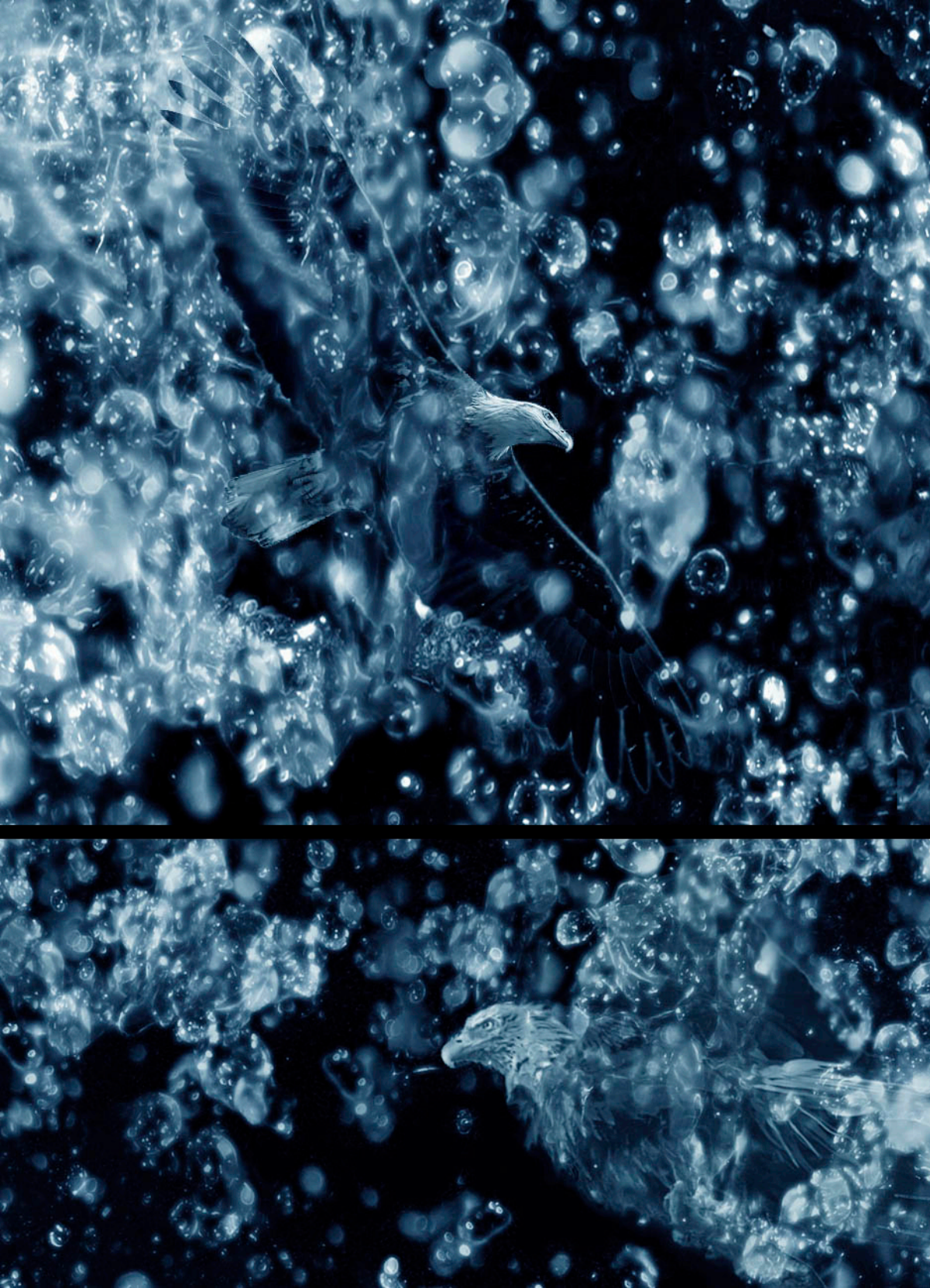
GIFRE

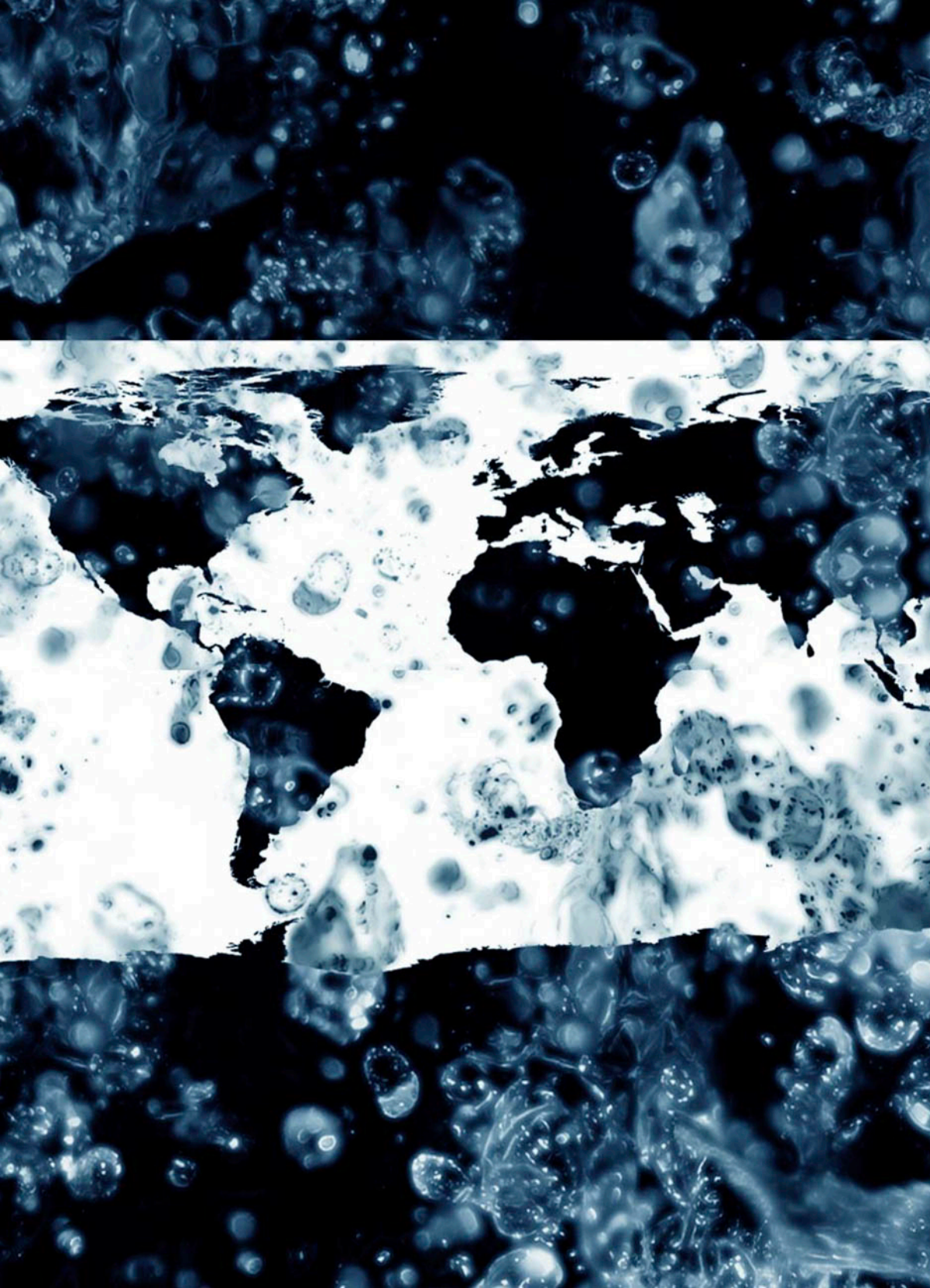
"Wings of Atlanta"

Transition Hall Sculpture Proposal

Hartsfield-Jackson Atlanta International Airport

Concept







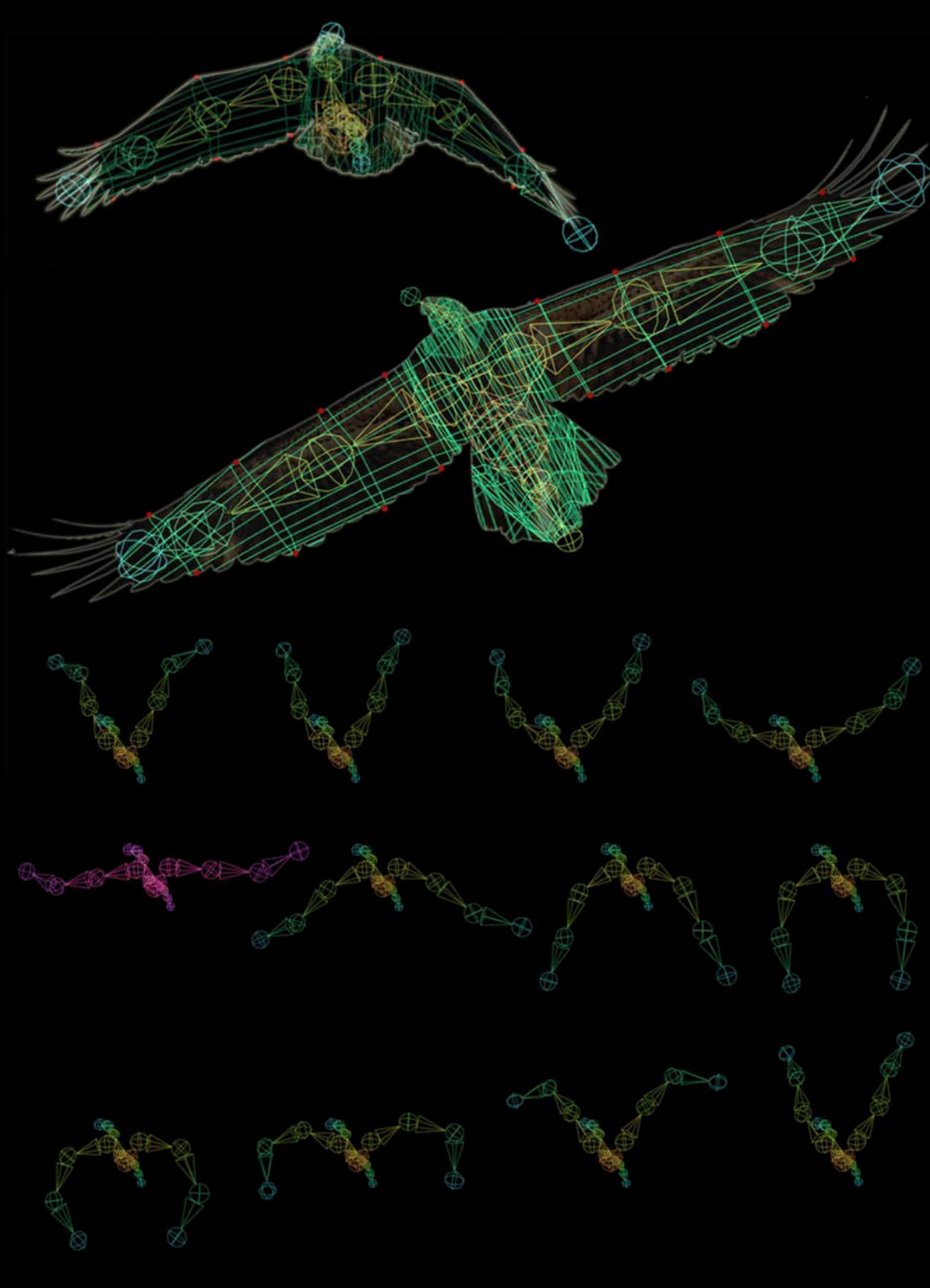


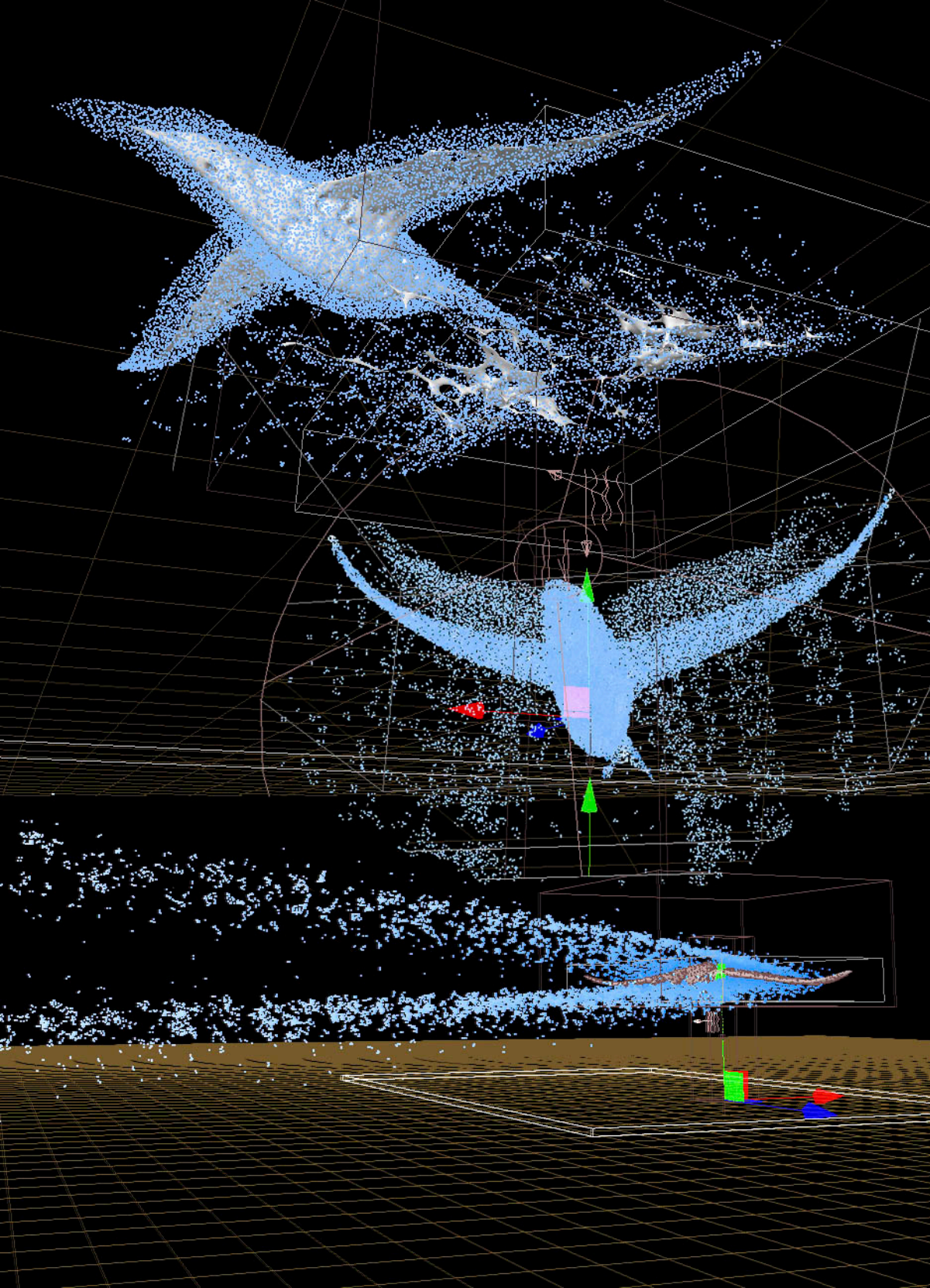


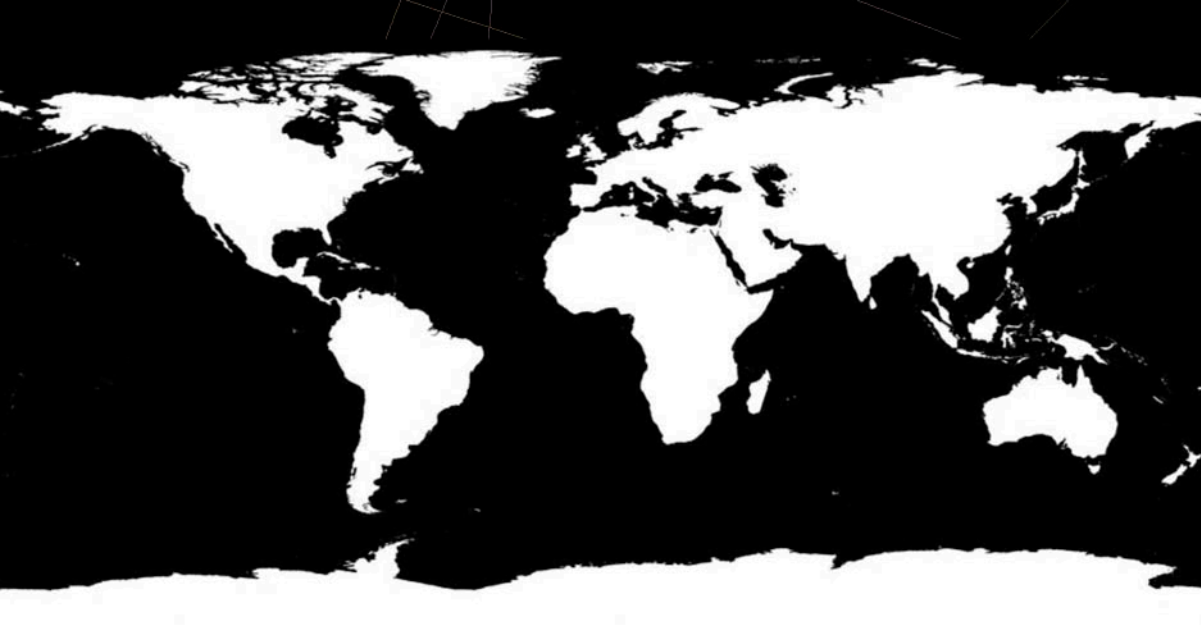


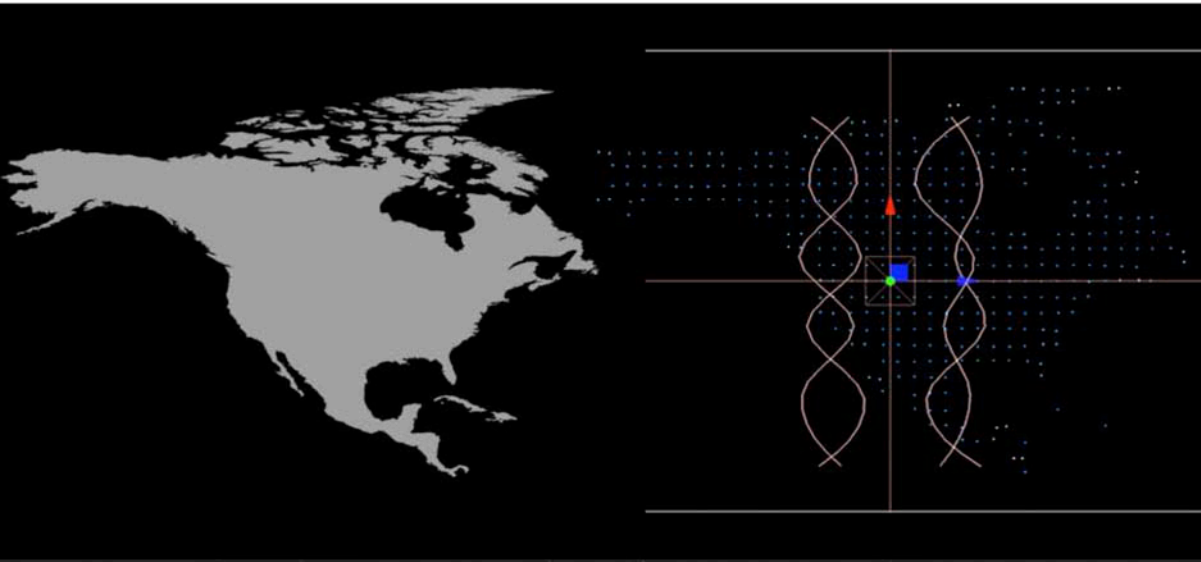


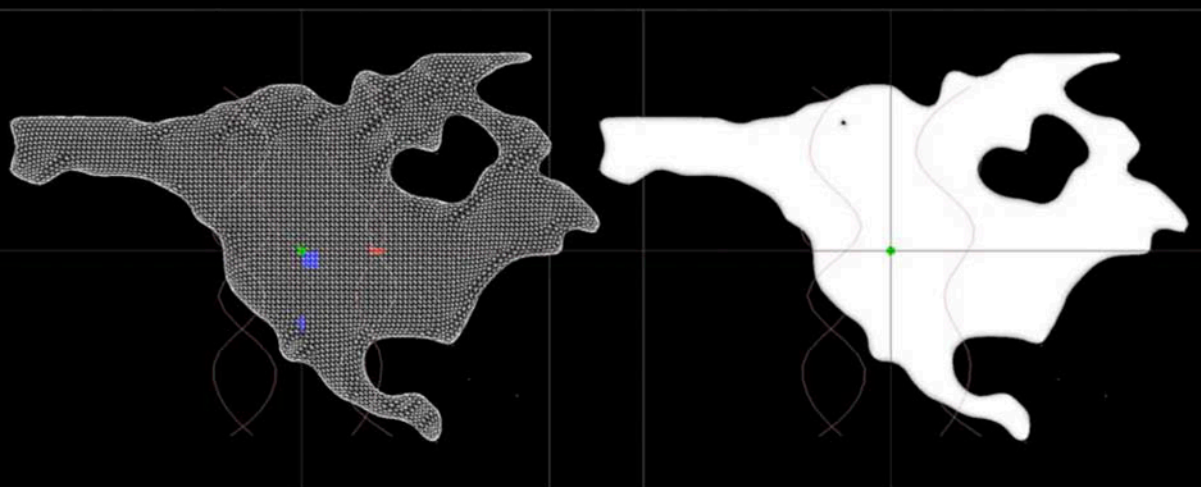
VFX Engineering



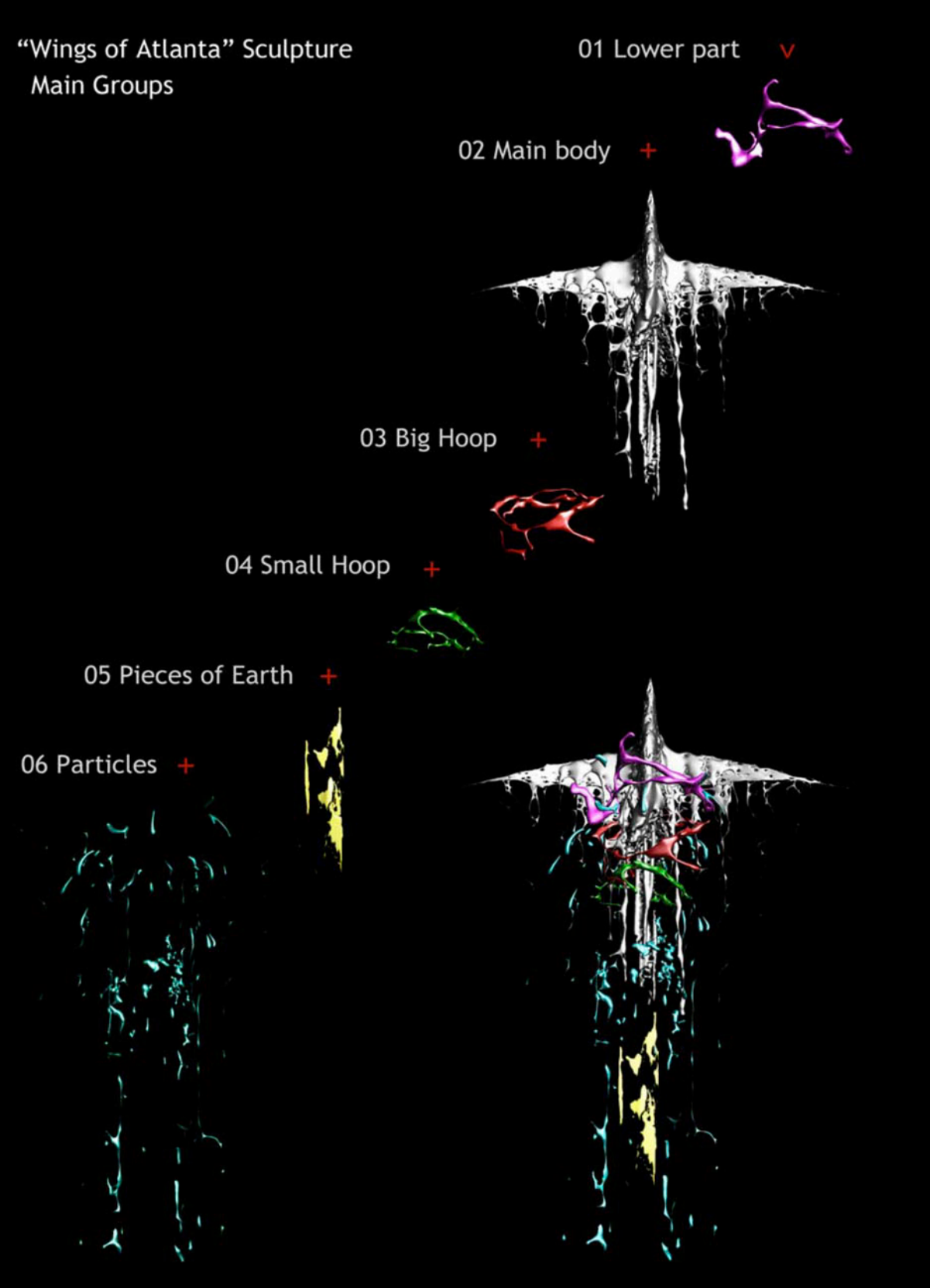




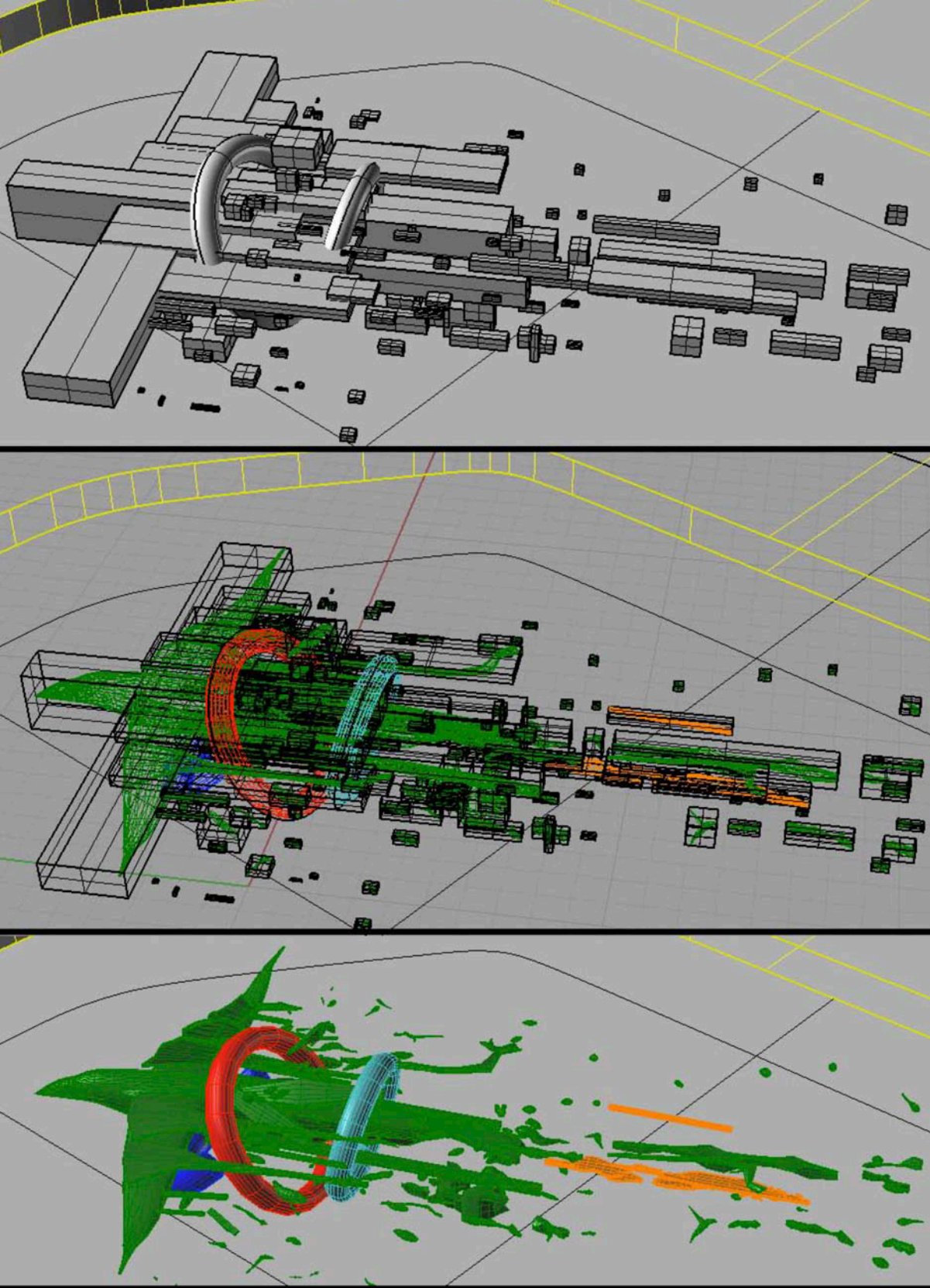


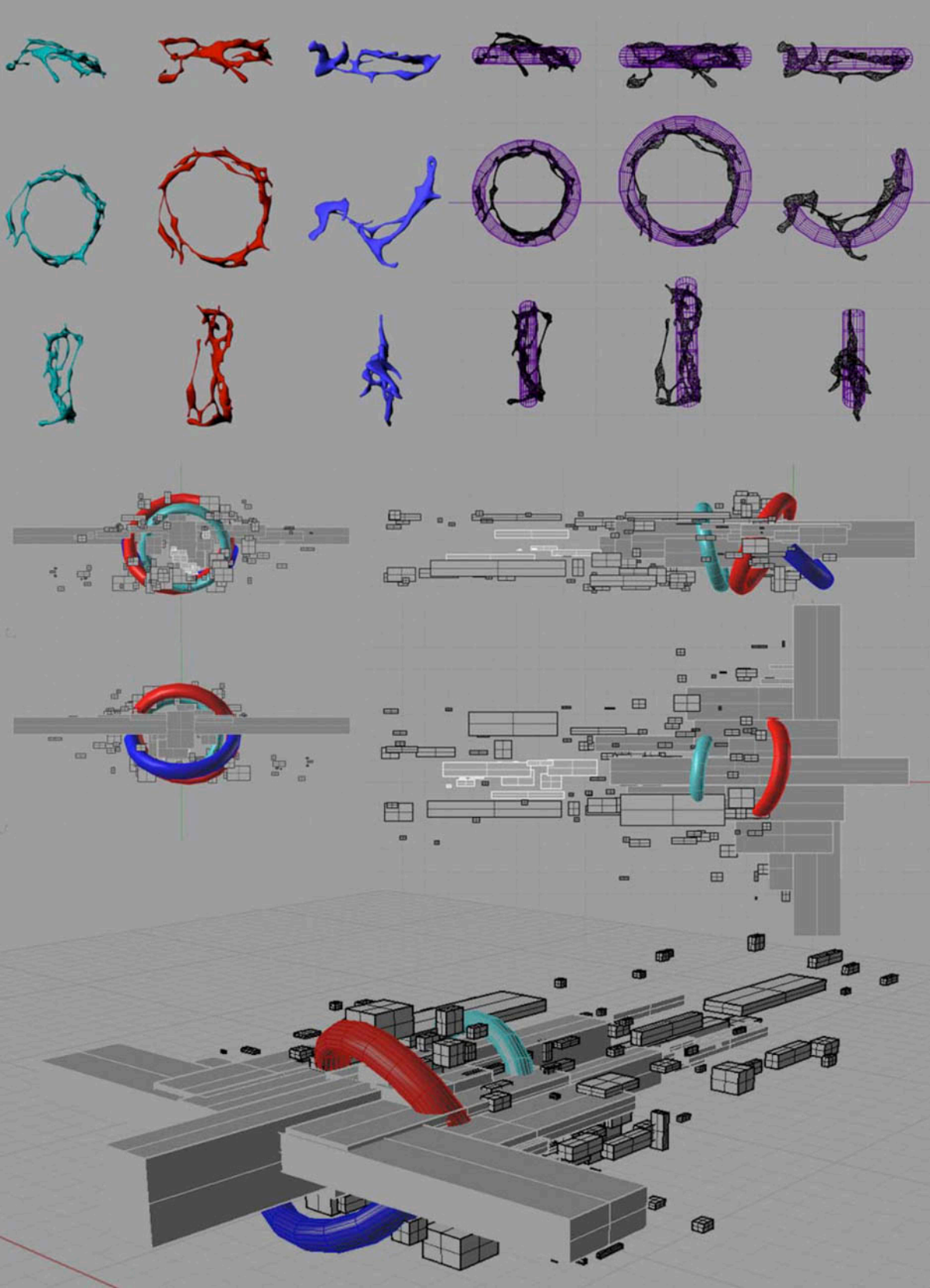


“Wings of Atlanta” Sculpture
Main Groups



Structures and Engineering



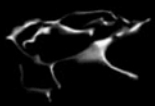


“Wings of Atlanta” Sculpture
Main Groups

01 Lower part v

02 Main body +

03 Big Hoop +



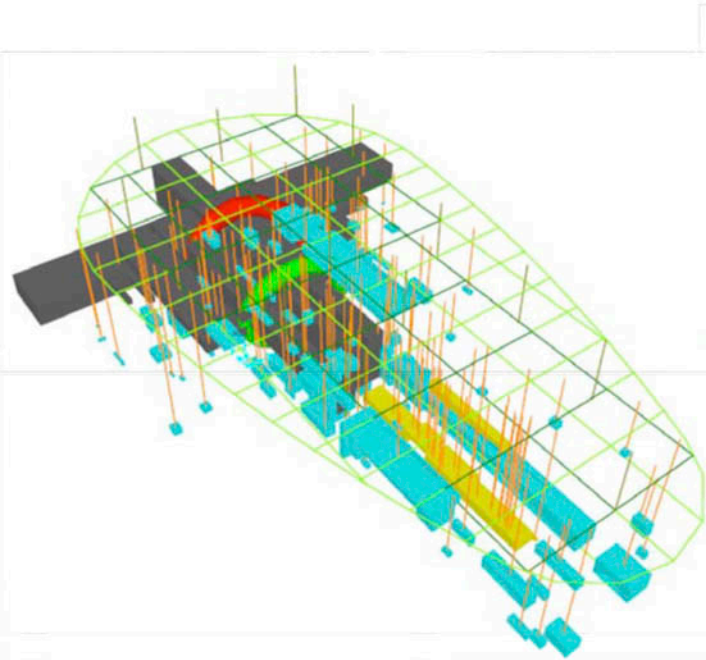
04 Small Hoop +

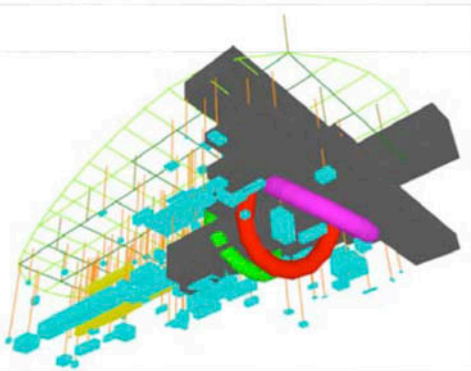
05 Pieces of Earth +

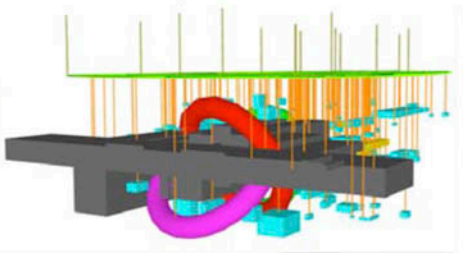
06 Particles +

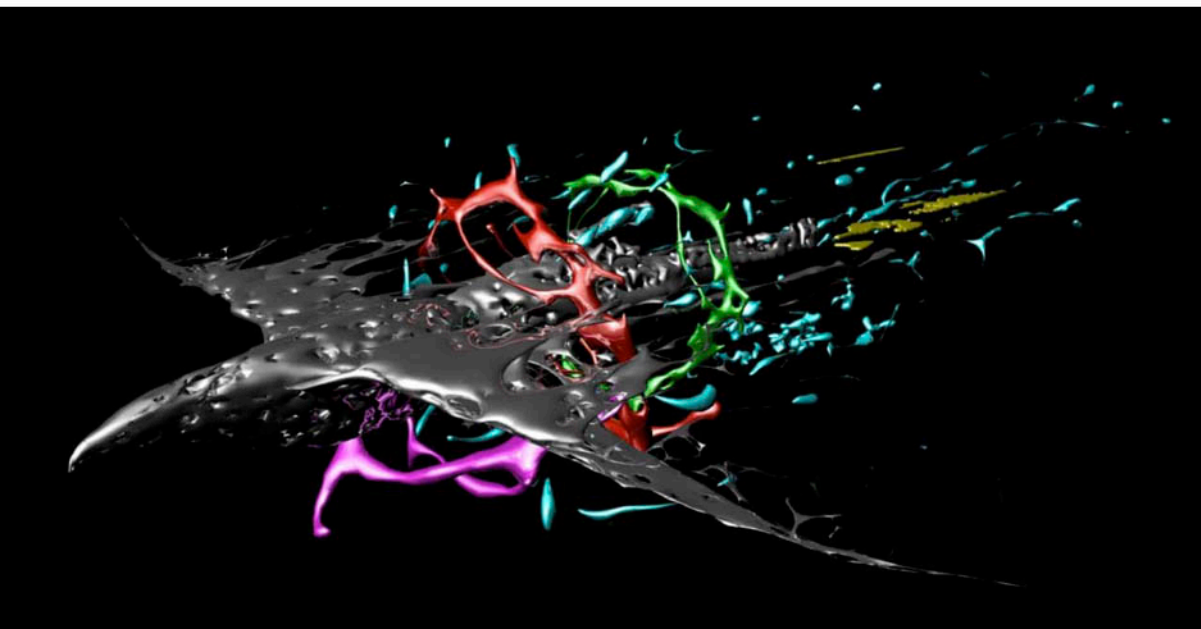
Process of calculation: For the structural calculations a numerical model has carried out in the program SAP NOT LINEAR VERSION 14.1, of the company CSI. The geometry of the sculpture has been reproduced from the files base provided by GIFRE.

The geometry reconstructs in the program of calculation SAP by means of parallelepipeds solid that make possible to approximate the distribution of real volume of the sculpture.









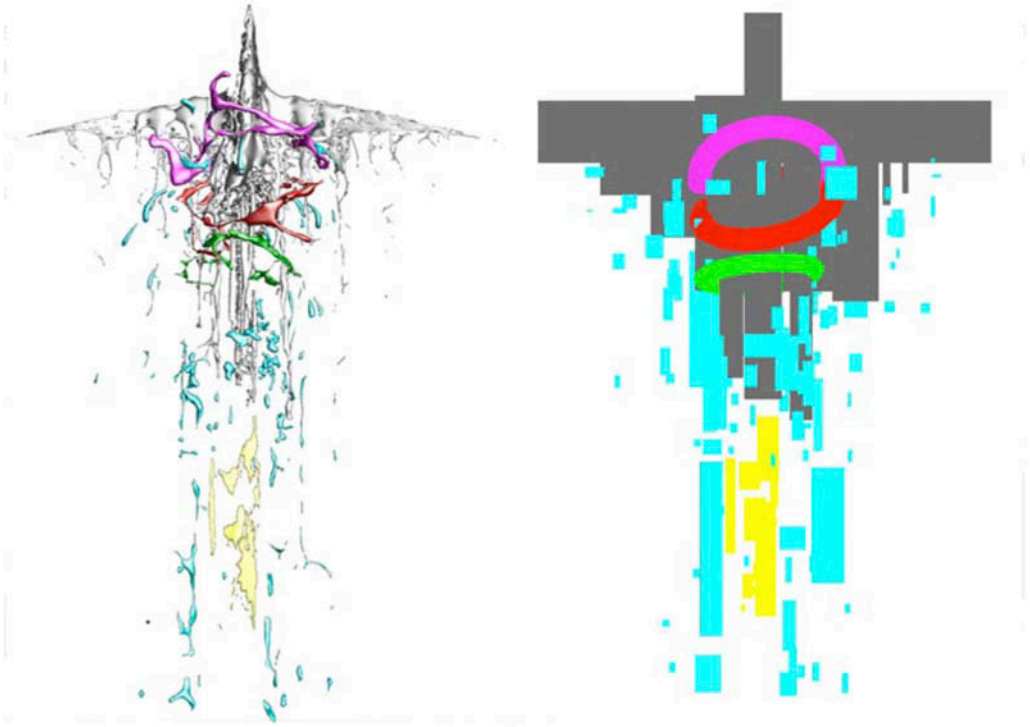
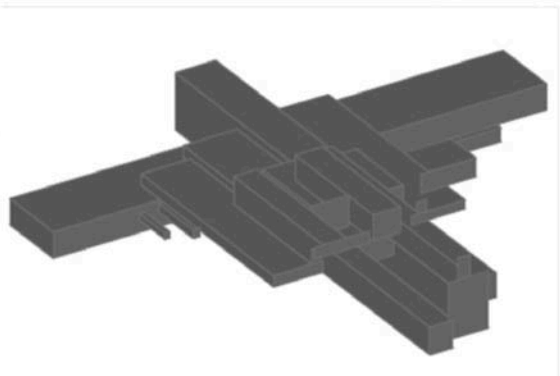


Image 3: Introduction geometry in parallelepipeds. Every colour represents a group of pieces. SAP

The design has been conceived so that the structure that supports the principal body is the main frame in such a way that the rest of groups, low piece, big hoop and small hoop, mate to her. Remaining groups, the pieces world and particles (pieces isolated of small volume) will be hung directly from the top structure.



The top platform of hangs of the sculpture with form of ovoid of 23m of length and a width that changes from 12m to 5.6m is a grid of beams.

The structure is formed by tubular rectangular beams forming a gridiron that will use as support for the platforms of tramex, by means of these platforms there will be realized the anchorage of the cables of sustentation of the sculpture

The platform is joined to the structure of the cover of the hall by means of a few tubular rectangular beams of 50cm of length.

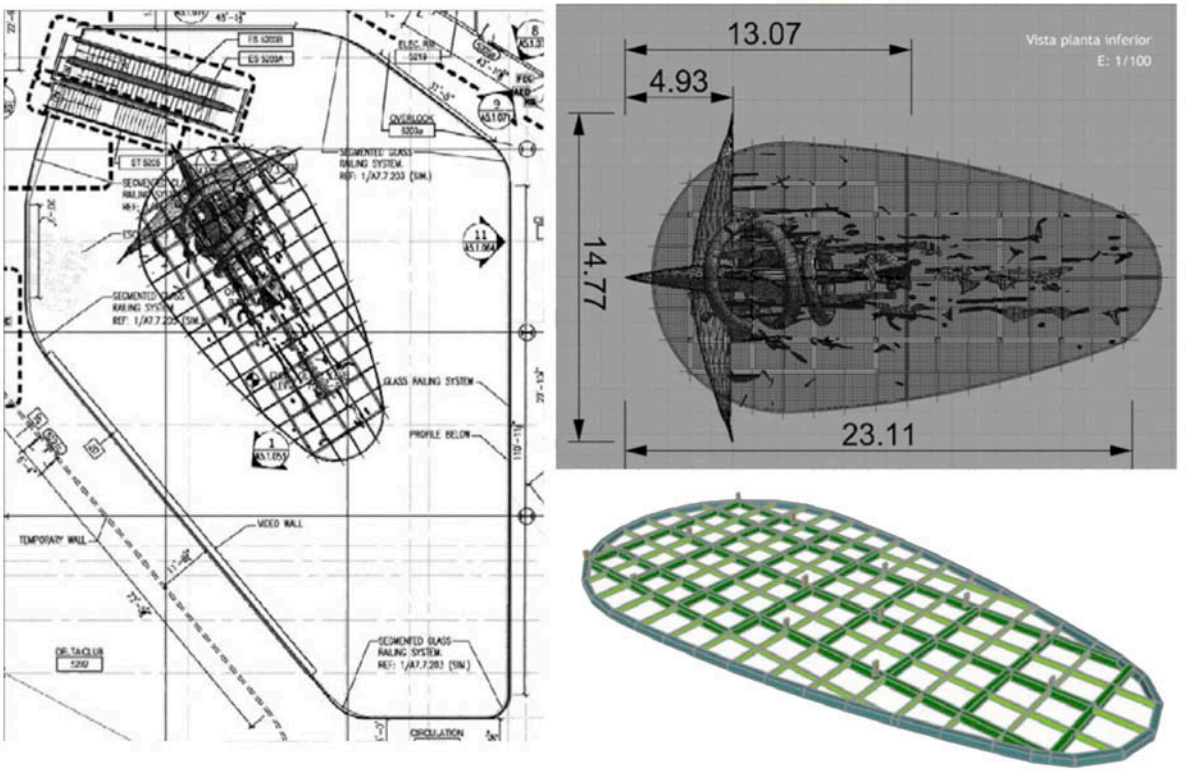


Image 5: The top platform of hangs of the sculpture: location, plant and perspective. SAP

The placement of the sculpture in the hall of the airport will be realized according to the following phases:

1. Placement of the elements of union of the platform with the structures of the cover of the hall.

2. Placement of the platform.

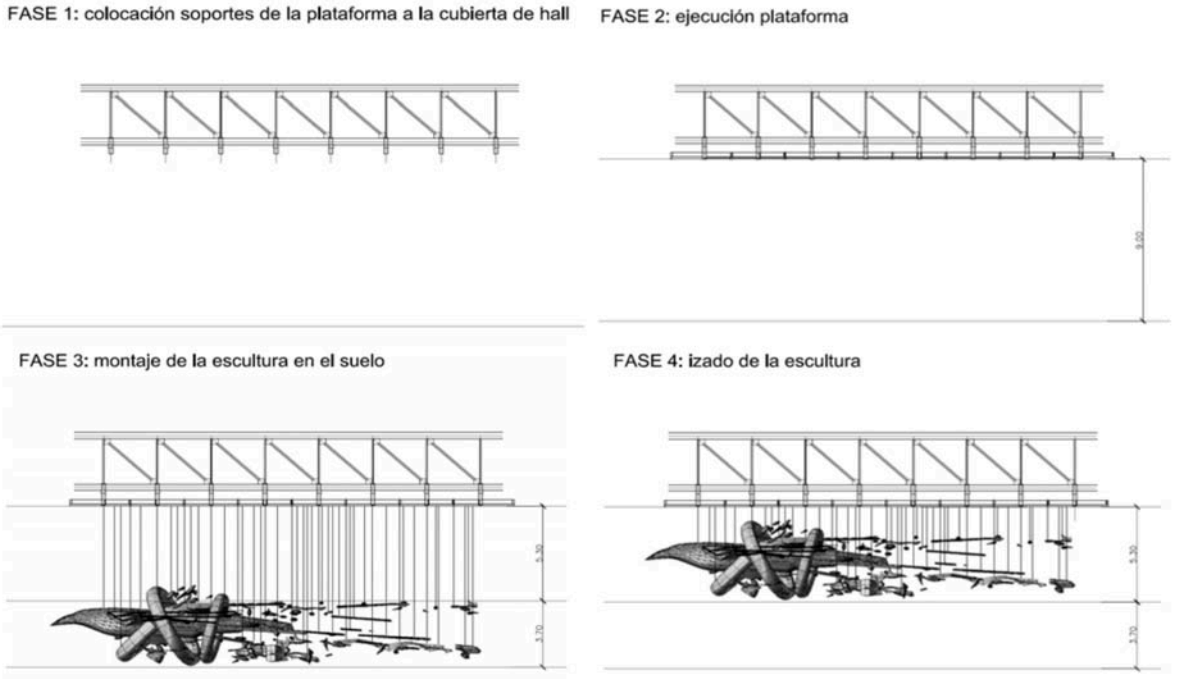
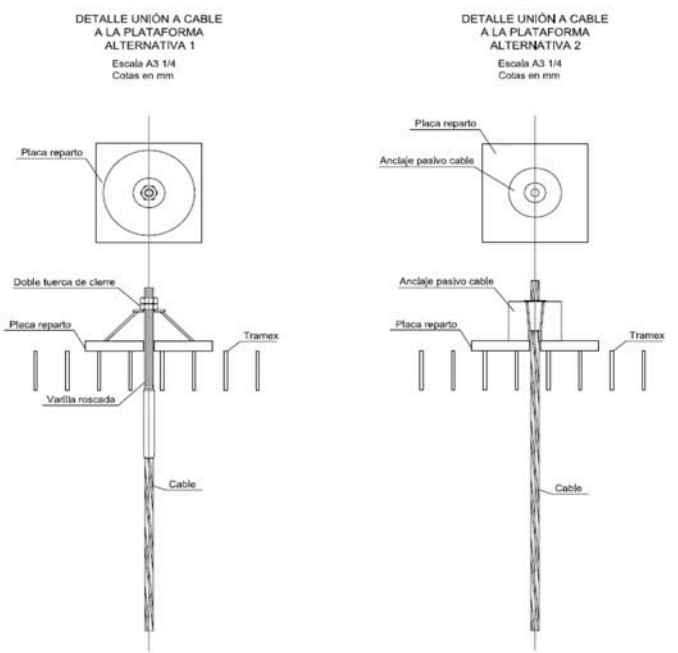


Image 6: Constructive phases.

Hang of the sculpture it is formed by cables of steel of different diameters variables between 3 and 18mm depending on the solicitations performers.



The cables join the internal skeleton of aluminium of the sculpture with the top platform hanging to the structure of the building.

The internal skeleton is composed by tubular beam of aluminium. The study of the beam is realized by groups considering the load provided by the parallelepipeds.

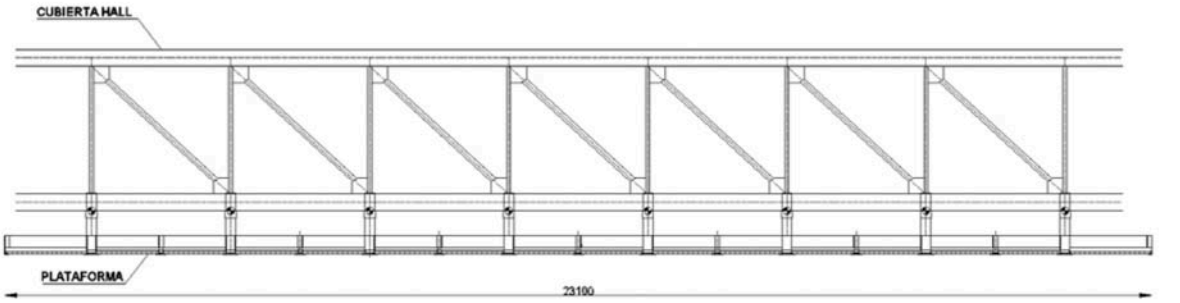


Image 8: Profile of the platform.

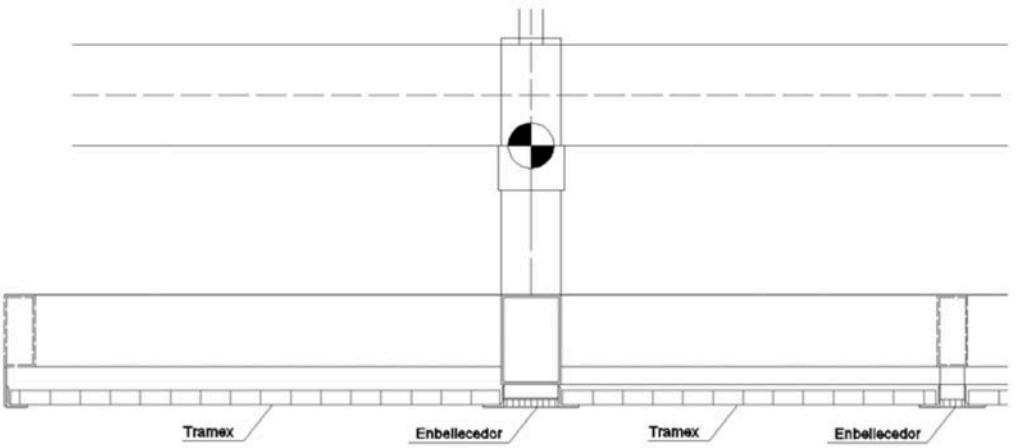
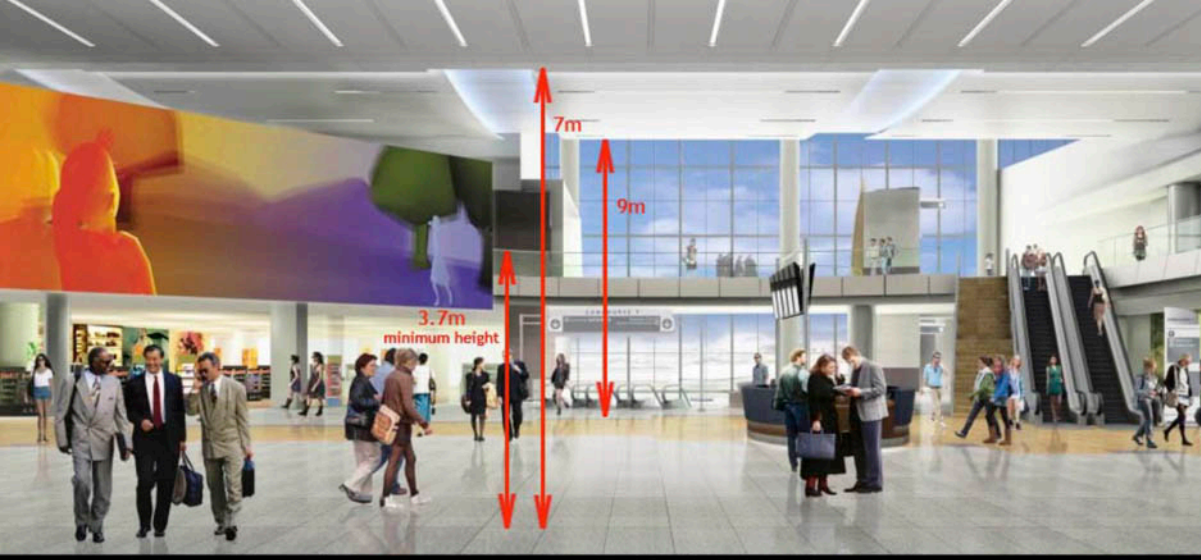
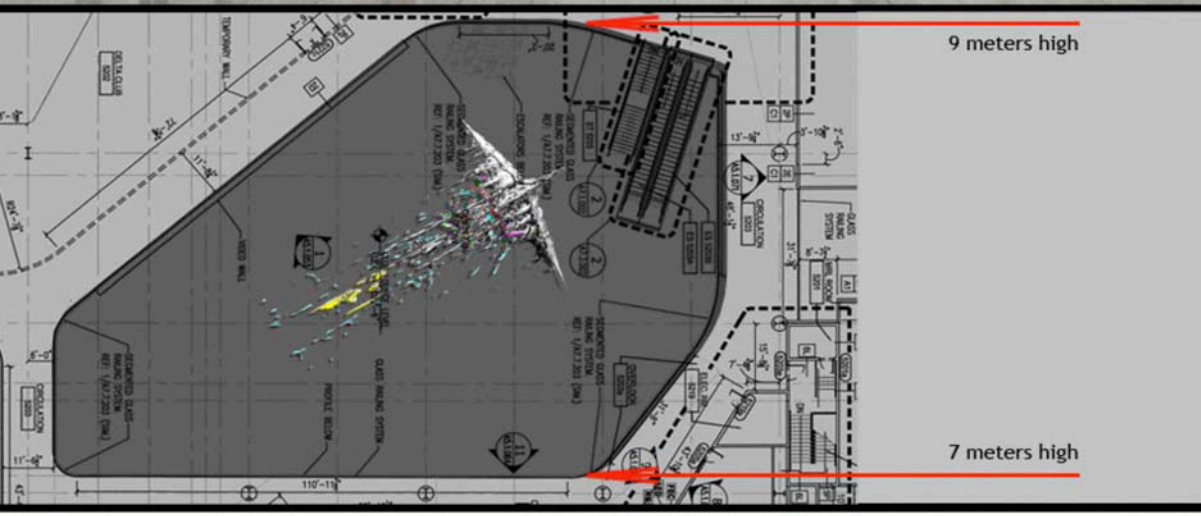
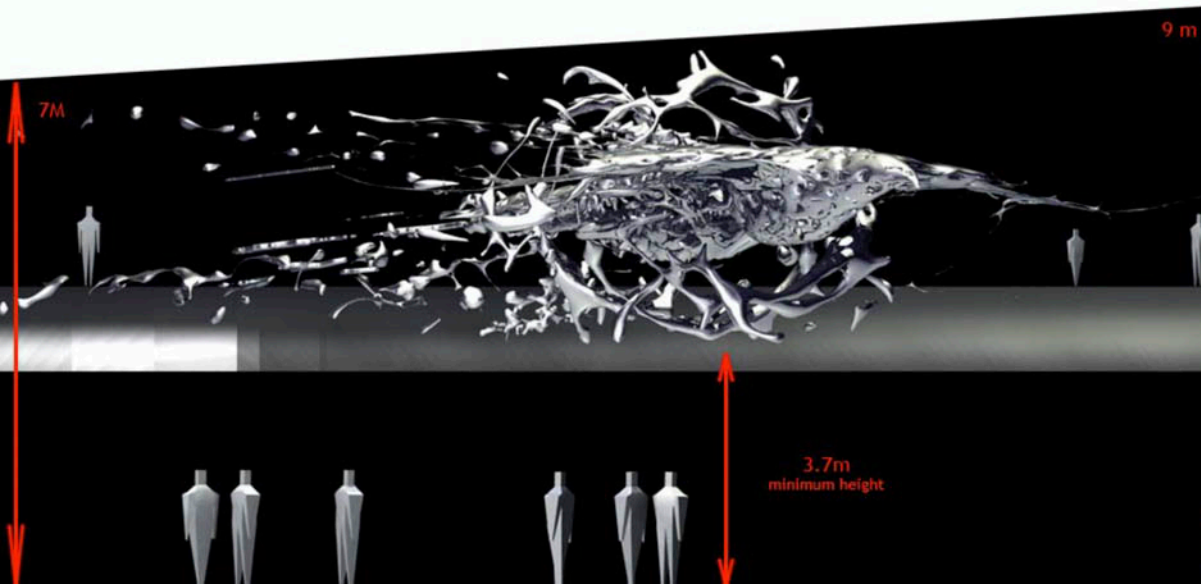


Image 9: Detail of union of the tramex to the structure of the auxiliary platform by means of beams in L. It is places a hub cap to cover the tubular beams and to show a reticulated uniform surface.


7m
9m
3.7m
minimum height


9 meters high
7 meters high


9 m
7M
3.7m
minimum height

Final Presentation