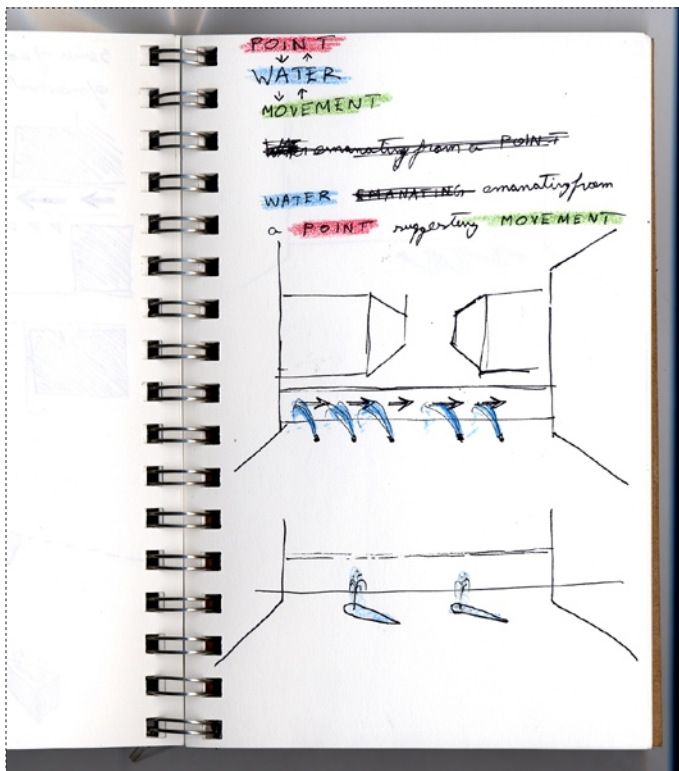


# Predesign

Once the three layers of analyses were completed, a substantial amount of information was generated. The initial stages of the design process was an attempt to look at the results of overlaying all this information. This was done by sketching out possible solutions that may arise out of the interaction of these layers of information. This predesign phase was more of a back and forth process. The following pages illustrate these sketches.

Once these sketches were completed, three elements stood out as being critical for the design of the plaza:

**Water, The issue of circulation/movement and The significance of the point.**

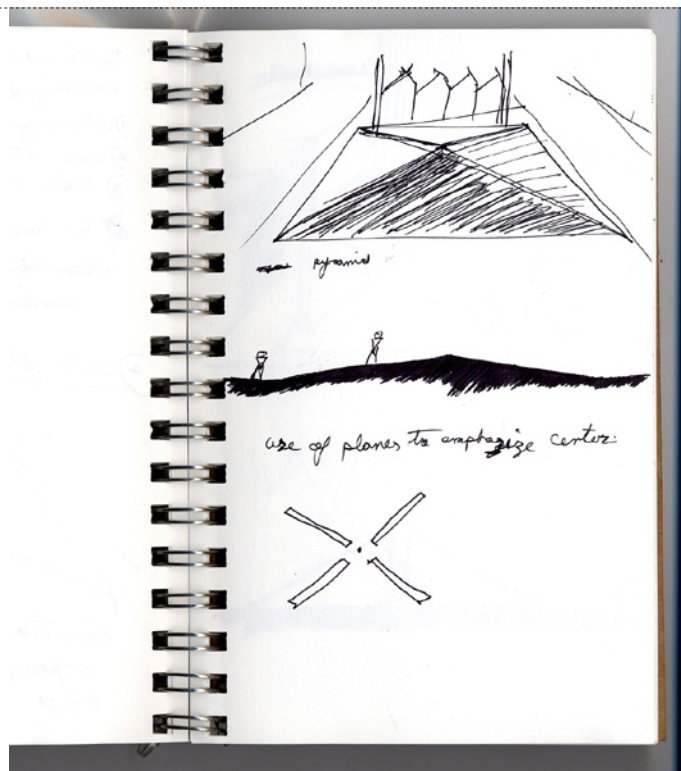


From the layers of analysis that were done earlier, three elements were identified as being significant and needed to be acknowledged in the design process.

Water: Its quality to draw people to a public space as well as the significance of the rivers to the downtown area

Point: The point being a key element in the imageability of the PPG building (with its spires on the top) and also in the urban structure of downtown.

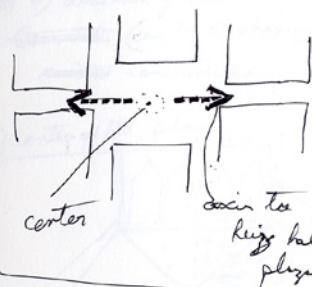
Movement: The movement of people within the plaza space and its connectivity to neighboring spaces.



The Point, which exists in the building in the form of the spire and in the urban structure as the Point Park is a significant element. The Point can be used to emphasize the center of the plaza.

Point to be emphasized in the plaza.

points & directions that can be emphasized in the plaza.



point formed by plow

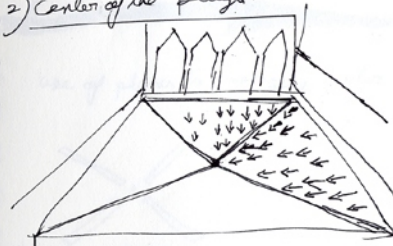


in landscape can be a low hill.

Points and directions that can be (have a potential) emphasized in the plaza.

- 1) entry way entrance to the main bldg
  - 2) axis center of plaza.
  - 3) axis along market street.
  - 4) direction of movement of traffic.
- (can be emphasized or restricted controlled)

2) center of the plaza.



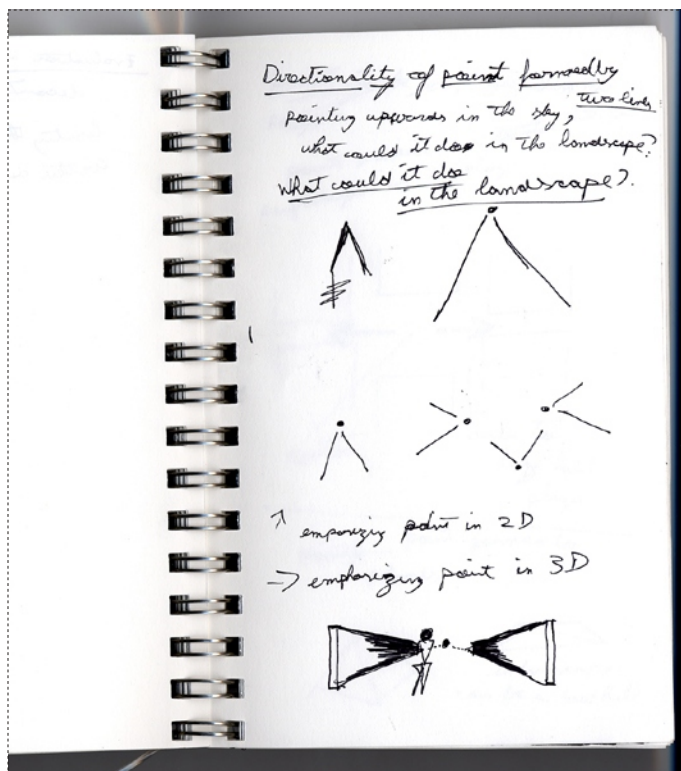
inverted pyramid INVERTED PYRAMID surfaces used to emphasize a point.



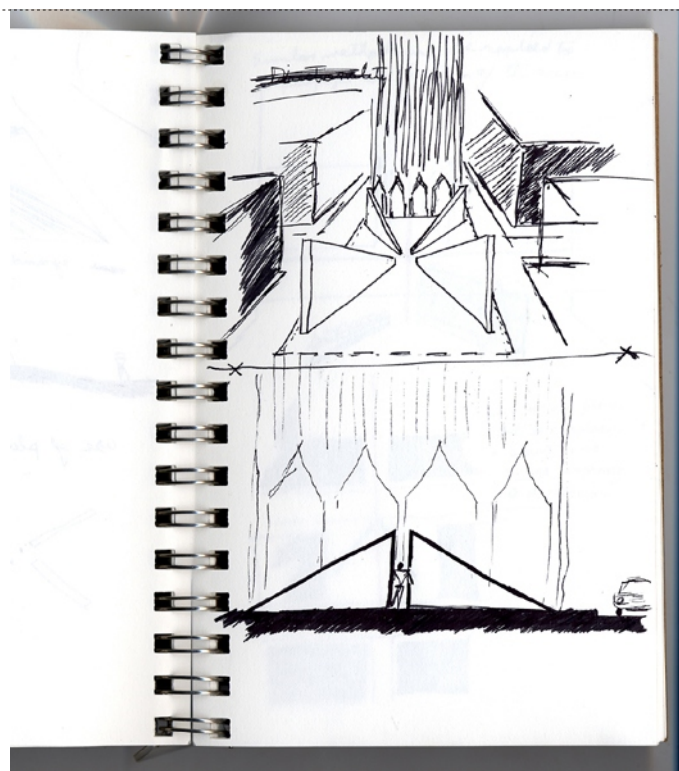
Establishment of a point in the landscape could serve to emphasize a direction in space. The axis, a significant element in the plaza, can be emphasized using this aspect of the point.

Points and directions that could be emphasized in the plaza

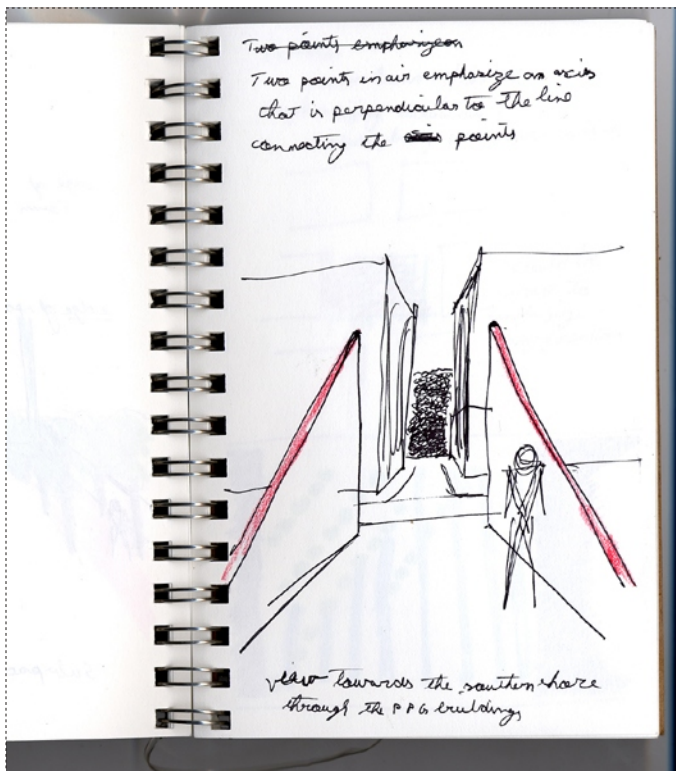
- 1) entrance to the main building
- 2) center of plaza
- 3) axis connecting to market square
- 4) direction of movement of traffic



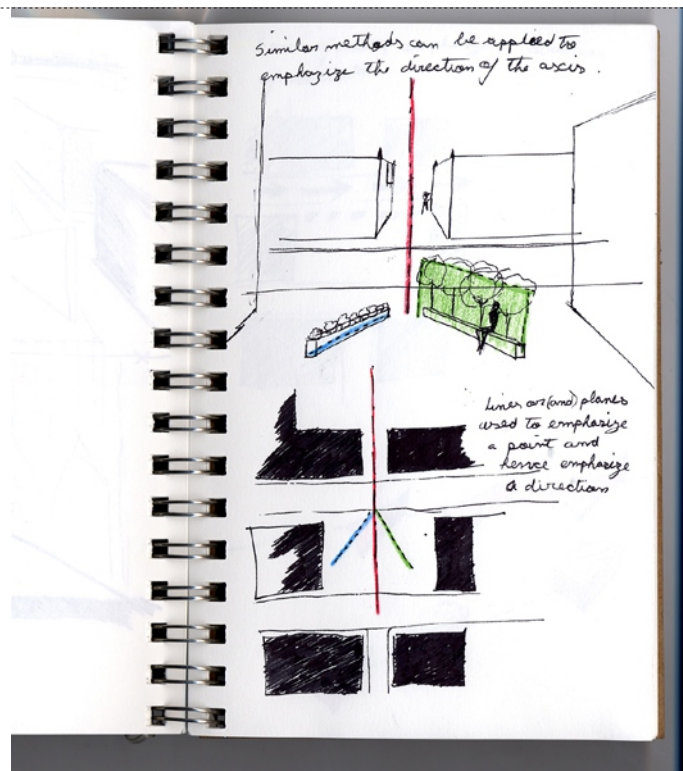
As seen in the building analysis, the point emphasizes directionality. A point can be emphasized using two converging walls and other such methods.



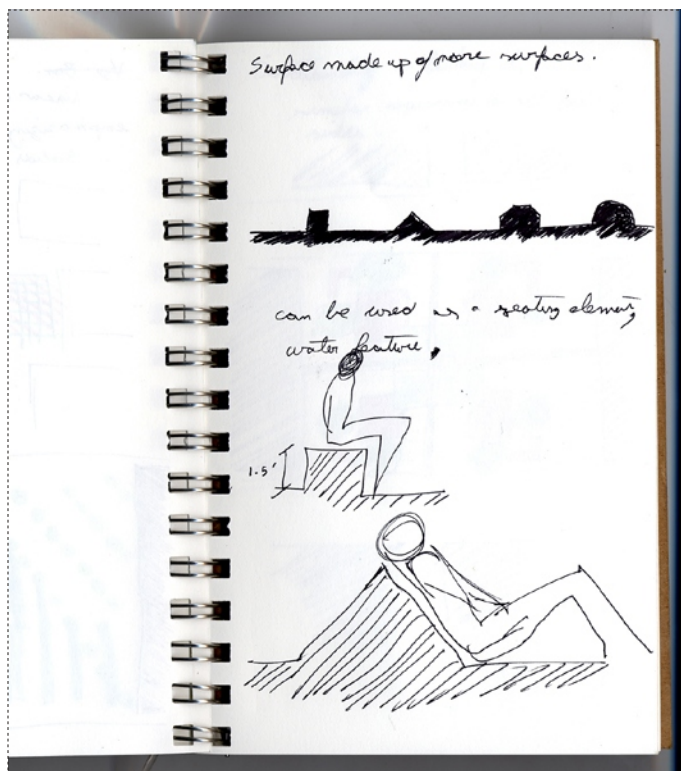
Elements such as the sloping wall above, can reinforce a point in the third dimension.



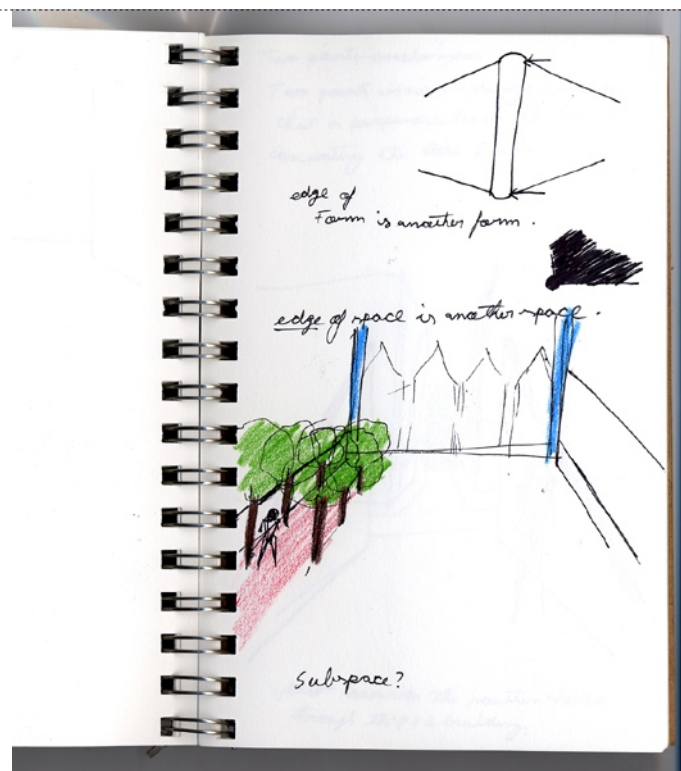
As we have seen in the built form analysis of the PPG building, "two points in air emphasize an axis that is perpendicular to the line connecting the points" (Ching, 1990).



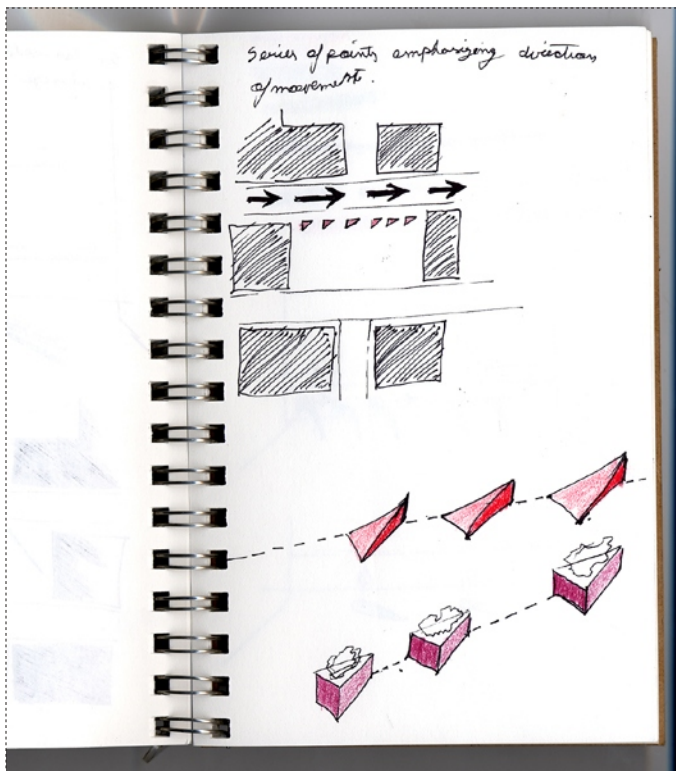
This design principle can be used to emphasize the axis that runs through the site



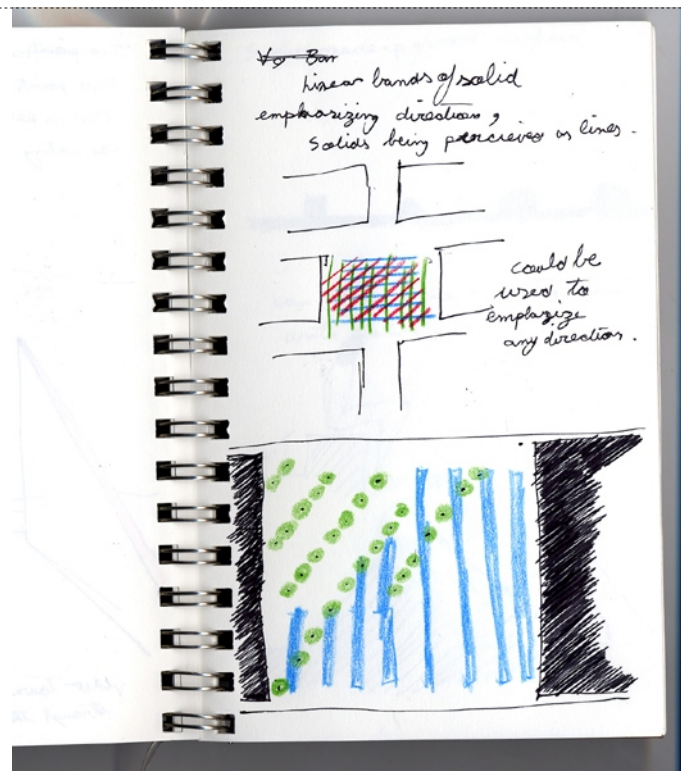
The fractal nature of the skin of the building can be translated to the ground plane, to form much needed seating elements



The corners of the PPG building can be read as individual forms by themselves. Similarly subspaces can be created along the edge of the plaza space, corresponding to the column like structures along the edge of the building



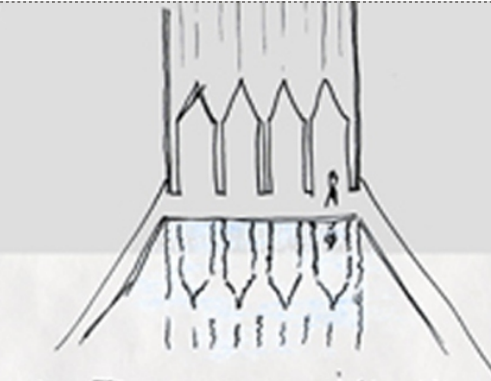
A series of points create a line which can reinforce the direction of movement



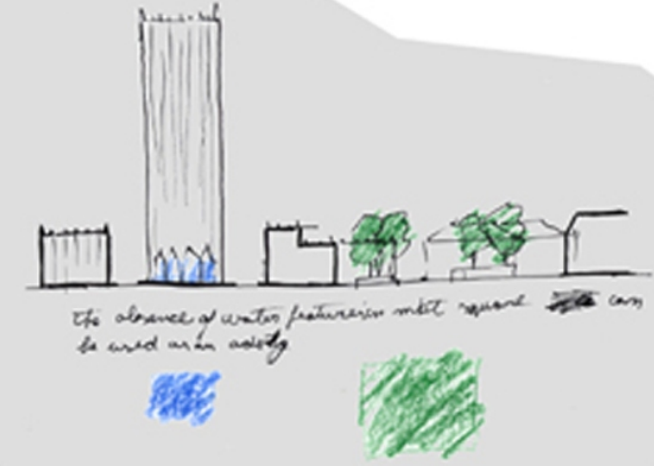
Linear bands of elements can be used to emphasize direction. The linear fractal elements on the skin of the PPG building reinforce its height. In the plaza space any significant direction can be emphasized using such bands.



water in the CONTEXT (man-made)  
water (channel & bridge) as a hurdle?  
water as relief? (waterfront development)



SENSATIONS - visual, aural, touch



# WATER

- ⊕ AS A DEVICE TO DRAW USERS  
↳ VISUAL, AURAL, TOUCH
- ⊕ REFERENCE TO THE CONTEXT (RIVERS)
- ⊕ DIFFER DISTINGUISHING FROM MARKET SQUARE
- ⊕ REFERENCE TO REFLECTIVE QUALITY OF BUILDING SKIN (GLASS)

# MOVEMENT

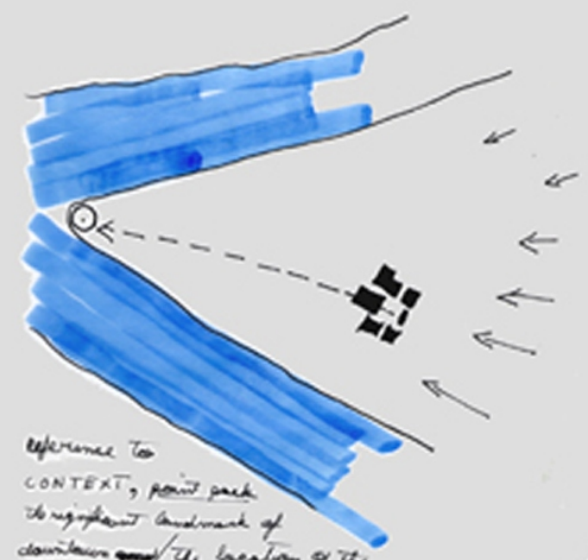
- ⊕ TO EMPHASIZE DESTINATION
- ⊕ TO & TRANSITION
- ⊕ RELATE TO THE "CONNECTION" FACTOR
- ⊕ REFERENCE TO THE QUALITY OF MOVEMENT IN THE IMAGE OF THE BUILDING.
- ⊕ VEHICULAR & PED CIRCULATION
- ⊕ VISUAL MOVEMENT (VIEWS)

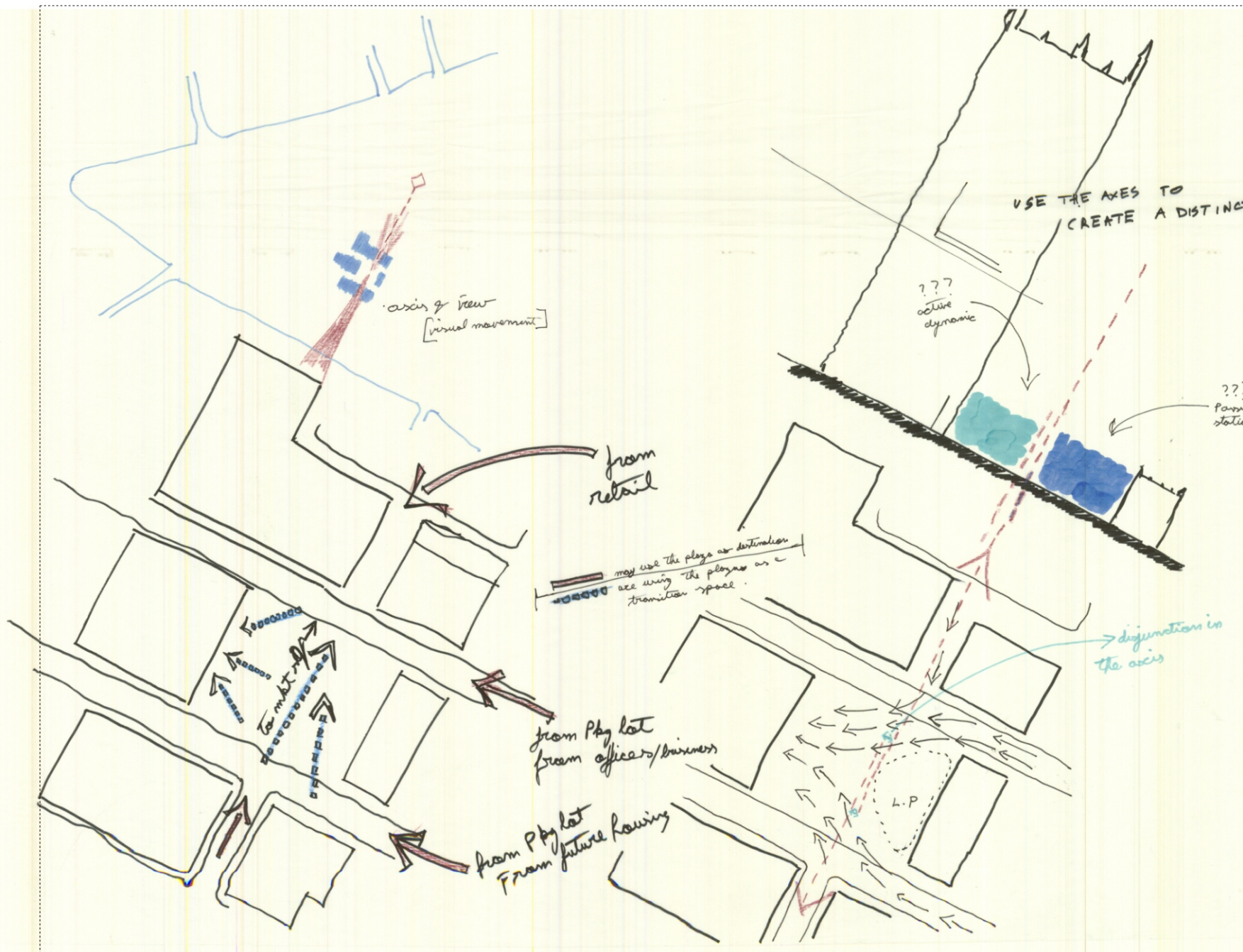
# POINT

- ⊕ REFERENCE TO CONTEXT (POINT PARK)
- ⊕ REFERENCE TO IMAGEABILITY OF BUILDING (SPIRE)
- ⊕ REFERENCE TO EVENTS IN THE LANDSCAPE



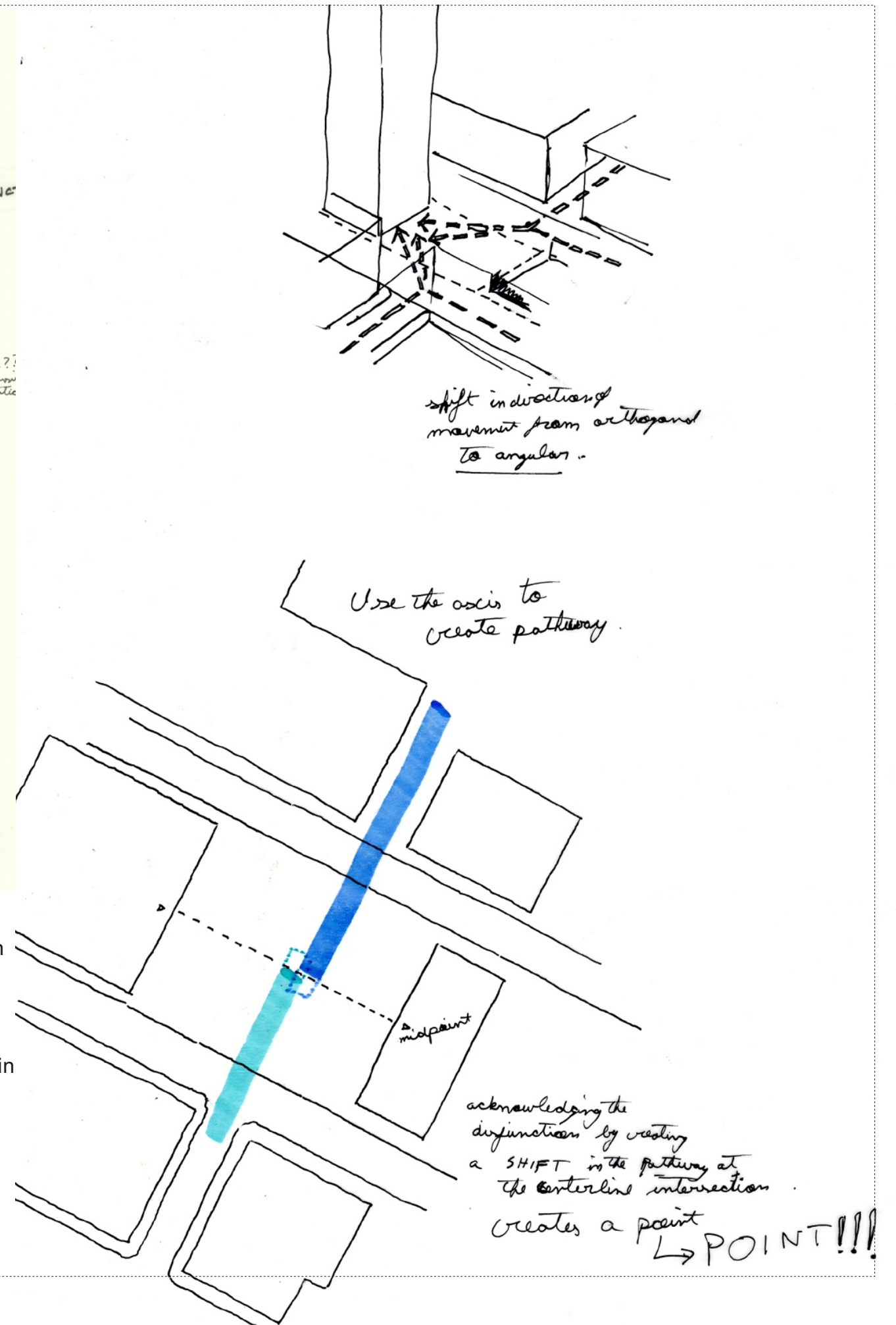
Point as a beginning  
the an initial element in the derivation of form

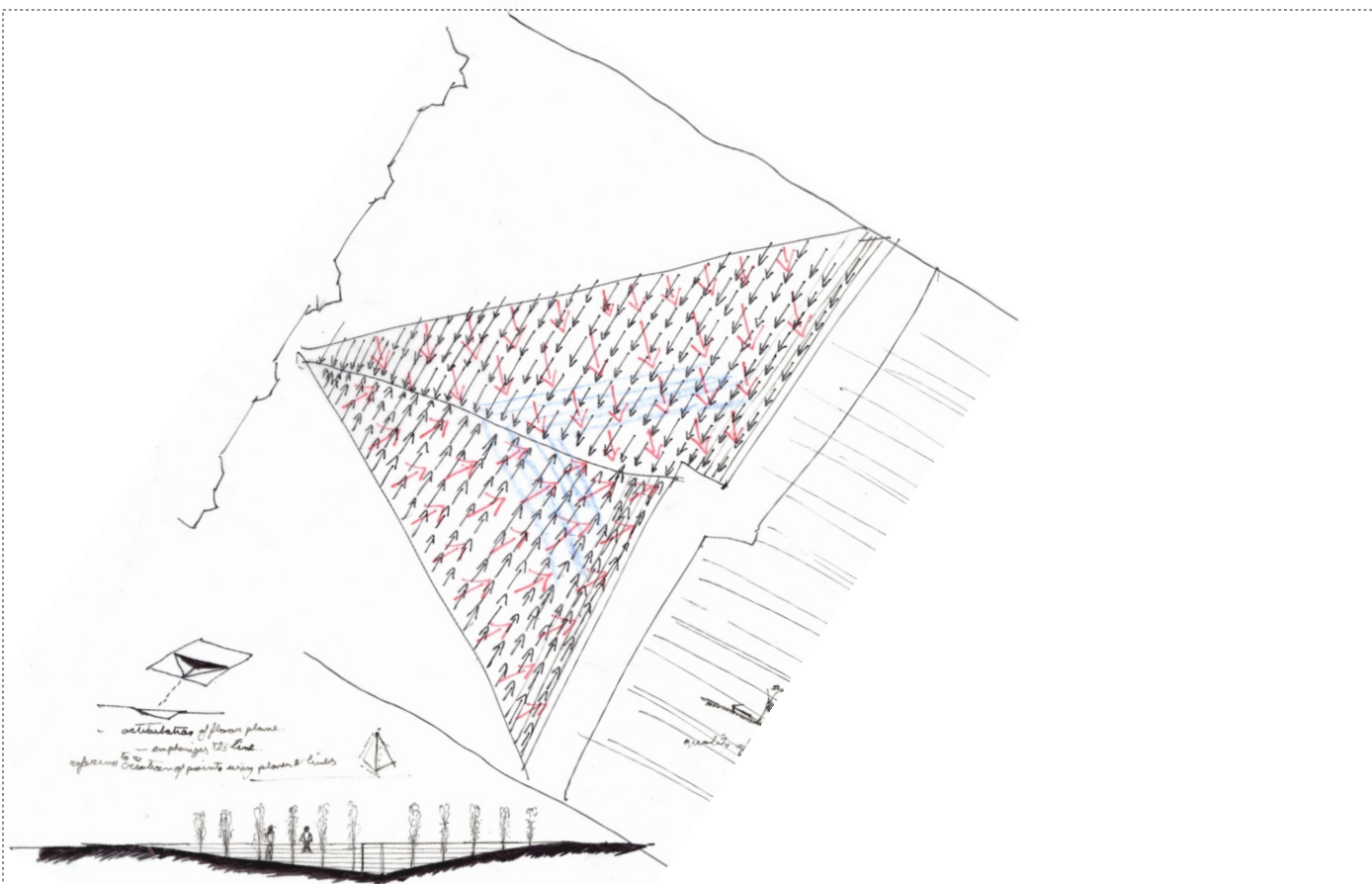




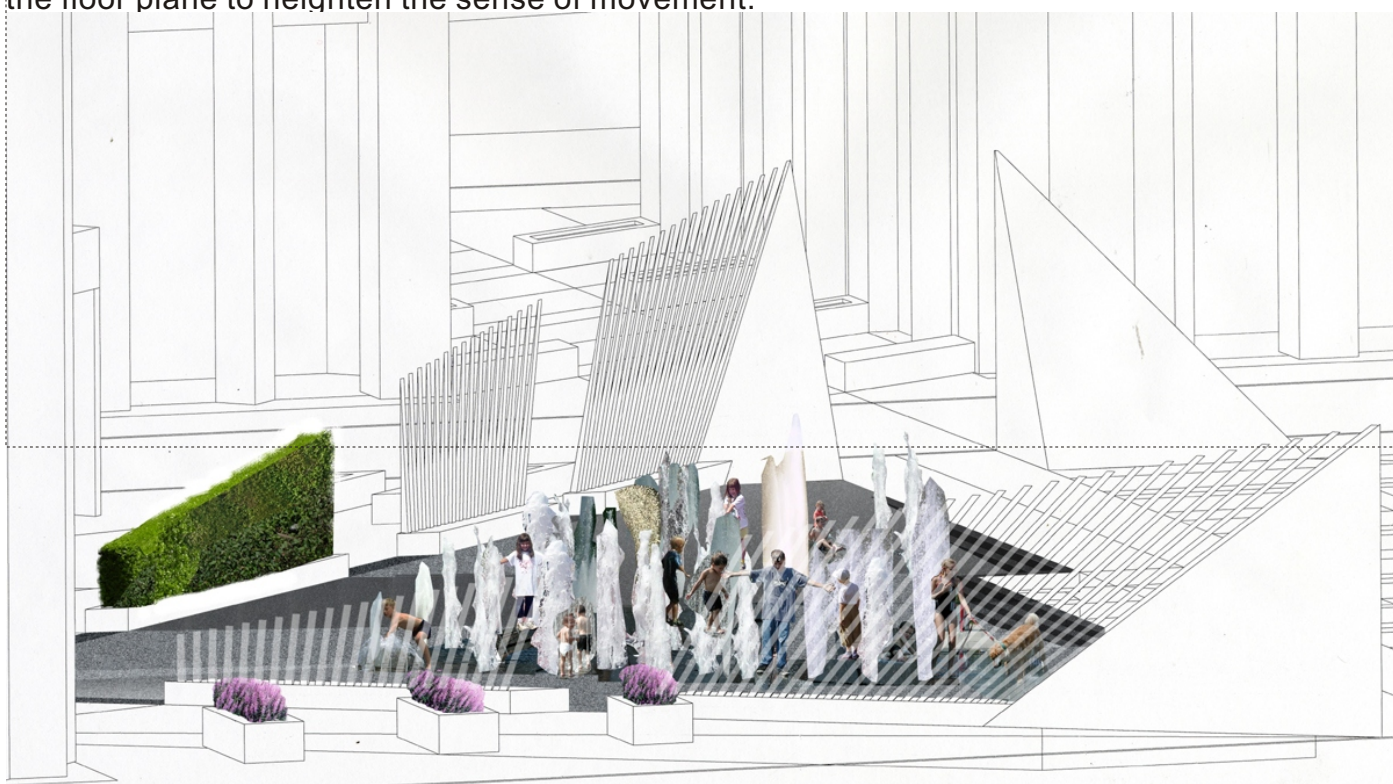
The primary destination of the people using the plaza is the PPG building. The pedestrian traffic originates from the parking lots, the residential developments, and the retail establishments as indicated by the red arrows in the above figure.

The movement of pedestrians along the axis of Market Street also needs to be taken into account. This physical movement along with the visual movement (the views from the plaza) makes this the significant axis within the site. This axis is used to divide the space into two areas. Also due to the nature of pedestrian flow within the plaza, a "low pressure" is created on the South East side of the plaza. The focus of action on one side of the plaza and the lack of it in the other half leads to the possibility of creating two spaces that are distinct in character, divided by this line of physical and visual movement.

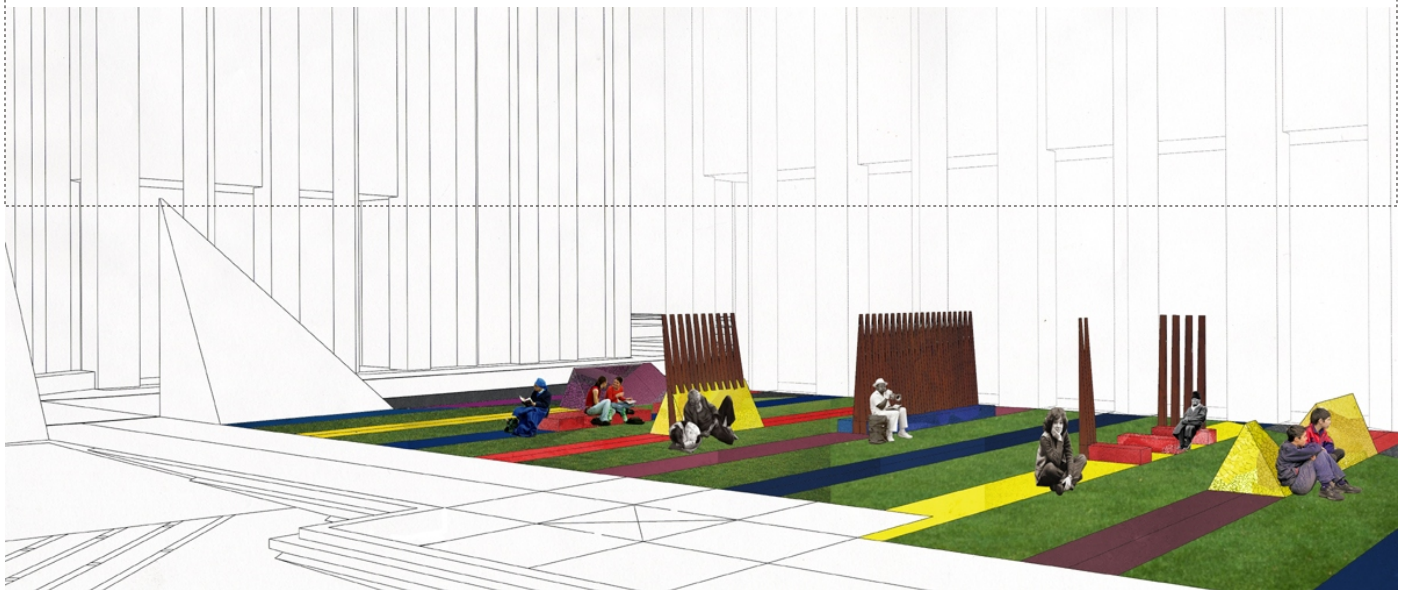
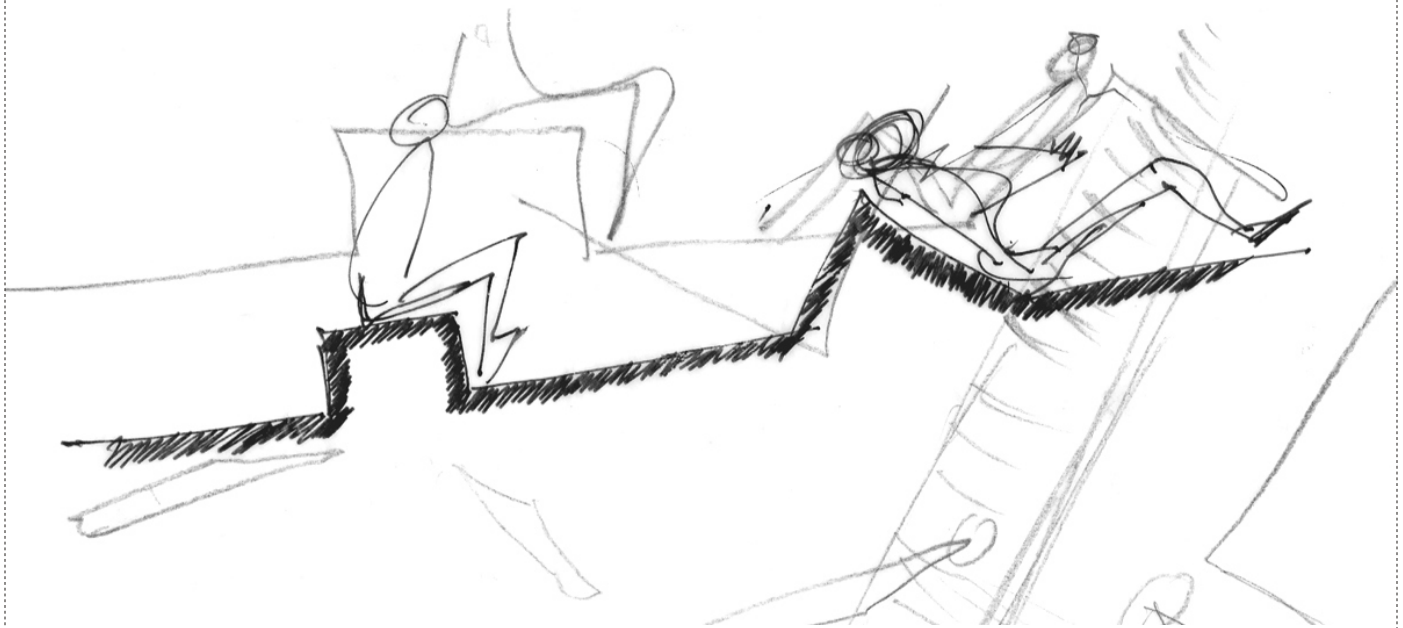
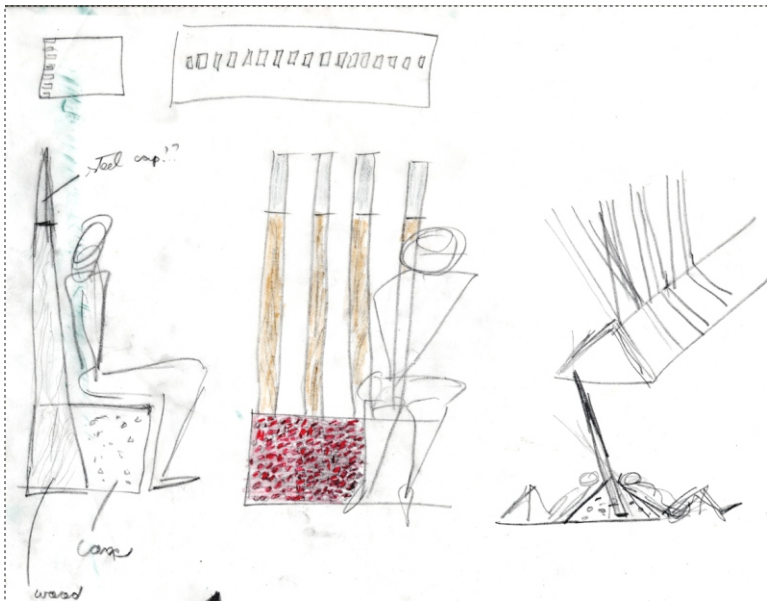


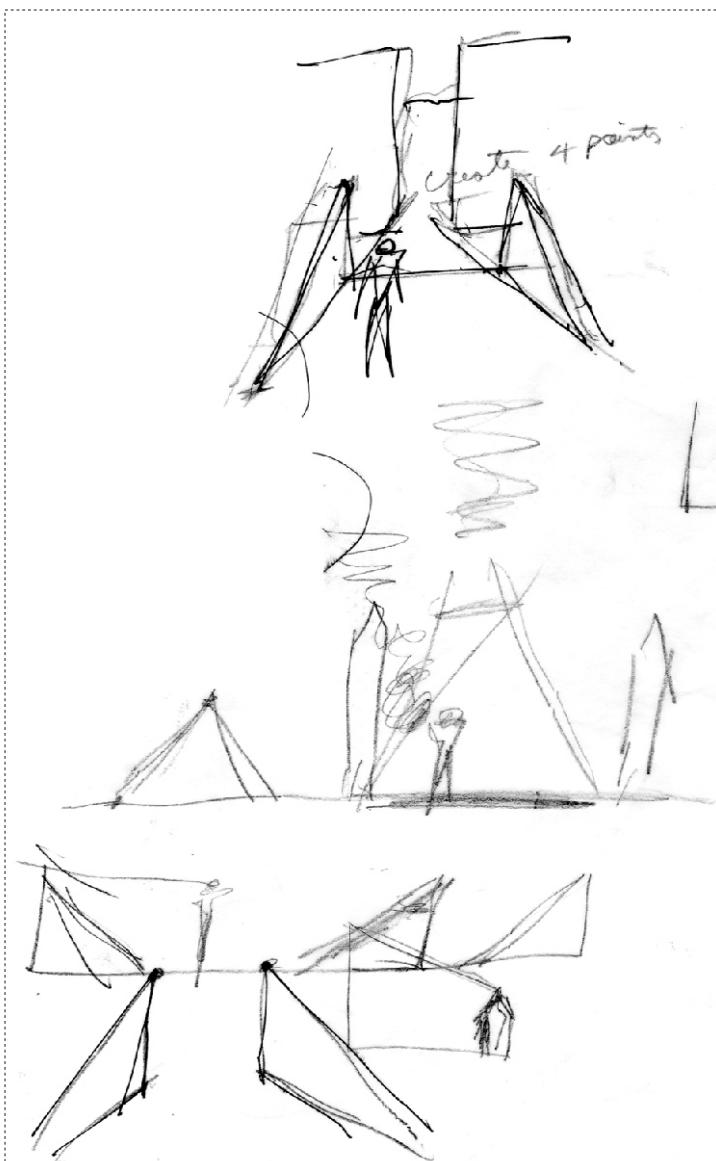


Within the dynamic side, the direction of movement also suggests the possibility of making a reference to a significant element in the urban context, the point. Since water is a significant feature of the existing plaza, water fountains are incorporated in this dynamic side of the plaza, and the arrangement of the water fountains are in reference to the two rivers that meet at the point. The dynamic nature of this side of the plaza is also emphasized by sloping the floor plane to heighten the sense of movement.

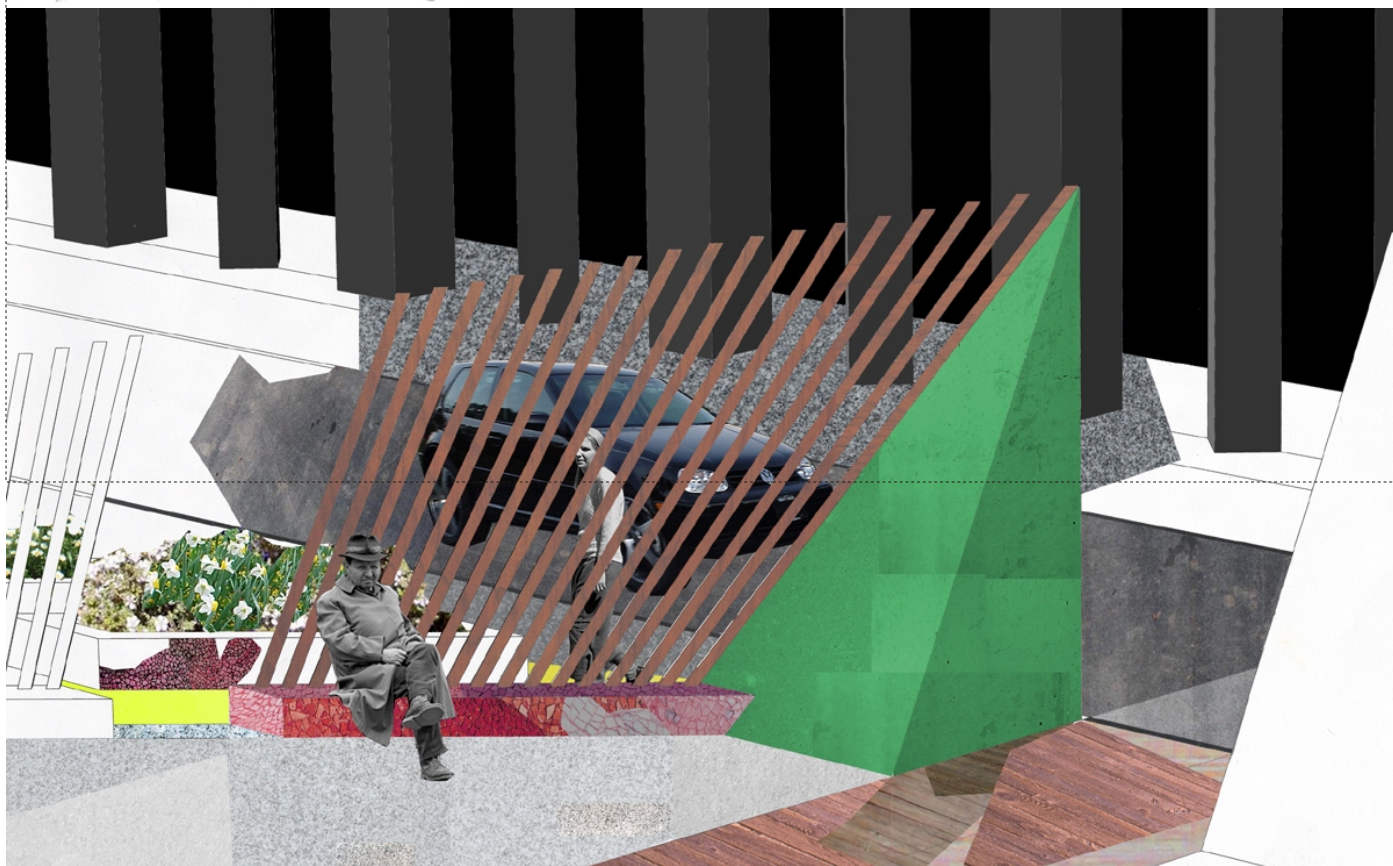


One of the major drawbacks of the existing plaza was the lack of seating. The passive side of the plaza is provided with a lot of seating, in a variety of combinations. The Geometry of the seating is derived from the fractal nature of the skin of the building, a surface made up of prisms and boxes.





The creation of these two distinct spaces, the active and the passive space, emphasizes the line that divides them. This line is not a perfect axis but a disjuncted one. This disjunction is turned into an asset by using it to emphasize the center of the plaza. This line also acknowledges the horizontal line of the building that signifies the shift from the vertical lines to the slope that meets at a point. The disjuncted axis is further emphasized by the use of two points in air, created by the pyramids that define the views from the plaza.



# Conclusion

## **Built form and open space**

This thesis is an expression of the author's interest in the relationship of the built form and open space. Since this is such a broad subject, the research focuses on the corporate plaza and the office tower.

The corporate plaza has been the subject of research and study from various perspectives ranging from Sociological to Climatological. This thesis has made an attempt to understand the relationship of the plaza with its office tower.

A study of the history of office towers, since the 1960's revealed a strong desire for an imageable building as the driving force behind the design of most office towers. Since this imageability is such an important factor in the design process of the building, it was used as the basis to investigate the possibility of a mutually beneficial relationship between the office tower and the plaza.

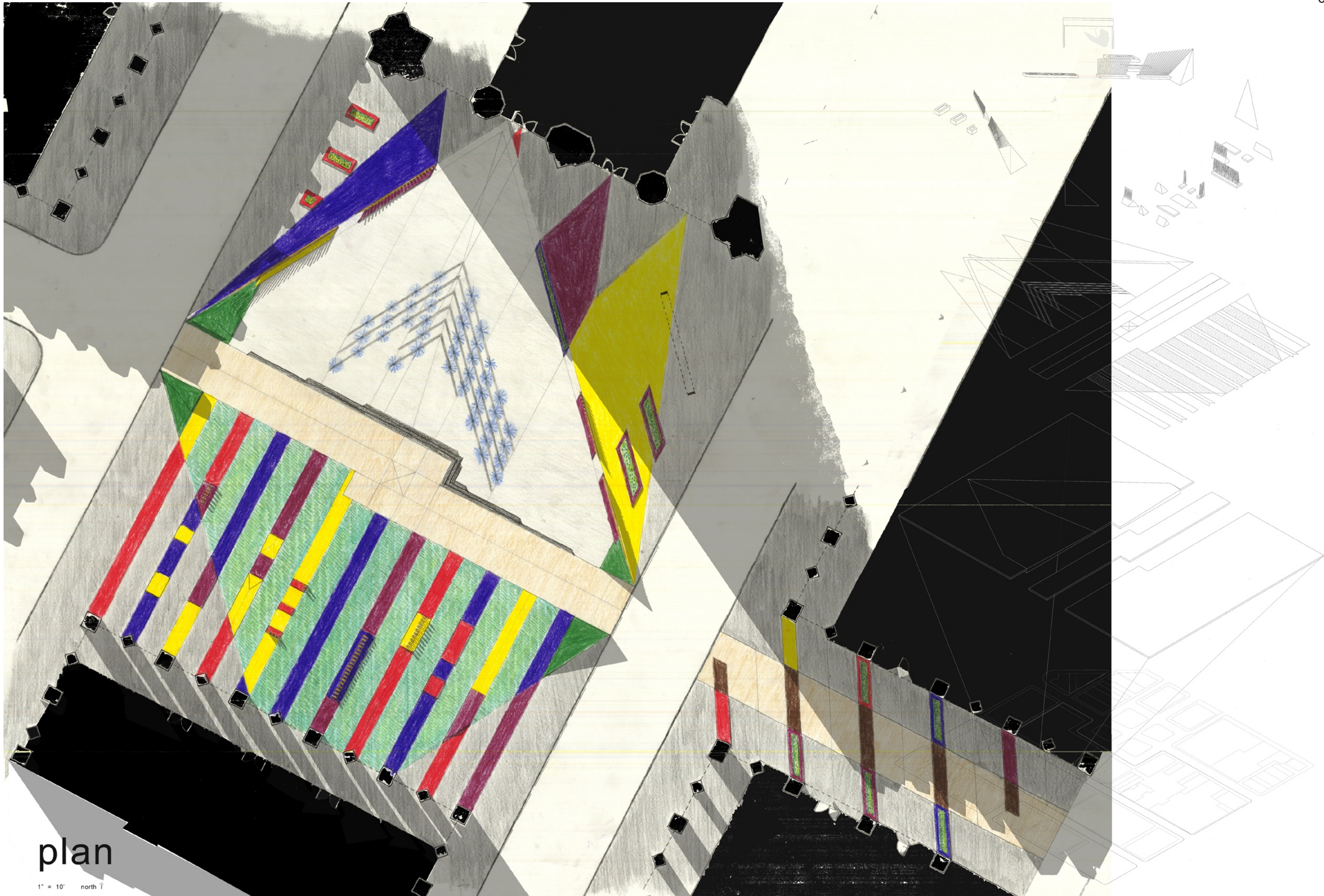
## **Research on the relationship between the built form and open space**

The thesis has revealed a fraction of the many possibilities that exists in exploring the relationship of the built form and open structure, either in a more focused manner or with a broader approach. Although the thesis restricts itself to the syntactic relationship between the office tower and the plaza, this relationship can be explored from other dimensions, such as the functional relationship between the two. Furthermore the syntactic relationship between the plaza and the office tower could be explored in a more focused manner, by restricting to one element, such as materiality, color, proportion etc.

## **Approach to Design**

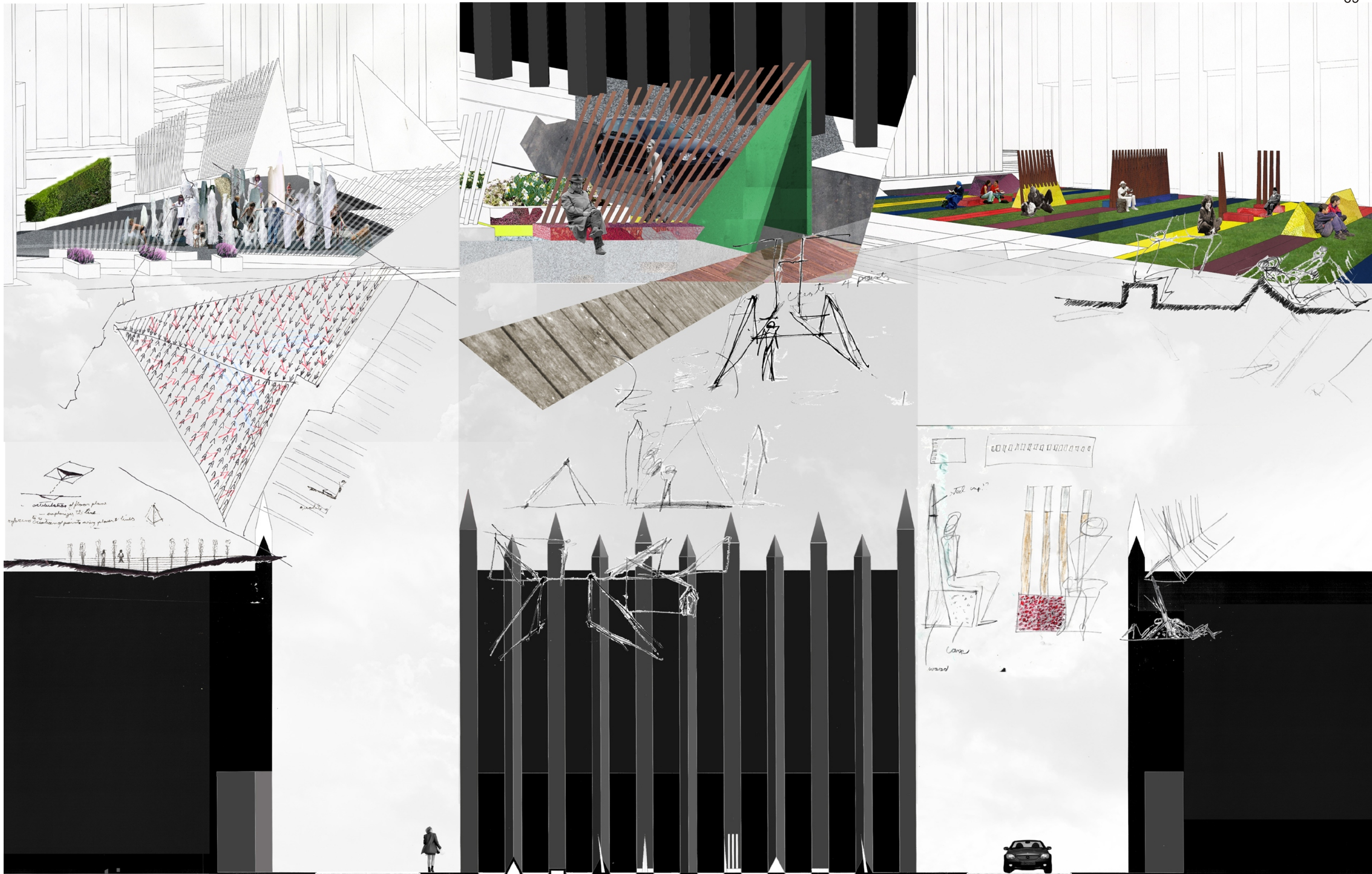
Design in the broader sense, can be considered as the output that results from the Designer's processing of "information". In lieu of a conventional "site analysis", the thesis

uses an overlay of three layers of information. The design that was an output of this thesis was processed from the information that was generated by these three layers of analysis. This methodology of generating design from layers of information can be used in any given scenario, dictated only by the amount of information that a designer/researcher can obtain.



plan

1" = 10' north ↑



# section

1" = 10'

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## Images

001 : <http://www.imagegallaria.com/gallery/modern/plaza.jpg>

002 : <http://www.cs.duke.edu/~xiaobo/pics/wtc2.jpg>

003 : <http://www.users.bigpond.com/b.h/America/UNITED%20NATIONS%20BUILDING.JPG>

004 : <http://www.schoolsalad.com/sinking/levi.jpg>

005 : <http://www.aviewoncities.com/img/chicago/kveus1873b.jpg>

006 : <http://ftp.ccccd.edu/andrade/britlit/wwlpoets/images/14.jpg>

007 : <http://www.bluffton.edu/~sullivanm/som/olivettism.jpg>

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009 : [http://www.greatgridlock.net/NYC\\_Images/626.jpg](http://www.greatgridlock.net/NYC_Images/626.jpg)

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