by Ashraf Salama

Mosque & Islamic Cultural Centre

Rome, Italy

Architects
Paolo Portoghesi
Sami Mousawi
Vittorio Gigliotti

Client
Islamic Cultural Centre of Italy

Design
1976

Completed
1992-1995

I. Introduction

The Mosque and Islamic Cultural Centre of Rome was officially inaugurated in 1995 after 20 years of design and construction when the idea of its establishment was envisioned as an international competition in 1976. The centre is located 5 km to the north from the city centre. It sets in Prioli district, a residential area of the upper-middle class at the foothills of Villa Ada park and Monte Antenne, serves the growing number of Muslims that moved to Rome, and provides educational and cultural services to both Muslim and Italian communities. Due to considerable coverage the project has received in international publications and media, the centre has acquired regional and international architectural significance. The final realization of the project is a synthesis of elements that are derived from historic references of Islamic, Roman, and Baroque architecture. The incorporation of these elements into a unified whole results in a unique landmark that speaks to the Islamic and Western worlds.

II. Contextual Information

a. Historical background

Rome witnessed several different cultural periods and historical eras. These are the Republican, Imperial, Middle Ages, Renaissance, Baroque, and Rococo, classicism, and modernism They have influenced the development of the city at all levels. The settlement of Rome started on the Palatine Hill. It was there that the walled original cell that the Romans called Roma Quadrata was built according to Varro in 753 BC. In fact, Iron age huts have been found, including the so called House of Romulus, that can be dated to the Ninth century BC by their funerary urns.

In 509 B. C. the Roman republic was founded and based in Rome. In 313 A. D. under the reign of Emperor Constantine (r. 306-337) Rome became the major official centre of Christianity. Constantine founded Constantinople as the capital of the eastern part of the Roman Empire. Consequently, it emerged as a revival to Rome. Over time, the Roman Empire began to weaken and in 476 the German tribes that inhabited the northern borders of the empire brought the Roman Empire to an end.

Following the collapse of the Roman Empire, papacy developed as the most important institution in Rome that was considered as the primary centre of Western Christianity. The papacy control over Rome continued until the 19th century and the Bishops of Rome defended it against a variety of outside powers, such as the Holy Roman Empire, the French and other Italian states. During that period Rome became the most significant religious, political and cultural centre and the major Western world's greatest works of art and architecture were created in the city during those centuries

Under the rule of King Victor Emmanuel II, Italy was unified and Rome was declared its capital in 1870. As a result, the pope's authority was diminished and was limited to the area of the Vatican. In 1922, the Fascists took the control of the government under the leadership of Benito Mussolini. In 1939 in alliance with Nazi Germany, Mussolini led Italy into World War II. After Italy's defeat in the War, it was declared as a republic and Rome continued to be its capital. In fact, throughout history, Rome was an important political and religious centre. However, its characteristic features are not as striking as they were in the last centuries.

b. Local architectural character

In the ancient Roman period, architecture as the art of enclosed space first emerged. The early Christian basilica was developed in Rome in the 4th century that became the basis of the Romanesque and Gothic movements throughout Europe. Bramante and Michelanglo created the so called the flower of western architecture in the high Renaissance period. Their architectural work is to be found almost exclusively in Rome. Bernini and Barromini had great influence in almost every single Baroque building. The Fascist architecture of Rome has been described as much more interesting than people imagine.

The best known Italian monuments, such as the Colosseum and the Pantheon exist in Rome. The great monuments from the Christian period include some from the medieval period such as the church of Santa Marria Maggiore. However, the vast majority of its surviving post-Roman buildings date from the 15th century onwards. Among those are the Renaissance Piazza del Campidoglio, the Plazzo Farnese, and the Tempietto and the Baroque's St. Peter's, San Andrea al Quirinale, and San Carlo alle Quattro Fontane.

Several important planning projects were carried out by the popes in the late 16th century in order to create wide and broad streets that linked a number of Rome's major monuments and churches.

During the late 19th and early 20th centuries, Rome witnessed the realization of several architectural and urban development projects. After it was declared capital of the newly unified Italy in 1870 new planning schemes were devised for the city. These schemes provided for important arterial roads that passed through older parts of the city where a number of great estates were converted into public parks. In 1922, Mussolini ushered in a new period of grandiose town planning that included the penetration of a number of new streets through the fabric of the pre-modern city.

c. Climatic conditions

Generally, Rome enjoys a mild weather with an average of 50% to 60% relative humidity. Winter temperatures range from – 4 degrees to 5 degrees Celsius. Summer temperature soars to between 28 to 35 degrees Celsius, with night temperatures of 20 degrees Celsius. The city enjoys a rainy winter with occasional rains in the summer. The average annual precipitation is 84 cm.

d. Site context

The Mosque and Islamic Cultural Centre of Rome is located to the north, approximately 5.00 km. from the historic core of the city. It is situated in the Parioli district that is characterized by the upper middle class residential apartment buildings built in the period between 1950s and 1970s. The site of the project is located at the edge of the vast Villa Ada Park, which contains the site of Monte Antenne that is closely connected to the myths surrounding the founding of the old city of Rome.

The site of the project is considered a historically significant area although it is relatively far from the historic centre. Villa Ada park was a residence of the Italian royal family. Monte Antenne is believed to be the location of the Sabian city of the Antennates who were conquered by the founder of Rome, Romulus.

e. Site topography

The area was a dump site at the foothills of Villa Ada Park. The site of the project is nearly triangular with very slight slopes toward the southeast, with an area of 30.000 sq.m. Via della Moschea is the road that leads to the centre. It was especially paved for accessibility purposes based on the request of the authorities of Rome.

III. Programme

a. Initial Conditions of program formulation

Before the construction of the centre, the Muslim community had to rent apartments in the city in order to perform religious activities and cultural gatherings. Some stories associate the establishment of the centre to the period of 1920s when Mussolini was asked about the possibility of building a mosque in Rome and he replied if they allowed me to build a church in Mecca I would agree. However, the Rome Islamic Centre was established in 1959 and intended to provide assistance to the Muslims living in Rome and to satisfy the need for a place for group prayers.

In recognizing the high demand to provide a mosque for the benefit of several thousands of Muslims residing in Rome, a Vatican decree issued in 1963 had declared that it would not oppose the construction of a mosque in Rome on condition that this mosque be located out of sight of St. Peter's Basilica, and that its minaret not to be taller than the St Peter's Dome. As a result of this declaration, the Islamic Cultural Centre was founded in 1966 based on a presidential decree.

Reports indicate that the initiative to build the Rome mosque dates back to 1972 when the ambassadors of all Muslim countries assigned to Italy and the Vatican, together with representatives of the Muslim community, approached the president of Italy to set up the centre. While the intention was to basically serve the Muslim community, the foundation charter of the centre also declared that it should become an international forum to encourage dialogue between Islam and the Western world. In addition, a visit to Rome by King Faisal of Saudi Arabia in the early 1970s seems to be the occasion that triggered action on

the part of the Muslim community of Rome in taking definitive steps toward the realization of a new Islamic cultural centre. Consequently, an international architectural competition was launched in 1976.

b. Objectives

With a clear vision the client, the Islamic Cultural Centre of Rome prepared an architectural program for a mosque and a cultural centre that encompass religious, social, cultural, and educational activities. The objectives of the program were to provide an architectural setting where Muslims can perform the prayers, and to accommodate a wide spectrum of educational and cultural activities such as lectures, seminars, and exhibitions. Via these activities the centre helps to provide the Italian community with a clear and better understanding of Islam. As well, one of the important objectives was to provide social and socio-religious services to the Muslim community.

c. Functional requirements

The functional requirements for the design of the centre included designing a prayer hall which would accommodates 2000 worshippers of whom 10% would be females, and which would be served by ablution areas. As well, the design was to include a smaller prayer hall which would accommodate 150 worshippers, an educational section containing library, classrooms, a conference auditorium for 400 people or more, an exhibition area, and two residential sections , one for the Imam of the Mosque and the other for visitors. Since the project took about 20 years to be completed and occupied, few modifications to the initial program took place where the number of prayers was estimated to be 2500 males, and 500 females, and meeting rooms and offices were added.

IV. Description

a. Project data

The total built area of the complex is 13.800 sq. m. The complex consists of two masses. The first is a rectangular prayer hall measuring about 60 x 40 m with the longer sides facing the south east, the qibla wall. The second part approximates the shape of H and accommodates the remaining functions of the complex except for the ablution facilities that are located beneath the prayer hall. A water channel runs along the longitudinal axis of the H shaped mass and connects two pools, one located in the centre of the mass and another to the northeast. The longest side of the H shaped mass, which faces the northwest, curves away from the complex and toward the city, while the other long side of it curves toward the prayer hall. The minaret is located southwest of the prayer hall, close to where the H shaped mass and the prayer hall meet.

The first mass is the prayer hall that is raised about 8 metres above ground level, with the ablution area occupying part of the volume underneath. The space of the prayer hall contains two symmetrically arranged gallery floors that run perpendicular to the qibla wall. The galleries provide a space for female worshippers about a fourth of the size of the main prayer hall located below them. The two symmetrical parts below the galleries are lower 15 cm than the rest of the hall. The second mass is the H shaped one that includes three floors with riwaqs occupying the roof of the mass. The riwaqs are colonnades that generally follow the shape of an H but form a sahan and courtyard in its centre. The stories below the riwaqs are divided into four wings resulting from the shape of the H which include in one side classrooms, offices, the small prayer hall, and exhibition hall, and in the other side dorms and library, storage the accommodation units of the Imam of the mosque. Below the sahan is the multipurpose and conference halls.

The massing of the complex seems to follow a traditional approach to the architecture of mosques. The prayer hall is articulated by a large central dome with a diameter of 21.60 m. 16 smaller domes surround the large central one. All of the domes are covered with lead and each is articulated with ribs meeting at its apex. Another important feature is the columns forming the colonnade/riwaq areas. Each column consists of four small columns that curve outwards at the top to give the image of a four branched tree. The four branch columns are also shaped to form the 40 meter high minaret of the mosque. However, while the columns of the riwaq are made of concrete, the curving parts of the minaret are carved out of marble. The columns are used as a unifying element throughout the mosque. The four branches of each main column in the prayer hall shoot out to form an intricate web of arches and ribs that articulate the area just beneath the domes. In terms of lighting, natural light enters the interior through window openings in the wall and through a series small windows located within the stepped structure of the dome.

The treatment of the facades and exterior walls includes panels combining travertine marble and slender, and yellow Roman bricks. A veneer of traditional Moroccan decoration was applied to the interior walls of the prayer hall. This consists of geometrical patterns made of ceramic mosaics that cover the lower part of the prayer hall's walls, the mihrab, and the lower parts of the columns. A painted band of calligraphic inscriptions is applied at the top of the geometrical patterns. However, the calligraphic inscriptions applied on the columns are carved in stucco.

Other elements articulating the interior include circular traditional Moroccan chandeliers that provide the prayer hall with artificial lighting and wooden minbar was manufactured and donated by a Saudi Arabian construction company. The floor of the prayer hall is tiled with marble and has been covered with carpeting in blue. The walls of the small prayer hall are covered by traditional Turkish ceramics and its floors are tiled with marble that is covered with blue carpeting as well.

Generally, the landscaping around the area around the complex is simple and consists of greenery and parking areas. The area extended along the longitudinal axis of the H shaped mass contains the water channel that connects the two pools. The channel steps down forming a chute as it moves from the upper pool to the lower one. The lower pool has a central waterspout surrounded by sixteen smaller ones, all arranged in a manner that reflects the arrangement of the domes above the prayer hall.

b. Structure, materials, technology

Structural system, Construction technology

The structural system used in the complex expresses the new technological advancements in construction technology and reflects the spirit of the time and place. The client required the designers to incorporate anti-seismic measures even though Rome building codes do not have such a requirement. Due to the nature of the site, the foundation pillars had to extend to a depth of 80 m to reach bedrock. A modular structural system was established; the modular system of the riwaq is 3.60 x 3.60 m while for the main prayer hall is 7.20 x 7.20 m, and resulting in a span for the dome of 21.60 m.

The most striking aspect of the structural system is the clustered four branch columns and the ribs springing from them. These columns are composed of case-in-situ elements, and the upper web-like ribs contain both pre cast and cast-in-situ elements. The four branches of each column hold a raised octagonal stub column and all the octagonal columns support the domes. However, the web-like ribs springing from the four branched columns are purely decorative.

The concrete employed for all the structural elements of the columns and arches consisted of a special composition of materials; white carrara marble aggregates mixed with white cement. The unconventional use of chromium plated zinc coated reinforcement bars was required to avoid corrosion and concomitant staining of the white concrete. PVC formwork was especially manufactured and utilized to suit the structural components while allowing fine adjustments during positioning and casting in-situ.

Materials

A wide variety of materials have been used in the complex. For the rendering of facades and exterior finishes travertine and peperino Romano were used with classic Roman brickwork. Exterior spaces are either tilled with typical Roman stone and marbles. Roads in the premises of the centre are paved.

For the flooring of interior spaces marble finishes were used. The sahan and riwaq floors are finished with strips of travertine based on the modular design 3.60m x 3.60. m. with brick paving in between. Lead was used as a sheathing material for the domes. Interior finishes of the domes of the main prayer hall were made of particular coating of encaustic stucco. Mosaic stucco decorative panels in the main prayer and the small prayer halls were made by Moroccan and Turkish craftsmen. Office spaces, classrooms are simply painted, while marble finishes are used for floors.

It is significant to note that Vittorio Gigliotti, the member of the design team responsible for structural and constructional issues, received the Gairn EEC Medal Award in 1989 for his work on the complex.

c. Origins of technology, materials, labour force, professionals

Origins of technology and materials can be traced to Roman and Baroque architecture. The materials used are common to Roman and Baroque architecture. The constructional and structural systems used were devised by an Italian Vittorio Gigliotti. An Italian contracting firm, that of Fortunato Federici carried out the construction works. The architects are the offices of Sami Mousawi, the UK-Based Iraqi architect and the Italian office of Paolo Portoghesi/Vittorio Gigliotti. The office of Portoghesi/Gigliotti supervised construction of the complex with collaboration of Mohsen Nourian Pour, an Italian-Iranian architect. Sami Mousawi was acting periodically as a technical consultant. Apparently, the project has a strong Italian component to it.

Professionals from Morocco and Turkey were involved at later stages of construction. Moroccan craftsmen carried out much of the decoration of the main prayer hall. Turkish craftsmen decorated the small prayer area. In normal construction works the labour force consisted of skilled and non-skilled workers.

V. Construction Schedule and Costs

a. History of project

Since its establishment in 1966 the Islamic Cultural Centre of Rome had the intention to build a mosque and cultural centre; however, this intention was not realized until mid-nineties with the completion of the project. The municipality of Rome donated the land for the mosque and cultural centre in 1975, and a year later the centre launched an international architectural competition for the design of the complex.

The competition drew more than 40 entries and the jury, which consisted of both Muslims and Italians, selected two entries as winning designs. The jury, however, asked the two winners, the Manchester-based Iraqi architect Sami Mousawi and the Italian office of Paolo Portoghesi/Vittorio Gigliotti, to submit new joint design.

According to the letter signed by the design team, a new joint design was submitted in October 1976 that was approved by the client, and a contract assignment was given to the design team in April 1977 for the design and supervision of the proposed scheme.

Difficulties that pertain to budgeting and resistance to the project from the residents of the area, and the long process of obtaining approvals for the new design from the municipality of Rome, delayed the project. This took place during the period between 1979 and 1984 when the final design was approved. The main prayer hall was completed in 1992 and the rest of the complex components were completed in January 1995. However, the official inauguration was in June 1995 in the presence of the President of Italy and representatives of the presidents and kings of Muslim countries.

b. Total costs and main sources of financing

The cost of the project amounted to approximately 50.000.000 US$ in 1992. It should be noted that this sum does not take into account in-kind donations. The land was donated by the Municipality of Rome, and the costs of carrying out the decoration of the main and small prayer halls were donated by the Moroccan and Turkish governments respectively.

The main source of financing come from 24 countries, which covers the total cost of the project. These are Algeria, the United Arab Emirates, Bahrain, Bangladesh, Brunei, Egypt, Indonesia, Iraq, Jordan, Kuwait, Libya, Malaysia, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Sudan, Tunisia, Turkey, and Yemen. Saudi Arabia made the largest contribution.

c. Comparative costs

The cost per sq. m. is 3.600 US$. It is not significant to present direct comparisons between the cost of this project and other projects built in Rome in the same period, since this project is one of a kind and the comparison might be unfair.

d. Maintenance costs

Maintenance and ongoing costs were not available from the client. Nonetheless, the interview with Dr. Abdullah Redwan, the secretary general of the centre reveals that the annual budget allocated for maintenance is less than 20.000 US $. It is believed that this amount is enough for maintaining the complex since it is in excellent physical condition.

VI. Technical Assessment

a. Functional assessment

A very rational approach to the planning and deign of the complex was adopted. It is apparent that the use of H shaped plan divides the complex naturally into four wings. The connections between and the separation of the various components of the centre are carefully studied. Circulation and wayfinding aspects are very well articulated via the good distribution of hallways and lobbies. However, one can not find any signage system in both the interior and exterior spaces.

On Fridays and important religious holidays, the complex becomes a vibrant and lively place. For Friday prayer, about 1200 worshippers perform the prayers, while on religious holidays over 15.000 worshippers visit the centre and perform the prayers in shifts. On these days food vendors set up shops outside the centre. During the month of Ramadan about 500 Muslims visit the centre, take their Iftar, and perform the prayers. A permanent tent was constructed to accommodate the visitors.

It would appear that there is miscalculation in space allocation and utilization concerns the females prayer surface areas and their access. Although two upper floor gallery wings have been set aside for the use of female worshippers, their number are rarely large to fill half of one of them. This is not a surprise since the Muslim population in Rome is predominantly male. With the large number of expected visitors, the scheme successfully responds to emergency situations where access to and from all the major spaces is cleverly studied since they have direct links to the exterior space. In this context, one should note that the conference hall is prepared to these situations and has three escape and fire exists.

All the spaces are very well equipped and easily furnished. Toilets and ablution areas seem to connect well with the major spaces. The project had significant impact on the site where Via della Moschea road was planned and resulted in a new route for vehicular movement and easy access to the site.

b. Climatic performance

Climatically, the complex seems to perform well. Heating for the main prayer hall comes from under floor pipes and appears to work adequately. The heating system reaches all the spaces of the centre. There is no cooling system for the main prayer hall, but a number of offices and classrooms are air-conditioned by the use of split units.

It is significant to the assessment of the climatic performance to note that the main prayer hall can be used without artificial lighting. The level and quality of natural lighting inside it differs according to the time of the day, and provides a pleasant and spiritual atmosphere. Intelligent lighting systems are installed in the small prayer hall and some other spaces. Acoustically, the conference hall is very well equipped. Acoustics seem to work well in the main prayer hall, the conference room, the small prayer area, and the library. Over all, the climatic performance of the complex is efficient and successful.

c. Choice of materials, level of technology

Among the most successful characteristics of the complex are the choice of materials and level of technology. The construction technology employed and the structural elements used illustrate a high level of technological innovation. The materials used in the complex are common to the architecture of Rome and concomitantly corroborate a sense of belonging and a sense of place in the project. Actually, they reflect a high quality of design and execution.

d. Ageing and maintenance

Although clear information about maintenance costs were not available, the meetings reveal that some companies are assigned to undertake maintenance works. A local company is appointed annually for the maintenance of the landscape and the garden of the centre, another company is assigned for the maintenance of the elevators and the electrical system, and the third is contracted for the maintenance of the fire-fighting system. In general, the complex is very well maintained. However, few traces of water can be observed on the exterior brick pavements of the sahan and the exterior staircases. As well, damage appears in the aluminium frames of few windows of the main prayer halls. This is due inefficient use.

e. Design features

The overall planning and design of the complex satisfies the functional requirements and users needs. A number of distinctive design features can be defined, many of whom are based on symbolic interpretations and are derived from historic references. Metaphorically, the image of the tree expressed the diversity inherent in the unity of Islam. To Islam, the roots, the trunk, branches and leaves represent an enjoining of all the countries in which the teaching and instructions of the prophet are followed.

Thirty two concrete columns do exist in the main prayer hall, each bears four 10 cm. branches held together by pre cast ring-beams These branches extend and traverse the space in a delicate filigree of ribs. These ribs are surprisingly decorative rather than structural, with the main dome and its 16 subsidiary domes, being carried in short stub columns between the four branches of each column. Another symbolic reference appears in the central 20 m. diameter dome. It rests on seven step concentric circles which are intended to represent the seven sacred hills.

In Muslim faith, figurative art and depiction of human form is forbidden. Consequently geometric ornaments and calligraphy are used as devices that modulate the space of the main prayer hall. The use of abstraction in the decoration in the main hall provides a language and a repertoire of forms where traditional arabesque and geometric mosaic patterns are combined with concrete forms in a very sensitive manner.

The architectural treatment of the facades and the exterior walls is on contrary simpler. Although the concrete use dominates the design it is clad in straw-coloured Roman brick. The tree motif continues in the columns of the riwaq acting as a theme that links the inside of the main prayer hall with the outside of the centre. The stepped detailing is repeated in the travertine framing of openings and brick walls. Throughout the whole exterior scheme roundels pierce the walls providing dynamic patterning. In fact, these design features made the building a distinctive architectural setting that meets the demands of mosque architecture.

VII. Users

a. Beneficiaries of the programme

The program of the centre responds to the fact that Islam is an all embracing faith that defines man's spiritual context through the act of submission to Allah and regulates in detail his daily social life. The complex is primarily intended to serve the Muslim community of Rome that can be exemplified by several groups and categories. An estimate of 20.000 was given for the size of the Muslim population in 1990. Unfortunately however, no accurate statistics exist. It is believed that the number of Muslims is much higher than 20.000, since according to the Iman of the mosque and his assistants the last three religious holidays attracted over 15.000 worshippers each, and had to be carried out in shifts. It is evident from the activities conducted at the centre that it serves four major groups.

The first group is small but very important and visible in the Italian community. It includes members of diplomatic missions from Muslim countries to Italy and Vatican. Ambassadors of Muslim countries occupy 11 of the 13 seats of the administrative council of the centre. The remaining two seats are occupied by the secretary general of the centre and a representative of the Union of Muslim students in Italy. The second group that the centre serves consists of students from Muslim countries studying in the city. The third and the largest group consists of people from Muslim countries working in the city. Most of these are young men engaged in relatively low-paying jobs. They come from various parts of the Muslim world including Morocco, Egypt, Senegal, Bangladesh, Albania, and Bosnia-Herzegovina. The composition of the latter two groups indicates that most of the people who use the centre and benefit from it are basically young men.

In the context of the beneficiaries of the program it is important to note that in addition to the religious and socio-religious services provided, the centre has added some health care facilities; out-patient clinics replacing some of the vacant offices. Volunteer Muslim physicians and doctors serve in these clinics. The centre also collects donations for victims of wars or disasters in Muslim countries such as Kosovo, and Palestine.

The fourth group that the centre serves is the Italian community. The complex became a venue through which people of Rome can become better acquainted with Islam as a religion and as a civilization. Visitors can come to the centre on Wednesdays, Fridays, and Saturdays. Records indicate that approximately 3.000 persons other than the worshippers visit the centre every month. These services are provided through seminars, public lectures and conferences, and classes in Arabic language and the Islamic culture. Programs are devised especially to students of public schools and Italian universities.

b. Users' and professionals' response

The centre has become a tourist attraction in the city. Local and International tourists visit the centre since it is listed in Rome's tourist maps and is featured in important guidebooks to the city and in some books about the architecture of Rome. The inhabitants of Parioli district opposed the centre's presence in their neighbourhood. However, with time they have come to accept it and have developed a sense of pride in it. Many of the residents participate in the social activities performed in the centre. As well, they participate in the donations campaigns.

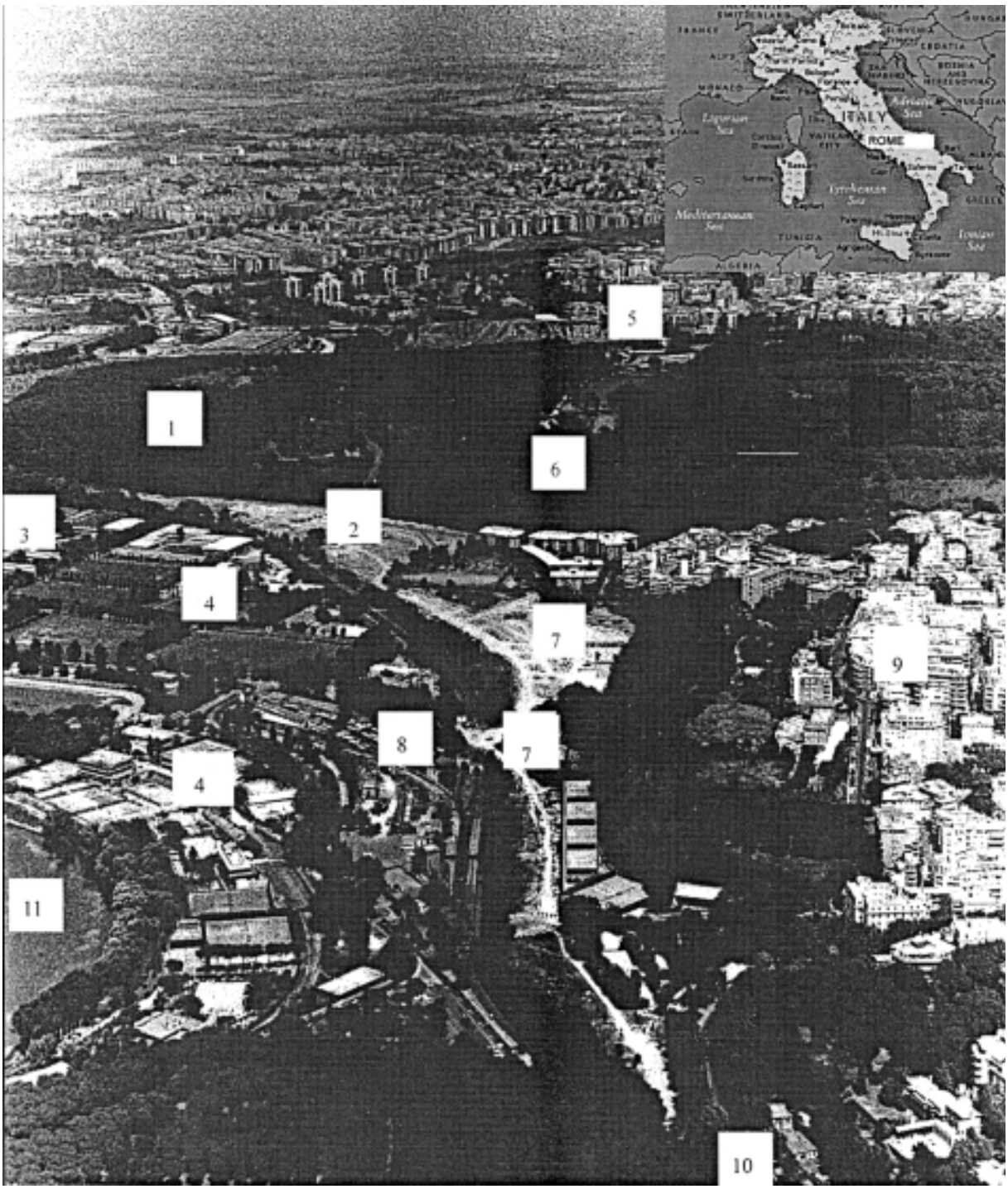
The Muslim community regards the importance of the complex and has responded positively to the project. When talking to three Italian architects who visited the centre previously, they mentioned that it is one of the great buildings built in Rome in the last three decades.

VIII. Persons Involved

Project personnel

The client is the Islamic Cultural Centre in Rome. An administrative council oversees the affairs of the centre. Currently, three representatives act actively on behalf of the council; its President, his excellency Zine El Abidine Sebti, the Moroccan Ambassador to Italy, the Vice President, his excellency Nehad Abdel Latif, the Egyptian Ambassador to Italy, and Dr. Abdullah Redwan, the secretary general of the centre.

The architects involved in the design and supervision of the centre are the office of Sami Mousawi International in Manchester, UK, headed by Sami Mousawi, and the Italian office of Paolo Portoghesi/ Vittorio Gigliotti.

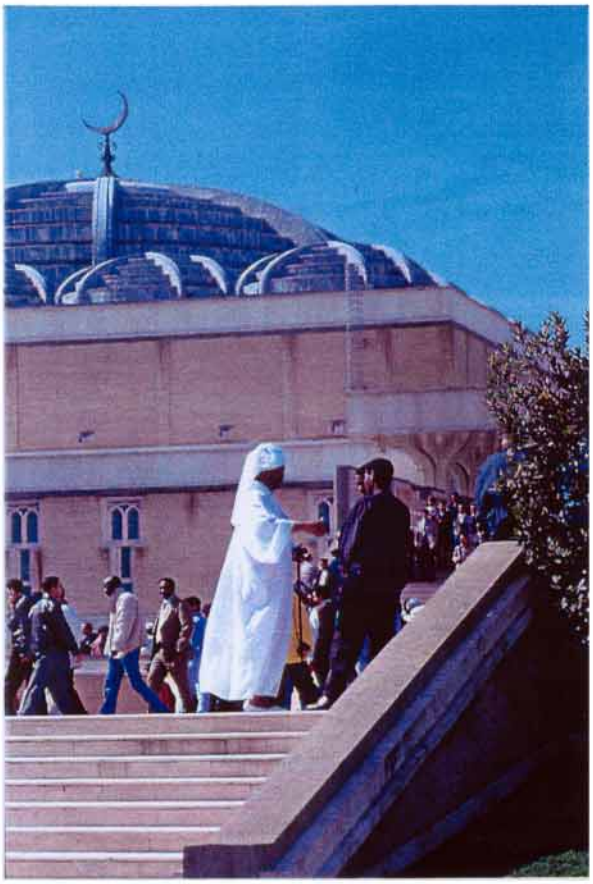


1. MONTE ANTENNA PUBLIC PARK
2. MOSQUE AND ISLAMIC CULTURAL CENTRE
3. VIA OLYMPICA
4. ACQUA ACETOSE ATHLETIC GROUNDS
5. CARABINIERI HEADQUARTERS
6. VILLA ADA PUBLIC PARK
7. PARKING AREA
8. RAILWAY STATION
9. PARIOLI QUARTER
10. VIALE PARIOLI
11. TEVERE RIVER

Above: The piazza of the Islamic Centre is along the main approach from the North. The domed volume of the prayer hall is seen on the left. To the right, steps lead to the cultural centre.

Below: The main entrance is through one of the three courtyard spaces formed between the two, two-storey, rectangular wings which make-up the H-block. The staircase leads to the reception hall.

Above: The main prayer hall can accommodate 2'500 worshippers. It is capped by a large, lead sheathed central dome surrounded by 16 smaller domes. Ceramic tile work, stucco finishing, and Moroccan chandeliers highlight the interior.



Right: A raised plaza leads to the cultural centre wing. Travertine marble panels and yellow Roman brick are used as the exterior finishing.

Above: The interior and exterior structural components throughout the complex also serve as decorative elements. In the prayer hall, four branches of the main concrete columns shoot out to form a web of arches and ribs that articulate the area beneath the domes.

Below: The web-like rib which highlights the underside of the central dome during construction. It was built using both pre-cast and cast-in-situ elements. Unlike the columns which support it, the ribs are purely decorative.

1998 Technical Review Summary 1192.ITA

by Mohammad Al-Asad

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I. Introduction

The Mosque and Islamic Cultural Centre in Rome was inaugurated in 1995 after a 20-year design and construction period. The complex is intended to serve the growing number of Muslims that have moved to Rome. The mosque is the only one in Rome and the complex is considered one of the major monuments built in the city in the past few decades. It has become well known outside Rome and Italy as a result of the considerable coverage it has received in a number of international publications.

II. Contextual Information

a. Historical background

Rome was founded in 753 B.C., but the city's importance in history begins in 509 B.C., with the founding of the Roman republic based in Rome. In 313 A.D. Emperor Constantine (r. 306 - 337) officially recognised Christianity, and Rome became a major centre of that faith. Constantine also founded Constantinople as the capital of the eastern part of the Roman Empire, and the new city consequently emerged as a rival to Rome. In time, the Roman Empire began to weaken. At the end of the 4th century, pressures from the Germanic tribes inhabiting the northern borders of the empire escalated. The tribes sacked Rome on more than one occasion and in 476 brought the Roman Empire to an end. After the collapse of the western Roman Empire, the papacy evolved as the most important institution in Rome, which was developing as the primary centre of Western Christianity. The successive Bishops of Rome, or popes, controlled the city until the 19th century and defended that control against a variety of outside powers, including the Holy Roman Empire, the French, and other Italian states. At the end of the 15th century, Rome, already established as an important religious and political centre, emerged as a prominent cultural centre. Some of the Western world's greatest works of art and architecture were created in the city over the next three centuries.

In 1870, Italy was unified under the rule of King Victor Emmanuel II, and Rome was declared capital of the newly unified Italian state. Consequently, the pope's authority was greatly diminished, and was limited to the area of the Vatican. In 1922, the Fascists, under the leadership of Benito Mussolini, took control of the government. In 1939, Mussolini led Italy into World War II in alliance with Nazi Germany. After Italy's defeat in the war, Italy was declared a republic with Rome continuing to serve as its capital.

b. Local architectural character

Rome contains some of the world's best known Roman monuments such as the Colosseum, the Baths of Caracalla, and the Pantheon. Its great monuments from the Christian period include some from the medieval period such as the Church of Santa Maria Maggiore, but the vast majority of its surviving post-Roman buildings date from the 15th century onwards. Among those are the Renaissance Piazza del Campidoglio, the Palazzo Farnese, and the Tempietto and the Baroque St. Peter's, San Andrea al Quirinale, and San Carlo alle quattro Fontane. Beginning in the late 16th century, a number of popes carried out important urban planning projects in the city creating broad streets that linked a number of Rome's major monuments.

The city underwent important architectural and urban developments during the late 19th and early 20th centuries. After Rome was declared capital of the newly united Italy in 1870, new town plans were devised for the city (1871 and 1883). These plans provided for important arterial roads that passed through older parts of the city. A number of the great estates were converted into public parks. The arrival of Mussolini in 1922 ushered in a new period of grandiose town planning that included cutting a number of new streets through the fabric of the pre-modern city.

The building materials common in Rome include stone, marble, and brick.

c. Climatic conditions

The weather in Rome is generally mild. Temperatures range from an average low of 2°C degrees Celsius in winter to an average high of 31°C in the summer. The average annual precipitation is 84 cm.

d. Site context

The complex is located to the north of the historic core of the city in the upper middle-class residential Parioli district which consists primarily of International Style apartment buildings built in the 1950s,

1960s, and 1970s. The site is located at the edge of the vast Villa Ada Park which contains the site of Monte Antenne, a place closely connected to the myths surrounding the founding of Rome.

Although the area site is not in the historic core of Rome, it is still a historically significant area. The Villa Ada was a residence of the Italian royal family. Moreover, the park of Villa Ada contains the site of Monte Antenne. The site is closely connected to the myths surrounding the founding of Rome since it is believed to be the location of the Sabian city of the Antennates who were conquered by Romulus, the founder of Rome.

e. Site topography

The 30'000 sq.m site is nearly triangular. A road (Via della Moschea) was especially paved to lead to the site and the centre is well served by public transportation. The site itself is nearly flat, but is located at the foothills of the Villa Ada Park which slopes upward toward the Southeast.

III. Programme

a. Conditions of programme formulation

The Rome Islamic Centre was established in 1959 to provide assistance to Muslims in the city and to provide a place of prayers for them. Until the construction of the mosque, Muslims in Rome had to use rented apartments for performing the prayers. In 1963, the Vatican declared that it would not oppose the construction of a mosque in the city, provided that it would be out of sight of St. Peter's and that its minaret would not be higher than St. Peter's dome. In 1966, the Islamic Cultural Centre of Rome was founded with the construction of a mosque as one of its main objectives.

b. Objectives

The complex provides an architectural setting where Muslims can perform the prayers and accommodates a variety of cultural activities such as conferences, lectures, and exhibitions. Through these cultural activities, the Centre helps to provide the people of Rome with a better understanding of Islam.

c. Functional requirements

The functional requirements for the design of the centre included designing a prayer area which would accommodate 2'500 worshippers of whom 10% would be female, and which would be served by ablution areas. In addition, the design was to include a smaller prayer hall which would accommodate 150 worshippers, an educational section containing a library and classrooms, a conference auditorium for 400 people, an exhibition area, and two residential apartments, one for the imam of the mosque and the other for visitors.

IV. Description

a. Project data

In plan, the complex consists of two parts. The first is a rectangular prayer hall measuring about 60 x 40 m with the longer sides facing the *qibla* (the Southeast). The second part approximates the shape of an "H" and houses the remaining functions of the complex except for the ablution facilities, which are located beneath the prayer hall. A water channel runs along the longitudinal axis of the H-shaped mass and connects two pools, one located in the centre of the mass and another to the Northeast. The longest side of the H-shaped mass, which faces the Northwest, curves away from the complex and toward the city, while the other long side of the H-shaped mass curves toward the prayer hall. The minaret is located southwest of the prayer hall, close to where the H-shaped mass and the prayer hall meet. The total built area of the complex is 13'800 m²

The prayer hall is raised 8 metres above ground level, with the ablution area occupying part of the volume underneath. The space of the prayer hall contains two symmetrically arranged gallery floors that run perpendicular to the *qibla* wall. Together, the galleries provide a space for female worshippers about a fourth of the size of the main prayer hall located below them.

The H-shaped mass contains three floors with arcades (or *riwaqs*) occupying the roof of the mass. The arcades generally follow the shape of an "H" but form a courtyard in its centre. The stories below the arcade are divided into four wings resulting from the shape of the "H," which contain the small prayer hall and the various functions of the cultural centre.

In terms of massing, the prayer hall is articulated by a large central dome with a diameter of over 20 metres. 16 smaller domes surround the large central one. All of the domes are covered with lead and each is articulated with ribs meeting at its apex.

The columns forming the arcaded areas topping the H-shaped mass are another important feature. Each column consists of four small columns that curve outwards at the top to give the image of a four-branched tree. The four-branch columns are also used to shape the forty-meter-high minaret of the mosque. However, while the columns of the arcade are made of concrete, the curving parts of the minaret columns are carved out of marble.

The columns are used as a unifying element throughout the mosque. Inside, the four branches of each main column shoot out to form an intricate web of arches and ribs that articulate the area just beneath the domes.

Natural light enters the interior through window openings in the walls and through a series of small windows located within the stepped structure of the dome.

Decorative scheme: The mosque's structural elements also serve as decorative ones as much of the articulation of the surfaces, forms, and spaces of the complex are provided by its four-branch columns and the intricate web of ribs springing out of the prayer hall columns.

For the exterior, panels combining travertine marble and slender, yellow Roman bricks provide the exterior surfaces with their main decorative scheme. A veneer of traditional Moroccan decoration was applied to the interior walls of the prayer hall. This consists of geometrical patterns made of ceramic mosaics that cover the lower part of the prayer hall's walls and the *mihrab*. These in turn are topped by a painted band of calligraphic inscriptions. The ceramic mosaics are also used to cover the lower parts of the four-branch columns. They too are topped by a band of calligraphic inscriptions, but the inscriptions here are carved in stucco. A blue and white flecked plaster finish covers the interior of the dome. Other elements articulating the interior include circular traditional Moroccan chandeliers that provide the prayer hall with artificial lighting and a wooden minbar that was manufactured and donated by a Saudi Arabian construction company. The floors of the prayer hall are paved with marble and have been covered with blue carpeting.

The walls of the small prayer hall are covered by traditional Turkish ceramics.

Landscaping: The landscaping of the area around the buildings is generally straightforward and consists of greenery and parking areas. The area extending along the longitudinal axis of the H-shaped mass contains the water channel connecting the two pools mentioned above. The channel steps down, forming a chute as it moves from the upper pool to the lower one. The lower pool has a central waterspout surrounded by sixteen smaller ones, all arranged in a manner that reflects the arrangement of the domes above the prayer hall.

b. Structure, Materials, Technology

Structural systems

The client required the designers to incorporate anti-seismic measures even though Rome's buildings codes do not have such a requirement. In addition, the foundation pillars had to extend to a depth of 80 m to reach bedrock. The most interesting aspect of the structural system, however, is the above-mentioned clustered four-branch columns and the ribs springing from them. These columns are composed of cast-in-situ elements, and the upper web-like ribs contain both pre-cast and cast-in-situ elements. The four branches of each column in the prayer hall hold a raised octagonal stub column and the octagonal columns support the domes. In contrast, the web-like ribs springing from the four-branched columns are purely decorative.

Materials

A wide variety of materials have been used in the complex. The concrete of the four-branch columns and ribs is a combination of white cement and crushed Carrara marble which achieves a bright white colour.

Zinc-coated reinforcement bars were used to avoid rusting and staining of the white concrete. Vittorio Gigliotti, the member of the design team responsible for structural and constructional issues, received the Gairn EEC Medal Award in 1989 for his work on the complex.

Other materials include a variety of stones and marbles such as travertine, Peperino Romano marble, and slim, yellow Roman bricks. Lead was used as a sheathing material for the domes. In general, the materials show a high level of detailing and execution.

c. Origin of technology, materials, labour force, professionals

The project has a strong Italian component to it. As mentioned, the materials used are common in Italian architecture, the constructional and structural systems used were devised by an Italian, Vittorio Gigliotti, and an Italian contracting firm, that of Fortunato Federici, carried out the construction work. The office of Paolo Portoghesi and Vittorio Gigliotti supervised construction on the complex with the collaboration of Mohsen Nourian Pour, an Italian-Iranian architect.

Non-Italian participants in the design and construction of the project include Sami Mousawi, the British-Iraqi architect who collaborated on its design, Moroccan craftsmen who carried out much of the decoration of the main prayer hall, and Turkish craftsmen who decorated the small prayer area.

V. Construction Schedule and Costs

a. History of project

The Islamic Cultural Centre of Rome had intended to construct a mosque and cultural centre since its establishment in 1966. In 1975, the city of Rome donated the land for the mosque and cultural centre and the following year the Centre held an international competition for the design of the complex. The competition drew more than 40 entries, and the jury, which consisted of both Muslims and Italians, chose two of them as winning designs. The jury asked the two winners, the Italian office of Paolo Portoghesi and Vittorio Giglioti and the Manchester-based office of the Iraqi architect Sami Mousawi, to submit a new, joint design. Financial difficulties, resistance to the project from residents of the area, and the process of obtaining approval for the design from the municipality of Rome delayed the project. The hall was completed in 1992, but the rest of the complex were not completed until early 1995.

b. Total costs and main sources of financing

The cost of the project amounted to about USD 50’000’000. However, this sum does not take into account in-kind donations. The land was donated by the city of Rome, and the costs of carrying out the decoration of the main prayer hall and the small prayer hall were assumed by the Moroccan and Turkish governments respectively. In addition to those mentioned above, 21 other Muslim countries covered the costs of the project. These are Algeria, the United Arab Emirates, Bahrain, Bangladesh, Brunei, Egypt, Indonesia, Iraq, Jordan, Kuwait, Libya, Malaysia, Mauritania, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Sudan, Tunisia, and Yemen. Of the contributing countries, Saudi Arabia made the largest contribution.

c. Qualitative analysis of costs

USD 3’600 per sq.m.

e. Maintenance costs

Not available.

VI. Technical Assessment

a. Functional assessment

The planning of the complex seems to follow a very rational approach in which the separation of and connections between the various components of the mosque and cultural centre are carefully studied. The use of the H-shaped plan naturally divides the centre into four wings.

The complex becomes a lively place on Fridays and important religious holidays. About 1'000 worshippers perform the prayers there on Fridays, and over 15'000 on important religious holidays. Food vendors set up shop outside the mosque on these days.

One miscalculation in space allocation concerns the women's prayer area. Although two upper-floor gallery wings have been set aside for the use of female worshippers, their numbers are rarely large enough to fill one of them. This is not a surprise considering that the Muslim population in Rome is predominantly male.

b. Climatic performance

Heating for the mosque, which comes from underground pipes, seems to work adequately. The amount of natural light entering the mosque is well-controlled since much of it is indirect. Changes in the amount of daylight, resulting from passing clouds for example, are registered clearly inside the mosque. The quality of light in the mosque differs according to the time of day. All this makes for a very pleasant effect.

The acoustics in the prayer hall seem to work well.

c. Choice of materials, level of technology

Both the choice of materials and the level of technology used are among the more successful characteristics of the complex. The materials used in the complex are common to the architecture of Rome and therefore help assert a sense of place for the complex. They also reflect a high quality of design and execution.

The structural elements used show a high level of technological innovation not usually seen in contemporary mosque architecture.

d. Ageing and maintenance

The complex is very well maintained.

VII. Users

a. Beneficiaries of the programme

The complex is primarily intended to serve the Muslim community of Rome. An estimate of 20'000 was given for the size of the community in 1990, but unfortunately, no accurate statistics exist concerning this matter. It is likely that the number today is much higher than 20'000 since the last 'Id al-Adha prayers attracted over 15'000 worshippers and had to be carried out in three shifts.

A small, but very visible and important part of the Muslim community in Rome includes the members of diplomatic missions from Muslim countries to Italy and the Vatican. After all, 23 Muslim countries participated in the funding and construction of the complex. Ambassadors of Muslim countries occupy 11 of the 13 seats of the Centre's administrative council (the remaining 2 seats are occupied by the secretary general of the mosque and by a representative of the Union of Muslim Students in Italy).

Another important group that the Centre serves consists of students from Muslim countries studying in the city. The third and largest group consists of people from Muslim countries working in the city. Most of these are young men engaged in relatively low-paying jobs. They come from various parts of the Muslim world including Morocco, Egypt, Senegal, Bangladesh, Albania, and Bosnia-Herzegovina. Consequently, considering the composition of the latter two groups, it is clear that young men make up most of the people who would use the Centre and benefit from it.

In addition to serving Rome's Muslim community, the complex is also important in that it has become a venue through which the people of Rome can become better acquainted with Islam as a religion and a civilisation. The Centre opens its doors to visitors twice a week and it is estimated that between 2'000 and 3'000 persons visit it every month.

The Centre has also become a tourist attraction in the city. It is listed in Rome's tourist maps and is featured in important guidebooks to the city such as the *Michelin Tourist Guide*.

b. *Response to project*

Initially, the inhabitants of the upper middle-class neighbourhoods surrounding the Centre opposed its presence in the area. With time, however, these residents not only have come to accept the Centre, but have even developed a sense of pride in it. In its October 15, 1992 issue, a local magazine of the area, the *Parioli Pocket*, published a very positive lead article about the Centre. In fact, the mosque is now considered one of the major monuments to have been built in Rome in the past few decades.

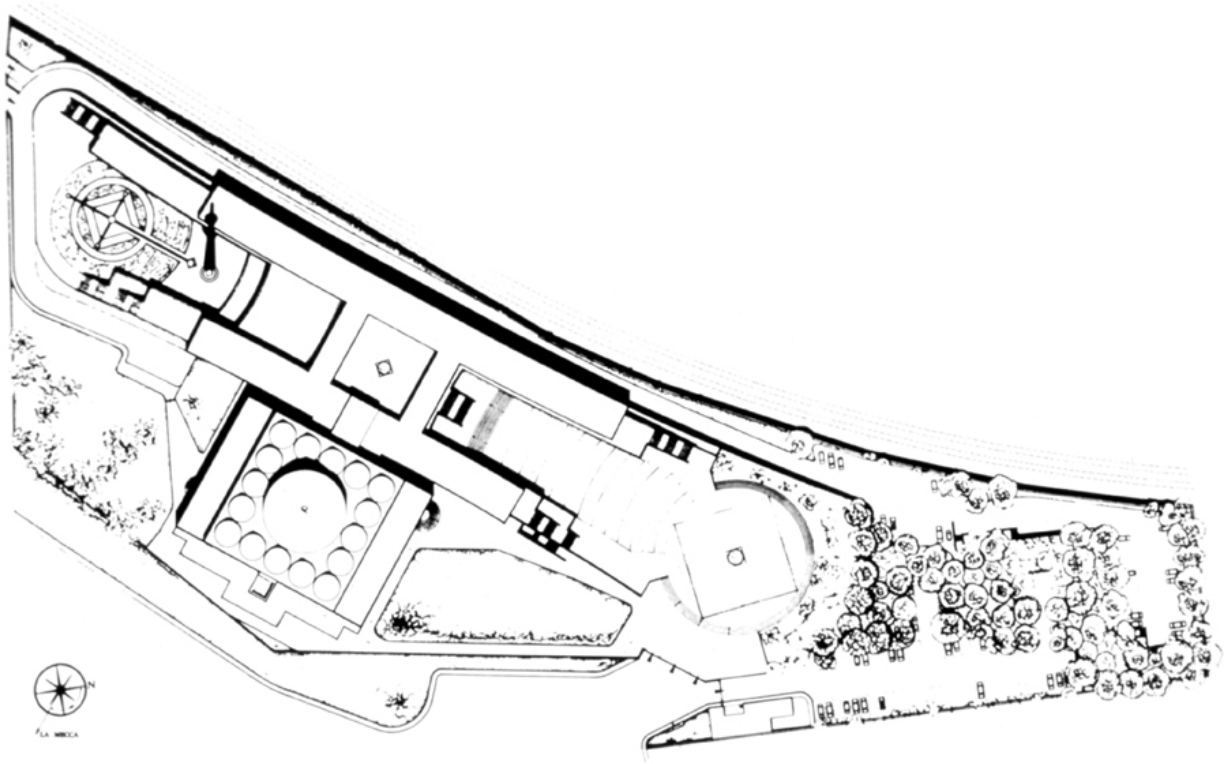
VIII. Persons involved

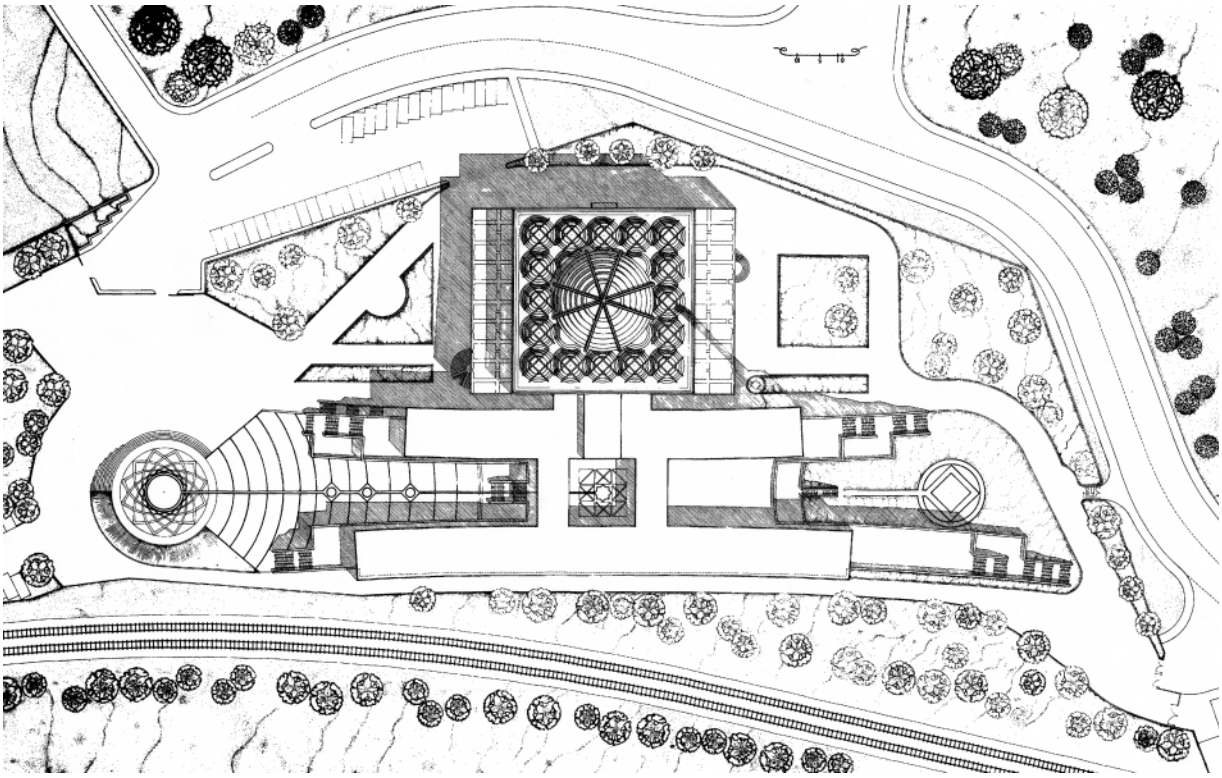
Project personnel

The client is the Islamic Cultural Centre in Rome. An administrative council oversees the affairs of the Centre, and its president is His Excellency Zine El Abidine Sebti, the Moroccan ambassador to Italy.

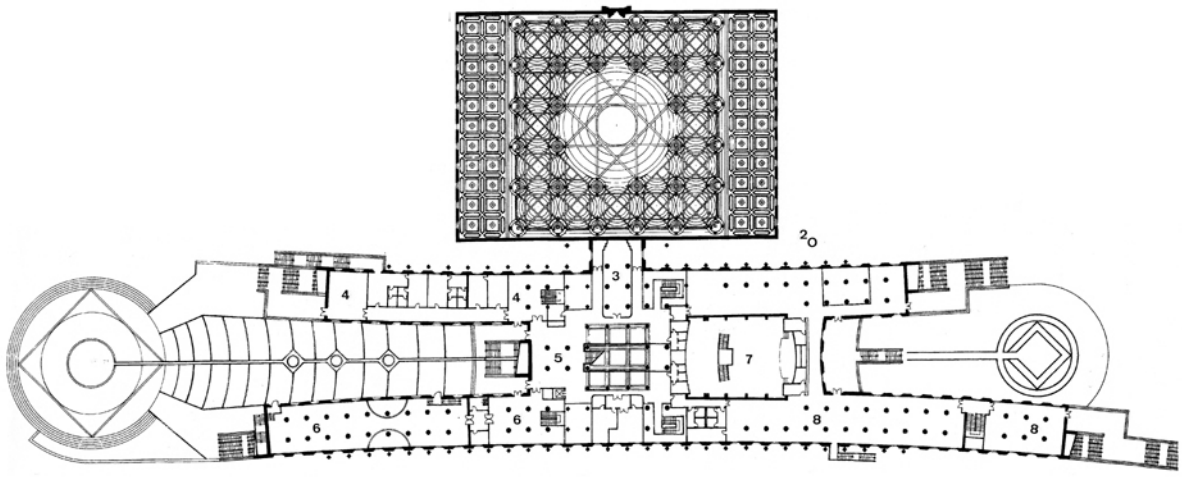
The architects involved are the office of Sami Mousawi International, Architects and Planners (headed by Sami Mousawi) and the office of Prof. Arch. Paolo Portoghesi and Dott. Ing. Vittorio Gigliotti.

Mohammad al-Asad
May 1998



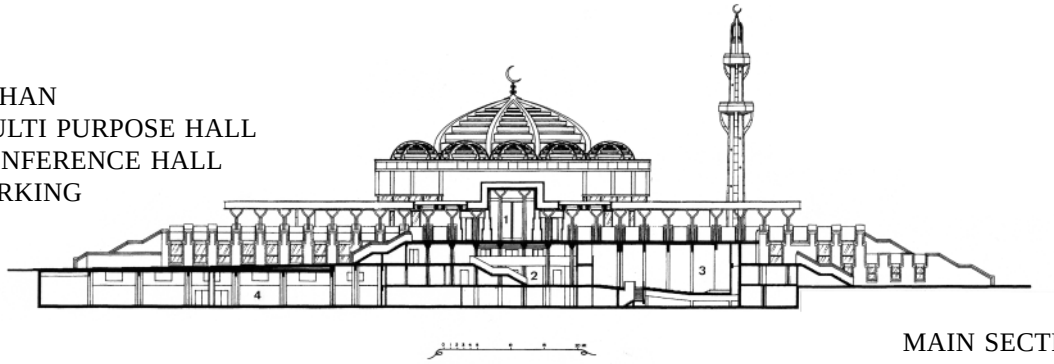


SITE PLAN



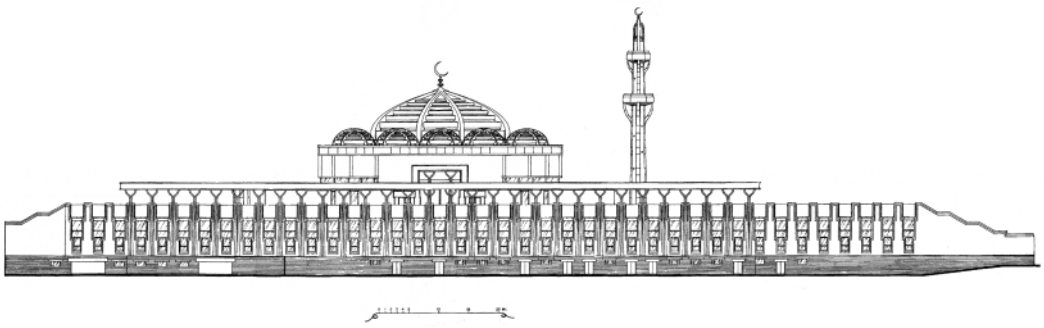
1. MAIN PRAYER HALL
2. MINARET
3. DAILY PRAYER HALL
4. ISLAMIC CULTURAL CENTRE
5. RECEPTION HALL
6. ISLAMIC LIBRARY
7. CONFERENCE HALL
8. MEETING ROOMS & MUSEUM
9. FOUNTAIN

LAYOUT PLAN

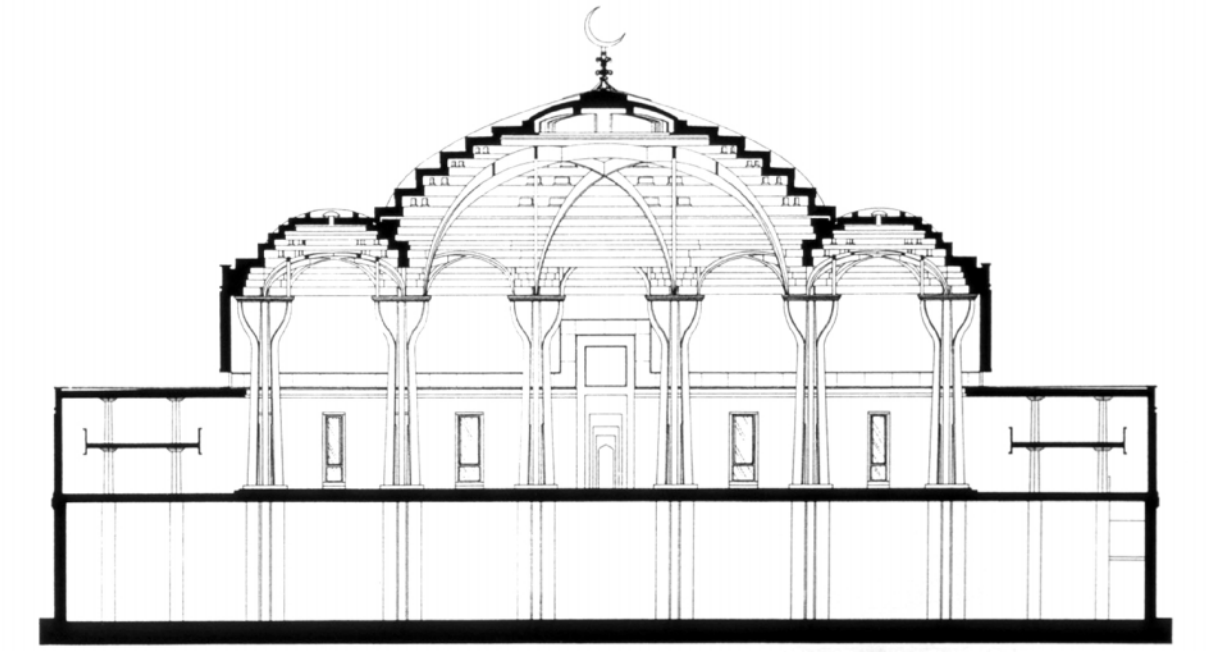


1. SUHAN
2. MULTI PURPOSE HALL
3. CONFERENCE HALL
4. PARKING

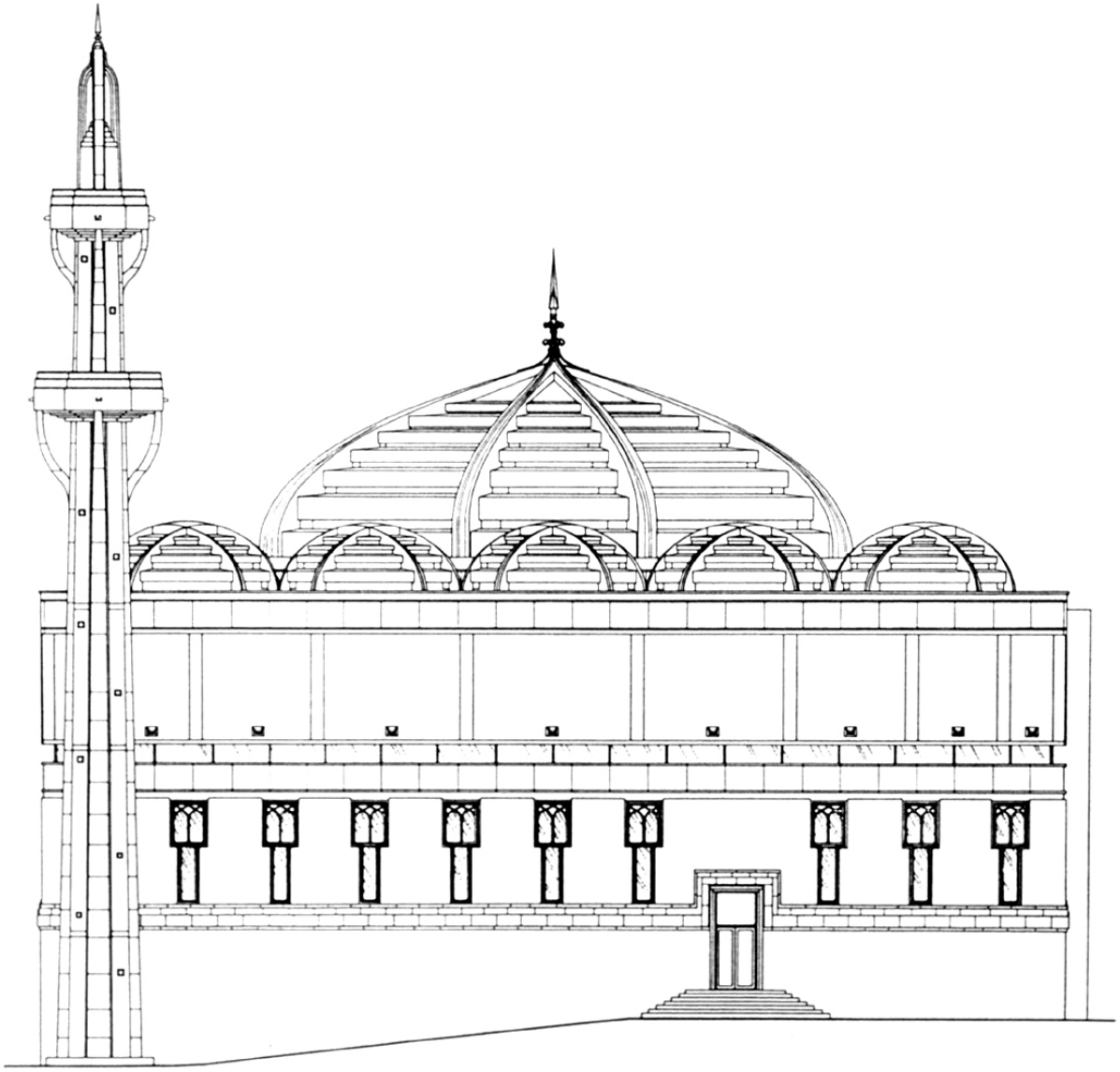
MAIN SECTION



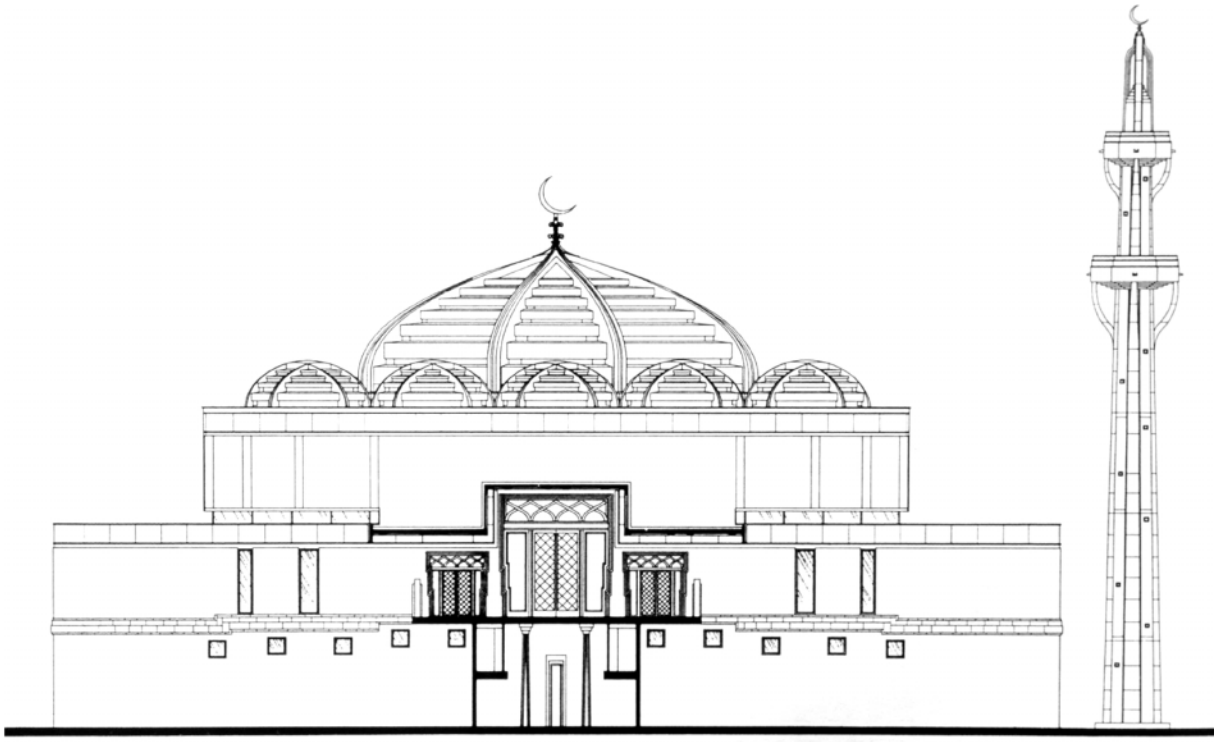
WEST ELEVATION



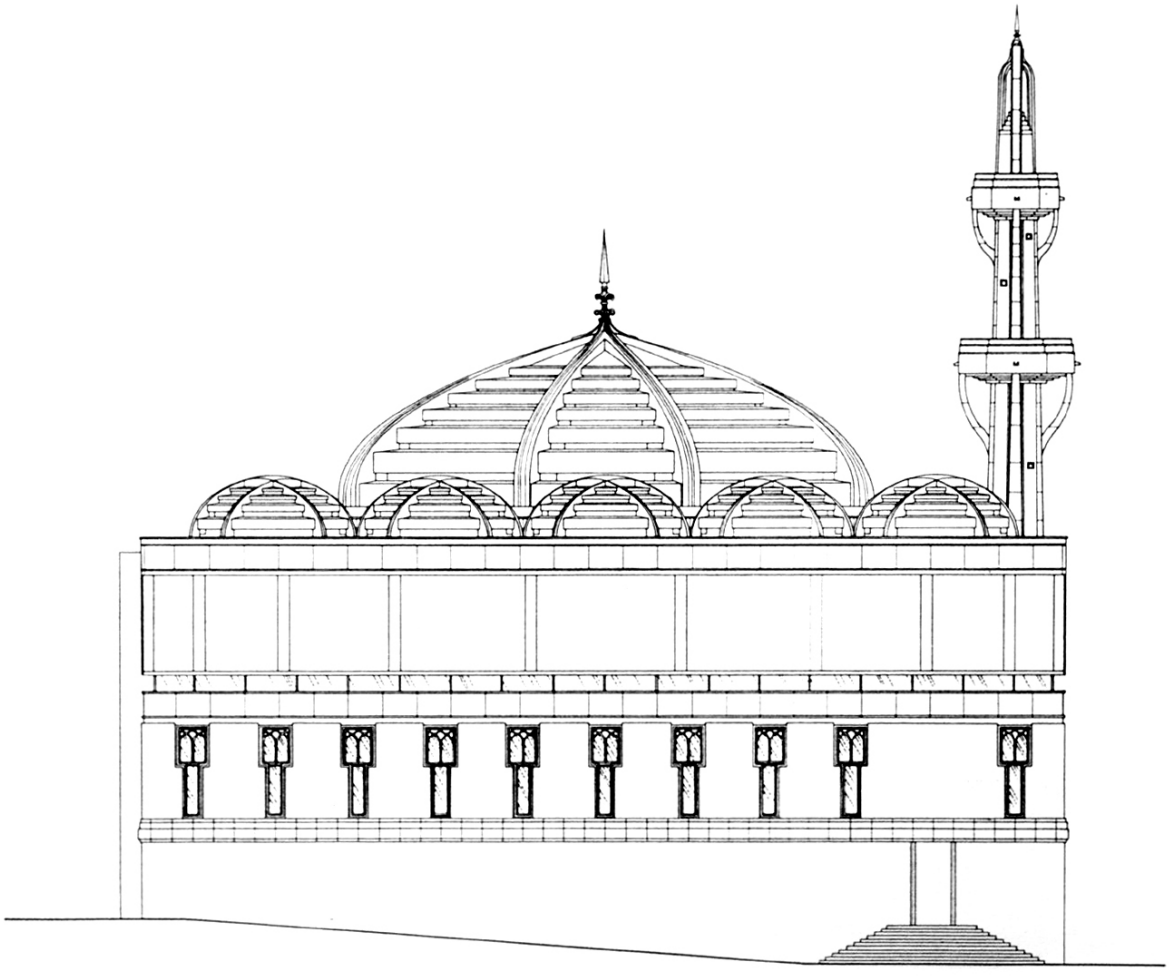
SECTION THROUGH MAIN PRAYER HALL



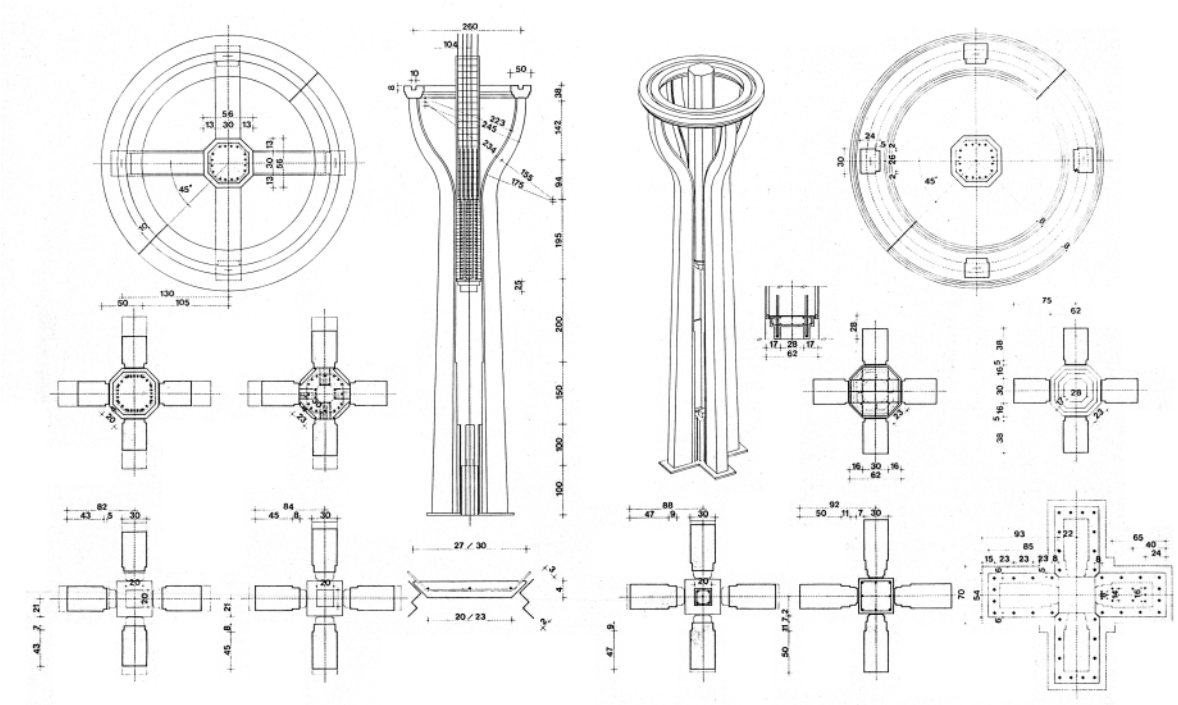
Mosque & Islamic Cultural Centre, Rome, Italy



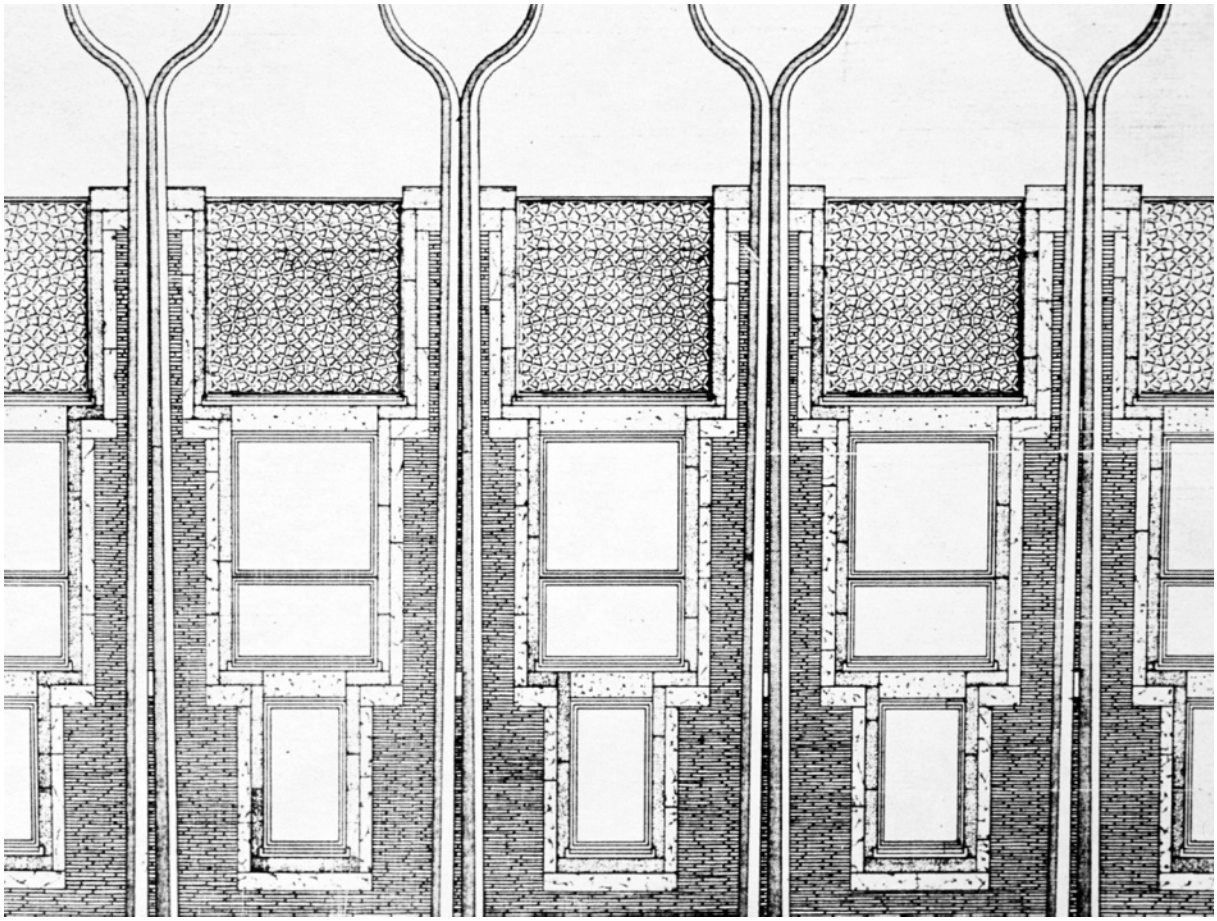
THE MOSQUE SECTION ELEVATION



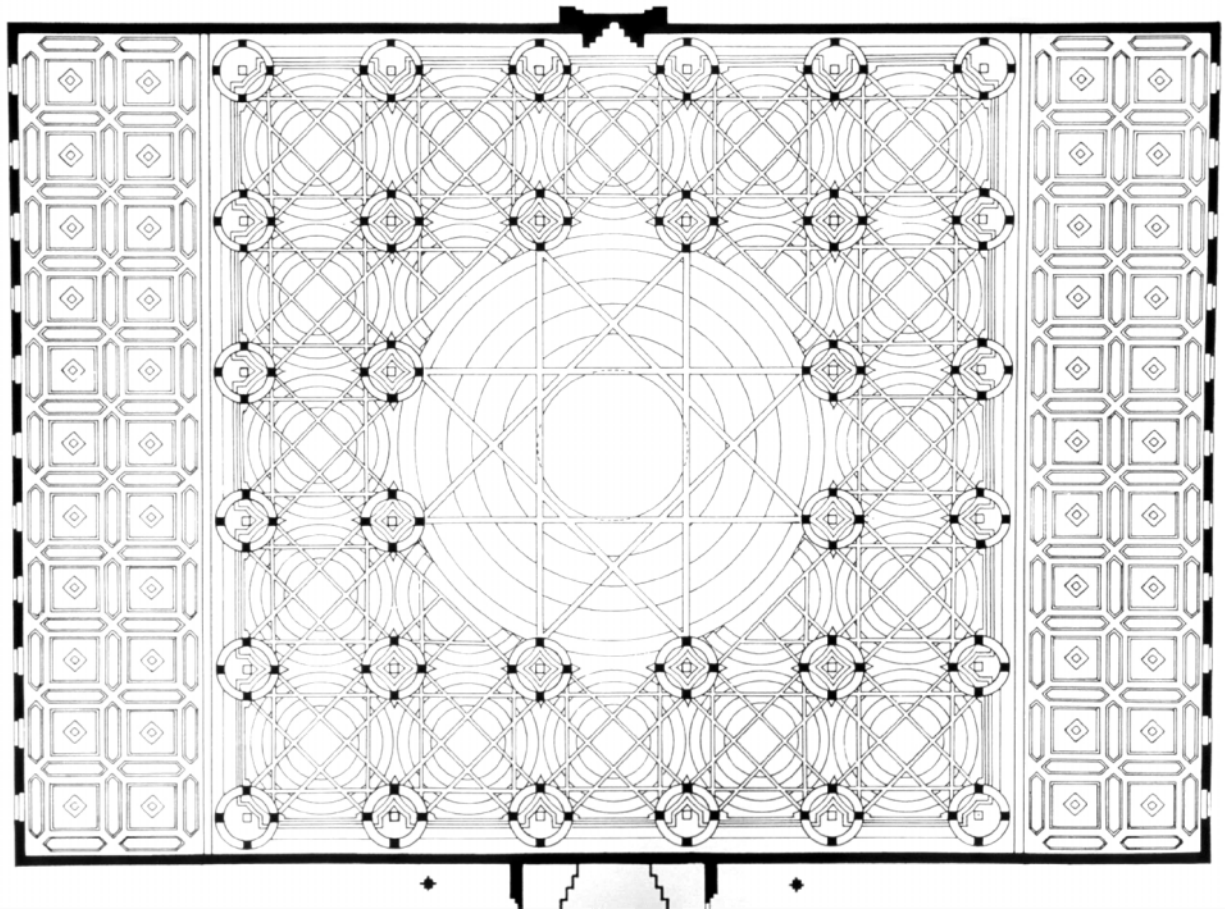
NORTH ELEVATION OF MAIN PRAYER HALL



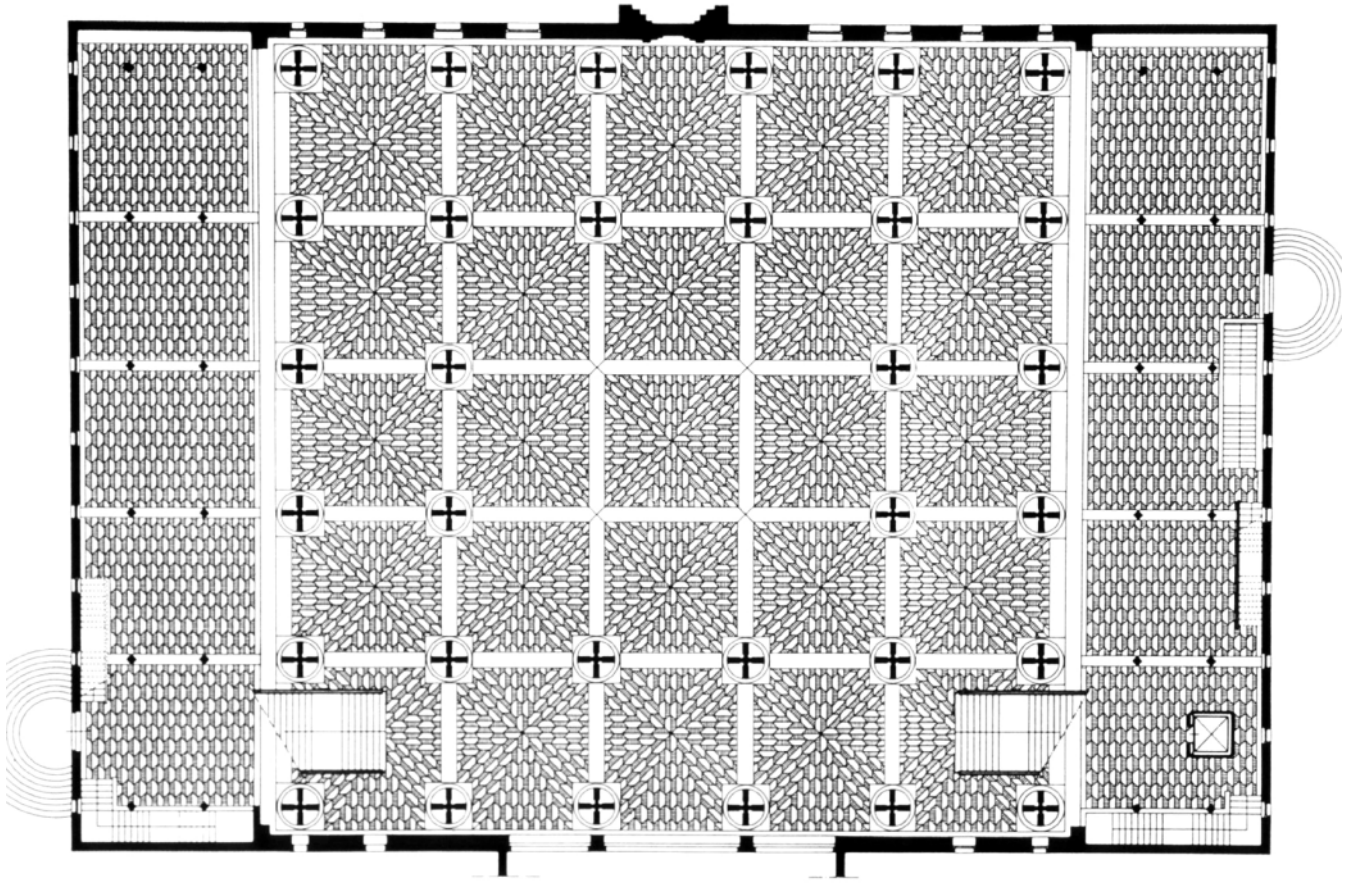
COLUMN DETAILS



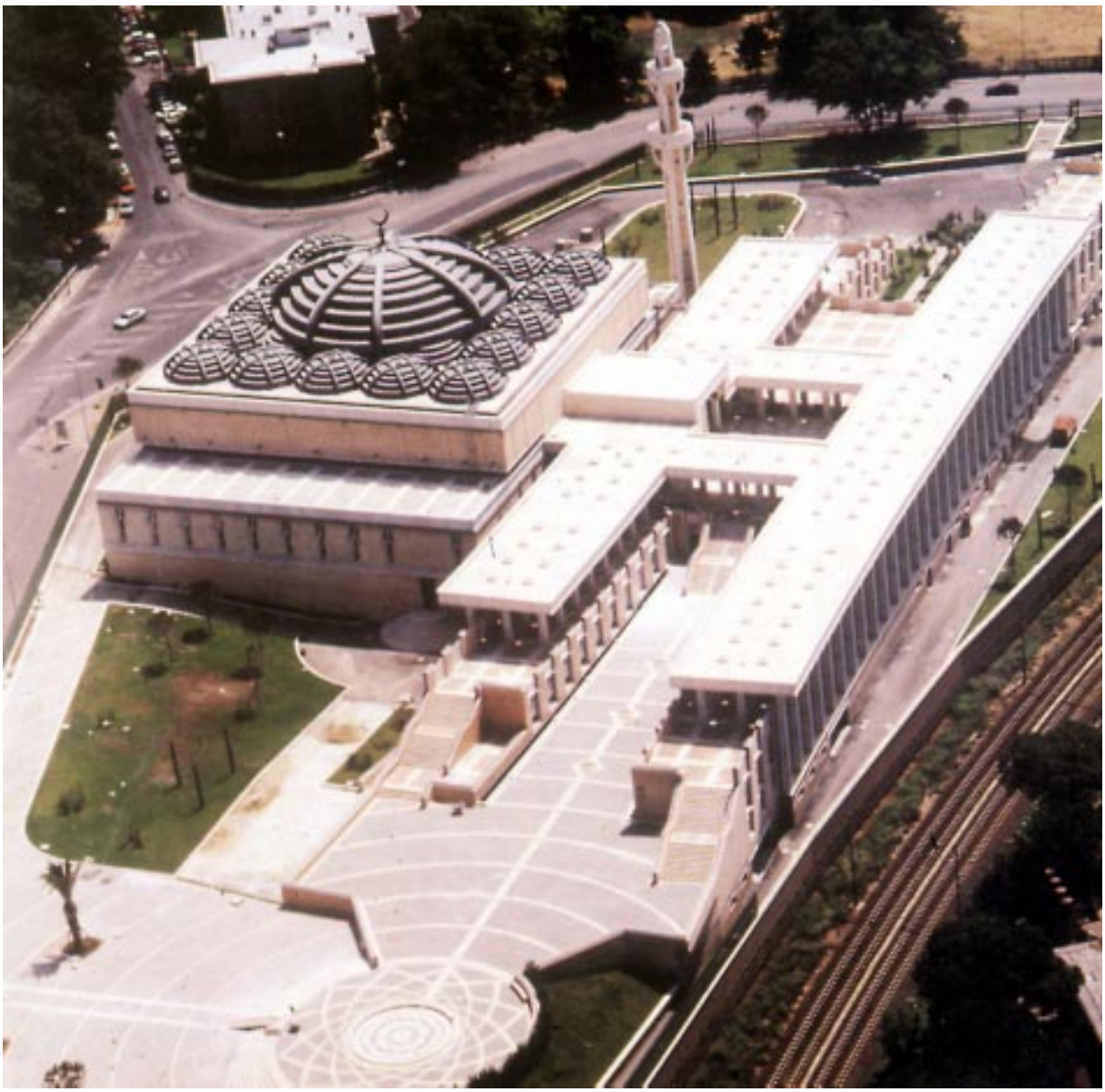
Mosque & Islamic Cultural Centre, Rome, Italy



PRAYER HALL REFLECTED CEILING PLAN



Mosque & Islamic Cultural Centre, Rome, Italy

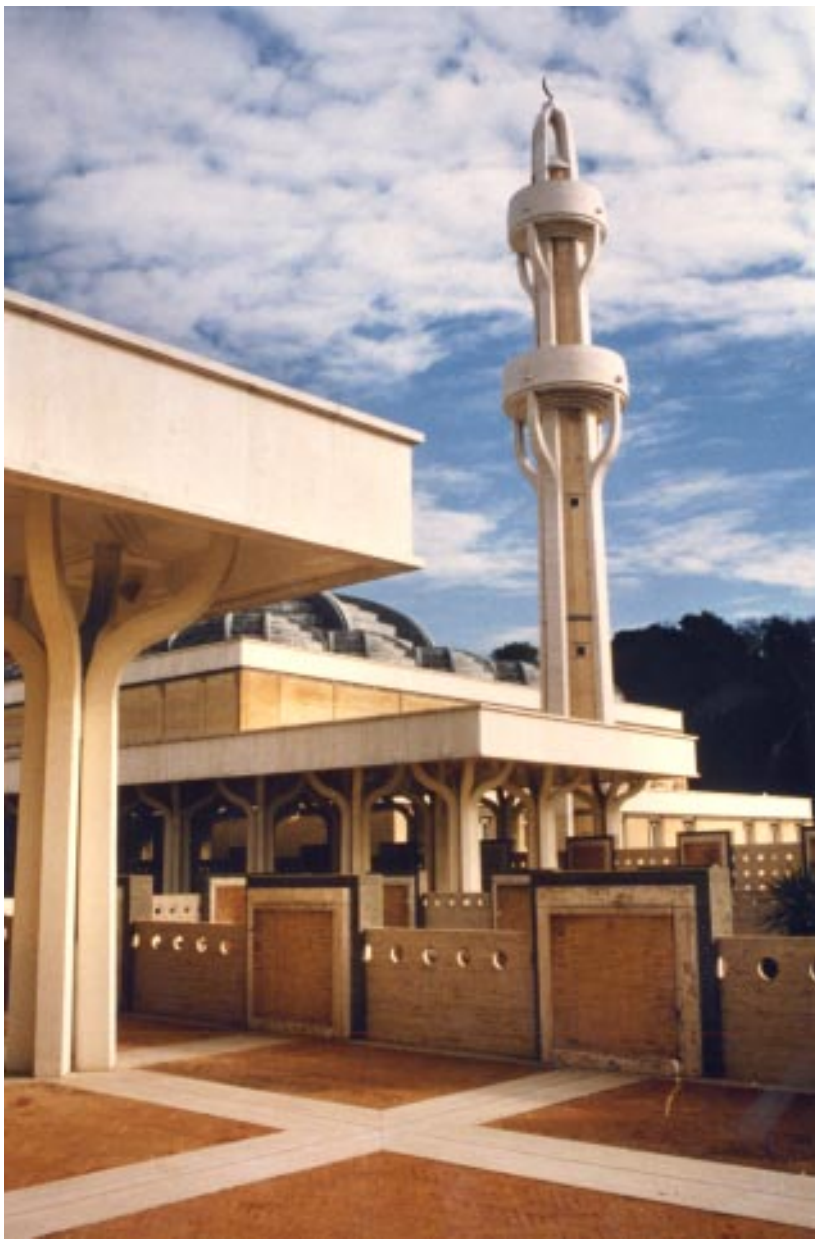


Mosque & Islamic Cultural Centre, Rome, Italy

The Approach

View to East Wing

View from West Wing to Sahan



View from West to Mosque

The Riwag

Mosque & Islamic Cultural Centre, Rome, Italy

Portico

Sahan

The main dome

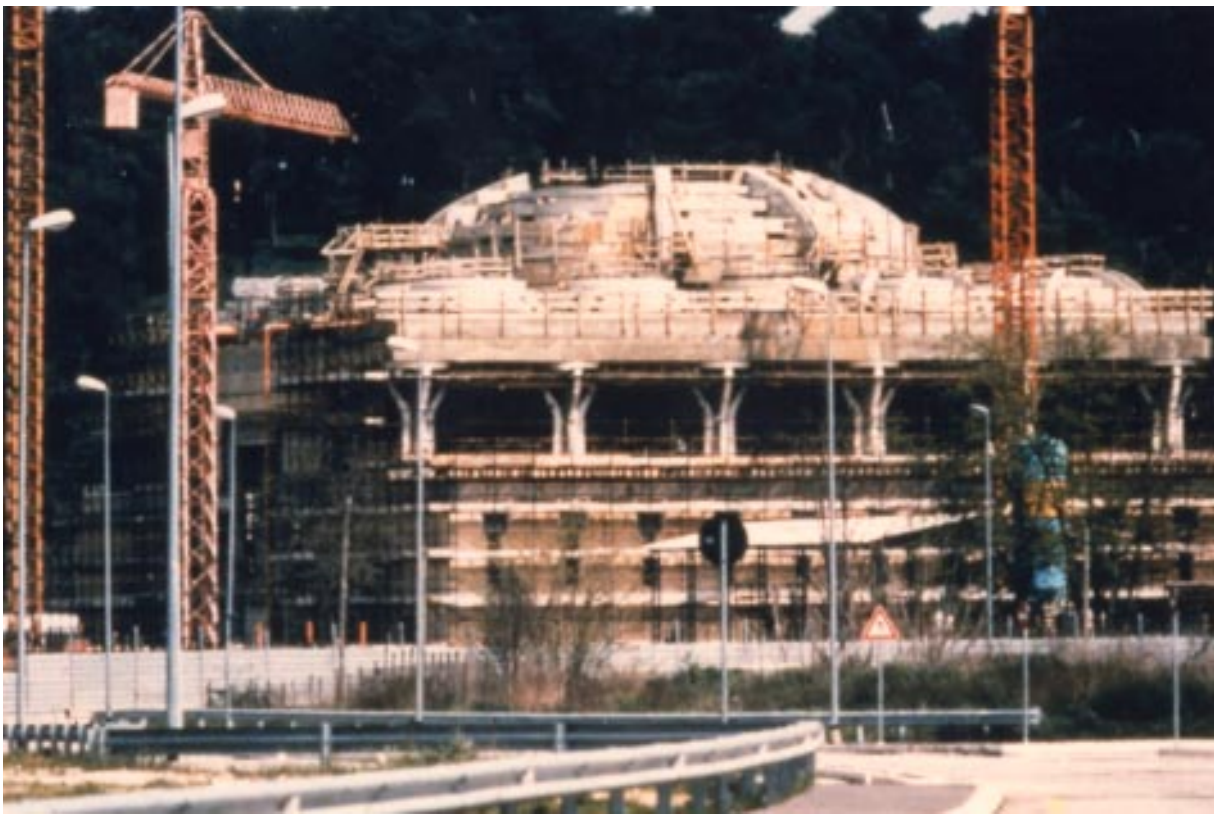
View to main dome

Small domes

The Mihrab

Prayer hall, 1995

Mosque & Islamic Cultural Centre, Rome, Italy



The Mosque during construction

The Mosque during construction

South view

The Mosque during construction