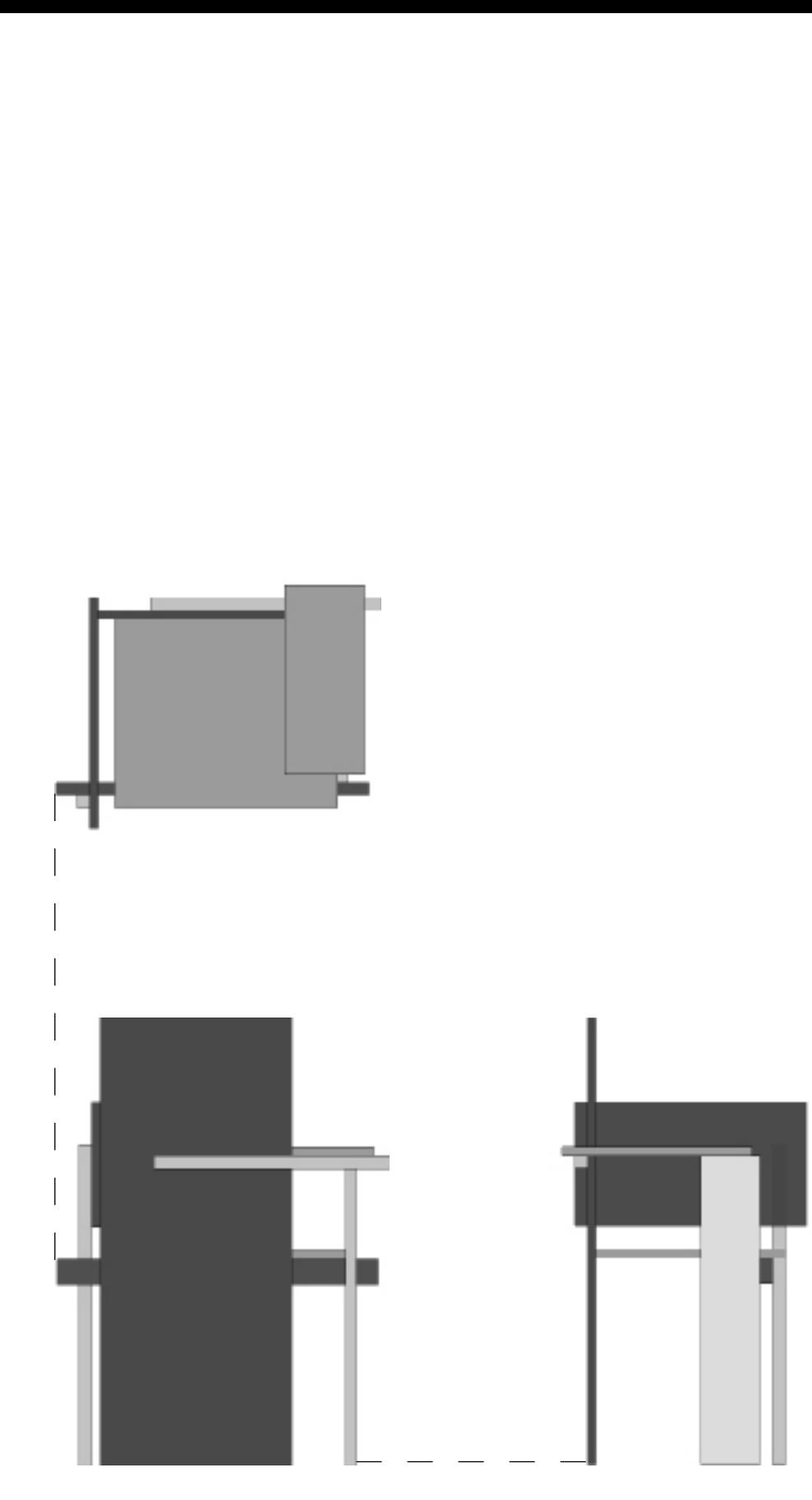
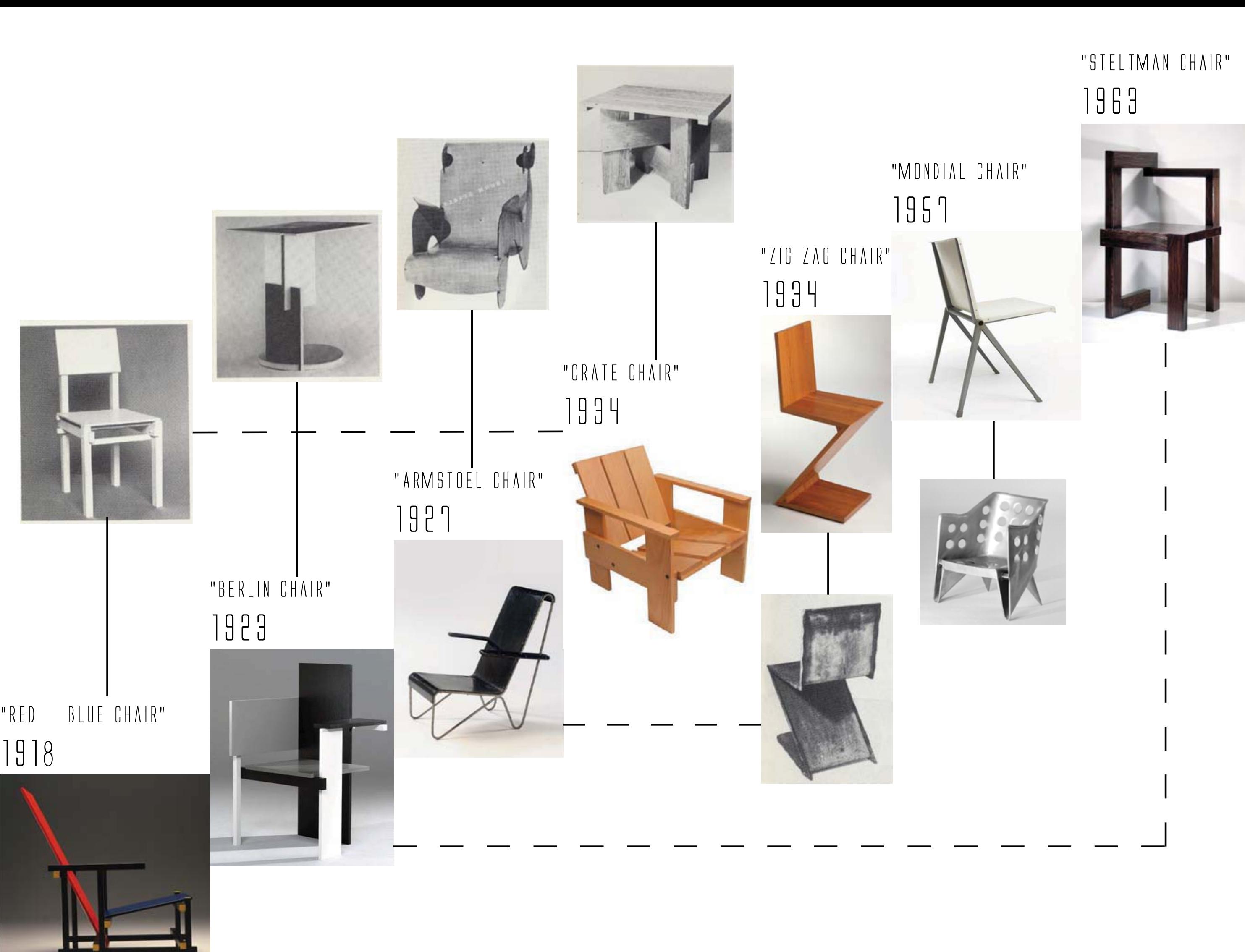


# RIACHUELO RECREATION COMPLEX - BUENOS AIRES



## 1. CASE STUDY - RIETVELD FURNITURE COLLECTION

A BODY OF GERRIT RIETVELD'S FURNITURE DESIGNS WAS SELECTED AND DISSECTED DURING A COMPREHENSIVE ANALYSIS. EACH DESIGN WAS DRAWN FROM MULTIPLE PERSPECTIVES AND BROKEN DOWN INTO ITS ELEMENTS IN ORDER TO IDENTIFY FORMAL PROCESSES/SYSTEMS IN EACH CHAIR.

## EX: BERLIN CHAIR

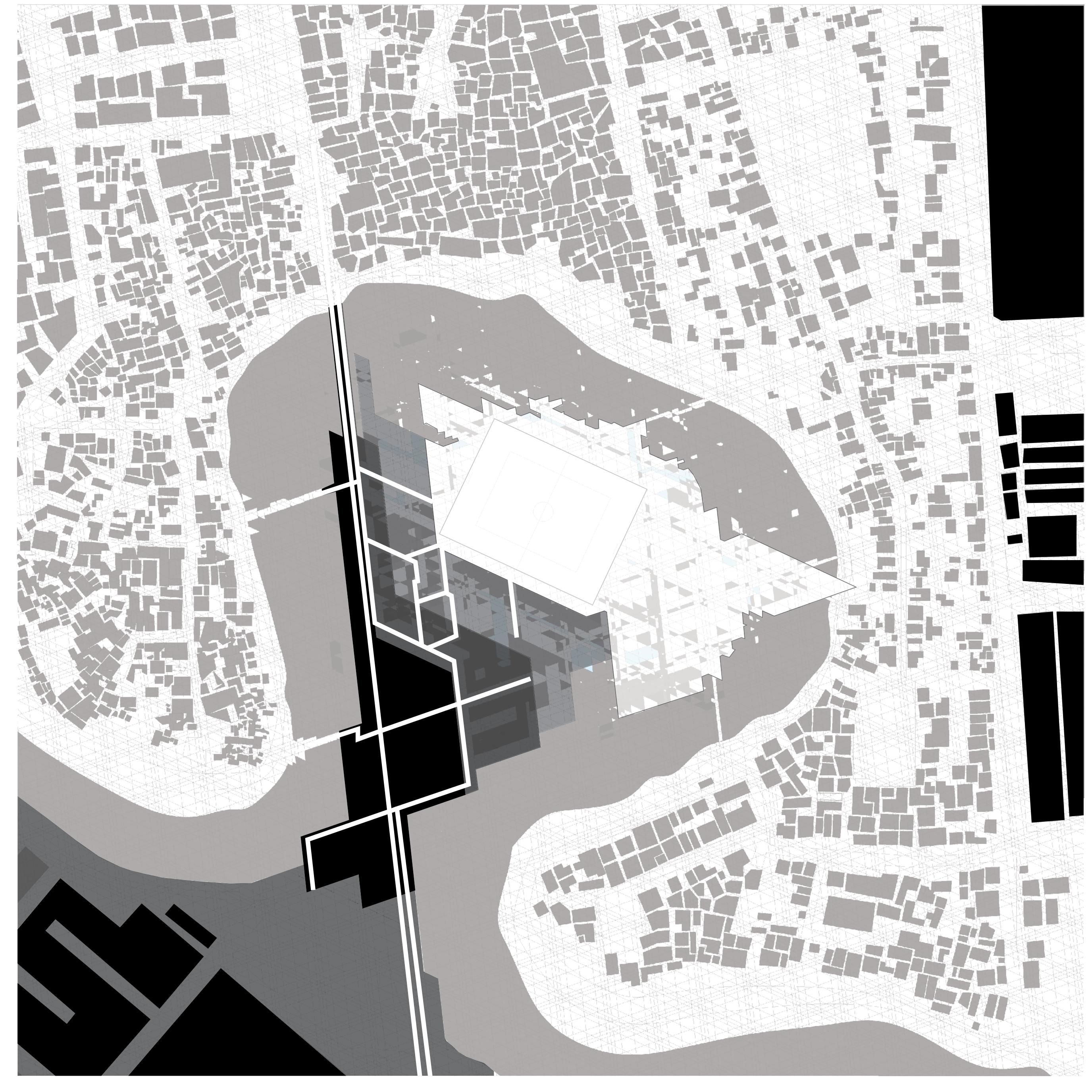
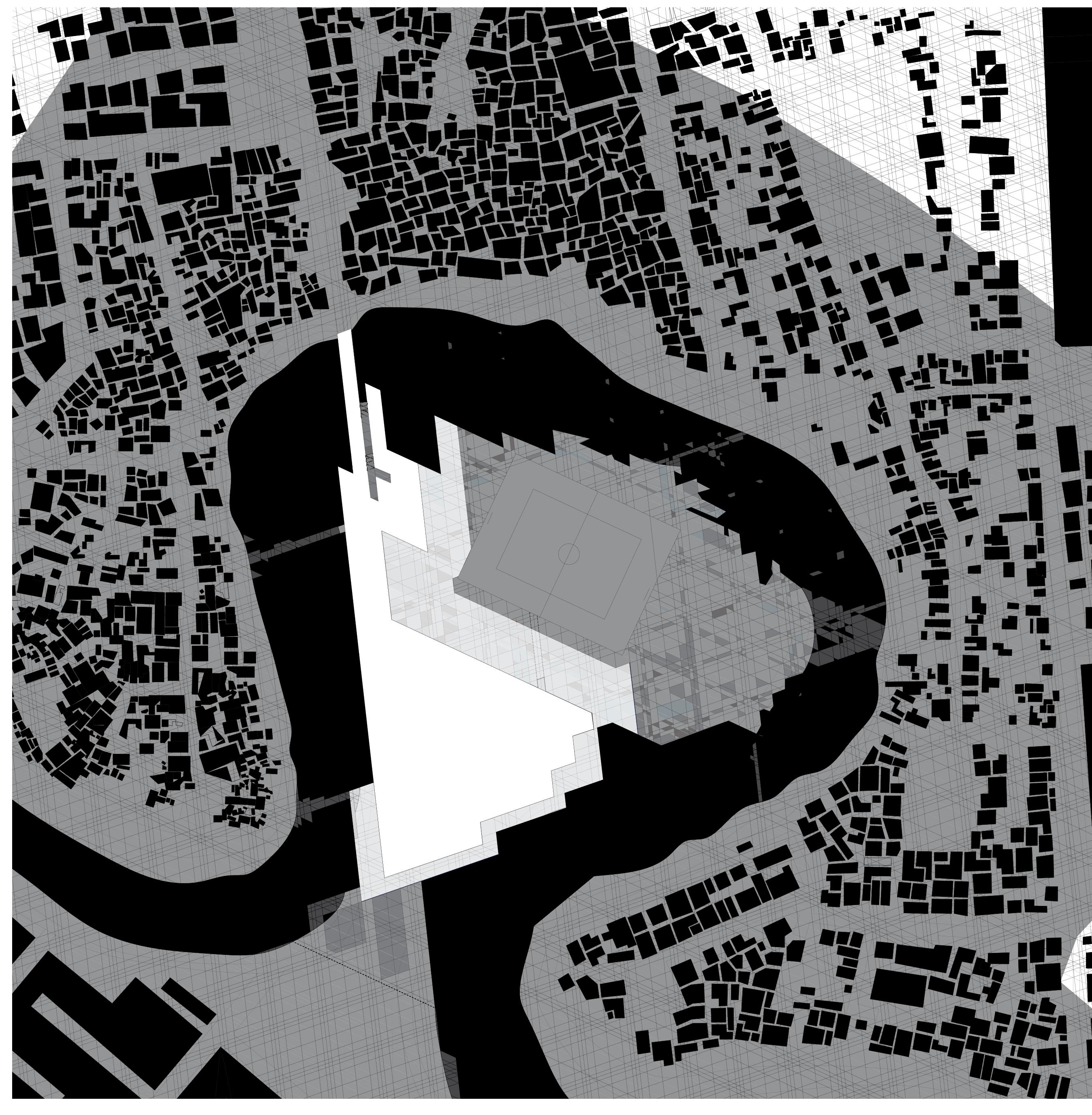
THE BERLIN CHAIR DEMONSTRATES A STRONG FORMAL SYSTEM INVOLVING ONLY THE USE OF CAREFULLY PLACED PLATES.

RIETVELD DEMONSTRATES HIS STUDY OF THE CREATION OF INTERSTITIAL SPACE AND INTRICATE RELATIONSHIP BETWEEN PARTS OF A WHOLE.

## 2D STUDY

THE BERLIN CHAIR IS UNIQUE FROM OTHER FURNITURE IN ITS ASYMMETRY, AND IT'S FORM THAT IS BOTH DIFFERENT FROM EVERY PERSPECTIVE, AS WELL AS NEARLY UNRECOGNIZABLE AS A CHAIR OR SEATING OBJECT.

IT INSTEAD STANDS AS ITS OWN UNIQUE OBJECT, AND PROVIDES THE VIEWER WITH VIEWS THAT CANNOT BE PROPERLY REPRESENTED OR FULLY UNDERSTOOD IN 2D.



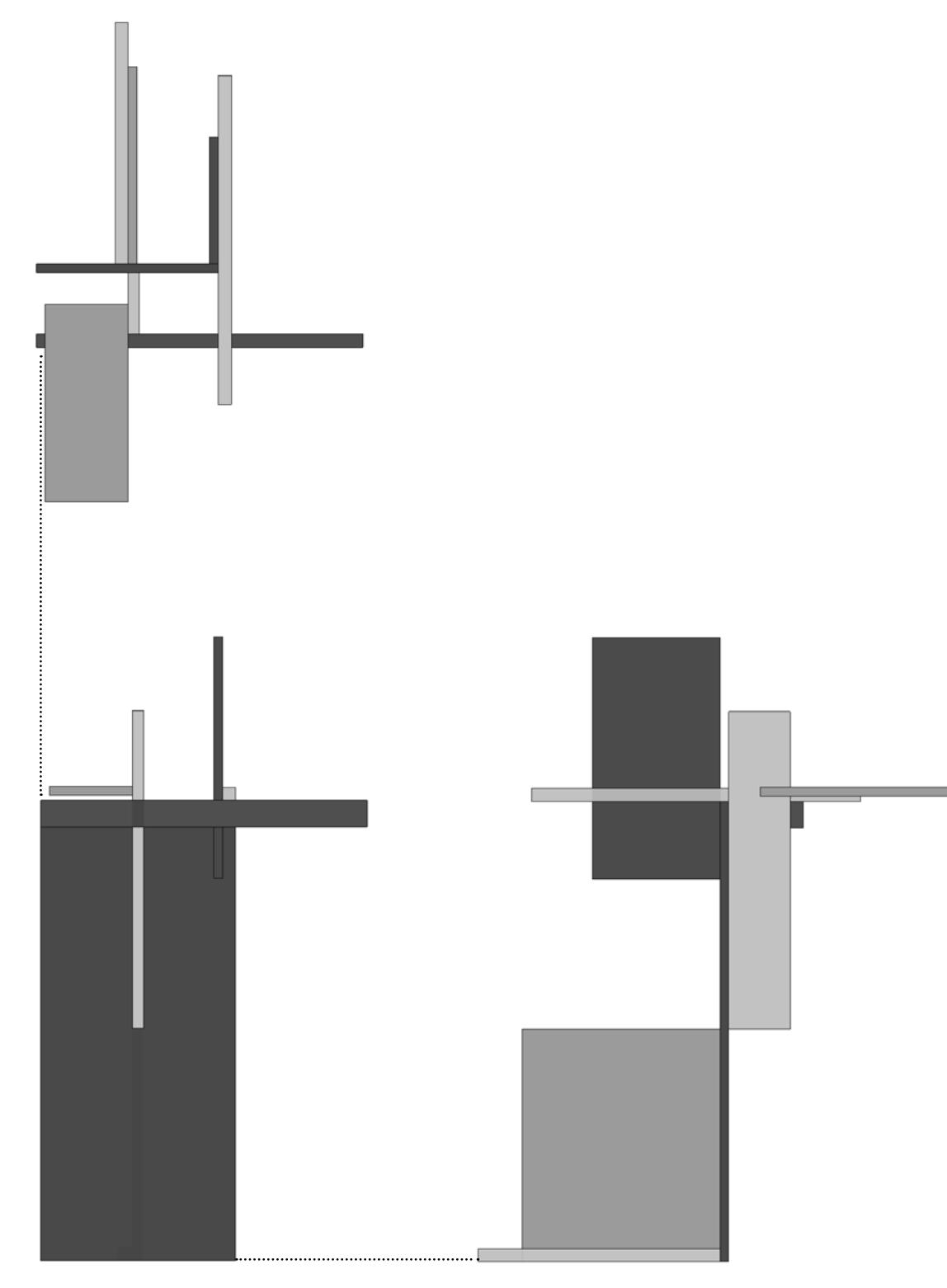
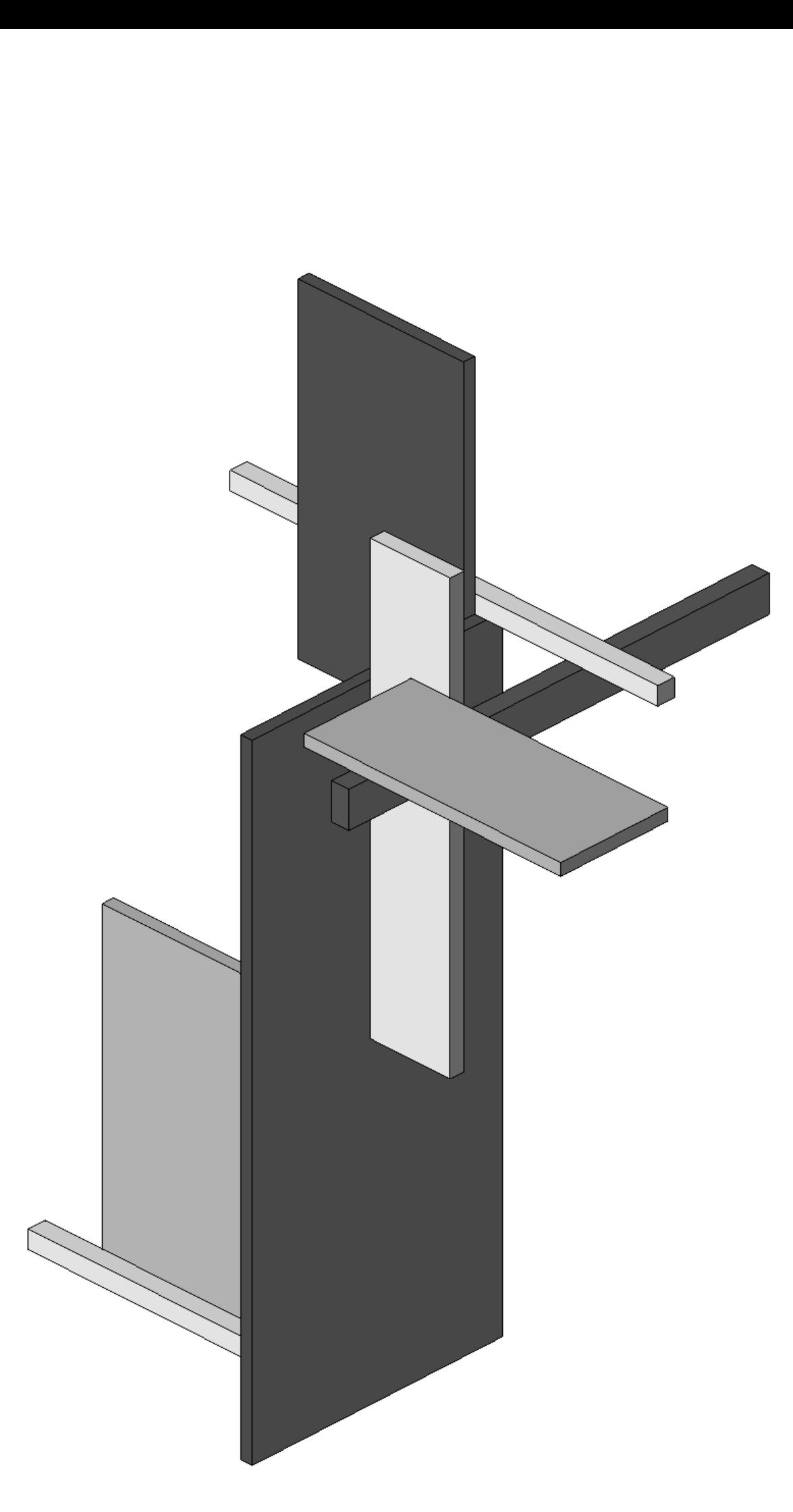
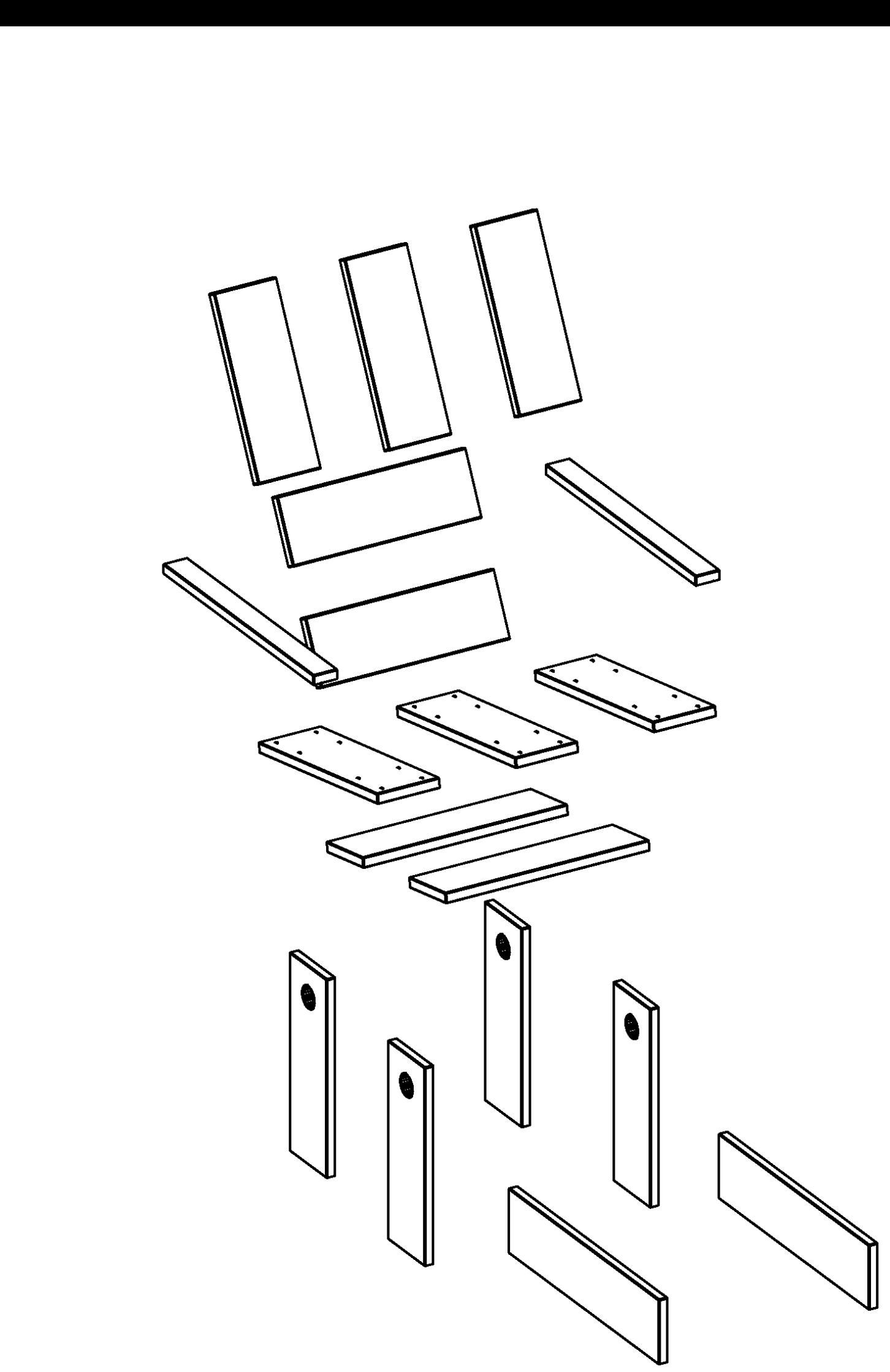
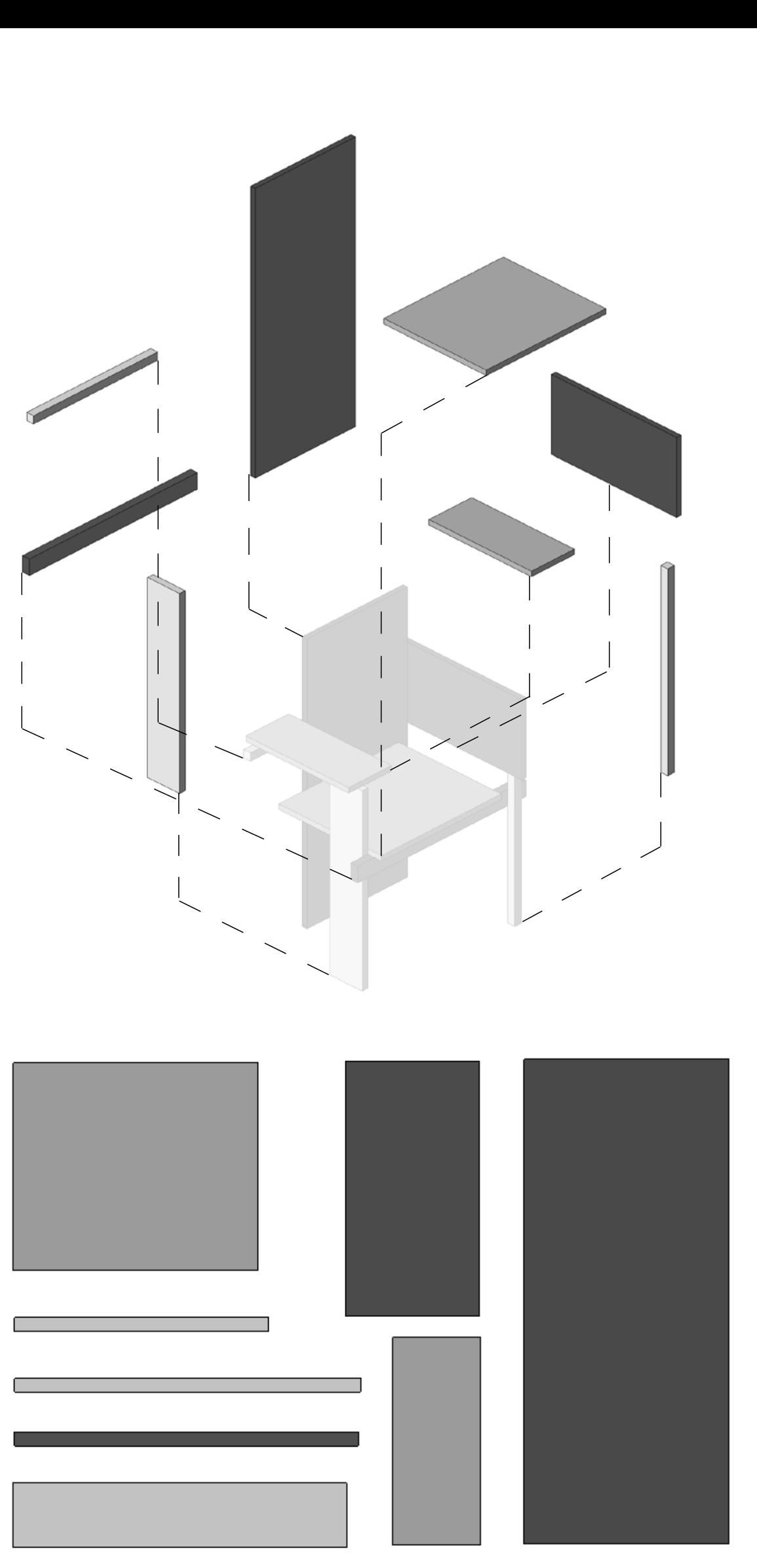
## ELEVATION + FLOOD ZONES

THE SITE FLOODS SOMETIMES, AND ZONES OF DENSER PROGRAMMATIC ELEMENTS ARE PLACED ON RAISED TERRACES TO PROVIDE PROTECTION FROM WATER INVASION.

## CIRCULATION + PROGRAM SCALE

PROGRAM ORGANIZATION IS BASED UPON EXISTING ACCESS POINTS TO SITE, AND IT'S SURROUNDING ENVIRONMENT. HEAVY-DUTY PROGRAM AND FUTURE EXPANSION SPACE OCCUPIED LARGE, DEFINED BLOCKS WITH TALL ELEVATIONS ON THE SOUTH END OF THE SITE, REFLECTING THE EXISTING INDUSTRIAL ZONE IT IS CONNECTED TO. AS THE PLAN REACHES NORTH TOWARD VILLA 21+H, PROGRAM ZONES BECOME LESS DENSE AND MORE FRAGMENTED, FEATURING LOWER ELEVATION CONSTRUCTIONS SUCH AS BENCHES, TERRACES, AND VARYING GROUNDCOVER.





## 2. DISSASSEMBLY / PARTS ANALYSIS

EACH CHAIR IN THE COLLECTION WAS EXPLODED IN 3D IN ORDER TO GAIN UNDERSTANDING OF ITS ASSEMBLY AND REVEAL THE INTERACTIONS BEHIND THE FORMAL SYSTEM USED.

## PARTS KIT

THE BERLIN CHAIR IS ENTIRELY CONSTRUCTED OF INTERSECTING PLANES. WHEN LAID OUT FLAT, THESE PARTS MAKE A FAIRLY CONSISTENT KIT THAT REVEALS THAT THE CHAIR'S DESIGN RELIES HEAVILY ON THE PROPORTION AND PLACEMENT OF EACH PLANE IN RELATION TO ANOTHER.

INSPIRATION ALSO FOUND IN RIETVELD'S USE OF "SANDWICHING" MORE THAN ONE PLANE TOGETHER, AS DEMONSTRATED IN HIS "CRATE CHAIR".

## 3: REFORMATION

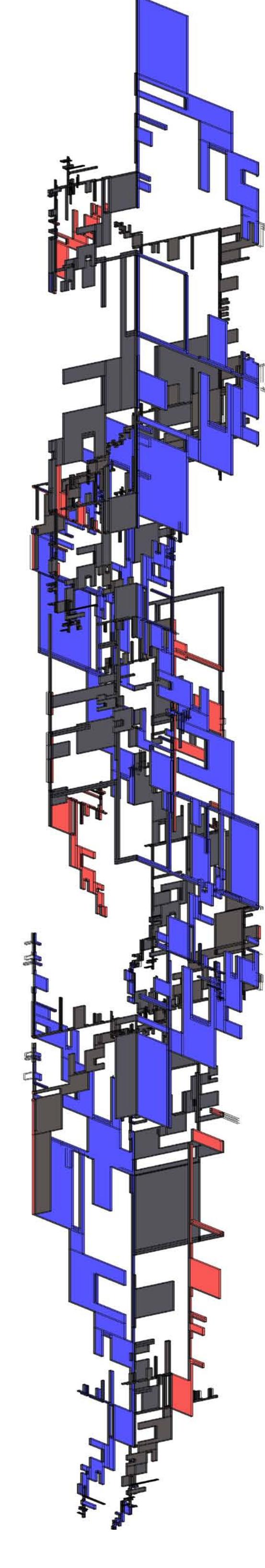
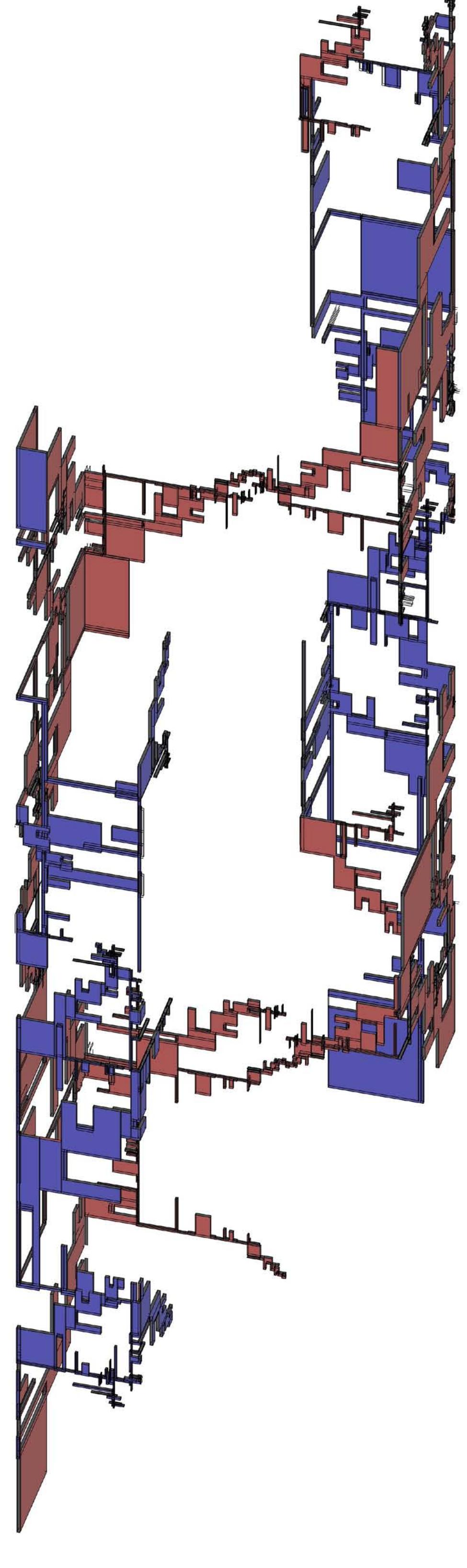
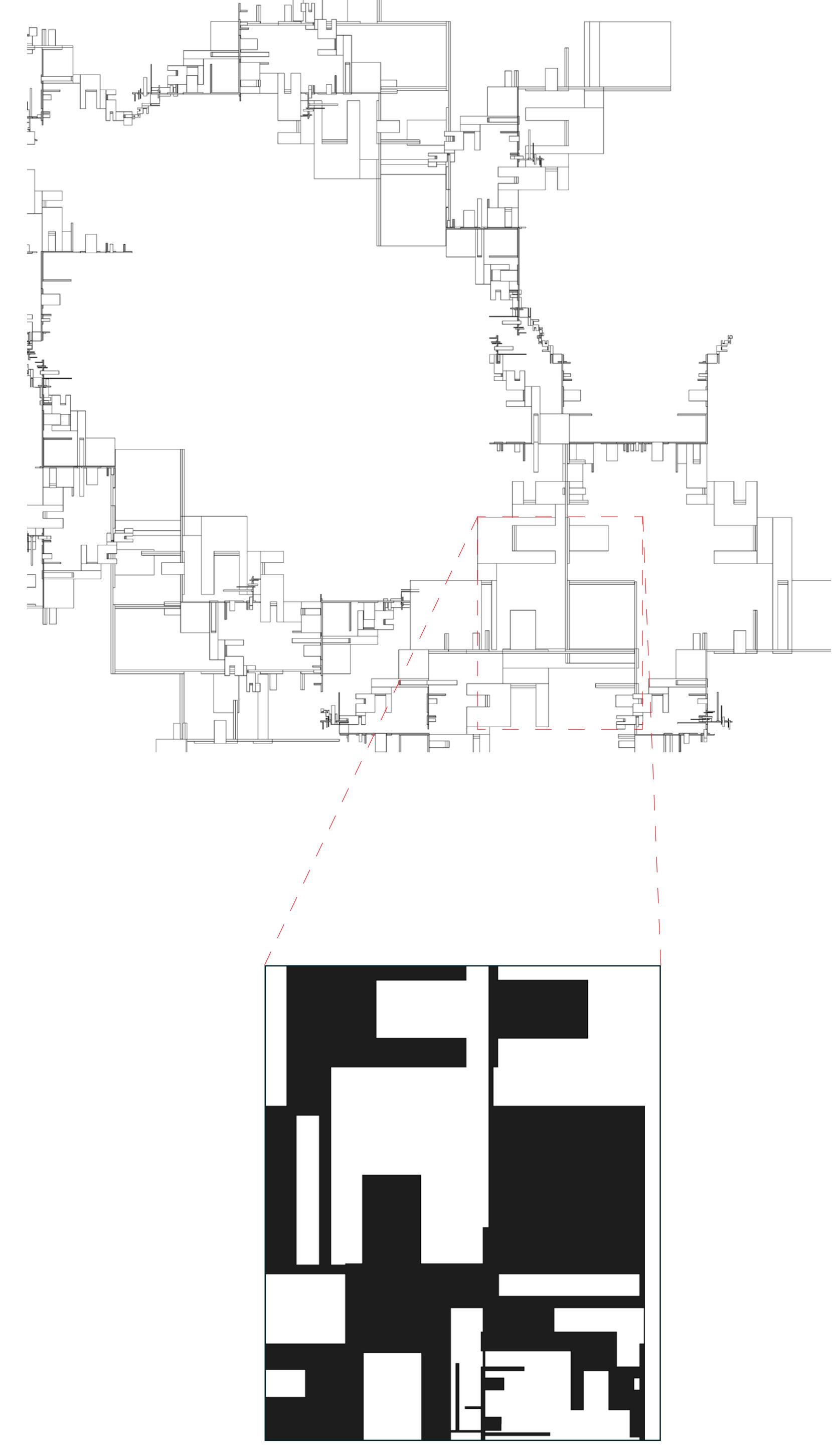
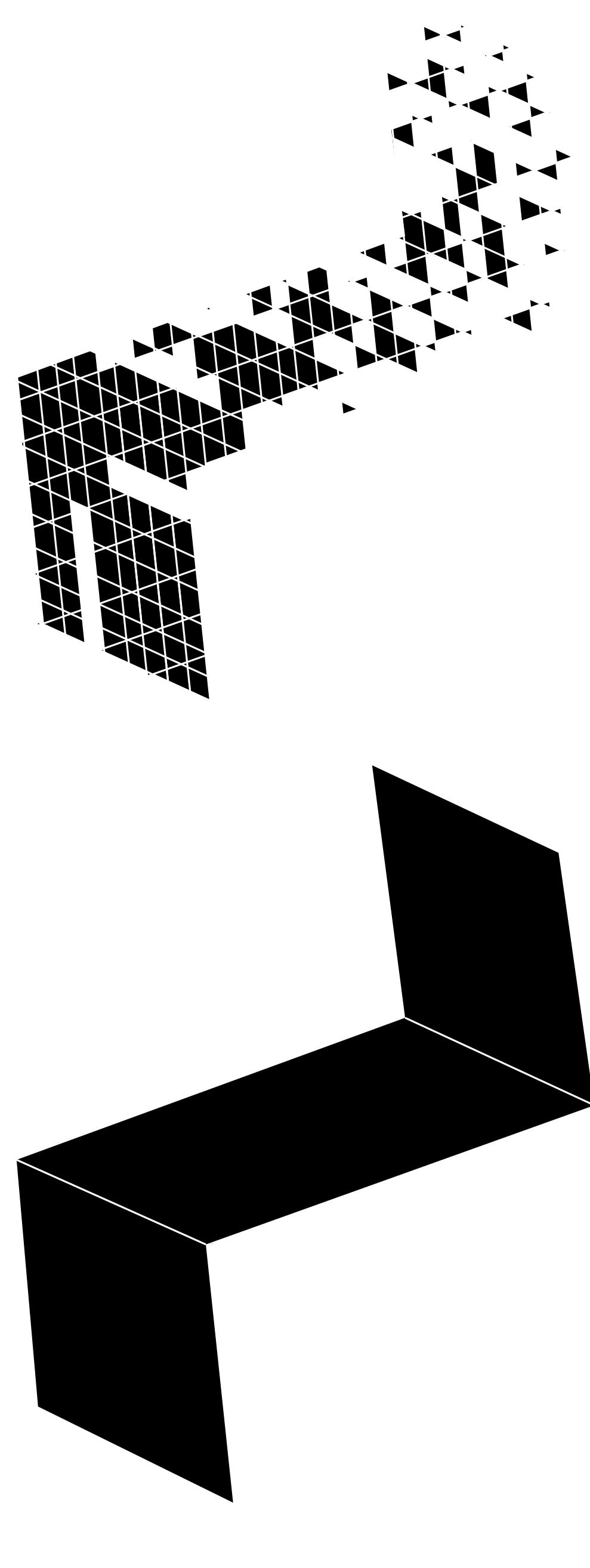
AN ORIGINAL 3D PERMUTATION USING THE SAME KIT OF PARTS FROM THE BERLIN CHAIR.

THIS INTERACTION WAS DESIGNED TO BE IN OPPOSITION TO THE SPATIAL QUALITIES OF THE ORIGINAL CHAIR, CREATING IMPLIED VOLUMES AROUND A CENTRAL MASS, AS OPPOSED TO IMPLIED INTERNAL VOLUMES LIKE IN THE ORIGINAL CHAIR.

## 2D STUDY OF REFORMATION

JUST LIKE THE ORIGINAL BERLIN CHAIR, THE REFORMATION FOLLOWS THE SAME RULESET, AND RESULTS IN A 2D STUDY SIMILAR IN EFFECT TO THE BERLIN CHAIR.

THE OBJECT HAS VERY DIFFERENT 2D PROFILES FROM EACH PERSPECTIVE, AND ITS 3D QUALITIES ARE LOST WHEN IT IS SHOWN IN ORTHOGRAPHIC PROJECTION.



## FIGURE GROUND DISINTEGRATION

SITE DEVELOPMENT CONTINUED WITH THE IDEA OF A GRID CONTROLLING THE MASSING AND GEOMETRY OF STRUCTURE ON THE SITE.

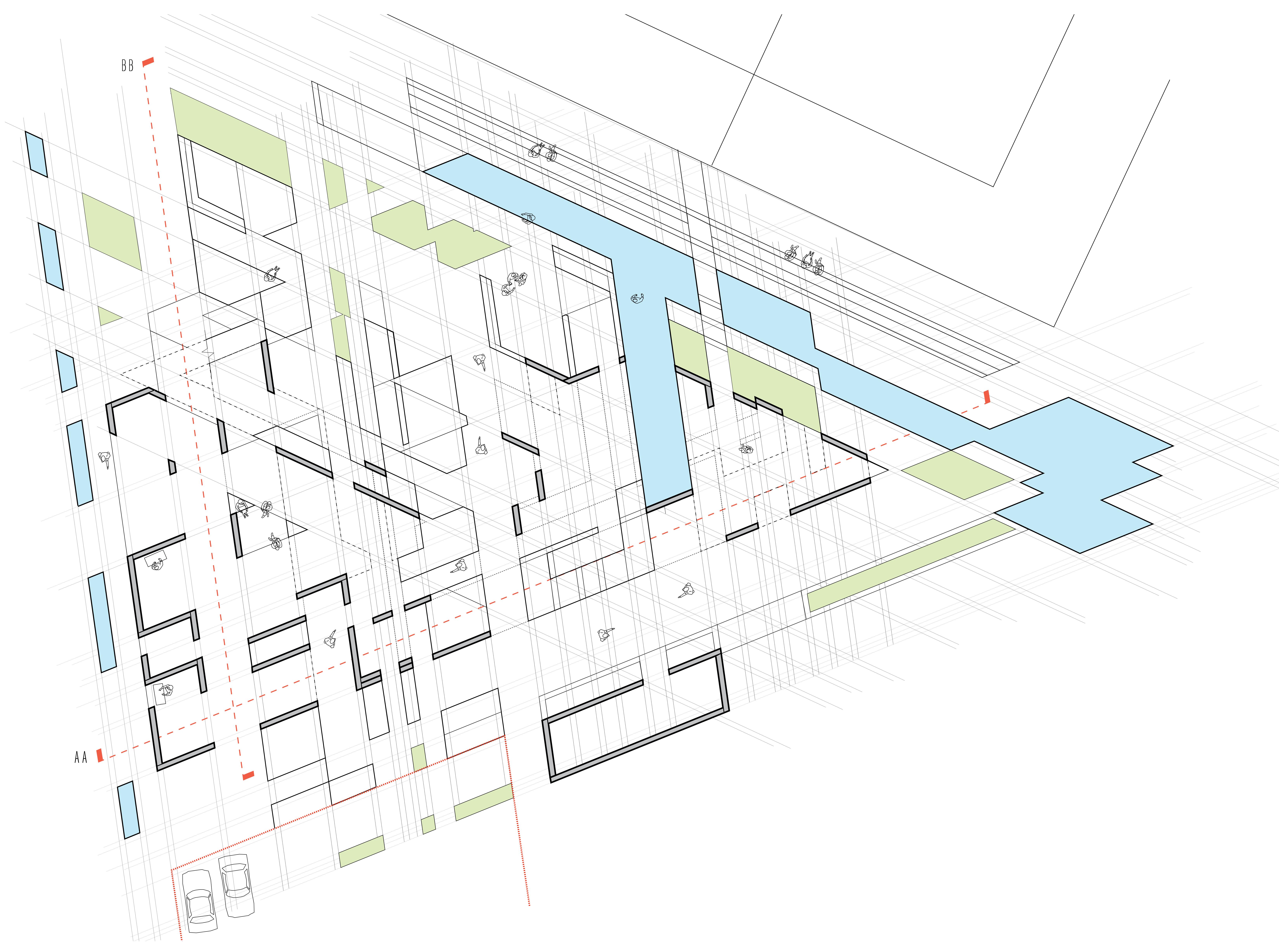
IT WAS NOTED THAT A STRONG FIGURE-GROUND RELATIONSHIP COULD DEVELOP.

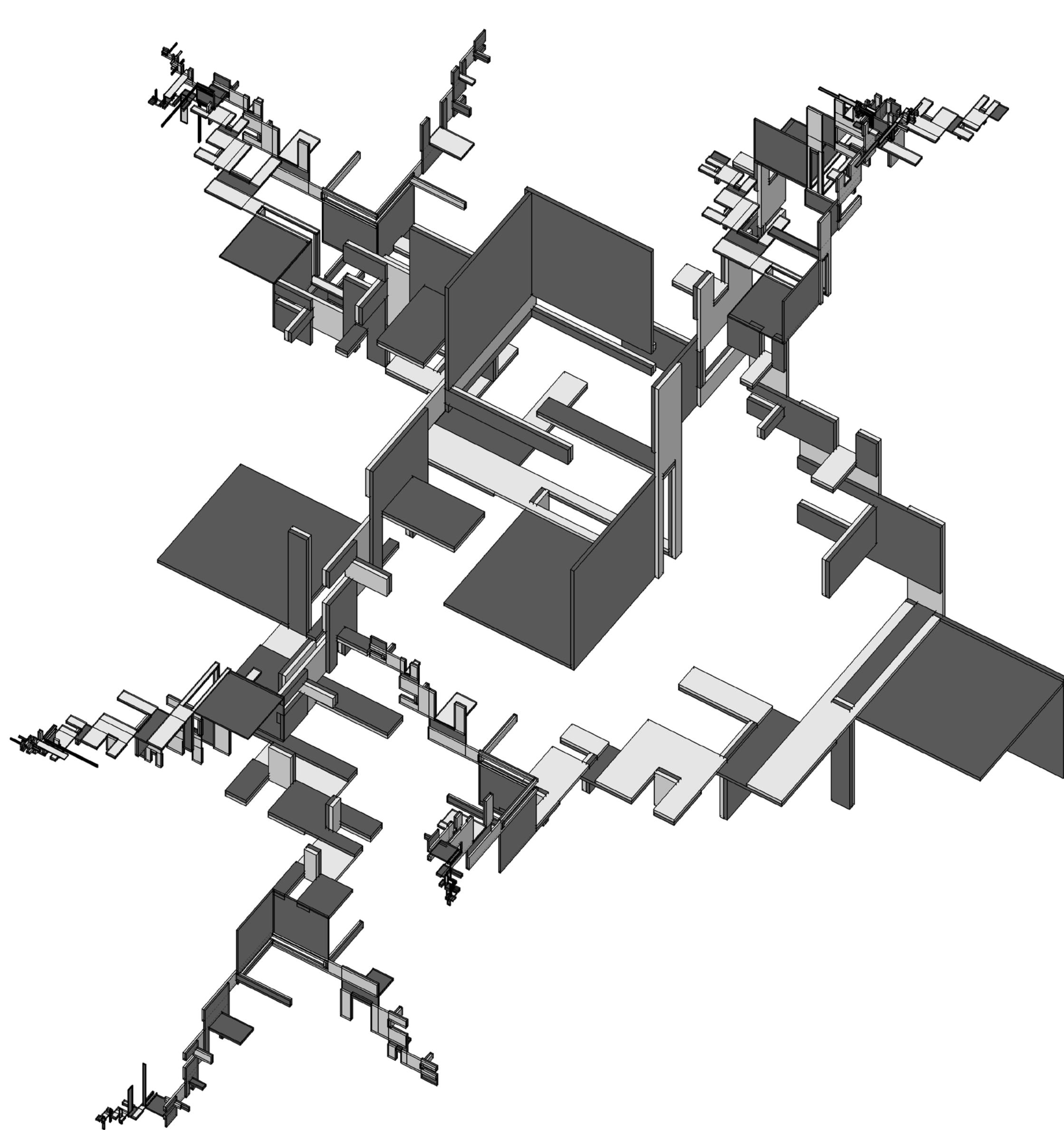
## FLATTENED PROJECTION: 3D TO 2D

THE 3D AGGREGATION WAS THEN FLATTENED INTO A FIGURE GROUND FIELD, IMPACTUS BEING THAT EVEN MORE LAYERING AND INTRICATE 2D RELATIONSHIPS WERE GENERATED EACH TIME THE 3D FORM WAS FLATTENED ONTO ITSELF INTO A CONTINUOUS SURFACE WITH HOLES.

## MULTIDIRECTIONAL FOLDING: 2D BACK TO 3D

THE FLATTENED 3D FIGURE GROUND PROJECTION WAS THEN RE-FOLDED ONTO ITSELF IN A NEW SERIES OF SPACE STUDIES. THE NEW 3D OBJECT STUDIES DEMONSTRATED GREATER POTENTIAL IN SPATIAL RICHNESS, COMPLEXITY, AND OPPORTUNITY TO CREATE A WIDER VARIETY AND SCALE OF SPATIAL RELATIONSHIPS IN 3D.

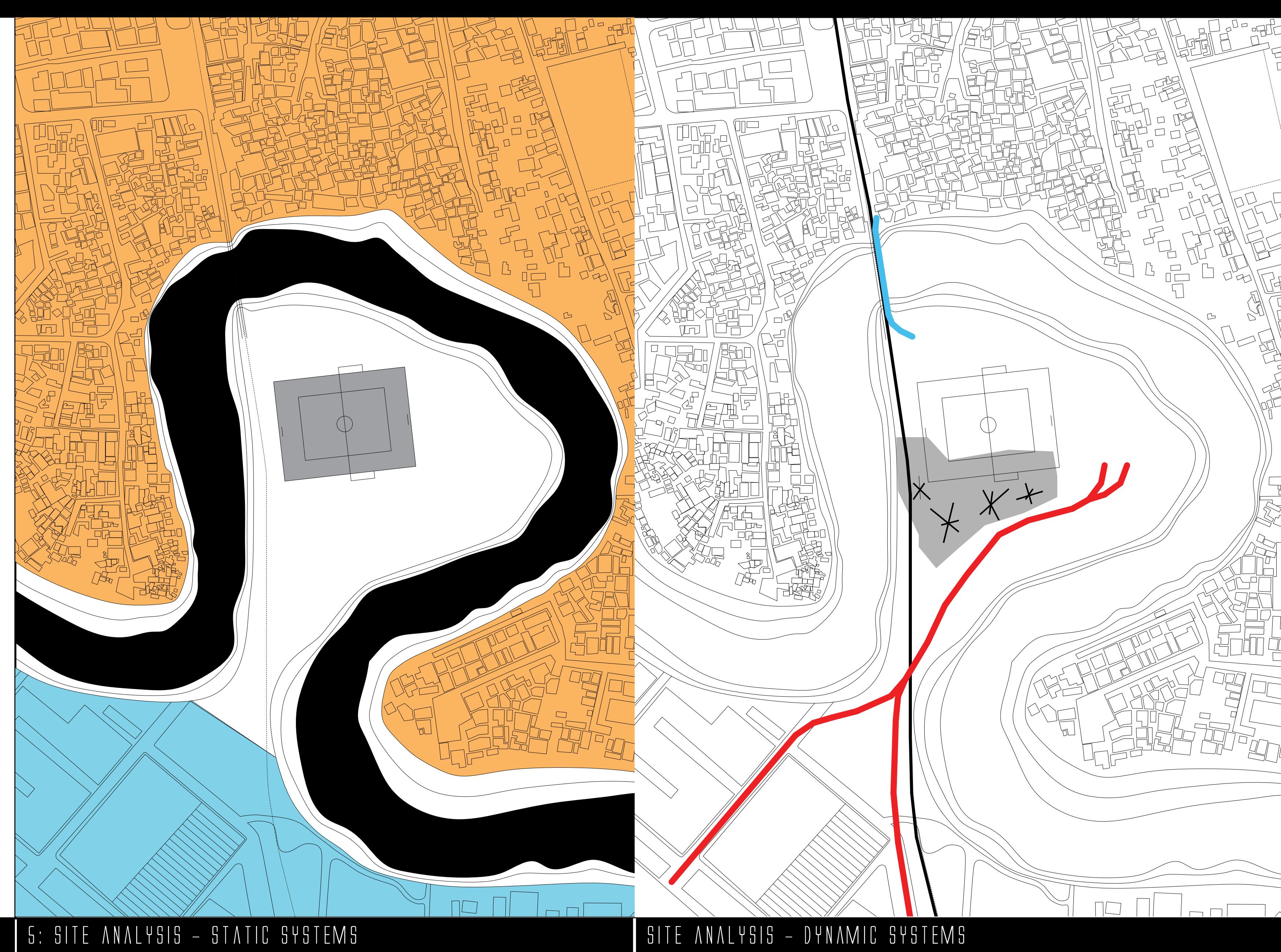




## 4. 3D AGGREGATION

THE PARTS KIT WAS USED TO BEGIN A 3D EXPLORATION UTILIZING THE FORMAL TECHNIQUES DERIVED FROM RIETVELD'S BERLIN AND CRATE CHAIRS. TWO FORMS OF SELF-REFERENTIAL INTERSECTION: FOLDING, SANDWICHING, AND SCALING WERE USED TO GENERATE A NEW SPATIAL OBJECT THAT CAN GROW TO FILL AN ENTIRE FIELD WITH INTERSTITIAL SPACES AND ORGANIC FORMS.

SANDWICHING PLAYS AN INTEGRAL ROLE, AS MANY PIECES BEGIN TO FORM BY THE FOLDING OF TWO OR MORE "PARTS" ONTO THEMSELVES USING CUTS DEFINED BY THE OVERLAPPING SURFACE INTERSECTION OF TWO PARTS.



## 5: SITE ANALYSIS - STATIC SYSTEMS

RECHUELO PENINSULA, BUENOS AIRES, IS A GRASSY ISLAND-LIKE LAND FORMATION NESTLED BETWEEN THE VILLA 2124 INFORMAL HOUSING COMMUNITY, AND AN INDUSTRIAL ZONE TO THE SOUTH.

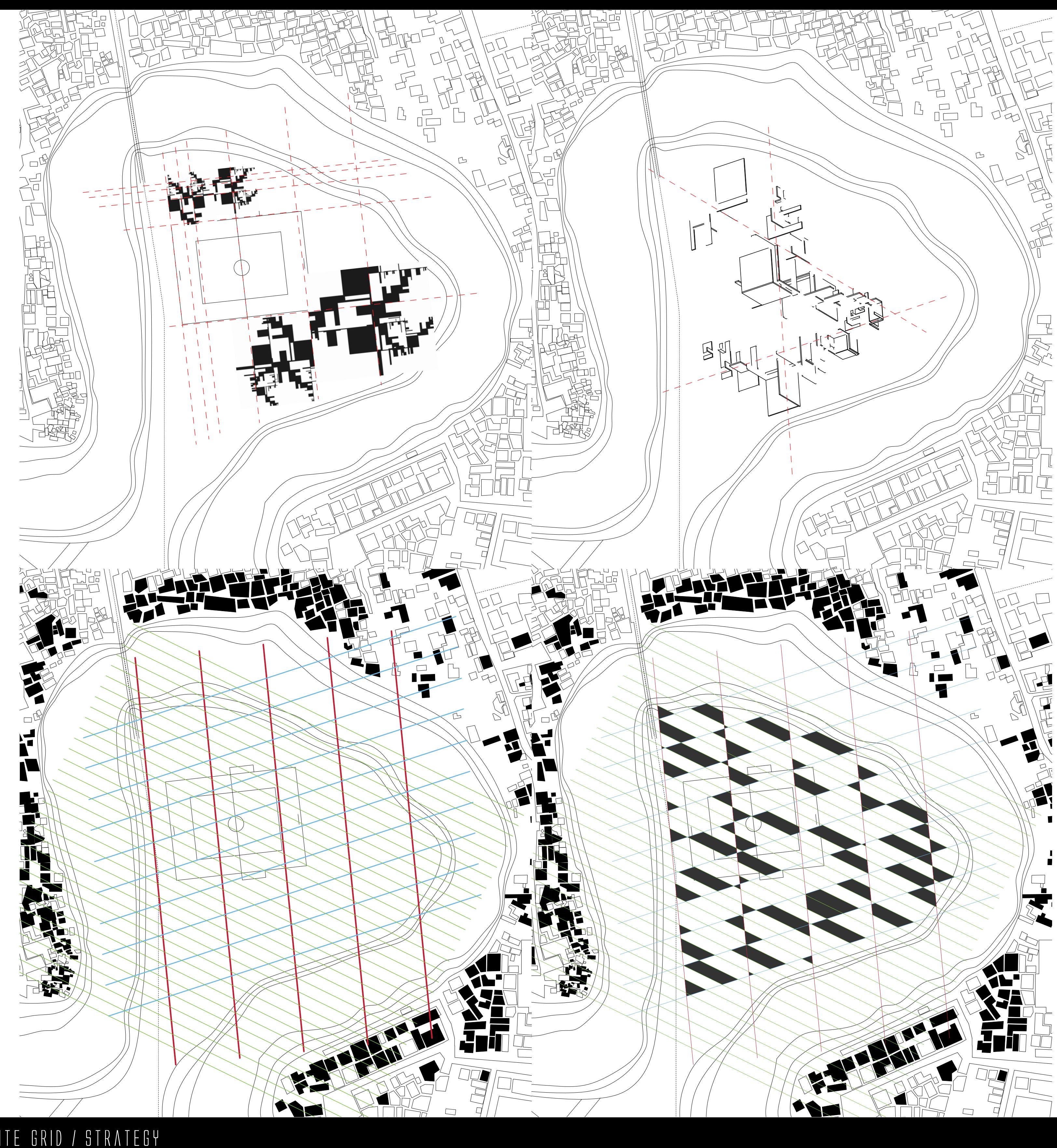
A SOCCER FIELD AND A RAILROAD ARE THE ONLY TWO SIGNIFICANT STRUCTURES ON THE SITE.

## SITE ANALYSIS - DYNAMIC SYSTEMS

VEHICULAR ACCESS (RED) BY LAND FROM THE SOUTHERN INDUSTRIAL ZONE

PEDESTRIAN ACCESS (BLUE) BY BRIDGE FROM THE NORTH

SOME EXISTING TREES PROVIDE SHADE TO THE SOUTHERN EDGE OF THE FIELD



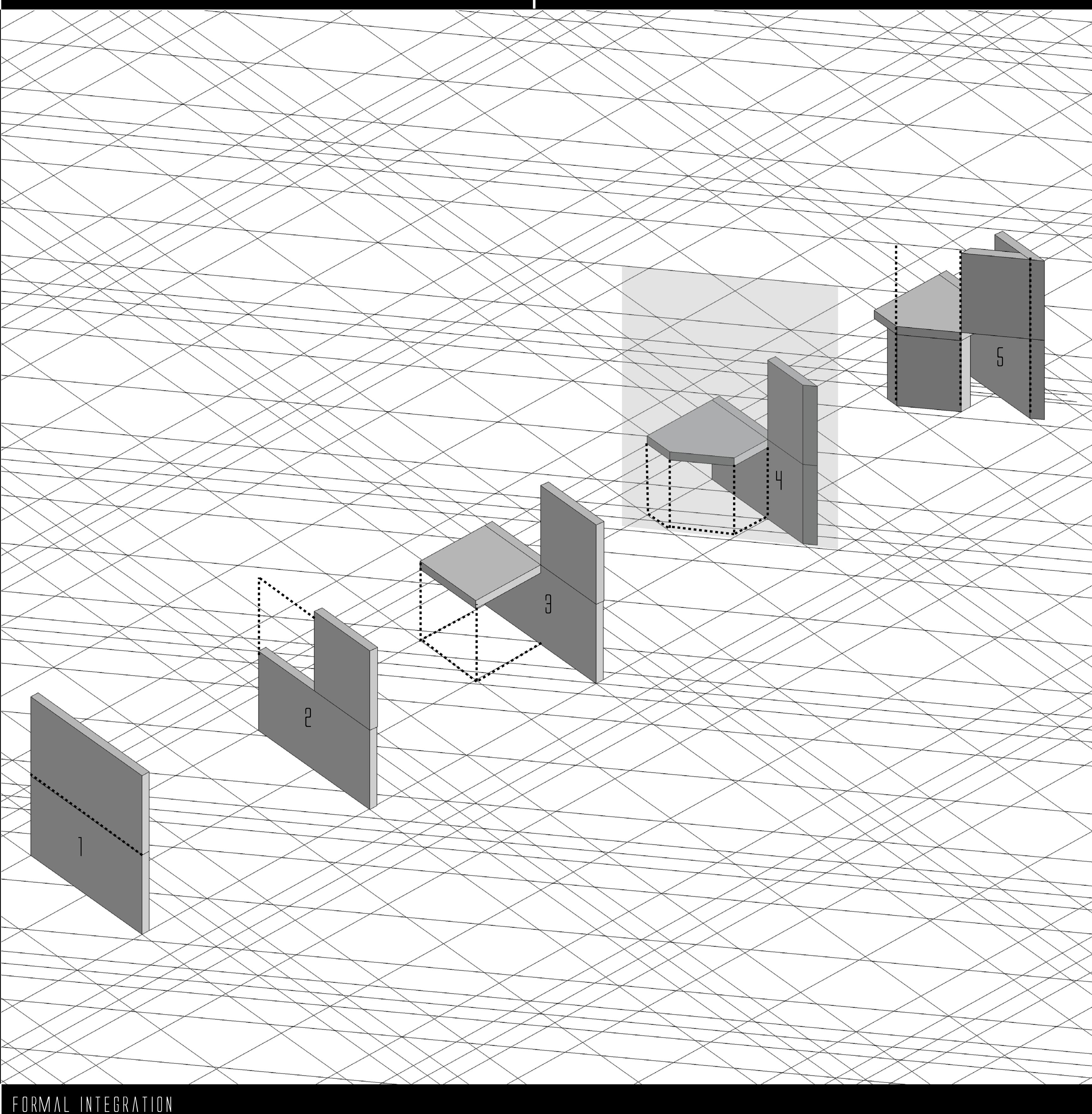
## SITE GRID / STRATEGY

A GRID SYSTEM WAS DEVELOPED TO COVER THE EXTENTS OF THE SITE AND BEYOND, ALLOWING FOR A LOGICAL, ABSTRACTED SYSTEM TO DICTATE THE ORGANIZATION OF THE BOUNDARY COMPLEX AND DISTRIBUTION

OF PROGRAM, AS WELL AS ESTABLISH A RULE SET FOR FUTURE DEVELOPMENT OF THE SITE THAT IS SELF-REFERENTIAL AND POSSESSES THE POTENTIAL TO BEGIN GENERATING ITS OWN NEW RULES AND METHODS

OF GENERATION BASED ON ITS EXISTING RELATIONSHIPS. AFTER INITIAL ITERATIONS (PICTURED), A TRI-GRID SCHEME USING THREE MAJOR AXES DEFINED BY THE OVERALL SHAPE OF THE SITE WAS DECIDED UPON,

AND SYSTEM OF VARIATION IN IT'S UNIT SPACING WAS INTRODUCED (SEE SITE PLAN).



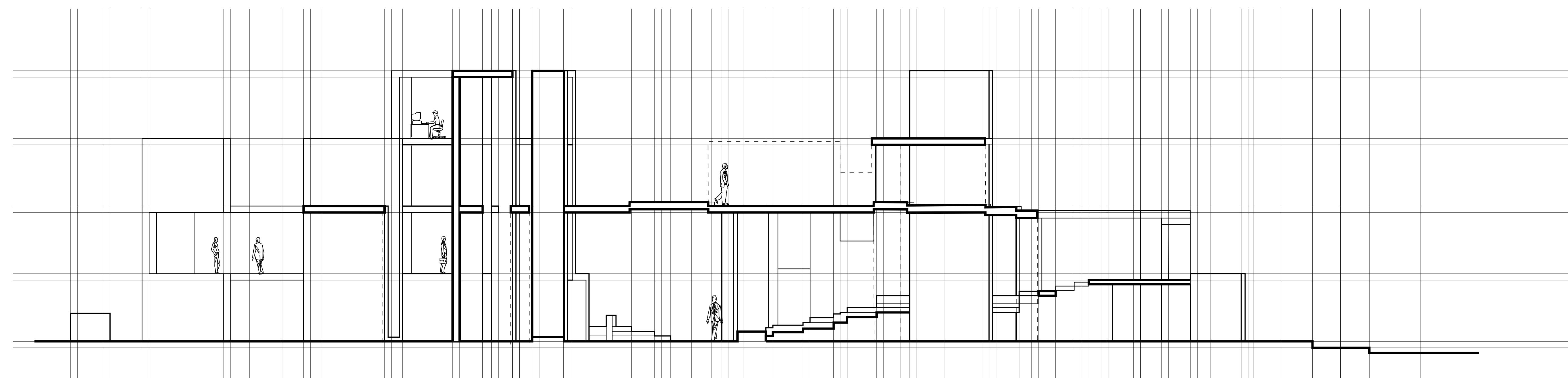
## FORMAL INTEGRATION

A SYSTEM WAS DESIGNED TO INTEGRATE THE FORMAL OPERATIONS OF FOLDING AND SANDWICHING ONTO THE GRID OF THE SITE. PLAN LINES ON THE SITE GRID ARE PROJECTED UP INTO AN ELEVATION (1). CUT LINES

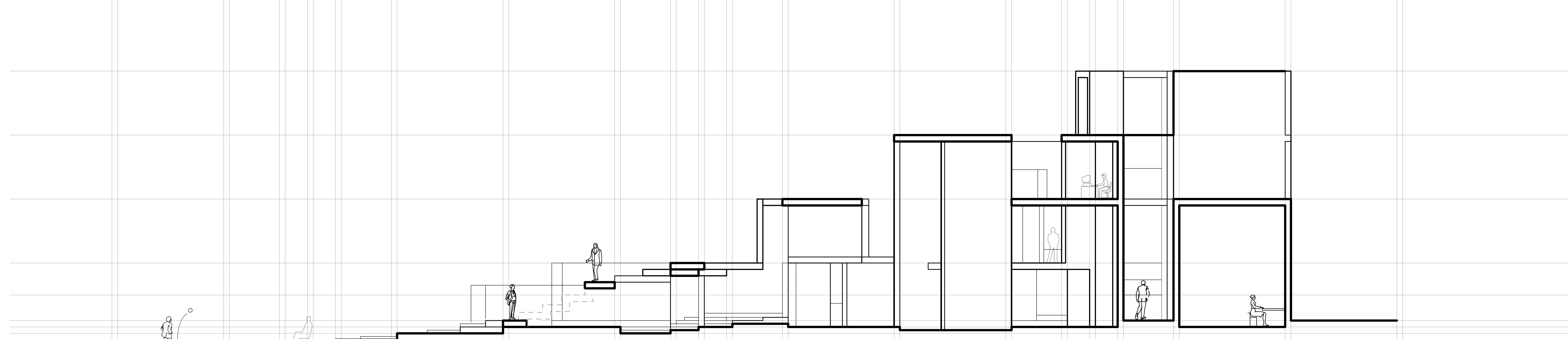
ARE PROJECTED ONTO THIS ELEVATION FROM ADJACENT ELEVATIONS OR OTHER SELF-REFERENTIAL POINTS, WHICH THEN CAN MANIPULATE THE OBJECT IN THE FORM OF A SECOND CUT, FOLD, OR EXTRUSION FROM

THE ELEVATION BACK OVER THE PLAN (2-3). THE PLAN THEN PROJECTS ITSELF AGAIN ONTO THE NEW FORM, AGAIN CREATING THIRD MANIPULATION, IN THIS FIGURE A SLICE (4) FOLLOWED BY TWO EXTRUSIONS

ALONG THE PLANE OF THE SLICE (5).



AA



BB

