIMITATION.....	4
JUSTIFICATION.....	4
Zoo and aquariums in the world	6
Indian Species	6
Indian Scenario.....	7
Classification of Fish:	7
Chondrichthyes	8
Osteichthyes.....	8
Anatomy and physiology	9
The Skin.....	9
The Swim bladder	10
Maintaining salt balance	10
Breathing underwater.....	10
Sight and sound.....	11
Saltwater vs Freshwater Aquariums.....	11
CASE STUDY.....	12
GEORGIA AQUARIUM.....	12
ADDITIONAL FEATURES OF AQUARIUM	13
MOVEMENT INSIDE AQUARIUM.....	13
WORKING OF AQUARIUM	14
HVAC SYSTEM AT GEORGIA AQUARIUM.....	14
SALTWATER DISPLAYS	14
FEEDING	14
CASE STUDY -2.....	16
The Lost Chambers, Atlantis.....	16
Concept	16
Filtration.....	20
Fish Kitchen and Fish Feeding.....	21
Aqua theatre show.....	21
SHANGHAI OCEAN AQUARIUM, CHINA :	25
Location : Pudong Special Development Zone, Shanghai, China	25
ABOUT THE PROJECT :	25
UNDERWATER TUNNEL (BASEMENT FLOOR).....	26

RECOMMENDED ITINERARY (GROUND FLOOR):	26
SOUTH ASIAN REGION (FIRST FLOOR):.....	26
SERVICES :	27
Aquatic Life Support :	28
WATER SUPPLY :	29
CONCLUSION :	30
LITECTURE STUDY	30
CONTEXT	30
CIRCULATION :	35
Public Access :	35
Private Access :	35
WATER CIRCULATION SYSTEM :	36
FRESHWATER CIRCULATION SYSTEM :	37
INTERENCE	39
SITE ANALYSIS	40
ABOUT MAHABALIPURAM	40
SITE ACCESIBILITY :	40
LAND OWERSHIP :	42
CITY CONNECTS:	42
LANDMARK CONNECTS :	42
CLIMATE CONDITIONS	42
ANNUAL SUN PATH AT MAHABALIPURAM	44
SITE SELECTION CRITERIA :	48
VEGETATION :	50
HUMAN & CULTURE :	54
SIZE AREA	54
UTILITIES :	54
SITE POTENTIALS :	55
REQUIRMENTS :	55
SWOT :	57
ACCESSIBILITY :	59
AREA STATEMENT	61
SERVICE AREA.....	61