REFUNCTIONING MONUMENTAL BUILDINGS

A THESE
SUBMITTED TO THE DEPARTMENT OF
INTERIOR ARROWS EXCIPTIVE AND
EXCUSIONMENTAL DESKOP
AND INSTITUTE OF FINE ARTS OF EARNEST UPPLYERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF FINE ARTS

By An Pinan Augusia Jahuary, 1995

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By H. Pinar Furtun January, 1995

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ABSTRACT

RE-FUNCTIONING MONUMENTAL BUILDINGS

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This thesis is a study on re-functioning monumental buildings. It is supported by a case study, which is a project of re-functioning a church called "Kavakli kilise" into a conference center.

The previous chapters, analyze the re-functioning activity, churches and conference centers in order to support the case study.

A re-functioning project on the church in Burdur and a comparison list is enclosed in the thesis.

ÖZET

ANITSAL YAPILARI TEKRAR FONKSIYONLANDIRMA

H. Pinar Furtun

İç mimari Bölümü

Yüksek Lisans

Tez Yöneticisi: Dr. Zuhal Özcan

Ocak, 1995

Bu tez anıtsal yapıları tekrar fonksiyonlandırma hakkında yapılmış bir çalışmadır. Burdur'da "Kavakli kilise" olarak bilinen bir yapının konferans merkezine dönüştürülmesi projesiyle desteklenmiştir.

Önceki bölümler, konu çalışmasını desteklemek amacı ile tekrar fonksiyonlandırma aktivitesini, kiliseleri ve konferans merkezlerini inceler.

Burdur'daki Kavakli kiliseye ait bir tekrar fonksiyonlandırma projesi ve karşılaştırma listesi incelenmiştir.

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1. INTRODUCTION

Human beings generally have a sense of being connected to the past so that they may have a confidence that there will be a future. The built environment in which they live, give them guaranty. For this very basic reason buildings in order to be presented to the next generations, should be kept awake and alive. To achieve it, giving a new appropriate function to a lifeless building, seems to be one of the best solutions.

Many people participate in the preservation movement because of their instinctive attraction to old forms and fashions. Others participate because of a patient understanding and admiration for societies, functions and skills that created those forms. Many civic groups express affection for a building or monument because of a desire to retain the visual characteristics of their environment. They rush to public hearings, try to collect funds express hostility for new materials and approaches. At the moment of political action, the distinctions between restoring a building, preserving it for adaptive reuse and reconstructing parts or all of it, are considered minor. As it is listed in article by Giorgio Cavaglieri, (1974) all three have educational value and are worthwhile; yet only one of them can have an important impact on our way of life and on the education and behavior of future generations. It is adaptation for reuse, for this approach can demonstrate that the forms and materials devised in the past are still valid and viable when properly adapted to the functions of today's life.

Many older buildings are already located on desirable sites, while others could provide the opportunity to "seed" the redevelopment of an urban area if

they were properly renovated. It is not generally cheaper to demolish an older, structurally sound building and construct a new one in its place. Many older buildings have important historical or architectural significance in addition to functional or commercial use. These and other aspects will be examined in detail in further chapters as it is stated in the contents and limits of the thesis.

1.1. Scope of the thesis

For it is our duty to pass on to future generations what we inherited from our past, today every nation is becoming more and more aware of the importance of historic monuments and ways of handing them to next generations. One of the best ways to achieve this, is to give new functions to monumental buildings in order to keep them alive and maintained. As in all over the world. Turkey is also aware of this fact and is a fortunate country with its many historical sites, monuments, and various other architectural heritage. Among many of the historical monuments there lays a modest church in Burdur, which is going to be re-functioned in order to take an active role in the city, by serving as a conference hall which was a demand of the Municipality. In the case study of the thesis, the conversion of this church to a conference hall has been examined and supported by drawings. For clearly understanding the case study, the earlier chapters will define refunctioning, churches and conference halls. This is one of the many refunctioning projects which takes place in our country, but, the only historical church in Burdur, and letting it serve public once again, will be an endless pleasure.

1.2. Methodology of the study

The methodology of the study will be examined in two parts, which are the field survey and the literature survey. The field survey consists of the measuring of the site and the building which the designing group has worked for many days in hard conditions. During the period while the measurements were taken, the church was used as a storage building therefore the group had difficulties in measuring the interior spaces. The measurements were taken with manual techniques and equipment related to this system is used i.e. boning rodes, steel meters. Later the measurements taken are converted into drawings of 1/50 and 1/100 scale, depending on the specialties of the thesis and the building itself. The literature survey took place in the deed office, the municipality and the government. Detailed information on the site and the church were gathered from deed office about the pervious functions and owners of the church. Further information is tried to be collected on the subject concerned in various libraries in Ankara.

1.3. Contents and the limits of the study

A brief information on the contents of the thesis will be given below. After the introduction part which takes place in the first chapter of this thesis, refunctioning is being examined in the second chapter. The first part introduces the history of re-functioning activity and then, the advantages and needs to re-functioning is discussed with remarks on the economical aspects of re-functioning. An important aspect in re-functioning is the role of the interior designer in adapting old buildings to new uses and this is discussed at the end of second chapter. The third chapter is about re-functioning churches, as churches housing religious activities, have emotional roles in the city life, and therefore, the new activity assigned to these buildings are

much more important when compared to other buildings with modest functions. These new activities which are adapted to churches are divided into categories in the first section of this chapter. There are many churches in Turkey where re-functioning projects are adapted to them, related to the new situations, the functions given, listed in this chapter.

The parts of the church are briefly described in order to introduce the divisions of the structure before adapting a new function in to the shell of the old structure. The fourth chapter is on conference halls, after examining the parts of the church in the third chapter, the types of conference centers and their space requirements as well as the equipment needed are listed. The case study which is in the fifth chapter, is about re-functioning of the church building in Burdur, to function as a conference hall. Before introducing the drawings of the church which will propose a new design, brief knowledge on the city will be given and the historical past and the previous functions of the church will also be listed. Lastly, the conclusion part takes place in the sixth chapter where a chart about the necessary spaces, equipment and materials for conference centers are compared to the already existing spaces of Kavakli church with new design considerations.

When mentioning the limits of the study the author is not able to examine the deed records which were dated earlier than 1931, because of language limitations. The historical knowledge was gathered from the deed office, and the aged citizens who have witnessed the changes of functions in the church but no recorded data was gathered on the dates of construction of the building. As it is the demand of the Municipality to convert the church to be functioned as a conference hall, other functions that may fit the church is left out of consideration.

2. RE-FUNCTIONING

In case people are let to breath in, the monuments live. By giving new functions to monumental buildings, they can survive for long intervals of time. It can be seen that various new functions have been assigned to such buildings.

Function creates form but what is to be done with the form once the function has disappeared? Can the existing form accommodate the new function? Answers to these questions lead to re-functioning, adaptive reuse and recycling terms and concepts.

Many phrases are being used in order to describe works undergone while changing the function of an already existing building. Re-functioning, is "organising a building fit for a new function of a future use". Adaptive reuse, is the "process of converting a building into a use other than that which it was designed for"(Maddex, 1985, p:311), in other words "it is the interjection of an entirely new function into the shell of an older building"(Kurtich, Eakin, 1993, p:362).

Terms like remaking, extended use, reconstruction, restoration, preservation and others are directly related with restoration activities, therefore they are out of professional limits of the author.

Various examples of monuments which has gone through these actions can be listed. Castles, palaces, temples, churches and other monumental buildings with different functions can be counted among these, that have been adapted to new functions throughout history.

2.1. Re-functioning in history

Except when, they have been the victim of the disasters of natural forces or being witnesses to wars, change in urban fabric was slow in history, which enabled generation after generation to derive a sense of continuity and stability from its surroundings. In fact, "until the industrial revolution the common pattern was for buildings to be adapted to new uses, only since then has it become more usual to demolish and build new" (Cantacuzino, 1987, p:8).

Throughout history, the cost of making anything a city, a house, even a quilt has been high, in terms of both labour and materials. Thus, every artifact was used and reused until it wore out or fell apart. Final dissolution was postponed as long as possible by patching, remodelling, and repair. Often, dissolution was not absolute even then: the artifact was destroyed, every possible bit and piece being salvaged for reuse in new combinations. This sort of conservation of energy cut across every level of preindustrial societies.

Fitch, (1990) states that even in ancient times the recycling of old structures were in action:

In Periclean Athens the columns of earlier temples were used in retaining walls of the modernised Acropolis; and down at the foot of the hill, other column drums were used in the construction of a new road in front of the Stoa of Attalos. Builders of the noblest Romanesque

churches were not above recycling whole columns from the ruins of nearby Roman temples, even where the columns did not always match in style or size. The very aesthetics of Orthodox churches in the Eastern Mediterranean derived from the use of brick and stone scraps salvaged from pagan sites (p:29).

After the Second World War the pace of change accelerated to such an extent that redundancy, followed by demolition, became commonplace in urban areas. Planning policies caused the departure of industrial and commercial activities from central areas to suburban or rural zones that had been allocated exclusively to them. Buildings that had housed these activities now stood on increasingly valuable land, so many were demolished to make way for more profitable development, such as shopping centres and offices. In Europe, the post-war years witnessed the construction of a great deal of public housing, by local authorities in the form of housing estates which encircled the towns in an utmost speed.

Specially, in the last twenty years, people realised the importance of letting the history live today and therefore they also realised the importance of these buildings which were left to their destinies. Today it is generally accepted in Western Europe and America that, conservation policy which includes finding new uses for old buildings must be an integral part of the planning policy. Turkey is a country full of cultural properties and regrettably some historic buildings have been neglected and been left to their own destinies, while many others have been re-functioned in order to serve public. It is needless to say that today parallel with the world, Turkey is very much aware of the importance of these buildings and is in action to save and refunction many more.

There is nothing new about buildings changing their functions. Buildings throughout history have been adapted to all sorts of new uses, as structure tends to outlive function.

In 1971, P. A. Stone pointed out that "urban quality depends more on the standards of maintenance and improvement of existing stock, then on the standards to which new buildings that are built" (Cantacuzino, 1989, p:11).

To claim towns are never completed and that the buildings which are constructed are always complements or additions to what already exists, may be a new way of belief. As Michael Graves has proposed "the existing building can be thought of as an unfinished fragment of a larger edifice" (Robert, 1989, p:11).

2.2. Advantages and needs to re-function

As the economical costs are one of the most important benefits for the owner of the buildings, the economical aspects are very vital when re-functioning buildings, as "old buildings can be cheaper, low acquisition costs, no demolition costs, lower materials costs" (Maddex, 1985, p:310).

The governments in America and Europe support designers and owners of the buildings in order to redesign buildings to function again. The tax benefits is one of them.

One of the important benefit of re-functioning old buildings is that the construction time of a new building is not taken into account because the building is already constructed.

Another important factor is that, these buildings are mostly constructed in valuable sites and these places are good locations for the new functions. "The site is often right available utilities and public services, nearby labor, transportation, retail areas, new amenities such as revived urban centers. Saving buildings saves historic resources, local landmarks, irreplaceable buildings" (Maddex, 1985, p:310).

The usage of already constructed buildings bring out another benefit. The usage of natural sources are eliminated and this saves energy and materials. The energy to build or to demolish is saved.

Also there are some hidden benefits of recycling buildings, one is that the old structures being more labor intensive.

Another is, the image of an old building which cannot be created in new constructions and these sound and popular buildings give the new users an image which can not be achieved in financial means.

The New York Landmarks Preservation Commission, then in its tenth year, issued a statement on the occasion of National Preservation Week in 1975, which states:

Creative adaptation provides pride in our heritage, a link with the past, respect for the aesthetics and craftsmanship of another time, insights into our development, ample creative opportunity for architectural innovation and problem-solving, enhancement of the urban fabric, greater security, stability and beauty, while conserving basic materials and meeting modern needs. (Diamondstein, 1978, p:13).

Compared with new constructions, adaptive use offers many advantages. Not only do recycled projects generally require less capital to start with, and take less time to complete, meaning less money tied up for a shorter period, but they are by nature labour-intensive projects, relying less on expensive heavy machinery and costly structural materials.

Conversion work is labour-intensive, employing thousands of small builders, whereas new building tends to be capital intensive. New building is energy-consuming, where conversion work is energy-saving. And old buildings are themselves energy-saving because of their massive construction and small windows (Cantacuzino, 1989, p:11).

Considering the historic value and the quality of the craftsmanship of old buildings as Fitch (1990) states below, it is wise to refunction buildings:

"There are obvious benefits to reusing existent buildings. Older buildings are frequently better built, with craftsmanship and materials which cannot be duplicated in today's market. Late nineteenth and early twentieth century buildings were constructed with care and lavish decoration seldom possible in contemporary buildings (p:183).

Another very important aspect in re-functioning buildings for new uses is a social one. When old structures are adapted to new uses, future generations will have a chance to observe them and be aware of their past.

We may live without her, and worship without her, but we cannot remember without her, Our built environment is the most tangible record we possess, the most palpable proof of civilisation's continuous evolution. (Diamondstein, 1978, p:13).

Also, Fitch (1990) states, that:

Beyond the benefit to the developer, these factors produce social benefits by conserving resources and employing relatively greater numbers of workers. (This has been duly noted by the General Services Administration in endorsing proposed legislation that would establish a preference for using recycled buildings of historic or architectural significance for federal office space). In doing so, they noted that adaptive-use projects employ more labourers per structure than comparable new construction projects (p:179).

The very first decision to make before deciding on a re-functioning process is to decide on whether the proposed program space requirements fit the confines of the existing old building. Depending on the character, materials and the detailing of the building the decisions should be carefully given in order to house the new function.

To generate the funds necessary to restore a building a change of use, new use or adaptive use may be the only way to increase its economic viability.

2.2.1. Economical aspect in re-functioning old buildings

There are countless points of view on economical benefits of re-functioning old buildings. Below, few are listed; some stating that the cost of recycling old buildings are more than the cost of building new structures and others the reverse. Anyhow, both concepts agree on the benefits of converting these irreplaceable old buildings to new uses in order to give them an active role in society; to serve in social way.

Within the past twenty years, the view of public as well as the government and owners of old buildings have changed towards recycling of old buildings. Before these two decades recycling was thought as being more costly than building new, but today as it has been stated below, the world started to be aware of the cost benefits of converting old buildings to new uses than to construct new buildings.

Ten years ago there was evidence that the cost of converting old buildings consistently outstripped the cost of equivalent new work. This tendency appears to have been reversed, and conversions are now fully competitive. In addition, more developers have learnt to appreciate the unquantifiable values of age, character and architectural quality, are much higher than they would be in an equivalent new building (Cantacuzino, 1989, p:10).

Fitch (1990), states the cost benefits of recycling as:

Only within the past two decades have the economic scales begun to tip again in favour of retrieval and recycling as opposed to demolition and or new construction. Here again fundamental economic forces are at work. For now it is apparent that adaptive reuse of old buildings is more economic not only in general terms but absolutely (p:169).

This phenomenon has been perceptively analysed in a special study by the Advisory Council on Historic Preservation, Adaptive Use: A survey of Construction Costs. The report points out that:

With the growing concern for the natural environment in the late 1960s and early 1970s, the idea of recycling buildings took on new significance, applying the conservationist attitude to the man-made environment as well. But

perhaps the single most important factor to further the cause was the change in the state of the economy in the mid-1970s. As fuel and material costs skyrocketed faster than labour costs, new construction, being oriented to intensive use of new materials, and heavy machinery, became prohibitively expensive for many (Fitch, 1990, p: 169).

Despite the obvious economies of retrieving and recycling older structures, actual cost comparisons with new construction have been hard to come by. Thus the Advisory Council's report includes a survey of 35 recently completed adaptive-use projects, as stated by Fitch, giving actual costs per square foot and relating them to actual costs of comparable new construction in the same region at the same time. Five building types were studied:(1) apartments; (2) museums; (3) office buildings; (4) retail establishments; (5) The Advisory Council report makes a number of general theatres. observations. The data confirm that, although adaptive use is not always cheaper than new construction costs. It would seem, then, that adaptive use stands as an any given project will, of course, vary with the amount of work needed to adapt a particular building to the desired use. The survey indicates that demolition costs inside the building being recycled are minimal, normally only 1 to 4 percent of the of the total project cost. Structural costs are also low, normally varying from about 5 to 12 percent of the total project cost, which is less than half the average expenditure for new construction. This reflects the fact that little structural work is normally required when reusing an old building. Architectural costs vary above and below the average for new construction.

Examples around the world do not clear up confusion on new buildings or re-functioning the old ones but, in the end, the relative economy or expense of renovation depends on the specific situation. If the new use is not

competitive with the characteristics of the old building the cost adaptation runs high.

Besides the moral aspect of re-functioning, other than the economical benefits, there stands the importance of the tangible benefits which governments provide recycles. In New York local government offers tax breaks to the recycles and as stated above beyond the cost considerations there is another important factor to be weighed. It is what Sherban Cantacuzino calls "the unquantifiable value of age and character" (Diamondstein, 1978, p:26)

Although adaptive use is not always cheaper than new construction, the cost of adaptive use falls within the range of new construction costs. It would seem, then, that adaptive use stands as an equally feasible alternative to new construction to meet the space needs of the tenant. The real bonus comes at the conclusion of the project. There is no comparison to a project which creatively reuses and adapts an old building, rich in decades of character and life, to a new building of only average construction.

2.3. The role of Interior Architect while re-functioning

Interior design of cultural properties presents a special set of interesting problems. Many excellent older buildings survive, displaying the styles of design, current at the time of their construction. In Europe and in Turkey, structures built as far back as the Middle ages, as well as buildings ranging through all the historic styles since, can be found.

Recent years have seen an upsurge in historic preservation and what is called adaptive reuse, that is, the preservation of structure and some details with modifications to permit ongoing modern use. Many places now designate historic buildings or districts as landmarks, legally protecting them against destruction or inappropriate modernization. Although the landmarking of interiors has increased, usually only exteriors are protected. Nevertheless, the preservation and intelligent adaptation of interior space in preserved buildings, even when not required by law, are usually advisable. The modern movement toward professional specialization in historic preservation includes interior design as an important aspect.

Apart from a total restoration work, historic interiors are primary resources in current Interior Architecture. The educational value of visiting preserved interiors cannot be underestimated for the design professionals, as well as for the general public. Historic architectural space imprints the most vivid personal memory, allowing the viewer the closest opportunity of experiencing an actual moment of history. The impact of this kind of understanding can only fertilise the designer's palette and cultivate the public's appreciation. This reality is perpetuated by sustaining significant spaces through preservation, renovation, restoration, and adaptive reuse.

The ability to combine the new with the old requires a special creative sensitivity. Of all the categories of preserving the past re-functioning demands more design attentions. The practitioner of Interior Architect, who is trained to resolve contemporary interior problems while maintaining a respect for history, must exercise the vision and responsibility to recognise and protect unique architecture (Kurtich, Eakin, 1993, p:11).

Religious buildings have a tradition of monumentality and pure architectural expression. In referring to the great cathedrals or to other historic religious buildings, one can hardly speak of interior design independent of the basic

structural form. "Because churches are large single space buildings, they require work on their interior and this, therefore, requires an architecture of interior space rather than external volume" (Robert, 1989, p:11).

The old building has a history of its existence in space. In addition, it might also represent an interesting historical style or composite of styles. Considering the building's rehabilitation, the designer must have a keen, intelligent understanding of all histories associated with the building. Careful and thorough research is necessary.

Existing conditions of the old building must be thoroughly analysed by the interior architect. The analysis is necessary for a proper evaluation of what needs to be done or what can be done. The evaluation would include the historical or architectural significance of the building, the size of the building and its room disposition, the condition of the building's structure and mechanical systems, the location of the building and the building's economic potential.

Returning old buildings to their original dignity requires a sensitivity to careful historical research and the discipline to carry it through. Buildings are built to provide shelter for the human activities. The resultant interior spaces contain visual record of the architectural styles, providing some of the most important educational lessons for the practitioners of Interior Architect (Kurtich, Eakin, 1993, p:403).

Statements above prove the very important role of an Interior Architect while adapting a new function to a building which it was not designed for. To take care of the modern necessities and adapt them as if they were always there requires a professional effort.

The lighting, climatization, ventilation, security and fire controls of a newly functioned building should be very carefully solved according to the new function. As the physical remedies and re-functioning will be brought by the Architect-Restorer, Interior Architects should work in close relation with them. The renewal of the interior will be realised by these professionals together.

3. CHURCHES IN RE-FUNCTIONING

Churches, which are originally religiously functioned buildings, have survived through several phases. The origins of a church was, an outcome of the Roman basilica used as a gathering place. After the acceptance of Christendom, it has gone through various differences depending on the social needs of the society where they were built, and also depending on the architectural style existed during that special period.

As the case study is about an Anatolian building, it can be said that the first religious spaces, called as churches can be observed in Cappadocia. The churches of the underground cities in Cappadocia are examples of the first churches constructed in Anatolia. Since then, churches were built, continuing through Byzantine period up to Mehmet the Conqueror's reign. It was not until 19th century, when new church buildings were legally allowed to be constructed. After 1830's, churches were allowed to be built and restored. Generally free standing church buildings in Anatolia have a basilical plan type, although the styles may differ related to the society, as Greek Orthodox, Armenian or Georgian.

3.1. Various functions which have been assigned to churches

Like mosques of an Islamic society, churches are usually landmarks in their surroundings and traditionally a focal point of their community so that their disappearance constitutes a serious moral damage. Although the case changes depending on the countries, for such reasons, new uses are to be found that will damage neither the exterior nor the character of the religious

buildings. An accepted appropriate new use is one that fits both to the spirit and the form of a monumental building. In this case as examined in the thesis; a church, which bears a public or a communal use, with a degree of ritual and ceremonial link, needs a function that fits best morally and physically.

Various functions, of social or legal base, have been assigned to churches. Broadly speaking, appropriate uses can be grouped in three categories: cultural, educational and social. Conversions to museum, theater or performing art functions are placed in cultural category, whereas community centers, parish and youth centers are social functions and conversion to a library or a school falls into the educational category.

Concerts and performances, which are cultural activities, require the use of an undivided volume and are public and ceremonial activities, so they are among the best choices for churches which will undergo re-functioning activity. A very successful conversion to a concert hall use dating from 1968, is St .John's Smith Square, in London, which is a baroque church of 1730's by Thomas Archer.

The conversion of a church into a theater is less common, but there are nevertheless some remarkable examples. In Bologna, another baroque church, Santa Lucia is being converted into a center for the performing arts, in order to serve University of Bologna (Figure 3.1.).

Other examples of churches successfully adapted to cultural uses include the Church of the Raising of the Holy Cross in Prague, converted into an art center, and the church in Ibiza which can be evaluated both as an art gallery and a concert room.

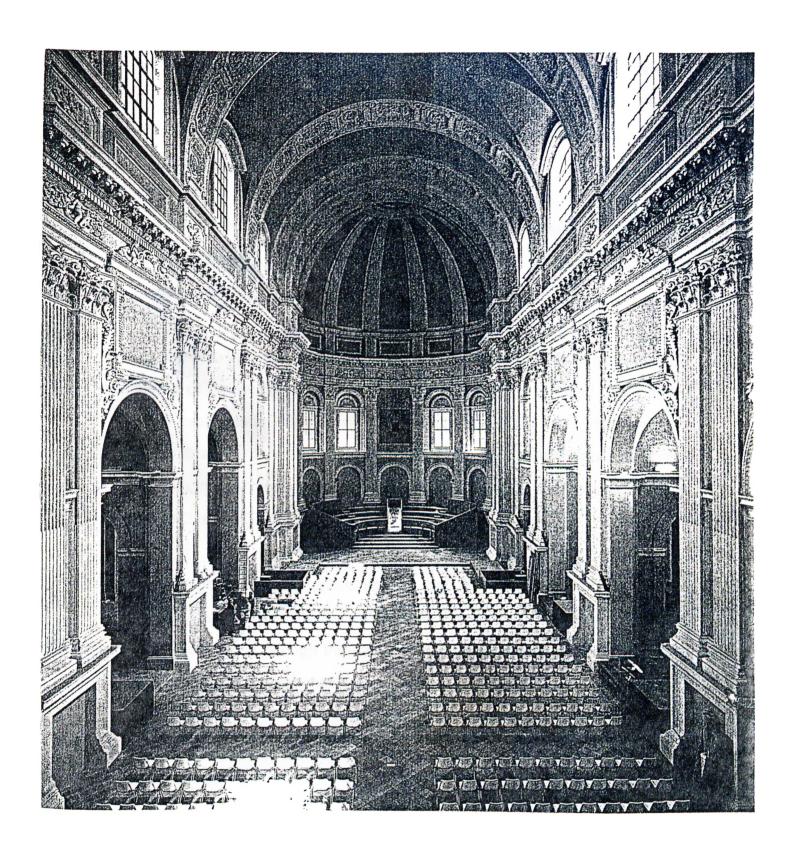


Figure 3.1. Santa Lucia. Bologna.

(Scannavini, R. 1988:68)

Conversion to a museum use, which also falls into the cultural category, probably requires the least change to a church, and from that point of view is a highly desirable option. The fact that the building remains public and that visiting a museum is generally a quiet and contemplative activity also makes it an appropriate use.

A great many churches have been converted into museums. One of the most spectacular examples is the Church in Basle, which has become a museum of church art.

In Educational category, churches make excellent libraries, providing a feeling of the single volume as the original structure is retained. One of the finest examples is All Saints at Oxford, a church built in 1699 and converted into a library for Lincoln College in 1975. Such an example, having a library function in very modest sizes can still be seen in a neo-gothic church still in use in Giresun Çinarlar district.

In the social category are churches that are converted into community centers, youth centers and old people's day centers. All are worthy and appropriate uses, though they are more liable to require subdivision of the interior space then a concert hall, a museum or a library.

Inappropriate uses, because they require the subdivision of the church or because the activity is not in the right spirit, are office, retail, restaurant and night-club uses and the like, of which there are too many examples around the world (Cantacuzino, 1989, p:172).

In our country unfortunately many of them are left empty, waiting for being demolished gradually. A considerable amount of them were used as

storage, barns or byres and prisons until recent years, and many were converted to mosques, as Fatih camii (Panayia Crysocephalos) in Trabzon, as Çukurbağlı camii in Antalya, etc.

Within the context of this thesis, one of the most appropriate functions, "converting a church into a conference hall" will be discussed in detail.

3.2. Functions of churches in Turkey today

There are countless historic churches which have been refunctioned in Turkey and many others are still waiting to be refunctioned. Below a brief information on, re-functioning of churches in history has been given:

After migration of Turks Christians were left free from the aspect of religion to a degree. So some of the churches were turned to mosques, but after 1453 though new churches were also constructed most of the old ones were converted to mosques, as Church of Saint Mary (Panachrantos) of lips - Fenari Isa Mescidi; Church of St. Andrew in Krisei - Hoca Mustafa Paşa; Church of Panoghia Chrysocephalos - Yeni Cuma camii etc.(Özcan, 1980, p:32).

Many church buildings in Turkey, have been converted into museums; Hagia Sophia in Istanbul and Trabzon are two of the remarkable examples. Gogara church in Giresun is also a successful example for re-functioning in Turkey in modest sizes.

Hagia Sophia is one of the most remarkable re-functioning projects which came a long way through functioning as a church building, then a mosque and nowadays a museum. The building served for 916 years as a basilica

and 477 years as a mosque to two religions. Upon Atatürk's orders it was converted into a museum. Figure 3.2. illustrates a plan of the structure.

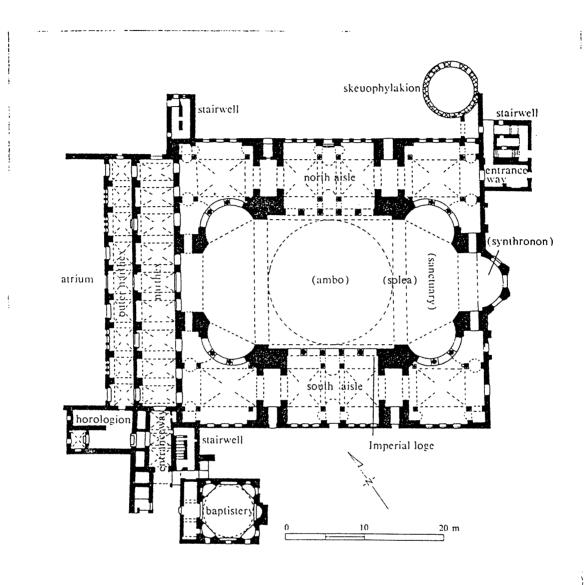


Figure 3.2. Hagia Sophia. Plan. (Mathews, T. 1982:92.)

Another example to re-functioning a church is Hagia Eirene. This monumental building is now used as a concert hall. It served as an arsenal until 1846. Then a military museum was installed in and it served in that

capacity until 1940's. Today it is used as a concert hall and it also houses occasional exhibitions. In figure 3.3. the plan of this church is given with also the later additions.

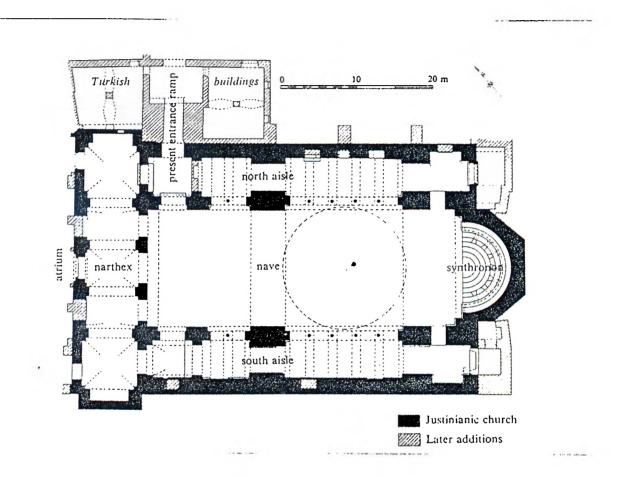


Figure 3.3. Hagia Eirene. Plan. (Mathews, T. 1982:81)

Kariye museum is one of the best examples of re-functioning churches used as mosques in Turkey. Among the many structures belonging to the Roman, Byzantine, and Ottoman periods, after Hagia Sophia the Kariye Museum is one of the most important Byzantine building in Istanbul. The plan of Kariye Museum is in Figure 3.4. with identification of architectural components. After Turks conquered Istanbul in 1453 the church was converted into a

mosque in the early 16th century. Examples can be increased like the etnographical museum in Antalya, apart from the rock-cut church-museum of Cappadoccia.

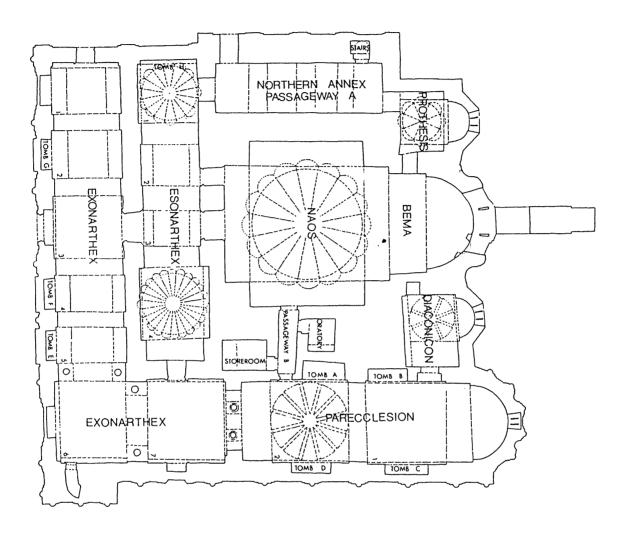


Figure 3.4. Kariye Museum. Plan. (Ousterhout, G. 1987:275)

3.3. A church with a basilical plan scheme

A basilica in Roman architecture is a public building for assemblies that is rectangular in plan with an entrance on the long side. A Roman colonnaded hall for public use, later adopted as a building type for early Christian churches. Figure 3.5. illustrates a plan of a basilica. The area shown with

(1) is the nartex part of the church. (2) stands for the nave and (3) shows the nave part, and (4) symbolizes the side aisles.

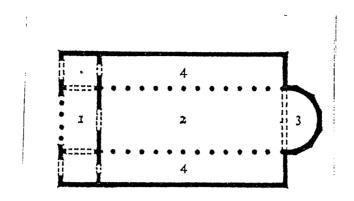


Figure 3.5. Basilican plan.

(Fleming, J. 1980:30)

"In Roman times a basilica was a large hall of justice, and the term originally referred to the building type rather than to its form. In a Christian basilica, the entrance is usually from one short end and the apse of the Roman basilica serves as the apse at the other, creating an axial plan used for religious activities" (Gardener, 1986, p:977).

Basilicas do not impress from afar. They are plain, presenting broad surfaces, with windows and doors practically flush with the masonry and with few recesses or extrusions. They rely for effect on the simple juxtaposition of contrasting planes. The façades are awkward in shape and simply reflect that of the nave and aisles. The single triangular pediment of the classical temple has been divided into three portions, of which that in the middle has broken away and is raised above the wings, which, with their lean-to roofs, have each a triangular fragment. In contrast the inside is highly decorated- the glory, it may be said, is all within (Davies, 1982, p:91).

The main part of church between the entrance and apse, demarcated from aisles by piers or columns is called 'nave', which is virtually an oblong box with base and lid, formed of pavement and ceiling. As such, nave is characterized by horizontality, self-containment and inward lookingness. Its very shape beckons forward because this is how rectangles affects human beings. If one enters through a short side, one is immediately drawn to the opposite side, and in the case of the basilica this means towards the altar. Indeed floor, roof and walls all have a part to play and much of the delight lies in being able to recognize the subtle ways in which this is achieved.

The portion of a church flanking the nave and separated from it by a row of columns and piers is called 'aisle'. Originally meant a wing and its derivation points to its dependent role: an aisle is not the main body of a building but an adjunct. While parallel to the nave, the aisles are strictly secondary and are shown to be such by either their lesser illumination or their size.

It is now important to explain what is meant by interpreting the basilica as a path. The arcades divide the nave form the aisles, they also keep them in visual relation. Hence arcades not only divide the dominant space from the subsidiary ones, they also unite them, thus creating a dynamic tension. They may be considered not as barriers but seams along which the differing volumes are sewn or joined together.

The aisles themselves contribute to the framing of the nave, while at the same time they too are paths defined on either side by the arcades and outer walls. In the eastern Mediterranean, however, apses were soon added to their termination, probably to reinforce their pathlike quality (Davies, 1982, p:96).

Advancing both visually and physically along the nave in the direction so clearly indicated, the next architectural feature to confront the visitor is the triumphal arch. Originally an open air Roman creation, the Christians employed it as an interior feature. Such an arch summons one to approach it and to pass through it: It is a kind of gateway to the altar.

An apse is a recess usually singular and semi-circular in the wall of a Roman basilica or at the east end of a Christian church (figure 3.5.). The Early Christian apse is half an upright cylinder surmounted by a quarter sphere; It is clearly distinct from the rest of the building which is rectangular. Its concave shape suggests the shelter of an embrace. Space flows into it and it holds its arms out in welcome. With its unbroken concave surface, it both enlarges and shapes the primary space, unifying it and reinforcing its containing quality. In eastern Mediterranean examples, like in Anatolia, each rectangular space ends in an apse, with sizes in proportion to the width of the aisles or the nave.

Entering the nave, one feels compelled to walk forward, but this advance cannot go on indefinitely without losing significance; it has to be concluded in a way that gives satisfaction (figure 3.5.). The apse provides an admirable closure. The importance of the altar is due to the fact that it is essential for the celebration of the divine. The architectural dominance of the altar is thus achieved by making it the object in a visual field, which constitutes a small gravitational center of its own.

Most churches have a nartex which is a porch or vestibule of a church, generally colonnaded or arcaded and preceding the nave (Figure 3.5.). In Greek orthodox churches, this is a preparatory space attached to the entrance side of the building. Iconostasis is a partition used as a screen

with doors and many tiers of icons that separate the sanctuary, apse part from the main body of the church.

When recycling a building, one of the first things to investigate is how the structure originally functioned and whether this usage is still viable. If designers come to a conclusion that restoring the original functions is not feasible, they must realistically analyze how the old structure relates to today's needs and possibly to the future of its community. Most old buildings are re-functionally obsolete long before they are physically and structurally worn out. When church buildings complete their active role in serving public, they must be adapted to new necessary functions in order to survive.

Churches, as listed above, have been adapted to new functions, and serving as a conference hall is one of the many new functions which they have been adapted to. In the following chapter the requirements of conference halls will be examined in order to help the re-functioning process of converting a church into a conference hall.

4. CONFERENCE CENTERS

The hospitality industry today is in the midst of a period of great innovation, as operating companies and entrepreneurial developers modify facilities and refine management techniques to meet the demands of new markets and remain competitive. In 1980's the conference center industry marked its presence with the maturing of several influential properties and the establishment in 1981 of the International Association of Conference Centers, or IACC. Although important conference properties existed earlier, it wasn't until the 1980's that conference centers became truly competitive and demonstrated a successful product that would show increasing acceptance and continued growth.

Although conference centers have been in existence for a century as sites for meetings or retreats, it was not until 1950 that a facility dedicated to high-level professional meetings was created. In the late 1960s, entrepreneurs renovated other estates ousted New York. These early properties, as well as notable examples in Scandinavia, created a physical, operational, and philosophical concept that now has become the modern conference center.

In Turkey the conference centers are not as developed or spread as in America. Mostly conferences take place in large hotels. The hotels in the Mediterranean cost houses many conferences mostly in winter seasons as they are off seasons for hotels in this region. There are auditoriums and some small size conference halls, but all are additional facilities to the main function of the building, which mostly are business centers and art centers. The growing demand towards modern conference centers are showing that

there are requirements for these facilities in Turkey too. This awareness will let the conference centers spread throughout the country in a short period of time.

4.1. Types of conference centers

Conference centers fall into distinct categories. These distinctions are based for the most part on the ownership, market orientation, and usual mix of facilities. Of course, many conference centers exhibit the characteristics of several different categories; many of the corporate conference centers, for example, compete with executive properties by soliciting general meetings. Also, like most businesses, conference centers can mature and grasp the opportunity to compete in new markets. Penner (1991) has grouped the conference centers as: "Executive, Resort, Corporate, University, Nonresidential, and Not-for-profit. These are the principal types of conference centers according to their typical meetings and their general physical characteristics" (p:18). Below the principal types of conference centers, and their typical physical characteristics will be listed:

The first type of conference center is Executive conference center, which is the most typical midrange facility. It is oriented toward corporate meetings, including both training and management development. Such centers feature a relatively large number of conference rooms, only the largest corporate training centers have more. Most executive centers are located in the suburbs around the larger cities. With increasing competition and land costs, the main concern of both developers and operators should be whether a proposed facility has the potential to attract weekend conferences or social business, both of which are necessary to ensure profitability.

The second type of conference centers, which are resort conference centers, have evolved from executive properties by marketing and promoting their recreational facilities. They are designed for the same type of management meetings, as well as for sales and incentive groups. Resort conference centers vary in size but most new properties are in the 300 to 400 room range. Usually they have somewhat less meeting space than do executive centers, but more food and beverage and recreational facilities. New resort centers are being built in both suburban locations and the more traditional resort destinations.

In third group, Corporate conference and training centers will be examined. They are physically the largest of the several categories. Corporate centers contain much more conference space than other types because of the need to meet very specific training needs. Many major corporations, especially those in telecommunications, insurance and in financial services, are struggling with the decision of whether to build their own residential or non-residential centers, or to rent space form executive centers or at other sites. Fortunately, they all realize the importance of training and employee development to their success.

University conference facilities meet three different needs: the most luxurious are designed for dedicated business school executive education programs; others provide for campus visitors and educational conferences, or for growing continuing education programs. The university centers exist because the large research universities realize that their reputations are, in part, dependent on the types of executive and adult education programs they run, and on their abilities to bring business executives to campus on a regular basis.

The non-residential type of conference centers will be examined in detail, because the case study on the fifth chapter, the church which will be refunctioned as a conference hall, falls into this category.

The non-residential centers most often are corporate operated, either for low and mid-level training or for upper level management development. They may be constructed near the corporate headquarters or at a site convenient to the training department. Most contain fairly standard conference rooms and may be available to the public for day meetings, depending on the corporate policy. In the case of the church in Burdur, the municipality plays the role of a corporate and will refunction the building to serve as a conference hall. The conference center will act in a multi-purpose way in serving citizens of the city. Because it has no guestrooms and other specialties such as the absence of the recreation facilities and the limited dining and beverage facilities, the church in Burdur fits in this category. The non residential conference halls can be used for daily purposes whenever needed by the society.

The most highly variable group are the not-for-profit centers, which may be owned by religious or educational organizations, associations and foundations, research centers, or private humanitarian and arts groups. Their facilities reflect the differing missions of their respective owner groups and offer the public or specific entrust groups the opportunity to meet in, for example, a spectacular mountain setting or near a historic landmark.

In the table below, information on the types of conference centers, their typical meeting uses, locations, number of guestrooms they accommodate, food and beverage facilities, the number and size of conference rooms and recreational facilities are given (Table 4.1.).

Table 4.1. Types of conference centers

		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
TYPES OF CENTERS	TYPICAL MEETING USES	LOCATION	NUMBER GUEST- ROOMS
EXECUTIVE	Mid and upper level training and management development; management planning; sales meeting	suburban locations	225-300 midsize to large guest- rooms
RESORT	Mid and upper level management meetings; incentive trips; sales management	Resort district or suburban locations	150-400 large rooms
CORPORATE	Technical or sales training for low and mid level employees; management development meetings; outside conferences if company policy permits	Suburban or head- quarters locations	125-400 rooms
UNIVERSITY	Executive education for middle managers; scientific meetings and continuing education programs	On campus locations	50-150 small to midsize rooms
NON RESIDENTIAL	Low and middle level employee education middle and upper management development	Urban or corporate head- quarters locations	no guest- rooms
NOT FOR PROFIT	Religious; education and government staff training association and foundation meetings	Often at remote locations	25-100 guest- rooms

Table 4.1. (con'd)

TYPES OF CENTERS	FOOD AND BEVERAGE FACILITIES	NUMBER AND SIZES OF CONFERENCE ROOMS	RECREATIONAL FACILITIES
EXECUTIVE	multiple dining and beverage outlets	moderate number of midsize conference rooms	large number of breakout rooms moderate recreational facilities
RESORT	multiple dining beverage outlets	small to moderate number of conference rooms	additional banquet rooms; extensive recreational amenities (especially outdoors)
CORPORATE	limited dining alternatives	extensive training or conference rooms to meet corporate objectives; specialized rooms; auditorium	moderate to extensive recreational facilities
UNIVERSITY	limited dining and beverage options	small to moderate number of conference rooms; amphitheater auditorium	recreation elsewhere on campus
NON RESIDENTIAL	limited service dining and beverage options	generic conference and breakout rooms limited special purpose rooms	no recreation
NOT FOR PROFIT	single dining room	small to moderate number of generic conference rooms	large multi purpose room; limited recreation

Every center has its own characteristics, depending on the functions it conveys. Today the importance of functions of conference centers are realized and therefore the centers not only distinguish their functions from hotels and other public buildings but also continue to spread around the world.

#### 4.2. Description of functions

To redefine our discussion a conference center is a specially designed hospitality property dedicated to providing an environment most conducive to effective conferences and meetings for various number of groups. The conference center, provides a distraction-free, dedicated, comfortably furnished, and fully equipped facility with the added important feature of a professional staff trained to provide a high level of service to the meeting planner and conference attendees. At such a center, all aspects of the facility design, the conference support services, the food and beverage program, and the recreational amenities enhance and further the goals of a meeting.

There are significant physical differences between the designs of conference centers and those of more traditional hotels and resorts. Many of these differences are related to the conference center's principal planning objective, which is to separate the conference and training areas from the other functions in order to eliminate distractions and intrusions during a meeting. Dining, lounge, banquet, and recreational areas usually are located away from the meeting wing, in connecting structures, or even in separate buildings. "Other objectives include the architectural massing and careful sitting of the facility to enhance the residential scale and create a feeling of closeness with the environment."(Penner, 1991, p:16).

Other planning and design distinctions are specific to the conference core. They include the following:

-The meeting space, whether in the form of classrooms, breakout rooms, amphitheaters, or other special-purpose rooms, is exclusively dedicated to conferences; such social functions as banquets and receptions are scheduled in other areas of the building. These rooms usually are assigned and dedicated to a single user group throughout its stay.

-Each of the conference rooms is specially designed and equipped to enhance the meeting purpose: spacious, daylit, high-ceilinged rooms incorporate the deal types of lighting, audiovisual systems, furnishings, and individual climate controls to support a productive meeting.

-Assembly and refreshment areas are provided throughout the conference core, providing opportunities for frequent informal gathering and allowing the meeting planner and instructor great flexibility in scheduling breaks.

-In addition, such support functions as rest rooms, telephones, and offices for the conference services staff are conveniently located nearby.

The other functional areas support the conference focus. Guestrooms are designed for work and study; additional lounges and case discussion rooms may be provided on the guest room floors. Most centers provide a lavish conferee dining room and, often, an alternative dining room, usually an upscale specialty restaurant; also, it is becoming common to add a more casual room with an informal snack menu. The recreational areas are considerably more extensive than in most hotels: the typical conference

center will include an indoor pool, exercise and aerobics rooms, racquetball courts, and locker and spa facilities.

# 4.3. Conference support areas

Coincident with the schematic planning of the conference and training rooms, the architect and other members of the development and design teams must develop the plan for the several assembly areas and the conference support functions, all of which will be crucial to the center's overall success.

The assembly areas include more than simply wide corridors for prefunction areas, many centers provide a separate conference foyer for day guests, decrying much the same architectural function as the conference center residential lobby. Practically all centers include specially designed coffee and refreshment lounges with permanent food display units supported by nearby pantries. Other centers add special private lounges, where customers or staff can meet. And conference center board rooms often incorporate private anterooms for gathering before or during a meeting without the congestion of the public break areas.

# 4.3.1. Planning the lobby and the reception areas

The lobby or entrance place is the part of a building that greets the visitor and user; it is therefore the place in which the architecture can first declare itself, providing a part of the whole as a sample of the quality of the rest. The entrance place offers the interior architect an opportunity to design a paradigm of the spirit and language of the whole building; the lobby becomes

the essence of the architectural intention by considering aesthetic ambitions into one primary public space:

Entrance spaces, especially those to corporate and municipal buildings, are often large in scale. In addition to comfort and function, the lobby will symbolize the activities and qualities of the building's user. Through architecture, the client can express an attitude to the public about the building's function and their company principles and philosophies. The lobby will expose the personality of the building's function. In addition to the reception desk, the entrance will reveal vertical circulation systems. architectural hierarchies together with public and private spaces as well as the rest areas (Phillips, 1991, p:10).

In developing the lobby program and its design, the designers need to meet a number of practical requirements. The lobby serves as the registration area, the central point of assembly, the circulation heart, and perhaps even houses the restaurant or auditorium foyer. Frequently, it is the nucleus, with the conference areas to one side, the guestrooms to a second, and the restaurants and lounges to a third.

Another practical consideration is the provision of group seating in the lobby area. The design should allow enough for six to ten people at the least, depending on the overall program and arrangement of functional areas.

Other lobby support areas include the public rest rooms, coat areas, and telephone alcoves, which might be combined with similar areas nearby, such as the restaurant or banquet rooms, as well as the luggage storage, bellman stand, valet parking office, and fire control rooms. In addition to establishing

the area program requirements for these areas, each type of conference center has particular operational needs.

Conference centers today are much more than simply meeting sites with few additional amenities. Developers and operators are paying increasing attention to the design and management of the public facilities: The lobby and registration areas, the food and beverage outlets and the various lounges.

Once the guests have registered the lobby may serve more as a transition space than as a reception area. The position and design of the front desk may be secondary, in fact, to circulation routes between guestrooms, dining areas, and the conference center.

Therefore the position and layout of the front desk, seating areas, and other support functions need to reinforce and focus on the daily routine of the conference program, rather than on the daily routine of the conference program, rather on the usual lobby functions.

Finishes. The lobby area should incorporate many of the finishes and decorative touches found throughout the rest of the center. In fact, it should establish an expectation level for finish quality that the guest will encounter during his or her stay. This may include marble or granite floors and wood paneling in the more upscale centers, or more informal materials, such as flagstone flooring and open beam trusses, in the resort and more casual university and not for profit facilities. In each case, however, the guest should understand the quality level of the operation immediately upon arriving by the look and feel of the lobby finishes and furnishing. Another very important aspect in choosing the finishing of the lobby areas is safety of the materials. As it is noted in Architect's Room Design Data Handbook:

Smooth, hard surface materials sometimes used at entrances, such as terrazzo, marble, smooth tile or polished travertine are safety hazard. Even those treated to be non-slip are a problem when wet and when in contact with certain shoe sole materials (Stitt, 1992, p:47).

Detailed chart on the conference rooms design standards is placed in the appendix B of the thesis.

While hard surfaces are convenient, their use should be limited so that the public areas have better acoustics and a less harsh look. Large expanses of glass need to be softened with blinds or shutters. Area rugs and fabric or vinyl wall sections create a variety of materials, textures, and colors, add visual interest and reduce the scale of larger, undefined surfaces. The designers should strive to attain this variety without the design becoming overly busy.

Maintenance and durability. These issues need to be considered from the outsets, including such factors as heavy pedestrian traffic through particular routes, additional wear caused by baggage carts, and damage to walls and corners form carts and hand-carried luggage.

Furniture and Artwork. The lobby, although relatively small in area, offers and opportunity for placing special furnishings and artwork that set the character of the conference center. Again, the choice must be in keeping with the rest of the project, but the designers might consider choosing large scale, bold signature pieces covered with leather or other special materials, to catch the attention of the visitors. In addition, artwork should be selected for the lobby to carry out some nominal theme, be it abstract pieces or local

landscapes by emerging regional artists, works by employees or alumni, or the artistic efforts of some particular group.

**Fixtures and Equipment.** The interior architect, designers and other consultants need to collaborate on the design and selection of the lobby fixtures and equipment, including such elements as the front desk, public telephone area, storefronts, and service counters. The front desk design is the most obvious example.

Cooperation is required among the architect (for planning the space), the interior designer (for detailing the top and front of the desk and the back wall), the lighting designer (for conceiving the lighting concept), computer systems and telephone consultants (for selecting the equipment) fire- protection specialists (for positioning the alarm systems) (Penner, 1991, p:181).

Even the smallest conference centers should have two work stations at the front desk. Essentially one for registration and one for the cashier. The architect should add an additional station for each 100 guestrooms over 150. The lobby and desk should not be designed for short peaks of activity; if the entire facility turns over in a single day, then, it may be necessary to set up temporary tables in the lobby or conference foyer. The operational program should identify just such specifics of the conference center schedule and establish recommended design and management solutions.

#### 4.4. Conference room interiors

Much of the success of conference centers is based on the high quality of their meeting rooms, partly a reflection of the rooms dedicated character and generally large size, but also the result of the superior level of finishes, furnishing, and equipment, which contribute to much more than simply the aesthetics of the space. Design criteria for the surface finishes, standards for tables and chairs, and specifications for instructional equipment all add immeasurably to the potential for a successful conference, and the design team must begin to establish interiors criteria early in the schematic phase; it is inadequate to 'decorate' and equip the rooms in the months preceding the opening.

The interior designer and operator should prepare outline specifications of the conference room finishes, furniture, and equipment. In addition, architect and interior designer need to coordinate their respective responsibilities for the selection and budgeting of special finishes. Although the furniture can be selected later, it is necessary for the team to approve the meeting room layouts early on, to confirm the space planning. Similarly, the equipment purchases could be delayed until midway through construction, but the operator, audiovisual consultant, communications expert, and other team members must develop early equipment standards; these will influence the design of the rooms and establish cabling requirements that will be used throughout the rest of the facility.

Furniture used in the conference rooms should be selected with much care in order to satisfy the required functions. One of the most important aspect of the interior design in conference rooms is the furniture chosen. Obviously, the selection contribute substantially to the success of the design and the comfort of the participants.

One of the main decision involves the size of the conference tables, which influences guest comfort (in terms of amount of room given to each

attendee) and to some degree establishes the conference room dimensions. Below, a table showing the conference room table sizes are given.

**Table 4.2.** Conference room table sizes

Table size	Utilization	Comments
42 inches (107 cm) 48 inches (122 cm) 54 inches (137 cm) 60 inches (152 cm)	one person 42 inches (107 cm) two people 24 inches (61 cm) two people 27 inches (69 cm) two people 30 inches (76 cm)	excessive space unacceptable optimum
66 inches (168 cm) 72 inches (183 cm)	two people 32 inches (81 cm) two people 36 inches (91 cm) three people 24 inches (61 cm)	comfortable unacceptable
84 inches (213 cm)	three people 28 inches (71 cm)	table unwieldy and heavy

(Penner, R. 1991: 57)

The selection of the chair depends highly on the budget of the conference room but most executive centers serving clients full day prefer arm-chairs which are fully upholstered, but their use has other implications. In addition to their expense they create major storage problems since they do not stack. Designers should think of the problem of storing chairs. As Penner (1991) states: "most centers prefer the usage of a high raised platform about 1.2 meters above the floor, creating a deck for storing a second pair of chairs" (p:57).

#### 4.4.1. Conference room finishes

Floors at conference centers are almost universally carpeted, with the material choice based on acoustic, visual and aesthetic qualities and comfort; only occasionally, in certain corporate training centers with special-purpose classrooms, is resilient tile or another material substituted. The carpet pattern should be very simple, if not a solid color, in order to limit distractions. Some operators prefer carpet tiles, which allow easy replacement for soiled or damaged sections but may result in a slightly uneven color due to differences in wear and age.

Much of the discussion of conference room finishes is related to the walls, which most often are painted, vinyl-covered, or tackable. Instead of using tacks, however, many instructors prefer simply to tape sheets of paper, torn off the easel, to the walls, and a substitute criterion might therefore be for a "tapeable" surface that permits the easy removal of masking tape. As with the floors, most designers specify the walls to be relatively light, solid color or subtle pattern, rather than dark or strongly patterned.

Window coverings should meet similar criteria. Lighting, sound systems, fire protection systems and so forth can be integrated into the ceiling, much of which should be acoustic tile to reduce reverberation within the space. The tile may be combined with a frame of painted gypsum board or other material.

### 4.4.2. Conference room lighting

Meeting planners cite lighting as the single most important element in the selection of conference and training space. The optimum conference room

will combine incandescent downlights (with dimming capability) and fluorescent lamps, providing a wide range of lighting flexibility. The incandescent lights allow the instructor to lower the light level at particular locations. In the front of the room, for example, when slides or overheads are used and create a warmer feel; the fluorescent provide general room illumination, either directly or by indirect systems reflected off the ceiling. In addition, there may be wall washers lighting the vertical surfaces, spotlights over the lectern or buffet, or fluorescent fixtures highlighting the writing surface.

The design team, perhaps in consultation with a professional lighting designer, should deal with the following lighting requirements:

- -Overall room illumination, which can vary depending upon the anticipated type of instruction and can be direct or indirect.
- -Dimming capability, which may vary in circuits from the front to rear of room.
- -Wall washers highlighting the room perimeter.
- -Task lighting on the writing board, tackable walls and student work surfaces.
- -Accent lighting on the speaker, wall displays, and if present, such features as a built in buffet.
- -Control of unwanted light form the corridor projection booth

These requirements must be carefully integrated to create a unified lighting design for the entire conference room. The designers should consider the effects of daylight on the room and execute appropriate methods to control excessive glare. Systems should be individually controlled throughout the conference core and the individual meeting rooms, so that for example, downlights illuminating only the front presentation wall can be turned off when the projection screen is lowered.

## 4.4.3. Conference room fixtures and equipment

One of the important aspect of the interior design is the conference room equipment, most of which is directly related to the teaching or meeting objectives of the center and the particular room. Often the equipment is divided into two categories: permanent and movable. The permanent equipment includes such items as the whiteboards or other writing surfaces, tackable panels, hanging rail systems, and built in stages. Mobile elements include lecterns, portable projection screens, easels, carts and so forth.

Whiteboards. All medium and small conference rooms and breakout rooms should be equipped with permanent writing surfaces. The traditional blackboard is now usually a white surface designed to take colored dryerase markers. Surface-mounted systems, which gang two or three boards together with tracks, allow panels to be raised or lowered either electrically or manually, providing considerably more writing area.

Easels. The majority of the small conferences are still using writing boards, overheads, and easels with newspads. The most common arrangement utilities freestanding easels, which the instructors can place anywhere in the room. The hanging rail systems provide similar flexibility, although the tablets can only hang on the wall surfaces; this frees up floor space, however.

Tackable panels. Facilities anticipating a large amount of group work, brainstorming, and case-study exercises should expert conference leaders who will want to tack or tape paper to the room walls or to individual cork or fabric panels, but this limits the location for display. Tackable or tapeabla walls or a hanging rail are better options.

**Projection Screen.**Among the standard features inpractically every conference room is a permanent projection screen, often recessed into the ceiling and electrically operated. Larger rooms may require two screens, so that one can be lowered for slides, video, or overheads while portions of the front white board remain available to the instructor. Even the smallest conference rooms should be equipped with screens; these may be surface mounted on the wall or ceiling.

Hanging Rail. Suppliers are designing new systems for the meetings industry. Many centers now use a hanging rail, mounted about seven feet (2.1 meters) above the floor, from which the operator can suspend individual writing boards, tackable panels easels, projection screens and so forth.

Stage or Riser. Additional equipment may be necessary to properly set up a conference room. Larger spaces may benefit from a stage or platform to elevate the speaker or panel above the audience. Except in the largest function rooms, these should be portable, allowing the operator and meeting planner great flexibility in room configuration. If a platform is expected to be used in a given room, designers should consider increasing the height of electrical outlets and audiovisual jacks and providing raisable writing surfaces and projection screens.

Today contemporary conference centers can not be thought without audio-visual equipment. This is why many clients select conference centers over traditional hotels for management, training, and other meetings. Most modern properties offer a broad menu of systems, many of which are available in practically every room, from the most advanced auditorium to the simplest breakout room. Many of these audio-visual systems should be careful programmed and planned form the outset, to ensure that they are

appropriate for the expected client, meet budget constraints and can be accommodated by the building and system design.

The goal of the audio-visual program is to provide for the initial needs of the operator and meeting instructor and be sufficiently flexible to allow for expansion and future enhancements to the system.

The design team should approach the audiovisual program from several directions. First, they should develop a description of the characteristics of each type of conference room and its audiovisual and communications needs. At the same time, they should identify the general level of systems to be provided throughout the center. An important aspect is to clearly state whether specific equipment will be dedicated to a particular space(either permanently assigned or assigned), portable, so that it can be shared with other conference rooms, or not present be provided for in the storage, so that it can be acquired later.

Table 4.3. Audio-Visual system equipment

System type	Components
Control systems	-lighting systems(raise, lower, preset, off)
	-Blackout shades(raise, lower)
	-Curtains(open, close)
	-Projection screens( raise, lower, tilt)
	-Video(on, off, forward, reverse, focus)
	-Slide projectors(on, off, forward,
	reverse, pause)
	-Sound system(raise-lower volume)

# **Table 4.3.** (con'd)

Screen/display systems	-Central front projection screen
	-Side front projections screens (tiltable)
	-Rear projection screen
	-Writing boards (single, multiple, movable)
	-Tackable (or tapeable) walls
	-Easels (portable)
	-Hanging-rail system
Projection and	-Video and computer projection
	(floor,ceiling video systems or rear location)
	-Video monitors (permanent, portable)
	-Slide projections (floor, projection booth or
	rear location)
	-Film projections (floor,projection booth or
	rear location)
	-Video recording
	-Video transmission and playback
	-Video editing and projection
Audio systems	-Speech reinforcement (live sound)
	-Audience microphones
	-Program speakers (recorded sound)
	-Audio recording
	-Audio transmission-playback
	-Audio editing and production

(Penner, R. 1991:235)

4.5. Interior space requirements of a church while being re-functioned as a conference hall

Adapting a new function to an already existing building, requires very special attention. Because the old structure will need new divisions, leveling and adaptations of modern technical necessities, the restorer architect and anterior architect work together in order ease the difficulties which they will face while going through this process.

"Churches are undivided spaces which are often too large for a future use so the designer have at their use mostly oversized spaces from which to draw advantage for new uses" (Robert, 1989,p:9). As it can be understood from the statement above, the designer should be aware of the space characteristics of the already existing building and the space requirements of the function which will be adapted to the building, and after examining these characteristics, planning process will take action.

"It should also be kept in mind that a large building can accommodate several functions and that this allows a reconstitution of the multiple amenities found in towns: shops on the ground floor, offices or housing on the upper levels and collective facilities in specific spaces" (Robert, 1989,p:9).

"The huge single space of a historic monument can cause negative effects by creating hollow spaces, internal courtyards and setbacks" (Robert, 1989, p:9).

So when a single spaced church building is to be converted into a conference hall, it will naturally need, divisions, separations, and in some

cases levelings, and the interior architect should be aware of the characteristics of the church and the requirements of the new function.

The next chapter is the case study of a re-functioning project of converting a historic church into a conference center and the information above is given in order to help the design process.

## 5. CASE STUDY

In the past few years, considerable evolution has occurred in the theory of designing the attitude to converting existing ones. The design process in an historic context follows a different path to that for new buildings. It starts with an intensive study of the buildings, including survey, architectural analysis of the design and tests of the structure. From this, acceptable solutions to the essential needs of the building are developed, repairs, circulation, servicing, sub-division, etc.

Conservation of the character of the buildings can be achieved, by adherence to certain priority aims, as far as possible within functional and financial constraints.

5.1. Brief knowledge on geographical and historical condition of the "church at Burdur Zafer district"

Before giving information about the church itself, a brief history of the city will be given. With its roots reaching Neolithic era, Burdur has faced various settlements. Many sources prove Burdur's rich historical past. After the falling of the Roman Empire in 395 Pisidia was taken by Byzantine Empire and was called POLIDORION. During the principalities it was a part of the Hamid dynasty, during Ottoman Empire. Burdur geographically falls to the south-western part of Turkey, being neighbors to Antalya, Denizli, Afyon and Isparta. Burdur lays on a 683 kilometer square land. Including the lake which has the same name with the city. Burdur has 13 lakes at winter time.

# 5.2. Description of the church in Burdur Zafer District

By visiting Burdur several times, information was gathered from the Municipality, deed office, field surveys and aged citizens. Below information on the previous owners and the previous functions of the church are given.

#### 5.2.1. Previous owners of the church

Known as the "Kavakli Kilise" by the citizens of Burdur the Church at Zafer district stands on 1607 metersquare land (figure 5.1.). The earliest deed records with Latin alphabet belongs to the date 26-July-1931, where the church was called "Kavakli Rum Kilisasi". From the deed records it is understood that there was a fountain and housings of refugees at the south of the church and at the other three directions there were roads located. The plan of the part of the city were the church is located is enclosed in figure 5.2. and figure 5.3.

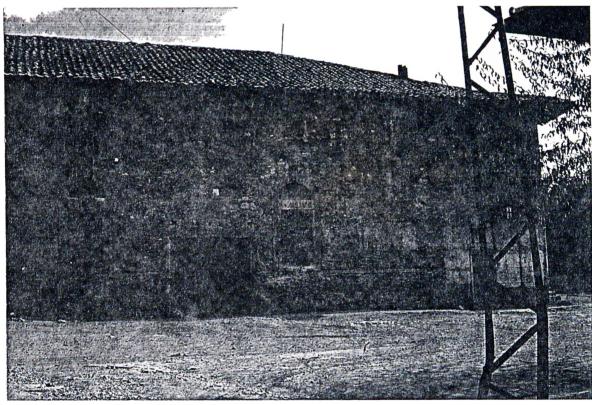


Figure 5.1. Kavakli Church

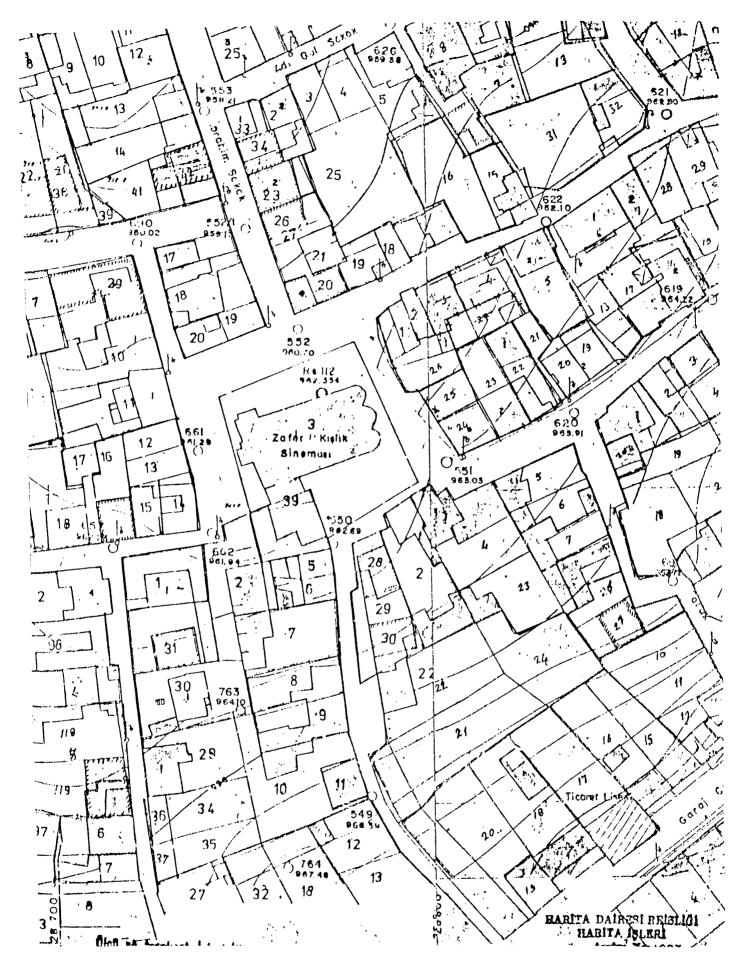


Figure 5.2. Map of the church at Burdur



Figure 5.3. Map of the church at Burdur

At that date "Burdur Türk Ocağı" owned the church but sold it to "Türk Cumhuriyeti Halk Firkasi" for 200 TL. In 29-July-1938, the building was sold to a citizen of Burdur, Mehmet Şanli, for 1252 TL. In 15-July-1948 it was sold to Kutsal family for 4900 TL. In 8-September-1966 the Savran family bought the church for 35000 TL. Today the same family still owns the church. Depending on the information gathered from the records 1\$ equaled 1.28 TL in the year 1938.

#### 5.2.2. Previous functions of the church

The church building in Zafer district, was used for several different purposes. After completing its service as a church, the structure was used to store wheat. In 1960's it functioned as a cinema until 1985 and now has been rented to function as a storage building for ceramics and bathroom equipment. Today the church is surrounded by single or two storey high houses and apartments.

# 5.3. The architectural features of the church

The building is a typical basilical plan type church, with three naves and three apses with three vaults and three half domes over them. The system of construction is timber with mud-brick infill over supposedly stone foundations. The apses of the two side naves are similar in size and form. Semicircular in plan, the central apse is bigger in diameter but they all lie on the same horizontal axis. The entrance to the church is from the two longer sides of the facades. In the past the main entrance should have been on the axis of the main apse, as it is still understandable from the traces on the wall. The main entrance at the opposite side of the apses has been enclosed during the "cinema activity".

The inner walls and columns have been painted but during the investigations in the building it is found out that they were originally timber columns heavily plastered over. The openings to the exterior were framed with a band of stone and the interior presents interesting gilded decorations on the capitals of the columns, yet few is known about the decoration on the superstructure over the ceiling, which is under a heavy patina of sooth (figure 5.4). There are suspicions about the decorations of the cross vault enclosing the central nave. There was a textile hanging for the aquistical reasons while functioning as a cinema, below the vaults but the surveying team was able to tear it off, in order to examine the and measure the superstructure.



Figure 5.4. The gilded decorations on the columns of Kavakli church

In the appendix, the interior design project of converting Kavakli church into a conference hall is enclosed and a chart which compares space characteristics of non-residential conference halls to Kavakli church with considering new design proposals is placed at the conclusion part of the thesis.

#### 5.3.1. Integrating modern necessities

Preserving and maintaining old structures engenders complications unforeseen by the original builders. Restored landmarks are expected to provide not only authenticity but cost effectiveness, energy efficiency, and modern conveniences, as well. The unobtrusive installation of modern plumbing, electrical systems, lighting, communications, climatization, and security systems poses a far greater challenge to the interior architect and preservationist than just a literal restoration or rehabilitation.

Contemporary design elements have been added to many adapted buildings. They have been accepted with enjoyment and success by some of the most history-conscious communities. In many adaptations the designer had created exciting products by harmoniously mixing new methods and materials with the original forms (Cavaglieri, 1974, p:12).

While designing the interior of the church in Burdur, the main body and the characteristic features of the historic structure were left as the original way they were built. The additions were made without disturbing the already existing structure. With respect to the activity of assigning a new function to an old building, the building was designed, being aware that this church can house many other re-functioning projects.

Today, every new construction takes into considerations the necessary factors which satisfy human comfort and security. Factors to be realized are listed below:

Introducing modern climatization systems must be carefully considered. Many old buildings had climatization systems that were relatively primitive compared to our modern concept of comfort. Most of these systems were incapable of producing consistent, controllable heating or cooling levels. Many early heating systems were extremely unpredictable and hazardous. Fireplaces and stoves cannot always be successfully combined with central air heating and cooling systems. Particular caution must be exercised when installing new energy-saving insulation and double glazing because both radically diminish the amount of fresh air that flows into a building.

Increasingly, private and institutional owners are concerned not only with the preservation of the exterior but also with distinct interior spaces. Frequently, when old buildings are being restored for extended or similar uses, it is possible to limit the initial investment by upgrading rather than totally replacing the existing mechanical systems. This approach is much less disruptive to the traditional interior because no new mechanical appurtenances such as ceiling diffuser grilles or convector units are needed.

However, the upgrade approach is not always feasible. Many adaptive use solutions require such dramatic rearrangements of the interior spaces that the upgrading of the old mechanical systems requires too many extensive changes to be economical. When enormous single spaces, such as churches and theaters, are portioned into smaller units, the existing heating, ventilating, and cooling systems are not salvageable (Shopsin, 1986, p:178).

Lighting is another very important aspect while re-functioning a building. Most of us have been so accustomed to modern lighting that it is difficult to conceive of the dimness of traditional interiors. The traditional lighting systems of most old buildings are totally inadequate by modern standards and expectations. The successful resolution of these shortcomings is a matter of finding a balance between the current architectural character of its interior spaces. Even in museum restorations, where functional requirements are not as rigorous, it is difficult to adequately see the furnishing and decorative objects without some accent lighting to supplement the dim output of the original fixtures.

Until twentieth century, night illumination of major buildings was virtually impossible. Before electric lighting, clusters of lanterns illuminated by burning oil, candles, or gas were all that was available. None of these earlier forms of illumination could be easily directed as beams or shafts of light. At the turn of the century, the first form of modern exterior night lighting was the use of rows of small bare bulbs to light up theaters. Now that landmark buildings of the early twentieth century are being restored for extended and adaptive use, it is important to become familiar with the evolution of contemporary lighting.

The church in Burdur will function as a conference center and this new activity will need new lighting systems to be installed to the building. The conference core will be illuminated by a space frame which will be placed over the conference area.

The problems of designing security systems for old buildings vary considerably, depending on the building's construction, layout, and location. Generally, urban masonry structures, which abut each other or share

common party walls, are easier to protect than isolated free-standing buildings where it is more difficult to restrict access.

#### **CHAPTER 6. CONCLUSION**

As it has been stated throughout the thesis, there are countless positive effects of letting cultural heritage survive to present times. Giving new functions to historic buildings in order to prevent them from being demolished seems to be a reasonable idea theoretically and economically. Nevertheless, these historic monuments are not the only ones to benefit from this process, it is also the contemporary society, as owners of the building and most fortunate, the future generations, who are unconsciously taking advantage from the action.

The thesis concentrates on the case study which takes place in the fifth chapter. The previous chapters analyze the interior space characteristics and requirements of the first function of the building which was a church and the new function which is a conference center.

In this specific case study, because the monument previously functioned as a church, the new activity was selected carefully by the municipality and the research team. The new activity had to suit and respect the old function of the structure. The most important aim while working on this interior design project was to design the conference center activity, without disturbing the architectural elements and characteristics of the church. New additions are made, in order to let the conference activity function without any complications. The process of rearranging the interior was so designed that it is not an oppression component to the basic volume breaking it into pieces while, trying to obtain necessary areas for the new activity and its support areas. For example the apsis, were very suiting volumes to be designed as

backstage rooms for conference lecturers or storage rooms for the conference core. Both activities require the apsis to be separated from the aisles with partitions in order to give privacy to the speaker the storage area. As it takes a lot from the architectural character of the interior space, such divisions are omitted on purpose.

The conference activity is different from the function which the building was designed for and therefore new areas had to be created in order to satisfy the requirements of the new function. In the fourth chapter conference centers are examined in detail. The church in Burdur fits in the non-residential conference center category mainly, because it has no accommodation facilities and also the required conference spaces and recreation areas defined in a non-residential conference center fits to the existing structure. In non-residential conference centers there are hardly any recreational facilities and in addition to the main conference core there are limited number of private conference and meeting rooms.

A new proposal of drawings are enclosed in the appendix of the thesis. The necessary functions which had to be placed in the entrance floor such as the foyer, lobby, reception, guestrooms and storage areas are located in or near the nartex area of the church, and, as for this part of the church had been changed a lot and occupied with later additions in the recent years, the idea of designing new divisions in this area was more convenient than disturbing the single volume of the church (figure 6.1.). As it can be observed at the plan of the first floor, meeting rooms which are required in every non-residential conference center, were placed in the first floor which is a new addition to the building in order not to divide the main space into smaller divisions. The already existing second floor of the church is designed to

house the modern audio-visual equipment as well as the lighting systems, which conference centers today can not be thought without.

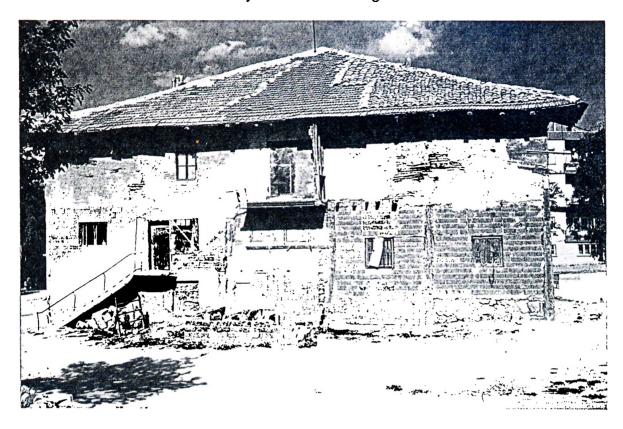


Figure 6.1. The nartex part of the Kavakli church

The church originally has three entrances. They are still kept but the main entrance on the axis of the main nave, is evaluated as the principle approach point.

The existing platform in the main apse of the church is also necessary for the conference activity in order to raise the speaker and therefore is left in its position found during the field survey.

The traces of a round window on the facade of the building helped to suggest the original openings over the main apse to be distinguished by the architect-restorer. Both the one having the traces and its supposed twin is opened depending on the design of the interior. Figure 6.2. shows the

façade of the church at Burdur.

The side aisles are designed to serve the exhibitions which will take place, and the exhibition panels which are portable can both define the conference core by separating the nave from the aisles which will house exhibitions. They are flexible and therefore easily can be moved when ever needed.

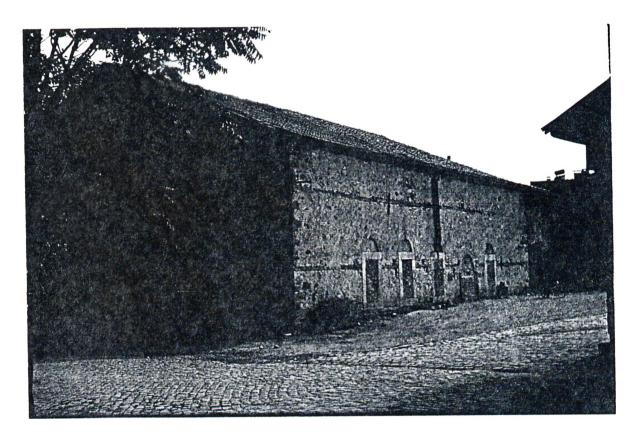


Figure 6.2. The façade of the church at Zafer district, Burdur.

The general lighting of the nave, which will function as the conference core will be constructed on the space frames which will be placed above the nave, and will be operated from the second floor above the nartex.

The necessary functions and space requirements of a non-residential conference center and the characteristics of the Kavakli church in Burdur, in consideration of adapting these factors to this specific study are listed at the table in the following pages.

Table 6.1. COMPARISON OF NON-RESIDENTIAL CONFERENCE HALLS WITH KAVAKLI CHURCH FORM THE ASPECT OF SPACE QUALITIES AND NEW DESIGN CONSIDERATIONS

Non residential Kavakli New design conference halls considerations Church necessary existing proposed spaces spaces spaces Entrance -information nartex part the nartex part -reception of the church is of the church will -cloakroom used for entrance house the below activities -telephone boxes -toilets -information -vertical circulation -reception -cloakroom -telephone boxes -toilets -vertical circulation Storage for storing none a storage room unnecessarv designed in order to keep chairs and equipment, (usually located near the tables which are not being used conference core) located near the nartex area (see appendix A) for speakers to rest a priest house speakers room Speakers room and prepare their was attached to the located near the speeches; usually church in the past, entrance in order located near the not to disturb which no longer conference core exists and the the single volume apsis were used of the church behind an (see appendix A) iconastasis Conference requires a space the priest used to in this case the without columns core preach in the main main nave houses for visual comfort apse and side the conference core apsis, where the for its columnless altar tables were settings located Exhibition the side aisles none none will be used area for exhibitions. with portable panels surrounding the conference core

Private meeting room, VIP seating	at least two meeting rooms or special purpose rooms should take place	does not exist in original structure	for these activities necessary space is constructed in the first floor which will be a later addition (see appendix A)
Audio- visual equipment	audio-visual systems are a must in modern conference centers (see list on page 49)	none	the audio-visual systems are placed in the already existing second floor

Table 6.2. COMPARISON OF NON-RESIDENTIAL CONFERENCE CENTERS WITH KAVAKLI CHURCH FROM THE ASPECT OF PHYSICAL CONDITIONS AND TECHNICAL EQUIPMENT

	Non-residential conference halls	<u>Kavakli</u> <u>kilise</u>	New design considerations
	necessary equipment and materials	Existing situation of physical condition and materials	Proposals for equipment and materials
Floors	non-slippery materials used in the lobby, sound absorbent materials used in conference core	original stone floorings	the lobby will be covered 40x40 granite in order to remove the pieces with ease in case of necessity; conference core should be carpeted for aquistical reasons
	raised platform in the conference core for the speaker	raised platform in the apse part of the church for the priest	the platform will be used in the conference core where speaker is supposed to give lectures

Table 6.2. (con'd)

Walls	hanging rails, easels, or panels used for bulletins; projections on side walls	walls have original decorations without any fixtures	conference core will be divided from other spaces by panels which will also be used as news boards and for exhibitions
Ceiling	projectors, lighting systems, audio-visual equipment are mostly placed in ceiling	all lighting and audio- visual facilities are natural	lighting and audio- visual facilities controlled from the second floor carried by the help of space frames hanged from the ceiling
Lighting	general lighting for the conference core with dimming capacity; and accent lighting for the speaker	natural lighting through side and rose windows	the conference core can be illuminated by a space frame which carries the lights with dimming capacities; being controlled from the audio-visual room. The basic aim for the space frame is to protect the original building
	unwanted lights from the corridors or windows controlled by blinds	shutters to control natural light	easels will separate the central nave from and will control the light coming into the conference core and the windows can be covered with blinds or again with timber shutters
Heating	heating should be controlled to satisfy human comfort at any weather conditions with mechanical means	natural heating (no heating systems)	floor heating used for winter conditions controlled from the storage room
Ventilation	with mechanical means	natural ventilation	no air-conditioning systems are used

Principally, as this is a historic building, all the interventions necessary for the new function are based on entirely new, contemporary techniques and materials. The new additions are attached away from the main body of the building as much as possible so as to give a chance for a further refunctioning. This will help to keep the original features of the building in the position it is found.

The process of re-functioning a building for a contemporary use is a serious activity and it is necessary for the architect-restorer to work with interior designer just as an interior designer should work in coordination with the architect-restorer. Both professions should work together for a successful adaptation of a new function which the building never accompanied before.

Although the process usually takes less time and less money to complete when compared to constructing new buildings, as it is indicated in the second chapter, it requires more professional effort in adapting the new activity, as the building was designed to satisfy another function. When the cultural, social and economical benefits are taken into consideration, mostly every project is worth spending the time, energy and effort in the conversion process.

Furthermore, even though it may not be an economical benefit today, to save a historic building is a benefit that can not be evaluated with financial means.

In conclusion, every city in the world will obviously face new constructions for contemporary functions housing modern necessities and obviously they will one day become historical monuments of future days. Re-functioning is a never ending activity which will continue to take place in future, and that

came a long way from history unconsciously serving to different functions with the natural requirements of the societies of the past.

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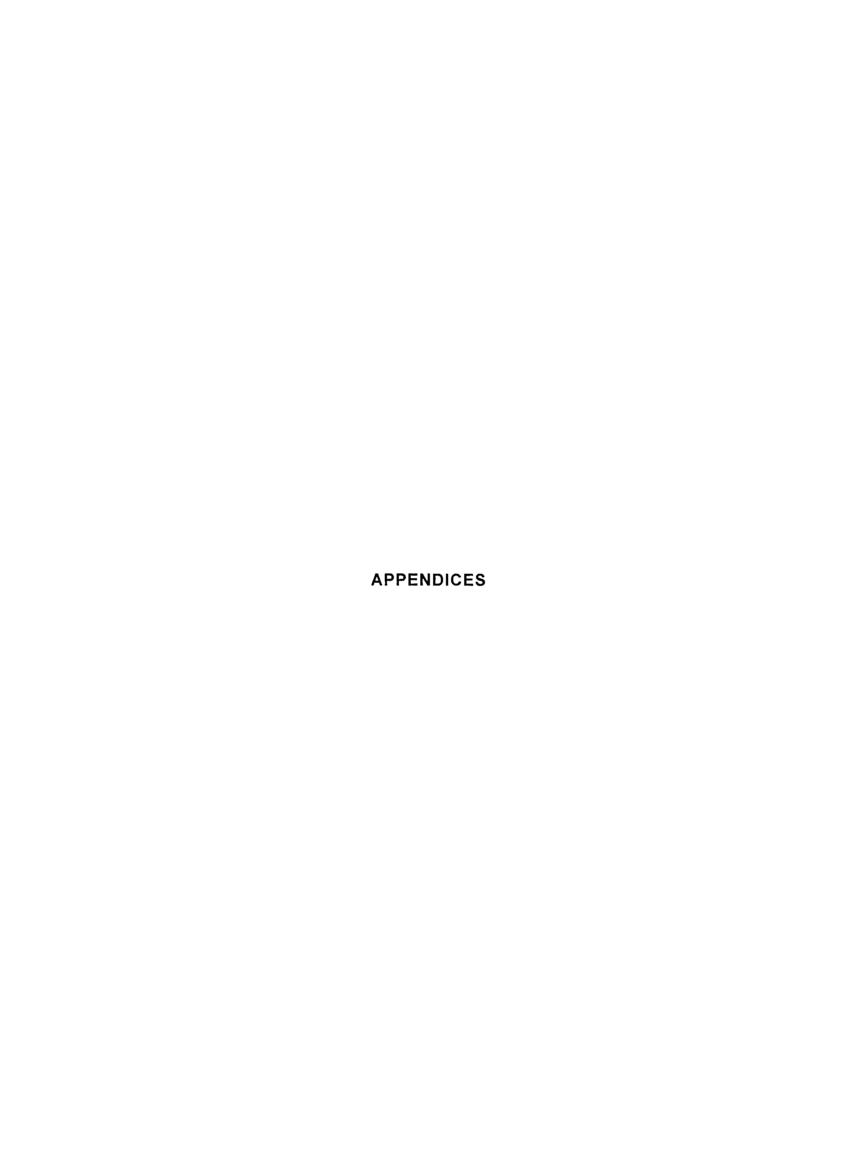
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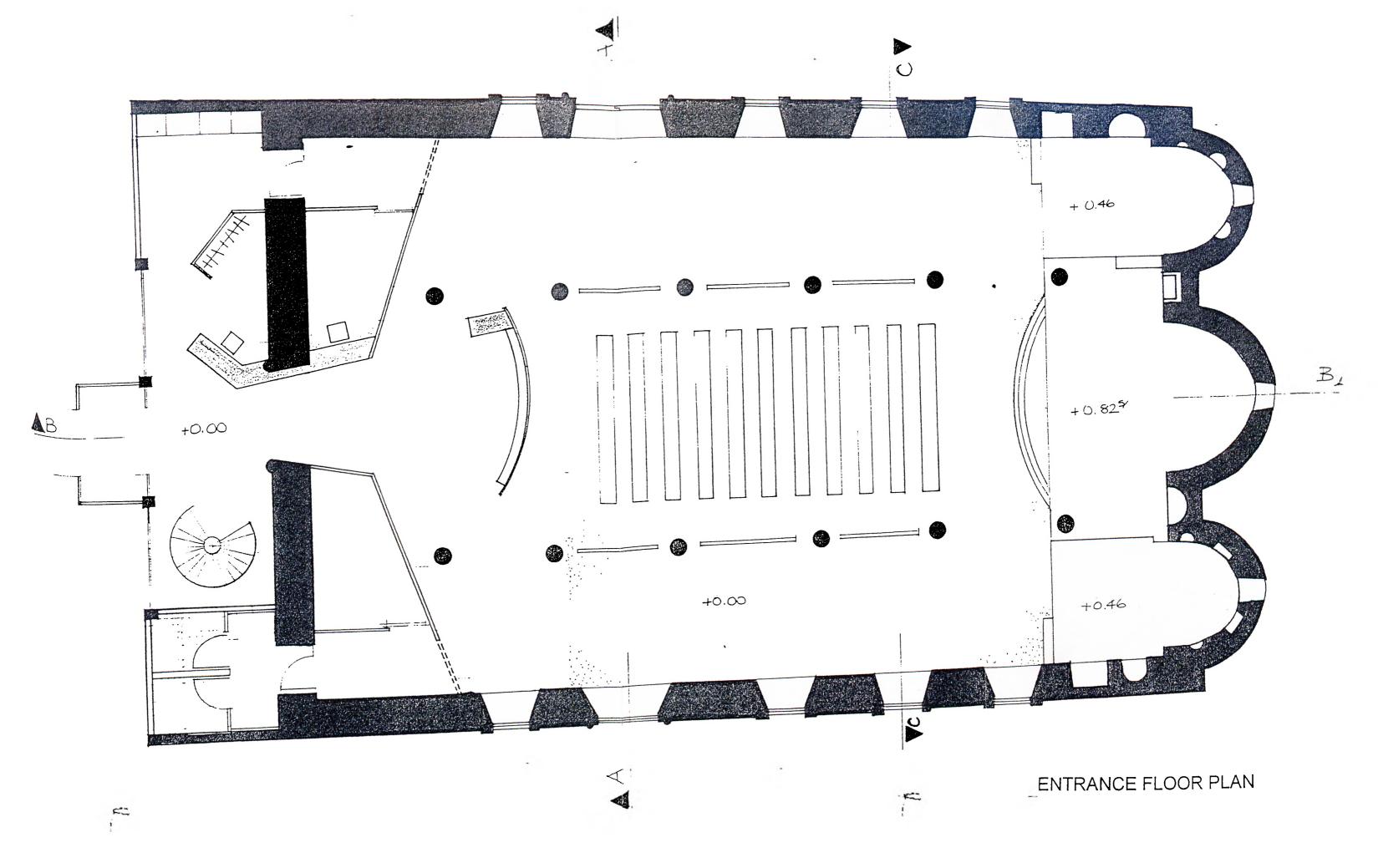
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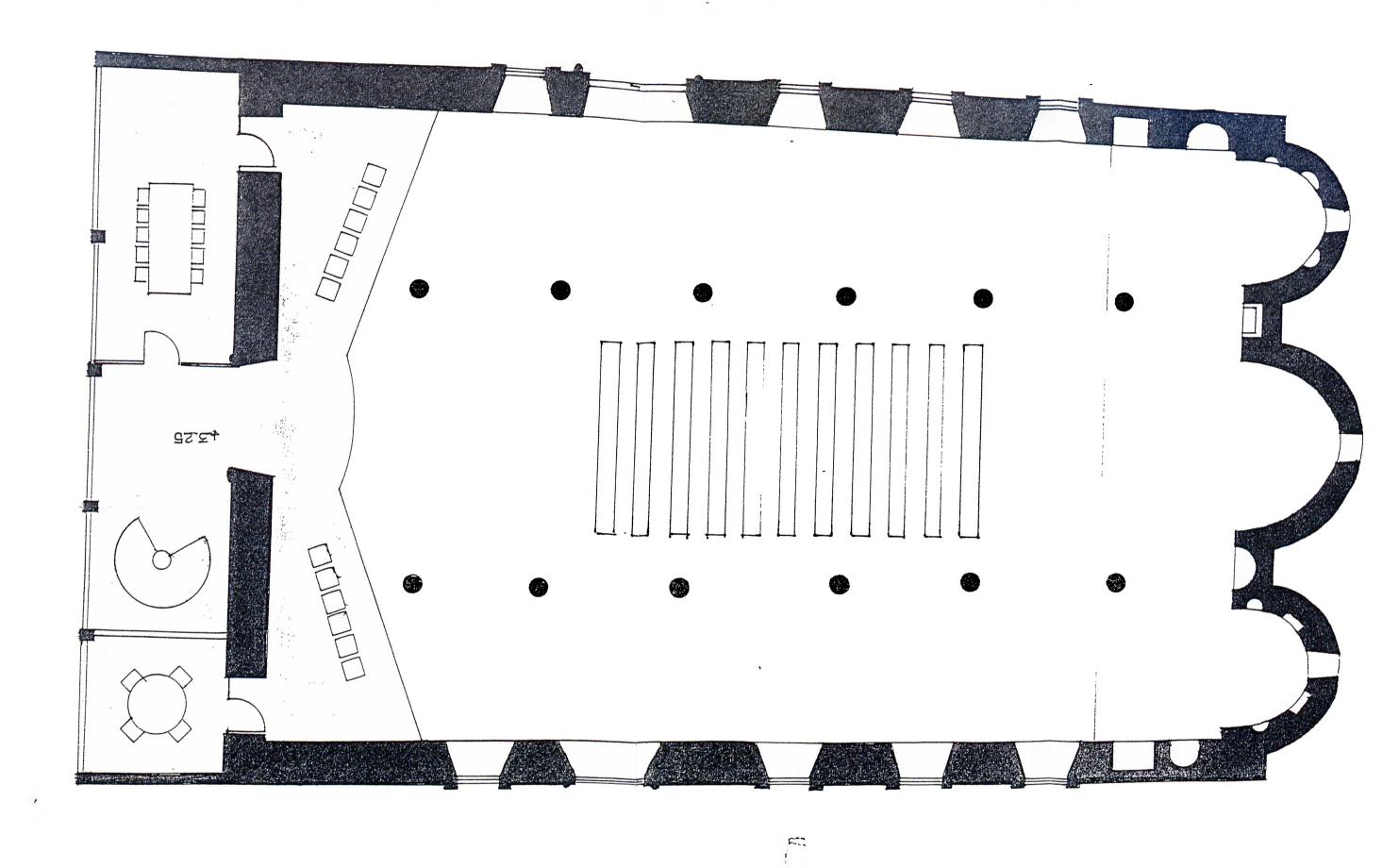
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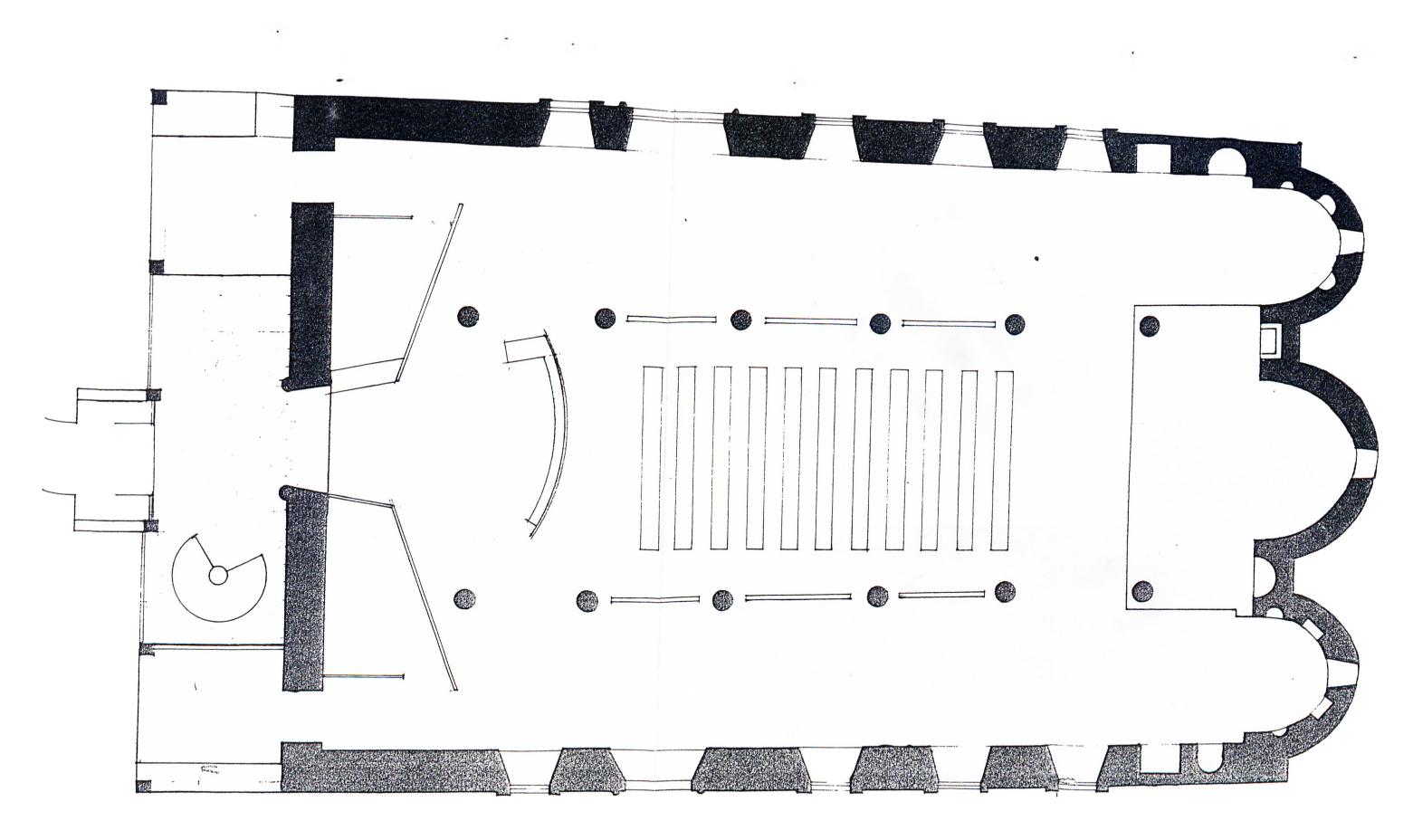
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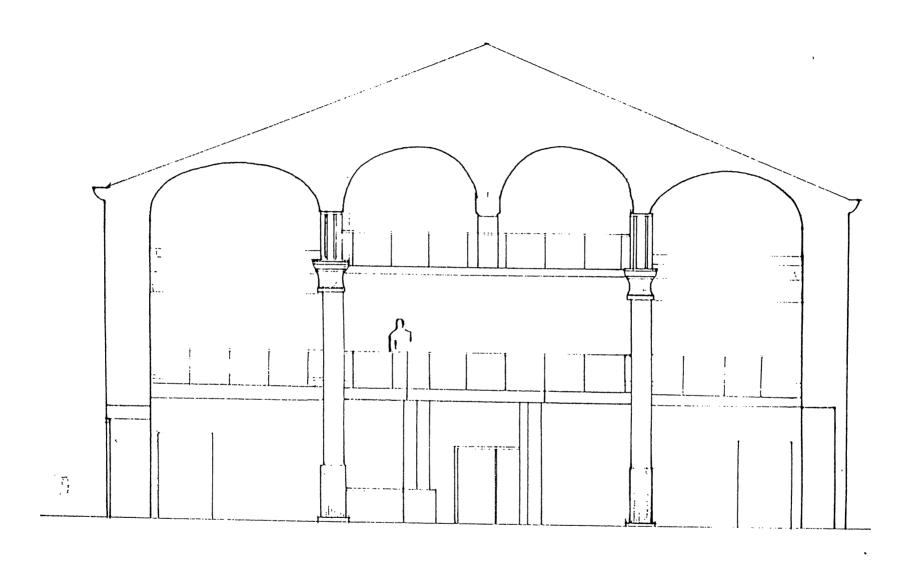




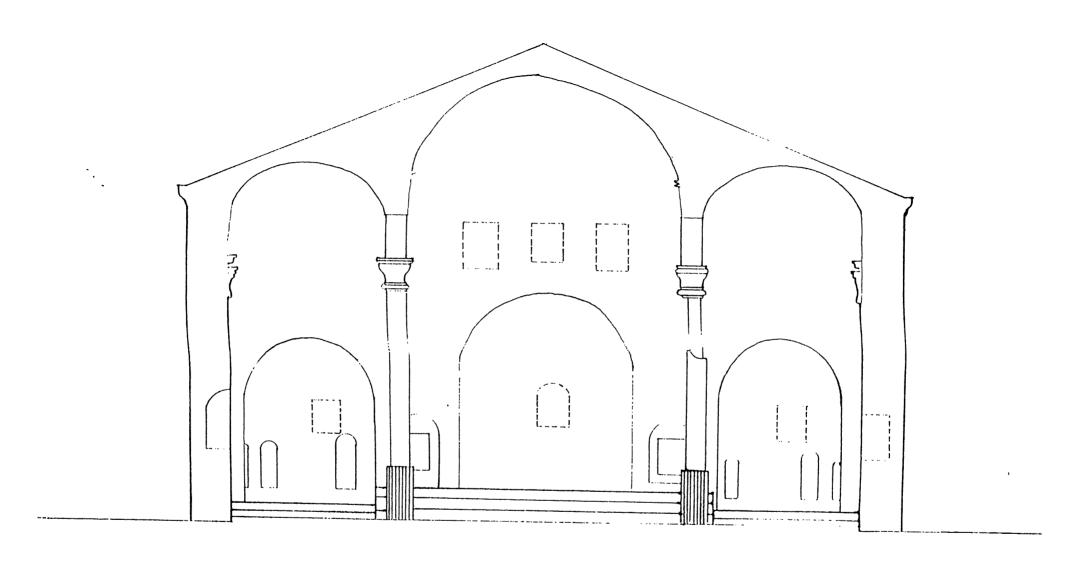
FIRST FLOOR PLAN



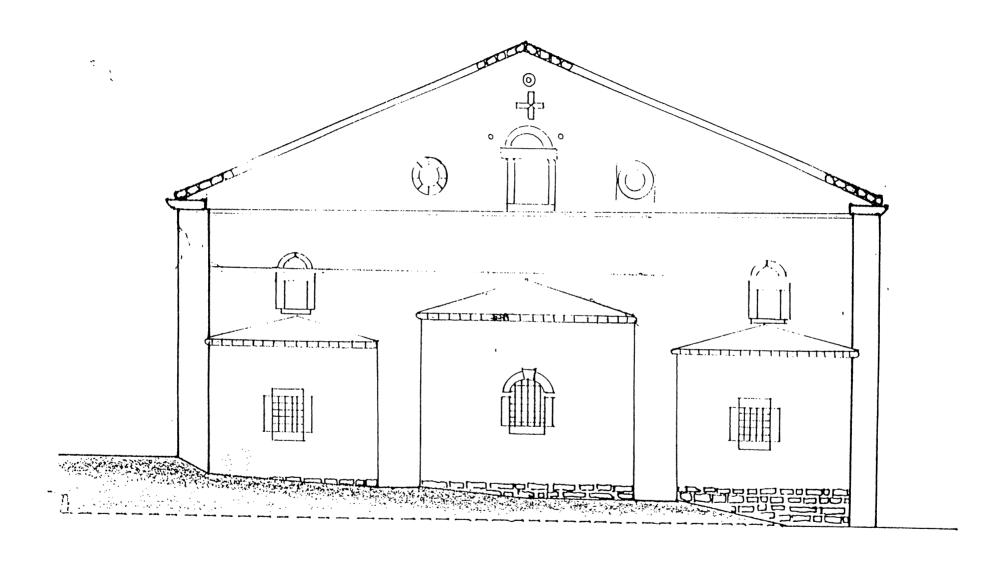


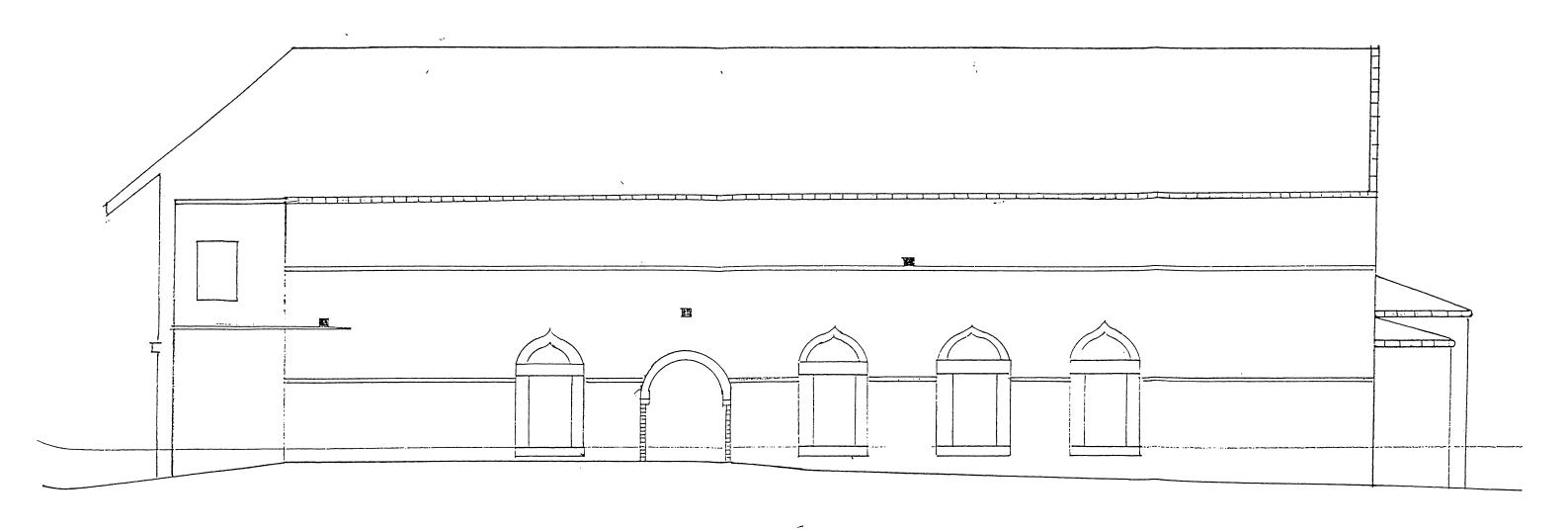


AA SECTION

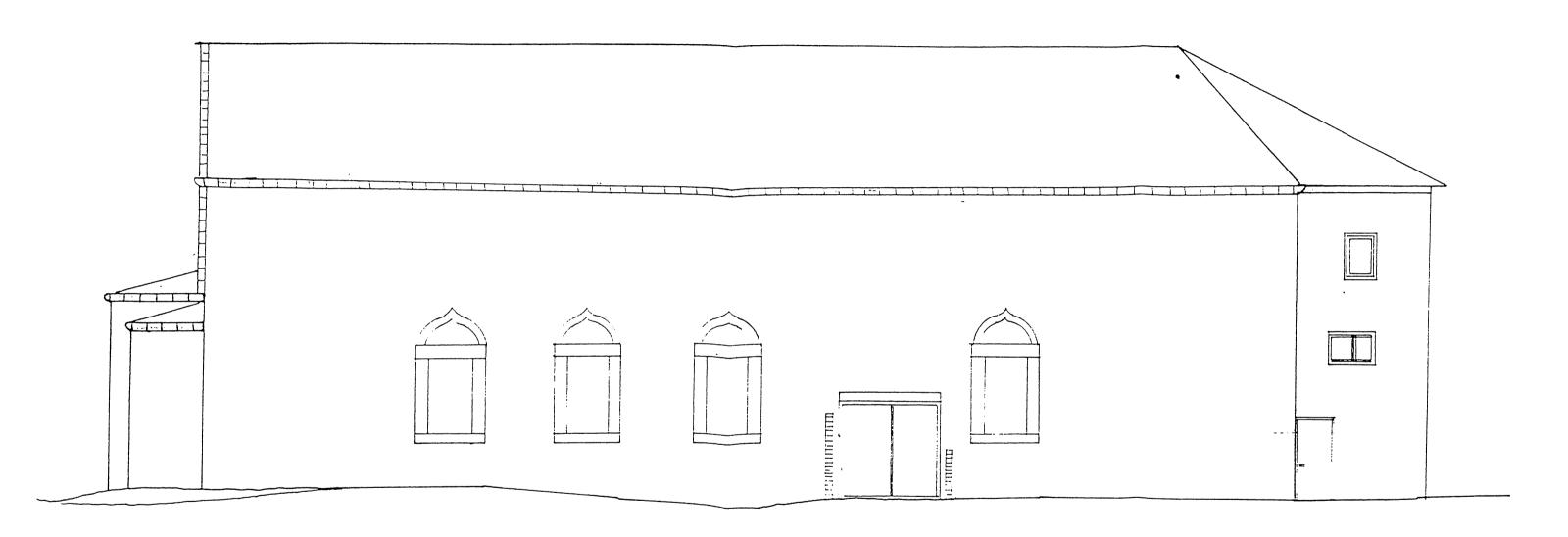


CC SECTION





SOUTH EAST ELEVATION



NORTH WEST ELEVATION

# APPENDIX B

## DESIGN STANDARDS -- CONFERENCE CENTER ENTRY LOBBY

GENERAL	Recommended Standards		Minimum Stand	iards
Occupancies and Floor Area	As per program with allowance occupancies and traffic loads		As per progra	am
Celling Height	10' - 20' Can include low (7'- 6" to 8') s	offit at entrance	10' - 12' in sn	naller centers
Special Plan Considerations	Centralized information/registr     Double-door air lock vestibule     climates     Ample, clear signage to identif     room locations and event not     crucial	in hot or cold y meeting	As per Recor	nmended Standards
FINISHES	Cost Categories A	В		С
Floors  WARNING: Smooth, hard surface materials sometimes used at entrancessuch as terrazzo, marble, smooth tile, or polished travertine are safety hazards even those treated to be non-slip are a problem when wet and when in contact with certain shoe sole materials	Recessed floor mat for rainy/ snowy climates at vestibule Non-slip rubber or vinyl tile at entry vestibule Nylon or other synthetic fabric carpet near entry should be rated for heavy wear, stain resistant and reasonably dark tone, glued to floor Carpet may be a different, complementary color an fabric at other spaces to allow easier replacement of the more heavily trafficked entry floor area Avoid light-tone reflective floor surfaces	vestibule Synthetic fab for heavy w glued to floo Complementa medium wea adjacent are	ary heavy to ar carpet at eas g considerations	Non-slip rubber or vinyl at entry vestibule Synthetic fabric carpet near entry, glued Vinyl or asphalt tile
Fixtures	<ul> <li>Public phones</li> <li>Handicap access allowing for handicap and elderly</li> <li>Lighted fire exit signs</li> <li>Displays, bulletin board</li> </ul>	Fixtures as pe Category A a	er Cost and/or program	Fixtures as per Cost Category A and/or program
_ Walls & Substructure	<ul> <li>Full-height store-front entry         with automatic door opener</li> <li>Interior wall finish typically         plaster or gypsum board         with heavy weight vinyl         or fabric</li> <li>Exit wall fire ratings as per         code</li> </ul>	Foyer and exit ratings as pe Gypsum board weight vinyl d Plaster with so treatment	er code d with heavy or fabric	Fire ratings as per code Gypsum board, painted
_ Ceiling	Plaster Baffle, metal, wood or other decorative ceiling Gypsum board with acoustic treatment Suspended decorative acoustic tile Fire resistive treated wood	Suspended de tic tile Gypsum board	ecorative acous-	Suspended acoustic tile, exposed grid Gypsum board

# DESIGN STANDARDS -- CONFERENCE CENTER ENTRY

ORS & WINDOWS	Recommended	Minimum
.Doors	<ul> <li>Automatic doors as needed for heavy traffic and for most convenient handicap access</li> <li>Heavy-duty, glazed public entry doors with quiet operating hardware and automatic closers</li> <li>Double door air-lock vestibule to control indoor-outdoor temperature differentiations and outside noise</li> </ul>	Glazed public entry doors with quiet operating hardware and automatic closers
Frames	14 gauge steel or heavy-duty aluminum store front detailing	16 gauge steel or as per store front manufacturer
√ Hardware	Quiet, concealed automatic closers	
√Related Fixtures	<ul> <li>Lighted exit signs at exit doors as per code</li> <li>Controlled locking with security alarm system</li> <li>Side panel glazing or safety vision panels at non-glazed doors</li> </ul>	
Windows		No minimum requirements but views to the exterior are very desirable t Safety barriers at full-height glazing as per Recommended
XTURES/EQUIPMEN	T Recommended	Minimum
Special furnishings	Information/registration counter Bulletin and event announcement boards Display and exhibit cabinets Event notice displays Ample signage and location map displays	As per program and Recommended standards
UMBING	Recommended	Minimum
Fixtures	Drinking fountain near entry and/or near restrooms Fire sprinklers as required by code Fire hose cabinets as required by code	As per Recommended standards

## DESIGN STANDARDS -- CONFERENCE CENTER ENTRY

HVAC	Recommended	Minimum
Occupancies	As per program allowing for large variations in traffic	As per program
Ventilation	<ul> <li>20 - 30 cfm outdoor air per occupant</li> <li>Air lock vestibule to preserve air temperatures and buffer air pressure changes as people enter and leave the building</li> </ul>	20 cfm outdoor air per occupant
HVAC System & Controls	<ul> <li>As per primary adjacent public spaces</li> <li>Localized heating may be provided in waiting area of vestibule</li> </ul>	As per main public areas
	•.	
ELECTRICAL POWER	Recommended	Minimum
Power Outlets	Outlets at information/registration desk     Wall clock outlet     Outlets as required for janitorial service     Lighted fire exit signs at exit doors     Battery powered emergency lights	Outlets at information desk     Outlets as required for janitorial service     Lighted fire exit signs at exit doors
-IGHTING	Recommended	Minimum
Lamps	Overall incandescent and/or fluorescent ceiling fixtures    Downlights or task lights at information/registration desk and other focal points    Spotlights and wall wash lights for displays and artwork	Fluorescent ceiling lights Down lights or task lights at information/ registration desk and other focal points
Switching	Central control, dimmers, and timers near information/registration desk	Standard room switch controls near entry
COMMUNICATIONS	Recommended	Minimum
	PA system fire/security alarms Generous number of public phones	Alarms as required by code Public phones

## DESIGN STANDARDS -- CONFERENCE CENTER MEETING ROOMS

GENERAL	Recommended Standards	Minimum Stand	dards
Occupancies & Floor Areas	25 s.f. per person for up to 8 20 s.f. per person for 8 to 10 18 s.f. per person for 20 to 40	people	am
Ceiling Height	10' to 12' depending on room	proportions 10'	
Plan features	Maximum provision for confer sound control and minimal a and visual distractions	rence room acoustic, HVAC,	
FINISHES	Cost Categories A	В	С ,
Floors & Sub- structure	Sound isolated substructure Carpet rated for heavy wear, glued	Sound isolated substructure Carpet for medium to heavy wear, glued	Carpet, medium, glued
Wainscot	Wood paneling at executive conference rooms	Partial wood paneling     Plaster     Heavy weight vinyl wall cover	If no wainscot, provide protective chair rail
Counters & Bullt-in Furnishings	Coffee service counter alcove plastic laminate, HPDL grade Built-in projector cabinet	Plastic laminate utility counter	
Walls & Substructure	1-hour fire rating or more,	Fire ratings as per code     Gypsum board with fabric or     vinyl	Fire ratings as per code Gypsum board with fabric or vinyl
Celling & Sub- structure	Integral ceiling, plaster or gypsum board, with integrated lighting Sound isolated substructure Partial hard surface sound reflective areas at ceiling and walls	<ul> <li>Suspended acoustic tile with integrated lighting</li> <li>Suspended gypsum board ceiling with acoustic treatment</li> </ul>	<ul> <li>Suspended acoustic tile,</li> <li>exposed grid</li> <li>Gypsum board with acoustic treatment</li> </ul>
Acoustics	<ul> <li>Provide for speech privacy in private conference meeting rooms</li> <li>NC 30, STC 60</li> <li>Doors to conference rooms gasketed at all edges</li> <li>Sound reflecting surfaces at speaker's area</li> </ul>	NC 30, STC 40 Other provisions as per Cost Category A	All provisions as much as possible as per Cost Category B

## DESIGN STANDARDS -- CONFERENCE CENTER MEETING ROOMS

DOORS & WINDOWS	Recommended	Minimum
Doors CAUTION: No sound transfer allowable from or to other rooms or exterior corridor	Steel doors 18 to 16 gauge with sound proofing gaskets at all edges Fire-rated assembly 1-3/4" solid-core with sound proofing gaskets	Steel doors 18 gauge 1-3/4" solid core doors are minimum for access to peripheral spaces Fire-rated assembly
Frames	16 gauge stee     14 gauge steel at fire exit doors and doors to corridor     Corner guards for protection from service	16 gauge steel or extra-sturdy wood jambs and frames for smaller rooms
Hardware	carts, moving furniture in and out, etc.  Heavy-duty latchsets Ouiet, concealed automatic closers, sound gasketing, and controlled locking systems Panic bars for meeting rooms for more than ten people or as per code Kickplates	Heavy-duty latchsets Automatic closers Panic bars as per code
Windows	Windows are generally not desired for conference rooms but, if used, provide: Double-pane for noise insulation from exterior Blinds and black out screens	As per Recommended
FIXTURES/EQUIPMENT	Recommended	Minimum
Special furnishings	Projector cabinet and/or counter A/V equipment storage cabinet	
Audio-Visual/Meeting Equipment	Any items built-in must be unobtrusive until required for use in meetings Projection screen Tack board White board	Ready access to projection screens, chalk boards, etc. from near-by storage
PLUMBING	Recommended	Minimum
_ Fixtures	Restrooms accessible Drinking fountains accessible Fire sprinklers as required by code	As per program

## DESIGN STANDARDS -- CONFERENCE CENTER MEETING ROOMS

VAC	Recommended	Minimum
Occupancies	As per program, or if not designated: 500 sq. ft. per 15 people	As per program
Ventillation	35 - 50 cfm outdoor air per occupant	30 cfm outdoor air per occupant
HVAC System & Controls	Temperature controlled by individual thermostat Central HVAC system	If climate is zone controlled, temperatures 68 to 72F Central system with individual room or zone control Warm & cool forced air (zoned) Package systems not recommended Even at minimum construction cost, provide generous fresh air supply
LECTRICAL POWER	Recommended	Minimum
Power Outlets	<ul> <li>Outlets for audio visual equipment</li> <li>Floor and wall outlets for transcription, recording and playback equipment</li> <li>Floor and wall outlets for computer and video playback equipment</li> <li>Outlets for axiliary exhibit equipment</li> <li>Podium outlet and sound amplification</li> </ul>	As per Recommended or as per program
IGHTING	Recommended	Minimum
_ Lamps	<ul> <li>Variable incandescent ceiling lighting</li> <li>Incandescent down lights for exhibits and/or note taking during A/V presentations</li> <li>Ambient fluorescent lighting, indirect preferred</li> <li>Wall wash lighting at tackboard wall</li> </ul>	Standard fluorescent fixtures
Switching	Dimmer controls for incandescent lights Switch controls at entry and at rear wall	Standard room switch controls
COMMUNICATIONS	Recommended	Minimum
Communications	<ul> <li>Microphone jacks and ceiling speakers</li> <li>Video and computer</li> <li>House phone and intercom</li> <li>Fire and smoke alarms</li> </ul>	As per Recommended or as per program