

INDOOR SPORTS ACADEMY

By

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A REPORT

Submitted in partial fulfillment of the requirements for the degree of
Bachelor of Architecture.



University of Mumbai

2019

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AIKTC 
SCHOOL OF ARCHITECTURE

CERTIFICATE

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Sign of the guide:

Name of the guide: PROF. ABHISHEK KADAM

Sign of the Dean: _____

Date:

DECLARATION

I hereby declare that this written submission entitled

“INDOOR SPORTS ACADEMY” at Ghansoli, Navi Mumbai

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Date: 01-Mar-19

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ACKNOWLEDGEMENT

I would like to say thank you to my thesis guide **Prof. Abhishek Kadam** for supporting me throughout the academic year 2018-19 and for helping me from start to finish.

I am grateful to **Prof. Swapna Joshi** (Dean) for providing me with all the necessary facilities for the completion of this dissertation.

I would like to express my thanks to my family and my friends **Parvez Alam Khan, Khizar Sharar, Aziz Sheikh, Anas Shaikh & Pooja Joshi** for supporting me when needed.

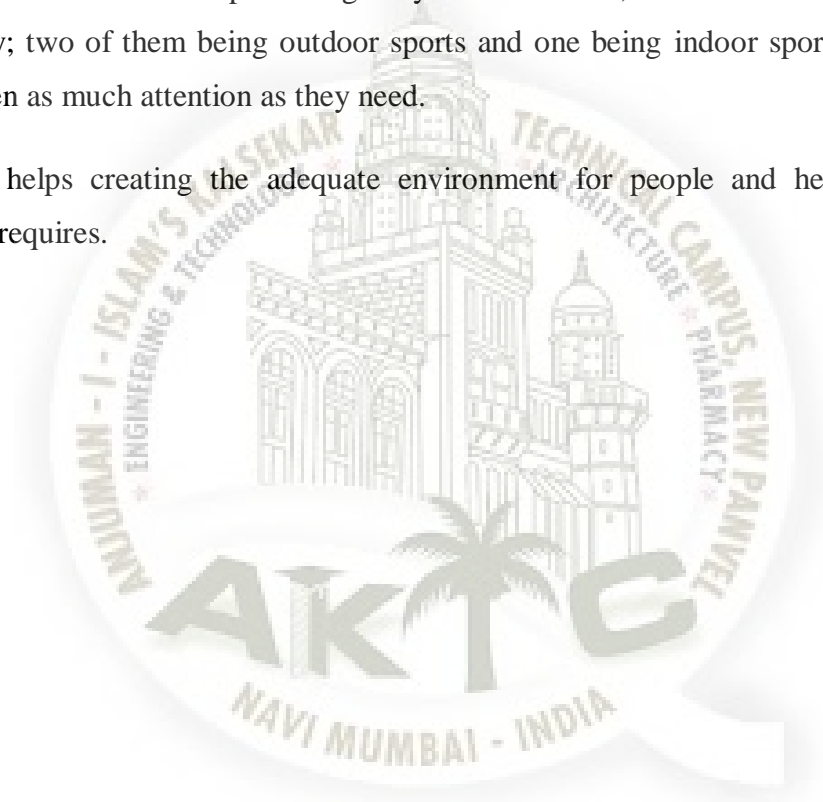


1. ABSTRACT

Sports are played worldwide; people love the excitement arising through these sports. People make careers out of sports and there are sports academy to help them in choosing sports as a career. Some countries celebrate sports like culture like in Europe many countries have population crazy for football.

While the most famous sports arguably are Football, Basketball and Baseball ranked respectively; two of them being outdoor sports and one being indoor sport, other indoor sports are not given as much attention as they need.

This book helps creating the adequate environment for people and help indoor sports get attention it requires.



INDEX

ACKNOWLEDGEMENT

1. ABSTRACT	
2. TABLE OF CONTENT	
2.1 Introduction.....	1
2.1.1 Background Study	
2.1.2 Problem Statement	
2.1.3 Objectives	
2.1.4 Methodology for Case Studies	
2.1.5 Scope	
2.1.6 Limitations	
2.2 Literature Review	4
2.2.1 Definitions and Descriptions	
2.2.2 Articles by Other Authors	
2.2.3 Case Studies	
2.2.4 Case Study Inferences	
2.3 Research Design.....	46
2.3.1 Standards and Data Collection.	
2.3.2 Inferences.	
2.4 Site Selection and Analysis	53
3. CONCLUSION	
4. ARCHITECTURAL SPACE PROGRAMME	56
5. LIST OF FIGURES	65

6. LIST OF TABLE 70

7. LIST OF MAPS 80

8. BIBLIOGRAPHY



2.1.1 BACKGROUND STUDY

Sports academy is as the name suggest is an academy where people are taught about sports they are interested in. Workouts for fitness, techniques of the sports, methods, etc. are taught in these academies. The sports can be categorised into two types, first being outdoor sports and the second being indoor sports. Outdoor sports mainly rely upon athlete's physical capabilities while indoor sports might not require physical strength.

Indoor sports are games like for example Carrom board, Chess, Bowling, Archery, Table Tennis, Snooker, Squash, Badminton, Volleyball, Boxing, Swimming, Basketball etc. These games can be categorized into board games, card games and games that don't require physical movements. Indoor games were invented to pass time at home, when either the weather is bad.

Card games may have originated in India but are played worldwide. Various kinds of card games are played using the same 52 cards. Bridge, Rummy, Whist are some of the card games played. Uno is another card game which has gotten popular in our times.

The history of chess goes back almost 1500 years. The game originated in northern India in the 6th century AD and spread to Persia. When the Arabs conquered Persia, chess was taken up by the Muslim world and subsequently, through the Moorish conquest of Spain, spread to Southern Europe.

There are many advantages in indoor games as compared to outdoor games such as protections from weather, even playing surfaces, etc. Indoor games like card games and carom can be played inside our own house so the kids can be under their parents' supervision.

2.1.2 PROBLEM STATEMENT

AIM: -

To improve the quality of indoor sports played in India.

2.1.3 OBJECTIVE

- Make world class athletes.
- It will enlighten people about the sports with medical intent so that injuries can be controlled.
- It will not only train athletes but also provide a platform for state & national level events. (e.g. Pro Kabaddi)

2.1.4 SCOPE

- In India, 'sports' is somewhat considered as an activity that is secondary to knowledge based professions like architecture, engineering, etc. The success of sports academies will help in negating this idea.
- The academy will cater to sports at **state level**.
E.g. Indoor sports like table-tennis, badminton, bowling, etc. and football will be part of the academy.
- Designing large facilities for **national level** events.

2.1.5 LIMITATIONS

- Only some part of the site will be used for the project since the site comes under CRZ-II line partially.
- Basement can't be built as the site is in Navi Mumbai and its DCR doesn't allow it.

2.1.6 RESEARCH METHODOLOGY

Background study

(Need for the Indoor Sports Academy)



Aim, Objective, Scope

(For clarity in design)



Limitations:

(Deciding exact location for site)



Literature review

- Reading articles & blogs, videos
- Understanding Indoor Sports in Mumbai
- Listing the activities coming under Indoor Sports in Mumbai



Live case studies/ book case studies/ internet case studies

- Studying the rules and regulations for building an Indoor Sports Academy.

2.2.1 DEFINITIONS:

Kabaddi

1. **Baulk Line :**

Baulk Line means each of the lines in court parallel to the mid line. The distance of the baulk line from the mid line is 3.75 meter.

2. **Bonus Line :**

Bonus Line means the line between the baulk line and end line. The distance between Bonus line and Baulk line is 1 meter.

3. **Lobby :**

Lobby means the yellow strips on both sides of the court measuring 1 meter in width.

4. **End Line :**

End Line means the four boundary lines forming the court together. All end lines shall be of 3 to 5 cm width.

5. **Mid Line :**

Mid Line means the line that divides the play field into two equal halves.

Basket Ball

1. **Free Throw Line :**

In basketball, **free throws** or **foul shots** are unopposed attempts to score points by shooting from behind the free throw line (informally known as the foul line or the charity stripe), a line situated at the end of the restricted area. Free throws are generally awarded after a foul on the shooter by the opposing team. Each successful free throw is worth one point.

2. **Free Throw Lane :**

The **key**, officially referred to as the **free throw lane** by the National Basketball Association (NBA) and the National Collegiate Athletic Association (NCAA), the **restricted area** by the international governing body FIBA, and colloquially as the **lane** or the **paint**, is a marked area on a basketball court surrounding the basket. It is bounded by the endline, the free-throw line and two side lines (freebody lines), and

usually painted in a distinctive color. It is a crucial area on the court where much of the game's action takes place.

3. 3-point line :

A **three-point field goal** (also **3-pointer** or informally, **trey**) is a field goal in a basketball game made from beyond the three-point line, a designated arc surrounding the basket. A successful attempt is worth three points, in contrast to the two points awarded for field goals made within the three-point line and the one point for each made free throw.

Squash

The squash court is made up of four walls: the front wall, two side walls, the back wall and the floor.

1. Service Line :

The service line, in the middle, which is the line that when playing you need to hit above when your serving.

2. Tin :

A half metre-high metal section at the bottom of the front wall, that if you hit means that your ball is out.

3. Out Line :

At the top there's the out of court line which wraps the whole way round the court, including the side walls and the back wall. If you hit on or above this line your ball is out.

The floor, or court surface, is divided into two by the short line.

4. Short Line :

A horizontal line running through the middle of the court which brakes the court up into the front and back parts of the court.

5. Half Court Line :

The half court line runs vertically through the middle of the back part of the court to make up the left and right back quarters of the court (aka court back quarters).

6. Service Box :

Each court back quarter, left and right, then contains a smaller box known as the service box, which is where you'll stand when you serve.

Swimming Pool

1. Lane Ropes :

Lane ropes are the ropes that guide the swimmer to stay in their own lane.

2. Lane Marking :

The lane markings are the line that are marked in dark colour at the centre of lane on the floor of the swimming pool.

3. False Start Rope :

A false start/recall rope is a rope that stretches across the width of competitive racing pools. It stops swimmers who were unaware of a false start.

4. Backstroke Turn Indicator :

Backstroke turn indicator is a line 1.8m above the swimming surface that indicates the swimmer (Swimming in backstroke style) that the distance left between him/her and the wall is 5m.

Badminton Court

1. Back Boundary Line :

The back boundary line is the same for singles and doubles play. It is the outermost back line on the court. It is also the long service line for singles.

2. Long Service Line for Doubles Play :

The Long Service line for Doubles is marked 0.76m inside the Back Boundary Line.

3. Net Line :

The net line marks the middle of the court where the net is placed, creating a 6.7m by 6.1m area on each side of the net.

4. Short Service Line :

The short service line is marked 1.98m (some are marked 2.13m) from the net line.

5. Centre Line :

The Centre Line is the line that divides the court from the Short Service Line to the Back Boundary Line. This delineates the Left from Right Service Court.

6. Side Line for Singles Play :

The Singles Side Line is marked 0.76m from the edge of the outer boundary (doubles side line).

7. Side Line for Doubles Play :

Side line for doubles play is the outermost side line on the court.

Tennis**1. Baseline :**

The rearmost line of the court, furthest from and parallel to the net.

2. Service Line :

The line that is parallel to the net and is located between the baseline and the net. It is 5.5m from the baseline.

3. Centre Service Line :

The line dividing the two service boxes on each side.

4. Backcourt :

The area between the baseline and the service line.

5. Doubles Side Line :

Doubles side line is the outer most side line on the court.

6. Singles Side Line :

Singles side line is 1.37m parallel to the doubles side line.

2.2.2 ARTICLES BY OTHER AUTHORS

ARTICLE #1

Indoor Sports Facilities: Four Reasons Why They're Better Than Outdoor Facilities

POSTED ON MAY 23, 2018 BY SPORTS ADVISORY

Four Reasons Why Indoor Sports Facilities Are Better Than Outdoor Facilities



There are many questions that need to be answered and factors to consider before constructing a sports facility. Among the first is whether it will be outdoors or whether it will be an indoor sports facility. While there are certainly arguments to be made for an outdoor sports facility — such as space and affordability — there are just as many arguments for indoor sports facilities. At SFA, we believe that an indoor sports facility can be worth the money and also an outright better option than an outdoor sports facility. In today's post, we'll give you four reasons why.

1.

Complete Climate Control

The most obvious benefit to indoor sports facilities is climate control. Unlike an indoor sports facility, a primarily outdoor complex has no way of controlling weather elements, whether they be

<https://sportadvisory.com/indoor-sports-facilities-four-reasons-theyre-better-outdoor-facilities/>

1.

Less Maintenance

Another thing that outdoor facilities are more vulnerable to are damages, which means more maintenance. Artificial turf or hardwood floors are the surfaces of choice for indoor facilities, requiring far less maintenance and upkeep than natural grass and deteriorating far less quickly than concrete or asphalt. You won't have to fill in divots or cut your grass with an indoor sports facility like you would with an outdoor facility.

1.

Higher Quality Facilities

For an athlete, the biggest draw of an indoor facility is the quality of the playing surfaces and environment. Athletes won't be subject to uneven playing surfaces or extreme weather that might impact their play should they be performing outdoors. Facilities often underestimate how important playing conditions are to athletes.

1.

More Appealing To Athletes

Aside from the draw of higher quality facilities, indoor facilities are also outright more appealing to athletes than outdoor complexes. Especially in youth and high school sports, every athlete wants to feel like a pro. Nothing makes an athlete feel like a pro more than getting to play indoors on artificial turf.

<https://sportadvisory.com/indoor-sports-facilities-four-reasons-theyre-better-outdoor-facilities/>

INFERENCE:

- Indoor sports complexes have comfortable environment. They have lesser maintenance requirement, and their facilities have better quality.

ARTICLE #2

The Advantages of Playing Indoor Sports

April 16, 2013/in Benefits and Advantages, Indoor Sports /by admin

Playing sports is a great way to exercise and keep your body fit and healthy. But oftentimes your regular sports dates with friends are interrupted by weather conditions. You are forced to cancel a weekend game due to rain, or you sometimes elect not to play because being exposed to the sun's rays could cause skin damage. Playing indoor sports allows you to play regularly without worrying about the rain or the damaging effect of the sun on your health.

Indoor sports facilities such as Salisbury Super Sports offer venues where sports like cricket, netball, soccer, volleyball and handball can be played indoors. Most of the rules for playing indoor netball are the same as the regular outdoor version. However, the indoor version has no out-of-bounds and requires a smaller court. From traditionally known as a sport for women, indoor netball is now played by both men and women in Australia. At Salisbury Super Sports, the team numbers of mixed teams now equal the women's teams.

Aside from courts for rent, the sports court can be hired for birthday parties, corporate competitions, team building and other large-group events. Group bookings include access to the facility's air-conditioned licensed bar and well-stocked canteen.

Facilities include five indoor courts and two outdoor beach volleyball courts. Sports equipment includes bats, gloves, balls and goalposts.

Indoor sports solve all the problems and limitations inherent in outdoor sports. You do not have to skip games because of the weather and you can play in comfort in a controlled environment.

A Great Way to Spend your Leisure Time

Playing indoor sports is an excellent way to spend your leisure time. An indoor venue provides sufficient lighting, climate controlled environment and the required gear. You also prevent being overheated or getting drenched by sudden rain if you play indoor sports. This is because indoor sports facilities allow you to play in all types of weather.

A Comfortable Venue to Play Sports

The courts in indoor sports facilities are smooth and maintained, ensuring the safety of players. Spectator facilities are also excellent, allowing friends and family to watch you play from the comfort of the sidelines.

A Venue to Socialise

When the game is finished, you can join friends and family for some socialising over a cup of coffee in an environment of comfort and even temperature. Seeing how comfortable and safe it is to play indoors could perhaps encourage your family and friends to join an indoor sports club. They too, will experience the benefits of playing indoor sports.

<http://supersports.com.au/the-advantages-of-playing-indoor-sports/>

INFERENCE:

- This article talks about how the indoor sport venues encourage people to play any sport because the climate is controlled in these complexes.

ARTICLE #3**INDOOR SPORTS AND HEALTHY BENEFITS OF THEM**

Posted on June 9, 2018 by [admin](#) / Posted in [Community sport](#)

Indoor sports are those that we play inside our home. All types of indoor sports do not demand physical activities always. Indoor sports like chess, darts, etc. are less demanding physically. But some indoor sports like ping pong or table tennis offer entertainment as well as is a great exercise. It helps to mingle up people of different ages socially. Ping Pong is one of the most



popular indoor games which is played all over the world. The popularity of ping pong is mainly due to the many health benefits of the game. If you have played ping pong, you will definitely know the many health benefits of playing the game.

This type of indoor sports can be played by all age of people and abilities. Playing any type of sports is a great way to exercise and keep your body fit and healthy. But sometimes we have to cancel our outdoor games due to bad weather like rain, storm or harsh sunlight. But if you decide to play games indoors nothing and no adverse weather condition can stop you. Sport like ping pong can be played indoors and side by side will give you enjoyment and health benefits.

So, why do people love to play indoor games? Well – there are many reasons which explain the popularity of these games. Here are some of the best reasons why people play ping pong like indoor sports and derive the many benefits.

A GREAT WAY TO SPEND YOUR LEISURE TIME:

Playing indoor sports is an excellent way to spend your leisure time properly. You can play this type of game in proper lighting even at night and in any type of weather. So there is no chance of getting over heated or getting drenched due to sudden rain. Indoor sports facility allows you to play in all types of weather. You do not have to prepare much to play the game because usually these can be easily arranged in short time.

HELPS TO BURN OUT EXTRA CALORIES:

If you are in search of a new pastime that could give you a regular dose of exercise, then indoor sport like ping pong is a good choice. It provides fun and is challenging sport to burn out our extra calories in any type of weather. If you play this game for just a few minutes, you will sweat profusely. Regular playing of ping pong really helps to subtract a few extra pounds from your body. If you have tried a lot to lose weight and failed every time, you need to play the game and find how beneficial it is.

IT ENHANCES YOUR MENTAL ALERTNESS AND CONCENTRATION.

Ping pong is a fast-paced game. Records show that the fastest smash by a professional ping pong player can cross the speed of 70 miles per hour. So there is no chance of boredom and regular practicing of this type of indoor game makes you mentally alert. Regular playing of ping pong also enhances your concentration. If you suffer from lack of concentration or focus, this is the game which is here to make a difference.

TO KEEP YOU FIT PHYSICALLY:

Regular playing of ping pong helps to improve your body fitness as it incorporate several body movements. Experts say that regular engaging in active indoor game like table tennis helps to develop fast-twitch muscle which ultimately improves your reflexes. This improvement of the reflex will surely help you to live your life more enjoyably. Play an hour of table tennis every day and you will know how beneficial it is for your body.

IMPROVE HAND-EYE COORDINATION:

While playing indoor games like ping pong or table tennis need constant coordination of your eyes and hand. For this reason regular habit of playing this indoor game improve hand-eye coordination.

DECREASES STRESS

If you are in a great stress in your workplace or in any sphere of life, then try to play ping pong. Constant focus on ball helps to shift your focus from stress to ball. Spending an hour or two in this type of indoor games help to lower down the stress level.

Start playing indoor games whenever you can and you will love the changes it brings in your life.

<http://www.riverdalians.net/healthy-benefits-of-indoor-sports/>

INFERENCE:

- This article mentions the benefit of indoor sports, how they are not affected by weather.
- Indoor sports help physically as well as mentally and also reduces stress.



ARTICLE #4

13th August 2018

ADVANTAGES VS. DISADVANTAGES OF INDOOR SPORT

We all know that **sport** is one of the best ways to keep fit and healthy, meet new people and have fun! However, come winter, when the temperature is near freezing, a lot of us lose the motivation to get out and exercise.

If you're not keen on exercising outside during the year's coldest months, playing an indoor sport is an option. However, it has its advantages and disadvantages. We thought it might be fun to look exactly what these are. If you are thinking of starting an indoor sport, make sure you keep reading!

ADVANTAGES :

1. It's the perfect alternative to being outdoors, in the cold, wind and rain! No matter what the weather is doing, if you play an indoor sport you will never need to worry about it being called off.
2. Being in a controlled environment, the playing area is generally a lot easier to play on. For example, there are no bumps, uneven ground, stones or puddles.
3. Indoor playing areas are a lot smaller than a regular outdoor playing field. This helps to bring the players together, encouraging more networking.

DISADVANTAGES :

1. Playing indoors is a controlled environment. While this can definitely have its benefits, such as keeping you out of the elements, there is also no wind or sunshine, and can sometimes feel stale. It is completely different to the natural conditions of playing outdoors.
2. When you are playing indoors, you have limited freedom, due to the constraints of the walls and ceilings. This can make the game a little less interesting at times.
3. Maintaining an indoor sports venue is costlier than using an outdoor one. For example, building cost, electricity, cleaning, etc.



What do you prefer, playing indoor or outdoor sport?

<https://www.onthegosports.com.au/news/advantages-vs-disadvantages-indoor-sport>

INFERENCE:

- Indoor sports may have advantages like no constrain of weather, safer playing fields, requiring lesser area, but they have disadvantages as well like not having any connection with nature, constrained area, and higher cost in maintaining the venue compared to outdoor sports.



Purpose of case studies:

- With the help of case studies pros and cons can be decided before going for the design.
- By understanding the footfall of the case studies, space program can be derived.
- To understand which facilities are needed to be required and which are not required for the design.



2.2.3 Case Study

Live Case Study

1. N.M.S.A., Sector 1A, Vashi, Navi Mumbai

1.1 Introduction

N.M.S.A. stands for 'Navi Mumbai Sports Association' and is a sports association at Vashi. It deals in educating people in sports. There are various sports and grounds for practice e.g. football field, basketball court, indoor court for badminton etc. It's open from 10am to 6pm, Tuesday to Sunday.



NMSA Entrance



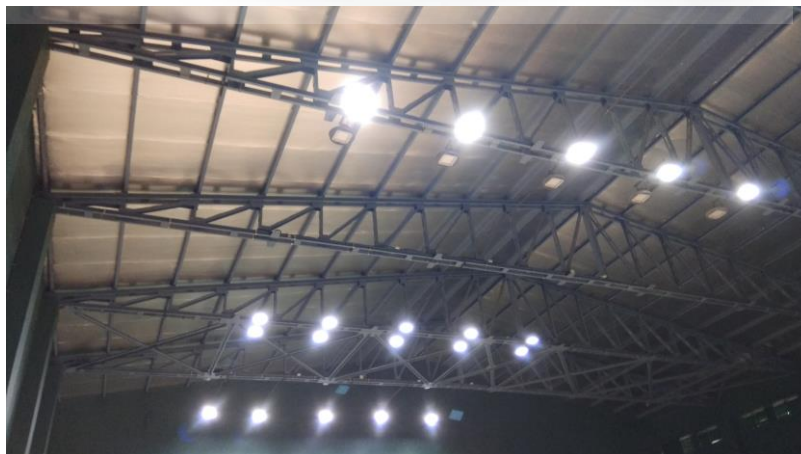
Satellite Image of NMSA

- It has badminton courts, 4 in total inside the structure.
- Steps at one side to sit on for audience.
- Wooden floor finish.
- Ventilation above the amphitheatre side wall.



Badminton Hall

- Trusses as structural system for roofing over badminton courts.
- Steel trusses.



Trusses above Badminton Hall

- Seminar hall with capacity of 106 people to sit.
- Centralized AC in seminar hall.



Seminar Hall

- Open to sky swimming pool.
- Separated from main NMSA building.
- 25 meters in length with 5 lanes.



Swimming Pool



Satellite Image of NMSA

- Basketball and 5-a-side football courts.
- Open to sky.
- Trees used as boundary.



Outdoor Basketball Court

- Tea stall near swimming pool.



Tea Stall

- Services-Ducts behind restaurant.



Ducts behind the restaurant wall

- Wedding hall



Panoramic view of Wedding Hall

- Around 65 parking lots.



Parking Lots

- Natural light coming from above the wall.



Passage

INFERENCES:

- Bigger glass surface on wall for better natural light along the corridors.
- Sufficient no. of parking lots.
- Inaccessible area for ducts behind the restaurants.
- The tea stall near swimming pool area is isolated.



Live Case Study

2. Andheri Sports Complex

Location : Andheri West, Mumbai

Owner : B.M.C.

Capacity : 20,000

Opened : 1988



Andheri Sports Complex also known as Shahaji Raje Krida Sankul is multi-purpose facility located on veera desai road in Andheri west, Mumbai. It was built in 1988 at Rs. 30 crores for schools that lacked necessary infrastructure to hold sports meets. The complex is used for national level sports tournaments like squash, boxing, tennis and karate. The sports complex has an Olympic size swimming pool and a diving pool with four diving levels.



Map showing location of Andheri Sports Complex



Satellite image of Andheri Sports Complex

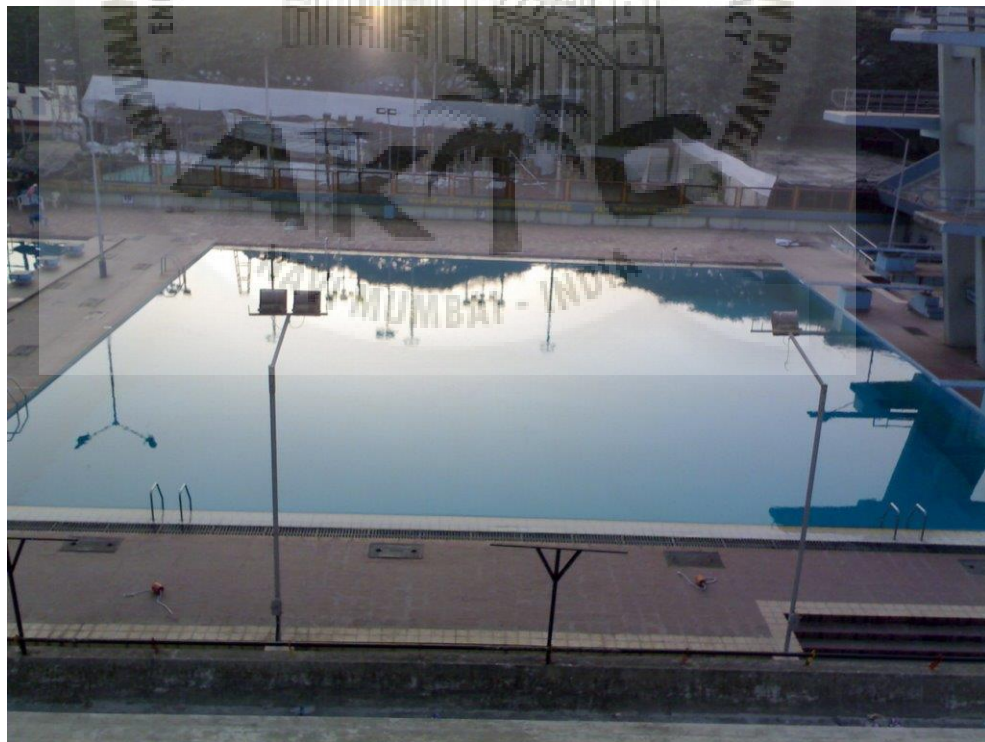
-  Football Ground
-  Swimming Area



Football Ground



Swimming Area



Diving Pool



Olympic size swimming pool

INFERENCE:

- Spectator area around the swimming pool and the diving pool does not have any covering, which can be inconvenient during rainy season.

Net Case Study

1. Morris Iemma Indoor Sports Center

Architects : McPhee Architects

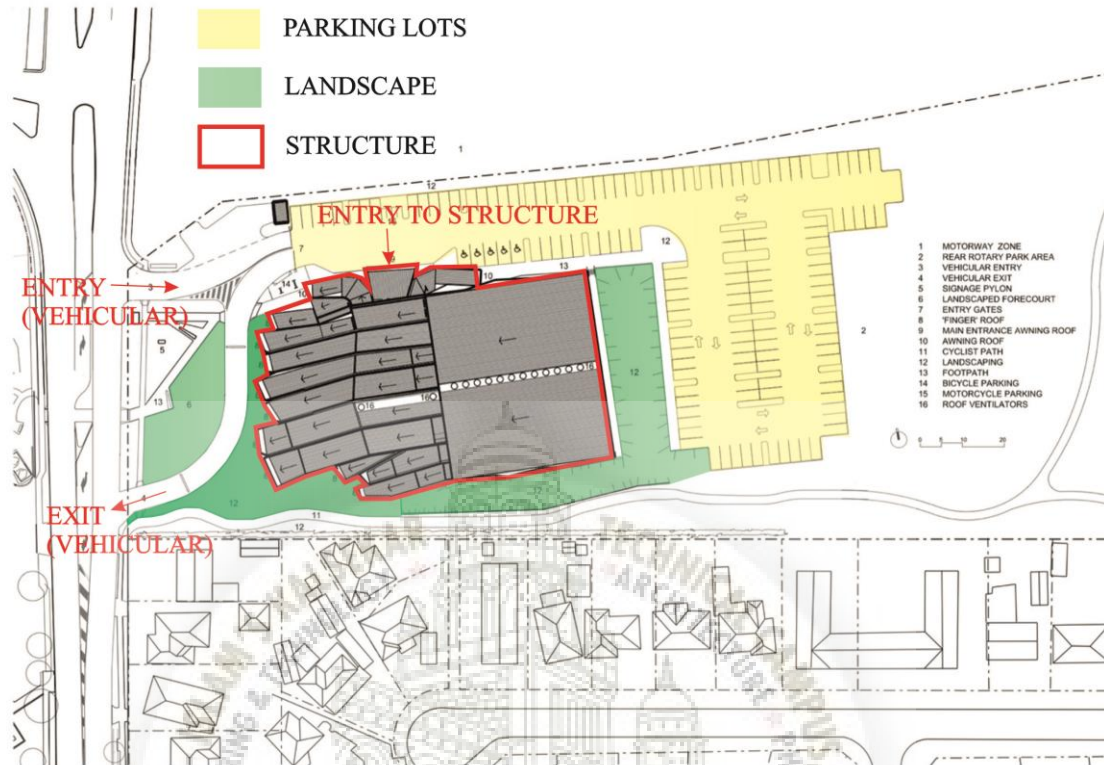
Location : Marrickville NSW, Australia

Client : Canterbury City Council

Area : 3575.0 SQ.M



Morris Iemma Indoor Sports Center



SITE PLAN





SECTION

- Gym for fitness training.
- Natural light incorporated.
- Mechanical ventilation.



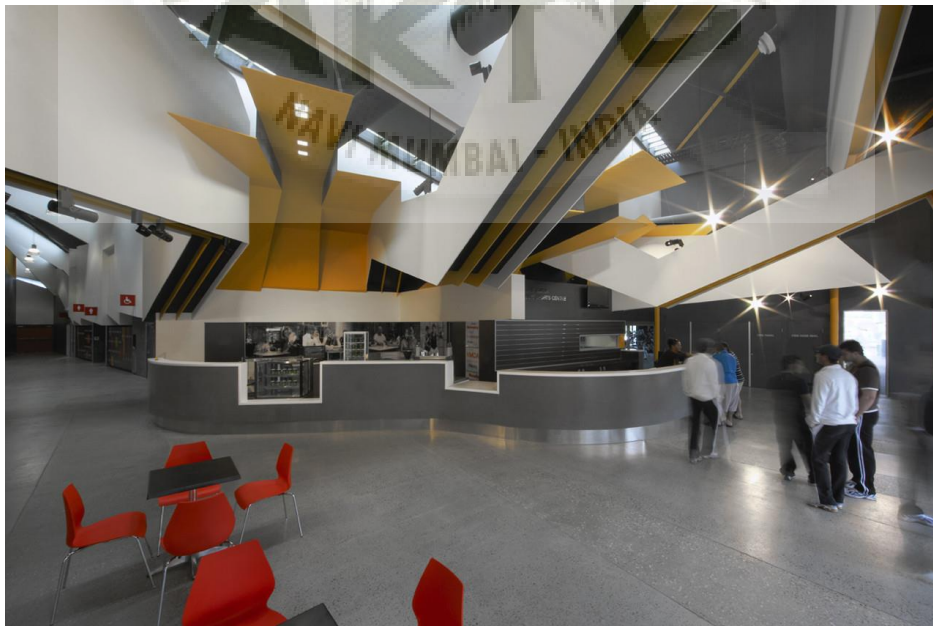
Gym

- Multi-purpose Sport courts
- There are two basketball courts.
- Natural light incorporated.



Sport Courts

- Reception



Reception showing incoming natural light

INFERENCES:

- Balanced floor plan layout with sports area on right, fitness area on left and service area in middle.
- Natural light throughout the structure through roof or curtain glazing walls.
- 155 parking lots which include 4 2-wheeler parking and 5 parking for especially abled people.



Net Case Study

2. Ciutadella Sports Centre

Architects : Batlle i Roig Arquitectes

Location : Barcelona, Spain

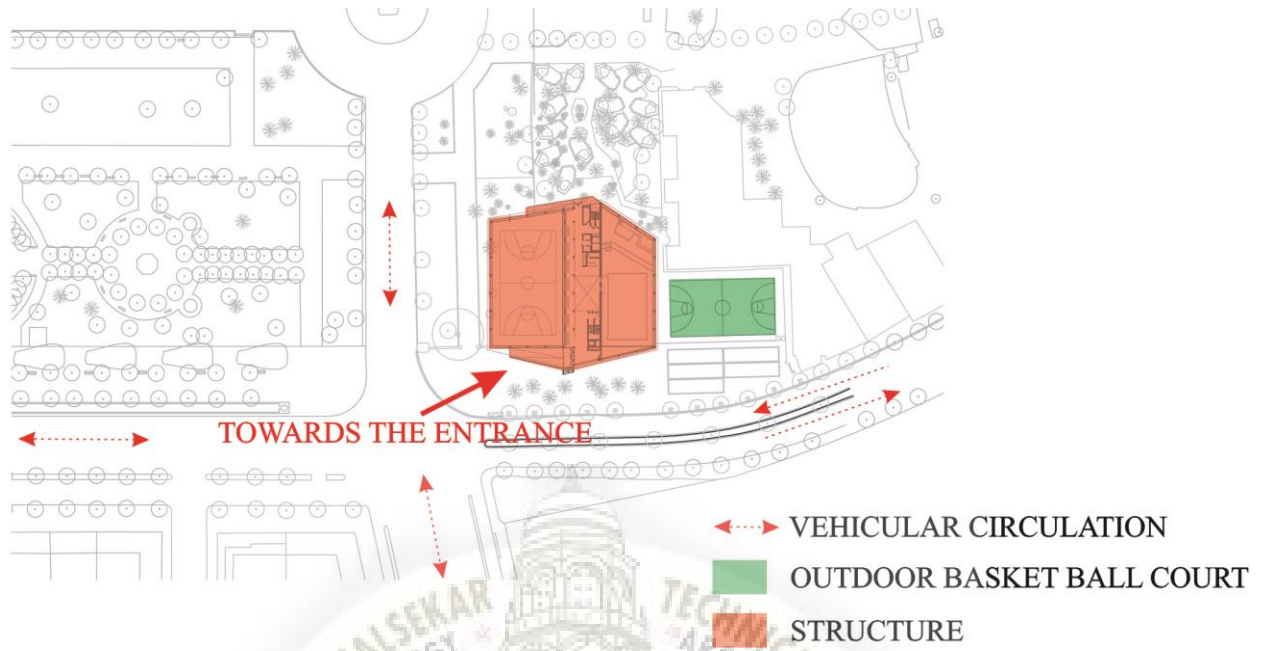
Project Architects : Enric Batlle, Joan Roig

Area : 4300 SQ.M.

Project Year : 2005

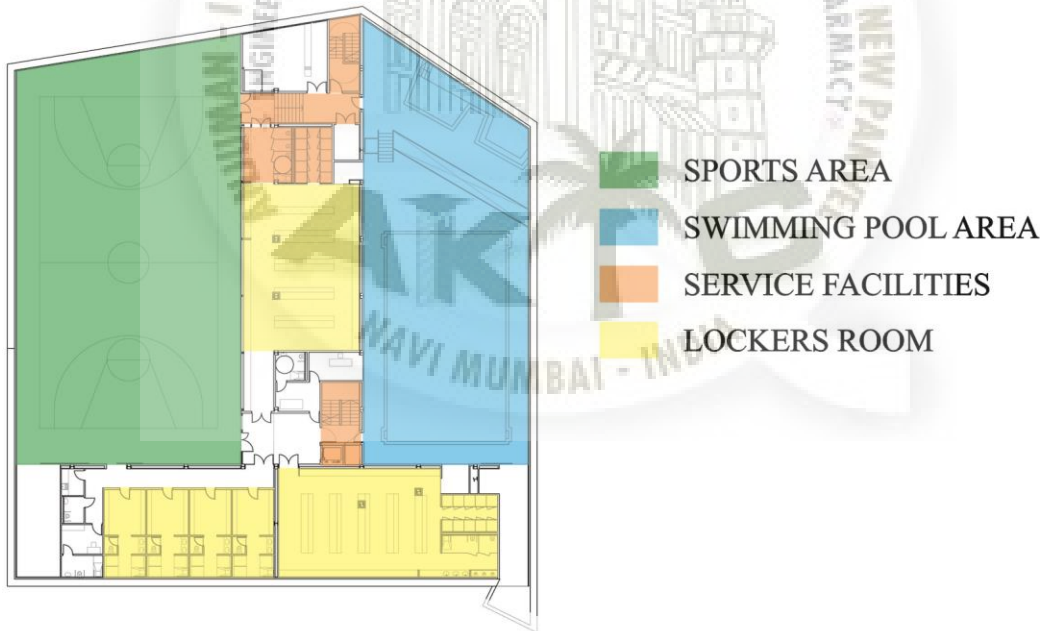


Ciutadella Sports Centre

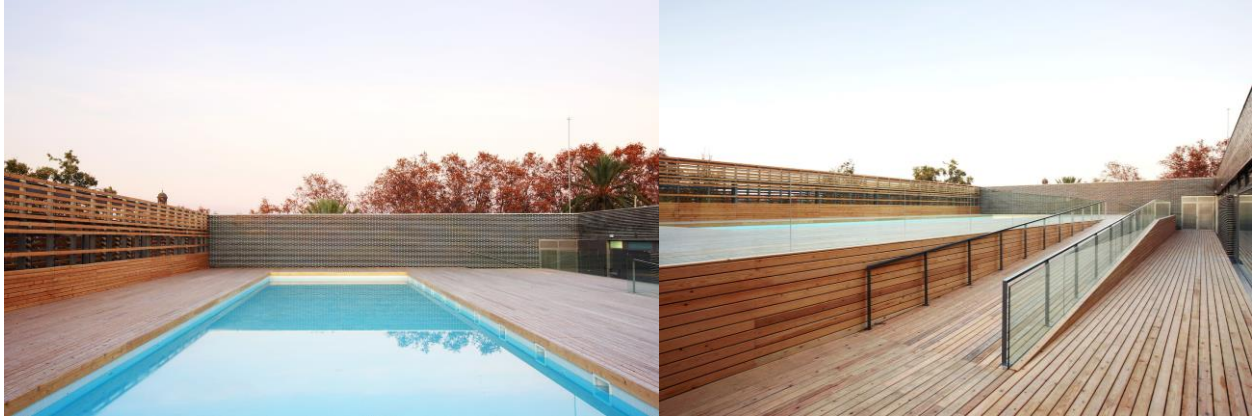




GROUND FLOOR PLAN



BASEMENT PLAN (3.5M BELOW GROUND LEVEL)



SWIMMING POOL AT TERRACE



MULTI-PURPOSE SPORTS COURT

The first floor comprises the gym and fitness rooms, and the second floor includes the rest of the program required by this facility (medical centre, building services, etc.), as well as an outdoor pool with its corresponding services.



SPECTATOR AREA



INDOOR POOL

INFERENCES:

- Double height at the sport courts and swimming pool (at G-1 floor) giving better view to the spectator area at the middle (at ground floor).
- Enough natural light because of floor height certain glazing at ground floor level.
- Swimming pool at terrace can be included in indoor sports activity as well.



Book Case Study

1. Milson Island Indoor Sports Stadium

Architects : Allen Jack + Cottier Architects

Location : Hawkesbury River Information Centre, 5 Bridge Street, Brooklyn NSW
2083, Australia

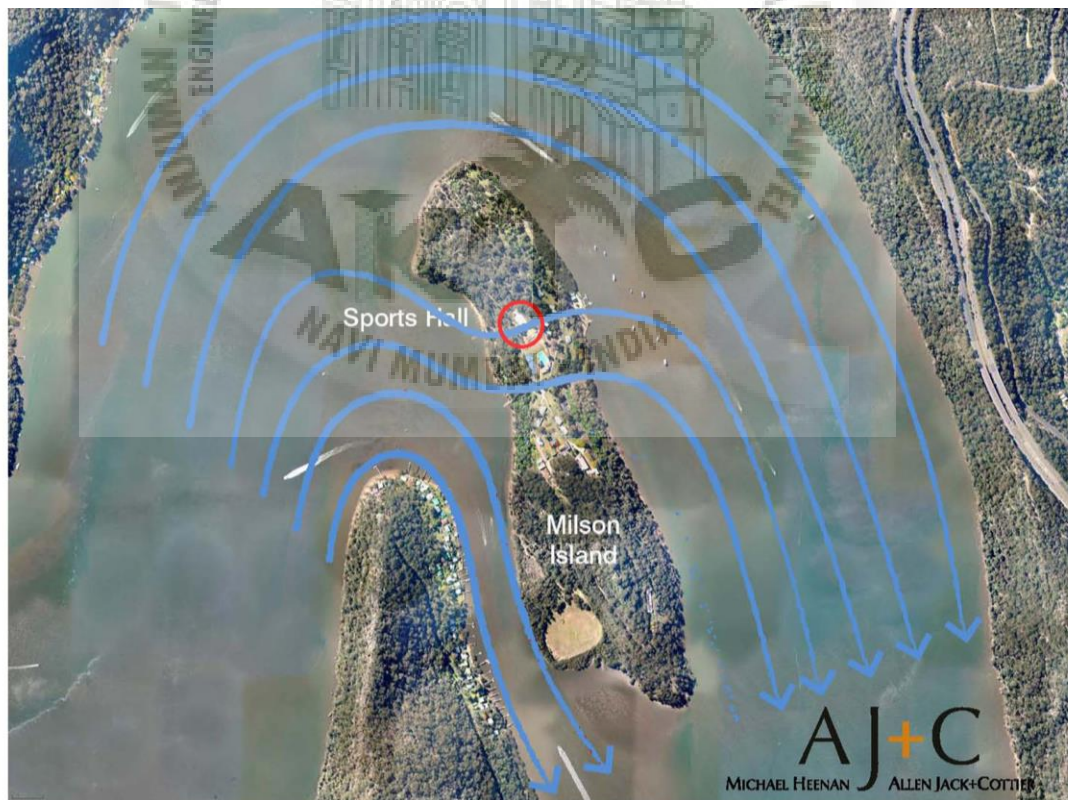
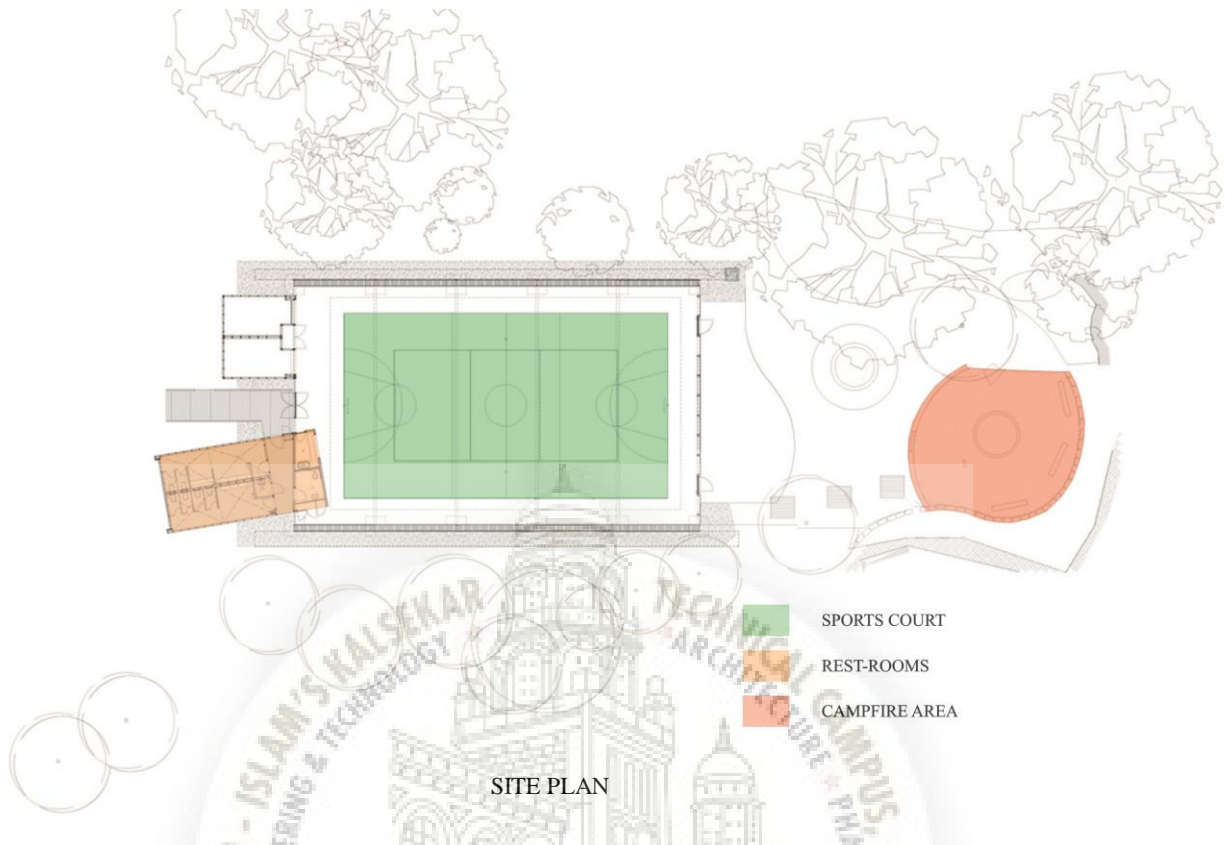
Projects Architects : John Gunnell, Jennifer Gehbauer

Area : 690 SQ.M.

Project Year : 2010



Milson Island Indoor Sports Stadium



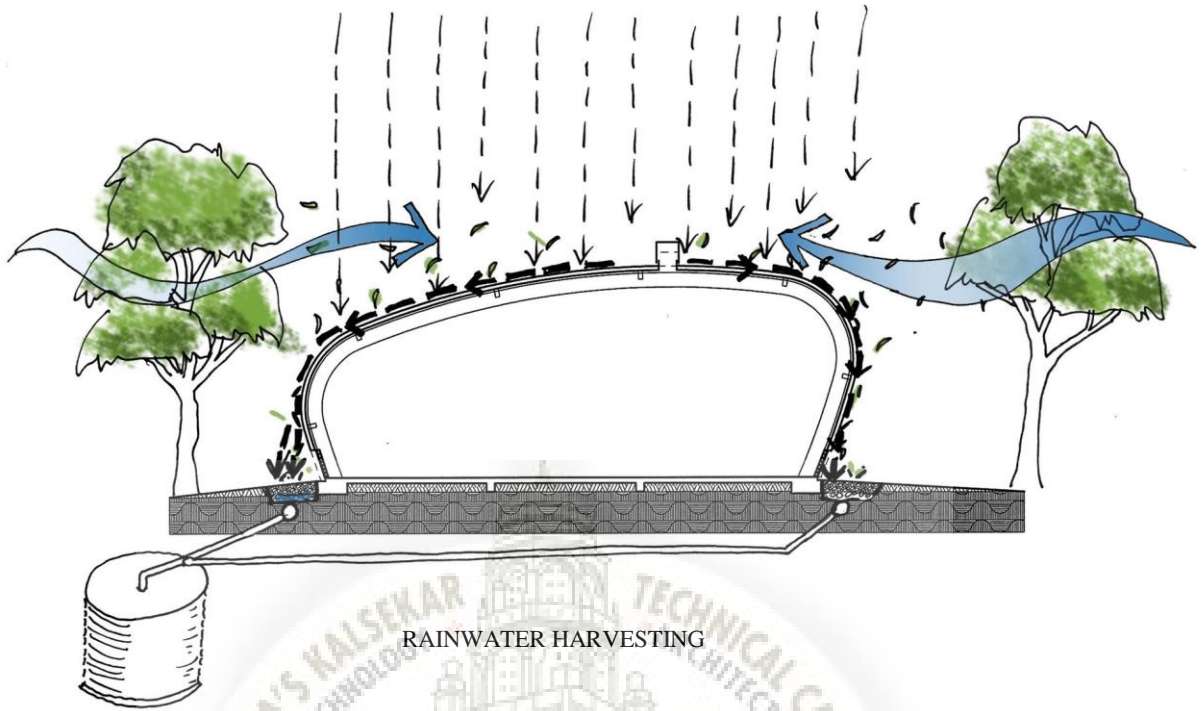
BREEZE ACROSS THE ISLAND



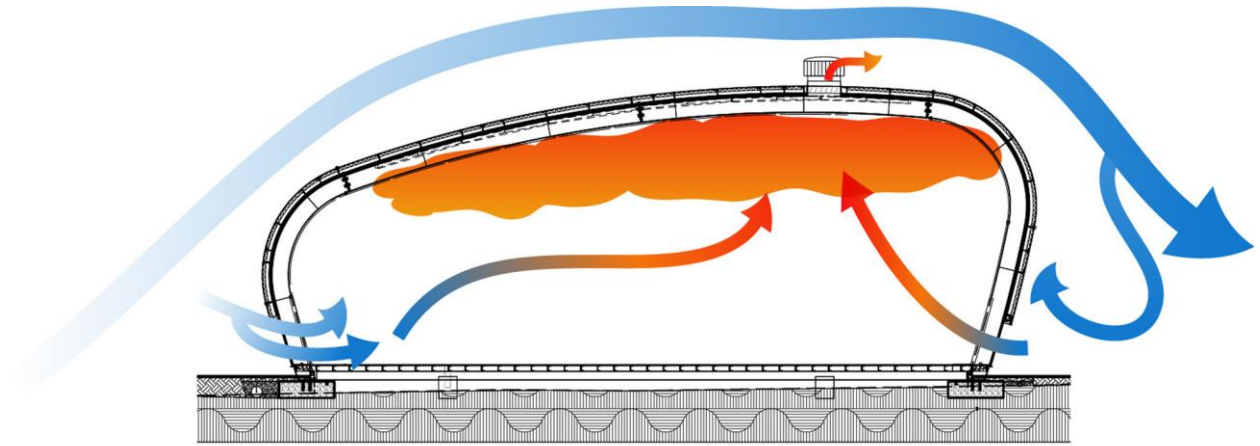
CAMPFIRE SITE IN FRONT OF STRUCTURE



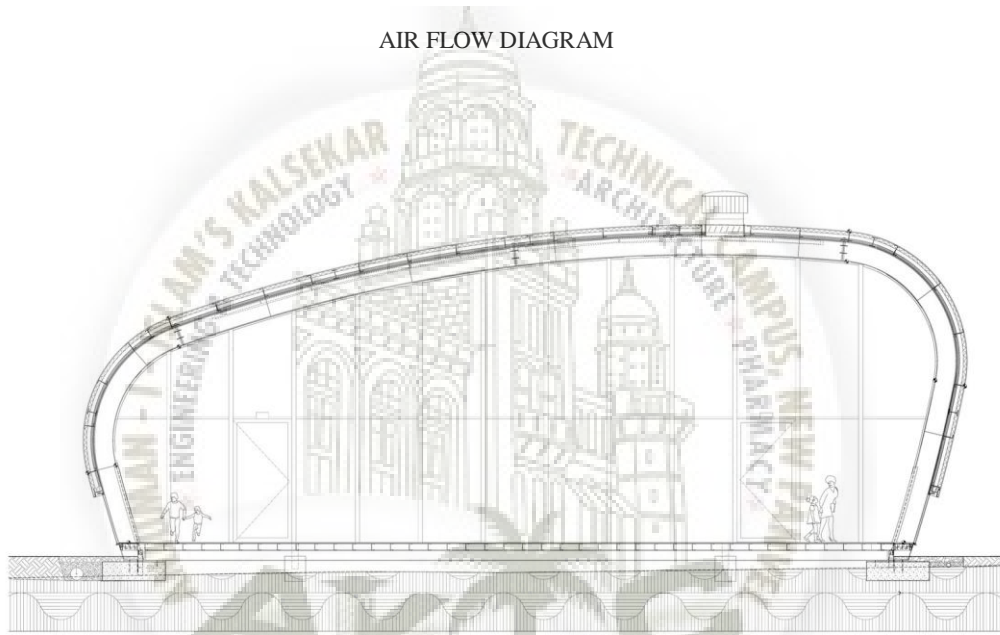
INDOOR SPORTS COURT



WATER AND LEAVES SEPARATION



AIR FLOW DIAGRAM



SECTION

INFERENCES:

- Recreational space outside the structure for better environment.
- Low ventilators can be provided for cool air to come in and exhaust at the roof for hot air to go out of the structure.
- Inclining walls to separate water from other solid natural particles.
- Rain-water harvesting using the separated storm water drained down the inclined wall.
- Multi-purpose Sports Court is used.



- 2.3 Research and Data collection

Basket Ball Court

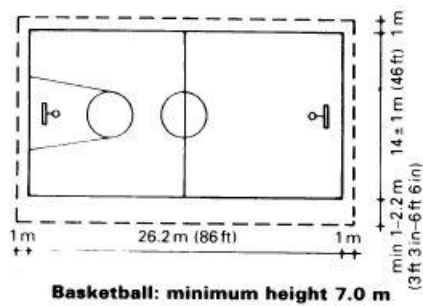
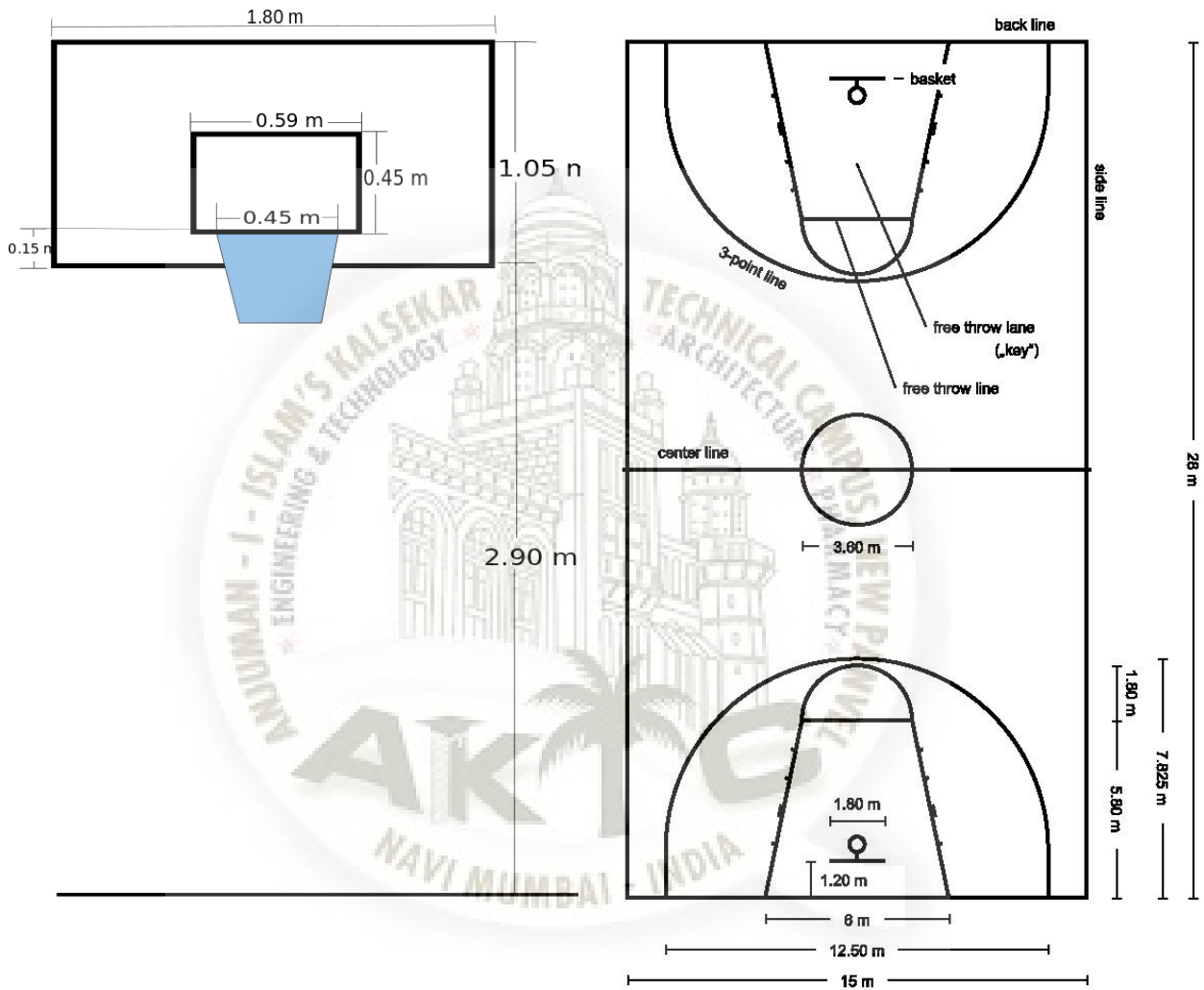
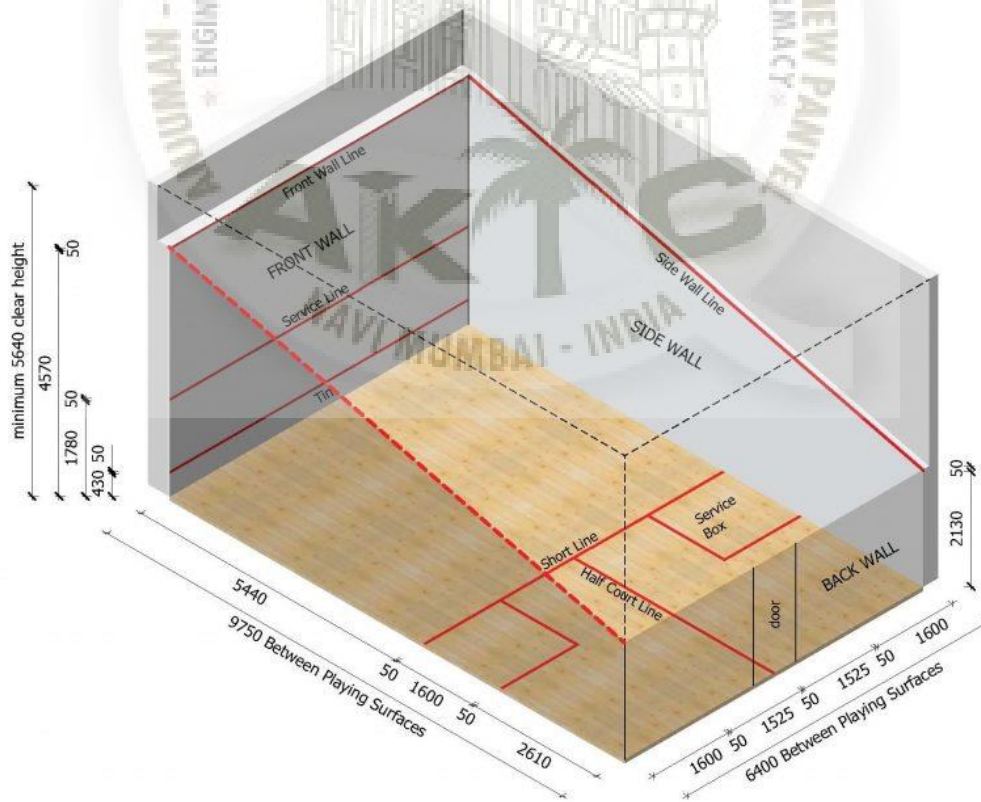


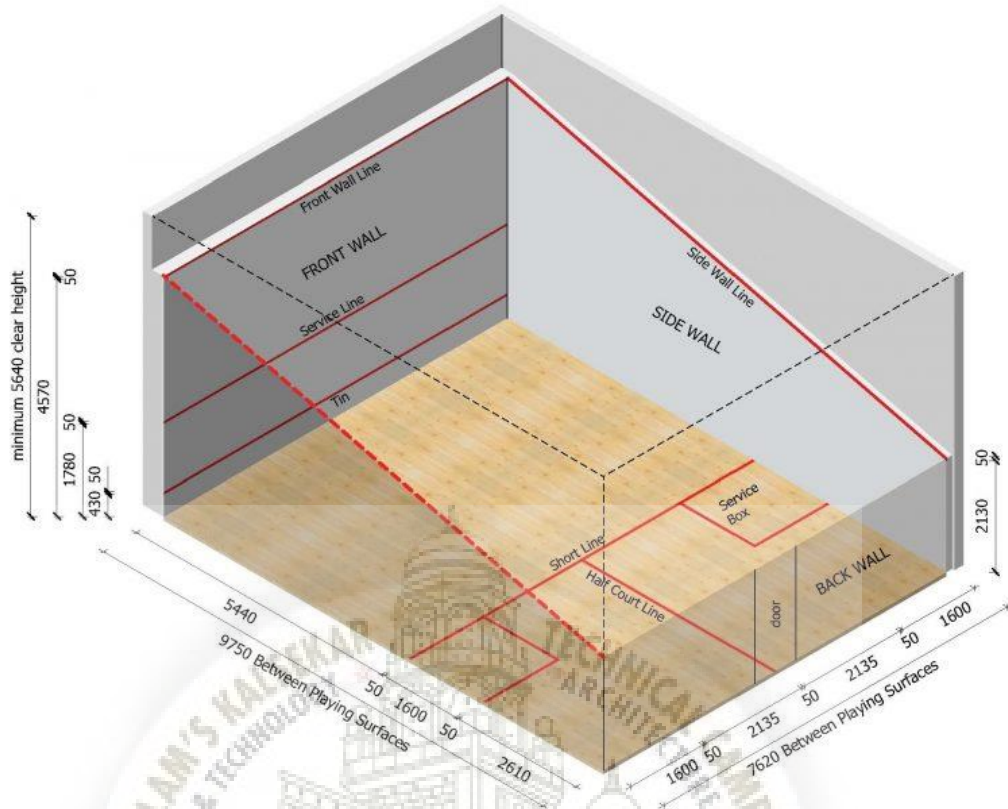
Table Tennis



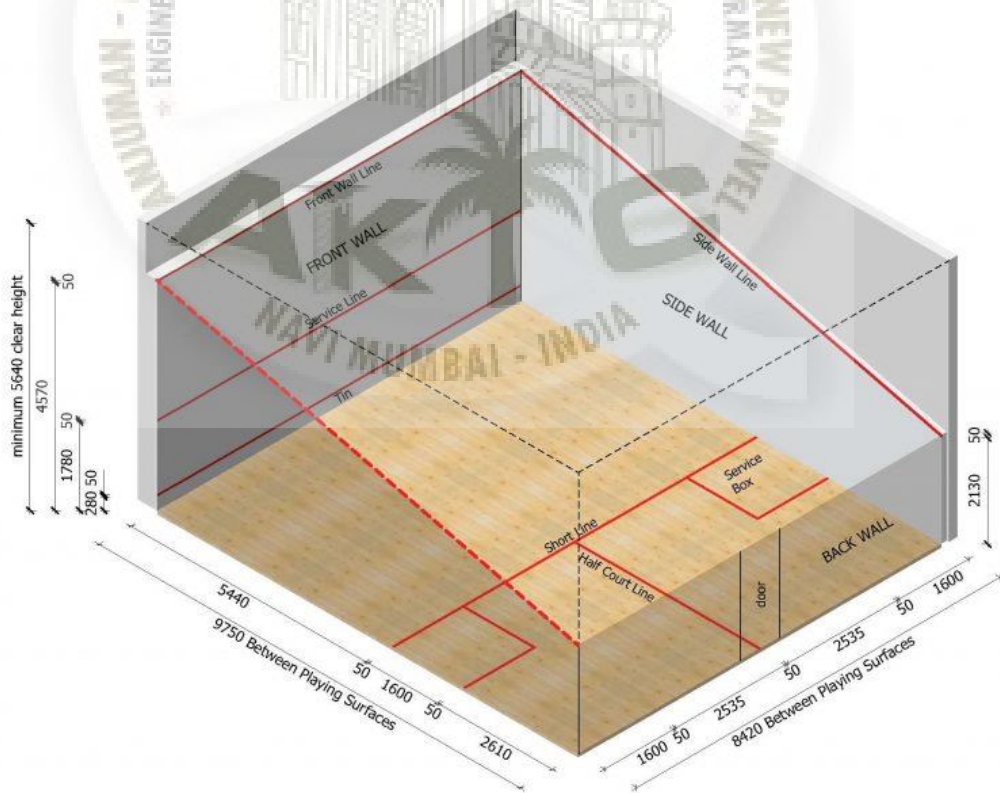
Squash Courts



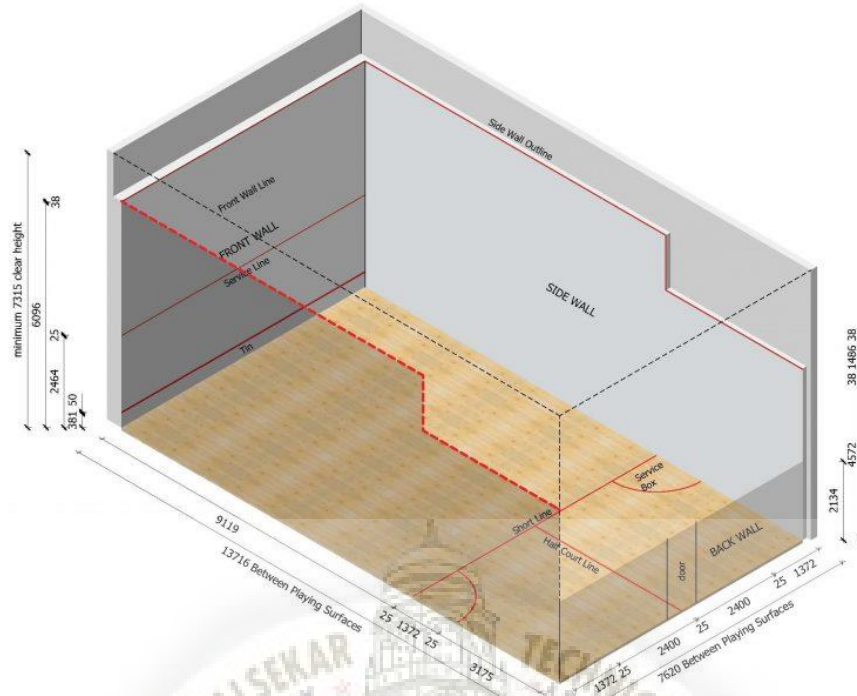
SINGLE COURT DIAGRAM



DOUBLE COURT DIAGRAM

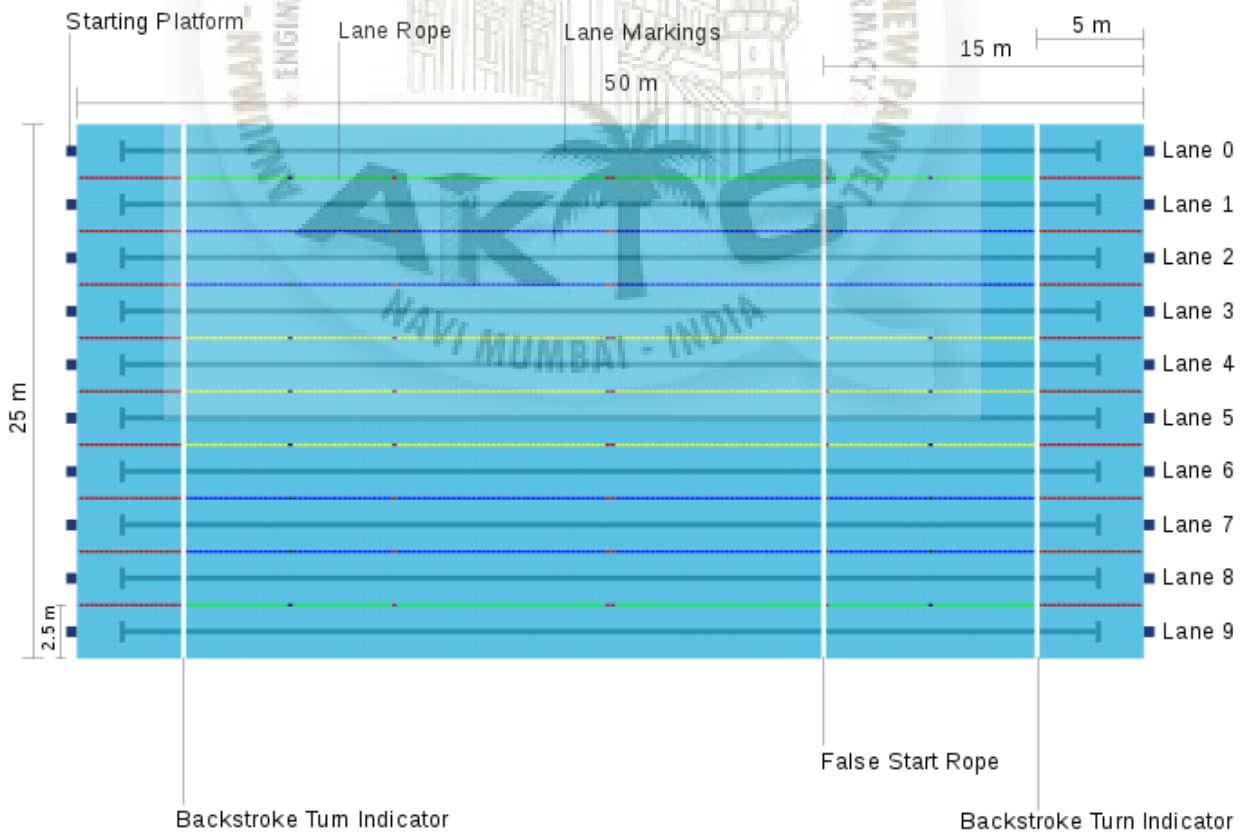


DOUBLES COURT DIAGRAM: COMPETITION WIDTH

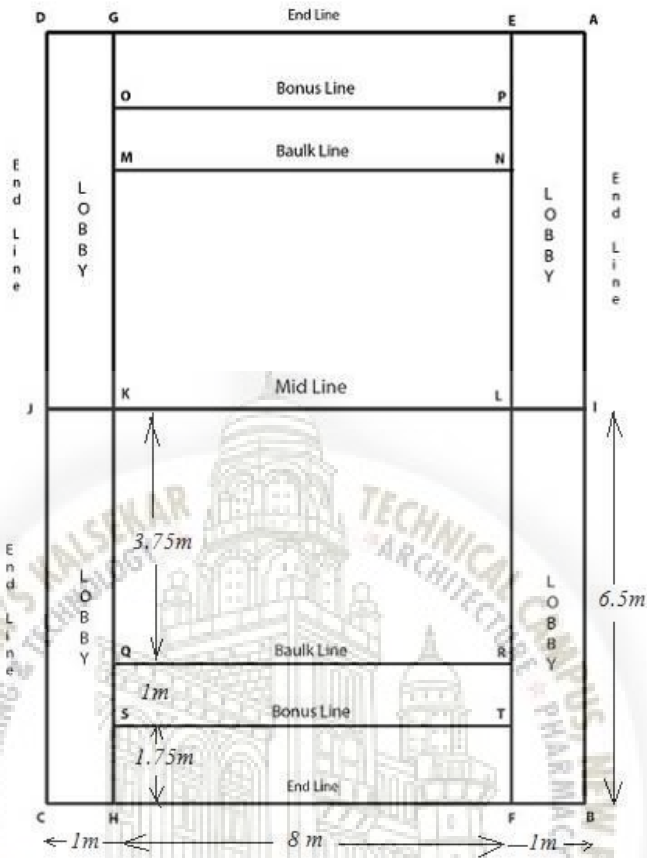


HARDBALL DOUBLES COURT DIAGRAM

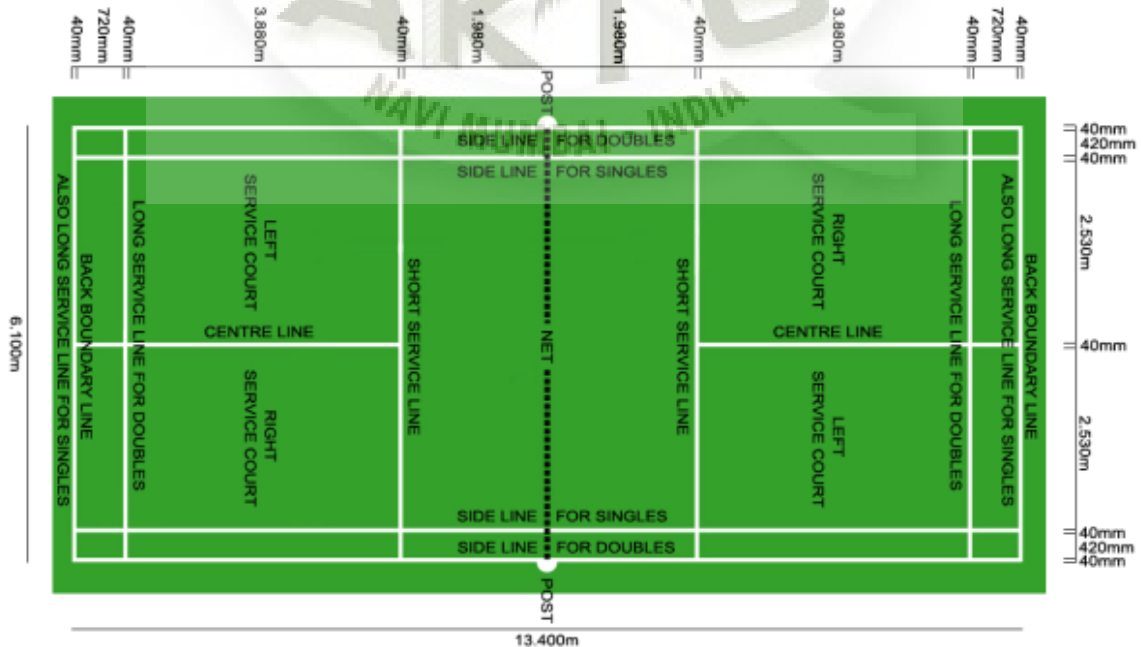
Swimming Pool



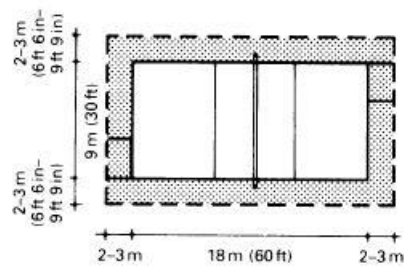
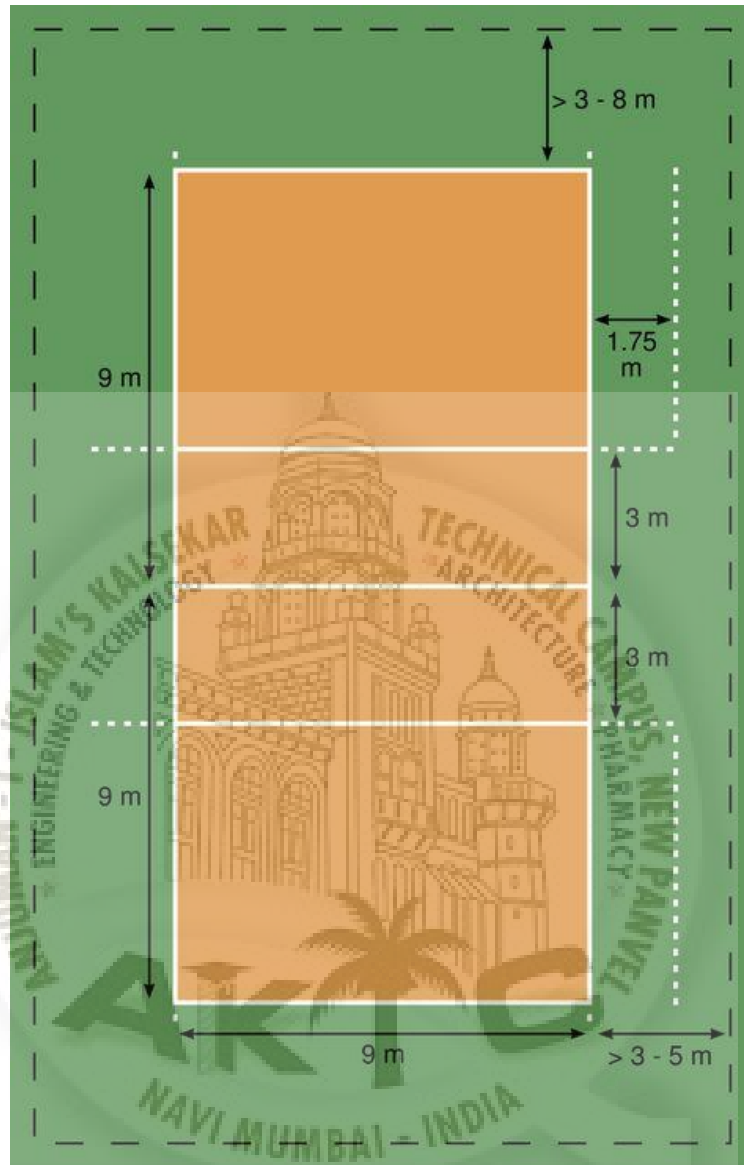
Kabaddi Court



Badminton Court

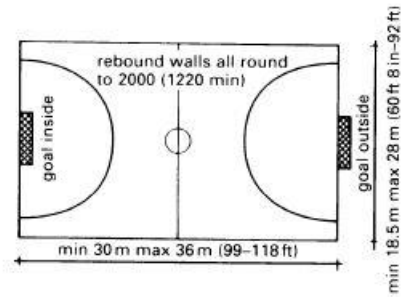


Volleyball Court

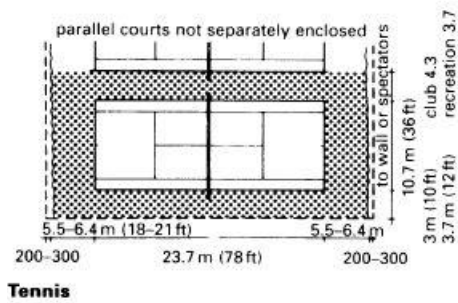
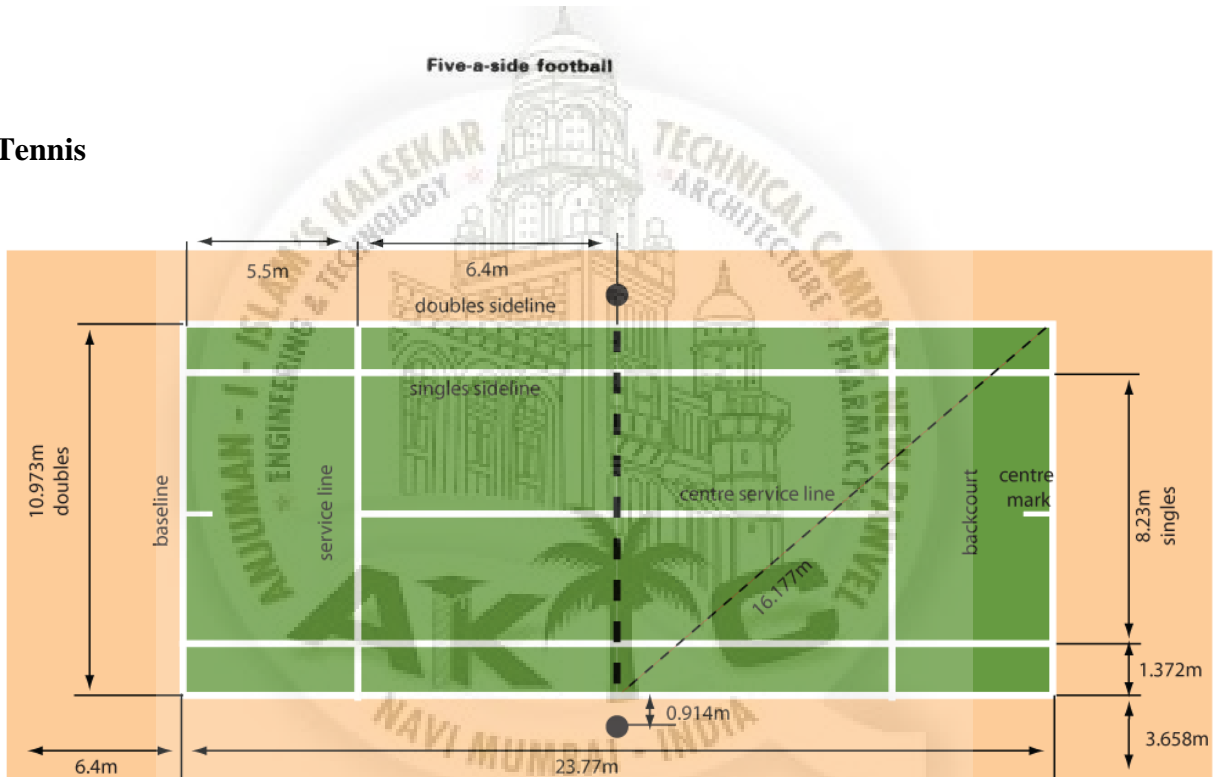


Volleyball

5-a-side Football



Tennis



Tennis

SITE JUSTIFICATION

NMMC to develop Rs 600cr sports centre in Ghansoli

B B Nayak | TNN | Nov 28, 2016, 12.15 AM IST

Navi Mumbai: If things go as planned, the city will house a first-of-its-kind Regional Sports Centre (RSC) in the entire Konkan Division. The civic body will be developing this multi-purpose sports centre on 36 acres of land at plot no 1 in sector 13, Ghansoli, which has been reserved by Cidco for sports facilities.

Plans for the sports centre include facilities such as a hockey stadium, synthetic track, Olympic-sized swimming pool, indoor stadium, kabaddi and kho kho stadium, an International Sports Academy and a gigantic parking lot. The project cost is pegged at Rs 600 crore and a renowned architect will design the master plan.

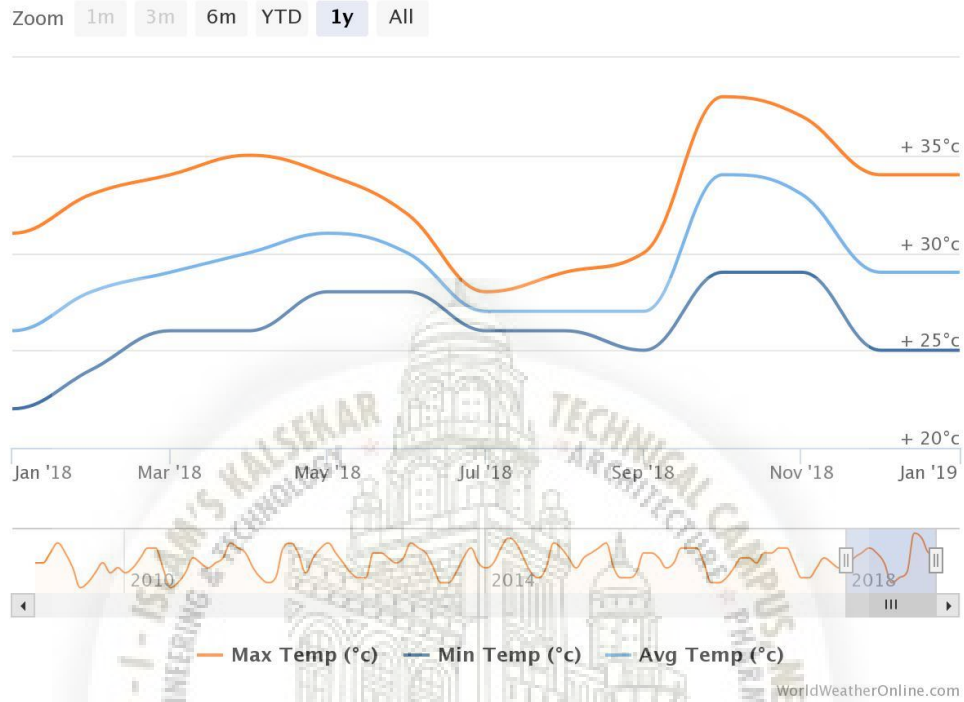
In a recent board meeting, Cidco agreed to handover the plot to NMMC for developing the sports centre. The state government has been in favour of creating a regional sports centre for Konkan region for long time. But the concept took shape only after Tukaram Mundhe put up the matter in the Cidco board meeting on November 24 and got the land approved.



Climatic Data of Site

Ghansoli

Max, Min and Average Temperature (°C)



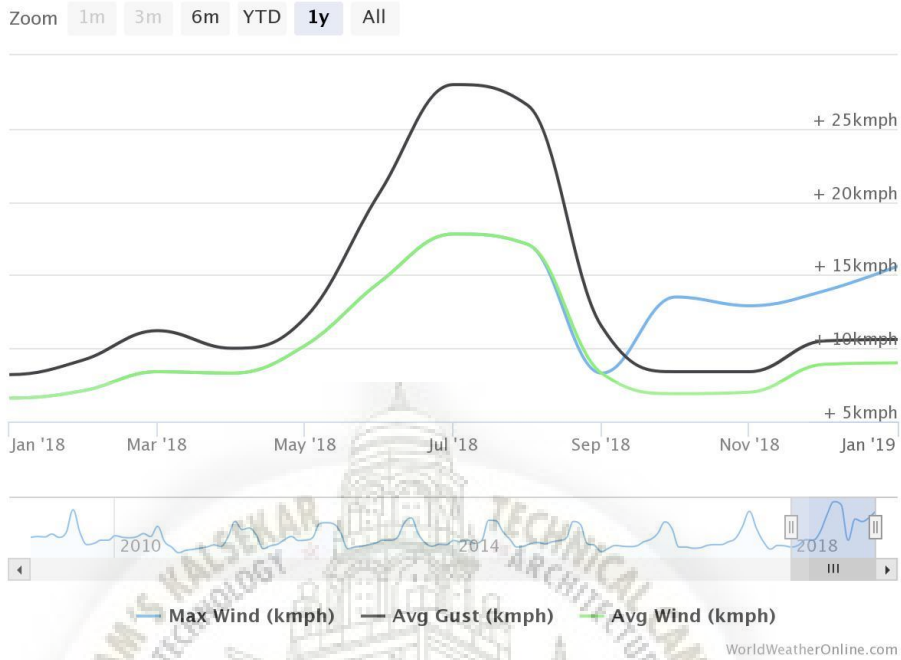
Ghansoli

Average Rainfall Amount (mm) and Rainy Days



Ghansoli

Average and Max Wind Speed and Gust (kmph)



Ghansoli

Average Cloud and Humidity (%)



4. ARCHITECTURAL SPACE PROGRAMME

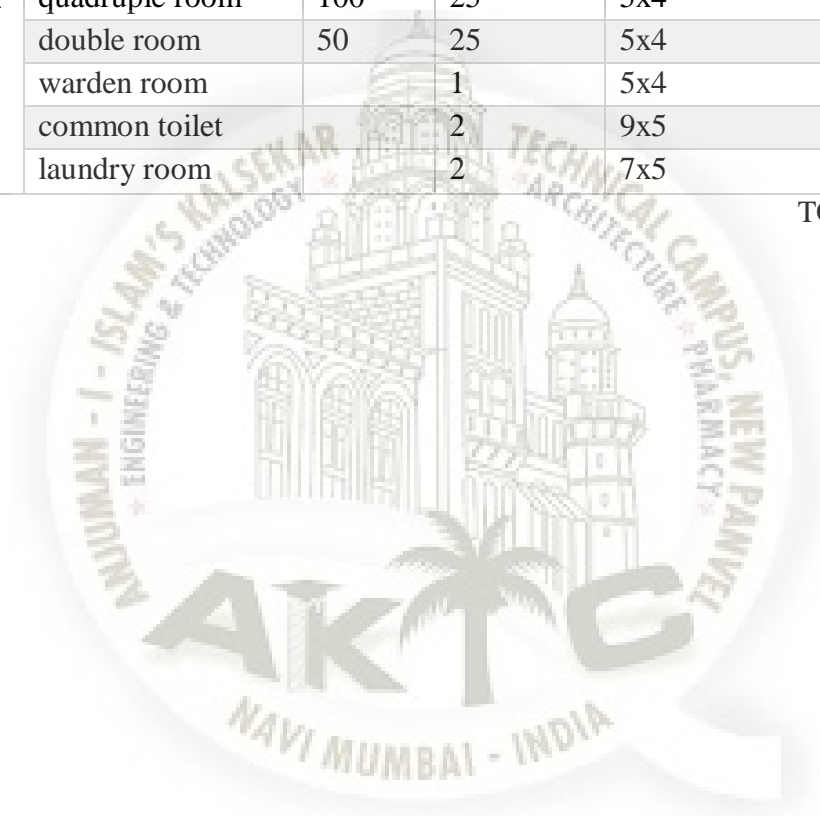
Sr. No.	Spaces	Sub-spaces	No. of users	Total no. of units	Sizes	Area per unit	Area(Sq.mt.)	
1a	Admin Department	Reception Area	150	1		300	300	
1b		Admin Head Office		1		50	50	
1c		Director Office		1		50	50	
1d		Accounts Room		1		100	100	
1e		Record Room		1		50	50	
1f		Store Room		1		25	25	
1g		Conference Room		1		105	105	
1h		Toilets		1		50	50	
2a	Halls	Waiting Area		1		50	50	
2b		Seminar Hall	110	1		150	150	
2c		Wedding Hall	300	1	20x30	600	600	
3a	Canteen	Closed	50	1		150	150	
3b		Semi-open	100	1		300	300	
3c		Kitchen		1		30	30	
3d		Washing Area		1		20	20	
3e		Storeroom		1		25	25	
3f		Gents Toilet		1		35	35	
3g		Ladies Toilet		1		35	35	
4a	Tennis	training field		3	34.75x16.45	572	1716	
4b		competition field		2	34.75x16.45	572	1144	
4c		spectator area		1	(44.75x92.25)- (34.75x82.25)	1270	1270	
4d		changing room+waiting area+restroom		2	15x5	75	150	
4e		massage room		2	7x5	35	70	
4f		gents toilet		1	7x5	35	35	
4g		ladies toilet		1	7x5	35	35	
4h		storeroom		1	5x5	25	25	
4i		medical room(first aid)		1	3x3	9	9	
5a		Kabaddi field	training field		3	15x12	180	540
5b			competition field		2	15x12	180	360
5c	spectator area			1	25x70-15x60	850	850	
5d	changing room+waiting area+restroom			2	15x5	75	150	

5e		massage room	2	7x5	35	70
5f		gents toilet	1	7x5	35	35
5g		ladies toilet	1	7x5	35	35
5h		storeroom	1	5x5	25	25
6a	5-a-side football court	training field	1	35x25	875	875
6b		competition field	1	35x25	875	875
6c		spectator area	1	45x60-35x50	1750	1750
6d		changing room+waiting area+restroom	2	15x5	75	150
6e		massage room	2	7x5	35	70
6f		gents toilet	1	7x5	35	35
6g		ladies toilet	1	7x5	35	35
6h		storeroom	1	5x5	25	25
7a	Basketball	training field	3	28x15	420	1260
7b		competition field	2	28x15	420	840
7c		spectator area	1	38x85-28x75	2100	2100
7d		changing room+waiting area+restroom	2	15x5	75	150
7e		massage room	2	7x5	35	70
7f		gents toilet	1	7x5	35	35
7g		ladies toilet	1	7x5	35	35
7h		storeroom	1	5x5	25	25
8a	Restaurant	seatings	1	20x30	600	600
8b		kitchen	1	20x5	100	100
8c		storage	1	10x5	50	50
8d		reception	1	2x5	10	10
8e		deep freezer	1	5x5	25	25
8f		washing area	1	1x1	1	1
8g		staff washroom	1	7x5	35	35
8h		public washroom	1	2x5	10	10
9a	Swimming arena	practice pool	1	25x15	375	375
9b		competitive pool	1	50x25	1275	1275
9c		gents changing room	1	15x5	75	75
9d		ladies changing room	1	15x5	75	75
9e		gents toilet	1	7x5	35	35
9f		ladies toilet	1	7x5	35	35
9g		diving pool	1	15x15	225	225

9h		spectator area	1	60x5	300	300
10a	Volleyball	practice court	3	24x15	360	1080
10b		competition court	2	24x15	360	720
10c		spectator area	1	(34x85)- (24x75)	1800	1800
10d		changing room+waiting area+restroom	2	15x5	75	150
10e		massage room	2	7x5	35	70
10f		gents toilet	1	7x5	35	35
10g		ladies toilet	1	7x5	35	35
10h		storeroom	1	5x5	25	25
11a	Squash	single court	2	9.75x6.4	62.4	124.8
11b		double court	2	9.75x7.62	74.295	148.59
11c		doubles competition court	2	9.75x8.42	82.095	164.19
11d		hardball double court	2	13.716x7.62	104.51592	209.03184
12a	Table tennis	tables	6	14x7	91	546
12b		changing room+waiting area+restroom	2	15x5	75	150
12c		massage room	2	7x5	35	70
12d		gents toilet	1	7x5	35	35
12e		ladies toilet	1	7x5	35	35
12f		storeroom	1	5x5	25	25
13a	Chess room	tables	6	3x3	9	54
13b		gents toilet	1	7x5	35	35
13c		ladies toilet	1	7x5	35	35
13d		storeroom	1	5x5	25	25
14a	Carrom room	tables	6	3x3	9	54
14b		gents toilet	1	7x5	35	35
14c		ladies toilet	1	7x5	35	35
14d		storeroom	1	5x5	25	25
15a	Card room	room	1	15x15	225	225
15b		gents toilet	1	7x5	35	35
15c		ladies toilet	1	7x5	35	35
15d		storeroom	1	5x5	25	25
16a	Gym	gym room	1	40x10	400	400
16b		gents toilet	1	7x5	35	35
16c		ladies toilet	1	7x5	35	35

16d		storeroom		1	5x5	25	25
16e		office		1	4x3	12	12
16f		changing bathrooms	+	2	15x5	75	150
16g		massage room		2	7x5	35	70
17a	Boys hostel	quadruple room	100	25	5x4	20	500
17b		double room	50	25	5x4	20	500
17c		warden room		1	5x4	20	20
17d		common toilet		2	9x5	45	90
17e		laundry room		2	7x5	35	70
18a	Girls hostel	quadruple room	100	25	5x4	20	500
18b		double room	50	25	5x4	20	500
18c		warden room		1	5x4	20	20
18d		common toilet		2	9x5	45	90
18e		laundry room		2	7x5	35	70

TOTAL – 30028 SQ.M.



DESIGN BRIEF:

Designing an Indoor Sports Academy at Ghansoli catering to following indoor sports:

Basketball, Kabaddi, Tennis, 5-a-side football, swimming pool, volleyball, squash, table tennis, chess, cards, and carrom.

Designing it such that the spaces create environment for social interactions and promote indoor sports.



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