A Museum for Film and Photography
and its Place in the City

by
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Thank you for every way of support that helped me finish this thesis to

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Even though downtown areas are located in the heart of the city, they are often lifeless and empty. They have been developed into office areas with no life in the evenings. Closed, blank walls on ground floor and the possibility to drive right into the building with a car deserted the streets.

Right now efforts are made to revitalize these areas. With my project I develop buildings for one block in Downtown Washington DC. I will address the following issues:

How can a museum, film theaters, and a building with art-related functions and housing be combined on one site?

Is it possible to create a pedestrian-friendly environment on ground level even though the previous mentioned functions do not need openings or the connection to the outside?

How can inside and outside work together without disturbing each other?

Can daylight be used in the museum and the film theaters although it is not needed for the functions themselves?

I will try to set an example for a different approach of building in Downtown.
The advent of the automobile changed the face of town and city planning. In the pre-automobile era the most common methods of transportation were walking or using horse-drawn carriages. Only for long distances trains were used. As a result residential buildings often contained stores and offices on the first floor, thus providing easy access to people as they went about their daily business. Streets were shared by people and slower-moving vehicles alike.

A major change occurred after World War II. Automobiles were now being produced on a much larger scale than ever before and were becoming more affordable to the working classes. In the United States the car became the symbol of freedom. No longer did Americans have to live in the cities in order to be close to shops and workplaces. They could move out where land was cheaper and where they could afford larger properties.

Stores sprang up all along the routes between the city and its new suburban developments, oriented towards the increased mobility of the citizens. Drive-through restaurants and banks offered convenience and increased efficiency. The competition from huge shopping malls with long opening hours made it impossible for many small neighborhood businesses to survive, and the large sizes of new developments also made it impossible to reach shops without a car.

The increasing numbers of cars caused problems in existing cities. New roads were required to manage the growing traffic. The policy of the sixties and seventies was aimed basically at avoiding total traffic chaos. To achieve the highest possible flow of automobiles, parking was forbidden along main roads, and wide sidewalks were often reduced. These actions encouraged car-drivers to drive faster, and pedestrians felt less comfortable walking next to fast-moving traffic without the barrier created by parked cars. Traffic was also allowed to make right-turns on a red light, which is normally the time pedestrians and bikers cross the road. City planners made the creative roadways their first priority. For years it was a bigger concern to handle the increase in traffic than to study its effects on the environment and the social network of the city.

Washington DC was planned in 1790 as a baroque city by Major Pierre Charles L'Enfant. Planned as the capital of America, the scale was chosen to demonstrate the power and strength of the nation rather than to accommodate daily human activities. The Mall, along with the Capitol and the White House, is the heart of the city. From there tree-lined avenues, which form visual axes, extend through the city. Large plazas are located where these avenues meet. Between these major axes, a gridiron matrix of streets forms city blocks.

### History

**The Pedestrian in the City**

map: Washington DC: The Mall and Downtown

close-up see map page 3

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Downtown Washington, which is located North of the Mall between the White House and Union Station, faces many problems. The six- to eight-lane avenues divide the inner city into sections, because they are difficult to cross. In addition whole blocks have closed, blank walls at ground level, which makes walking unpleasant and boring. Although 20 million tourists visit the Mall every year, few of them cross over Pennsylvania Avenue to the downtown Washington area. Successful developments like the pedestrian zones behind the Old Post Office or the cafe and shopping area around the Navy Memorial, are cut off from expansion by Pennsylvania Avenue.

Other streets have been closed to cars and remodelled to create pedestrian zones, but no further efforts were made to revitalize them by offering cafes, restaurants, galleries or sculptures that invite pedestrians to stay. The pedestrian zones on E Street between 7th and 9th Streets and the one in front of the Martin Luther King Library are nicely arranged, but provide no such attractions. They are always empty. Just two blocks away from the F Street pedestrian zone, shops and galleries occupy the first floor of all buildings, but shoppers must walk along the busy F Street traffic to enter this section. Pedestrians may even feel unsafe.

Despite several parks and plazas in the downtown area, there are little or no cafes or benches for tired walkers.
Residential housing is basically non-existent here. The few museums in the area are located within reach of public transportation, but access to metro or buses after dark is considered unsafe by many pedestrians.

In spite of these drawbacks, the downtown area has recently started to become more attractive. There is an effort to locate restaurants and night life in the area. Some old theaters exist and new restaurants have opened during the past years. Furthermore, a new sports arena, a larger convention center, and big stores that have long opening hours, are planned in the near future. Unfortunately, due to the unsafe conditions of the area, it is not recommended to walk between theaters and restaurants. More evening activities might bring more safety in numbers, as we have seen on the main streets of Georgetown which are always filled with people in the evenings.

Another problem deals with downtown housing. Many artists live and have their studios in some of the old existing buildings. The area around 7th and 8th Streets has been developed into an arts district. However, these artists might vanish once the old buildings make room for new developments. By proposing housing and galleries for some new building blocks, the city is trying to keep these inhabitants there and bring additional ones into the area. This should encourage developers to make space on first floors of buildings for public usage. The lobbies of the office buildings could as well be located on the second floor to make way for stores and restaurants on the first. Existing buildings that demonstrate this successfully are the Shanghai Bank in Hong Kong by Norman Foster and the Citicorps Building in New York.

In order to further improve the situation for pedestrians in the downtown areas of the city, the existing 8-lane streets could be converted into boulevards with three lanes for driving, two for parking and a row of trees in the middle. This would make them safer to cross, more attractive, and would also eliminate the isolation of different sections of downtown Washington. But the existing traffic does not allow for any reduction of street width at present.

It is easier to push positive development in an area where the land prices are high and the location is one of the best in the US. We need to examine why cars are so often used and from where they are coming. Although the public transport system functions well within the downtown area, the suburbs are served by few bus lines that connect subway stops to housing areas. Because the density of houses is often low, the walk from the house to the bus stop is still long. Infrequent schedules also cause additional waiting time. Since a ride with the car is faster and more convenient, there is no incentive to use public transportation. Bus companies in turn do not want to provide more frequent connections as customers are

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History

1. Column:
   - Navy Memorial
   - Lunch Break at Navy Mem.
   - Concerts at Navy Mem.
2. Column:
   - Pennsylvania Avenue
   - Old Post Office
   - Pedestrian Zone
   - Ford Theater.
   - 10th / E Street
A better understanding of the damage caused by car pollution on our environment - which affects everybody directly - might raise the acceptance of small inconveniences without a car. Buildings containing stores, housing and offices would bring more life during the day and night. People who could then live in the area might even reduce their way from home to work enough to avoid the use of cars. The public transportation in the Washington area is also good enough to transport inhabitants from one part of town to another.

In the suburbs, light industries, offices and shops that do not cause any pollution or noise can be integrated into the housing areas. This would not only reduce the traffic in and out of the city, but would also bring jobs and stores within walking or biking distance. The bike could be rediscovered as a means of transportation rather than only a tool for recreation. The resistance against a combination of commercial and living areas in the suburbs has its reason in the fact that nobody knows how they would work. There are no existing examples, and people are afraid of trying new approaches.

**History**

1. Column:  
   - E Street Shopping Area  
   - SW Corner of the Site  
   - FBI Building on Penn. Ave.

2. Column:  
   - Portrait Gallery as the end of the 8th Street axis  
   - Archives from Portrait Gal.  
   - NE Corner of the Site

3. Column:  
   - Tariff Commission Building  
   - F Street Pedestrian Zone  
   - F Street North of the Site
The site for my project is located in downtown Washington between E / F and 8th / 9th Streets. It is four blocks north of the Mall, but separated from it by Pennsylvania Avenue.

Most of the neighborhood blocks are office buildings. Along F Street they feature retail stores on the ground floor, and new restaurants, theaters and clubs are located along E Street. 8th and 9th Streets have various artists studios and galleries. To the North is the National Portrait Gallery, a part of the Smithsonian Institution. 8th Street forms an axis between the Portrait Gallery to the North and the National Archives to the South. Both have Renaissance temple fronts which connect them visually.

With the design of my buildings I tried to address the urban issues of the area. Although I primarily intended to build a Museum for Film and Photography, I saw the need for other functions in the neighborhood. The Museum would be closed in the evening, leaving the street empty around the block. Therefore, I decided to give most of the ground level to other functions.

The buildings are placed along the perimeter of the block, leaving a plaza in the middle that is accessible from all sides of the block, with a large opening towards the existing pedestrian zone. The plaza forms an enclosed space to rest, have lunch, watch the artists work or wait for the movies. It is shielded from the street. No cars can access it.
and all deliveries are made from the street side.

The buildings contain the National Museum of Film and Photography, movie theaters for day and evening use, bistros, bars, galleries, artist-studios and housing.

The ground level all around the block is open to the public. It features art galleries, restaurants, a jazz bar, the museum entrance, administration and gift shops towards the street, artist's workshops, bars and outside seating for the restaurant towards the plaza.

The Museum's first floor allows passing pedestrians to see the exhibition along the whole plaza side as well as from the street.

The Site

1. and
2. Column: different study models in their urban surrounding
3. Column: Final Study Model conditions given by the urban context
The Museum will consist of three parts: a long section along 9th Street that contains most of the exhibition, the National Collection of Photographs and administration.

A building along E Street houses film theaters and a restaurant on ground level.

Both parts are connected by a cylindrical tower, the Rotunda. Entrances, waiting space for the film theaters and the reading room for the library are located there. At night time this space will still be used as the foyer for evening shows of the film theaters. The theater entrance and restaurant are located on E Street to add life to the evening activities along that street.

Artist-studios and the galleries are on 8th Street, closest to the existing art activities.

The wing along 9th Street contains the exhibition part of the Museum. Most of the gallery spaces face 9th Street. Towards the plaza is a grand open space, containing vertical and horizontal circulation. The open space is traversed by bridges, that allow the visitor to reach a series of balconies on the plaza side.

On ground floor, the open area would exhibit objects such as cameras and other photographic equipment. Along E Street, administration offices, a classroom and the gift store are located. The north end contains a commercial gallery. The gallery makes the connection from the existing stores on F Street to the new galleries in the artists' complex.

Second, third and fourth floors contain galleries for the exhibition of photographs. Because photographs are mostly small in size, there are only a few large gallery spaces. The main idea was to provide a series of small galleries, interrupted by a "channel of light" between each of them. These narrow hallways end in bay windows towards 9th Street. They allow the visitor to maintain contact with the outside world, see daylight and the time of the day, and they are places to rest. The windows also allow pedestrians outside to see the museum visitors and not just a closed, blank wall. The top floor is divided into library, The National Collection of Photographs and galleries that show selected pieces out of this Collection.

The structure of the building is made of pairs of columns that are connected by beams. The short distance between two columns forms the "light channel", the larger distance between the pairs of columns forms the space for the gallery. The galleries themselves are formed by concrete block walls that are exposed and visible from the inside, since grey is the best background color for photographic exhibitions. The outside is covered with insulation and corrugated metal panels. The windows are aluminum-framed.

To be able to adjust to different sizes of photographs, the galleries can be further subdivided by setting up panels.
across the space. Floors and ceilings contain a grid of metal bands. At the crossing of these bands are receivers for metal rods which will hold the exhibition panels of various sizes.

The photographs themselves are exhibited on panels that are covered with matte metal fabric. This allows the re-use of these panels, because the fabric will not show holes from nails in the panels underneath.

Since photography is always exhibited behind glass, it is extremely important to have the lights at a steep angle above the exhibit. Otherwise the viewer will see the reflection of the lamp in the glass. The metal bands in the ceiling are able to hold lamps to light the exhibitions. Spotlights and indirect lights can be adjusted to the current panel setup in the gallery space.
The Rotunda provides the main entrance, information and the main vertical circulation for both Museum and theater spaces.

The form of a large cylinder emphasizes its importance for the museum complex. The space inside is divided into the main cylindrical space and the staircase that wraps halfway around the cylinder. It is separated from the main space by a concrete wall.

On the south side light comes through large openings directly into the main space, which is used as the entrance lobby on ground floor, and as an area to relax or wait for the movies on the upper floors. It is well lit and friendly.

The staircase is at the opposite side of the room. Only indirect light enters the main space through this staircase, creating different effects according to the windows in the outside wall. It is the more mysterious part of the space, because it is darker and has interesting lighting. This draws the attention to the staircase, which is the means to reach the next level or the bridge to the theater part.

Whereas the main space has direct connection to the outside world, the lighting conditions and outlook in the staircase change as you proceed upwards. First, only indirect light comes through vertical slots in the outer concrete block wall. This light is just slightly brighter than the light in the main space that is also visible through slots.

In the middle is a large landing open to main space and the hallway to the theater block. Again bright light and direct outlook symbolize rest and relaxing.

As you proceed upwards, direct light enters through slots along the outside, first as a single slot, and then in pairs, to make the transition from relative darkness without outlook to the bright light in the main space with floor-to-ceiling windows.
The design challenge for the building along E Street was to arrange four movie theaters and a restaurant in one building above ground without having a plain, closed wall towards the urban surroundings.

The restaurant is located on the ground floor. The second floor contains one large two-story theater space. Above this large space, there are three smaller theaters. The idea was to set up a series of walls which are cut out wherever view or passage is needed. Between the first two walls from the west, vertical circulation is provided. Then the distances are determined by the width of the small theaters on the fourth floor. In between the small theaters, bands of windows provide sunlight for the grand theater space before and after the show.

Tickets for the movies are sold at the information counter on the ground level of the rotunda. The theaters have access through the rotunda on the second and fourth floors. During the opening hours of the Museum, visitors can go back to the exhibition spaces the same way. For evening performances, the visitor exits from the first floor theater through the staircase on the east side of the building, and from the fourth floor theaters through the staircase along the North side.

The series of walls and the main theater walls are made of concrete. The small theaters are structured with steel, with beams spanning in between the walls. All glass surfaces are aluminum-framed.
The building along 8th and F Streets contains various art-related functions. On the ground floor, towards the outside of the block, are two-level art galleries of various sizes and a community art studio. At the ends of the building, where you can enter the plaza, are a cafe and a jazz bar. They have outdoor seating mainly to the plaza side, but also, in smaller size, towards the pedestrian zone. On the plaza side, the ground floor features workshops and studio spaces which also have terraces for outside work. They are shielded from the public part of the plaza by a sloped lawn, which allows people to look into the workshops, but gives the artists some sense of privacy.

Above ground level there are 4 stories of apartments in various sizes from 36 to 75 square meters. The size is kept small to make them affordable for young artists. Three to five apartments per story share one hallway and staircase. This way every apartment can be reached from the naturally-illuminated hallway; the indoor corridors are only fire exits. All apartments have balconies that are set back on the street side, projected on the plaza side.

All around the building there is a row of large trees to give privacy to the apartments and to provide a natural roof and sun shade for the plaza and shopping street. For the same reason, a 2.5 meter wide balcony runs along the first apartment level on the plaza side. To insure noise protection in these small apartments, the structure includes heavy masonry walls and concrete floors.
The Site Plan

1. Row: over-all view of the model from the East

2. Row: over-all view of the model from the South

10 | 25 | 50 | 100 m
The Exterior Space

1. Row: whole model from the East
2. Row: whole model from the South

5 10 20 40 m
The Ground Floor

1. Row: bird's view from the East
2. Row: whole model from above
The Museum

1. Row: West Elevation

2. Row: West Elevation

1 5 10 15 m
The Museum

1. Row: East Elevation
2. Row:
   - bird's view from the East
   - view into the Plaza from the South
   - pedestrian's view of the Museum's circulation space
The Museum

One Exhibition Space

1. Column: Sections and Ground Floor of one Exhibition Space with the receiver grid

2. Column: elevation of one panel

3. Row: section of one panel
The Museum

One Exhibition Space:
Arrangement for large Photographs
The Film Theaters

1. Row: South Elevation

2. Row:
- South Elevation along E Street
- Defined volumes through cut-out walls

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1. Row: Section H-H

2. Row: South Elevation of the Film Theaters
     Section F-F
     Section G-G
The Artists' Complex

1. Row: North Elevation
2. Row: 
   - bird's view along F Street from the West
   - pedestrian's view along F St. from the West
   - view along F Street from the East

1 5 10 15 m
The Museum is especially designed for photographic exhibitions in size, color and exhibition arrangement. Between the exhibition rooms the visitor is always led through naturally lit areas in order to remain in contact with the outside world.

The Film Theaters form one building without visible openings. The viewer can read the different rooms and the descending theater floors on the outside. He recognizes the walls as structuring elements while passing along the site.

All buildings have public functions on ground floor which are partly opened late into the night. Above the ground floor with the artists' studios and the cafés, the affordable apartments are located.

For all buildings I succeeded to provide naturally lit areas and a pedestrian-friendly environment. The inside and outside worked well together, and I achieved to give new life to a city block.

One single building block cannot change the downtown area, but it can be seen as an example for others to follow.

Conclusion


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all photos are taken by the author

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In Washington DC efforts are made to revitalize the lifeless downtown area. With my project I develop buildings for one block in Downtown. The site for my project is located between E / F and 8th / 9th Streets.

I try to set an example of how a building block can help this revitalization process. The following issues will be addressed:

The combination of various functions on one site should avoid the close-down of the building after office hours.

Public functions on ground floor create a pedestrian-friendly environment, even though some functions above do not need openings or the connection to the outside.

Daylight and circulation are used in the museum and the film theaters to remain in contact to the outside world.

I know that one single building block cannot change the whole downtown area. But it can set an example that might encourage others to follow this path and change the negative image of the area which yields new investment right now.

Abstract