Università degli Studi *Mediterranea* di Reggio Calabria, Dipartimento di Architettura e Territorio dArTe
Dottorato di Ricerca in Architettura e Territorio - XXXII ciclo

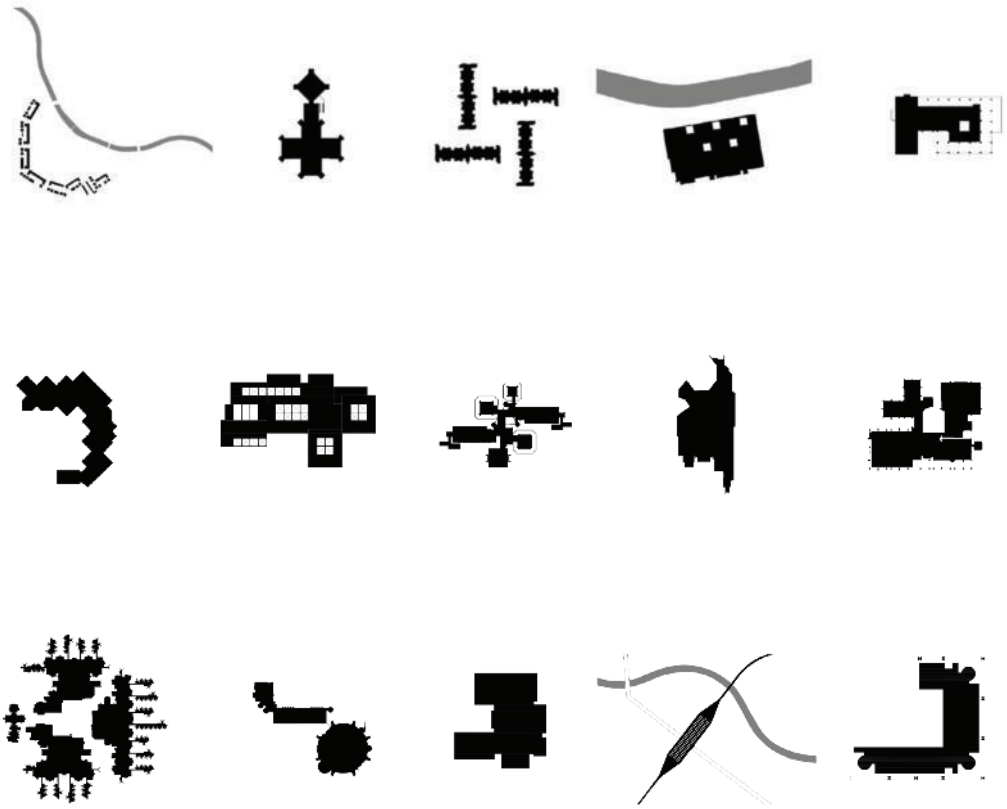
Operative Atlas of Brutalist Skopje

A graphic biography of 15 architectures

Dottorando
Arch. Blagoja Bajkovski

Relatore
Prof. Arch. Rosa Marina Tornatora

Corelatore
Prof. Arch. Marija Mano Velevska



Università degli Studi *Mediterranea* di Reggio Calabria, Dipartimento di Architettura e Territorio dArTe
Dottorato di Ricerca in Architettura e Territorio - XXXIIciclo

Università degli Studi *Mediterranea* di Reggio Calabria
Dipartimento di Architettura e Territorio - dArTe

Dottorato di Ricerca in Architettonica e Territorio
XXXII ciclo

Dottorando:
Blagoja Bajkovski

Relatore:
Prof. Arch. Arch. Rosa Marina Tornatora

Corelatore:
Prof. Arch. Marija Mano Velevska

Coordinatore:
Prof. Arch. Gianfranco Neri

Collegio dei Docenti:
Ottavio Salvatore Amaro
Giuseppe Carlo Arcidiacono
Francesco Bagnato
Alessandra Barresi
Rosario Giovanni Brandolino
Francesco Cardullo
Daniele Colistra
Alberto De Capua
Francesca Fatta
Giuseppina Foti
Gaetano Ginex
Vincenzo Gioffrè
Renato Laganà
Massimo Lauria
Maria Teresa Lucarelli
Marco Mannino
Martino Milardi
Francesca Moraci
Gianfranco Neri
Adriano Paolella
Franco Prampolini
Venera Paola Raffa
Ettore Rocca
Adolfo Santini
Antonella Blandina Maria Sarlo
Marcello Sestito
Rita Simone
Rosa Marina Tornatora
Michele Trimarchi
Corrado Trombetta
Alessandro Villari

Tutte le immagini presenti sono riprodotte per fini puramente didattici e di ricerca.
Per tutte le fonti si rimanda all'apparato bibliografico e sitografico.
Le foto, ove non diversamente specificato, sono da considerarsi proprietà dell'autore.

INDEX

Abstract 1
Objectives 2
Notes on the methodology and the structure 2
State of art 5

IT
Abstract 13
Obiettivi 14
Metodologia e Struttura 14
Stato dell'Arte 15
Skopje città del brutalismo 20
La trasformazione contemporanea di Skopje 22
Atlante Operante 22
Conclusioni 26

PART 1 **31**

1. Brutalism in general context 31
2. Brutalism in context of Skopje 35
3. Skopje and its changing context today 41

PART 2 **23**

4. OPERATIVE ATLAS 45

A. Composite **47**

A.4.1 City Archive _Georgi Konstantinovski **49**
- general information
- Monolith, Axial Arrangement, Axial fluidity, Locus_*analytic model*
- Lodge_*geometric diagram*
- photo documentation

A.4.2 Hydrometeorologycal Sevrice Building _Krsto Todorovski 67
- general information
- Demarking, Attaching, Suspend, Diversity_*analytic model*
- Collaging_*geometric diagram*
- photo documentation

A.4.3 National Bank of Macedonia _Radomir Lalovikj, Olga Papesh 85
- general information
- Compound, Field, Spatial layering_*analytic model*
- Embed_*geometric diagram*
- photo documentation

B. COMPACT **103**

B.4.1 Museum Of Macedonia _Mimoza Tomic 105
- general information
- Compound, Fields, Topography, Density_*analytic model*
- Join_*geometric diagram*
- photo documentation

B.4.2 Macedonian Academy of Sciences and Art _Boris Cipan 123
- general information
- Dialectical, Displacing by Sliding, Roofing, Sequential_*analytic model*
- Intertwining diagram
- photo documentation

B.4.3 National And University Library _Petar Mulickovski 141
- general information

- Patchwork, No Hierarchical Space, Patterns_*analytic model*
- Interlock_*geometric diagram*
- photo documentation

B.4.4 Republic Dispatch Center _Zoran Shtaklev 159
- general information
- Tabula Plena, Chain, Dichotomy, Dichotomy, In-Between_*analytic model*
- Insert_*geometric diagram*
- photo documentation

C. GROUP FORM **173**

C.4.1 Telecomunication Centre _Janko Konstantinov 175
- general information
- Architecture of Elements, Hinge, Autonomous forms, Taxonomy_*analytic model*
- Multilayering_geometric diagram
- photo documentation

C.4.2 SS. Cyril and Methodius University Skopje _Marko Music 193
- general information
- Forum, Urban interior, Cardo/Decumanus_*analytic model*
- Extrude_*geometric diagram*
- photo documentation

C.4.3 Macedonian Opera And Ballet _Biro 71 207
- general information
- Terraform, Figure-Ground, Operative Topography_*analytic model*
- Tectonic metamorphose_*geometric diagram*
- photo documentation

D. CONTINIOUS **223**

D.4.1 Student Dormitory “Goce Delchev” _Georgi Konstantinovski 225
- general information
- Cluster, Circuit, Joint Cores, Group form_*analytic model*
- Infill_*geometric diagram*
- photo documentation
- archive materials

D.4.2 City Shopping Center _Zivko Popovski 243
- general information
- Infrastructure, Mosaic, Intertwined trajectories, New Ground_*analytic model*
- Overlapping_*geometric diagram*
- photo documentation

D.4.3 Museum Of Contemporary Art 261
- general information
- Dominance, Continuous trajectories, Relation, Suspend_*analytic model*
- Lodge_*geometric diagram*
- photo documentation

D.4.4 City Wall _Kenzo Tange 279
- general information
- Trace, System, Superposed Order_*analytic model*
- Overlap_*geometric diagram*
- photo documentation

D.4.5 Transportation Center Skopje _Kenzo Tange 293
- general information
- Thrashold, Evolutionary, Artificial soil, latform_*analytic model*
- Elevate - *geometric diagram*
- photo documentation

5. Conclusions 309

Endnotes 320

Bibliography 324

APENDIX
1. Archive materials of 15 brutalist architectures 329
2. Redesign of the archive materials of 15 brutalist architectures 539

Abstract

In the recent architectural debate there has been a renewed interest on the topic of *brutalist architecture* as a sign for a search of a different point of view and a necessity of filling the void in the architectural historiography.
The research investigates *Brutalist architecture* in Skopje as a paradigmatic example of the architectural culture of the countries of the former Yugoslavia. The intention is not to develop a historical research but to recognize the principles of these architectures that today can still be determinants for the contemporary city. In this direction the research intends to become a device for re-thinking of *Brutalism* as well as to develop a reflection from which to learn how to deepen into the knowledge of the architectural production of the 60's and the 70's.
This different vision becomes fundamental for Skopje, where the architectural and cultural heritage, built after the earthquake in1963, has always been marginalized and is now in danger to be erased. By overcoming the ideological barriers, it is possible to re-read *other modernities* that have characterized the Balkan architecture, and reassign what is now perceived as an *unloved heritage*[1], a familiarity in the urban physiognomy. Walter Benjamin has argued that in order to *understand any form of paradigm shift, it is necessary to reawaken the history*. This is what this thesis attempts to do, to elaborate a historical period that shares certain conditions with the present.
With this intent, the thesis aims to construct an ***operative atlas*** envisioned as an organic, complex study, still non-existent for this reality that represents a moment of reflection on the identity value for the countries of the former Yugoslavia. It documents and analyzes 15 *brutalist architectures* from the post-earthquake reconstruction of Skopje that have shaped the discourse of urbanism in the city.
Therefore, the ***operative atlas*** is consisted of: the collection of the original drawings of 15 selected *brutalist architectures* its redesign and analysis of the projects. The research examines the design projects of these architectures showing how design solutions implemented in the past often become the design challenges of the present. Its aim is to present a group of ideas on architecture and urban planning coming from this entities rather than to construct a simple catalog of buildings. These architectures are seen as a thank of *fragmented utopias*[2], a grid of ideas that can construct a strong identity for the city of Skopje.

Objectives

This research investigates Brutalist architecture in Skopje, as a paradigmatic example of the architectural culture of the countries of former Yugoslavia. One of the main objectives is to broaden the framework of knowledge in a specific segment of the history of architecture, that is not very thoroughly researched, if not untreated, thus trying to fill a historiographical void. Whilst the second main objective is to reaffirm the value of this substantial heritage, which is currently undergoing a transformation process that is changing its characterizing qualities. The aim is to diverge from a pure historical research, and to try and understand what may be the defining traits, or better yet the founding principles of these architectures, which today can still be considered relevant, if not crucial, for the contemporary city.

Notes on the methodology and structure

With this intent, the thesis aims to build an *operative atlas* which collects the projects of 15 brutalist architectures in Skopje. It is intended as an organic study, still non-existent for this reality that represents a moment of reflection on the identity value for the countries of the former Yugoslavia.
Following the objectives of the thesis, the same has been structured in two different parts. The first part of the thesis is articulated in three chapters. The first chapter goes beyond the historical background of brutalism, and is in search of characteristics, concepts, notions and ideas that are coupled to the nature of this architecture as well as to the theoretical discourse of Alison and Peter Smithson, Reyner Banham and the most recent scholars that elaborate this topic. This chapter traces the parameters and the principles that are relevant afterwards for the selection of the case studies. The second chapter of this part narrates, on one hand, the historical development of the city of Skopje with a focus on its urban transformations and definition of its physiognomy after the devastating earthquake in 1963, on other hand, the third chapter of this part elaborates the current dynamics and transformations of the existing brutalist legacies that have been implemented according to the political urban project for transformation of the city known as Skopje 2014.

The second part of the thesis constitutes the ***operative atlas.*** It collects the most significant testimonies starting from the ideational phase of the architectural project and up to the executive drawings, transforming them in to an operative tool, conceived as a device of knowledge and theoretical reflection. Therefore, the atlas has been articulated implementing methodologically four different steps:

Steep 1

Original materials have been collected from five different archives, all around Skopje, generally in conditions of decay, neglected and not clearly organized. The same materials after a long survey have been digitalized, systematized and categorized following the same template. Each of the original drawings have been described by noticing its dimension, technic and material of execution as well as the archive and box in which it is located.

Steep 2

Photographic survey realized with drone in order to present the complexity of the composition of these architectures, as well as the way they have been incorporated into the urban morphology. The photos have been organized and systematized in four different categories: ***zenital view***, to show the relation with the context, ***axonometric view*** that shows the volumetric composition, ***frontal view*** in order to express the articulation of the façade and ***detail*** with intention to express the atmospheric and phenomenological character of the architecture.

Steep 3

Redesign of the original materials in order on one hand to show the complexity and the totality of the building since many of the original drawings are realized in small scale divided in fragments of the composition that doesn't express the wholeness of the same. On other hand, the digitalization of the materials constructs the base for the further done analytical and critical readings.

Steep 4

The final consequent steep of the survey is in relation to the analytical and the critical readings of these architectures. The same have been divided in two categories: ***analytic model*** and ***geometric diagram***.
The ***analytic model*** explores and recognizes different concepts /principles/ embodied to these architectural emergencies. Therefore, this section is articulated through the categories of: concept context, concept floor plan, concept section and concept elevation. For each of the buildings specific concept from each category have been recognized and generated a simple

diagram and notion that describes it. The diagram is accompanied and described with a definition that regards the specific notion. The general definition has been appropriated from one of the three worldwide recognized dictionary: *The Chambers Dictionary, Oxford English Dictionary* and *The Merriam-Webster Dictionary.* The appropriated definition is the base for developing further explanation and elaboration of the notion that explains the exact concept. The generated diagram together with the diversity of notions constructs the synoptic framework expressed as a taxonomic board, biodiversity of concepts related to these architectural corpus.

The category of ***geometric diagram*** relates to the formal volumetric articulation and genesis of the architectural composition of the chosen case studies. Therefore the geometric diagram bridges abstract volumetric operations expressed through a lexicon of spatial verbs as a method of understanding the spatial formation. Moreover, the part of the geometric diagram explains the evolutionary process of the form of this architectures developed from the juxtaposition of autonomous volumes, joined together by means of recognizable elements or parts of the building. Operating as a sort of decomposition of the building that through a series of axonometric diagrams identifies how many are the elementary volumes constituting the artifact and subsequently how they are composed among themselves in complete complex form.

The ***analytic model*** together with the ***geometric diagram*** strives to show how language can invoke concept or form translated in notions that highlight various conditions of those architectures regarding their relation to the context and the specific articulation of the space.

State of art

During the past ten years, numerous debates and events were held in several European countries, as well as the Balkan area, which have dealt extensively with the topic of Burtalism. They have opened a new perspective of research regarding Brutalism, recognizing it as a broad cultural and theoretical phenomenon, interweaved with different national contexts, whose architectural production has been stifled by a historiographical and political rhetoric that has bound these works with a negative perception and a widespread sense of contempt.

Among the first events that started with a reinterpretation of this historical phase is the symposium *Brutalism. Architecture of the Everyday. Culture, Poetry and Theory* organized by the Karlsrhue Institute of Technology and the Wustenrot Stiftung at the Akademie der Künste in Berlin in 2012. During the deliberation, seventeen scholars contributed their studies on Brutalism in mostly Western Europe, e.g. France, Netherlands, Germany, etc. and even the U.S., as well as individual Brutalist buildings. These studies went beyond the historiographical approach of reconstructing the protagonists and their works, starting a reflection on brutalist architectural production as an expression of a different modernity, capable of interpreting the changes of the West after the Second World War. Subsequently of affirming the value of Brutalist architecture as a cultural heritage, the symposium considered the issue of raising mainstream awareness of its relevance. As Ingrid Scheurmann noted *it is important to make postwar monuments meaningful for the individual, too... which cannot happen by taking the route of spreading knowledge alone, it also requires interdisciplinary discussion and new forms of participation*. Furthermore, the necessity for defining new criteria and standards for evaluation of the Brutalist architecture was greatly emphasized, as means to determining its status in the debate of heritage protection.

Almost concurrently in Slovenia *Unfinished modernizations, between utopia and pragmatism* at Maribor Art Gallery inaugurated a cycle of seminars developed within two years, in 2011 and 2012 accompanied by an exhibition, curated by Maroje Mrduljaš (HR) and Vladimir Kulić (SR / USA), representing another stage of this journey focusing the attention on the architecture of the former Yugoslavia countries starting from the communist acquisition in 1945 up to the collapse of the Federal Socialist Republic in 1991. The works coming from Croatia, Macedonia, Bosnia and Herzegovina, Montenegro, Serbia and Slovenia have been seen in a new light, free from the rhetoric one of "socialist progress" and they have been relocated within the consolidated world history of architecture. With this research a great and a very important void in architectural history has been filled, a history which according to Dietmar Steiner *unambiguously shows that the architectural achievements of the East, until the end of the 1980s, are on an absolutely equal footing with those of the West and in some cases even more visionary*. Many of these prime architectural examples from the Yugoslavian region, were exceptionally pioneering and experimental, and it is exactly those qualities that even today can serve as a pondering inspiration for a progressive practice.

A similar operation was also carried out by the most recent exhibition organized by MoMA museum in New York between 2018 and 2019 titled *Toward a Concrete Utopia: Architecture in Yugoslavia, 1948-1980*. Through more than 400 drawings, models, photographs and videos that locate the role of brutalist architectural production in Yugoslavia internationally and its exceptionality not only for its quality and quantity but also for the specific intersection between a common history and a collective identity in a multi-ethnic state, characterized by the coexistence of opposing needs and influences. Identifying the predominant absence of the Eastern brutalist architecture in the historical discourse as a clear sign of an ongoing Eurocentric (Western) bias, MoMA as an

institution took on the responsibility for shedding light on this so far understudied body of work. In an ambitious pursuit, this exhibition ventured to recalibrate the modern architectural history by displaying numerous renowned urban developments, buildings and monuments from Yugoslavia to the international audience. Beyond its historical significance, this volume also highlighted the permanence and the progressive thought which marked the Yugoslavian modernism, as today, *many of the socialist housing neighborhoods, rich with greenery and public programs, have now become desirable living spaces , thus forcing us to question the myth of the failure of modernist housing production within welfare states*, was emphasized by Tamara Bjazic Klarin.
In 2017 The catalogue *SKOPJE, Macedonian architecture in context* is published on the occasion of the eponymous exhibition at the exhibition centre of the Vienna Insurance Group. The catalogue shows an impressive collection of specific architectural examples of Skopje. The after earthquake reconstruction was characterized by sympathy, solidarity and support from all over the world. This concerted effort powered by international aid turned Skopje into a case study in architecture, select examples of the results are shown in this exhibit.
The "global" dimension of Brutalism emerges visually on #SOSBrutalism platform which originates from the exhibition *SOS Brutalism. Save the Concrete Monsters!,* promoted by the German Architecture Museum in Frankfurt (Dam) and the Wüstenrot Foundation in Ludwigsburg, which today represents the largest digital archive of brutalist buildings. The ensuing publication is showcasing the prime Brutalist examples across all continents, creating a form of a world map of Brutalist architecture, which reveals its diversity and attempts to embed it in the collective memory. A growing database, currently containing more than 1,600 architectures with the intention not only to show the quantity but also to put the spotlight on the issue of the conservation of a huge heritage now at risk of demolition and in conditions of a severe degradation. There is a real emergency as it is evidenced by the recent demolition of the *Robin Hood Gardens* (1972), the single residential complex designed by Alison and Peter Smithson, masters of the British Brutalism, which, like many other similar buildings, are being targeted by english *developers* looking for new areas to be built, relying on the widespread negative perception of the *beton brut* works from the common people.
This has been an alarm at which the Victoria & Albert Museum in London responds by exposing a fragment of the *Robin Hood Gardens* facade at the *16th International Architecture Exhibition* in Venice, denouncing the need and urgency to recognize the value of this significant architectural heritage.
Parallel to these moments of debate, *social media* are witnessing a growing phenomenon of the dissemination of photos and images of *brutalist architecture*, of which the new communication devices are able to enhance its unexplored aesthetic and formal values. The proliferation of *facebook*, blog and hashtag pages - around 481,000 posts on Instagram with the hashtag #brutalism, in addition to the thousands of other versions - is a tangible sign of a renewed attention and different perception of these works as it has been demonstrated by Virginia McLeod in the publication *Atlas of Brutalist Architecture*, in which she comes to claim that Instagram will save the brutalist heritage.
A clear sign of this change in perception is represented by the collection of maps created and published by *Blue Crow Media* dedicated to the brutalist architecture of cities such as London, Paris, Berlin, Moscow, Belgrade, Tokyo, Sydney, New York, Boston and Washington through a "Cement endecalogy". All these works outline new routes for an innovative experience of tourist enjoyment.
All these events, publications, exhibitions, the *social media* and the advanced technology bring in evidence through a new contemporary language the qualities of *Brutalism*, like the formal legibility plan, clear expression of a building's structure and the honest use of materials in their "as-found" condition, once defined by Banham, Alison and Peter Smithson. Brad Dunning argues on the topic of the new appreciation for Brutalism saying that *Brutalist buildings are expensive to maintain and difficult to destroy. They can't be easily remodeled or changed, so they tend to stay the way the architect intended. Maybe the movement has come roaring back into style because permanence is particularly attractive in our chaotic and crumbling world*.
Therefore, this research attempts to reexamine Brutalism, taking Skopje as case study elaborating architectures in a search of a new understanding of this movement into the contemporary architectural debate that might also lead to develop new approaches.

STRUCTURE OF THE THESIS

INTRODUCTION

Abstract
Objectives
Methodology and the structure
State of art

Traduzione in Italiano
Abstract
Obiettivi
Metodologia e struttura
Stato dell'arte

PART I

1. Brutalism in general context
2. Brutalism in context of Skopje
3. Skopje and its changing context today

PART II

OPERATIVE ATLAS

A. COMPOSITE

A.4.1 City Archive
A.4.2 Hydrometeorologycal Sevrice BuildingA
A.4.3 National Bank of Macedonia

B. COMPACT

B.4.1 Museum Of Macedonia
B.4.2 Macedonian Academy of Sciences and Art
B.4.3 National And University Library
B.4.4 Republic Dispatch Center

C. GROUP FORM

C.4.1 Telecomunication Centre
C.4.2 SS. Cyril and Methodius University Skopje
C.4.3 Macedonian Opera And Ballet

D. CONTINIOUS

D.4.1 Student Dormitory "Goce Delchev"
D.4.2 City Shopping Center
D.4.3 Museum Of Contemporary Art
D.4.4 City Wall
D.4.5 Transportation Center Skopje

APENDIX

1. ARCHIVE MATERIALS OF 15 BRUTALIST ARCHITECTURES

2. REDESIGN OF THE ARCHIVE MATERIALS OF 15 BRUTALIST ARCHITECTURES

PARTE ITALIANA

Atlante operante di Skopje brutalista
Biografia disegnata di 15 architetture

Abstract:
Il rinnovato interesse per l'*architettura brutalista* che contrassegna il recente dibattito architettonico non risponde solo alla necessità di colmare un evidente vuoto storiografico, ma testimonia l'emergere di un diverso punto di vista verso un patrimonio che ancora oggi rappresenta un'importante ricerca della cultura architettonica e urbana degli anni Sessanta e Settanta.
A partire da tali presupposti, la ricerca approfondisce il caso di Skopje, capitale della Macedonia del Nord, assunta come esempio paradigmatico del processo di modernizzazione dei paesi dell'ex-Jugoslavia.
Lontano da esigenze storiche, la ricerca approfondisce i principi progettuali di quelle opere architettoniche e urbane *brutaliste* che ancora oggi possono rappresentare un valore nelle dinamiche della città contemporanea.
In tal senso, la tesi intende sperimentare un possibile "strumento interpretativo" del *Brutalismo* con l›obiettivo di fornire un contributo specifico all'attuale dibattito.
Questa indagine diventa fondamentale per il caso di Skopje, dove il patrimonio architettonico e culturale costruito dopo il terremoto del '63 su masterplan di Kenzo Tange, oggi rischia di essere cancellato, sottoposto a devastanti trasformazioni derivate dal Piano di rinnovamento urbano (SK2014). Superando le barriere ideologiche, la ricerca si sofferma sulle architetture più rappresentative della ricostruzione, rendendo evidente come la produzione architettonica e urbana balcanica del secondo dopo guerra non rappresenta un *patrimonio non desiderato*[1] da rimuovere, ma un'*altra idea di modernità*.
La tesi, dunque, trova un particolare campo di sperimentazione nella costruzione di un *Atlante Operante* di quindici architetture del periodo della rifondazione di Skopje, documentate attraverso la ricognizione di materiali originali d'archivio, attualmente disaggregati, attraverso i quali è stato possibile elaborare il ridisegno e la scomposizione architettonica. Il punto di partenza storico è assunto come momento decisivo per una riflessione sulla condizione contemporanea della città nella consapevolezza che "per capire qualsiasi forma di cambio di paradigma, è necessario svegliare la storia" (Walter Benjamin, anno 1940)

Parole chiavi:
Atlante, Brutalismo, Architettura, Urbanismo, Skopje

Obiettivi

Obiettivo generale della ricerca è di ampliare il quadro di conoscenza sull'*architettura brutalista* della città di Skopje, assunta come caso paradigmatico dei paesi dell'ex-Jugoslavia, non solo per colmare un vuoto storiografico ma per ampliare la riflessione sul valore e sulla specificità di un patrimonio architettonico e urbano, oggi sottoposto a consistenti interventi di trasformazione. Tale indispensabile azione di conoscenza trova un particolare campo di sperimentazione nella configurazione di un *Atlante Operante* che ricostruisce la complessità spaziale e urbana di tale patrimonio attraverso una lettura interpretativa dei principi architettonici di quindici opere del periodo della ricostruzione della capitale macedone. Il percorso di ricerca si è altresì proposto come l'occasione scientifica per intervenire sulla condizione di disorganicità e *oblio* dei numerosi materiali originali, oggi presso i maggiori archivi della città, sviluppando un lavoro di ricognizione, catalogazione e digitalizzazione di tali documenti.

Metodologia e struttura

In linea con gli obiettivi generali, la tesi è articolata in due parti.

La prima tratteggia il quadro storico e teorico del B*rutalismo*, facendo riferimento in particolare agli scritti di Alison, Peter Smithson e Reyner Banham. Segue una ricognizione sulle vicende urbane della città di Skopje, focalizzandosi sulla rifondazione urbana dopo il terremoto del 1963. Il quadro di riferimento è completato da una riflessione sul processo di trasformazione della città dall'indipendenza dalla Jugoslavia nel 1991, sino al programma di rinnovamento urbano *Skopje 2014*.

La seconda parte della ricerca, articolata in quattro fasi, elabora un *Atlante Operante* dell'*Architettura Brutalista*, indagando quindici opere che hanno contrassegnato il percorso storico e architettonico della città di Skopje dal terremoto del '63 sino agli anni Ottanta. Il lavoro, riconoscendo nel disegno il luogo privilegiato di conoscenza e interpretazione dell'architettura, si è sviluppato attraverso il ridisegno dei progetti originari e la lettura interpretativa delle opere elaborando dei modelli tridimensionali.

- La prima fase ha previsto la ricognizione dei materiali originali (102 disegni), custoditi presso i cinque archivi della città[2], che ha richiesto una significativa azione di organizzazione, catalogazione e digitalizzazione, per l'attuale condizione di disorganicità *e oblio* nella quale si trovano i materiali del ventennio successivo al terremoto. Ciascun disegno originale è stato identificato riportando le dimensioni, la tecnica di rappresentazione nonchè l'archivio di provenienza.

- La seconda fase ha riguardato l'elaborazione del rilievo fotografico dell'esistente, realizzato con un drone per rendere la complessità della composizione di queste architettoniche, nonché le relazioni con la morfologia urbana.

Gli scatti fotografici (90 foto) sono stati organizzati e sistematizzati in quattro categorie diverse: *vista zenitale*, per comprendere la relazione con il contesto; *vista assonometrica* che evidenzia la composizione volumetrica; *vista frontale* per descrivere l'articolazione della facciata sino ai dettagli.

- La terza fase ha riguardato il ridisegno dei progetti (148 ridisegni), nel tentativo di comprendere la complessità e la totalità degli edifici, vista la frammentarietà dei disegni originali, spesso realizzati per pezzi e stralci senza un'elaborazione d'insieme o una contestualizzazione.

- La quarta parte si confrontata con la lettura interpretativa delle opere elaborando dei modelli tridimensionali concepiti come strumenti operativi del progetto attraverso i quali sono stati elaborati due diversi tipi di scomposizione quella del ***modello analitico*** e quella del ***diagramma geometrico***.

Il ***modello analitico*** indaga e riconosce i diversi principi compositivi, analizzando il *concept* della pianta, della sezione e dell'elevazione. Per ciascuno dei *concept* è stato elaborato un diagramma descrittivo, corredato da una definizione acquisita dal confronto fra tre dizionari: *The Chambers Dictionary, Oxford English Dictionary* e *The Merriam-Webster Dictionary.* La serie dei diversi diagrammi configura una tassonomia che costruisce un quadro sinottico dei principi compositivi, descrittivi dalle diverse opere.

Il ***diagramma geometrico*** evidenzia l'articolazione formale volumetrica e la genesi della composizione architettonica dei casi studio prescelti. In tal senso il diagramma attraverso la definizione di un *lessico di azioni spaziali*, descrive le operazioni volumetriche del processo evolutivo e organizzativo della forma architettonica, sviluppata dalla giustapposizione di volumi autonomi, uniti tra loro da entità riconoscibili o da parti di edifici. Operando una sorta di scomposizione dei progetti in una serie di diagrammi assonometrici, si evidenziano i volumi elementari primari e la loro modalità di configurazione della forma complessa.

Il ***modello analitico*** insieme al ***diagramma geometrico*** tentano di tradurre in lessico i concetti spaziali, evidenziando le varie condizioni delle opere architettoniche in relazione alla loro articolazione interna e al contesto.

Stato dell'arte

Negli ultimi dieci anni, numerose pubblicazioni, mostre e conferenze, accompagnate da un'intensa comunicazione attraverso i *social media*, hanno sviluppato una riflessione sul *Brutalismo*, mettendone in evidenza qualità estetiche e implicazioni urbane. Si è così avviato un processo di rivisitazione di un vasto fenomeno culturale e teorico, fortemente intrecciato ai diversi contesti nazionali, la cui produzione architettonica, sottoposta a una diffusa retorica storiografica e politica, è stata percepita in maniera negativa e con senso di *disprezzo*.

Uno dei primi eventi a innescare tale processo è da individuare nel simposio *Brutalism. Architecture of the Everyday. Culture, Poetry and Theory* organizzato nel 2012 dall'Istituto di Tecnologia di Karlsrhue e il Wustenrot Stiftung alla Akademie der Künste a Berlino. Tale evento, che ha visto coinvolti studiosi internazionali, segna un momento deciso del dibattito poiché, superando l'approccio storiografico di ricostruzione dei protagonisti e delle loro opere, avvia una riflessione sull'architettura *brutalista* come espressione di una modernità diversa e capace di interpretare i cambiamenti dell'Occidente dopo la Seconda Guerra mondiale. Il confronto non ha solo posto l'accento sul valore dell'architettura *brutalista* come patrimonio culturale, ma anche sulla necessità di avviare un processo di sensibilizzazione dell'opinione pubblica su una significativa produzione architettonica. Come sostiene Ingrid Scheurmann "È importante avvicinare i monumenti post-bellici all'individuo […] e questo non può accadere solamente con la diffusione di conoscenze isolate, ma richiede piuttosto una discussione interdisciplinare e nuove forme di partecipazione"[3]. Inoltre, è stata fortemente sottolineata l'esigenza di definire nuovi criteri e categorie di valutazione dell'architettura *brutalista* in modo da avviare un processo di tutela e conservazione di tale patrimonio.

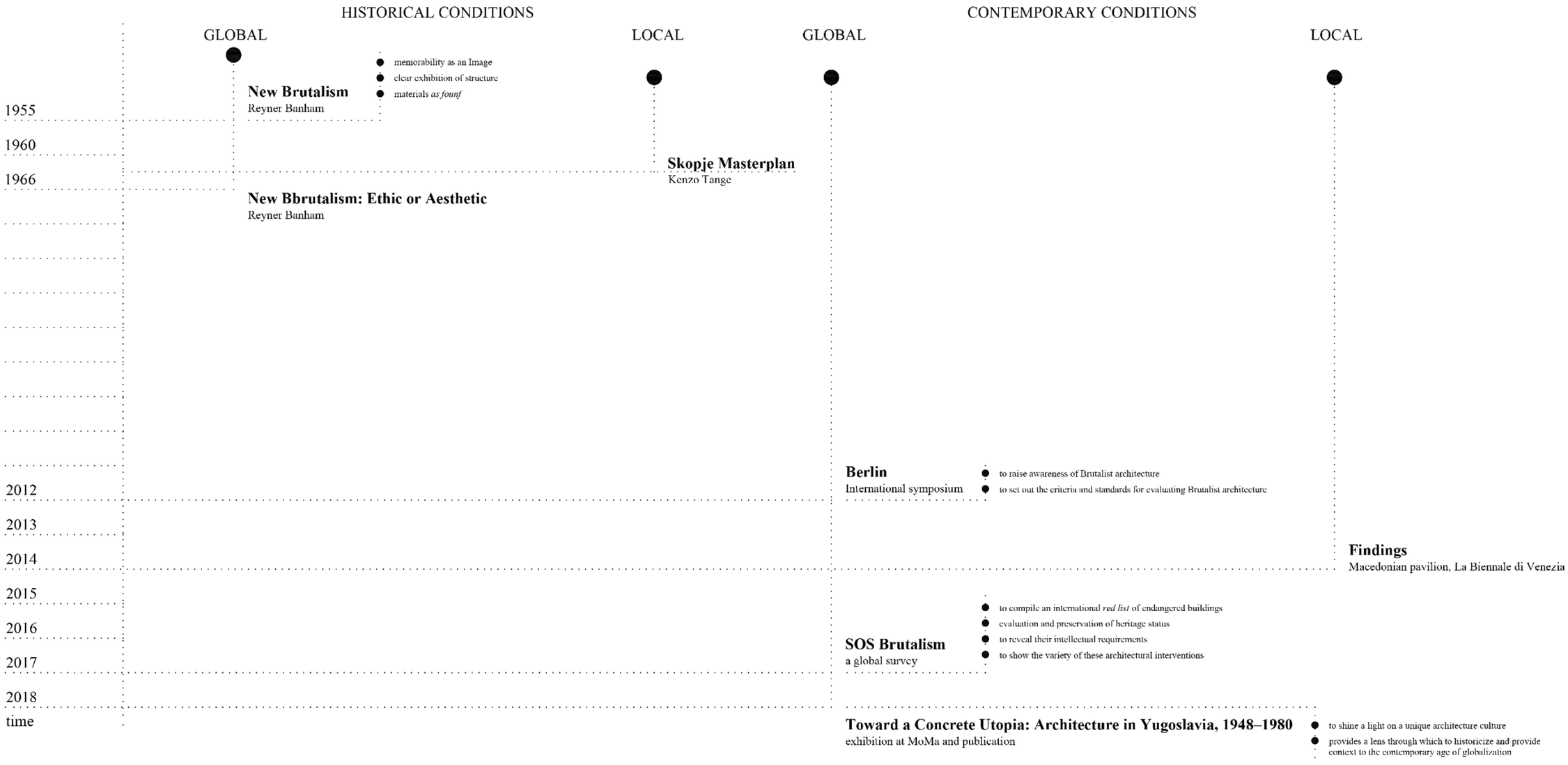
Quasi parallelamente al primo evento, presso la Maribor Art Gallery in Slovenia viene inaugurato il ciclo di seminari, *Unfinished modernizations, between utopia and pragmatism* articolato nell'arco di due anni, dal 2011 al 2012, in una serie di incontri e una mostra a cura di Maroje Mrduljaš (HR) e Vladimir Kulić (SR/USA). Il confronto, che si sofferma essenzialmente sull'architettura dei paesi dell'ex-Jugoslavia a partire dall'ascesa del comunismo nel 1945 al collasso della Repubblica Federale Socialista nel 1991, propone una rilettura delle opere architettoniche realizzate in Croazia, Macedonia, Bosnia Herzegovina, Montenegro, Serbia e Slovenia, interpretate attraverso una diversa prospettiva, sgombra dalla retorica del progresso socialista. Questo confronto, che interviene su un evidente vuoto storiografico, tenta di *riposizionare* tale produzione architettonica nel contesto internazionale come evidenziato da Dietmar Steiner "è inequivocabilmente evidente che le conquiste architettoniche dell'Oriente si estendono fino alla fine degli anni Ottanta, sono assolutamente allo stesso livello delle conquiste dell'Occidente ed in alcuni casi risultano addirittura più visionarie"[4]. Molte di queste prime opere architettoniche della regione jugoslava, infatti, sono eccezionalmente sperimentali e tracciano una traiettoria per la produzione successiva, affermando quelle qualità spaziali e urbane identificative di una fase fondativa della città moderna in area balcanica.

A queste prime occasioni di confronto si aggiunge la recente mostra *Toward a Concrete Utopia: Architecture in Yugoslavia, 1948-1980,* organizzata al museo MoMA di New York nel 2018.
I circa 400 elaborati esposti, tra disegni, modelli, fotografie e video, testimoniano il ruolo della produzione architettonica *brutalista* dell'ex-Jugoslavia nel contesto internazionale, rivelandone l'eccezionalità in termini di qualità e quantità di opere, ma anche sono l'espressione dell'incontro tra storia comune e identità collettiva in una realtà multietnica, caratterizzata dalla coesistenza di culture e influenze diverse. La mostra al MoMA rappresenta la prima esposizione della produzione architettonica e urbana *brutalista* dei Balcani fuori dai confini europei, facendolo conoscere ad un pubblico internazionale e fornendo un importante contributo al racconto dell'architettura moderna a forte polarizzazione eurocentrica.
Dunque, l'occasione per sottolineare la permanenza e il pensiero progressivo come fattori caratterizzanti la modernità jugoslava, prendendo in considerazione che anche oggi, come sottolinea Tamara Bjazic Klarin, "molti dei quartieri con edifici socialisti, circondati da verde abbondante e edifici pubblici, sono diventati spazi di vita attraenti, sfidando così la questione del mito del fallimento della produzione di case moderna all'interno del welfare."[5]

Nel 2017 il catalogo *SKOPJE, Macedonian architecture in context,* pubblicato in occasione della omonima mostra presso la galleria del Vienna Insurance Group, presenta una consistente collezione di architettura della ricostruzione della città di Skopje dopo il terremoto, sostenuta dalla solidarietà e dal supporto di tutto il mondo, rendendola un caso studio internazionale.

La dimensione *globale* del Brutalismo emerge visivamente sulla piattaforma *#SOSBrutalism,* oggi il più grande archivio digitale delle architettura *brutalista*, ideato in occasione della mostra *SOS Brutalism. Save the Concrete Monsters!,* promossa al Museo di Architettura di Francoforte (Dam) dalla Fondazione Wüstenrot a Ludwigsburg. Partendo dalle prime opere realizzate nei diversi continenti, la piattaforma costruisce in *open access* una mappa mondiale, svelandone le diversità e tentando di tracciarne una memoria collettiva. La piattaforma si configura come una banca dati implementabile, che oggi contiene oltre a 1,600 opere architettoniche con l'intento non solo di quantificarle ma anche di porre la questione della tutela di un enorme patrimonio, oggi sottoposto a rischio di demolizione e in grave stato di degrado. Una vera e propria emergenza, come testimonia la recente demolizione di *Robin Hood Gardens* (1972), il complesso residenziale disegnato da Alison e Peter Smithson, maestri del Brutalismo britannico, che come tanti altri edifici simili è stato individuato da *developers* inglesi in cerca di nuove aree edificabile, approfittando della diffusa percezione negativa dell'opinione pubblica delle opere in *bèton brut* .
A questo allarme, il Victoria & Albert Museum di Londra ha risposto mettendo in mostra un frammento della facciata del *Robin Hood Gardens* alla 16esima Mostra di Architettura di Venezia, denunciando così l'urgenza di riconoscere il valore di questo importante patrimonio architettonico.
Parallelamente a questo dibattito, i *social media* testimoniano un fenomeno crescente di

MAPPA DEGLI EVENTI BRUTALISMO



disseminazione di fotografie ed immagini dell'*architettura brutalista*, dei quali i nuovi dispositivi di comunicazione esaltano i valori estetici e formali. La proliferazione di pagine *facebook*, blog e hashtag - risultano 481,000 i post su Instagram con il hashtag #brutalism - è un segno tangibile di un'attenzione rinnovata e di una percezione diversa di queste opere come dimostrato da Virginia McLeod nella pubblicazione *Atlas of Brutalist Architecture*, dove sostiene che "l'Instagram salverà il patrimonio brutalista."
Un segno tangibile del cambio di percezione è rappresentato dalla serie di mappe create e pubblicate da *Blue Crow Media* dedicate all'architettura brutalista di Londra, Parigi, Berlino, Mosca, Belgrado, Tokyo, Sydney, New York, Boston e Washington tramite la *endecalogia del cemento*. Tali mappe tratteggiano inediti itinerari per una innovativa esperienza di fruizione turistica.
Gli eventi, le pubblicazioni, le mostre, i *social media* e le tecnologie avanzate descrivono e fanno conoscere le architetture *brutaliste* attraverso un nuovo linguaggio, esaltando quella capacità espressiva della struttura dell'edificio e l'uso dei materiali naturali, coerentemente alle idee di Banham, Alison e Peter Smithson". Brad Dunning sottolinea il cambio di percezione del patrimonio brutalista affermando che "Gli edifici *brutalisti* sono costosi da mantenere e difficili da distruggere. Essi non possono essere rimodellati o cambiati facilmente, perciò tendono a rimanere cosi come l'architetto li ha concepiti. Il movimento è ritornato in moda perché la permanenza sembra particolarmente attraente nel nostro mondo caotico e decadente."[6]

Alla luce di questo attuale fermento culturale di riesame del Brutalismo, la Tesi di dottorato tenta di dare un contributo, indagando la città di Skopje, assunta come caso di studio, attraverso una lettura interpretativa delle opere architettoniche più significative per ricollocarle nel dibattito architettonico contemporaneo.

Skopje città del brutalismo
Skopje, la capitale della Repubblica della Macedonia, ha un tessuto urbano *complesso e contraddittorio*[7], risultato delle diverse scritture e cancellazioni delle tracce della sua storia.
La città rispecchia la coesistenza di diverse parti urbane e la stratificazione di numerosi segni, come quelli del periodo medievale, quello ottomano e la parte del piano di rifondazione della città dopo il terremoto. All'interno di questo coacervo di diverse influenze, la produzione architettonica degli anni Sessanta e Settanta costruisce un paesaggio urbano del *bèton brut*, assegnando una riconoscibilità e specificità locale nel dibattito internazionale non solo per la quantità delle opere architettoniche ma anche per la loro qualità.
La città viene **rifondata** nella struttura dopo il terremoto del 1963 che l'ha rasa al suolo, viene ricostruita seguendo parzialmente il visionario masterplan di **Kenzo Tange**, concepito come un grande momento di sperimentazione architettonica secondo un'immagine utopica.
Nel 1964 l'architetto giapponese è invitato dalle Nazioni Unite a partecipare alla competizione per la progettazione del masterplan del centro della città di Skopje su un'area di circa due chilometri quadri, alla quale sono invitati quattro gruppi di architetti jugoslavi e altri quattro stranieri. Nel 1965 la giuria internazionale, coordinata da Ernest Weissmann, assegna il sessanta percento del primo premio a Kenzo Tange e il quaranta percento al gruppo jugoslavo di Radovan Mischevic e Fedor Wenzler.[8]
Il progetto dell'architetto giapponese propone un laboratorio di sperimentazione formale e costruttiva, che come evidenzia Ines Tolic supera la formula modernista *la forma segue la funzione,* indagando l'idea di una città basata su relazioni e connessioni stratificate, ovvero l'idea di una città che esplode su livelli diversi.
Il progetto di Tange rappresenta negli anni Sessanta uno studio ambizioso che prevedeva interventi a grande scala e la rifondazione della città basata su un approccio di *tabula rasa*, ovvero di non ricostruire a partire dalle tracce e dalla morfologia della città prima del terremoto, preservando solo il Centro Storico - la *Old Bazar* - concepito come un frammento, un ***object trouvè*** tra i nuovi organismi metabolici. Tange introduce una nuova misura della città, intrecciando la scala architettonica con quella urbana. Per tale motivo il master plan rappresenta un avanzamento all'idea di città elaborata per il piano della baia di Tokyo.
Il piano di Skopje si basava su due elementi strutturali, la **Muraglia Urbana** e la **Porta Urbana**, due elementi – simbolo che richiamano le nozioni di *cinta* e *porta* della città medievale con l'intenzione di avvicinare il radicalismo del progetto alle condizioni locali.
La **Muraglia Urbana** è immaginata come la materializzazione di un sistema residenziale che perimetra il nuovo centro della città, capace di assorbire una futura crescita della popolazione in linea con lo sviluppo della capitale. Questo tipo di sistema, una striscia lineare a forma di ferro di cavallo, abbraccia la funzione residenziale e ne permette l'integrazione. Una serie di cilindri verticali ospita i servizi, connessi tramite corridoi dai quali si accede a blocchi lineari modulari, costruendo in tal modo il muro della città.
La **Porta Urbana** è immaginata come l'ingresso alla città, un nodo infrastrutturale e commerciale dove gli esistenti sistemi di mobilità convergono su diversi livelli. Una *megastruttura* che instaura un legame con il centro storico tramite la successione di interventi urbani concentrati attorno a degli episodi architettonici verticali fortemente caratterizzati.
Secondo la strategia di Tange, la Muraglia Urbana e la Porta Urbana erano concepiti come *megastrutture metaboliche* in grado di incrementare significativamente la densità della città.
Nonostante il piano non sarà completamente realizzato secondo il progetto di Tange, è evidente la sua impronta urbana anche nella produzione architettonica degli architetti macedoni del periodo come Georgi Konstantinovski, Janko Konstantinov, Olga Papesh, Krsto Todorovski ect.
Appare ben visibile il loro interesse ad avvicinare il *brutalismo* all'architettura locale, incorporando concetti, elementi e motivi dell'architettura tradizionale macedone.
Oggi l'architettura brutalista a Skopje rappresenta un segno distintivo della storia

della città configurando una specie di archivio urbano, che può essere assunto come un incubatore di una nuova visione, minacciata dagli attuali interventi di rinnovamento.

La trasformazione contemporanea di Skopje

Oggi le parti centrali della città sono sottoposte a significativi interventi di trasformazione previsti dal Piano di *rinnovamento* urbano -SK2014- che sta cancellando una parte significativa del suo patrimonio *modernista* e *brutalista*. Il controverso progetto parte ufficialmente nel 2010, promosso e finanziato dal governo macedone, e modifica l'immagine di Skopje con la costruzione di 40 nuovi edifici e ponti, rimodernando oltre 10 strutture esistenti, 77 monumenti, sculture e fontane, nonché 5 spazi pubblici. Gli interventi non rientrano in una strategia urbana ma piuttosto sembrano voler intenzionalmente cancellare quella parte del passato legata al periodo socialista attraverso la sovrapposizione di facciate in stile eclettico sugli edifici più rappresentativi, comportando spesso un'alterazione sia sul piano linguistico che su quello costruttivo.

La ricerca, dunque, propone di documentare e indagare il patrimonio *brutalista* della città, oggetto dell'attuale trasformazione di SK2014, per dare un contributo concreto al dibattito, costruendo un *Atlante operativo* inteso come strumento di progetto per città contemporanea di Skopje.

Atlante Operante

> *L'architettura non è semplicemente la conoscenza degli elementi di base. Piuttosto, una grande parte della sua raffinatezza sta nel modo in cui essi sono posti insieme. Se prendiamo la lingua come esempio, conoscere tutte le parole del dizionario non garantisce il successo dello scrittore. Ma possedere un ricco e vasto lessico ci permette comunque una grande scelta e accuratezza nell'espressione linguistica.*[9]

La ricerca indaga quindici architetture *brutaliste* di Skopje del periodo della ricostruzione della città dopo il terremoto, individuate come casi studio e interpretate come entità *operative* emblematiche e paradigmatiche. Il lavoro è il risultato di un lungo studio sui materiali originali, non strutturati, recuperati da diversi archivi pubblici e privati, che comprendo gli elaborati della fase ideativa del progetto architettonico fino ai disegni esecutivi, grazie ai quali è stato possibile ricostruire il racconto dell'idea della rifondazione della città.

I progetti originali sono stati organizzati, digitalizzati e ri-disegnati diventando così il materiale base per lo studio analitico dell'*Atlante*, convertendo *"l'informazione in invenzione, e l'invenzione in interpretazione."*[10]

L'*Atlante* tenta di tradurre il carattere procedurale e operativo dell'architettura *brutalista* di Skopje, la sua capacità di innescare e sostenere problematiche architettoniche e urbane complesse. L'indagine sviluppata, rivela relazioni, principi, concetti e metodi incorporati in questa *biodiversita' architettonica*[11], tentando di offrire loro una nuova e diversa interpretazione. Lo studio si basa sulla relazione con la **Storia**, come legame tra innovazione e tradizione; la **Tecnica**, come interazione tra costruzione e forma architettonica; nonchè la relazione con la **Natura**, come rapporto tra il progetto lo spazio aperto e il paesaggio. Conseguentemente, le configurazioni spaziali di questi casi di studio sono stati analizzati tramite un lessico di 25 azioni spaziali che sono state distillate successivamente in quattro categorie: *Group Form, Compact, Continuous e Composite.*

Group Form

La categoria *Group form* è definita da una composizione di volumi indipendenti che emergono come forme autonome con altezze variabili e multifunzionali.

Un esempio è il progetto originario del ***Centro culturale*** che include l'*Opera e Balletto Nazionale Macedone* (solamente l'edificio costruito), la *Filarmonica*, il *Cinema* e il *Conservatorio e la Scuola di balletto*.

Nel 1968 lo studio di architettura sloveno Biro 71 (Roman Cizej, Oton Gashpari, Shtefan Kacin, Peter Kershovan, Jurij Princes, Bogdan Spindler, Marijan Urshic e Peter Zidanic) vince il concorso per il progetto del centro culturale previsto dal masterplan di Tange, immaginato come uno dei segmenti del nuovo asse urbano Est–Ovest, che prevedeva il nodo infrastrutturale identificato nella *Porta Urbana*, il *Centro Amministrativo* e quello *Economico*, nonchè il *Palazzo del Governo* e il *Centro Commerciale*.

Il complesso del *Centro Culturale* è concepito come una *metamorfosi tettonica* del suolo andando a configurare una *nuova topografia* artificiale che modella l'intervento architettonico e lo spazio pubblico aperto come legame con il fiume Vardar e la città compatta.

Il ***Campus universitario SS. Cirillo e Metodio*** è un'altra opera del *Group form*. Nel 1967 l'architetto sloveno Marko Music (insieme a Meta Hocevar, Jernej Krajger ed i collaboratori Borut Bucar, Marjan Music e Katja Repic) vince il concorso urbano e architettonico per il Campus universitario di Skopje. Il complesso comprende il *Palazzo Amministrativo del Rettorato* e il nucleo principale delle tre Facoltà (la *Facoltà di Lettere e Filosofia*, di *Economia* e di *Giurisprudenza*) concepiti come un assemblaggio che gradualmente si dissolve con le proprie estrusioni nel paesaggio circostante. La composizione stessa può essere descritta come una ***megastruttura frammentata*** composta da quattro forme che sono state estruse e concentrate attorno una piazza pubblica centrale, la quale caratterizza l'intero complesso.

Il ***Centro delle telecomunicazioni***, di Janko Konstantinov, è situato in una posizione strategica nel centro della città e in linea con i principi guida del masterplan di Kenzo Tange. Il complesso è costruito nello stesso sito dell'edificio delle Poste prima del terremoto.

Konstantinov che incomincia a lavorare sulla prima proposta nel 1968 e nell'arco di quattro anni sviluppa altri tre ipotesi, nelle quali il complesso consiste di tre edifici, la *Sala Sportelli*, il *Palazzo Amministrativo* e il *Palazzo delle telecomunicazioni*, sovrapposti su una piattaforma che li collega e configura uno spazio pubblico. Nel 1974 si realizzano solo i primi edifici, cambiando significativamente la morfologia dell'esistente tessuto urbano. L'intervento può essere definito come un complesso ***multistrato*** di diverse tipologie di edifici che reinterpreta il tradizionale cortile macedone con "coraggiose visioni futuriste sull'orlo dell'utopia."[12]

Compact
Fanno parte del *Compact* gli edifici *brutalisti* concepiti come una forma autonoma dove tutte le funzioni sono concentrate in un'unica struttura.
Il ***Centro di spedizione nazionale -MEPSO*** di Zoran Shtaklev dopo dieci anni completa il complesso del *Centro delle telecomunicazioni*, di Janko Konstantinov.
Shtaklev disegna l'edificio MEPSO dove Konstantinov aveva immaginato il principale *Palazzo delle telecomunicazioni*, ispirandosi al suo disegno non-costruito e inserendo quegli elementi architettonici che consentono la connessione con il complesso già edificato. La composizione può essere descritta come una struttura ***stratificata***, nella quale gli elementi ripropongono il sistema trilitico classico del tempio greco reinterpretato in una combinazione tra cemento a vista e vetro.
Un altra architettura di questa categoria è il ***Museo della Macedonia*** di Mimoza Tomikj e Kiril Muratovski, disegnato in 1971, il quale unisce *il Museo storico, etnologico e archeologico* e l'*Istituto nazionale* per la protezione dei beni culturali.
Il Museo, situato nella parte ottomana, è integrato nel mezzo del tessuto complesso e frammentato del Centro storico (Old Bazar) che ha ispirato il progetto cambiando le linee guida del masterplan generale di Radovan Mischevic e Fedor Wenzler.
Il Museo presenta geometrie chiare, rafforzate dalla diagonale che definiscono una ***griglia monolitica*** nella morfologia frammentata del Centro storico.
L'altra architettura della categoria è *l'**Accademia delle Scienze e delle Arti Macedone***, che Boris Cipan si aggiudica con un concorso nel 1970. L'edificio è localizzato nell'area centrale della città, sul lato sinistro del fiume Vardar. Partendo dal cubo come forma pura primaria, attraverso ***volumi traslati,*** l'autore riesce a stabilire una composizione dinamica asimmetrica che entra come forma autonoma nella successione degli edifici lungo il fiume. Il progetto estrae dalla tradizione della casa macedone, il *Ciardak*, la loggia multifunzionale che rappresentava lo spazio d'incontro e di lavoro delle famigli, e lo reinterpreta nel linguaggio moderno integrandolo nella composizione volumetrica dell'edificio.
La Biblioteca nazionale universitaria di St. Clemente di Ohrid, progettata da Petar Mulichkovski, 1967 è localizzata vicino al *Campus universitario e l'Opera e Balletto Nazionale*. La composizione architettonica presenta ***volumi interdipendenti*** in una vasta area verde che

propongono i temi macedoni come il *Vez*, le decorazioni tipiche, avvicinando questo tipo di intervento all'architettura tradizionale, come Boris Cipan propone nel progetto *dell'Accademia delle Scienze e delle Arti Macedone.*

Continuous
La categoria include composizioni di strutture diverse, messe in relazione attraverso connessioni continue.
Gli interventi dell'architetto giapponese Kenzo Tange, il ***Muro della città*** e la ***Stazione,*** fanno parte di questa categoria. Entrambi gli interventi incidono profondamente sulla struttura urbana e il suo sviluppo. Essi sfocano i confini tra architettura e urbanistica, intrecciando lo spazio pubblico con quello privato, diventando i nuovi simboli della città. Il primo, il **Muro**, con la sua coraggiosa composizione volumetrica e architettonica, sottolinea e separa il centro dal resto della città come un ***soglia lineare***. Mentre il progetto della **Stazione** rappresenta la porta urbana attraverso l'articolazione di una ***megastruttura continua*** che costruisce un nuovo suolo artificiale sostenuto da pilastri.
Inoltre, questa categoria comprende gli interventi degli architetti locali Georgi Konstantinovski e Zivko Popovski.
Il primo, nel 1969 vince il concorso per la ***Casa dello studente Goce Delchev,*** progettando un'opera impregnata della sua esperienza formativa come studente del maestro Paul Rudolph presso la Yale University in New Haven, Connecticut, e dell'influenza della visione del masterplan di Kenzo Tange. Quattro torri scultoree, orientate verso la corte centrale, si innalzano come una ***megastruttura verticale*** e creano una nuova immagine urbana in continuità con lo spazio pubblico, configurando al settimo piano uno spazio aperto che l'autore chiama "piazze sospese" connesse da un sistema di ponti che mettono in relazione i diversi edifici.

In quello stesso anno 1969 Zivko Popovski completa il progetto del ***Centro Commerciale della Città di Skopje***, una complessa mega infrastruttura urbana concepita come il punto finale del nuovo asse Est–Ovest introdotto da Tange. Dal punto di vista concettuale l'intervento rappresenta una reinterpretazione moderna e innovativa dell'idea del *Bazar* tradizionale, delle sue componenti base, la strada e il negozio, diventando così una ***piattaforma urbana*** che stratifica lo spazio pubblico a livelli diversi nella città.

Composite
Sono compresi assemblaggi ibridi che uniscono manufatti autonomi amalgamati in un unico sistema.
L'***Archivio della città di Skopje*** di Georgi Konstantinovski contrasta il caos edilizio circostante proponendo forme geometriche ***monolite compatte***, esaltate dall'uso di diversi pattern di cemento a vista, seconda la tecnica derivata dallo studio di Paul Rudolph dove il trattamento

delle superfici esprime la forza espressiva del calcestruzzo attraverso una differenzazione tattile. La ***Banca Nazionale della Repubblica di Macedonia,*** propgettato da Olga Papesh e Radomir Lalovikj nel 1974 ha la forma di un arcipelago e consiste in una piattaforma che unisce i deversi edifici in un'unità, mentre **L'Istituto idrometereologico**, realizzato nel 1972 su progetto di Krsto Todorovski è concepito come un ***collage*** di diversi volumi, che si stagliano nella parte più alta della città. Il centro interpreta la produzione dei monumenti *brutalisti* frequenti nella Jugoslavia socialista, proponendo un'architettura scultorea che evoca un oggetto dello spazio extraterrestre.

Conclusione

Lo studio delle opere architettoniche realizzate dopo la rifondazione post-terremoto di Skopje rivela significative implicazioni sulla configurazione della città contemporanea, svolgendo un ruolo decisivo sull'identità urbana. Questo patrimonio, percepito come il prodotto della cultura politica socialista, ha subito un'azione di rifiuto, cadendo in una condizione di oblio, che ne ha comportato un evidente deterioramento, nonché la cancellazione di alcune opere che sono state anche rimosse dalla mappa della città e quindi dalla storia dell'architettura locale, ancor prima che venissero indagate come testimonianze fisiche del processo di modernizzazione dei Balcani.

Le vicende che hanno caratterizzato la storia della città di Skopje, dalla caduta del socialismo, la proclamazione dell'indipendenza dalla Jugoslavia e il seguente periodo di transizione post-socialista, hanno profondamente trasformato la struttura spaziale delle città e in particolare il patrimonio *modernista* e *brutalista*, osteggiato ideologicamente. L'*Atlante Operante,* dunque, approfondisce la conoscenza di tale produzione architettonica, fornendo uno studio organico di supporto al percorso di consapevolezza del patrimonio *brutalista.*

In particolare, l'*Atlante* colma la mancanza di materiale scientifico strutturato, necessario per approfondire la conoscenza delle opere, ma anche propone studi specifici delle soluzioni architettoniche e urbane mettendo in luce i principi e le modalità compositive.

Ne emerge che le opere architettoniche *brutaliste* descrivono un *layer* nella struttura della città, configurando delle entità autonome, come microcosmi.

L'*Atlante,* si rivela uno strumento di progetto che ibrida il catalogo e il libro, nel quale i 60 diagrammi elaborati descrivono 45 differenti articolazioni delle opere *brutaliste*, traducendo la genesi delle operazioni progettuali. La rappresentazione diagrammatica di tale varietà incrementa le possibilità d'indagine e conoscenza delle testimonianze architettoniche e urbane, aprendo a ulteriori confronti e narrazioni che oltrepassano la loro convenzionale percezione.

Integrando i precedenti studi sul patrimonio moderno di Skopje, che descrivono il contesto sociale, politico, culturale e storico, la presente tesi propone una ulteriore prospettiva di indagine attraverso l'*Atlante*, tentando di ampliare il *lessico* disciplinare, concepito come uno strumento indispensabile per le trasformazioni dell'architettura e dell'urbanistica contemporanea dei Balcani. Tale articolazione può fornire una metodologia da applicare anche in altre realtà simili.

a
architecture of elements
artificial soil
attaching
autonomous form
axial arrangement
axial fluidity

c
colaging,
compound
continuous trajectories
circuits
cluster
chain

d
demarking
density
dichotomy
displacing by sliding
dominance

e
embed
evolutionary

f
field
figure ground
forum

g
group

h
hinge

i
in between
infrastructure
infill
insert
interlock
intertwined trajectories

j
join
joint cores

l
layering
lodge
locus

m
monolith
mosaic
multilayered

n
new ground
no hierarchical space

o
operative topography
overlap

p
patchwork
pattern
platform
profile
topography

r
relation
roofing

s
sequential
spatial Layering
superposed order
suspend
system

t
tabula plena
taxonomy
tectonic metamorphose
terraform
trace
threshold

u
urban Interior

Note

1 Mrduljaš, M., Kulić, V., *Unfinished Modernisation*, Kolorklinika, Zagreb, 2012.
2 Skopje City Archive, The Institute for Urbanism (the materials have been retreated from Divna Pencic), Macedonian Opera and Ballet Archive, Transportation center Archive, Private Archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski, Private Archive of Mimoza Tomic
3 Wunstenrot Foundation, Brutalism, Contributions to the international symposium in Berlin 2012, Park Books, Zurich, 2017.
4 Mrduljash M., Kulich V., Unfinished Modernizations, Between Utopia and Pragmatism, Croatian Architects' Association Zagreb, 2012.
5 Stierli M., Kulic V., Toward a Concrete Utopia: Architecture in Yugoslavia 1948-1980.
6 https://www.mymodernmet.com/brutalist-architecture/
7 Venturi R., Complexity and Contradiction in Architecture, The Museum of Modern Art, New York, 1977
8 AA.VV., Skopje Resurgent, The story of a United Nations Special Fund, Town Planing Project, Stationery Office Books, New York, 1970
9 Unwin S., *Analyzing Architecture*, Routledge, London, 1997
10 Graf D., (1986) Diagrams in Perspecta, Vol. 22, Paradigms of Architecture.
11 Roberts, B. (2016). Tabula plena, forms of urban preservation, Lars Muller Publishers, Zurich
12 AA.VV., Биографија на Едно Архитектонско Дело: Телекомуникациски Центар Скопје, Музеј на Град Скопје, Скопје, 2016

Definitions by rchitectural practitioners, theorists and critiques

Peter and Alison Smithson
Brutalist to us meant 'Direct': to others it came to be a synonym for rough, crude oversized and using beams three times thicker than necessary. Brutalism was opposite, necessary to suit the new situation, like Kahn's work at Yale. That wasn't rough or crude or oversized.

Jurgen Joedicke
Responsibility, truth, objectivity, truth to material, truth to structure, legibility and image.[9]

Bruno Zevi
It means:clean, virgin surfaces, havily corrugated volumes, but of prismatic simplicity; services exposed to view: zones of violent color.[10]

Reyner Banham
The definition of New Brutalist building derives from Hunstanton and Yale Centre, above, must be modified so as to exclude formality as a basic qualityif it is to cover future devlopments and should more properly read: 1, Memorability as an Imge; 2, Clear exhibition of structure; 3, Valuation of materials *as found.*[11]

Le Corbusier
Bèton brut was born at the Unitè d'Habitation, Marseilles, where there were eighty contractors and such a massacre of concrete that there was no way of imagining how to construct useful relationships through rendering. I had decided: leave everything "brut". I called it "bèton brut". The English immediately jumped on the band wagon and dubbed me (Ronchamp and the convert of la Tourette) "Brutal", -"bèton brutal"- and at the end of the day, the brute is Corbu. They called it "the new brutality". My friends and admires thinking of me as the brute of brutal concrete(bèton brut)[12]

PART 1

1. Brutalism in general context

Any discussion of Brutalism will miss the point if it does not take into account Brutalism's attempt to be objective about 'reality' – the cultural objectives of society, its urges, and so on. Brutalism tries to face up to a mass-production society, and drag a rough poetry out of the confused and powerful forces which are at work. Up to now Brutalism has been discussed stylistically, whereas its essence is ethical.[3]

Reconstruction of the historical evolution of Brutalism is not the aim of this part, rather to give an accent to a set of characteristics deployed in the nature of the movement. The characteristics are presented as notions that derive from descriptions extrapolated from diverse sources as: figures pioneers of the movement, dictionary or encyclopedia. Terminology such as *Bèton brut, material, concrete, rough, structure, as found, exposed, bold, heavy, pure, simple, image, memorability ,monumentality* have been used by the architects Reyner Bahnam, Peter and Alison Smithson, the artists Eduardo Paolozzi, the photographer Nigel Henderson, members of the Independent Group[15] on one hand and on other hand the Oxford, Cambridge, Collins dictionaries as well as Columbia and Sovet Union encyclopedia to describe the nature of this artistic-architectural movement *New Brutalism*. The origins of the movement can be traced in *bèton brut* - raw concrete that relates to the post-war work of Le Corbusier on one hand and in Jean Dubuffet's *art brut*[16] on other. The term *New Brutalism* itself first appeared in print in a brief description by Peter and Alison Smithson in 1953 introducing the drawings for the Soho house in Colvin Place that they have designed together claiming that *if it had been built would have been the first exponent of the New Brutalism*[17]. The house was envisioned in load-bearing brick with accented floor slabs in raw concrete purified of any decoration or unnecessary surfaces. Two years later, Rayner Banham, the pioneer of the theoretical thought of the movement, in his first essay *The New Brutalism* originally published in The Architectural Review in December 1955 elaborates a series of its characteristics: a formal legibility of plan, memorability as an image, clear expression of a building's structure and the honest use of materials in their as-found condition.[18] In a parallel of these, as Jürgen Joedicke explains in his essay *New Brutalism - Brutalism in Architecture* Smithson's views are centered on a sequence of complementary characteristics such as **responsibility**, **truth**, **objectivity**, **material** and **constructional justification**, and **readability**.

Definitions by dictionaries

Cambridge
A building style in which buildings are large and heavy-looking, and often made from concrete[4]

Merriam Webster
A style in art and especially architecture using exaggeration and distortion to create its effect (as of massiveness or power) [5]

Lexico
A stark style of functionalist architecture, especially of the 1950s and 1960s, characterized by the use of steel and concrete in massive blocks. [6]

Collins
An austere style of architecture characterized by emphasis on such structural materials as undressed concrete and unconcealed service pipes
Also called: new brutalism[7]

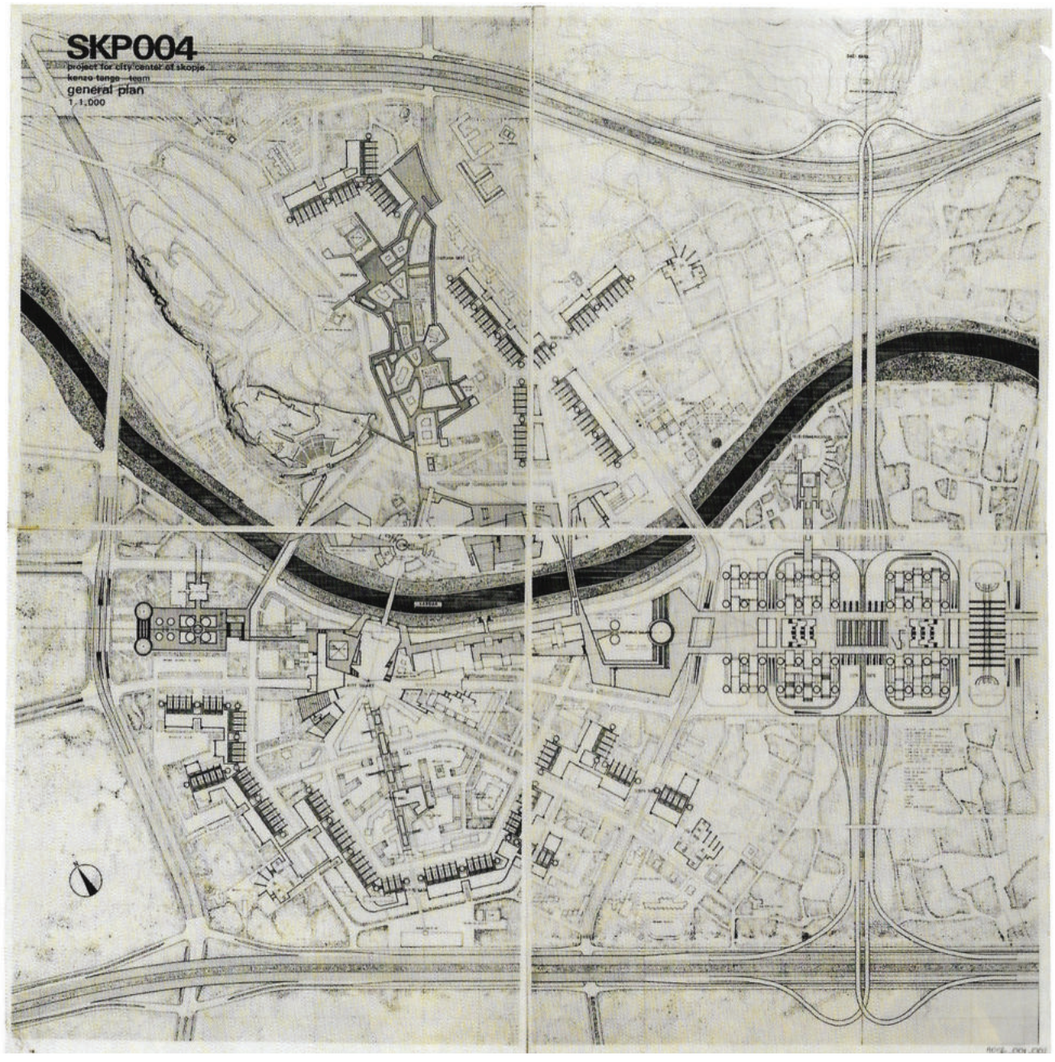
Oxford
A style of architecture used especially in the 1950s and 60s which uses large concrete blocks, steel, etc., and is sometimes considered ugly and unpleasant[8]

Definitions by enciclopedia

The Columbia Electronic Encyclopedia
brutalism or new brutalism, architectural style of the late 1950s and 60s that arose in reaction to the lightness, polish, and use of glass and steel that had come to characterize the orthodox International style ; the term is derived from the French béton brut [raw concrete]. Brutalism aimed at honesty in the use of materials, e.g., unfinished concrete and brick, and a certain moral seriousness, and arose in part out of the monumental structures designed by Le Corbusier[13]
The Great Soviet Encyclopedia
a trend in modern architecture. It originated with the architects Alison and Peter Smithson (husband and wife) in the middle of the 1950's in Great Britain and spread to the countries of Western Europe, the USA, and Japan. ***It has no clearly defined theory****. The brutalists strive to create architecture in which aesthetic qualities are determined by crude, obviously heavy forms and exposed structures and engineering systems of buildings. Examples include the school at Hunstanton, 1949-54, and the building housing the editorial offices of the London Economist, 1964; both by A. and P. Smithson; the Marchiondi Institute in Milan, 1959, by V. Vigano; and the Halen Siedlung near Bern, 1961.*[14]

Further on, terms such as *heavy-looking, massiveness, power, exaggeration, structural emphasis, honesty, monumental structures, aesthetic qualities, crude, heavy forms* have been employed by the upper mentioned dictionaries and encyclopedia in order to explain the nature of Brutalism. The list of the essential characteristics and definitions of the movement is rendered bellow into a lexicon structured as a taxonomic system, with the purpose to clearly outline and comprehend the movement. moreover, it is precisely this set of notions which served as a reference book for the selection of the case studies elaborated in this thesis.

formal legibility of plan - such a relationship between structure, function, and form is the basic commonplace of all good building of course, the demand that this form should be apprehensible and memorable is the apical uncommon place which makes good building into great architecture.[19]
Image - basically, it requires that the building should be an immediately apprehensible visual entity, and that the form grasped by the eye should be confirmed by the experience of the building in use.[20]
as-found condition - valuation of materials as found**.** Remembering that an Image is what affects the emotions, that structure, in its fullest sense, is the relationship of parts, and that materials 'as found' are raw material.[21]
honesty in structure and material - the way the building exhibits how it is constructed through the building itself, the visibility of the materials in use, and the way they are used.
responsibility - denotes above all the duties of the architect to society. It also implies, however, the relation of
the individual building to the structure of the city as a whole-in general terms, building within a framework set
by society and city-planning exigencies.[22]
truth - relates primarily to the method of construction. The building shall reveal the method of construction, as in Kahn's definition of architectonic space: *I think an architectural space is one in which it is evident how it is made.*[23]
objectivity - implies that not the architect himself but rather that which the building represents should be expressed.[24]
material justification - respect for material was interpreted anew. The building materials were to be used in their natural state.[25]
constructional justification - refers to an elucidation of the constructive function.[26]
readability - the Smithsons reduce this question to a single demand: that the logic of the project as visualised and more precisely-the spatial distribution, the construction and the building materials shall be visible to the outside.[27]



img. 01 SKOPJE MASTERPLAN
Kenzo Tange
ink on transparent paper copied on insoluble paper
Kenzo Tange Archive, Frances Loeb Library, Harvard University Graduate School of Design

2. Brutalism in the context of Skopje

Skopje, the capital of Republic of Macedonia, has a *complex and contradictory*[28] urban tissue as a result of writings and cancellations of the traces that reflects its eventful history. The city represents a coexistence of diverse concepts of urban development, a stratification of different signs, like the ones from the mediaeval Byzantine, the Ottoman influence, the traditional Balkan city[29] as well as the traces of the post-earthquake reconstruction that lead to the production of significant massive, raw concrete structures that produced the *bèton brut* cityscape[30]. Within this conglomeration of different influences the architectural production of the 60's warrant a particular place in the local as well as the global architectural discourse taking in consideration not only its quantity but also its quality.

More than 55 years ago on 26th of July 1963, the city has been almost completely destroyed by the devastating 6.1 magnitude earthquake when more than 2.000 people died and around 150.000 were displaced. The city was only partially reconstructed according to the bold Metabolic visionary master plan of **Kenzo Tange**, conceived as a singular moment of architectural experimentation projected into an utopian imagination.

In 1964 the Japanese architect was invited by the United Nations[31] to participate on restricted competition for a master plan for approximately two kilometers square of the Skopje city center. Four teams from Yugoslavia and other four foreign teams were invited. In 1965 the jury made up of representatives of United Nations, its project manager Ernest Weissmann[32], Ljube Pota the director of the Town-Planning Department of Skopje and Risto Galic as director of the institute for Town-Planning and Architecture, decided to give 60% of the first prize to the project of Kenzo Tange and 40% to the Yugoslav team Radovan Mischevic and Fedor Wenzler.

After the competition members of Tange's team: Arata Isozaaki, Yoshio Taniguchi and Sado Watanabe, and members of Zagreb's team: Radovan Misevic and Fedor Wenzler, together with members of Skopje's institute of Town Planning and Architecture will design a proposal that soon will be known as the *Ninth Version*, project based on Tange's proposal for Skopje.

The project of the Japanese architect transformed the rubble landscape in laboratory for formal and technological experimentation and goes beyond the modernist formula *form follows function* exploring the idea of a city based on relations and stratified connections, the idea of a city exploded on different levels or as Constant Nieuwenhuys wrote in *Another City for Another Life* published in *la Internationale Situationniste*:

img. 02 *Segment of the City Gate in the Model of the Kenzo Tange Plan for the City of Skopje,* 1965
AA.VV., (2014). *Findings*, Youth Cultural Center, Skopje.

> *The city of the future must be concived as a continuous construction on pillars, or rather as an extended system of different structures in which are suspended premises for housing, amusment, etc., and premises destined for production and distribution, leaving the ground free for the circulation of traffic and for public meetings.*
> *They will be accessible everywhere by stairs and lifts. The different floors will be devided into neighboring and communication spaces, artificially conditioned, which will offer the possibility of creating an infinite variety of ambience, facilitating the derive of the inhabitants and their frequent chance encounters.*

Tange's project flourished during 1960's with its ambitious investigation in big scale interventions and the **re-foundation** of the city based on *tabula rasa* approach, act of not taking in consideration the traces of the ruined
city, neither the existing morphology, except the Old Bazar that became an objet trouvè among the new inserted metabolic organisms. He introduced a new measure to the city, interweaving the architectural with the urban scale. Therefore, the masterplan actually represents application of the town ideas developed in 1960's for the Tokyo Bay plan. The plan for Skopje was based on two structural elements, the **City Wall,** and the **City Gate**, elements that as symbols recall the notions of *wall* and *gate* from the medieval city with tendency to bring closer the radicalism of the project to the local conditions. These two elements became the focal point[33] that dirigate the articulation of the whole masterplan.
The **City Wall** was imagined as a framework that has been materialized in residential system that surrounds the city center and makes it capable to absorb the rise of the population in the following development of the capital. This kind of a system, linear stripe that folds in a form of a horseshoe and delineate the urban center allows the housing function to be incorporated into it. Segments of vertical cylinders where the services were situated were connected with corridors as an access for the in between modular linear blocks constructed the city wall.
The **City Gate** was imagined as an entrance to the city, an infrastructural and commercial node where all existing traffic systems converge on different levels. A mega structure that establish a link with the urban center trough a sequences of modular interventions concentrated around strongly emphasized vertical elements.
According to the strategy of Tange the City Wall and the City Gate were conceived as metabolic megastructures[34] that would significantly increase the city density.
Although the plan wasn't completely realized as Tange has imagined it, his influence on the local architectural production of the macedonian architects like Georgi Konstantinovski, Janko Konstantinov, Olga Papesh, Krsto Todorovski ect., is obvious in many buildings erected in this period. It is evident their effort to bring the brutalism closer to the local architecture by incorporating elements and motifs from the traditional Macedonian architecture. Beyond this, trough the work , knowledge and the experience of those architects it could be noticed also the

indirect influence of Louis Kahn, Paul Rudolph, Serge Chermayeff, Alvar Aalto and Van den Broek and Bakema, who all had a major impact on those local architects. As a conclusion, in this years of the 60s and 70s many architects that have been working for the requalification of Skopje the solution to renew and begin regenerating again new social conditions in the city were creation of new elements, alternative to the existing city that could contain all the new aspirations and big enough to affect the whole city. The concept of new socialization and collectivization will be continued in numerous occasions in their architectural language.
Nowadays, this architecture in Skopje, presents the significant signs of the city history, becoming a form of urban archive, conceived as an incubator for a new visions that currently is threatened with the current interventions.

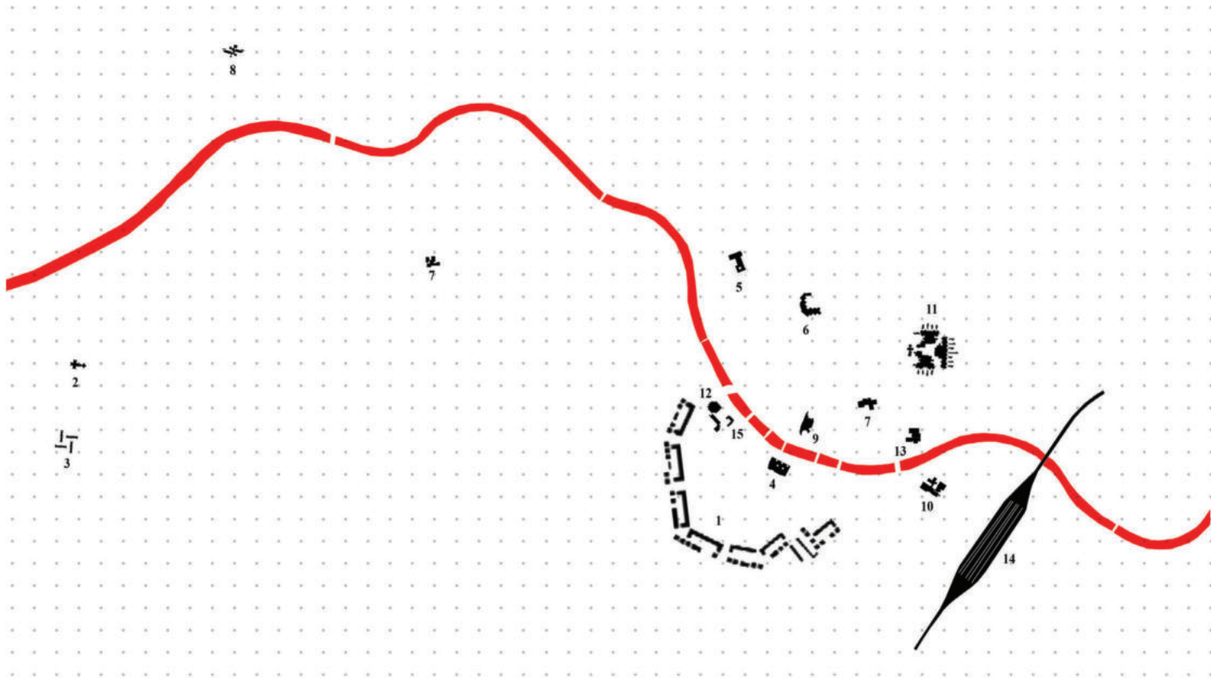
img. 03 *photo credit_Mattia Marinolli*
cource_99FILES DIGITAL ARCHIVE

3. Skopje and its changing context today

After points in time of societal trauma, caused by war, a natural disaster or a period of long economical and national transition, the politically served doctrines were the stimulus to rebuild the society and the urban milieu. Different ideologies have always driven the urban changes of the city of Skopje and this influence resulted in diverse physical and cultural layering.
The last layer, the infamous anachronistic project urban renovation plan “Skopje 2014”, followed a long term all-embracing transition aspiring towards cultural independence. This project made a link with the political notion of the so called romantic nationalism*, and the coupling various stakeholders that shared this view, fabricated a zeitgeist, a “spirit of the age” according to Hegel, insinuating the material world of the antic state of Macedonia. This architectural spectacle generally created a misconception of people becoming the active determiner of history, especially through the materialization of “Skopje 2014”, which was just a mere extension of the already existing process of urban and architectural transformation and degradation of anonymous residential blocks, which further developed into fundamental contextualism* (Lcaton& Vassal) in the “spirit of the age”, targeting important, but undervalued, urban entities and architectures of different periods. Currently the fundamental parts of the city are under transformative interventions envisaged in the project by neglecting the already built material legacy and by canceling a significant part of the modernist and brutalist heritage. The controversial project, which was officially announced in 2010, was promoted and financed by the previous macedonian government and has dramatically transformed the image of the central area of Skopje. The project, undertook the construction of 40 new buildings and bridges, remodeling of more than 10 existing structures, placed 77 monuments, sculptures and fountains, and incorporated 5 public spaces, as well. Following a political idea, but in absence of strategy and reason, the actions taken could not foster any urban planning process, on the contrary, they induced a process of deconstruction. This operations affected generally the built legacy related and identified with the architectural achievements from the socialist period, concentrated in the central area, and included different methods of reassembling and redecoration of the artifacts with new retrograde eclectic style facades.
Consequently to its exclusive generative ideology and not having a well-founded and reasonable plan, this project’s space projection actuated many debates concerning the legislative regulations, and motivated many researches on the neglected urban and architectural heritage. Many parallels can be made, mostly led by the political and economic conditions shaping the processes, some connecting the “Skopje 2014” with the Serbian occupation of this territory and the strategy of the Serbian kingdom for organizing their cities and centres, or with the “city of solidarity”* and Tange’s plan for reconstruction of Skopje after the earthquake, thus the creation of an open air exhibition not relating much to the existing context. Non the less, this project opened discussion on many subjects that have been rarely or never talked over, like what is the heritage

img. 04 *MEPSO building Zoran Staklev,*
with a new facade according to the project Skopje 2014 that covers the original building

Skopje possesses, evaluation of its motifs, structural characteristics and influences, its symbolic, integration and harmonization with its context.
In this direction, this paper's contribution to this debate comes through introduction of research experience, 99FILES that have the same intention of constructing a methodology and becoming a device for re-thinking the brutalist architecture in Skopje. The 99FILES project is conceived as an interdisciplinary think tank, a complex and innovative research that develops different points of observation of brutalist heritage in the Balkan area, releasing it from theentailed negative connotation concerning the ideological legacies, and stimulating different interpretative directions of an important string in the architectural thought.
For the Venice biennale 2018, "another design and analytical project that examines the current state of urban fragments within the Skopje city center" was prepared. As the authors claimed it envisions a fragmentary review of the key aspects of SK2014, contrary to its tendency to solidify the space.



img.05
[1] City Wall *_Kenzo Tange* **[2] City Archive** *_Georgi Konstantinovski* **[3] Student Dormitory "Goce Delchev"** *_Georgi Konstantinovski*
[4] City Shopping Center *_Zivko Popovski* **[5] Museum Of Contemporary Art** *_W. Klyszewski, J. Mokrzynski, E. Wierzbicki*
[6] Museum Of Macedonia *_Mimoza Tomic* **[7] National And University Library** *_ Petar Mulichkovski*
[8] Hydrometeorological Service Building *_Krsto Todorovski* **[9] Macedonian Opera And Ballet** *_Biro 77*
[10] National Bank Of The Republic Of Macedonia *_Radomir Lalovikj, Olga Papesh*
[11] Ss. Cyril And Methodius University Skopje *_Marko Mushic* **[12] Telecommunications Centre** *_Janko Konstantinov*
[13] Macedinian Academy Of Sciences And Arts *_Boris Chipan* **[14] Transportation Center Skopje** *_Kenzo Tange* **[15] Republic Dispatch Center** *_Zoran Shtaklev*

PART 2

4. Operative Atlas

Architecture is not just as easy as knowing the basic elements. A large portion of its subtlety lies in how they are put together. In language, knowing all the words in the dictionary wouldn't make one a great novelist. Having a good vocabulary does however give great choice and accuracy when one wants to say something[35].

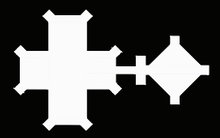
The research investigates 15 brutalist architectures in Skopje, dating from the post-earthquake reconstruction of the city, catalogued as case studies, interpreted as emblematic as well as paradigmatic *operative* entities. The work is based on a long exploration on the original non systematized and unpublished materials from different local and private archives[36]. It collects the most significant testimonies starting from the ideational phase of the architectural project and up to the executive drawings, proposing itself as a device of knowledge and theoretical reflection.

The significance and the meaning of the collected materials from the archives is to show the existence of an idea of a city rather to describe its historical evolution. The original projects have been organized, digitalized and re-drawn becoming a basic materials for an analytical study conceived as an operative atlas. This atlas becomes a tool that reduces the archive materials to information, *information are reduced to invention, and invention to interpretation*[37].

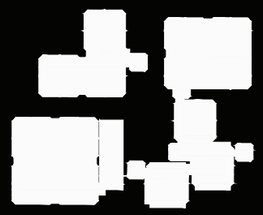
The Atlas strives to put in evidence the procedural and operative character of the brutalist architecture in Skopje, its capacity to initiate and support complex series of issues and events in the contemporary architectural debate, rather than refer hermetically to their own history or to the design process.

This work reveals relations, principles, concepts and methods embodied in this *biodiversity of architecture*[38] and aims to offer their new different interpretation. The elaboration of the architectures is based on a search for a relations, relation with the **History** seen from a discourse regarding the link between innovation/tradition, relation with the **Technology** or its influence on the architectural composition as well as relation with the **Nature**, therefore the predisposition of the building to establish necessary relations with the open space and the landscape. Consequently, the spatial configurations of these case studies have been explored through a lexicon of 60 spatial verbs that have subsequently been distilled into four different categories: *group form, compact, continuous and composite.*

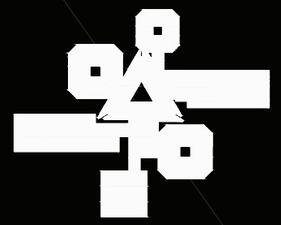
[A4.1]



[A4.2]



[A4.3]



A. COMPOSITE
Hybrid assemblages that bring together unrelated building types merged in an unique layout.

[A4.1]
City Archive
Georgi Konstantinovski

[A4.2]
National Bank of Tthe Republic of Macedonia
Radomir Lalovikj, Olga Papesh

[A4.3]
Hydrometeorologycal Sevrice Building
Krsto Todorovski

[A4.1]
City Archive

Architect
Georgi Konstantinovski

Date of construction
1966-68

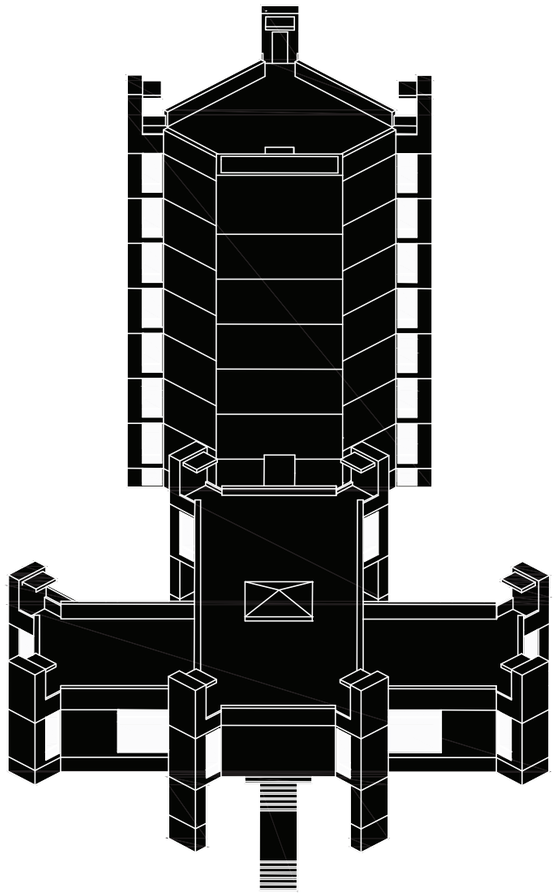
Building area
500m2

Size
S

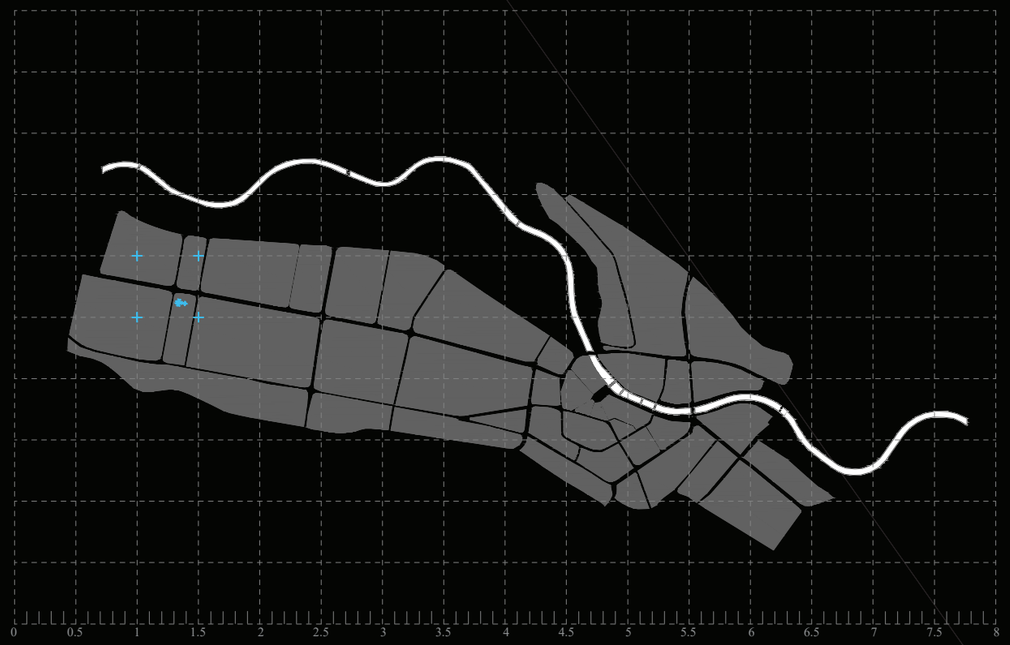
Category
Composite

Concept
Monolith, Axial Arrangement, Axial Fluidity, Locus

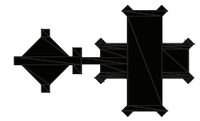
Operative verbs
Lodge



geographical position
42°00’11.0”N21°23’25.9”E



img. 06_Location
City Archive in the map od Skopje



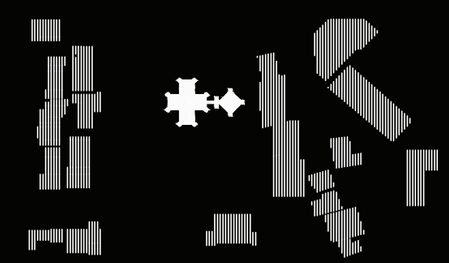
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

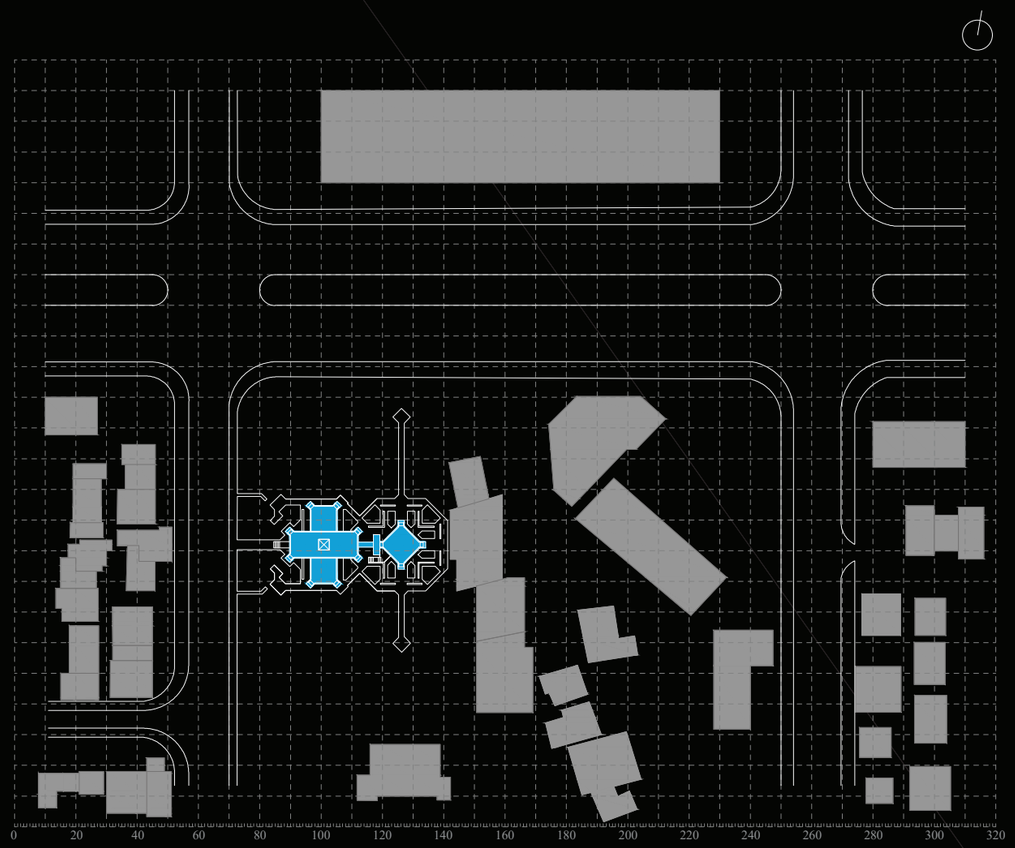
GEOMETRIC DIAGRAM
spatial syntax analysis

City Archive _Georgi Konstantinovski

The Historical Archive Of Skopje is a building depot where the most important documents concerning the history of the city of Skopje are kept. The project was commissioned by the archive institution for the architect Gjorgji Konstantinovski. The need for it emerged from the necessity to keep the city documents safe and displace them from a non-standard facilities in which they were kept at risk of being destroyed by fire or flooding. It was built between 1966 and 1968, on about area 490/1350/9300m2
This small scale depository is located in the settlement of Taftalidze, a suburb in the western part of the city, whose imprint of the urban morphology follows the principles of the garden cities, adapted to the local conditions, focused on the residential ground floor units plunged in greenery, served by islands of markets and the educational facilities, as well as factories proportionally settled between residential areas and the strong orthogonal communication corridor scheme. The Archive building is placed in one of the mixed-use islands, never the less the assigned plot and its appearance makes it an island per se.
The exciting formal outcome related strongly to Konstantinovski’s education under Paul Rudolph at Yale University and emerging personal design philosophy centered on programmatic critique and innovative construction practice determined by local circumstance.
Although the building is positioned by the main east-west axis of the city, its presence isn’t immediately evident because of its offset from the borderlines of the plot, and its mainly horizontal volumetric composition plunged in greenery appears only by a sculptured vertical that resembles a fortress tower. The building is accessible from a lower range street and trough an axially developed path the visitor is led directly to its interior.
The content layout of the building can be compared to the one of a house, starting from a reception unit, followed by servant administrative area, and ending with the intimate volume that holds the documents. There is a separate volume assigned to each set of functions, and these tracts are strictly and successively developed symmetrically from the main axis of the building. The hierarchy of the content and spaces is also readable in the complete edifice articulation, having two horizontal elements crossed one over the other forming a vertical corridor leading towards the principal container – a sculptured tower.
In spite the fact that its body is split in three components, this brutalist small scale specimen displays very regular geometry and structure, it keeps the symmetry thoroughly, and is visually simple and apprehensible. The austerity of the materialization of the three basic volumes, reduced to grooved in-situ cast concrete, phenomenologically, interferes the viewer’s experience appearing like an object that was always there. Moreover, the decorative hollow extensions on each volume corner have the function, through contrast, to emphasize the solidness of the building itself. Dimensioning its parts and planning their disposition, Konstantinovski, consciously applied hierarchy between them, choosing the archive steeple to be the main element of this composition.



img. 07_Diagram *Monolith*

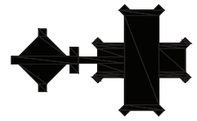


img. 08_Masterplan
City Archive

Image 07
The diagram shows the differentiation of the City Archive building in its surrounding by its monolithic character.

Image 08
Masterplan of the City Archivesituated in Taftalidze, shown over a grid of 10mx10m.

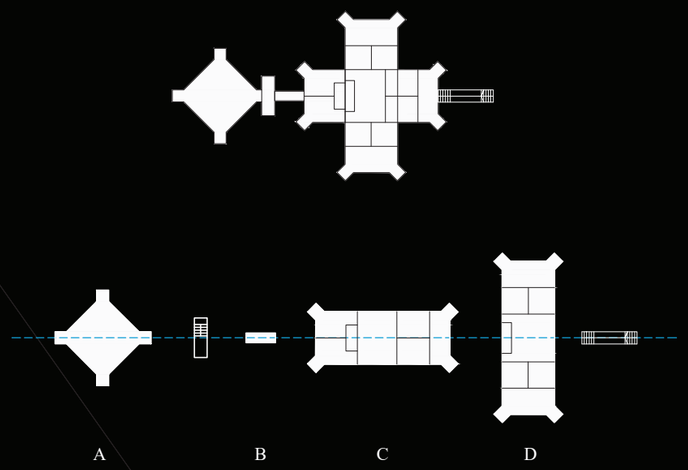
City Archive



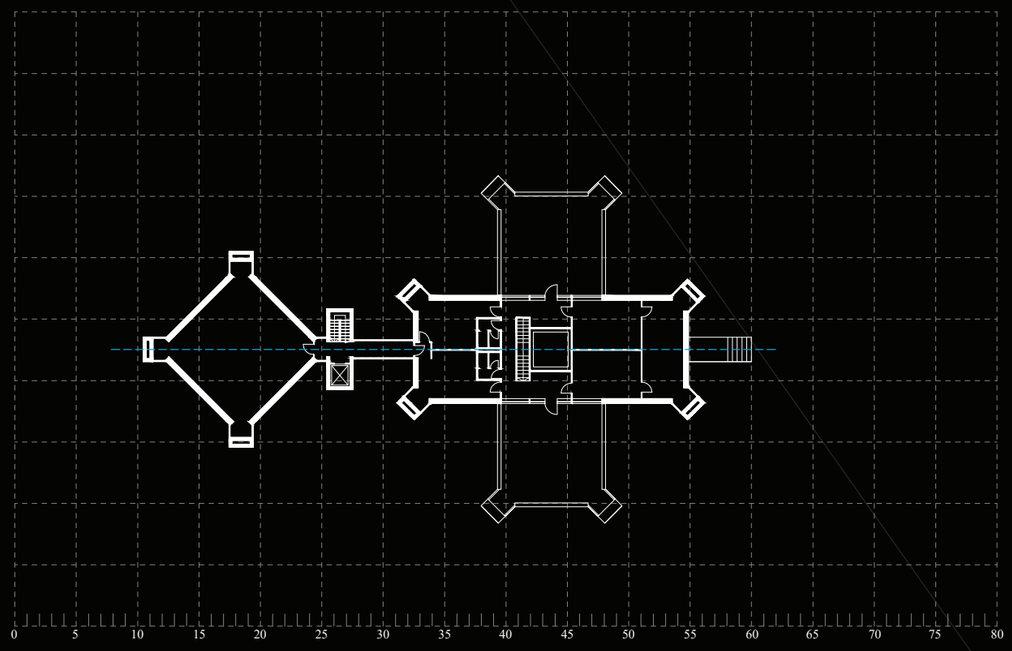
Monolith

Monolith, n. /ˈmɒn(ə)lɪθ/
1. A large single upright block of stone, especially one shaped into or serving as a pillar or monument. 2. Something suggestive of a large block of stone, as in immovability, massiveness, or uniformity.

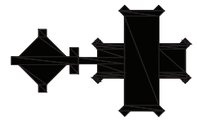
Although small scale and detached from the existing urban surrounding, the Archive building manifests as a reference point for the urban island. Its monolithic articulation distinguishes it from the adjacent residential buildings and makes its public function recognizable. Along with the student dormitory building Goce Delcev, this edifice is stabilizing the corners of the block, and being placed on a visible distance, they reveal the architect's trial to create a space sequence of an ideal city. On the level of architecture, the Archive building's strong presence originates from the readable conceptualization of its structure. The monolith appearance is a result of the author's adhering to order in each building detail, and keeping its materialization simple and consistent.



img.09_*Diagram Axial Arrangement*



img. 10_Floor plan (ground floor)
City Archive



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

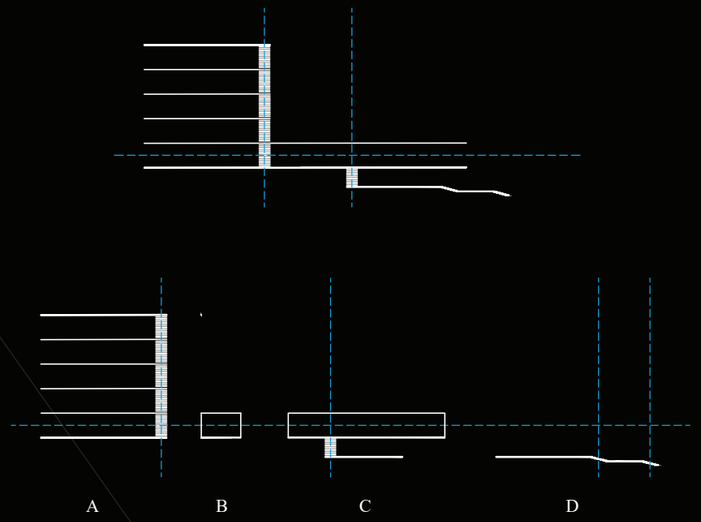
Axial Arrangement

Axial, adj. /ăkˈsē-əl/
1. Located on, around, or in the direction of an axis.
Arrangement, n. /əˈreɪn(d)ʒm(ə)nt/
1. The action, process, or result of arranging or being arranged.

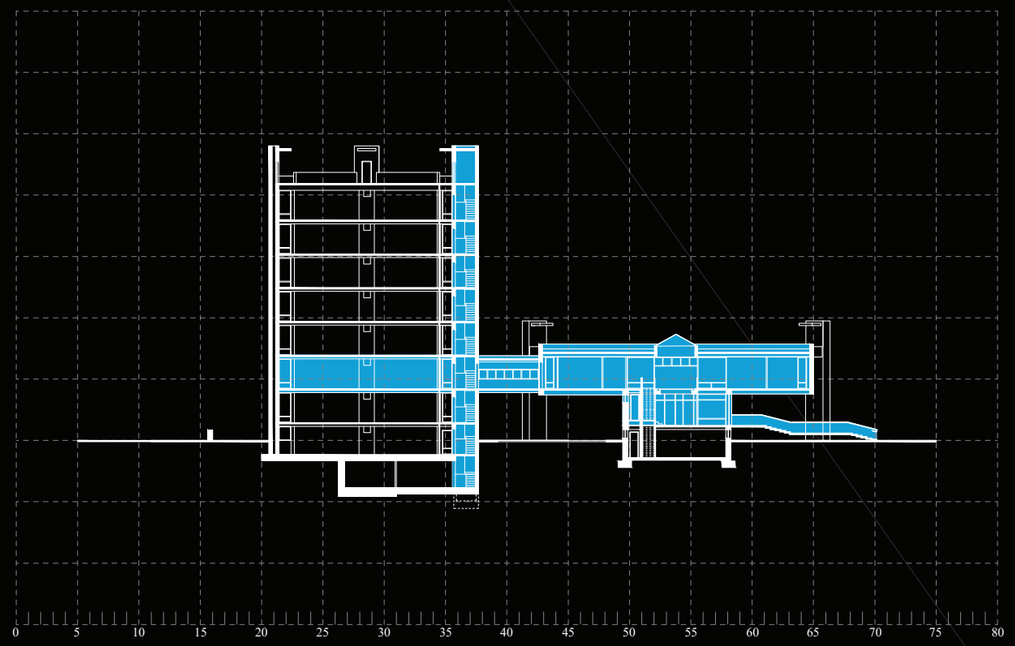
Image 09
Diagram that represents the arrangement of the spaces with a strong emphasize of the central axis.

Image 10
The axis as a backbone on which the main architectural elements that compose the plan are attached (the stairs, the gallery, the skylight etc.)

The top view of the building demonstrates a wider floor plan arrangement that embraces the close surrounding of the building. It reveals a ‘body’ resembling concept with easily comprehensible elements ceremoniously arranged on a main generative axis. A rectangular base module is used in forming the administrative, as well as the ‘head’ volume of the Archive. The formality of the plan is heighten with some well positioned and proportionally incorporated ornaments. What strengthens the wholeness of this architecture is the main circulation axis, that is only revealed when overlapping the horizontal sections of the two main levels.



img.11_Diagram *Axial Flof*



img. 12_Section
City Archive

Image 11
A - the archive depot.
B - the bridge.
C - the administrative part.
D - the entrance.

Image 12
The diagram shows the interchange of the horizontal arrangement with the vertical axes where the communications are situated.

GENERAL INFORMATION

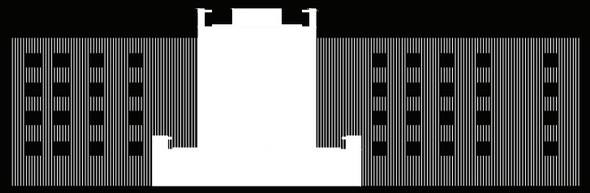
ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

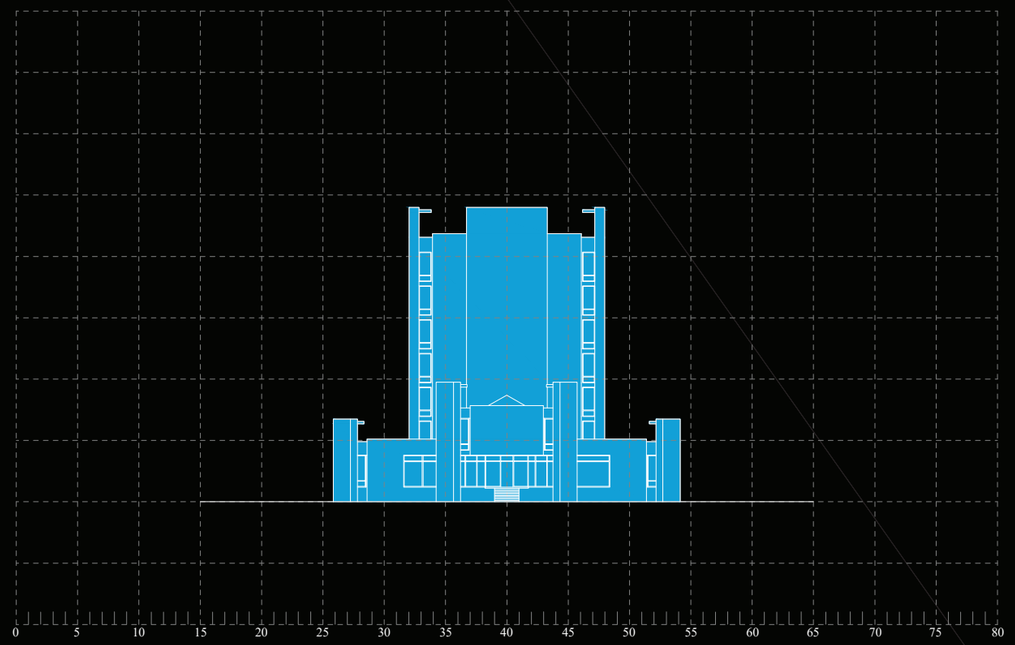
Axial fluidity

Axial, adj. /ăk'sē-əl/
1.Locatedon,around,orinthedirectionofanaxis.
Fluidity, n. /fluːˈɪdɪti/
1. The ability of a substance to flow easily.

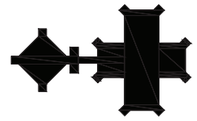
An ancient temple hierarchical composition was used as a model to conceptualize the main corridor trough the building. The whole movement seems to be a fluid procession that begins with nested emblematic entrance that leads you directly inside a public square, the first and last point that a common visitor can reach. From this point on, in spite the fact that there is a restriction of movement, clearly articulated by delevelling, the corridor volume axially continues towards the main unit, the tower. Depending on the level of security, the connection elements that lead the movement, stairs and a bridge, are left visible or have been well hidden.



img.13_Diagram *Locus*



img. 14_Elevation
City Archive



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

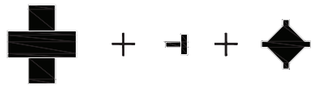
GEOMETRIC DIAGRAM
spatial syntax analysis

Locus

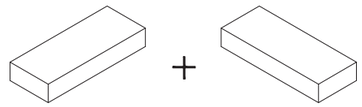
Locus, n. /ˈləʊkəs/
1. The effective or perceived location of something abstract.

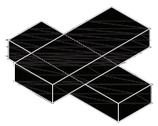
Image 13
The monolithic character of the building has been accented in the articulation of the facade.
Image 14
The public function of the building is expressed in its elevations that in their character are different form the surrounding housing buildings.

Distanced from the positivism on the idea of modern architecture and the proposed tabula rasa method by urban designers like Le Corbusier, and drifting in an unsettled present, the architect Konstantinovski, when intervening in the city, evidently pursued to revive obscure and lost notions of locus, *a relationship between a certain specific location and the buildings that are in it.*[57] The exterior of the Archive discloses the architect's rational mind and classical approach with highly perceivable functional outcome.

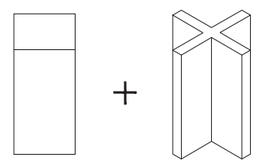


Operation_AXIAL ARRANGEMENT
the overlapping volumes and the intersect ones arranged in linear axial hierarchy

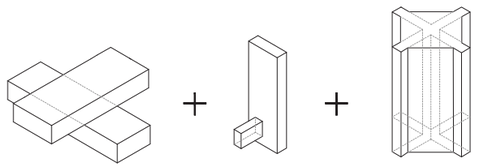




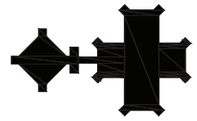
Operation_OVERLAP
overlapping of the volumes where the administrative part is located



Operation_INTERSECT
the pure form of the prism intersecting with a crisscross volume construct the complex form of the tower



Operation_AXIAL ARRANGEMENT
the overlapping volumes and the intersect ones arranged in linear axial hierarchy



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Lodge

Lodge, v./lɒdʒ/
1. Make or become firmly fixed or embedded in a place.

All parts of this building are methodicaly developed and lodged toghether, only after minimum of compositional operations. The main elements of the edifice, very simple prisms, reach the state of a formidable presence on site, in an operational succession of being overlaped, intersect and lodged togheter. The first was used by the architect for creating an alluring entrance and an interconnecting internal public square. In addition, putting an accent on the Archive compact monolith arising from strong geometrical shapes meant enriching the basic prismatic volume of the archive elements by intersecting two primary shapes. The deep-seated formal outcome of the Archive building results from Konstantinovski's education, greatly influenced by Yale University professor Paul Rudolph and his emerging personal design philosophy focused on programmatic critique and innovative construction practice determined by local circumstance.

City Archive

img. 15_Frontal view
City Archive

img. 16_Frontal view
City Archive

img. 17_Isometric view
City Archive

img. 18_Isometric view
City Archive

[A4.2]
Hydrometeorologycal Sevrice Building

Architect
Krsto Todorovski

Date of construction
1972-75

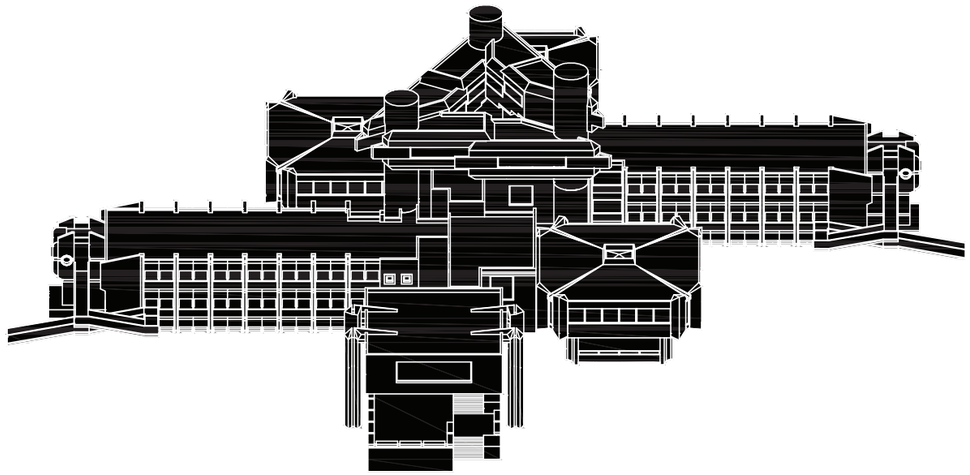
Building area
1600m2

Size
L

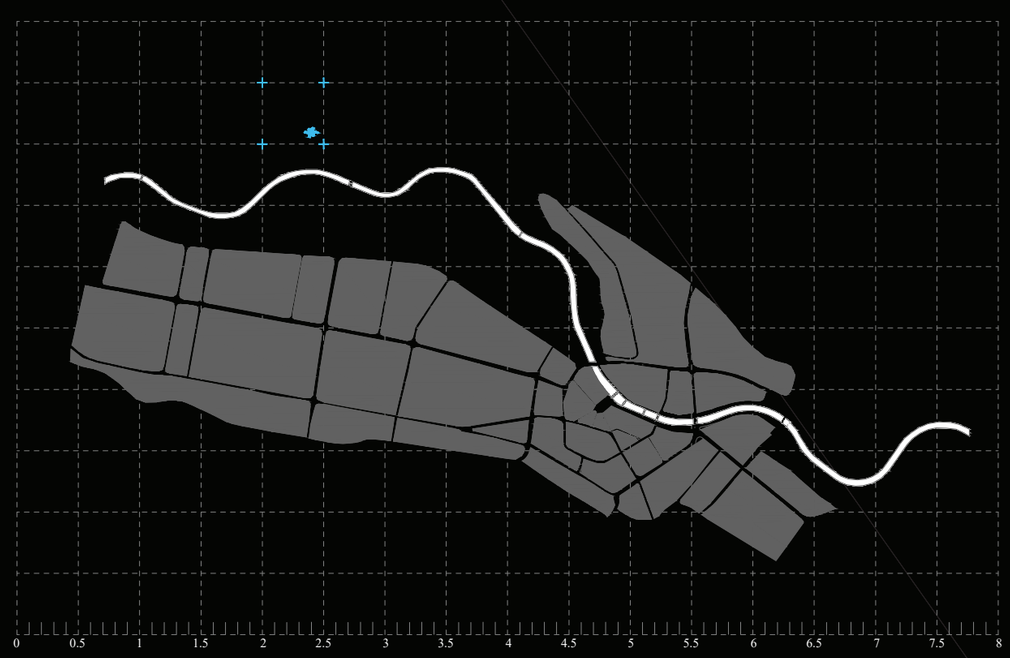
Category
Composite

Concepts
Demarking, Attaching, Suspended, Diversity

Operative verbs
Collaging



geographical position
42°00’11.0”N21°23’25.9”E



img. 19_Location
Hydrometeorologycal Sevrice Building on the map of Skopje

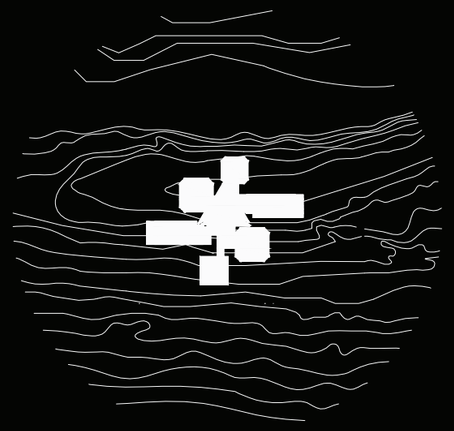
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

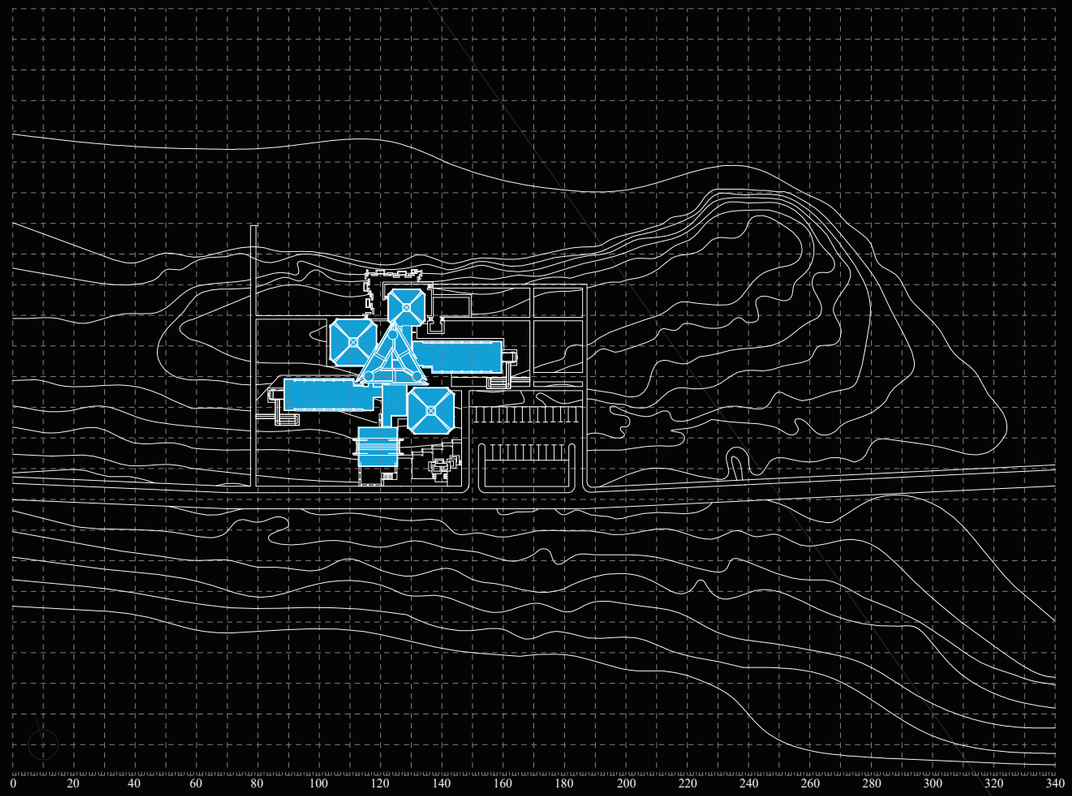
GEOMETRIC DIAGRAM
spatial syntax analysis

Hydrometeorologycal Sevrice Building _Krsto Todorovski

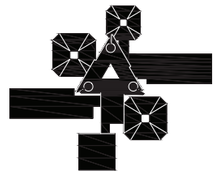
The Institute of Hydro-meteorology, holds a technological and functional programme that serves in collecting and processing meteorological, hydrological and bio-meteorological data. The project for this state service was commissioned to the architect Krsto Todorovski[60], one from the first generation of architects schooled in Skopje. It was built between 1972 and 1975.
This sculptural edifice, conglomerate of architectural elements, is mounted on top of Zajcev Rid hill raising over the river Vardar, in the north outskirts of the city of Skopje. In course of the design process, the surrounding area of the building was mainly unpopulated, so with no plan to follow, the only requirement, besides the program and the function, was to fit the shape to the circumambient topography and nature. Hence, it seems the architect made an extension of the height of the hill, laying down gradually the institute separate volumes and replacing the top of the hill with sort of a triagonal “crown” visible from all the circumferential lowland. One can approach the institute through a small and narrow road that gradually opens the view toward the sculptured fort and lets the visitor successively discover its elements, organically blended within the landscape, along the accents created by innovative structure and shapes.
The building entrée baldly thrown forward, occupies a whole visually detached module through which the movement is highly articulated. It sets off with a straight line double staircase and a view on a buoyant volume forming a transitional cavity that halts the movement just before entering. A passer-by caught in this intermediate space suddenly discovers a framed panorama of the northern fields and mountains, and for a moment can lose its way. The movement in the building then continues through an entrance hall from where a main circular deleveled path provides links between the elements that spread horizontally and the elevated triangle. Secondary distribution is planned within each separate section and their configuration results from the shape of each unit.
Once entered, a common visitor can run into initial confusion and trouble finding the way due to the complexity of the plot layout, and having multiple volumes attached to a body of deleveled and multiplied communications. The clear intention of the architect, to allocate each technological and functional entirety to a separate unit, to attain autonomy for all activities, but yet to interconnect them all, puts seemingly all of the components in no hierarchical ensemble, except for the elevated laboratories and monitoring rooms, that provide all the data which are being processed further in the lower units. Thus, the wholeness of the Institute of Hydro-meteorology is hard to grasp at once, except from air, from where the complex order of this assemblage gets cleared up and all the processes become visible.



img.20_ Diagram *Demarking*



img. 21_Masterplan
Hydrometeorologycal Sevrice Building



GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

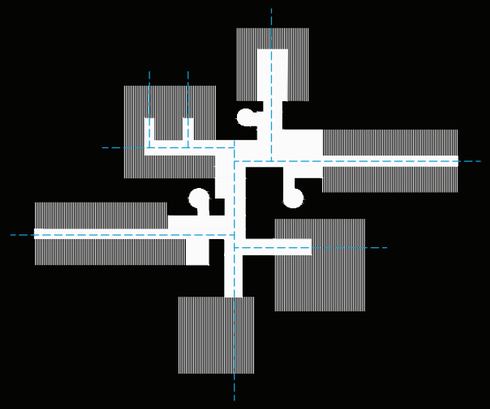
Demarking

Demarking, v. /di:ˈma:kɪŋ /
1. Making known a territory.

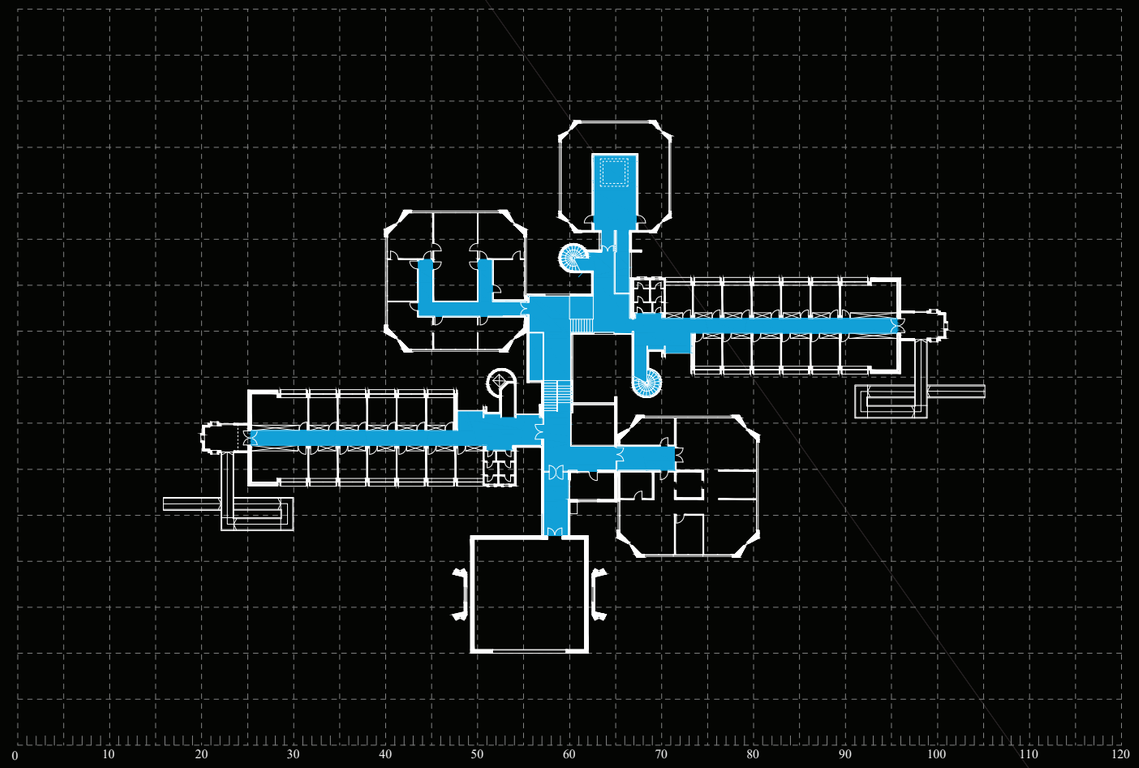
Image 20
The diagram shows the concept of site appropriation, overlapping of two strong layers, the topography and clearly shaped geometry.
Image 21
The traces of the *Hidrometerological Service Building* on the hill of Zajcev Rid in the south part of the outskirts of the city.

Hidrometerological Service Building

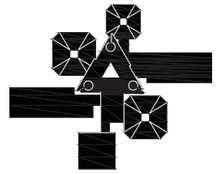
The distribution of functions in separate volumes, each profiled according to the specific needs, and the process of connecting these units into one has resulted in a sculpture like building. These collaged entity positioned on top of a hill, in the nearby surrounding of the city centre, within an area lacking urban or vegetation specifics, has arisen to be an iconic emblem for the city. It seems like the architect has used the advantage of having a clear territory to develop a seemingly lose and expressionistic structure and in this way to demarcate a territory, and to embed a new piece of land in the urban memory map of the citizens of Skopje.



img.22_ Diagram *Attaching*



img. 23_Floor plan
Hydrometeorologycal Sevrice Building



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Attaching

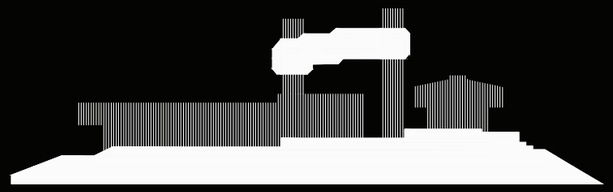
Attaching, v. /əˈtatʃɪŋ/
1.Join or fasten (something) to something else.

Image 22
The diagram shows the way how the different main spaces are attached to the system of communication.

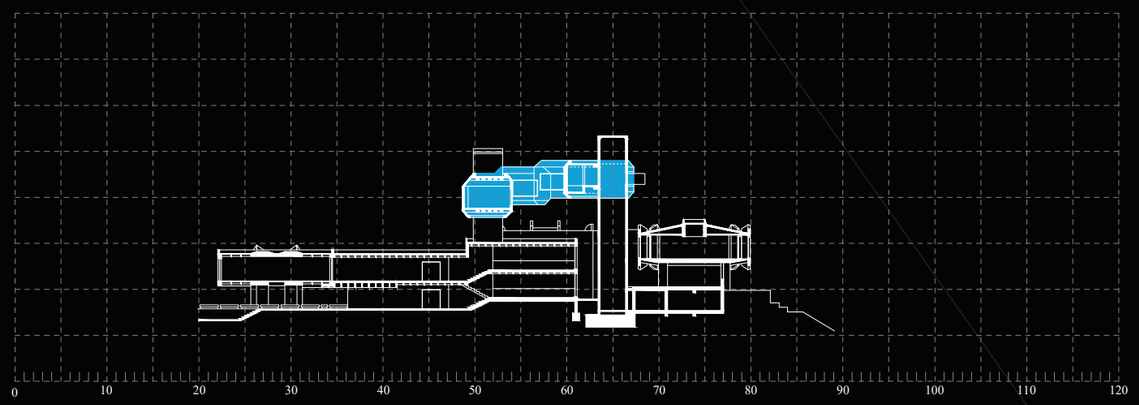
Image 23
Organic arrangement of the communication system.

Services, halls and staircases

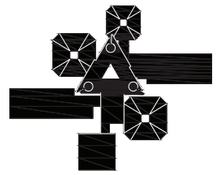
The top view of the Institute of Hydro-meteorology demonstrates a wide spread floor plan arrangement that embraces the close surrounding searching for a way to stabilize on the top of the mound. The floorpan discloses a compound scheme of at least three main types of radicals and a communication set, consisted of amorphous core and linear extensions. It is the communication nucleus the tissue that holds together all the elements of this composition together and the element from where all the movement in the building is distributed. In spite the fact that the units are assembled in a structure of seemingly loose order, the arrangement of attachments to the body of this building is characterized by very clear relations between all of the segments.



img.24_Diagram *Suspend*



img. 25_Section
Hydrometeorologycal Sevrice Building



GENERAL INFORMATION

ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

Suspend

Suspend, v. /səˈspɛnd/
1. Hanging; supported by attachment from above.

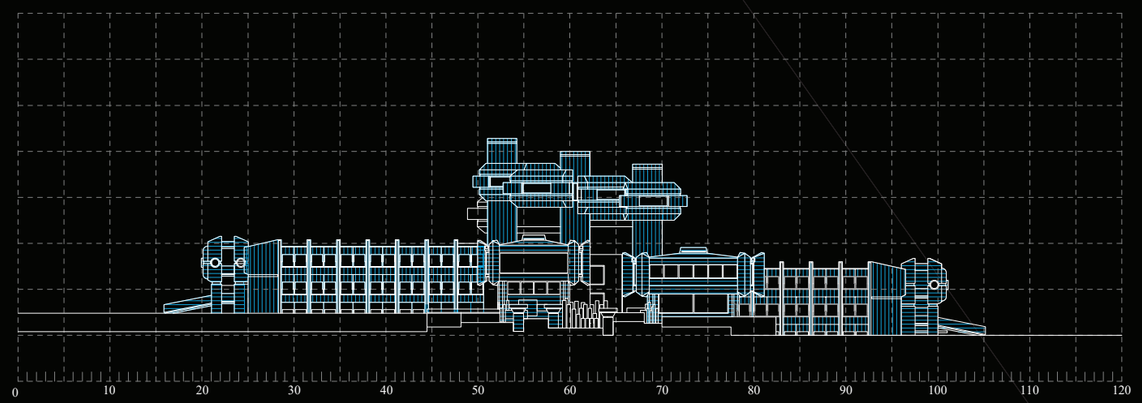
Image 24
The diagram shows the sculptural approach towards the articulation of the composition, with the emphasis of the suspended volume.

Image 25
The hidrometerological station has been situated in to the suspended volume that give an accent of its importance.

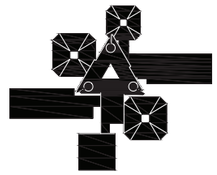
Hidrometerological station

One can recognize duality in the spacial disposition of the constitutive units of this architecture. The general principle is to keep the architectural structure close to the ground, outspread the sections and in this way create a heavy and solid appearance. On the other hand, the architect made few exceptions from this general idea in order to give the final expression of the building. Contrary to the before mentioned grounding, the suspension tension is used at the entrance of the institute, creating an impressive platform “ceiling” out from a seemingly hanging object. Both, the ground and the ceiling platform form a very precise frame of the north panorama. The second suspension occurs on the top, a triagonal element lifted above the main body of the institute, that besides its link to the ground, materialized in three communication columns, manages to create a perception of floating.

img.26_Diagram *Diversity*



img. 27_Elevation
Hydrometeorologycal Sevrice Building



GENERAL INFORMATION

ANALITIC MODEL
concept elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

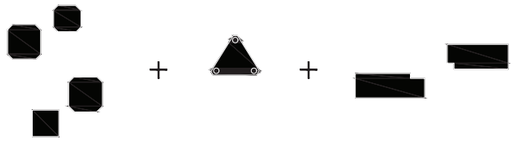
Diversity

Diversity, n. /dʌɪˈvəːsɪti/
1. A range of different things.

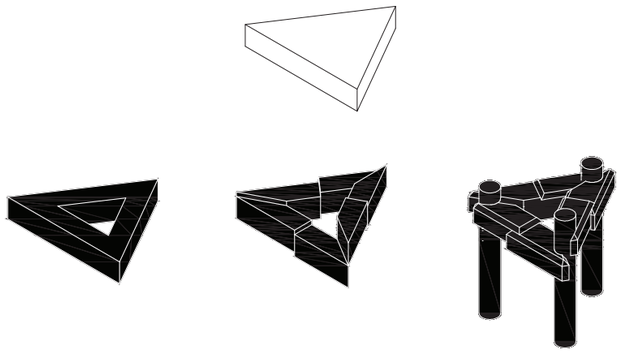
Image 26
A - hidrometerological station with cylindrical communication.
B - lateral communication (not executed).
C - administrative bock.
D - sharing space (entrance hall, meeting room)

Image 27
Diversity of different architectural components.

The architect developed the elevations of the institute through horizontally laid repetitive elements, following basic rhythm, which generate a good base for alterations. This continuity is interrupted and diversified with units elevated from the ground, a process that embeds a pause in the rhythm. Besides having different floorplan this prisms develop a resembling, yet different ornamentation aesthetic, that should display the different function they host. The second peculiarity is the triagonal crown like object, floating above all the other structures. This element does not quite discontinue the structure bellow, but rather use it as basis. The triangle lifted high enough was intentionally abstracted from the rest, so it raised to be a symbol of this architecture.

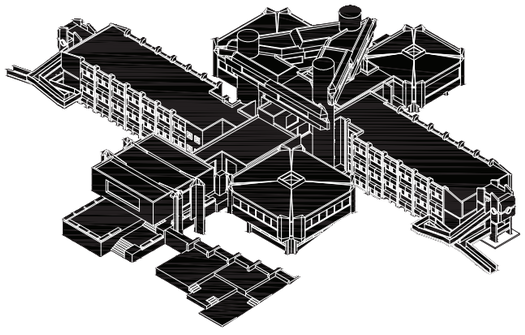


Operation_COLLAGING
A set of different volumes stitched
to a main communication core

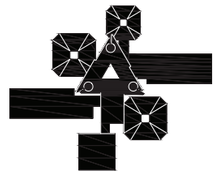


Operation_CARVE AND ELEVATE
A crown like floating triagonal prism, result of
carving out the core, stepping and elevating on columns

Operation_LIFT
A speciphic morphology developed from a basic prism
by ornamenting and detaching from the ground



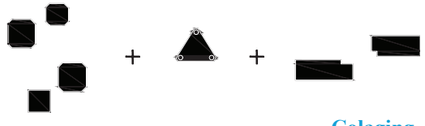
Operation_COLLAGING
A set of different volumes stitched
to a main communication core



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis



Colaging,

Colaging, v./ˈkɒlaːʒ,kəˈlaːʒɪŋ /
1. Making a collection or combination of various things.

Opposite to the principle of total design this architecture is formed gradually from its components, nonetheless following certain unifying ordinance, evident in the proportion of its parts and the used beton brut. The specific concept of building, common for dense urban tissues, in this case was used by the architect as a tool for reaching a sculptural outcome. The collage of various physiognomies, that were superimposed on the existing topography, are moderating a sort of dramatic physical transformation of the place itself. The overall perception of the building is boosted by the collaged details, the repetitive elements and ornamentation, sharp endings, various dispositions – grounding and suspending, the colour etc, thus the resulting expressive plasticity becomes a highly recognizable element of the outskirts of urban tissue of the city of Skopje.

Hydrometrrological Service Building

img. 28_Frontal view
Hydrometeorologycal Sevrice Building

img. 29_Frontal view
Hydrometeorologycal Sevrice Building

img. 30_Frontal view
Hydrometeorologycal Sevrice Building

img. 31_Frontal view
Hydrometeorologycal Sevrice Building

[A4.3]
National Bank of the Republic of Macedonia

Architect
Radomir Lalovikj, Olga Papesh

Date of construction
1971-75

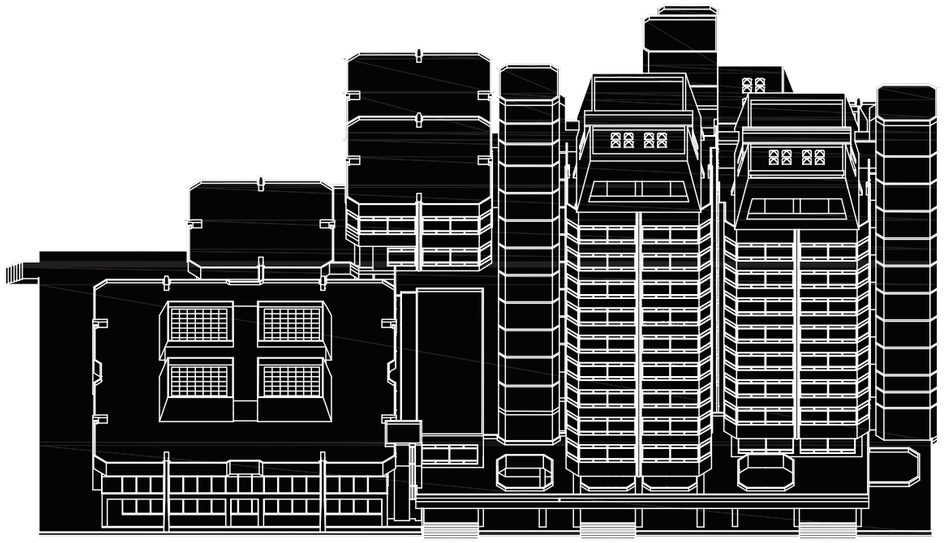
Building area
4600m2

Size
L

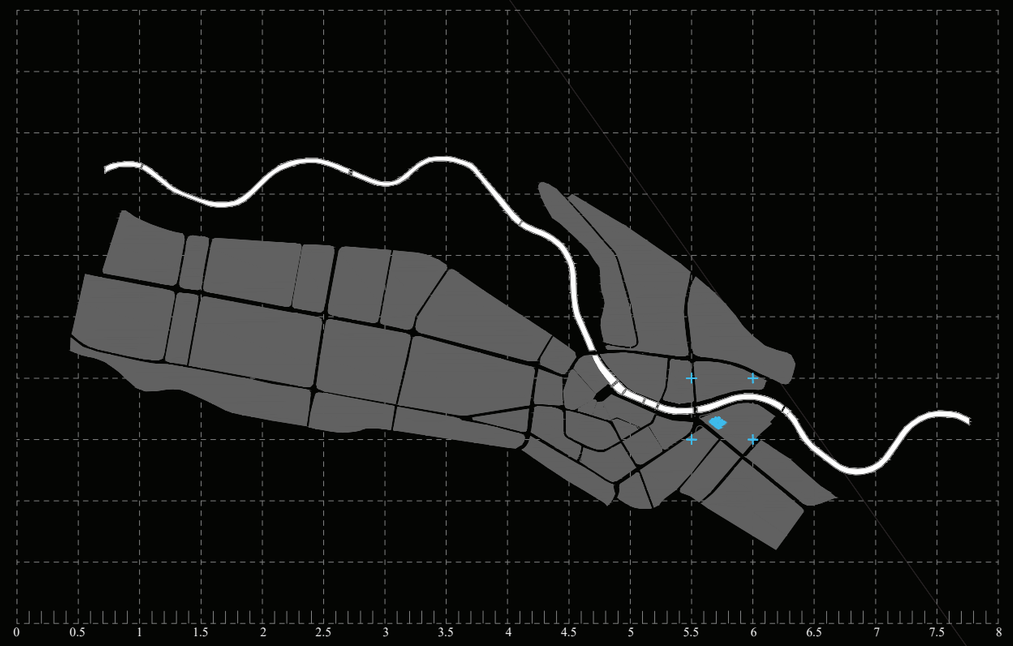
Category
Composite

Concepts
Compound, Field, Spatial Layering

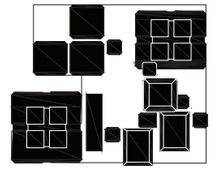
Operative verbs
Embed



geographical position
42°00’11.0”N21°23’25.9”E



img. 32_Location
National Bank of Tthe Republic of Macedonia on the map of Skopje



GENERAL INFORMATION

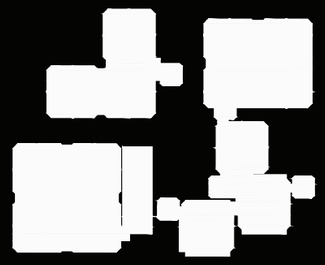
ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

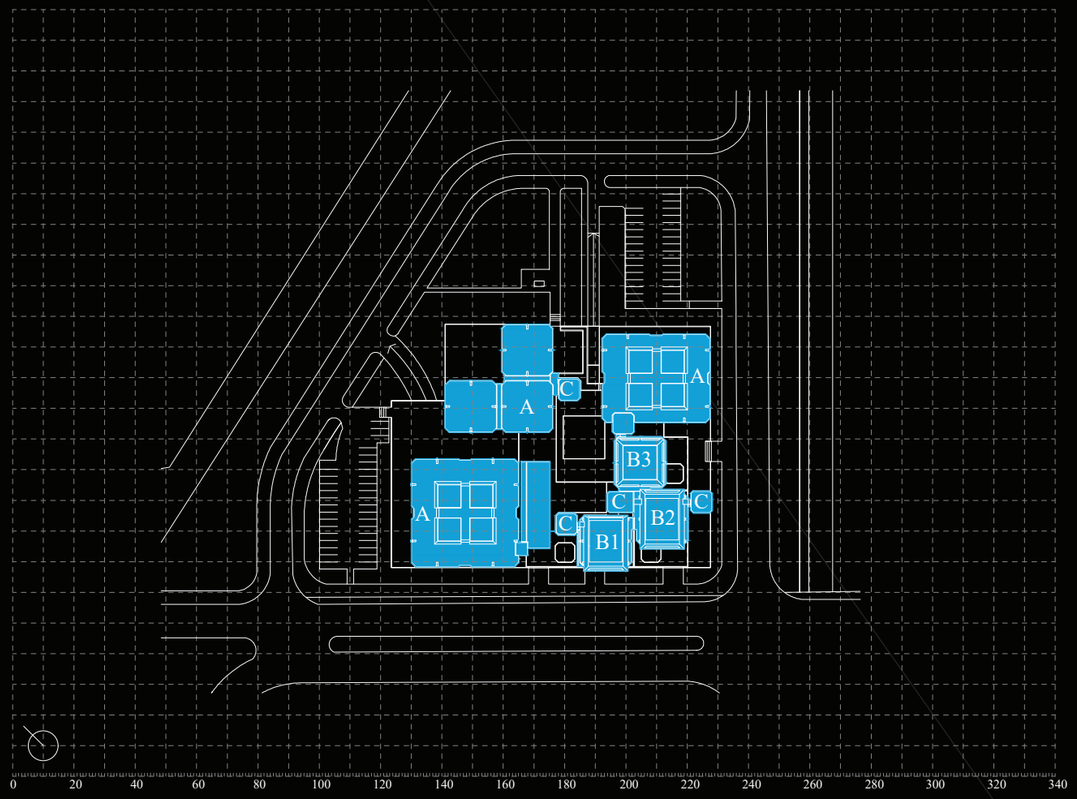
The National Bank of The Republic of Macedonia by Radomir Lalovikj[58] and Olga Papesh[59] is the first built structure within the planned City Gate ensemble, situated in the East part of the City of Skopje, nearby the Transportation Center. Spread out over an area of 20 000 square meters, the Complex of banks immediately after its construction in 1974 was serving four different institutions; The National Bank, Yugoslavian Bank, National Accounting Headquarters and the National Accounting branch. The City gate, a linear urban composition from the post-earthquake plan for the city of Skopje, imagined by Kenzo Tange as a metabolist structure that will offer the citizen well organized and short time consuming task completion, containing most of the state institutions, banks and businesses, ended up with small segment realization, The National Bank building.

The whole program of these institutions was carefully situated into three prismatic volumes with different height, while several lower annexed buildings located on the west and the north were housing the branches for public access. The skilled separation of the program into these three basic units greatly contributes to the distinctive functionality of the interior space. By positioning the office space on the upper floors, while meticulously separating the elements that establish vertical connection into independent cores and the strict division of the access points, a very unique coherence between the function, construction and the exterior architecture was achieved. The concrete slabs between the floors are embroidered with subtle vertical texture resulting from the mold into which the concrete was cast. These, along with the large glass windows and the dark window sills create one harmonious modular rhythm which represents the landmark of this building’s aesthetics. The interior walls are light and easily portable, which provides exceptional flexibility in terms of reorganization of the space, which entirely fulfills the functional demands of such banking institution.

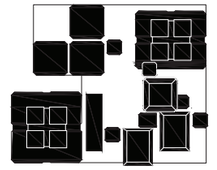
The chosen form of the volumes and their accentuated verticality, along with the unique composition of the constructive elements of the floors, are the attributes which make this building significant and singular in its appearance.



img.33_Diagram *Compound*



img. 34_Masterplan
National Bank of Tthe Republic of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

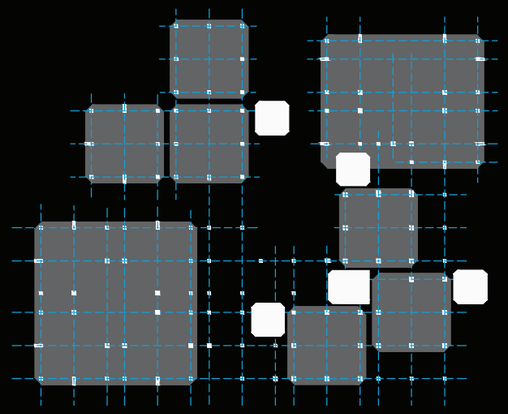
Compound

Compound, n. / ˈkɒmpaʊnd/
1. A thing that is composed of two or more separate elements; a mixture. [adj] 1. Made up or consisting of several parts or elements. [v] 1. Make up (a composite whole); constitute.

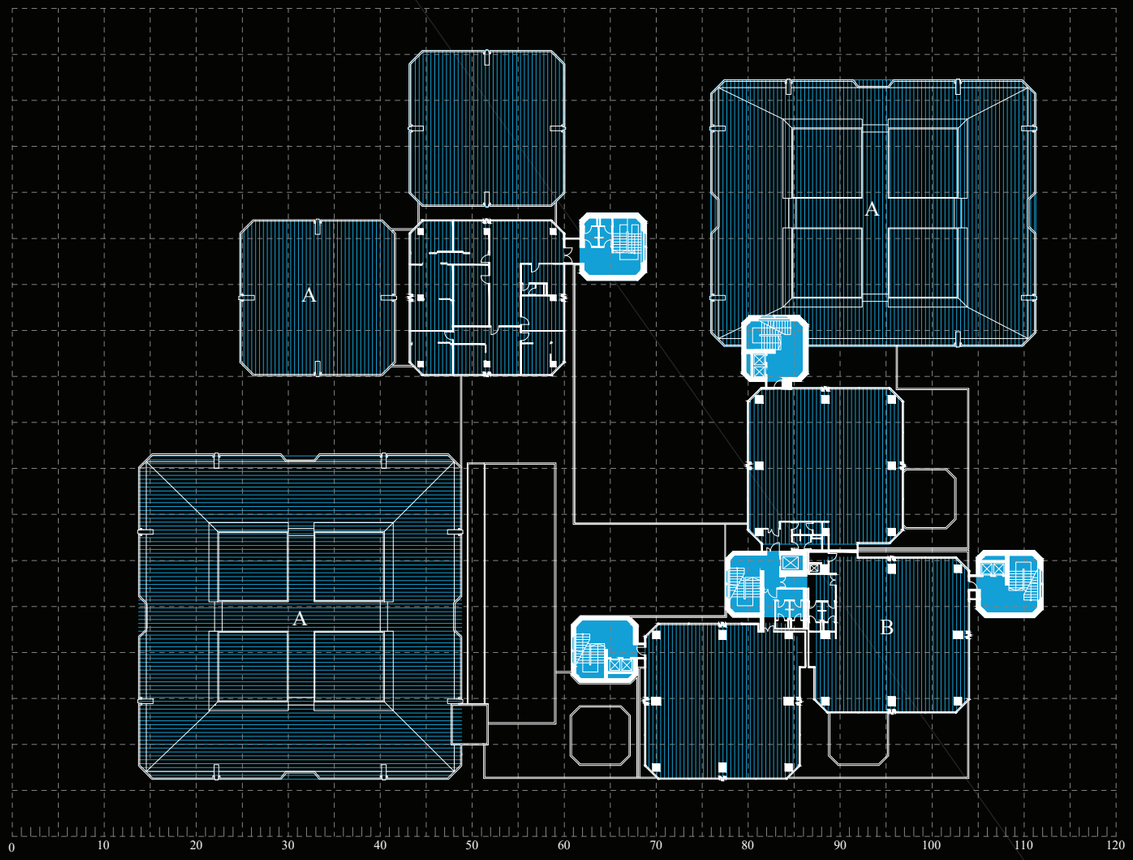
Image 33
Compound composition that is consisted of low rise structure, towers and tubes of staircases.

Image 34
A - Counter hall, Administration and Technical stuff.
B1 - National Accounting Headquarter.
B2 - Natinal Bank.
B3 - Yugoslavian Bank.
C - Staircases

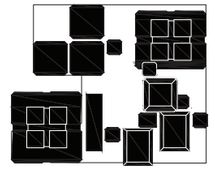
NBRM structure is a concrete compound, a set of elements linked by their morphology, that metabolise different functions. The horizontal and vertical aggregation of the prismatic modular elements in space is used to effectuate the impression of strength and firmness in the overall appearance. Although being just a piece of a greater planned urban composition, the architects managed to implement locally Tange's idea of metabolically operating structures that will create, on one hand an imposing and dramatic effect upon the common passer-by, and on the other, an effect of "assimilating" metabolic assembly for the employees.



img.36_Diagram *Field*



img. 37_Floor plan
National Bank of Tthe Republic of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept floor plan

GEOMETRIC DIAGRAM
spatial syntax analysis

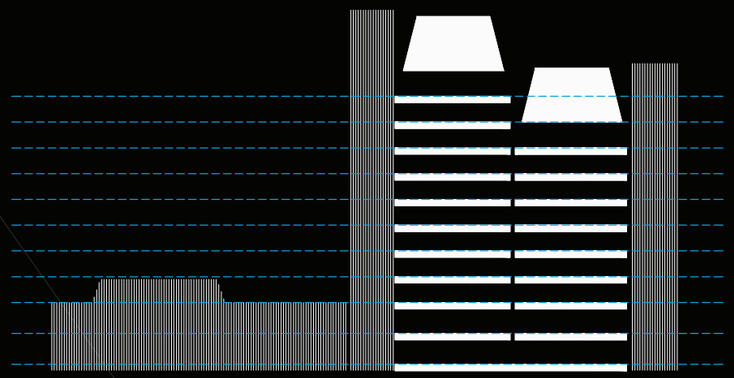
Field

Field, n. /fi:ld/
1. A large area covered by something or having something under its surface. 2. An area in which a particular force has some effect.

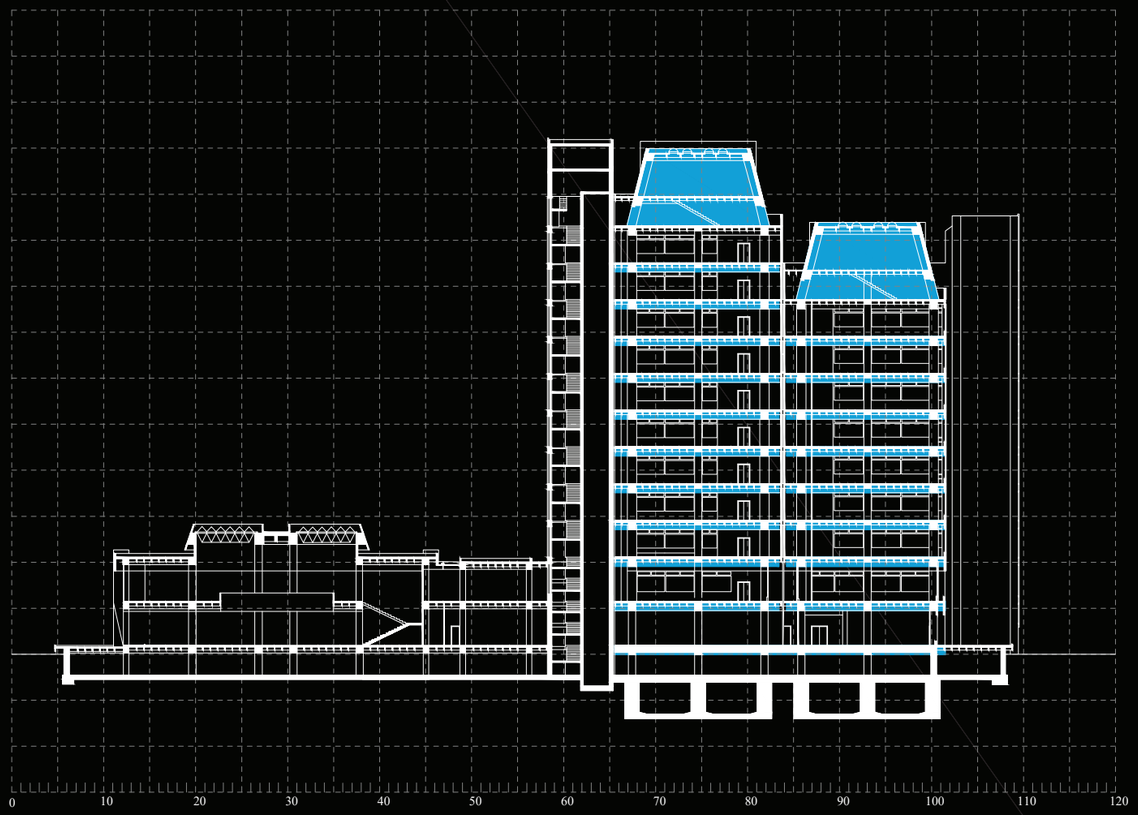
Image 36
Organization of the floor plan as a system of fields in particular module.

Image 37
The floor plan as grouping composition of four clusters:
A - low rise structure.
B - towers

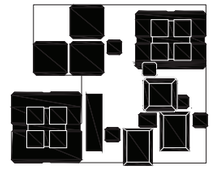
The idea of the post-war Japanese architectural metabolist movement that fused ideas about architectural megastructures and of their organic biological growth* one can recognize in the floor plan composition of the NBRM compound. The whole edifice lies on a network, and becomes materialised by effectuation of certain fields in space. The building constitution resembles a colony of at least four organisms, each with a main communication organelle and other interconnecting tissues. The morphology of the containing cells replicates into the form of the organelles, but also into other segments of the plan like atriums, galleries, decorative flower containers etc., which gives the impression of the whole being a flexible biological structure.



img.38_Diagram *Spatial Layering*



img.39_Section
National Bank of Tthe Republic of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

Spatial Layering

Spatial, n. */ˈspeɪʃ(ə)l/*
1. Relating to or occupying space.

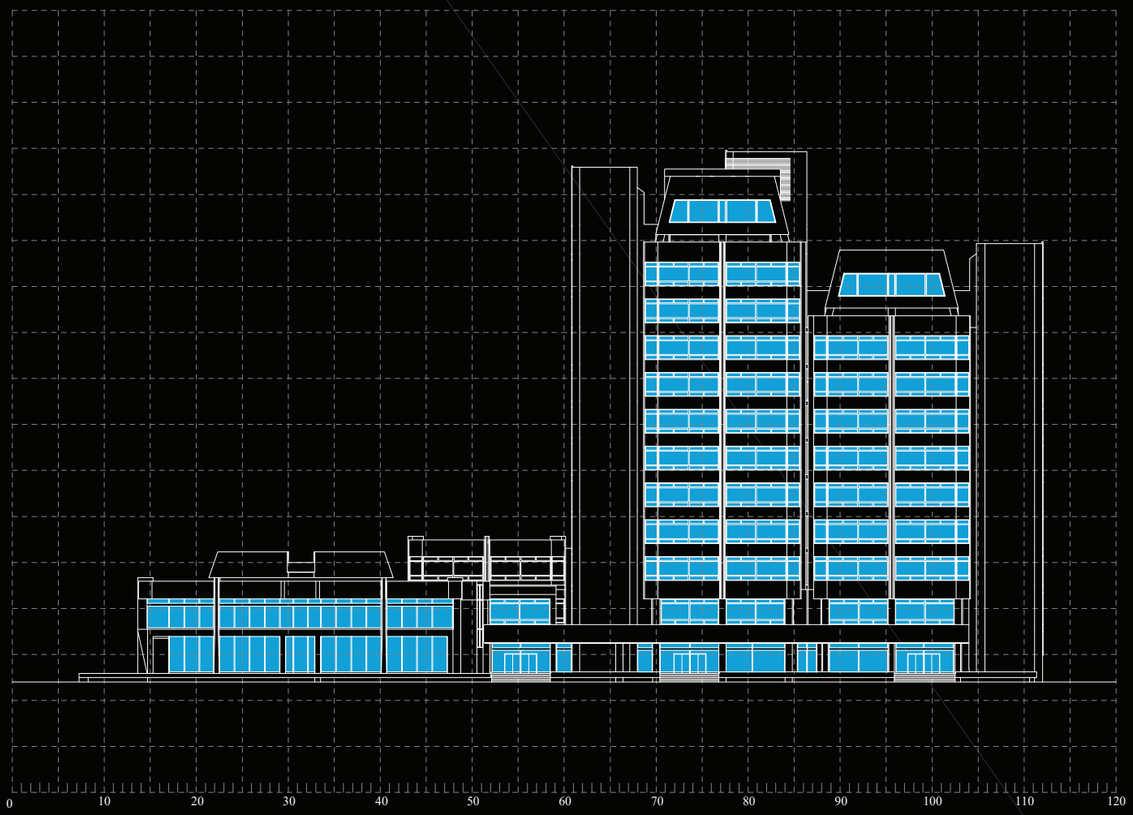
Layer, n. */ˈleɪərɪŋ/*
1. A thickness of some material laid on or spread over a surface. [v] 1. To form out of superimposed layers

Image 38
The diagram strives to emphasise the spatial layering of the composition accenting the horizontal elements of the tower.

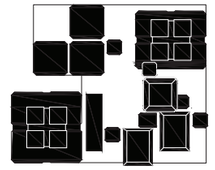
Image 39
Bold division of the tower with a characteristic relation to the sky.

The section of this edifice reveals the space arrangement of the base cell into superimposed layers. The so called communication organelle multiplication forms a spine mimicking element that splits the layered towers in separate and independent features. The final outcome of the propagation process are different height piles whose potential for growth is controlled by an architectural element mounted on top of it, whose morphology does not follow the principal of proliferation, but the opposite, it gives an impression of defined and “heavy” detail. The elevation of each element is defined by the function of each cell and its communication with the external users of its capacities.

img.38_Diagram *Spatial Layering*



img. 41_Elevation
National Bank of Tthe Republic of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Spatial Layering

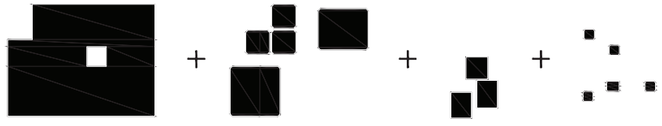
Spatial, n. */ˈspeɪʃ(ə)l/*
1. Relating to or occupying space.

Layer, n. */ˈleɪərɪŋ/*
1. A thickness of some material laid on or spread over a surface. [v] 1. To form out of superimposed layers

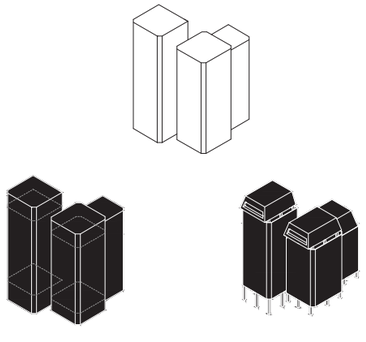
Image 40
The diagram shows the spatial layering of the composition with an accent of the voids

Image 41
Elevation where the openings are considered as voids of the composition

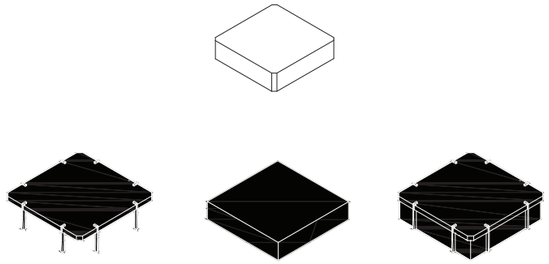
There is a clear intention in the project design for this composite structure to differentiate three basic composition elements, horizontal prismatic layers, vertical communication towers and finishing pyramidal elements. If biological analogy is applied, and the wholeness of this architecture is referred as a body, one can notice that the first type of element, the prismatic layers, are used to create the massive but structured trunk of this figure, implying an illusion of greatness. The second one, the tower elements, besides as external communication vessels, they are used to demarcate the different body parts. The pyramidal details are representing the head of the architecture body, and in this sense they are hosting the CEO function of the incorporated institutions.



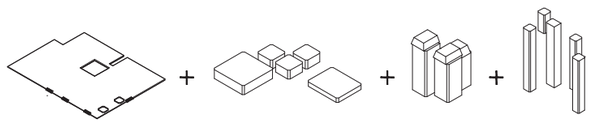
Operation_EMBED
A basis volume is used as a platform to
embed integral part of a system

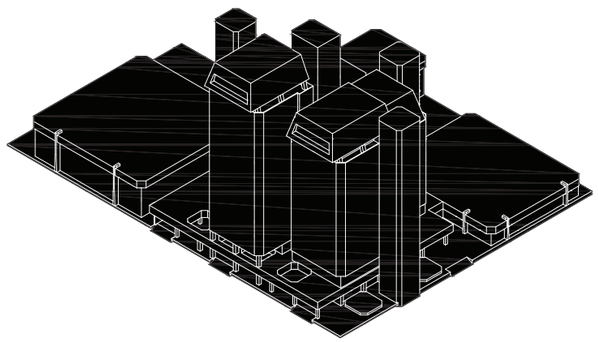


Operation_DETACH
Vertical prism refined into a sculptured tower,
by detaching from the ground and elevating its cap

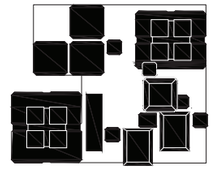


Operation_ELEVATE AND INFILL
A unit formed by a
structural and an infill prism





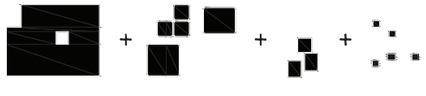
Operation_EMBED
A basis volume is used as a platform to
embed integral part of a system



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis



Embed

Embed, v. /ɪmˈbɛd/
1. To be or become fixed or incorporated, as into a surrounding mass.

The platform that holds the elements of this architecture resembles a motherboard, that allocates mass and allows communication to and between the body parts. The plan for the base platform makes analogies with urban design practices and tries to simulate an urban block. The mass distribution results in different size elements and it delegates them a certain meaning readable from their appearance and position. The material used, mixture of concrete and glass, and their distribution, adds to the overall impression of heaviness and the idea of embeddedness of the integral parts of a system.

National Bank of the Republic of Macedonia

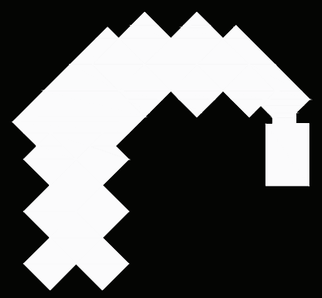
img. 42_Isometric view
National Bank of Tthe Republic of Macedonia

img. 43_Isometric view
National Bank of Tthe Republic of Macedonia

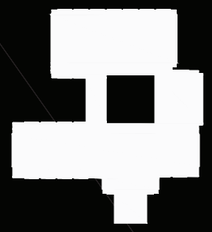
img. 44_Isometric view
National Bank of Tthe Republic of Macedonia

img. 45_Frontal view
National Bank of Tthe Republic of Macedonia

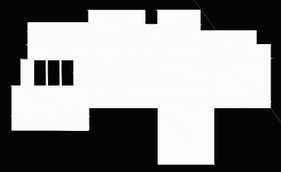
[B4.1]



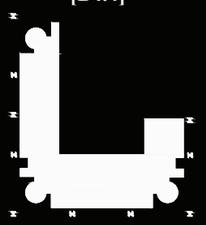
[B4.2]



[B4.3]



[B4.4]



B. COMPACT
Single autonomous form where all the functions are concentrated in one structure

[B4.1]
Museum Of Macedonia
Mimoza Tomic, Kiril Muratovski

[B4.2]
Macedonian Academy of Sciences and Art
Boris Cipan

[B4.3]
National And University Library
Petar Mulickovski

[B4.4]
Republic Dispatch Center
Zoran Shtaklev

[B4.1]
Museum of Macedonia

Architect
Mimoza Tomic, Kiril Muratovski

Date of construction
1971-76

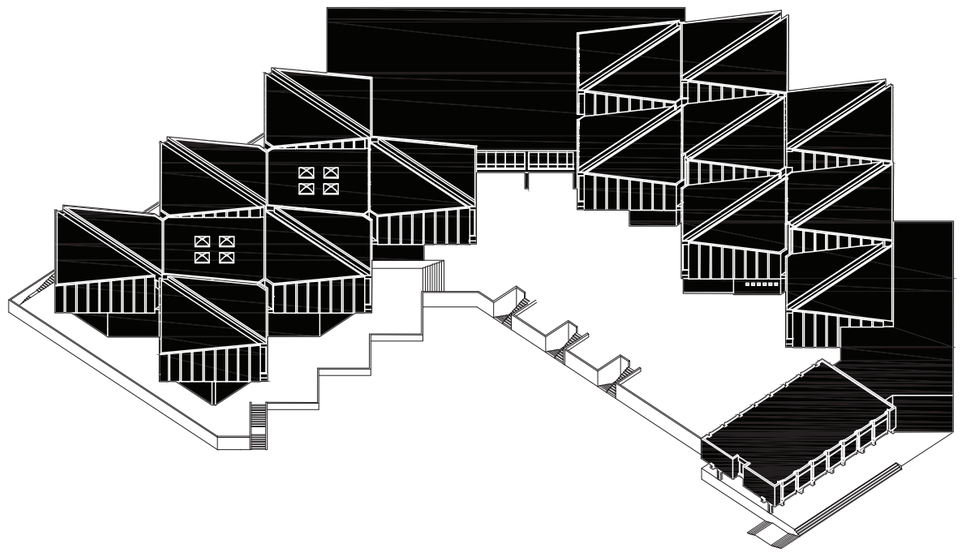
Building area
5300m2

Size
XL

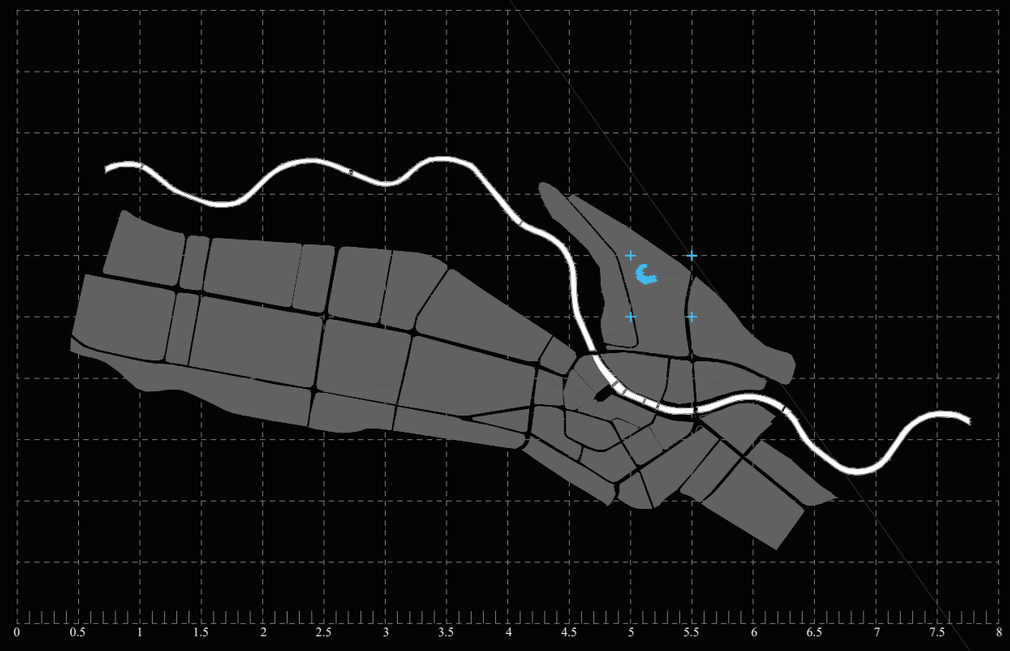
Category
Compact

Concepts
Compound, Field, Topography, Density

Operative verbs
Join



geographical position
42°00’11.0”N21°23’25.9”E



img. 46_Location
Museum Of Macedonia on the map of Skopje

GENERAL INFORMATION

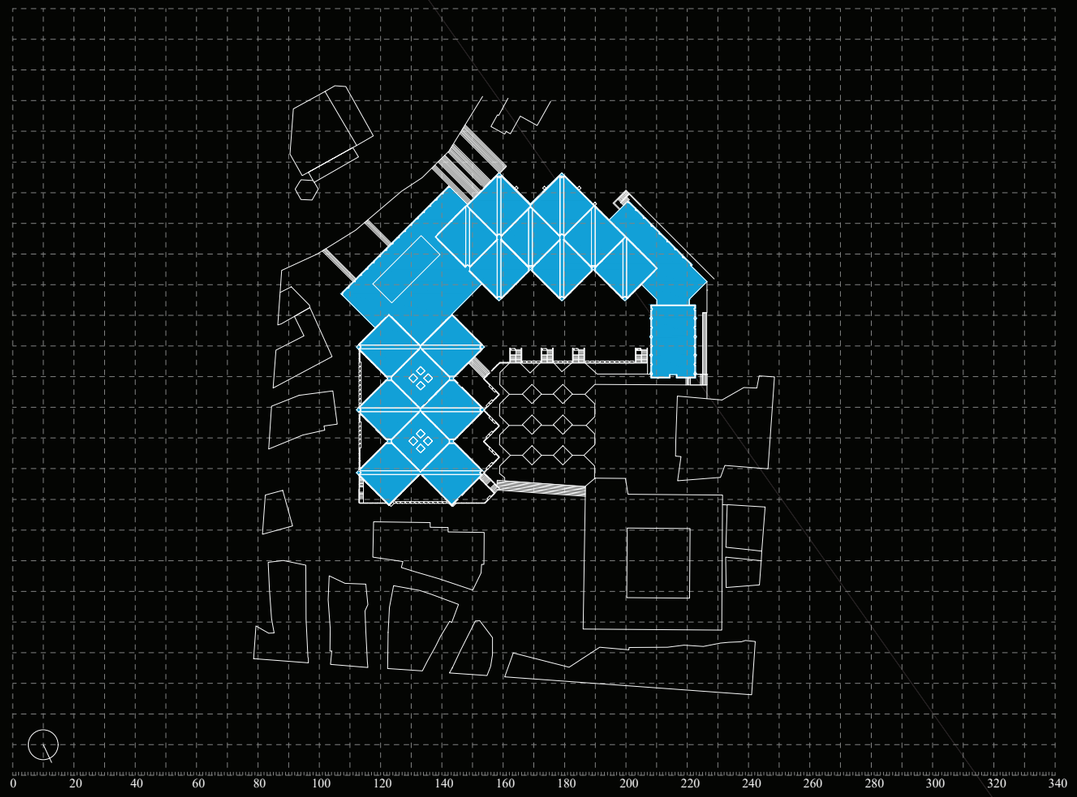
ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

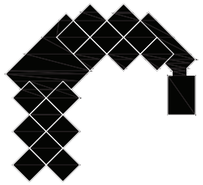
Museum Of Macedonia _Mimoza Tomic, Kiril Muratovski

The old bazaar in Skopje is a unique blend of small shops, mosques, türbes, two churches and a clock tower, with most of the buildings dating from the Ottoman era, in addition to several remains of Byzantine architecture which are evident as well. It is in this tightly packed and eclectic, yet felicitous milieu that the Museum of Macedonia designed by Mimoza Tomic[45] and Kiril Muratovski[46] was established. In terms of its use and activities, the building is a fitting addition to the cultural hub that the Old Bazaar represents. Taking into account the immediate context, with a disposition of a building complex, spread out on an area of 14000 square meters, there was a certain risk of disintegration of the historical urban tissue. However, with the seamless fitting of the building into the surroundings, by using harmonious volumes, with a prominent stylistic difference of the building elements, that risk was not only averted, but used as an opportunity to showcase the history of construction throughout the centuries. The site upon which the museum was built slopes up eleven meters, and exactly this change in elevation is where the authors drew their inspiration from, for the ingenious design of the building. The heterogeneous function of the structure is clearly defined in the architectural composition of the volumes; the administrative segment has flat roofs, while the exhibition halls are marked by the monumentality of the unique roofs. The central administrative area is a prismatic volume binding together two groups of modular units. These basic modular units for the exhibition halls are with dimensions of 15x15 meters, thus forming white square cubes, while the ridges of their roofs run diagonally devising a unique, rhomboid shape. The west group contains six modular units, and the east is represented by eight of the same cubes, which dynamically exalt above, following the natural topography of the terrain. Their careful arrangement unfolds a harmonious recurrence, reinforcing the building’s subtle, yet dynamic character. The material pallet of the building is quite restrained, with white marble, natural concrete surfaces and glass. All of these elements, give a spatial frame for the internal open square, surrounded by the cantilevered modules of the museum and the Old Bazaar to the other side.

img.47_Diagram *Compound*



img. 48_Masterplan
Museum Of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

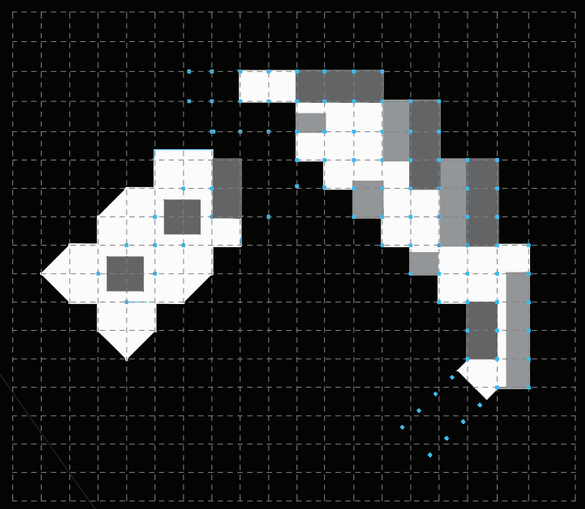
Compound

Compound, *n. / ˈkɒmpaʊnd/*
1. A thing that is composed of two or more separate elements; a mixture. [adj] 1. Made up or consisting of several parts or elements. [v] 1. Make up (a composite whole); constitute.

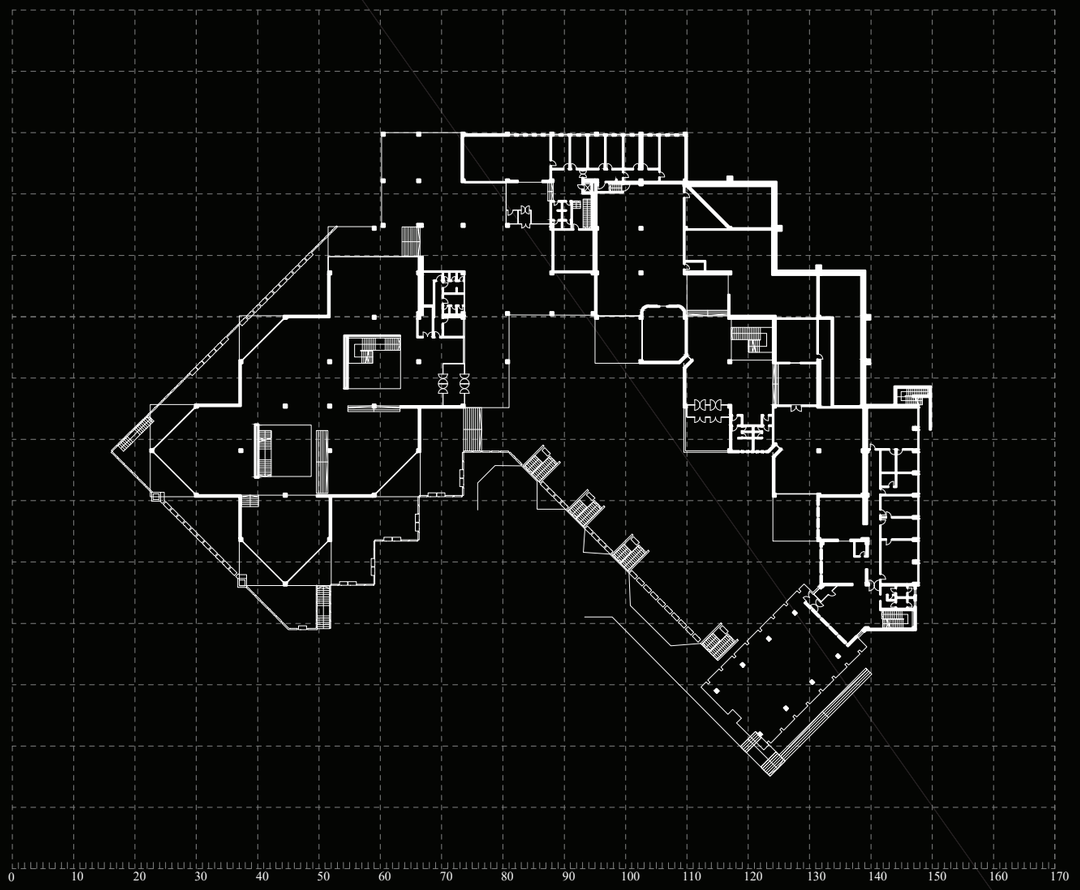
Image 47
Contrast of the Museum of Macedonia building with its close surrounding .

Image 48
Interpolation of the Museum in the context of the Old Bazar.

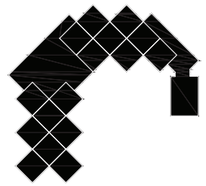
Regionalism based old bazaar, the context in which the Museum of Macedonia is embedded, is a Mediterranean vernacular settlement of tightly build small units within traditional urban concept of performing commerce. This platform of intertwined commercial, cultural and social paths “opens up” just enough for the interpolation of this museum “megastructure”. The scale difference and the possibility for domination of this edifice over its surrounding, the architects annulled designing a compound building and applying two main operation: mimicking - referencing the adjacent buildings by scaling the perimeter volumes according the existing urban regulations, and topographical design - replicating the physiognomy of the inherited topography in its the internal space. Further the sophistication of the endorsement of tradition, visible through the museum primary plastic, made the final manifestation of this architecture intrinsic and extrinsic features blend nicely, between them and with the circumferential tissue.



img.49_Diagram *Field*



img. 50_Floor plan
Museum Of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Field

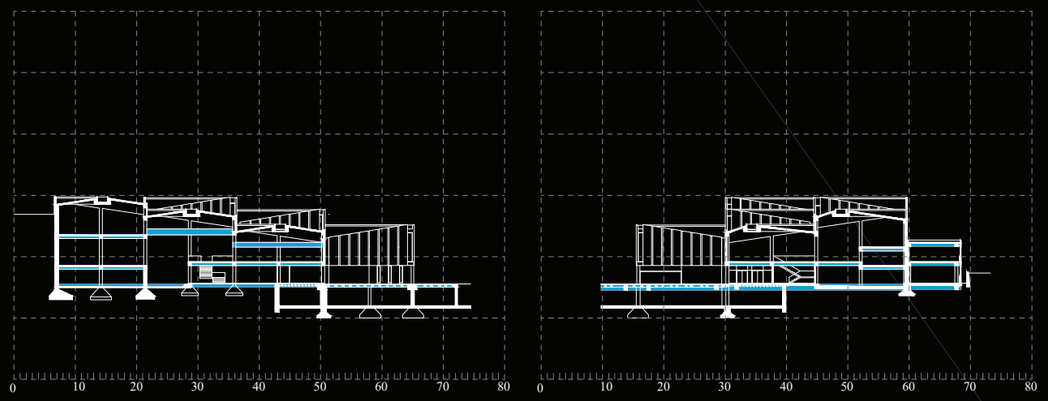
Fields, *n. /fi:lds/*
1. A large area covered by something or having something under its surface. 2. An area in which a particular force has some effect.

Image 49
Articulation of the floor plan trough the use of different fields for different functional units.

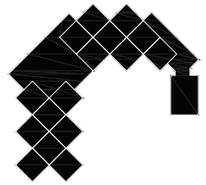
Image 50
The module as a principal guideline of the floor plan articulation.

In contrast to the external rigid and robust structural appearance, the interior of the museum unravels a completely opened and flexible floorplan, a pliant inner space allowing freedom in organization deriving from the primary structure fields formation. This structural net seemingly indefinitely spreading on the ground, in the interior, but in the exterior as well, gets materialized through several elements. The columns, the partition walls and communication nodes are the elements that should evoke the net presence in the internal space, and the parterre design and other division elements in the external space. The materialization of the fields arise into amorphous, but structured space, whose units display clear intention for communicating the neighboring urban context, visually and physically.

img.51_Diagram *Topography*



img. 52_Section
Museum Of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

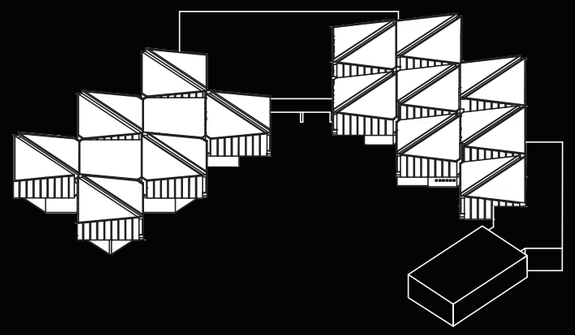
Topography

Topography, *n. /təˈpɒgrəfi/*
1. The degree of compactness of a substance.

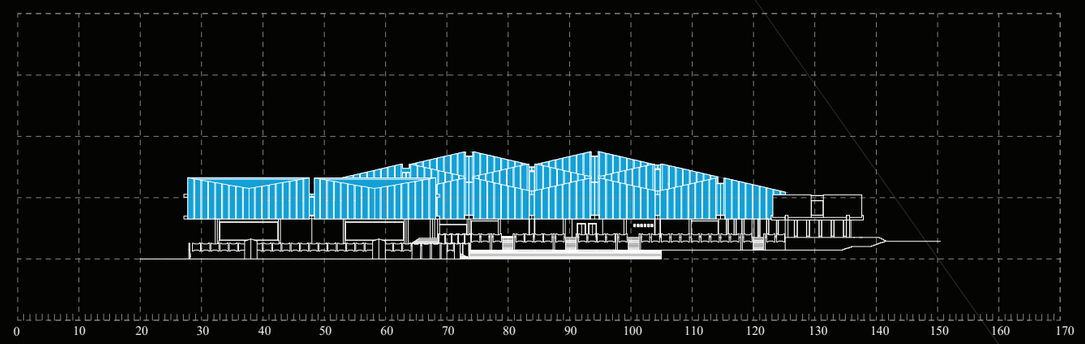
Image 51
Adaptation of the building to the land morphology trough a concept of topography.

Image 52
The section is articulated in cascades that constructs diversity of spatial experiences .

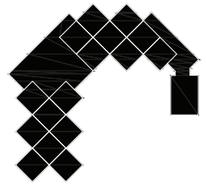
The physical features of the land surface on which the edifice stands influenced the design of the museum as well as the design of the platform on which it stands. The process of deleveling was a designer instrument for generating topographical variation of the interior and exterior space, following the given grid of the floorplan, thus keeping the scale small and making the presence of the fields scale readable. Furthermore, this artificial inner topography was basis for recreating the sense of the place, the genious loci* of the old bazaar, an operation aspiring to simulate a continuous path, a visitor would have experienced walking the bazaar's streets, while inverting the external and internal, solid and void familiar features, in order to direct his focus towards the exhibited objects.



img.53_Diagram *Density*



img. 54_Section
Museum Of Macedonia



GENERAL INFORMATION

ANALITIC MODEL
concept elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

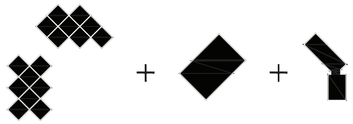
Density

Density, *n. /ˈdensɪti/*
1. The degree of compactness of a substance.

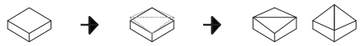
Image 53
The megastructure has been broken in its appearance trough a density of small volumes.

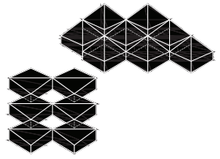
Image 54
The elevation of the building strives to establish a relation to the morphology of the Old Bazar.

The Museum of Macedonia designer intention of creating an ideal space, while fitting and emptied space in a densely settled and complex urban tissue, refers strongly to the “Collage city” book, and its authors rejecting the grand utopian visions of “total planning” and “total design”, for the proposal of a “collage city” which can accommodate a whole range of utopias in miniature*. The purity of intention had to be abandoned by the architects, and the design process of negotiation with the context seems to have taken place resulting into duality of the developed structure, dense and heavy appearance on one hand, and gridded and multiplicate fields figure reaching an abstract and lightness image, on the other.

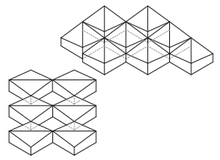


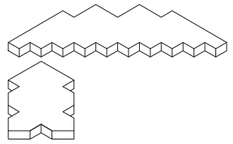
Operation_JOIN
Different functions settled in different volume
simply joint into a compact form,

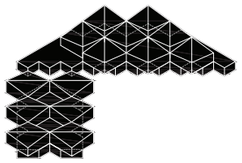




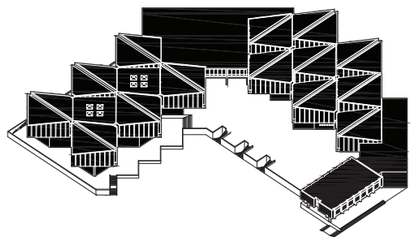
Operation_EXPAND AND ARRAY
A single prism diversified by expansion
and used as an exhibition space base module



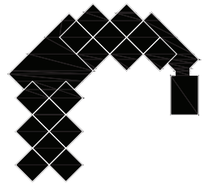




Operation_OVERLAP
Replica of a recognized model of urban tissue creation,
small volumes dominate the perception



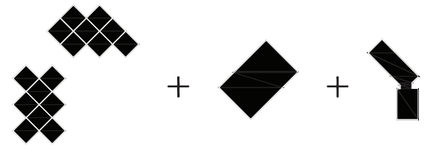
Operation_JOIN
Different functions settled in different volume
simply joint into a compact form,



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis



Join

Join, *v. /dʒɔɪn/*
1. Unite to form one entity or group.

The traditional body of the old bazaar, seen bottom up, is a complex feature of different functions settled in different volumes that are simply joint into a compact form. As an outcome of an open dialogue process, this designing approach was adopted, replicated and upgraded for the museum building and its surrounding. The primary volume generation procedure that is related to the base field, and includes its expansion, multiplication, grouping and overlapping, is followed by an operation of joining the museum separate parts. This forms just a part of the perimeter wreath of what is now a cultural square, which includes also the surrounding buildings, remnants of a Turkish mosque and a Turkish Han.

Museum of Macedonia

img. 55_Isometric view
Museum Of Macedonia

img. 56_Frontal view
Museum Of Macedonia

img. 57_Frontal view
Museum Of Macedonia

img. 58_view of the entrance
Museum Of Macedonia

[B4.2]
Macedonian Academy of Sciences and Art

Architect
Boris Cipan

Date of construction
1973-76

Building area
2800m2

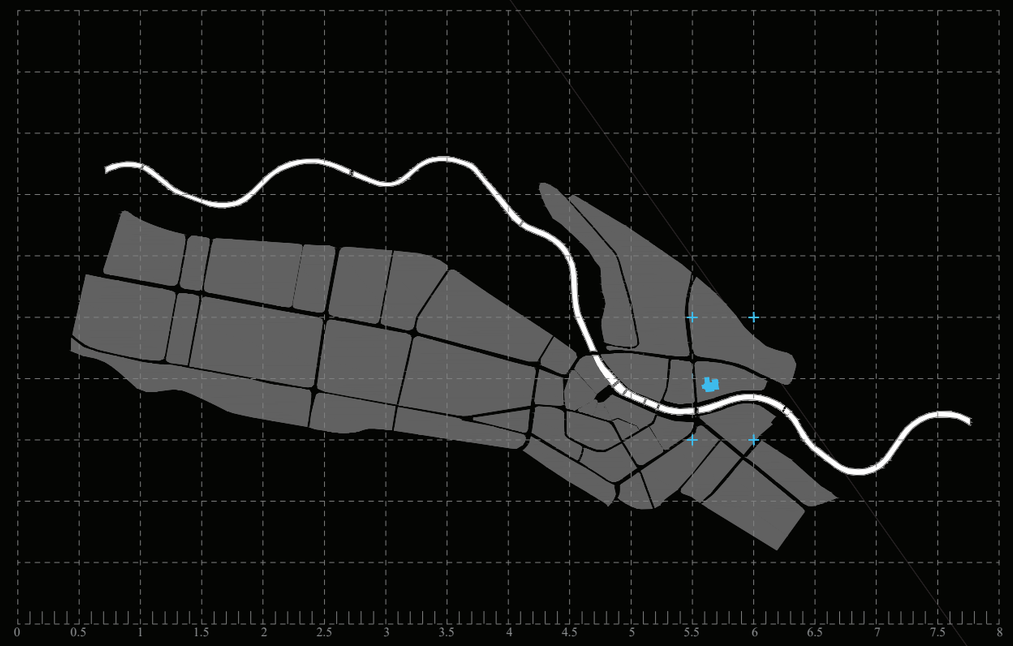
Size
M

Category
Compact

Concepts
Dialectical, Displacing by Sliding, Roofing, Sequential

Operative verbs
Intertwining

geographical position
42°00’11.0”N21°23’25.9”E



img. 59_Location
Macedonian Academy of Sciences and Art on the map of Skopje

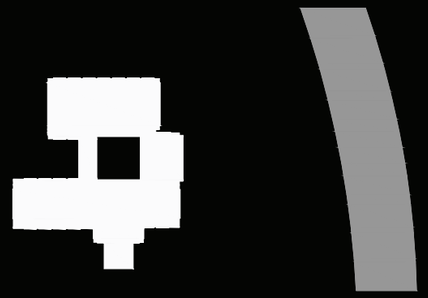
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

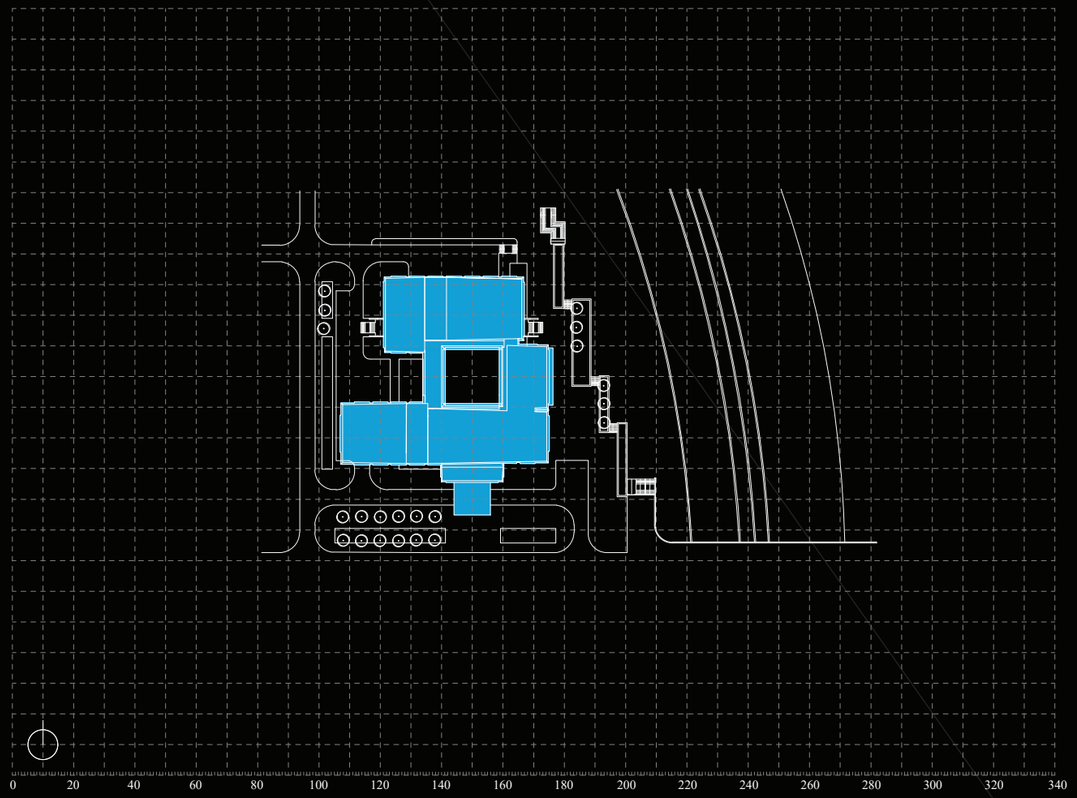
GEOMETRIC DIAGRAM
spatial syntax analysis

Macedonian Academy of Sciences and Art _Boris Cipan

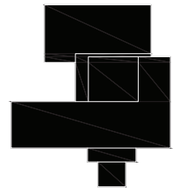
The other building listed in this category is the ***Macedonian Academy of Sciences and Arts.*** In 1970’s Boris Cipan[47] won the first prize of the competition for the design of the Academy. The building of the Macedonian Academy of Sciences and Art marks an exceptionally important phase in the development of the contemporary Macedonian architectural opus. It is situated in the central area of the city on the north bank of the river Vardar and at the time of its construction represented a significant segment of the then, newly proposed urban cultural center.
Starting from the cube as primary pure form, through an action of ***sliding volumes*** the author manage to establish a dynamic asymmetric composition that as an autonomous form enters in the sequences of freestanding buildings that constitute the river front. The concept of the interior arrangement of the space is embodied in a fusion of three basic and independent blocks; the first one housing the ceremonial area, the second housing the administration premises, while the third accommodating the library and its auxiliary offices. The central position within the singular volume is taken up by the ceremonial hall and the amphitheater. All of the other spatial components surrounding this central area, are arrayed at different elevations by which their function is clearly distinguished. Being an eminent expert on the regional architectural characteristics, Boris Cipan was highly adept at using forms, symbols and applications from the traditional architectural legacy, while skillfully translating them into the contemporary architectural language. The artistically accentuated Çardak balcony on the southern side of the building, the spatially extending cantilevers, the dark brown roof construction made of metal sheet, the cultivated details, and the ornamental plastic with folklore motifs, represent few of the many architectural elements which Boris Cipan used to carefully embellish the compacted volume of the structure. All of these elements craft the autochthonous character of the building, quintessential of the local milieu. The green oasis in the interior areas under the dispersed light and the remarkable works of art by prominent Macedonian painters, sculptors and wood carving masters, all contribute to the immense value of the building. Boris Cipan has won numerous awards for his creation, which represents a true recognition for the talent and the efforts made by the author and the whole team at the architectural office “Macedonia project” by which he was employed at the time.



img.60_Diagram *Dialectical*



img. 61_Masterplan
Macedonian Academy of Sciences and Art



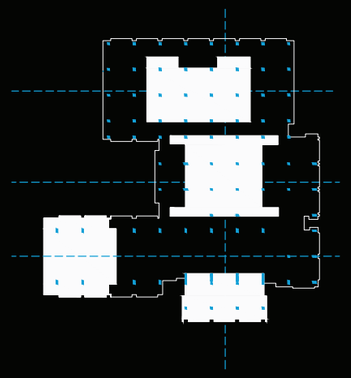
Dialectical

Dialectical, adj. /ˌdɑɪəˈlɛktɪk/
1. Relating to the logical discussion of ideas and opinions.

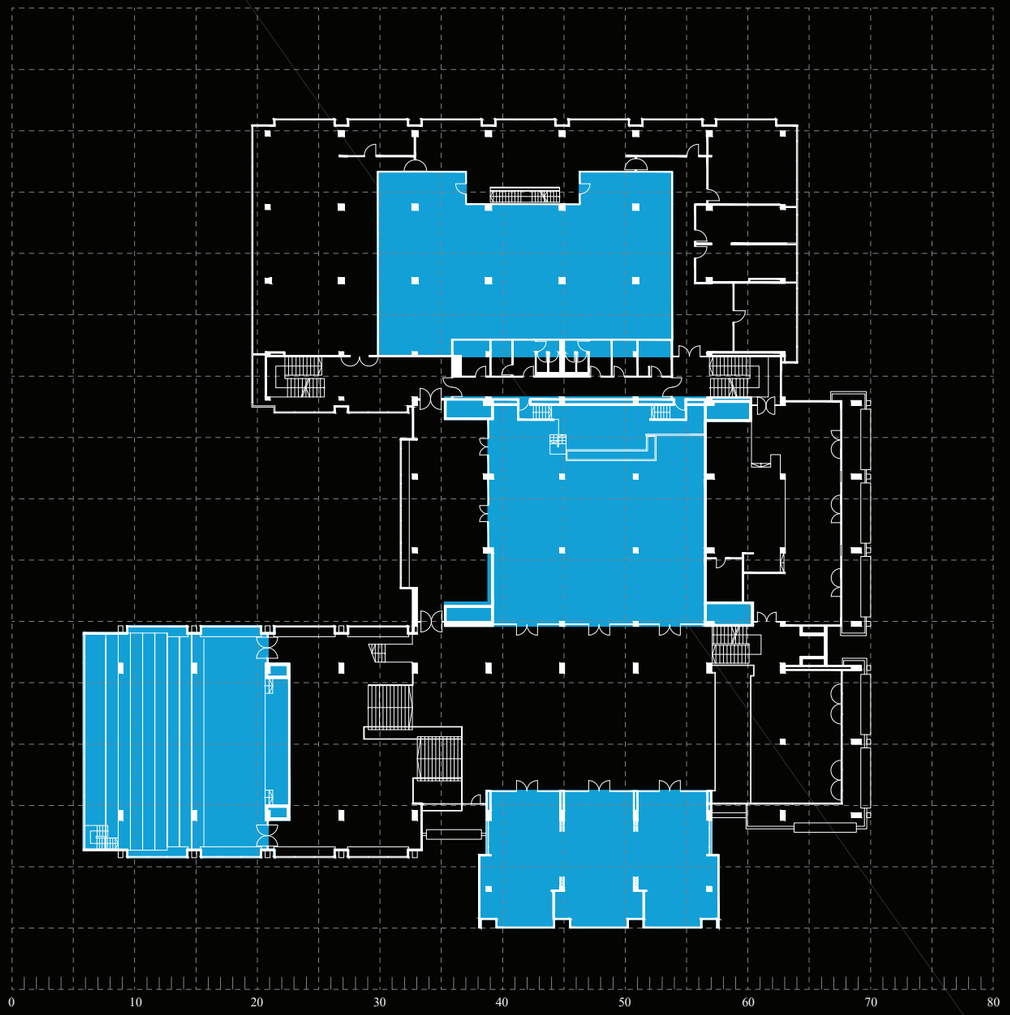
Image 60
The clear volumes of the volumetric composition in a dialectic to the natural surrounding.

Image 61
Relation between the intervention and the river Vardar.

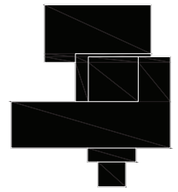
Contrary to the the famous credo “form follows function”, the architect of this edifice noted: Aesthetics shows that art form isn’t only a simple reflection of content, but something that is processed with additional and emotional effort. This point of view applied to the MANU volume and structure produced dialectical relation between the form and the function, which transcends into intellectual activity that concerns important aspects of historical identity and preserving and upgrading culture. The internal dialogue of MANU’s composition transfers to the external space, constructing association in a visitor’s mind towards this architecture, motivating different interpretations of the materialized shapes, programs and structure.



img.62_Diagram *Displacing by Sliding*



img. 63_Floor plan
Macedonian Academy of Sciences and Art



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Displacing by sliding

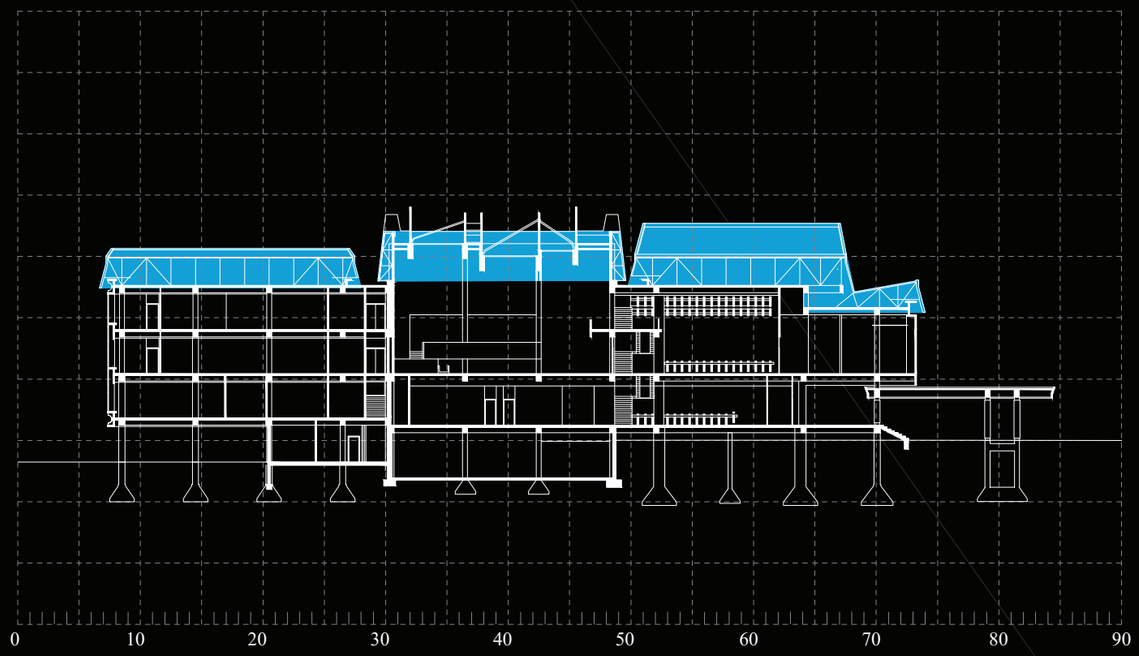
Displacing, v. */dɪsˈpleɪsɪŋ /*
1.Move (something) from its proper or usual position.
Sliding, v. */slaɪdɪŋ /*
1.Move smoothly along a surface while maintaining continuous contact with it.

Image 62
Axial arrangement that establish a hierarchy in the spatial organization.

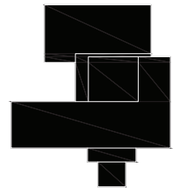
Image 63
The representative spaces that construct the main axis of articulation.

If the focal point is set on its floorplan, the dialectical character of this building is recognizable, but not presiding, and shows that the dominant reference for the design here is a certain functional logic, arrangements that predominantly serve the building's users and needs depending of their role. There are several details through which architectural symbolic vocabulary are introduced, and their presence sprouts on each following level, shifting the experience in the interior and the exterior as well. Additionally, by "sliding" the three main volumes, the architect tries to form spaces that will cause the visitors think and recreate on basis of a resemblance. The operation sliding is used also for the design of the entrance points and in many details in the structure and the interior of this building.

img.64_Diagram *Roofing*



img. 65_Section
Macedonian Academy of Sciences and Art



GENERAL INFORMATION

ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

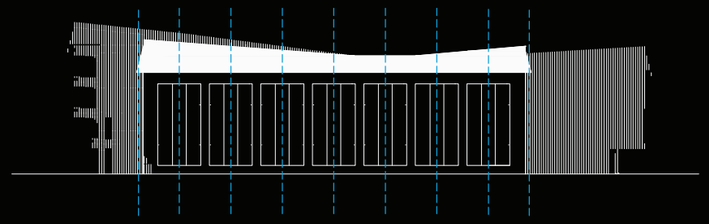
Roofing

Roofing, v. **/ ruːfɪŋ /**
1. The process of constructing a roof or roofs.

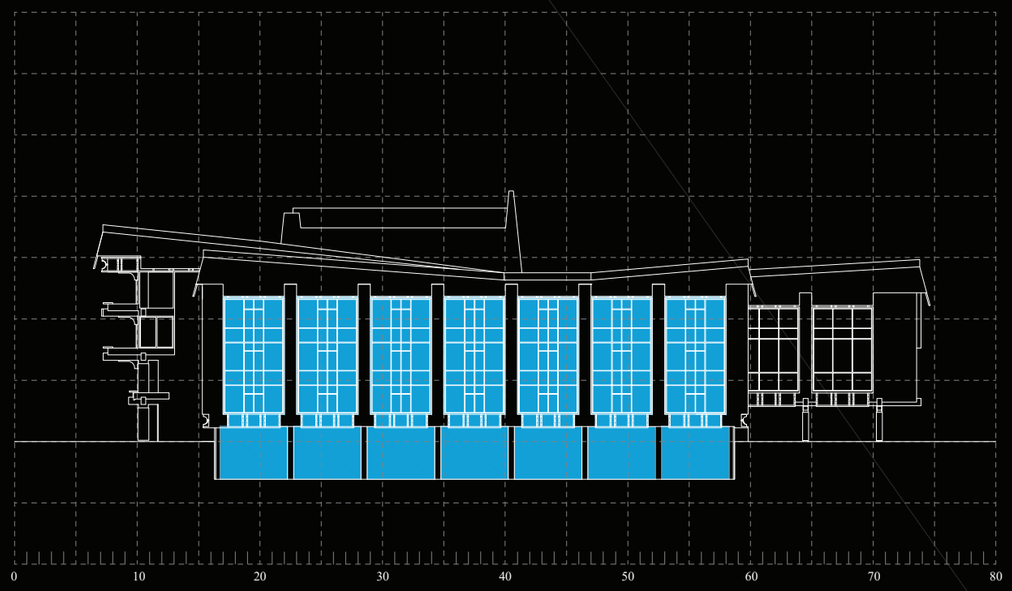
Image 64
The diagram puts in light the main compositional element, the roof.

Image 65
The section shows the articulation of the roof, that identifies tha character of the building.

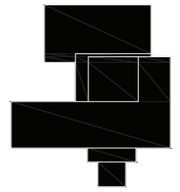
The relation between a traditional house body and roof was interpreted and upgraded by the architect of MANU. He goes beyond simple rendering of the recognized structural types, but applies modification and adjustments necessary for the planned function and incorporated content. The roofing element is used in two main directions that creates contrasting images, either stabilizes or stimulates the movement, giving directions for the visitor towards the main communication nodes and public contents. It seems like the traditional forms which relate to the structure are used in a way that does not completely follow a structural logic, but on the contrary, Cipan deliberately makes allowance for his artistic instinct to influence the design process.



img.66_Diagram *Sequential*



img. 67_Elevation
Macedonian Academy of Sciences and Art



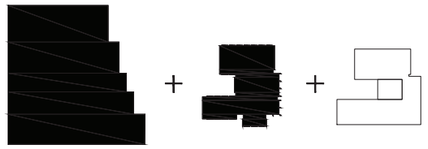
Sequential

Sequential, adj. */sɪˈkwɛnʃ(ə)l /*
1. Forming or following in a logical order or sequence.

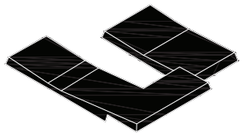
Image 66
The diagram strives to show the rhythm of the large openings arranged in sequences.

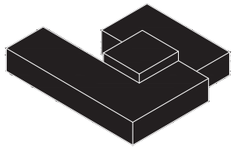
Image 67
The repetition of same elements in contrast to the shifting volumes of the volumetric composition.

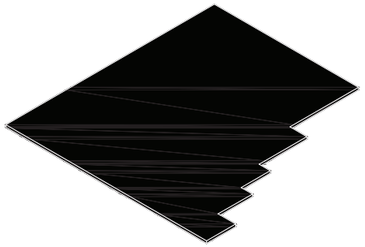
Trying to develop side by side contrasting blueprints of growth and completeness, the architect, incorporates dialectic manifestation visible in the total image, but also in the detailing, both internally and externally. In this sense the MANU's interior and exterior elevations gridded composition takes a certain analogy to the sequences of the traditional house structure, mimicking not only the supposed materiality, but also its spirit. The counter position of the two main elements, structure and infill, is further amplified in several steps: the structure is intentionally striped and changes colors, the secondary structure reveals the recursive primary, light is just another recurrent element, stored historical images and notions are applied, etc.



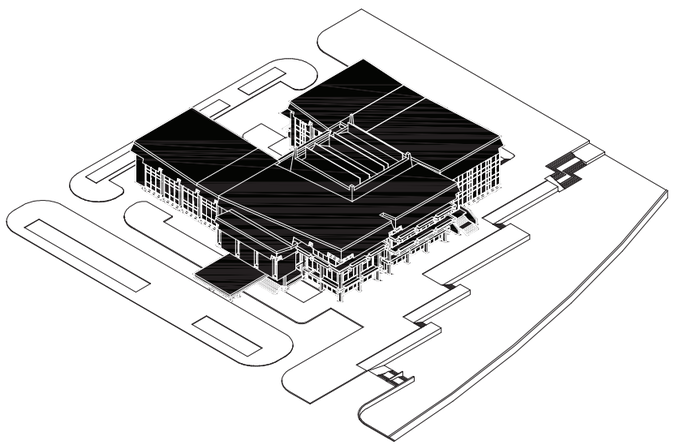
Operation_SPATIAL LAYERING
A set of three architectural elements articulates
the whole composition with an accent to the roof



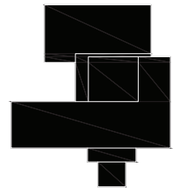




Operation_SPATIAL LAYERING
overlay of the elements that constitutes the
whole composition



Operation_SPATIAL LAYERING
A wholeness created by engaging with each other,
fitting together of projections and recesses



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Spatial Layering

Spatial, n. */ˈspeɪʃ(ə)l/*
1. Relating to or occupying space.

Layer, n. */ˈleɪərɪŋ/*
1. A thickness of some material laid on or spread over a surface. [v] 1. To form out of superimposed layers

MANU project was conceived with a clear intention to follow the traditional model of a house and this resulted in a three partition body. The platform, a connector between the rest of the body and its surrounding, a wide setting with a view towards the the building and the river running next to it. This surface tightly collaborates with the building movement, content and openings towards the public. The middle container layer, a body of interconnected functions, scarified from the outside with ornamental features, with vacated internal expanses in which an inter flow of scenes occur. And the third element, the roofing, a basic element of the traditional house, herein super structured by an additional function, a functional container, raising into an architectonic and sculptural attribute.

img. 68_Isometric view
Macedonian Academy of Sciences and Art

img. 69_Isometric view
Macedonian Academy of Sciences and Art

img. 70_Isometric view
Macedonian Academy of Sciences and Art

img. 71_Frontal view
Macedonian Academy of Sciences and Art

[B4.3]
National And University Library

Architect
Petar Mulichkovski

Date of construction
1967-72

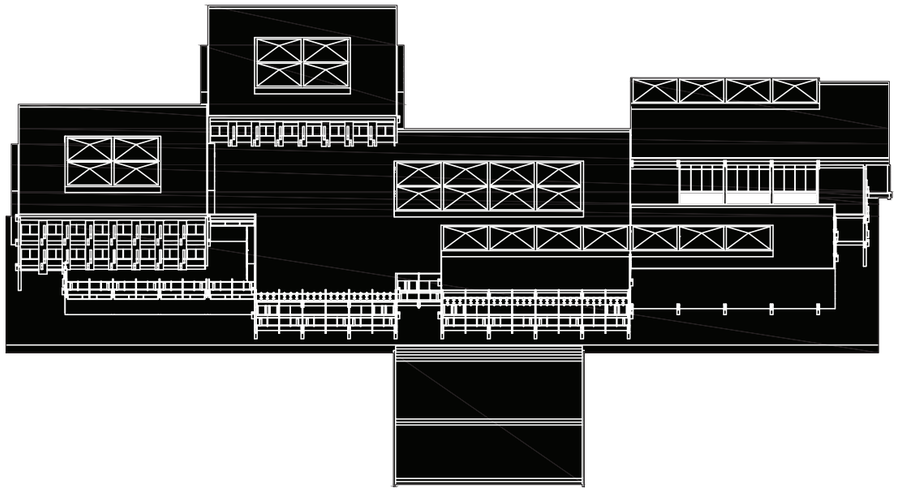
Building area
3700m2

Size
L

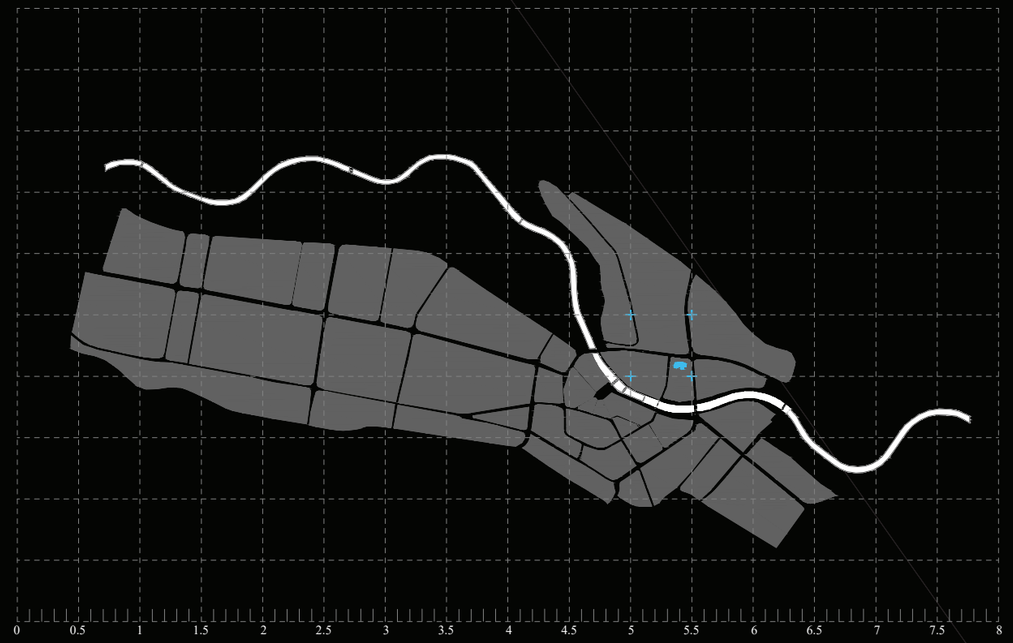
Category
Compact

Concept
Patchwork, No Hierarchical Space, Pattern

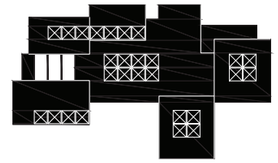
Operative verbs
Interlock



geographical position
42°00’11.0”N21°23’25.9”E



img. 72_Location
National And University Library on the map of Skopje



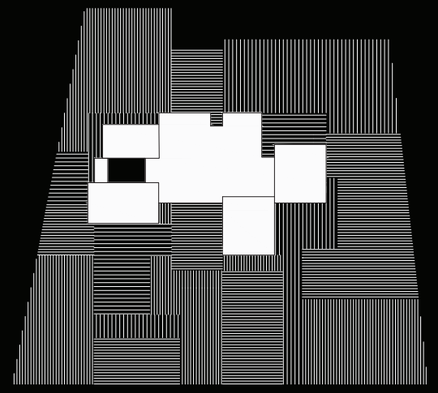
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

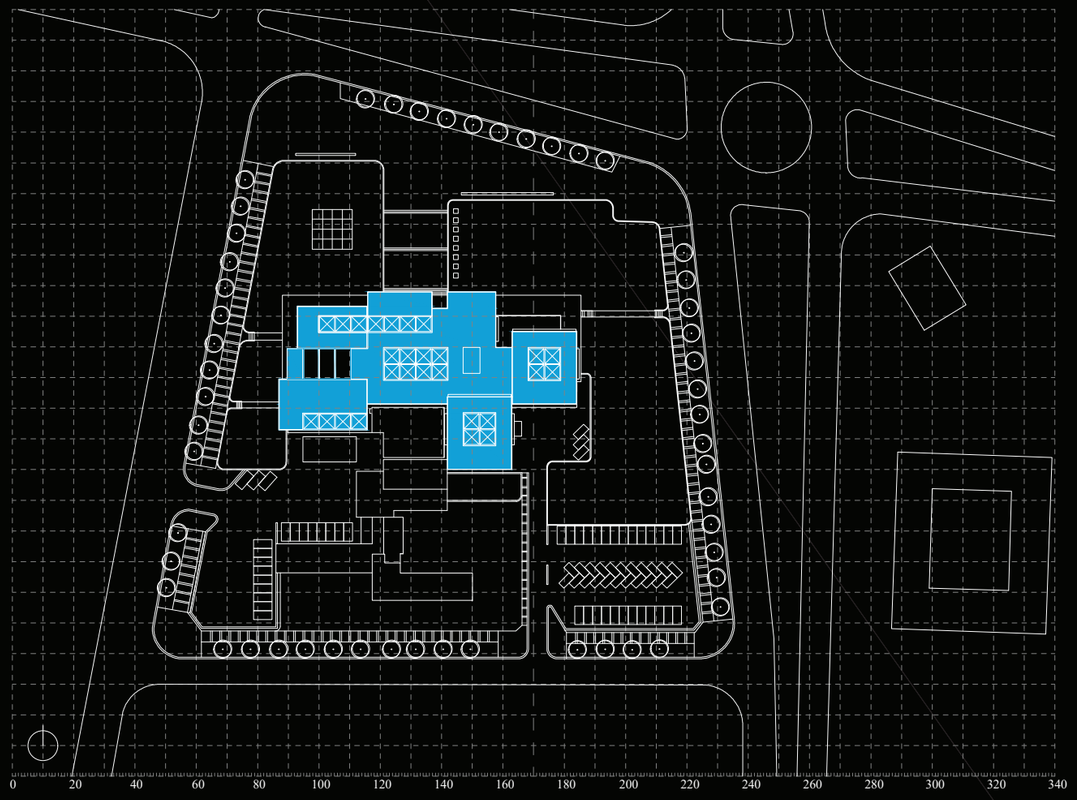
GEOMETRIC DIAGRAM
spatial syntax analysis

National And University Library _Petar Mulichkovski

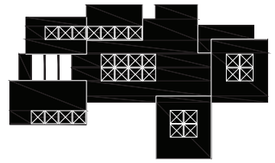
With the development of the master plan for the city of Skopje in 1967, a new cultural center extending on the north bank of river Vardar was conceived. One of the first built sections of the center was the National and University Library St. Climent of Ohrid which had its grand opening in 1971. The site location is framed by the busy city arteries, Goce Delcev street and Stiv Naumov street, with several significant cultural and architectural monuments located in the nearby distance. The inevitable spatial conflict between the tradition and the scale of modern architecture, was surpassed by the architect Mulickovski[48] with the establishment of an innate connection with the inherited spatial content. Mulickovski’s consistency is evident in the original and authentic design of this work as well. The solid unity of the form and the framework of the building, is juxtaposed by the shapes, symbols and applications of traditional architectural elements adorning the facade. On the white horizontal fence, Mulickovski used traditional ornamental decorations lightly carved in the concrete. Furthermore, the traditional medieval stone and brick building technique, was recalled in the facade of the building, with the natural stones being replaced by white marble stripes.
The interior composition of the library is marked by clean straight lines, with clear differentiation of the administrative and service areas on one hand and the numerous reading rooms and halls for the visitors on the other.



img.73_Diagram *Patchwork*



img. 74_Masterplan
National And University Library



GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

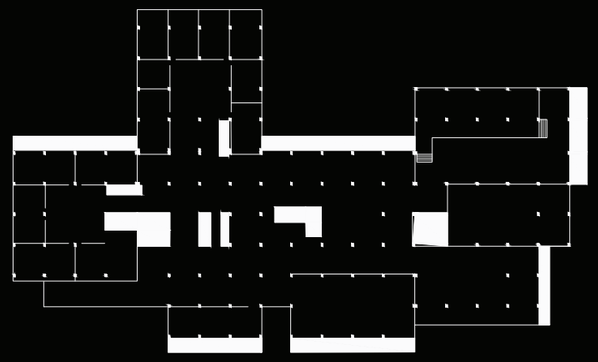
Patchwork

Patchwork, n. */ˈpatʃwəːk/*
1. A thing composed of many different elements so as to appear variegated.

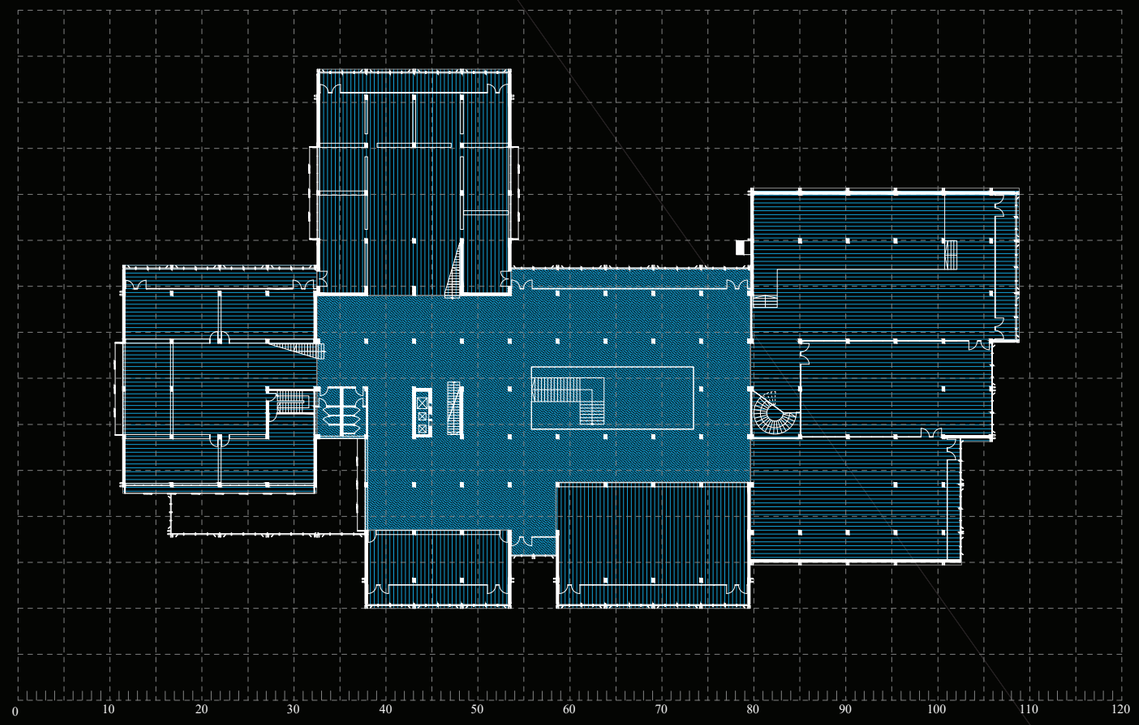
Image 73
The concept of patchwork as an approach of establishing relation between the building and its context.

Image 74
The interpolation of the building in a vast green area in the center of the city.

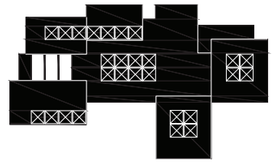
The traditional weaving technique, of intertwining different single threads finds a spatial interpretation in the building of the University library. The intention to create a complex fixed structures that maintain certain tension by manipulation of threads creates the basic blueprint, which is then overlapped by a clear modernistic structuring idea. The above mentioned operations encrust with symbolic traditional elements that appear on the parapet elements of galleries and balconies, in the interior and the exterior, result into another dialectical figure that creates space for dialogue between past narratives and what was then a contemporary architects' aspiration, an idea of modernistic and a sequential city.



img.75_Diagram *No Hierarchical space*



img. 76_Floor plan
National And University Library



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

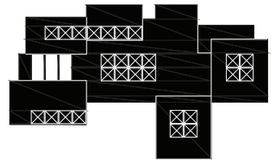
No hierarchical space

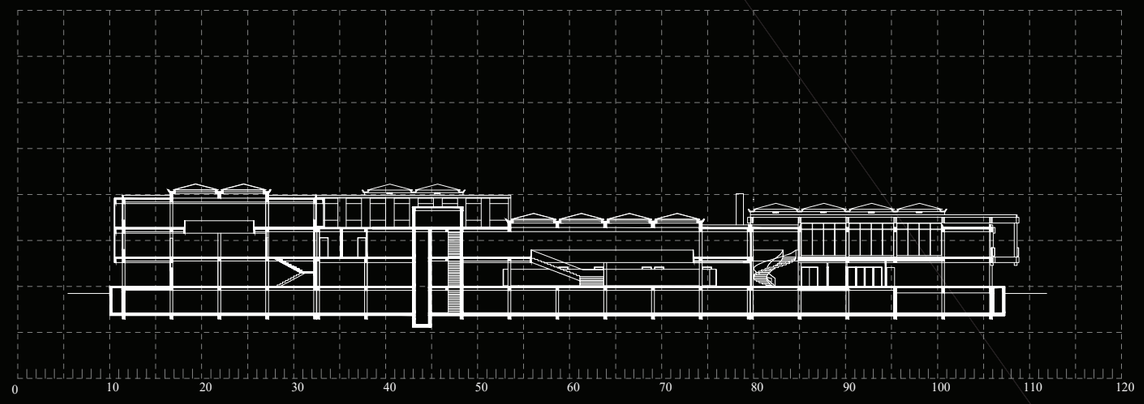
No hierarchical space, n. */nəʊ hʌɪəˈrɑːkɪk(ə)l speɪs/*
1. An arrangement or classification of things according to relative importance or inclusiveness.

Image 75
The floor plan is articulated trough a process of aggregation of different spatial expression in an absence of a clear hierarchy.

Image 76
The floor plan as a pattern of diverse typologies of spaces.

Following an ideological drive and considering the function of the building the architect strived to structure the library building in an ungraded order, creating an allusion of freedom of movement and perplexed activity. It is the depth of the space that becomes important instrument for conducting the movement of a common visitor and escorting him to the spaces in which programs concerning him are settled. The patchwork pattern gives a solid base for such free-for-all organization, and provided the space with prospect for fluctuation of functions. Further to this, in this organizational approach of creating open and non-hierarchical spaces there is the possibility for units isolation, applied for the depot and the administration cells for example, and this action does not interfere or obstruct any of the other activities.





img. 77_Section
National And University Library

GENERAL INFORMATION

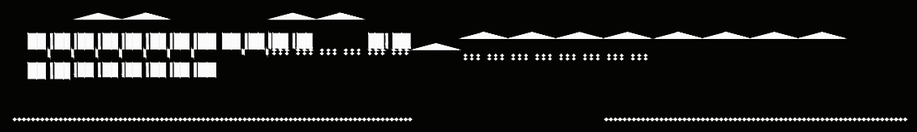
ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

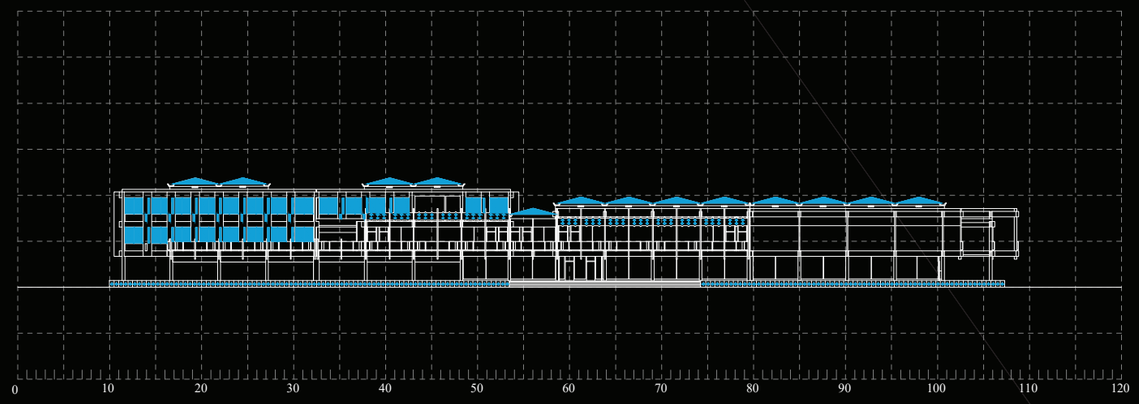
No hierarchical space

***No hierarchical space, n**. /nəʊ hʌɪəˈraːkɪk(ə)l speɪs/*
1. An arrangement or classification of things according to relative importance or inclusiveness.

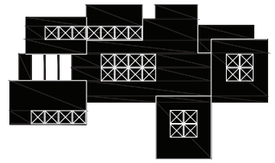
The design process is consistent in the floorplans, sections and elevations. The non-hierarchic structured spaces are evident also in the sections of the library edifice and the patchwork idea is materialised through the planned slab openings which combined with the communication cores enables visual and physical intertwining of the volumes of the different levels, creating an overall impression of a whole. The natural light is present as another uniting, but also a dividing design element, and its sourcing, quantity, permission or blockage, is just another mode for structuring the edifice interior. Thus the roofing elements that appear occasionally and in a group manner are linked to the movement suspension or appear as a movement stimulus.



img.78_Diagram *Pattern*



img. 79_Elevation
National And University Library



GENERAL INFORMATION

ANALITIC MODEL
concept elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Pattern, n. */ˈpat(ə)n/*

1. A regular and intelligible form or sequence discernible in the way in which something happens or is done.

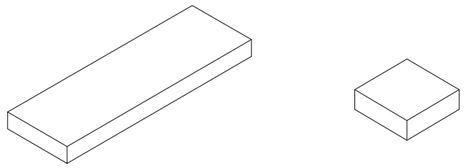
Image 78
Pattern of diverse elements that establish relation to the macedonian tradition.

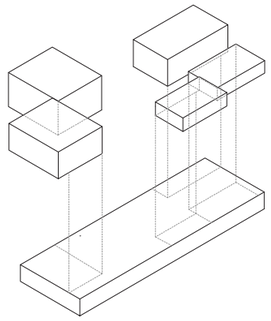
Image 79
Incorporation of the patterns in the complex elevation.

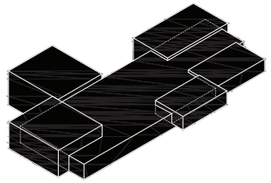
The design problems that this building would have concerning its identity within certain geographical confines, considering its basic modernistic approach of the architect was overcome by introducing symbolic encrust. The author tries to build ontological relations with historical practices incorporating stylised datasets of patterns that directs the observer's thoughts towards the traditional XIX century architectural figures and everyday associative shapes. In spite the fact that the dialectics of the final appearance stay in a mere philosophical realm, the incorporated patterns which are materialised in ornaments, do not compromise the openness of the modernistic set, on contrary they support it due to their "cleanness" of any unnecessary data.

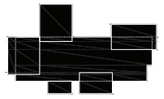
National and University Library St. Climent of Ohrid

Operation_INTERLOCK
A wholeness created by engaging with each other,
fitting together of projections and recesses

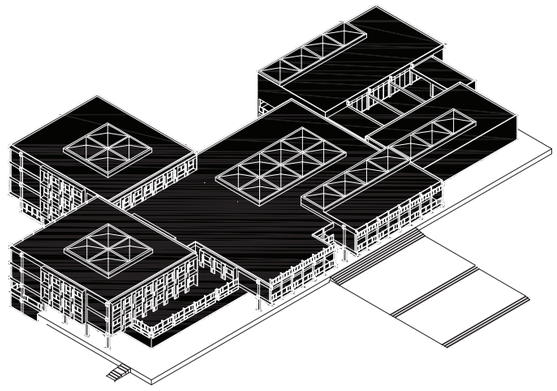


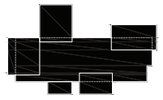




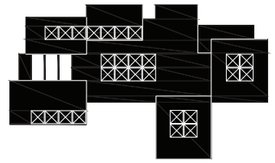


Operation_INTERLOCK
A wholeness created by engaging with each other,
fitting together of projections and recesses





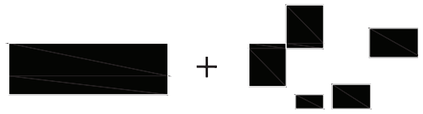
Operation_INTERLOCK
A wholeness created by engaging with each other,
fitting together of projections and recesses



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis



Interlock

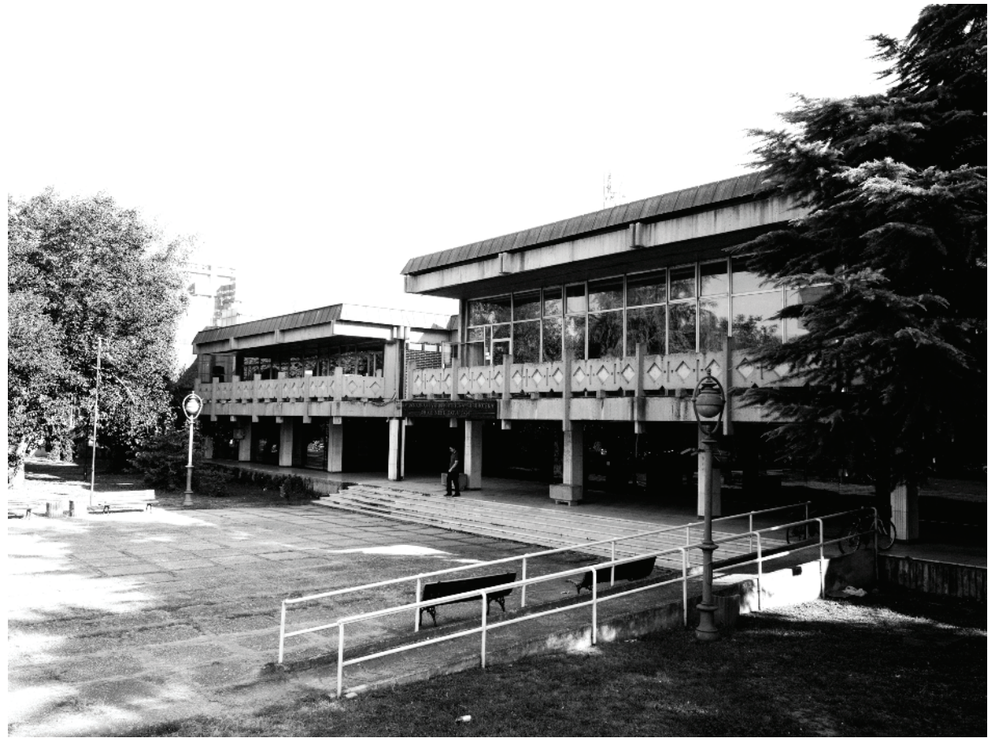
***Interlock, v**. /ɪntəˈlɒk /*
1. A device or mechanism for connecting or coordinating the function of different components.

The wholeness of the University library is created by engaging multiple volumes one with another, by fitting together of projections and recesses. This geometrical operation is evident and readable from the outside, intentionally disappears on the floorplanes and further in the interior space since the architect didn't want the idea of creating fluid and free space to be compromised. Borders between the different units of the patchwork appear subtly and occasionally, and are detailed in a way that includes either transparent materials, structured body and colours or pattern decoration, both leading towards demineralization. The communication nodes, on the other hand, are settled often in the bordering areas, and facilitate the units being set apart if needed.

National and University Library St. Climent of Ohrid

img. 80_Frontal view
National And University Library

img. 81_Frontal view
National And University Library



img. 82_Entrance view
National And University Library

img. 83_Entrance view
National And University Library

[B4.4]
Republic Dispatch Center

Architect
Zoran Shtaklev

Date of construction
1987-89

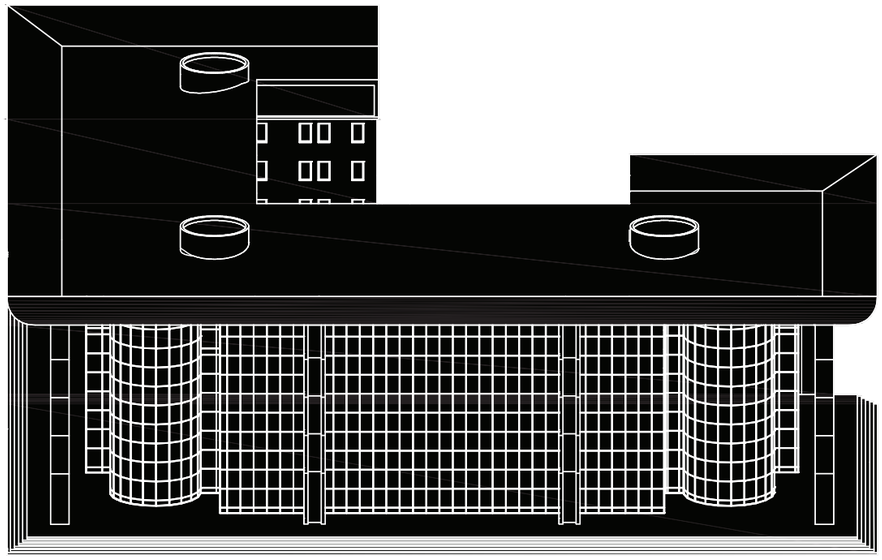
Building area
2500m2

Size
XL

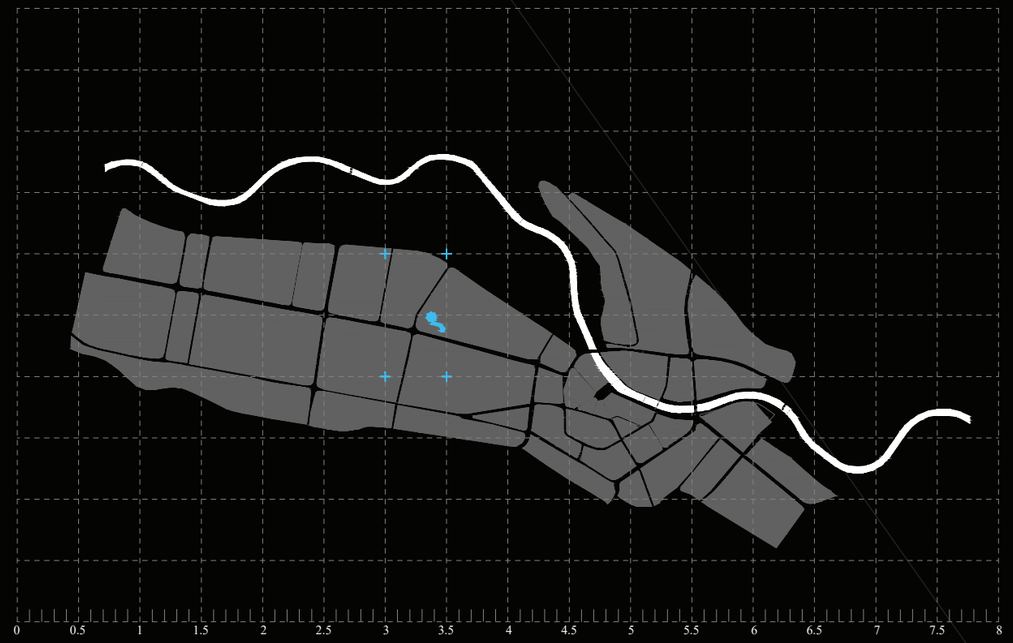
Category
Compact

Concepts
Tabula Plena, Chain, Dichotomy, in Between

Operative verbs
Insert



geographical position
42°00’11.0”N21°23’25.9”E



img. 84_Location
Republic Dispatch Center on the map of Skopje

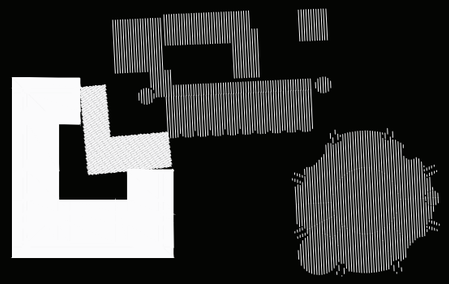
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

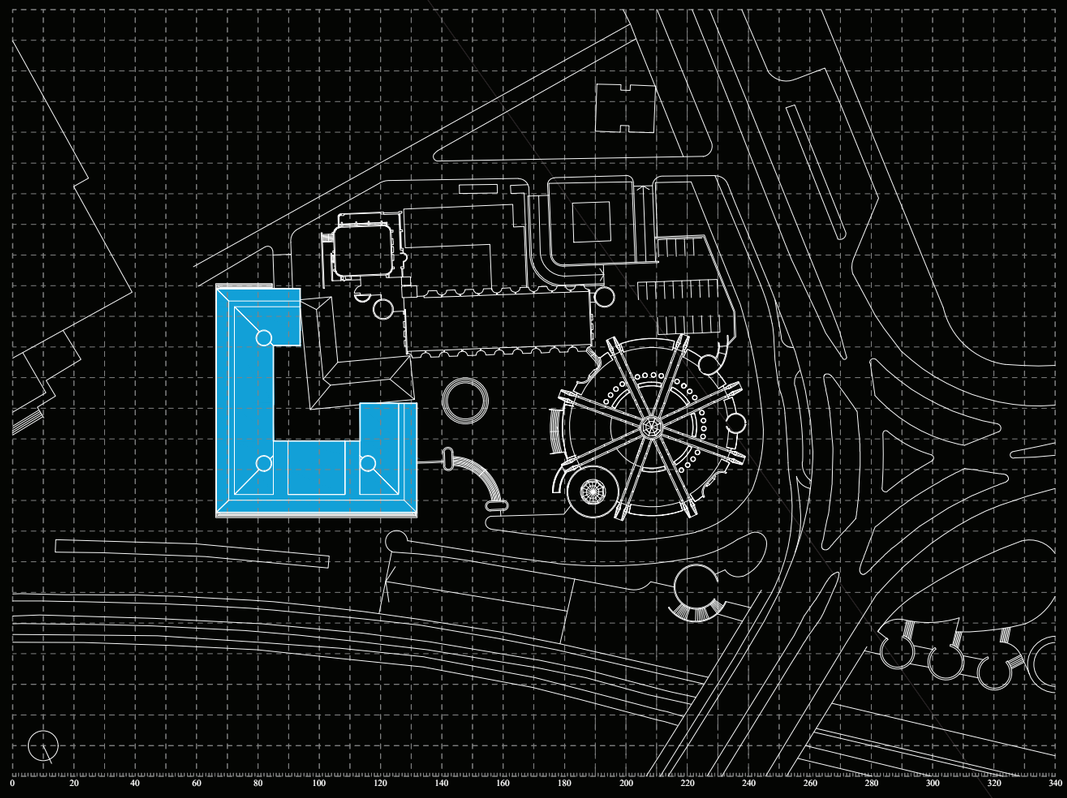
GEOMETRIC DIAGRAM
spatial syntax analysis

Republic Dispatch Center _Zoran Shtaklev

The Republic Dispatch Center from Zoran Shtaklev[44] concludes the uncompleted composition of the Telecommunication Centre. Ten years later, after the construction of the Telecommunication Centre Shtaklev designs the building of MEPSO on the plot where Konstantinov imagined the main telecommunication building. The rational design of Sthaklev is inspired from the un-built design of the telecommunication building and inherits some of the architectural elements from the realized one in order to establish the link with the already realized complex. The composition can be described as a ***stratified*** structure of generic elements of the classical Greek temple reinterpreted in combination of raw concrete and glass.
The building is located on the unbuilt building of the complex of Janko Konstantinov, it is surrounded by the massive architecture of the telecommunication center with colossal order. The design responds to this show of force with a unique interpretation of a Greek temple with contemporary means and creates a structural continuation of the surrounding. Behind the load bearing concrete supports, a detached glass membrane forms the innermost layer of the façade. This opens up the interior space to the outside creating a feeling of transparency.



img.85_Diagram *Tabula Plena*



img. 86_Masterplan
Republic Dispatch Center

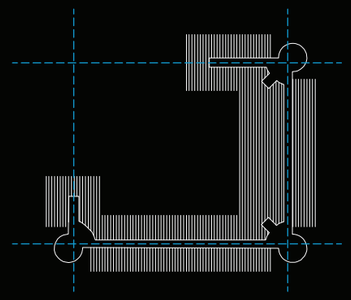
Tabula plena

Tabula plena, n. */tabjʊlə ˈpliːnə/*
1. Urban sites that are full of existing buildings of multiple time periods.

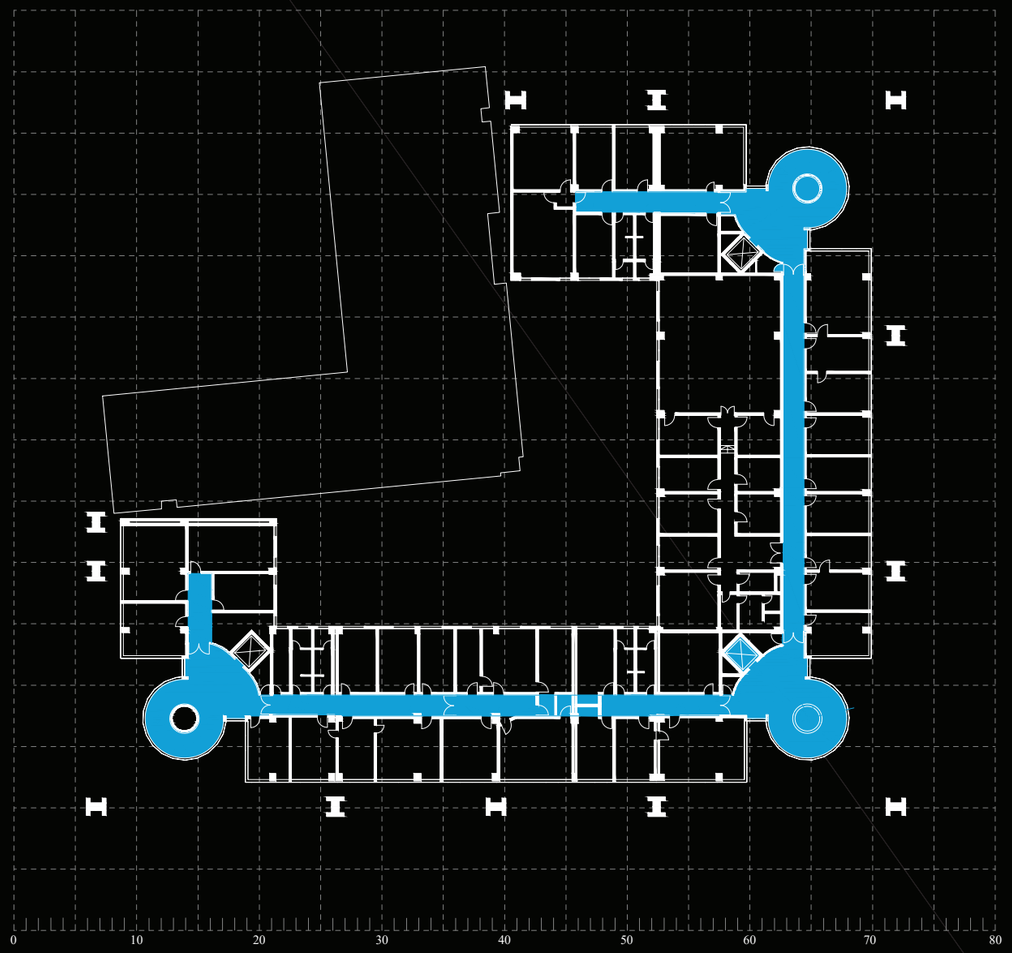
Image 85
The diagram shows the incorporation of the building in the existing complex.

Image 86
The Republic Dispatch Centre as part of the complex of the Central Post.

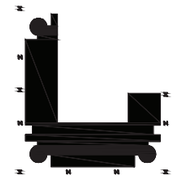
The relation that the MEPSO edifice created towards the characteristics of the existing architecture context and the process of continuation of the ideas of the designers before is what makes this building mostly a project of preservation. The concerns of the architect, for both, theoretical issues and design possibilities driven from the neighbouring telecommunication compound's volume and structure, visibly influenced the design of this building, and further made the operation of enclosing the planed and unfinished perimeter block structure a large scale project of preservation. The design process of the MEPSO building and the transformation of the mentioned block evidently lies in the space between architecture, preservation and urban planning, and struggles to overcome the dichotomy between designing new structures and architecture vocabulary regarding the preservation of the ones found on site.



img.87_Diagram *Chain*



img. 88_Floor plan
Republic Dispatch Center



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Chain

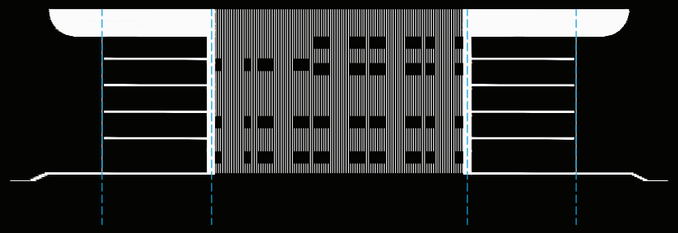
Chain, n. */tʃeɪn/*
1. A sequence of items of the same type forming a line.

Image 87
The diagram express the concept of chain as a relation between the coridors and offices.

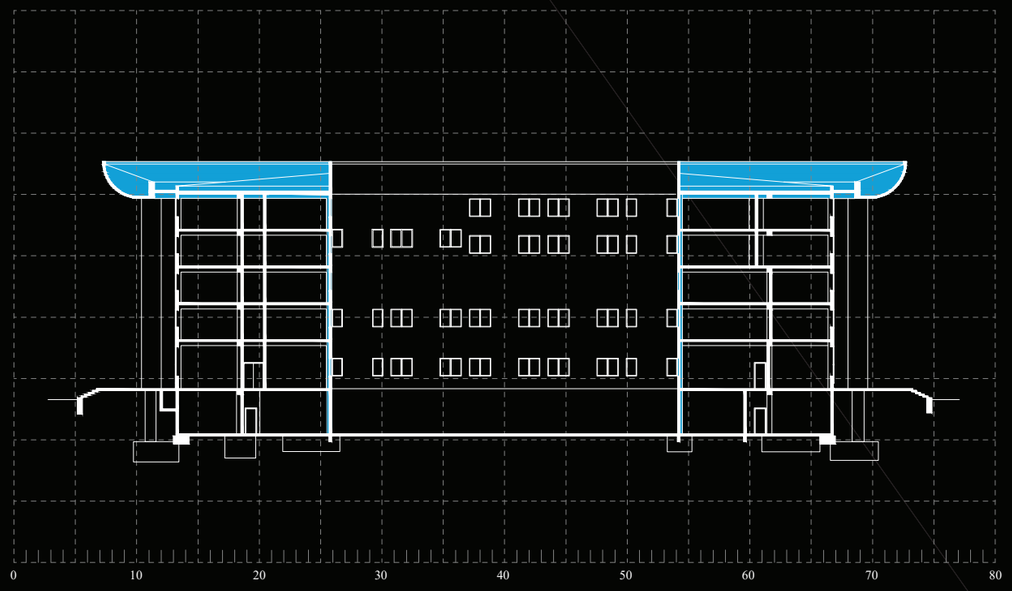
Image 88

Services, halls and staircases

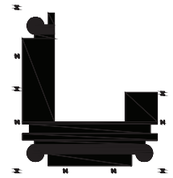
The building of MEPSO fills in the gap that was left unbuilt completing the idea for a telecommunication centre which parts are unified by a partially enclosed platform. Furthermore, the design of the floorplan of the building, materializes the idea of the unrealized edifice consisted of perimeter volumes that form an inner patio in conjunction with a neighbouring existing building. The chain like structure is intentionally broken in linear sections that are structured further in cells. At the joining points where the vertical communication are settled all of the centrally positioned horizontal distributive corridors end. This floor plan chain composition becomes more visible due to the contrast between the structure of the linear segments and the building's portico.



img.89_Diagram *Dichotomy*



img. 90_Section
Republic Dispatch Center



GENERAL INFORMATION

ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

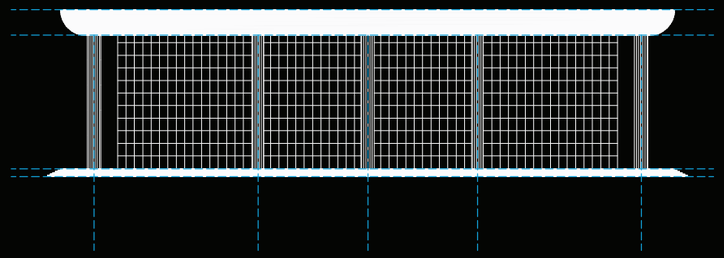
Dichotomy

Dichotomy, n. */dʌɪˈkɒtəmi,dɪˈkɒtəmi/*
1. A division or contrast between two things that are or are represented as being opposed or entirely different.

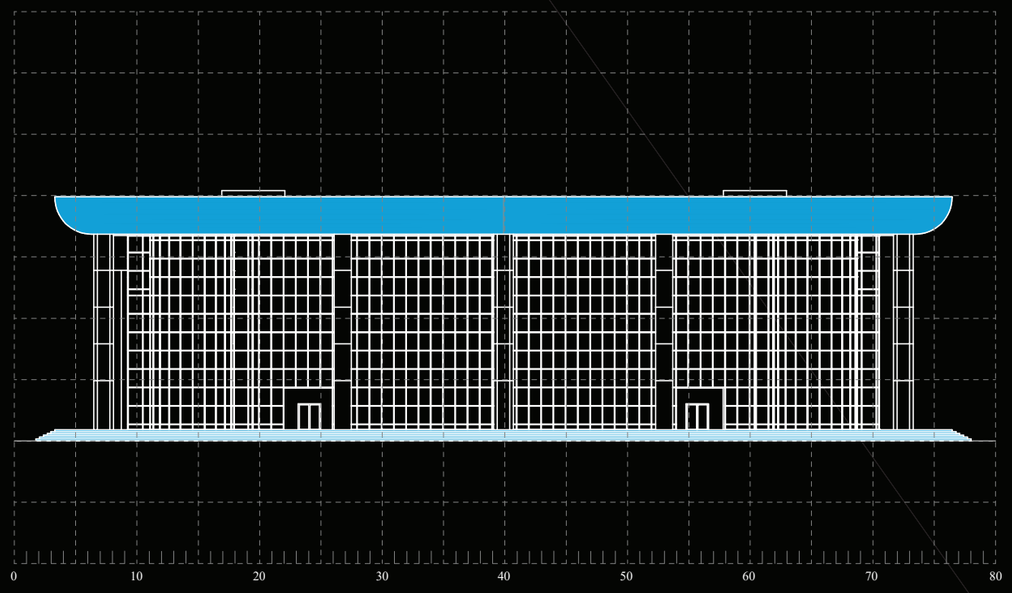
Image 89
The diagram shows the different articulation of the inner and the main facade.

Image 90
The dichotomy has been emphasized also in the use of the materials.

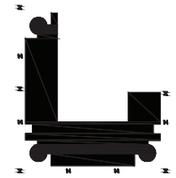
The sections through the volume reveals several levels of contrast, between the surrounding city and the architecture of MEPSO, the built and unbuilt space, between the inside, the enclosed courtyard treatment, and the external elements arrangement. This contrast results from the intention of the architect to react critically to the neighbouring milieu, and besides reinterpreting certain structural and non structural elements he introduces new concepts that act as counterpoints towards the existing. The dichotomy he achieved between inside and outside, he tries to blur by translating the tradition into contemporary architecture. The interpretation of traditional house elements which were not strictly part of the interior, or the exterior, and also the visible influence from the Japanese “angala”, resulted in a portico all around the building main volume, a space that depending on one’s activity would appear as part of the inside or the outside.



img.91_Diagram *In between*



img. 92_Elevation
Republic Dispatch Center



GENERAL INFORMATION

ANALITIC MODEL
concept elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

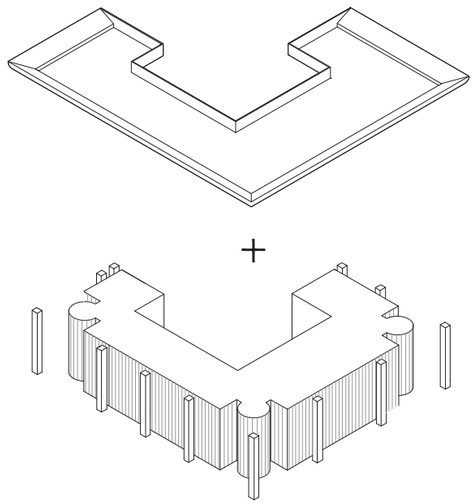
In between

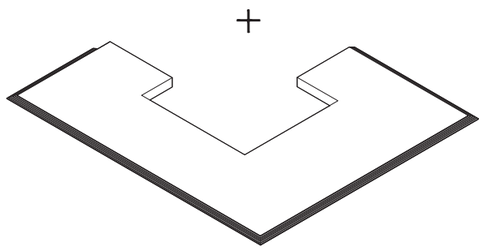
In between, adj. */ɪnbɪˈtwiːn/*
1. Situated somewhere between two extremes or categories; intermediate.

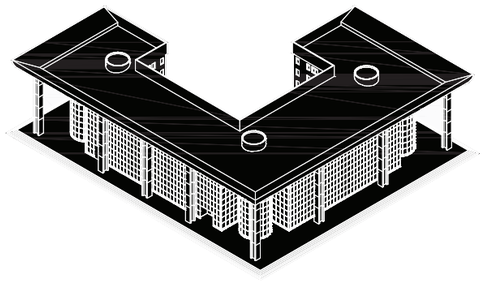
Image 91
The diagram shows the articulation of the elevation as in-between system.

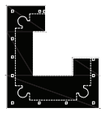
Image 92
The roof and the base as bold elements that in-between has been interpolated the glass volume.

Being part of a wider complex, and being the last element built, gave clear directions to the architect for the MEPSO unit regarding the design concepts, structure and materials. The architect finding him self with in a context of already evolved design practice chose a preservationist approach and obtained the character of the brutalist baroque, the style that shaped the block. However he simplified and minimized the design operations what created space in which he had the freedom of developing a specific vocabulary without compromising the continuation of the idea of a monolithic complex. Designing the in between area in this case literally meant recreating an element that would relate to the existing and then with the rest clearly stating that new design ideas also took place.

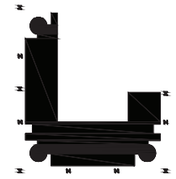








Operation_INSERT
Clearly defined construction
and amorphous content inlay



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

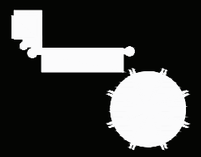
GEOMETRIC DIAGRAM
spatial syntax analysis

Insert

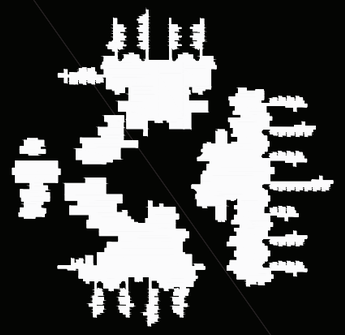
Insert, v. */ɪntəˈlɒk /*
1. Place, fit, or push (something) into something else.

The plan for two heavy concrete platforms divided by concrete supports intentionally resulted in creating an in between space in which a contrasting structural facade infill was placed. Furthermore the presence of this new element, the glass elevation surface, was proportioned well in order to additionally develop a dynamic dialectic relation with the whole. Contrary to the clearly defined construction, the firmness and constant appearance of the block's elevations, that predictably changes only with the sun influence, the amorphous content inlay of MEPSO edifice reaches another extreme, alternating due to reflections, weather conditions, surrounding fluctuation etc. The two main materials, concrete and glass, are clearly differentiated with the delegated forms and opposing each other on many designer grounds.

[C4.1]



[C4.2]



[C4.3]

C. GROUP FORM

The category of group form is defined by composition consisted of several independent volumes that arise as an autonomous forms.

[C4.1]
Telecomunication Centre
Janko Konstantinov

[C4.2]
SS. Cyril and Methodius University Skopje
Marko Music (with Meta Hocevar, Jernej Krajger, and the collaborators Borut Bucar, Marjan Music and Katja Repic)

[C4.3]
Macedonian Opera And Ballet
Biro 71 (Roman Cizej, Oton Gashpari, Shtefan Kacin, Peter Kershovan, Jurij Princes, Bogdan Spindler, Marijan Urshic and Peter Zidanic)

[C4.1]
Telecomunication Centre

Architect
Janko Konstantinov

Date of construction
1972-81

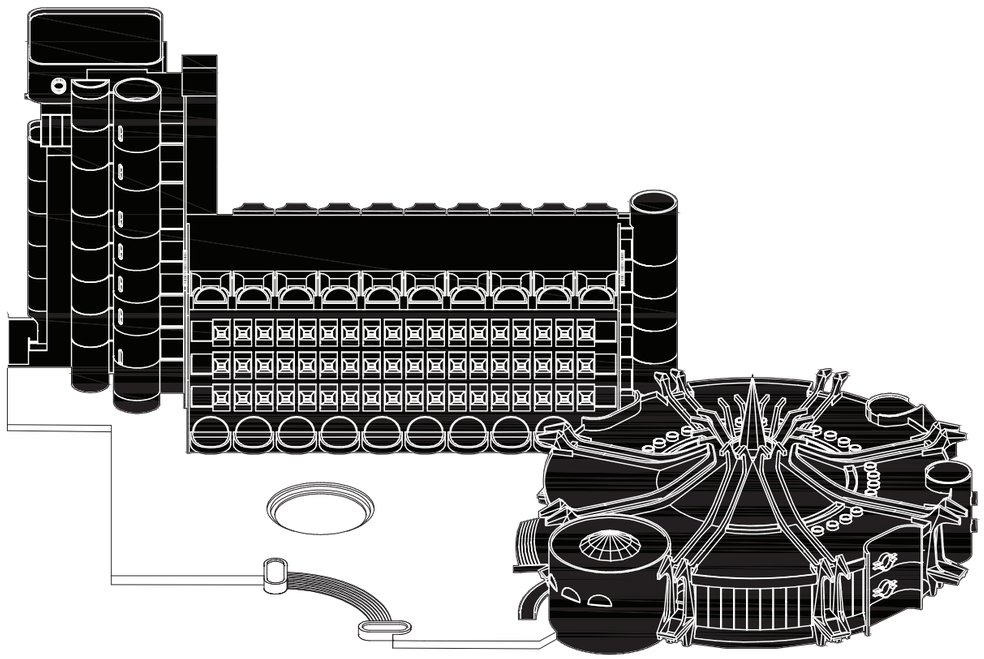
Building area
4200m2

Size
L

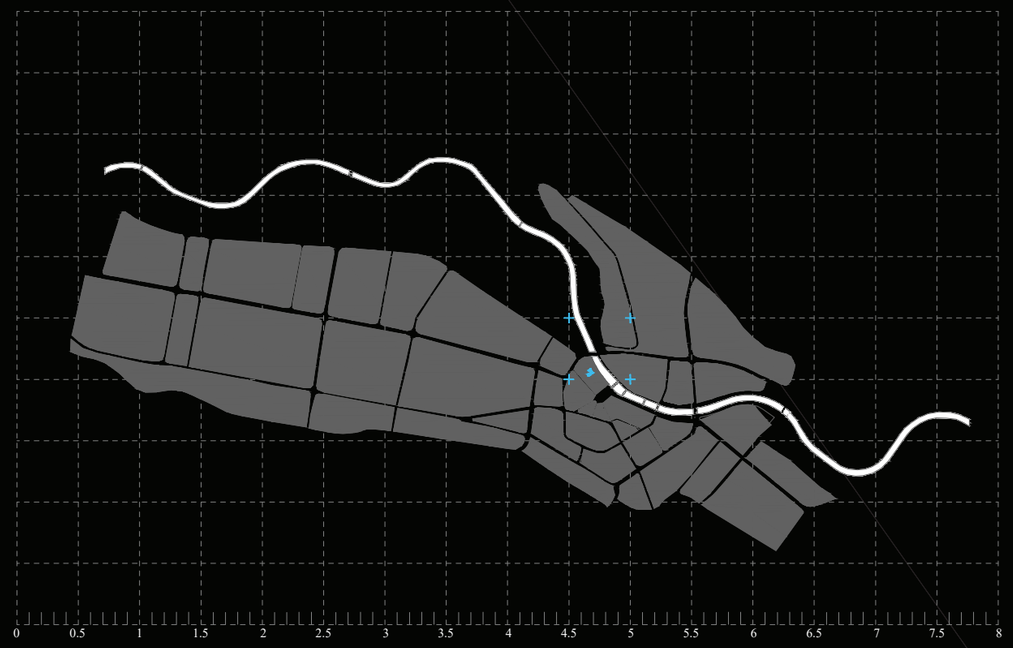
Category
Group Form

Concepts
Architecture of Elements, Hinge, Autonomous Form, Taxonomy

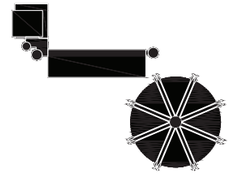
Operative verbs
Multilayering



geographical position
42°00’11.0”N21°23’25.9”E



img. 92_Location
Telecomunication Centre on the map of Skopje



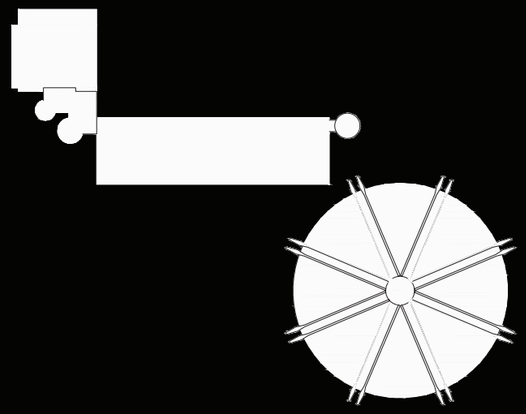
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

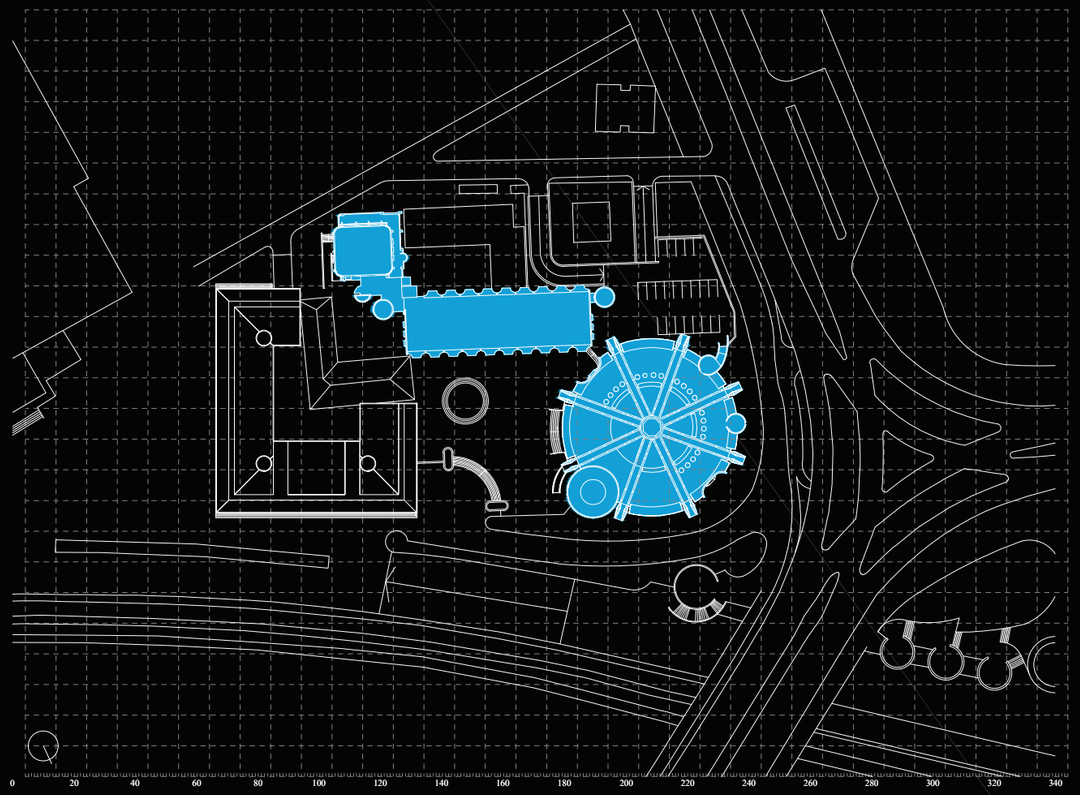
GEOMETRIC DIAGRAM
spatial syntax analysis

Telecomunication Centre _Janko Konstantinov

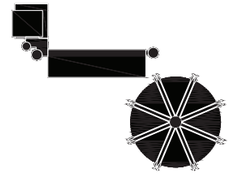
The Telecommunication Center is a lifetime achievement of Janko Konstantinov[43], situated on a strategic position in the city central area, keeping the memory of the old city since it is built on the same location where the old post office used to be, and follows the guidelines of Tange’s masterplan. The final design followed after three different variants. Konstantinov started the first proposal in 1968 and in a period of four years he has developed three different concepts for the telecommunication complex. In all of the proposals the complex consisted of three buildings, the telecommunication center, the counter hall and the administrative building, all of them superimposed on a bold platform that links them and at the same time is envisioned as a new public space. The groundbreaking ceremony happened in 1972 and marked the beginning of the first stage of the construction. By 1974 only the telecommunication center was built consisting of two segments; a centrally positioned rectangular block (ground floor +4 floors) and a tower (ground floor + 7 floors). Regarding the functional aspect of the building, the focus was put solely on the telecommunication equipment and its operation. In 1982 the second stage of the complex was finished with the construction of the large counter hall. The circular shape of the hall is juxtaposed with the rectangular volume of the center in the back, which further highlights its vivid sculptural expression. The functional use of the two-storey building was focused on the postal services and dedicated to working directly with clients. The administrative services, archives and offices are located behind the area accessible to the public - along the circumference of the circle.
Another discernible quality of the complex is the ascetically restrained palette of color and materials, limited to the use of concrete in its natural form. Additionally, the circular, rectangular and segmented elements of the facade, skillfully crafted to perfection, are arranged in a harmonious manner producing a moderate recurrence.
The landscape planning within and out of the complex was meticulously assessed, taking into account its immediate surroundings. The carefully executed separation of the access points, the system of concrete steps and promenades, all together form an intrinsic relationship with the river bank, the main square and the environment as a whole.
Konstantinovski’s confident expression is clearly evident in the strength, dynamic and maybe even dominance of the finished architectural composition, which significantly changed the morphology of the existing urban tissue. This composition can be defined as multilayered complex of different building typologies reinterpreting the traditional courtyard in brave futuristic visions on the edge of utopia



img.93_Diagram *Architecture of Elements*



img. 94_Masterplan
Telecomunication Centre



GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

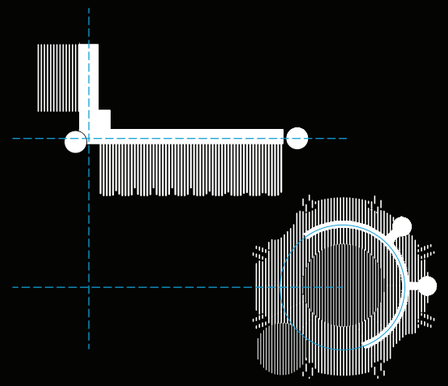
Architecture of Elements

Architecture, *n. / ˈɑːkɪtɛktʃə /*
1. The complex or carefully designed structure of something.
Element, *n. / ˈɛlɪm(ə)nt /*
1. An essential or characteristic part of something abstract. 2. Each of more than one hundred substances that cannot be chemically interconverted or broken down into simpler substances and are primary constituents of matter.

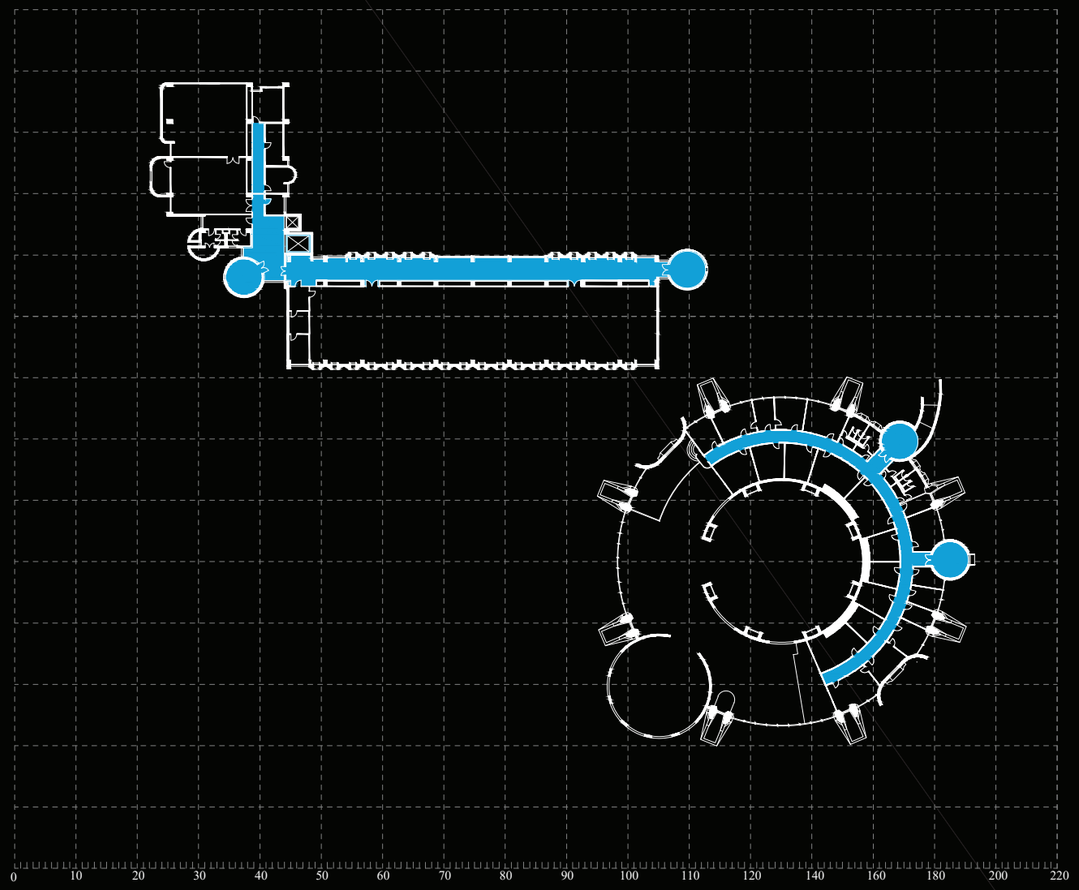
Image 93
The diagram shows the composition of the floor plan as a of variety of architectural elements.

Image 94
The complex in relation to the river Vardar and the infrastructure.

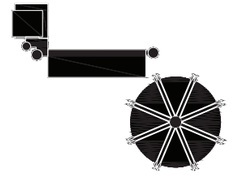
The building of the Telecomunication Centre define a specific articulation to the city, the relationship with the city landscape is above all characterized by the distant perception of the volumetric composition consisted of very differentiated articulations: the rotunda, the tower and the linear bloc. The center is represented as a dense and dialectical entity that allows to read the complex at different levels; concerning the program, the relationship with the urban form, the relationship with the landscape but also the historical development of the place. Therefore, the urban form and the architectural form coincide and the telecommunication center does not only define the landscape of Skopje, but also insinuate an idea of the city itself.



img.95_Diagram *Hinge*



img. 96_Floor plan
Telecomunication Centre



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Hinge

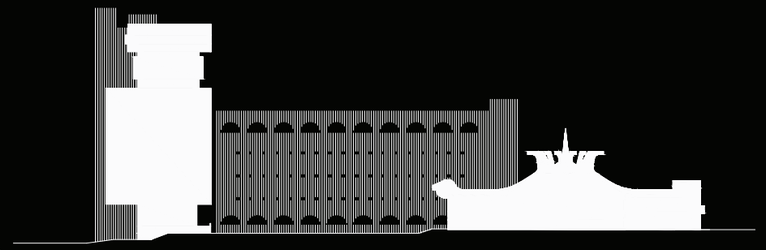
Hinge, *n. / hɪn(d)ʒ /*
1. A movable joint or mechanism on which a door, gate, or lid swings as it opens and closes or which connects linked objects. [v]
1. Attach or join with or as if with a hinge.

Image 95
The diagram shows concept of hinge as link between the corridors and main spaces.

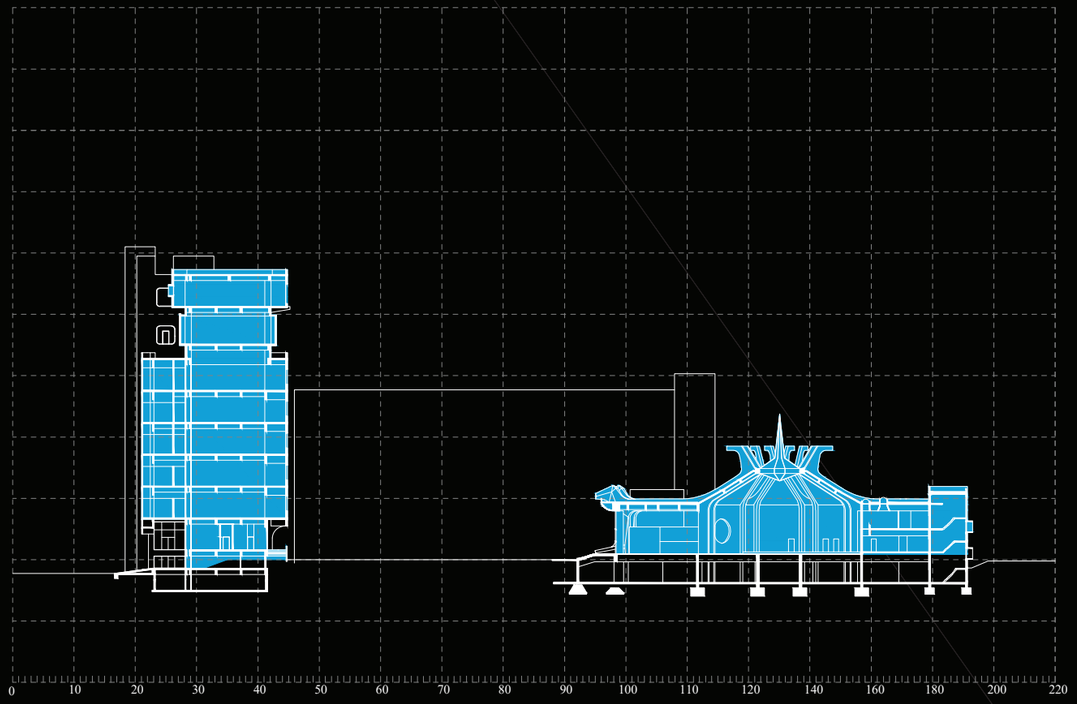
Image 96

Services, halls and staircases

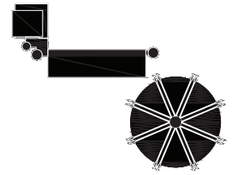
This concept of hinge as order of the internal organization, based upon flexible relationships between different categories of spaces rather than fixed and static disposition is in contrast to the rigid volumetric spatial composition of the telecommunication center. A clear distinction between the served space, as open and transformable and service spaces located in accented vertical cylinders that together with the corridors form the hinge as a backbone to whom all the other spaces are attached. This articulation disconnects the space from the function and makes it flexible to absorb different activities in different period of time.



img.98_Diagram *Autonomous form*



img. 99_Section
Telecomunication Centre



GENERAL INFORMATION

ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

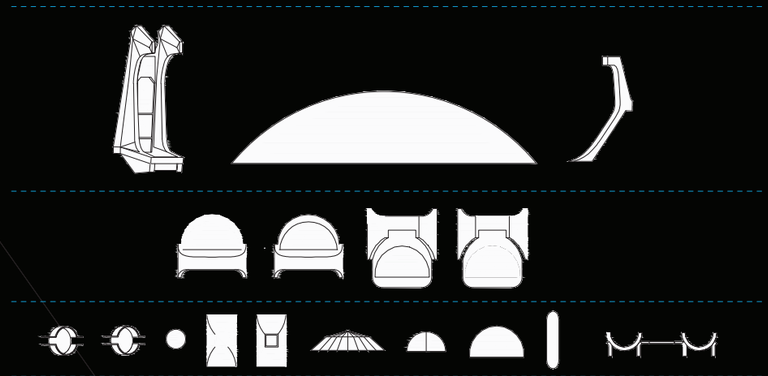
Autonomous form

Autonomous, *adj. / ɔːˈtɒnəməs /*
1. having the freedom to govern itself or control its own affairs.
Form, *n. / fɔːm /*
1. The visible shape or configuration of something 2. A particular way in which a thing exists or appears. 3. A type or variety of something. 5. A mould, frame, or block in or on which something is shaped. [v] 1. Bring together parts or combine to create (something) 2. Make or be made into a specific shape or form.

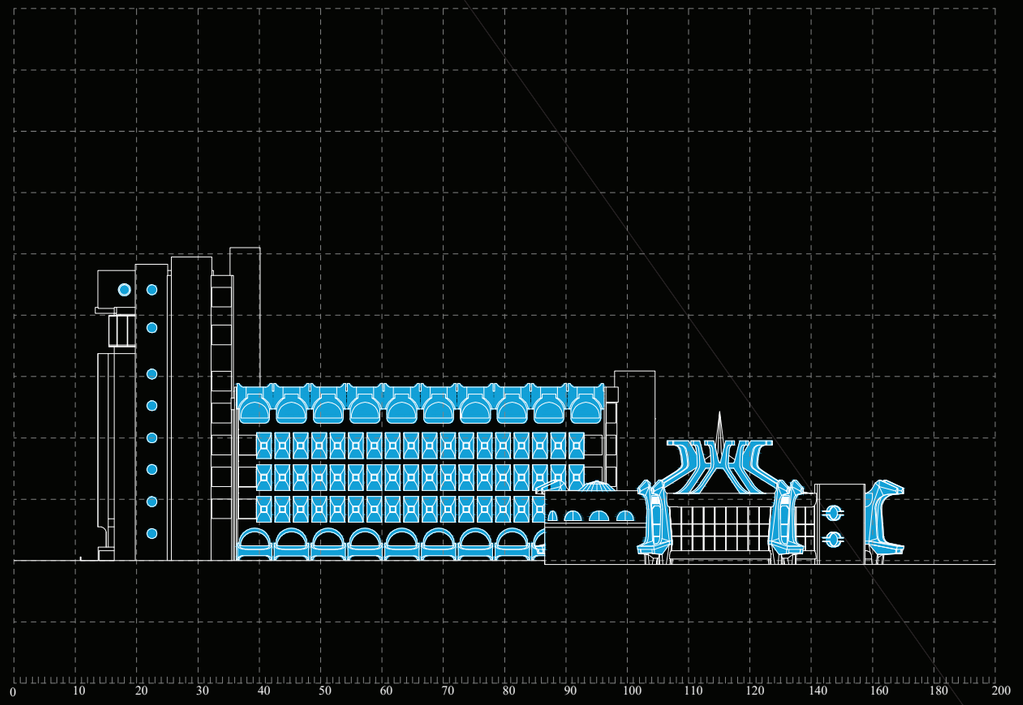
Image 98
The complex as a system of authonomus forms

Image 99
Section trough the counter hall and the administrative tower.

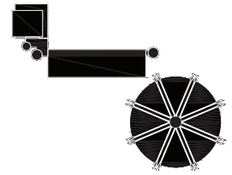
Through a juxtaposition of different forms, volumes and spaces, each with a specific theme, as well as through the complexity of its formal system the telecommunication center constructs an encyclopedia of architectural varieties. The fundamental phenomena of the form – the space and the volume, the consistency of the form, the relationships between different elements and between interior and exterior; the typology of volumes and spaces are declined in an almost experimental way. In this differentiated articulation the architectural form of the center expresses in the ensemble of its elements the substance of a very differentiated and representative program.



img.100_Diagram *Taxonomy*



img. 101_Elevation
Telecomunication Centre



GENERAL INFORMATION

ANALITIC MODEL
concept elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

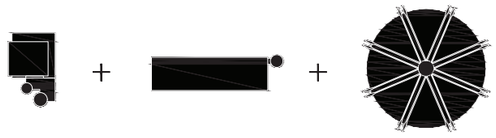
Taxonomy

Taxonomy, *n. / takˈsɒnəmi /*
1. The process or system of describing the way in which different living things are related by putting them in groups

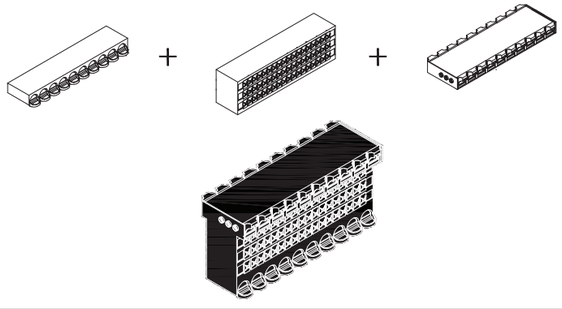
Image 100
Taxonomy of the variety of architectural elements that articulates the elevation.

Image 101
The facade composed of different types of architectural elements.

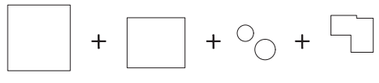
Brutalistic and metabolic in its character strongly recalls the work of Tange and Japanese metabolists such as Arata Izosaki and his project *City in the Air* as well as *Joint Core System*. Its volumetric articulation consisted of significant number of diverse architectural elements, structural, relational or just decorative molded in raw concrete, have been implemented into a spatial composition articulated by following precise and defined guidelines such as grids or matrixes. Different in their scale this biodiversity of architectural elements recognized as autonomous entities establish a relation among themselves in one clear and hierarchical composition.

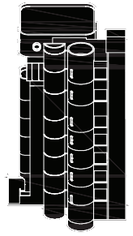


Operation_MULTILAYERING
A complex articulation of
compatible plastic languages

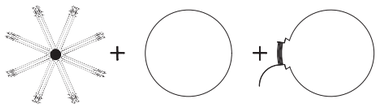


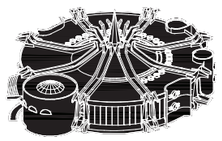
Operation_MULTILAYERING
A block is formed by prisms holding a different,
but compatible language of plasticity

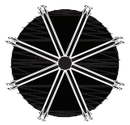




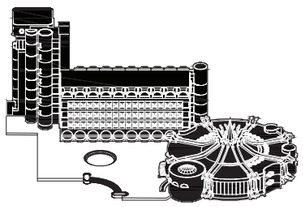
Operation_MULTILAYERING
Layers developed vertically,
articulated as separate volumes

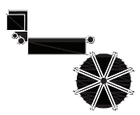




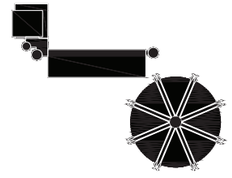


Operation_MULTILAYERING
A rich, three-dimensional and sculptural presence of a rotunda
becomes a symbol of a certain function





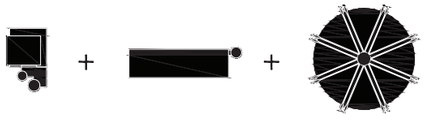
Operation_MULTILAYERING
A complex articulation of
compatible plastic languages



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis



Multilayered

Multilayered, *n. / məl-tē-ˈlā-ərd/*
1. having or involving several distinct layers, strata, or levels.

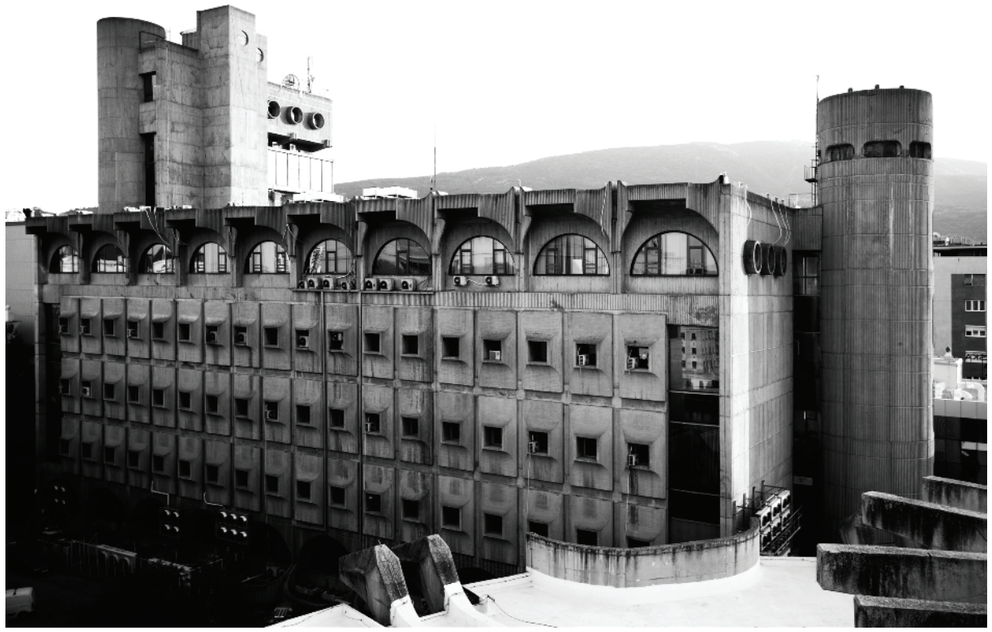
The action of multilayering has been implemented on different levels, multilayering of volumes, spaces as well as architectural elements regarding the three components of the complex. For the articulation of the first component, the linear block a parallel can be drawn with the concept of superposed order where successive storeys of the building have different orders, and the bottom of the building has the heaviest order. The second component, or the tower, its volumetric composition is a result of a multylayering of different geometric forms that declare different functions such as the cylender where the stairs are located, the tower where the technical support is located and the top of the tower as zone for relax. The last component, the rotunda, is practically a result of layering of different strong architectural elements such as, stylobate, cella and architrave.

The Telecommunication Center

img. 102_Isometric view
Telecomunication Centre

img. 103_Frontal-Isometric view
Telecomunication Centre

img. 104_Isometric view
Telecomunication Centre



img. 105_Isometric view
Telecomunication Centre

[C4.2]
SS. Cyril and Methodius University Skopje

Architect
Marko Music

Date of construction
1970-74

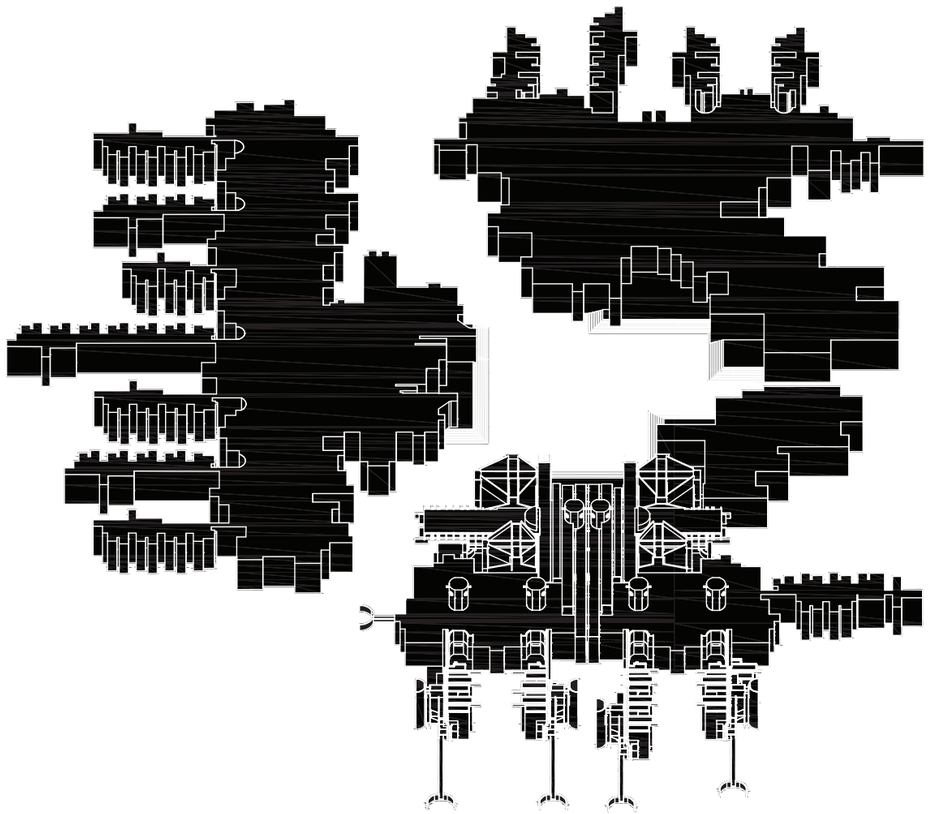
Building area
27400m2

Size
XL

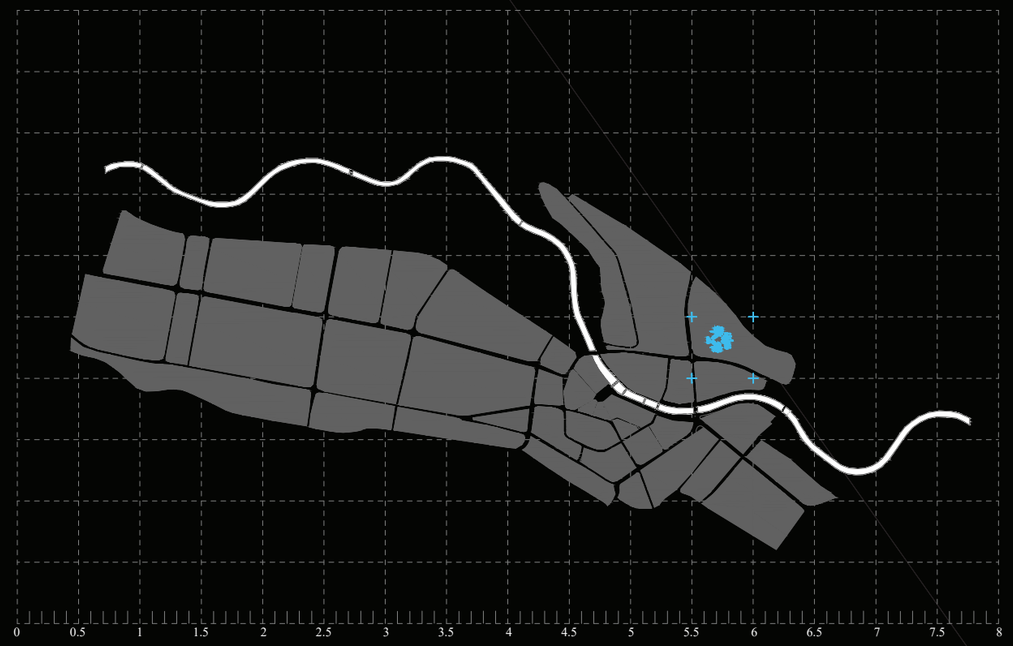
Category
Group Form

Concepts
Forum, Urban Interior

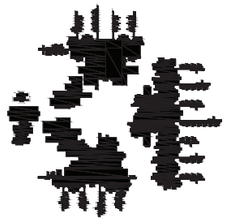
Operative verbs
Extrude



geographical position
42°00’11.0”N21°23’25.9”E



img. 106_Location
SS. Cyril and Methodius University on the map of Skopje



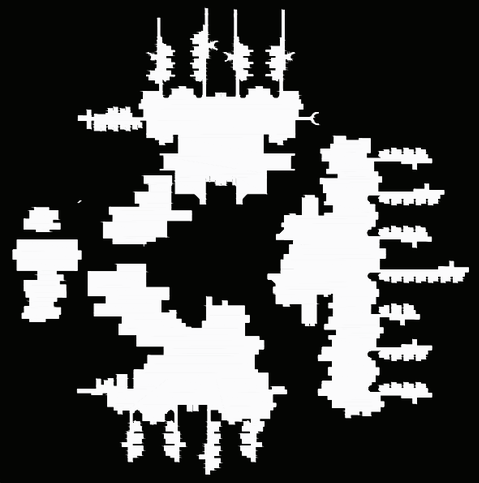
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

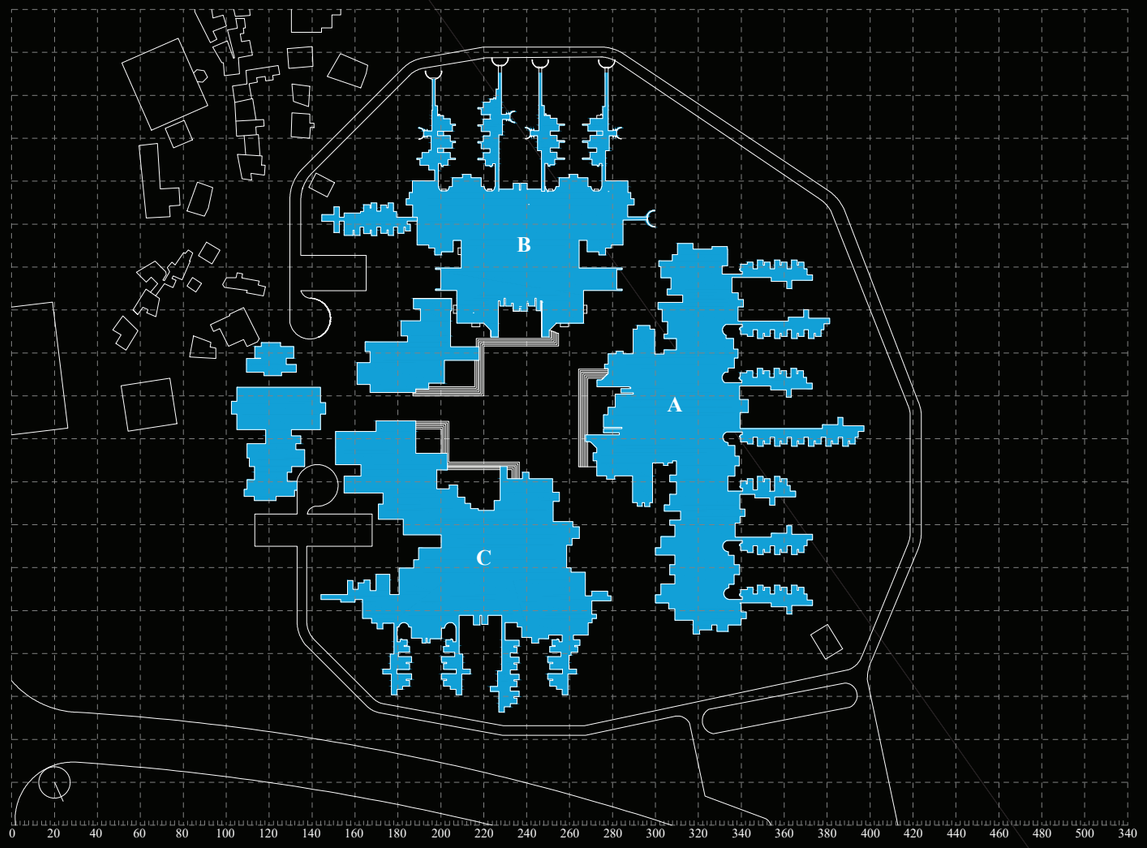
GEOMETRIC DIAGRAM
spatial syntax analysis

SS. Cyril and Methodius University Skopje_Marko Music

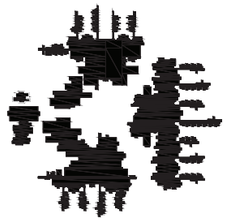
The University Campus SS. Cyril And Methodius University is also systematized in this section. In 1967 the Slovenian architect Marko Music[42] (with Meta Hocevar, Jernej Krajger, and the collaborators Borut Bucar, Marjan Music and Katja Repic) won the urban-architectural competition for a project for the University Campus in Skopje. The construction work began in 1970 and lasted four years, however the final phase which included swimming pool, large gathering hall and a sports center, was never executed. Situated north of the river Vardar, in a close proximity of the University Library and MANU, the university was an essential segment of the cultural and educational center for the City of Skopje proposed as part of Kenzo Tange’s masterplan. The composition of four shapes that are **extruded** and concentrated towards a central main square that gives the special character of the entire complex. The individual buildings represent an intricate series of volumes, seldomly repeating, organized in a compelling architectural composition. The building of the Rector’s administrative building marks the first contact with the complex. It consists of two fragments, connected by a second story enclosed passageway which emphasizes the axis leading to the central square bellow, thus embodying a symbolic gateway to the educational assembly. All of the three faculties are accessed from the square via wide stairs, following almost the entire length of the buildings. This open, spacious square repeats itself in the interior of all the faculties in a form of central hall as a meeting place, intentionally contrasted with the entrance areas in a form of small vestibules. It is precisely the central hall around which the organization of the entire space takes place. The Dean’s offices and the administrative offices are located on the perpendicular axis, while the classrooms and the teaching rooms are arranged in tracts of corridors on the longitudinal axis. Furthermore each faculty has four amphitheaters arrayed surrounding the first floor gallery, which opens to the central hall bellow. And even though a number of design principles, shapes and objects represent a joint, common theme in the design of all three buildings, each one of them is marked by its own unique character and interacts with the surroundings in a very particular manner.
With daylight being considered an ephemeral architectural material, Music masterfully orchestrated this most intangible of materials. Via large window walls and extensive use of roof windows and skylights, the movement of light and shadows further enhances the atmosphere, texture and vibrancy of the interior space.
The materials of the exterior represent continuity from the interior, relaying on a mixture of textured concrete surfaces derived from the rough-sawn formworks as well as smooth concrete surfaces achieved using a plywood finish. The raw, unembellished concrete, contrasted with light glass surfaces and untreated wood demonstrates restraint in the choice of materials, representative of the Brutalist archetype.



img.107_Diagram *Forum*



img. 108_Masterplan
SS. Cyril and Methodius University



GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

Forum

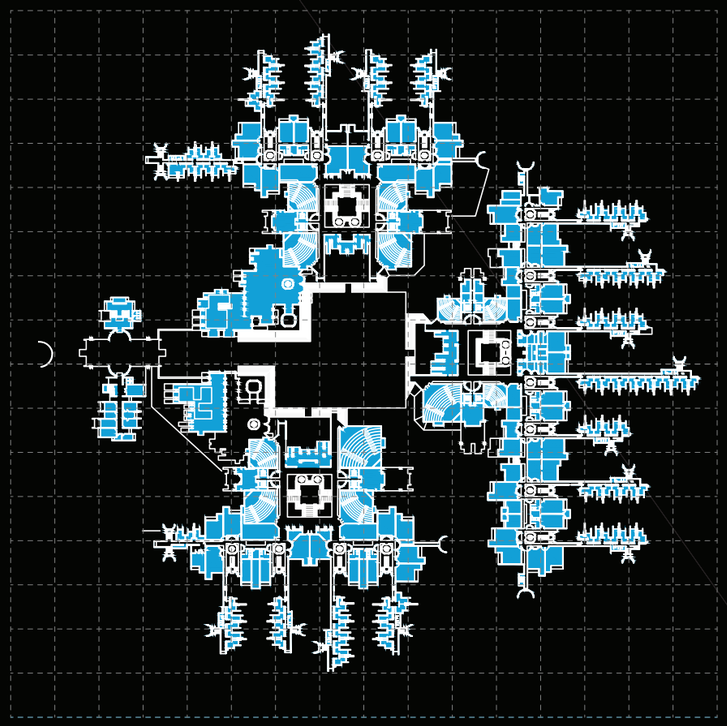
Forum, *adj. / ˈfȯr-əm /*
1. The marketplace or public square of an ancient Roman city, the center of judicial and business affairs and a place of assembly for the people.

Image 107
The buildings have been oriented towards a central public square.

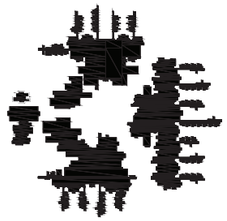
Image 108
A - Faculty of Philosophy
B - Faculty of Economics
C - Faculty of Law

The concept of the complex shows an image that is alternative to the contexualism of mimetic material and scale, by depicting a massive form that adjusts its perimeter to the contours of the existing. Inserted in a fragmented tissue the intervention, conceived as a monolithic megastructure emphasize the contrast with the surrounding on two levels; on the level of positive referring to the built mass and on the level of the negative represented by the void of the central open public square. The project can be described as a direct engagement of the notion architecture with the idea of public space materialized in the central square used as a forum, a place for social, cultural and educational interaction.

img.109_Diagram *Urban Interior*



img. 110_Floor plan
SS. Cyril and Methodius University



GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Urban Interior

Urban, *adj. /ˈəːb(ə)n/*
1. In, relating to, or characteristic of a town or city.
Interior, *n. / ɪnˈtɪə.ri.ər /*
1. the inside part of something. 2. inner; on or from the inside

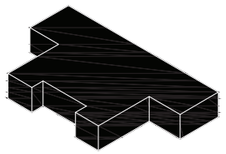
Image 109
The interaction between the corridors, classrooms, amphitheatres construct a sort of an urban interior.

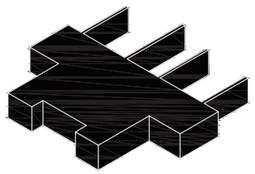
Image 110

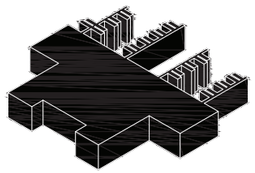
Classroms and professors cabinets

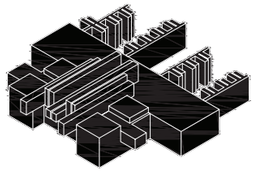
Emphasizing the inward focus toward the central square , the formal language of the architecture of the faculties changes dramatically in its scale, from volumes that has accented dimensions towards the center to fragmented linear structures going towards the peripheral side. The central public space metastasize towards the inner space where produces a series of different spatial categories of closed public spaces that generates various forms of movements and interaction. Actually, in the inner space of the faculties a series of corridors and axis together with the large scape spaces for social interaction around which the amphitheaters a located, constitutes the a network that has similar parameters to the urban infrastructure.

Operation_EXTENSION
Evolution of the form trough the process of extension in x, y and z direction

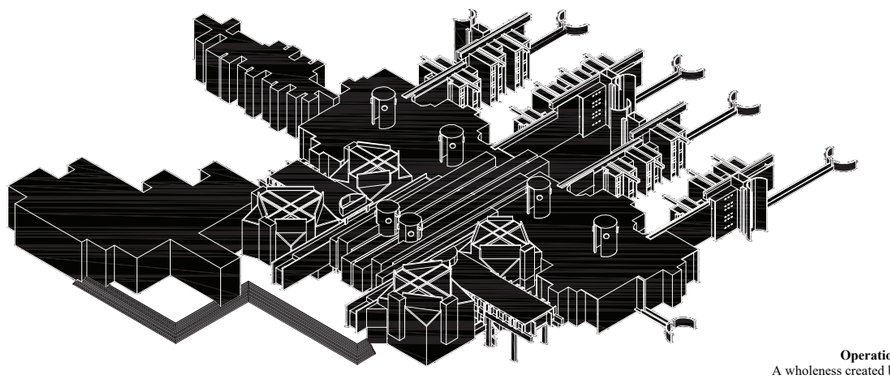




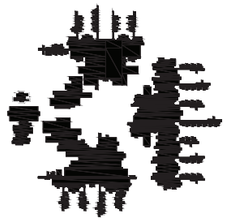




Operation_EXTENSION
The process of extension starting from the primary pure volume



Operation_EXTENSIO
A wholeness created by extension of singular elements of the primary volume



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

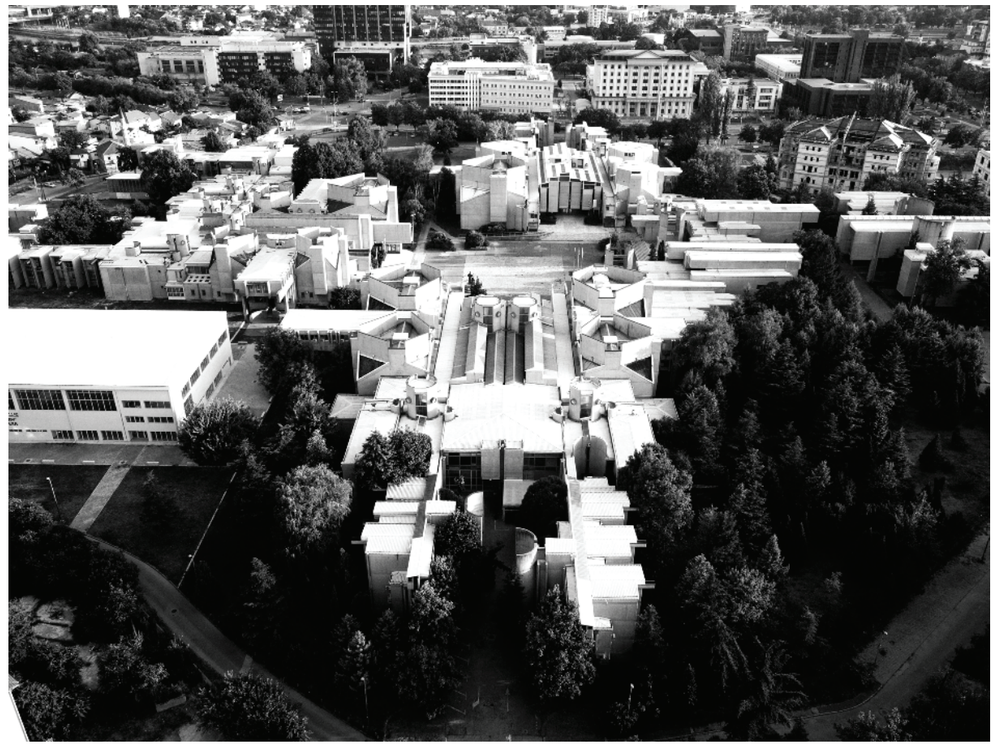
Extension

Extension, *n. /ɛkˈstɛnʃ(ə)n/*
1. A part that is added to something to enlarge or prolong it.

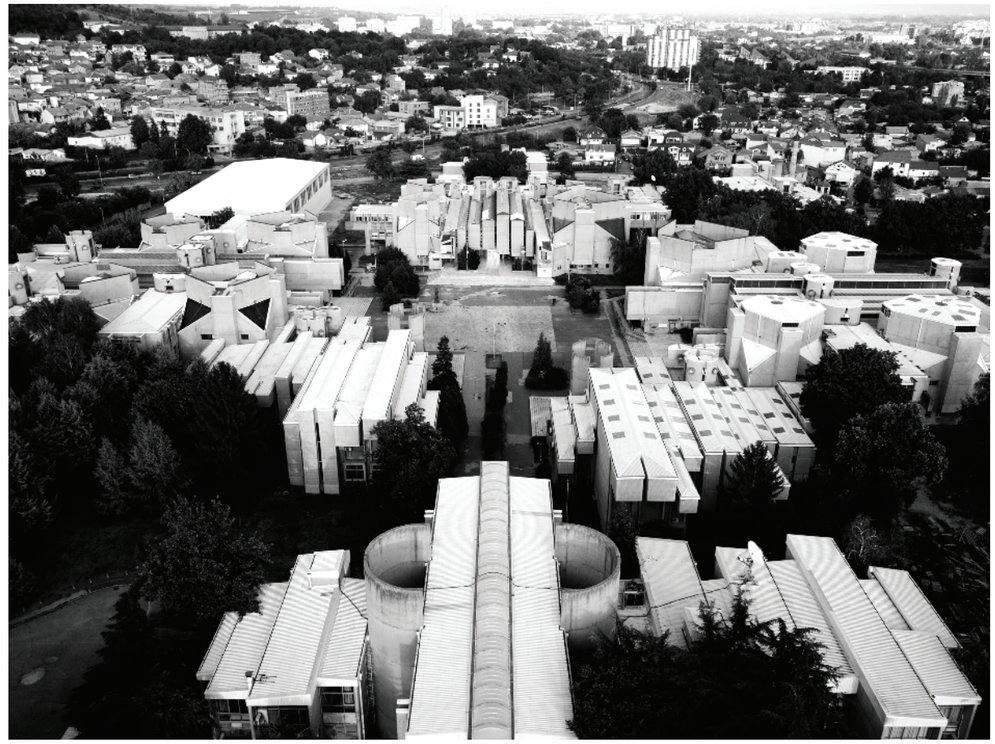
A generative forum replicates its essence and shape from the smallest group of elements to the entire complex of the university campus. This replication of a fractal spatial pattern is conducted by a very simple operation- the extension. This projecting tool has been manipulating the void, as well as the built material. It is the open air forum that extends in the three units' central space, and further to the small scale squares into the depth of the interior of the buildings. Further, the built material horizontal extensions start from the primary units', to the perpendicular linear corridors, and from them to the small professor cells, reproducing an already known urban pattern of suburban areas with lower density, controlling and restricting movement in these areas. The vertical extensions, however, aim to provide the necessary volume and light for the central students movement and dwelling.

SS. Cyril and Methodius University Skopje

img. 111_Isometric view
Cyril and Methodius University Skopje



img. 112_Isometric view
Cyril and Methodius University Skopje



img. 113_Isometric view
Cyril and Methodius University Skopje

img. 114_Frontal view
Cyril and Methodius University Skopje

[C4.3]
Macedonian Opera And Ballet

Architect
Biro 71 (Sctefan Kacin, Jurij Princes, Bogdan Spindler, Marijan Urscic)

Date of construction
1972-81

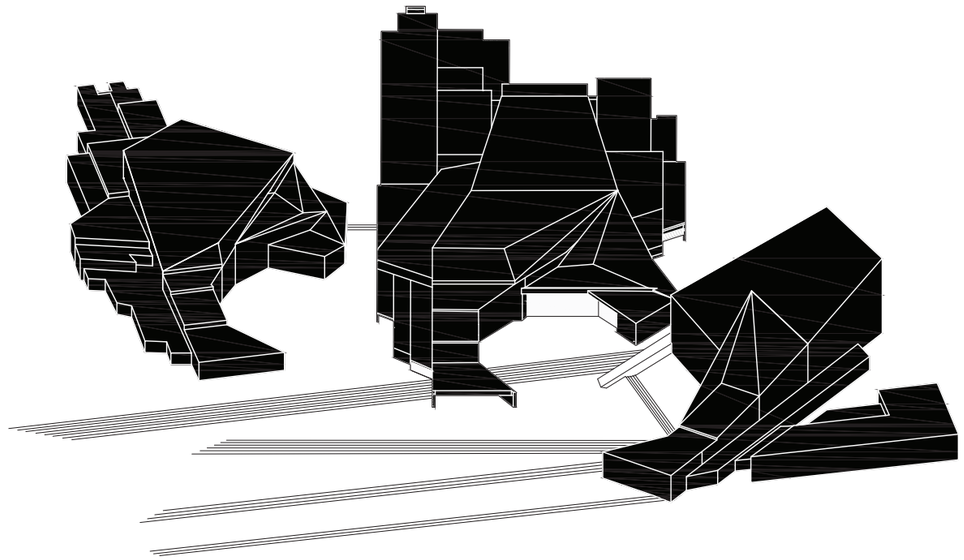
Building area
25400m2

Size
XL

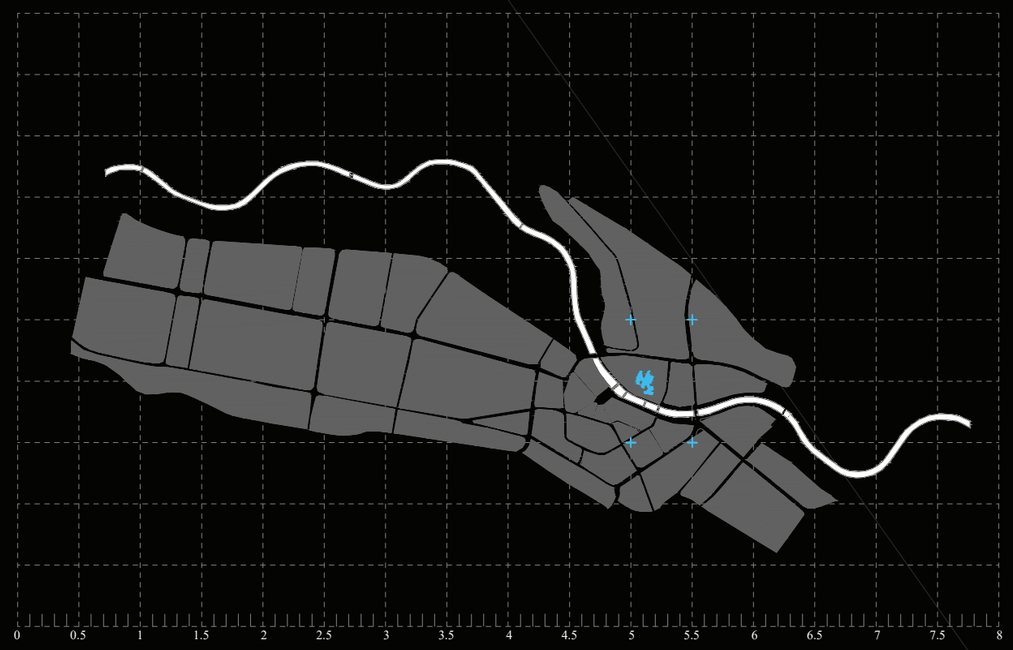
Category
Group Form

Concepts
Terraform, Figure-Ground, Operative Topography

Operative verbs
Tectonic Metamorphose



geographical position
42°00’11.0”N21°23’25.9”E



img. 115_Location
Macedonian Opera And Ballet on the map of Skopje

GENERAL INFORMATION

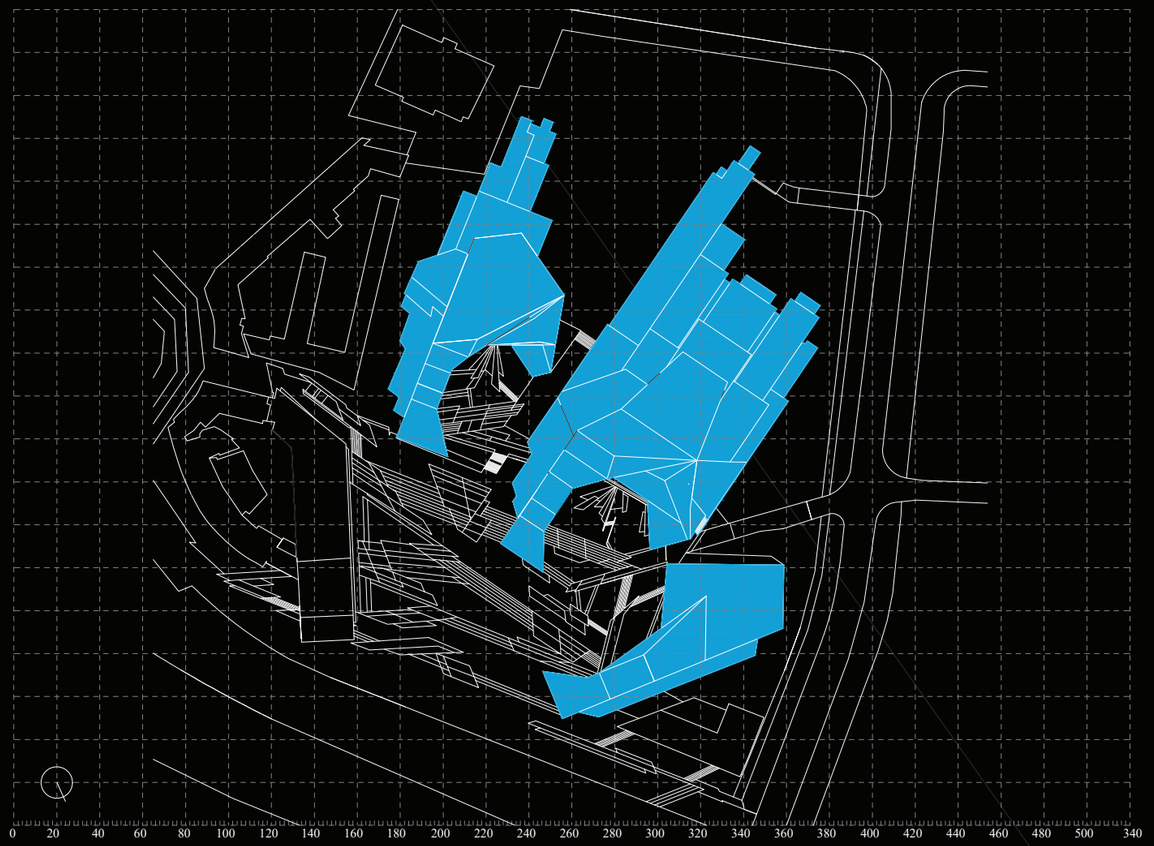
ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Macedonian Opera And Ballet _Biro 71

A prime example of this category is the original project for the Cultural center which on total area of 50,000 m2 included the Macedonian Opera And Ballet (the solely constructed building), Philharmonic Hall, Cinema and the building of the Music and Ballet schools. In 1968 the Slovenian architectural studio Biro 71[39] won the competition for the design solution of a cultural center. In Tange’s masterplan the same was envisioned as one of the segments that constituted the new east-west axis which incorporated also the transport center, the administrative and business center as well as the government and the shopping centers.
The location designated for the buildings of the Cultural Center, was in the most central city area, in view of the significance of such an ensemble of buildings for the city. The building of the Macedonian National Theatre is a segment of a broader unifying idea.
The composition is conceived as a tectonic metamorphose of the ground creating a new topography of artificial soil that shapes the architectural intervention and the open public space as a link, on one side with the natural segment of the city, the river Vardar and on the other side the solid city.
Rising from the plateau and the entryway, situated on the river bank itself, the roof of the opera building ascends towards the horizon. This emphasis is so powerful and precisely articulated, while the contact with the ground so organic and symbiotic that the remarkable roofscape dissolves in the surrounding landscape of the city. Frequently compared with the Oslo Opera House by Snøhetta one could use the famed phrase to portray it, that the building is as much landscape as it is architecture.[40] The composition of the Macedonian Opera and Ballet consists of several volumes whose shapes represent a simple and geometric gesture that dwells in irregularity. However, despite this irregularity, their seamless blend, into one another emanate balance, harmony and perfect congruency. The undeniable complexity of the building is visually abstracted by the sculptural approach to the molding of the exterior. The inspiration for this monumental architectural and artistic expression, as explained by Splinder - one of the authors, was inevitably the earthquake, but more importantly the new and progressive developments following the destruction:
…. the violent and devastating eruption of the earthquake was present in our thoughts and in our solution. We wanted to show that it has been overcome and that directions towards new aspirations and forces should be expected, as well as the explosion of energy of the new creation. The dynamic form of the walls and roofs that unstoppably climb to the heights were to express this energy. On the other hand, lowering to the timeless Vardar we wanted the complex to be closer to and touch the eternal and inexhaustible source, to be reconciled with the earth.[41]
The very same sculptural approach from the exterior penetrates into the interior organization and shaping of the space. The main distinctive feature of the interior is the dichotomy in the volumetric expression between the publicly accessible areas versus the space designated solely for the staff. The sculptural expression of the entry hall, the gallery and the main stage marked by denivelations, tilted walls and topographical approach is juxtaposed with the clean and serene prismatic volumes forming the changing rooms and the administrative area. The phenomenological approach, which activates all of the senses, is clearly visible in the articulation of the public areas, contrasted with the purely rational and functional approach necessary for the most efficient use of the space.
With the materials being the defining elements of the form in space, the white painted concrete and its exclusive use is what embodies the monumentality of the Opera building. It is the whiteness of the material which articulates the architecture through exquisite precision.

img.116_Diagram *Terraform*



img. 117_Masterplan
Macedonian Opera And Ballet

GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

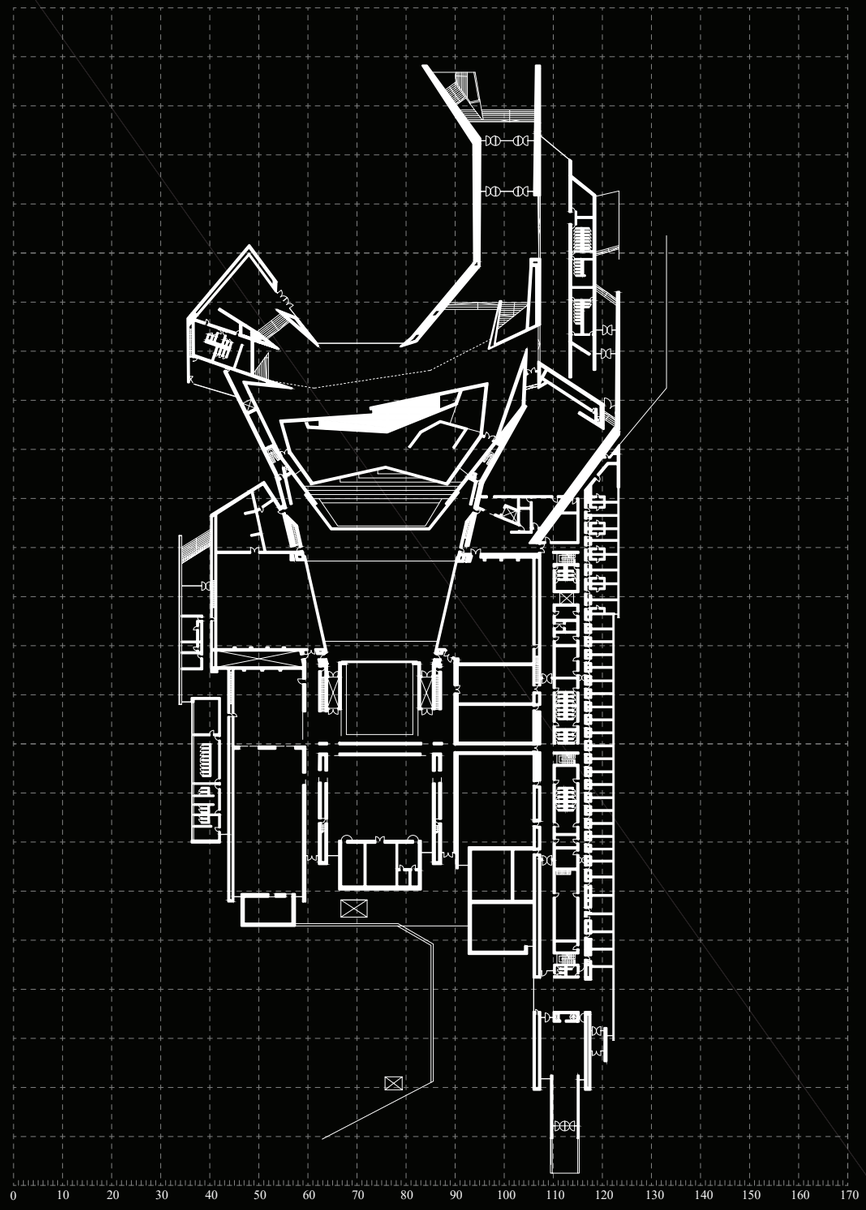
Terraform

Terra, *n. / ˈterə /*
1. Land or territory.
Form, *n. / fɔːm/*
1. The visible shape or configuration of something. 2. A particular way in which a thing exists or appears. 3. A mould, frame, or block in or on which something is shaped.

Image 116
The composition is conceived as a tectonic metamorphose of the ground creating a new topography of artificial soil.

Image 117
The architectural intervention and the open public space as a link with the river Vardar.

In the case of the Macedonian Opera and Ballet the ground is both, site and material for design intervention. Through a systematic manipulation of the landscape have been experimented the generative methodology of *land transformation*, revealing correlations between the histories, morphologies, natural entities, assemblies, materials as well as affordance of landscape practice. Figure and background blur their boundaries in new articulated device that is more flexible as they are precisely diffuse, definitively, capable of reformulating old categories of the urban (city, landscape, infrastructures) in a new dynamic synergy.



img. 118_Floor plan
Macedonian Opera And Ballet

GENERAL INFORMATION

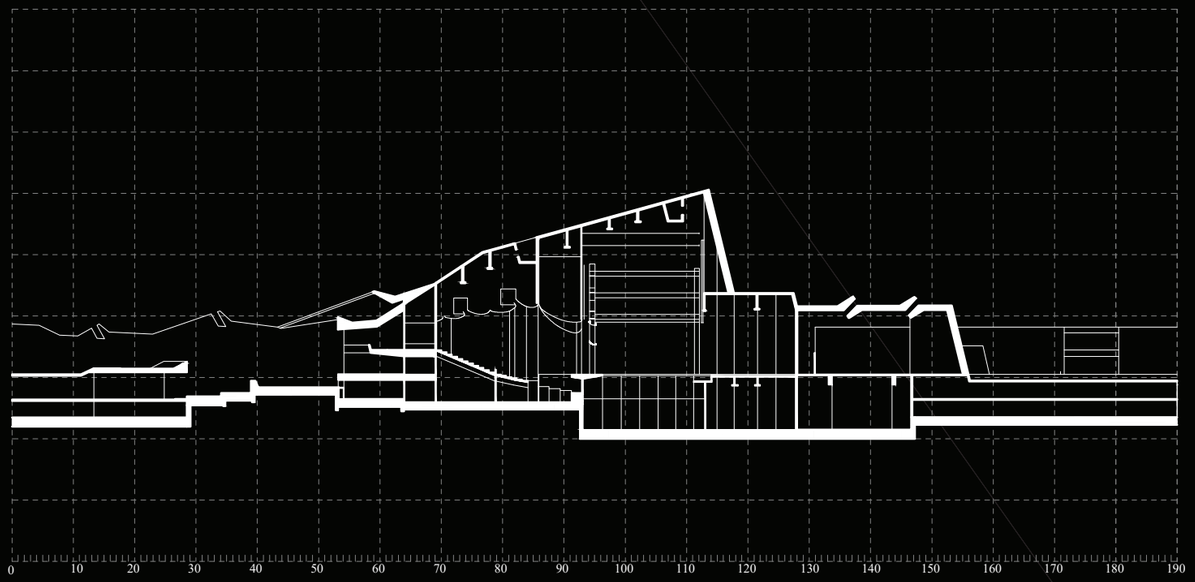
ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Figure Ground

Figure Ground, *adj. / fig-yer-ground*
1. A property of perception in which there is a tendency to see parts of a visual field as solid, well-defined objects standing out against a less distinct background.

Instead of following a linear system as a compositional approach that merge together a series of architectural elements isolated and independent the building of MOB presents a composition based on articulation of the surfaces and contiguity where the common architectural elements as column, wall, beam and slab are interwoven among themselves in one synergetic composition. The surface fold in order to construct structures that blur the division between architecture and landscape, inside and outside as well as artificial and nature. In this direction the floor plan is not anymore a rigid division of functions but it becomes an atmosphere where the space is moulded, with faded borders and divisions.



img. 119_Section
Macedonian Opera And Ballet

GENERAL INFORMATION

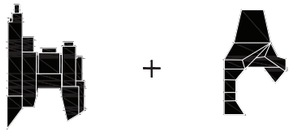
ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

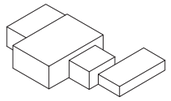
Operative Topography

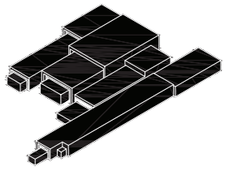
Topography, *n. / tə ˈpɒgrəfi /*
1. The arrangement of the natural and artificial physical features of an area. 1.1. A detailed description or representation on a map of the physical features of an area.

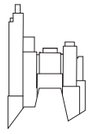
The section of the MOB building is formed through a strategic movements of folding the territory. This kind of movements define platforms or enclaves with a quasi-geographical nature where different functions metastasize on diverse levels constructing landscapes within landscapes. This tectonic shaping of the soil brakes the limits between the public space and private enabling the open public space to penetrate inside the building and to be exploded in various categories on different heights. Therefore, the building acquires attributes and properties of a relief feature or surface configuration of the place including its natural and man made features.



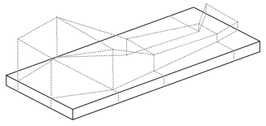
Operation_LODGE
A fully developed entities joint
to complete a certain function

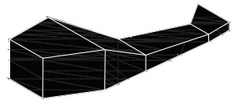




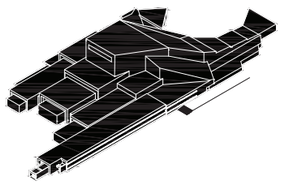


Operation_EXTRUSION
A complex formation, developed by
gradually extruding from a base volume

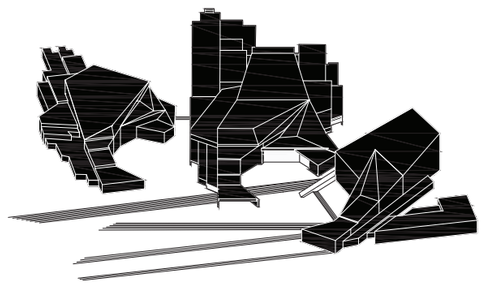




Operation_TECTONIC METAMORPHOSIS
Formation that results from a process of
transfiguration of the structure of the earth's crust



Operation_TECTONIC METAMORPHOSIS
Formation that results from a process of
transfiguration of the structure of the earth's crust



Operation_COMPLEX TECTONIC METAMORPHOSIS
Formation that results from a process of
transfiguration of the structure of the earth's crust around a central point

GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Tectonic Metamorphose

Tectonic, *adj. /tɛkˈtɒnɪk/*
1. Relating to the structure of the earth's crust and the large-scale processes which take place within it.
Metamorphose, *v. /mɛtəˈmɔːfəʊz/*
1. Change or cause to change completely in form or nature.

The architectural composition of the building of Macedonian Opera and Ballet is consisted of two fragments articulated in different manners. The first fragment is the one where all the administrative part is located as well as the changing rooms. The composition is consisted of several pure volumes that have been extruded towards the north part of the site creating a composition in a form of stalactites. The second segment that is oriented towards the river bank trough an operation of tectonic metamorphosis transforms the basic flat surface, models the soil into a complex geometric configuration that establish a relation between the plateau that is in front and the river Vardar. Those two fragments have been merged together into a geometric anthropocentric artificial landscape with blurred borders between the figure and the ground.

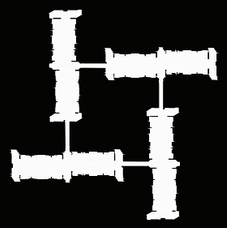
img. 120_Isometric view
Macedonian Opera And Ballet

img. 121_Isometric view
Macedonian Opera And Ballet

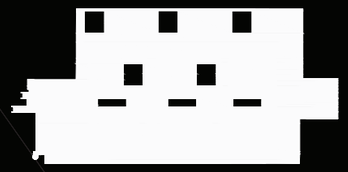
img. 122_Isometric view
Macedonian Opera And Ballet

img. 123_Frontal view
Macedonian Opera And Ballet

[D4.1]

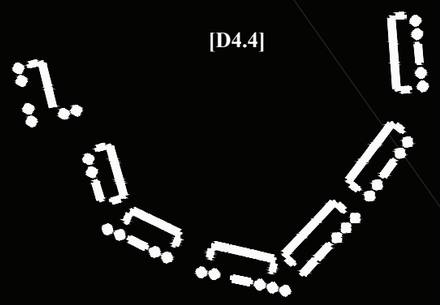


[D4.2]



[D4.3]

[D4.4]



[D4.5]

D. CONTINIOUS

The category of continuous includes compositions consisting of different structures with an intricate relation of uninterrupted circulation.

[D4.1]
Student Dormitory “Goce Delchev”
Georgi KonstantinovskiCity

[D4.2]
Shopping Center
Zivko Popovski

[D4.3]
Museum Of Contemporary Art
Group Tigers

[D4.4]
City Wall
Kenzo Tange

[D4.5]
Transportation Center Skopje
Kenzo Tange

[D4.1]
Student Dormitory “Goce Delchev”

Architect
Georgi Konstantinovski

Date of construction
1966-68

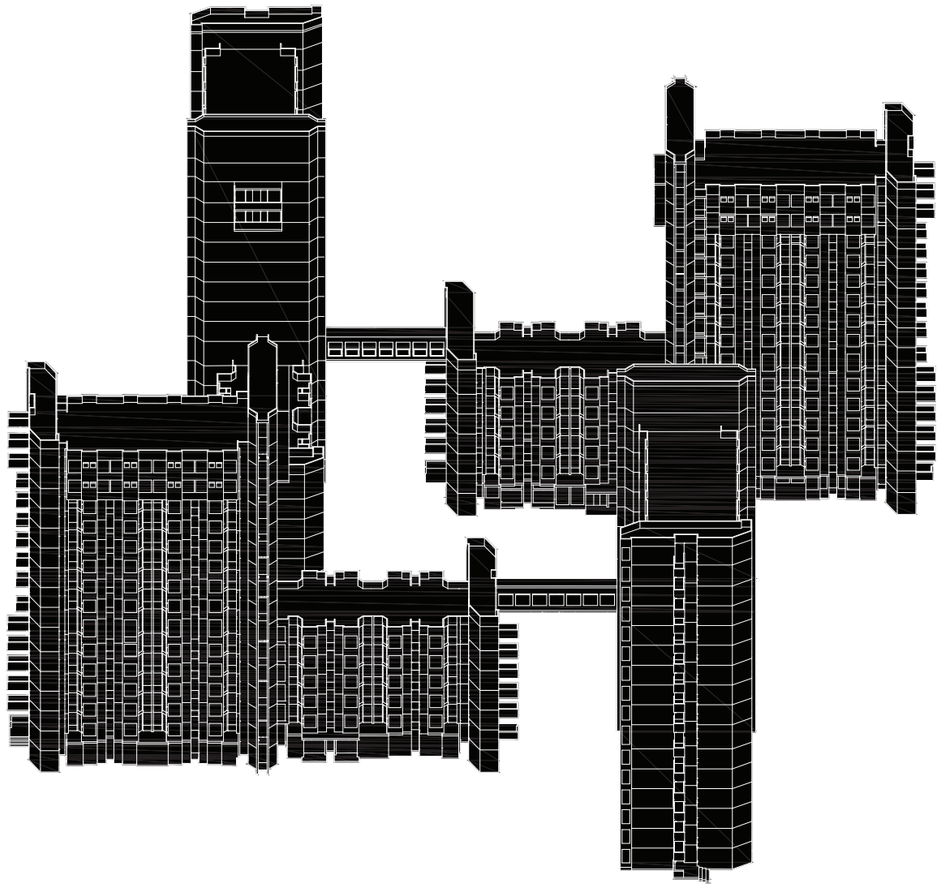
Building area
2600m2

Size
XL

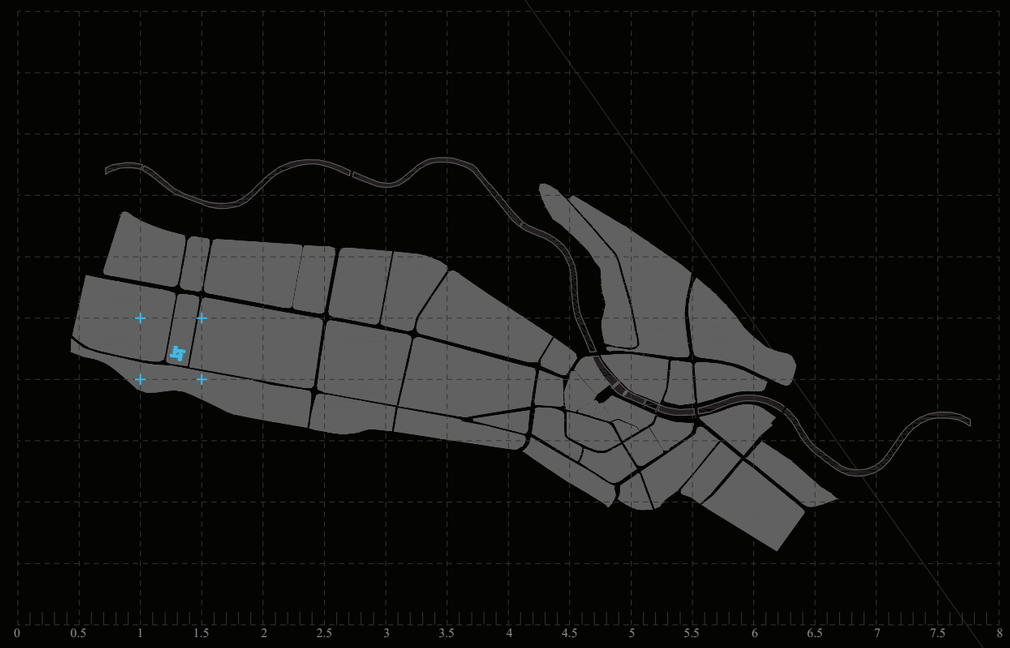
Category
Continuous

Concept
Cluster, Circuit, Joint Cores, Group

Operative verbs
Infill



Geographical position
42°00'11.0"N21°23'25.9"E



img. 124_Location
Student Dormitory "Goce Delchev" on the map od Skopje

GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Student Dormitory "Goce Delchev" _Georgi Konstantinovski

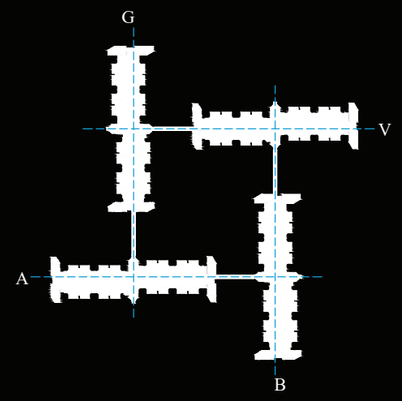
The work of Konstantinovski[50] is indissolubly related to the development of the Macedonian architecture of the post-earthquake reconstruction of Skopje. Few years after the Archive Building, in 1969 he won a competition with his design proposal for the ***Student Dormitory Goce Delchev[51].*** The proposed design witnesses Konstantinovski's aim after his return to Skopje, to introduce new ideas he had learnt as a student at the Yale University. The project represents a symbiosis of his experience in the class of Paul Rudolph and the influence of Tange's master plan for the requalification of Skopje's city center. The construction of the complex was realized in two phases during several years but still until nowadays the same have not reached the final complexity in its composition as the author has imagined it. The main reason for the incompleteness is influenced by a declining economy. A shortage of use over the last two decades due to lack of management and its poor maintenance has rendered it into landscapes of ruin.

The complex is located in Taftalidze, suburb in the western part of the city where the imprint of the urban morphology follows the principles of Le Corbusier, vertical architecture and plenty of shared open space in between, traffic corridors as well as public landscapes with lush greenery. Bookend to the Archive Building on Ulica Moskovska, the complex is spread on a vast site of nearly one hectare. In this part of the city, the intervention of Konstantinovski represents a new urban project as a strong point for the future spatial development of the surrounding.

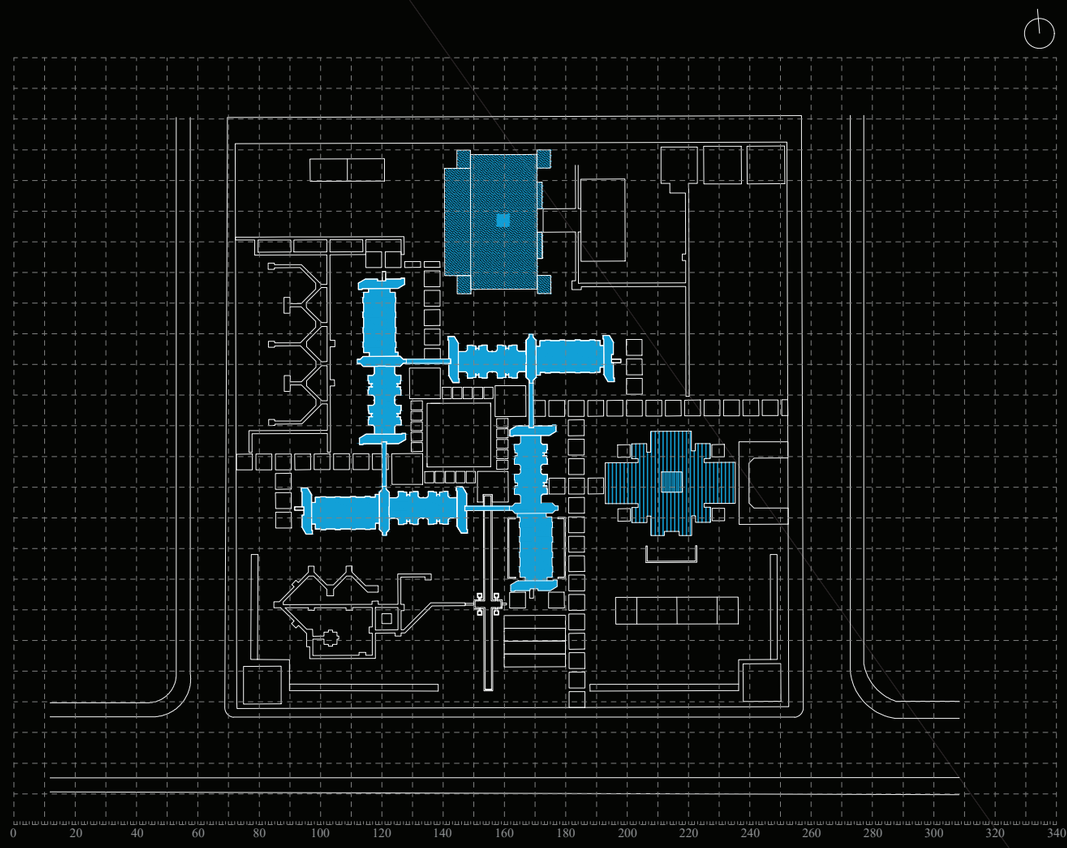
Spaciously, the complex is articulated as assembly of four identical housing towers and two separate structures for the restaurant and the sporting center. Each of the towers consisted of high rise unit (ground floor + 14 floors) and low rise unit (ground floor + 6 floors) connected by bridges at the sixth floor, with public facilities, like lounge rooms, terraces with pools and fountains. The complex composition of the towers is actually articulated by a repeated multiplication of the base cell that is composed of four units(rooms). The cells cling on the central corridor that as a backbone holds them in one linear system with closed spaces for social interaction in its transversal extensions. Therefore, the complex give the impression of extraordinary clarity and rigorous in its articulation and organization.

The dormitory complex is grand and characterized by heavy expression of its structure, bold sculptural forms, it is monumental and materially substantial. It puts in light the plastically molded mass accenting the articulation, the precision of the detail and blurs the line between the structure and sheath. The four sculptural towers in a pinwheel layout are oriented towards a central court yard and they rise as a ***vertical megastructure*** creating a new urban image with a continuity of the open public space inside the structure, configuring in that way, as the author says, *squares in the air*[52].

The concrete surface, used in its raw form and unassuming sincerity, is further accentuated by vertical profiles with proper profile, and the position of the slabs is emphasized by the horizontal decoration of simple square fields.



img. 125 Diagram_*Cluster*



img. 126_Masterplan
Student Dormitory "Goce Delchev"

GENERAL INFORMATION

ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

Cluster

Cluster, n. */ˈklʌstə/*
1. A group of similar things or people positioned or occurring closely together. [v] 1. Form a cluster or clusters.

Image 125
The diagram shows the four towers A, B, V and G estrapoilated from the context that compose the cluster.

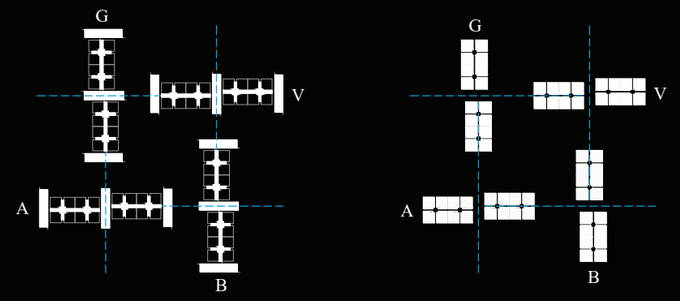
Image 126

Hausing towers

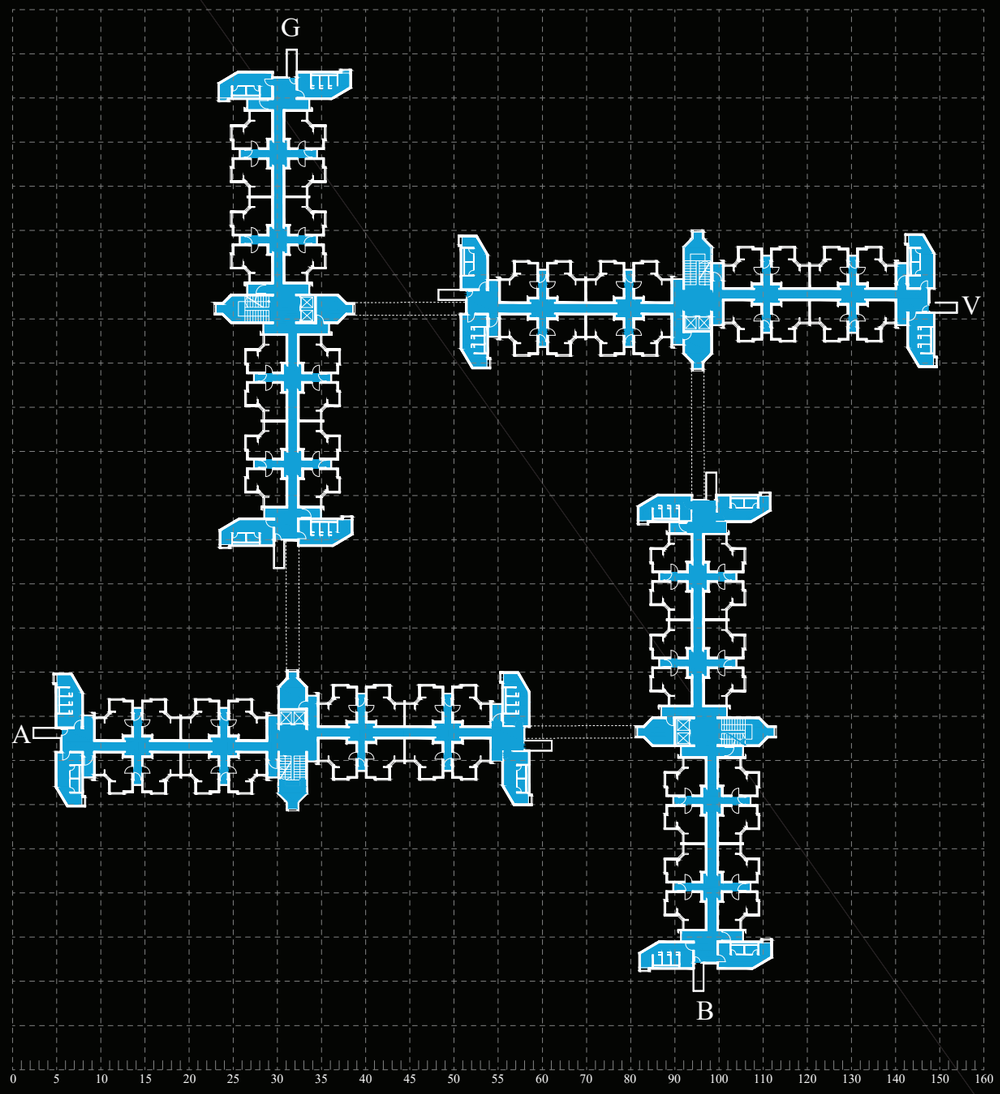
Restaurant

Sport hall (unrealized)

One of the major challenges facing the design, the planning and the development of the dormitory complex, Konstantinovski notes, has been creating and maintaining order that goes beyond the use of the conventional architectural articulation and composition. Thus, he has introduced the method of a **cluster** to obtain a total image trough a repetition of the base cell as a component that articulates the whole composition. In this direction the cluster would create a new relationship between the individual elements and the whole, a relationship fundamentally different from the conventional building composition. In the conventional method, when a single element is taken away or added to the composition, the overall quality is altered. In contrast, the cluster in the case of the dormitory is more than a sum of all the elements, even if any individual component is changed the total image will not be affected.



img.127 Diagram_*Circuit*



img. 128_Floor plan (first floor)
Student Dormitory "Goce Delchev"

GENERAL INFORMATION

ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Circuit

Circuit, n. /ˈsəːkɪt/
1. A roughly circular line, route, or movement that starts and finishes at the same place. 2. An established itinerary of events or venues used for a particular activity, typically involving sport or public performance.

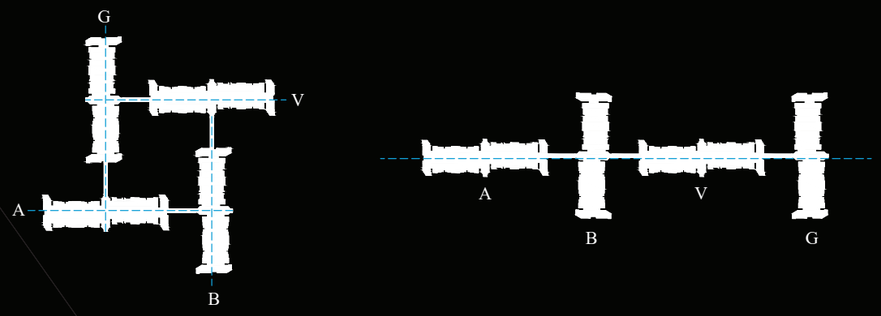
Image 127
(on the left side)
The diagram shows the estrapolated service areas, halls and staircases as well as the cirquit ot the itinerary that starts and finishes at the same place.

(on the right side)
The diagram shows the clusters of rooms that in relation to the estrapolated halls and staircases form a comlex system of streets, squares and houses.

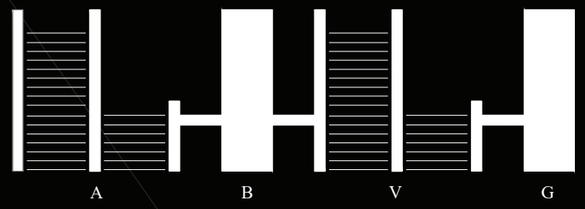
Image 128

Services, halls and staircases

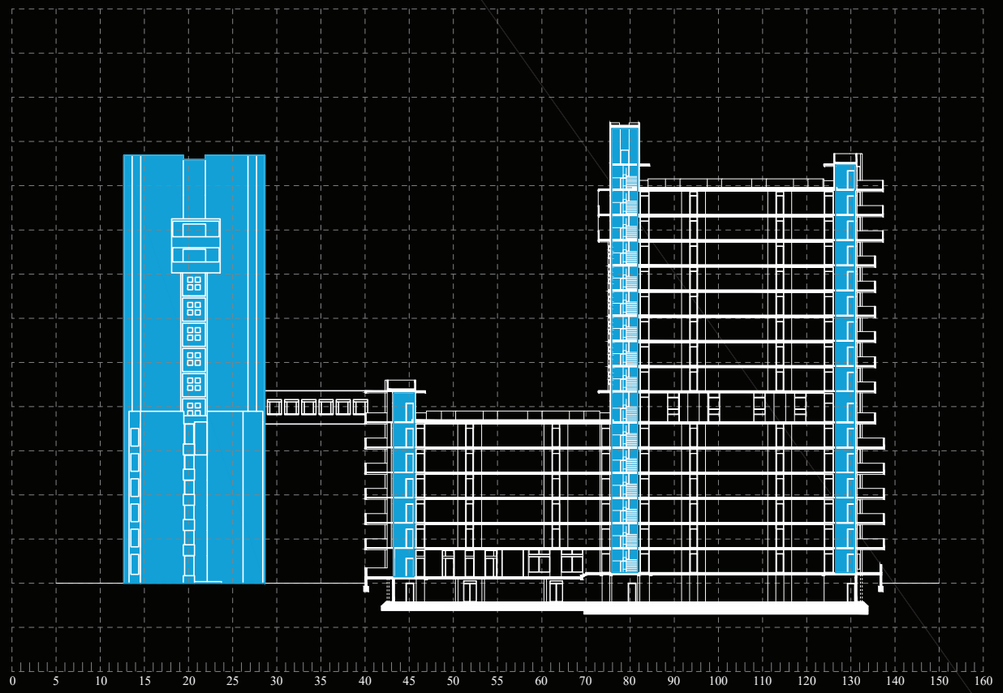
The formal expression of the plan follows the logic of an infrastructural system, reinterpreted by apartments, streets, spines, staircases and squares, which relates back to urban ideas promoted by Peter an Alison Smithson. The central corridor recalls a notion of an inner street, a linear spine that holds together the elementary units - a group of four rooms trough transversal extensions in the node of their interconnection. This dynamic element brings all movements to each infrastructural element, hence it becomes a complex circular system of interconnections following a precisely articulated spatial sequences.



img. 129 Diagram_*Unfolding Cluster*



img.130 Diagram_*Joint Cores*



img. 131_Section
Student Dormitory "Goce Delchev"

GENERAL INFORMATION

ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

Joint Cores

Joint, n. /dʒɔɪnt/
1. A point at which parts of an artificial structure are joined. 2. A structure in the human or animal body at which two parts of the skeleton are fitted together. [adj] 1. Shared, held, or made by two or more people together.

Core, n. /kɔː/
1. The tough central part of various fruits, containing the seeds. 2 The part of something that is central to its existence or character. 3. The dense central region of a planet, especially the nickel–iron inner part of the earth.

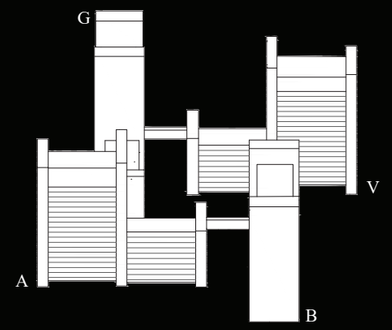
Image 129
(on the left side)
The diagram shows the original composition of the complex consisted of four blocks A, B, V and G.
(on the right side)
The diagram shows the unfolded composition of the complex in one linear disposition.

Image 130
The diagram is a section trough the unfolded composition of the complex in order to emphasize the relation between the cores where the staircases and the services are located.

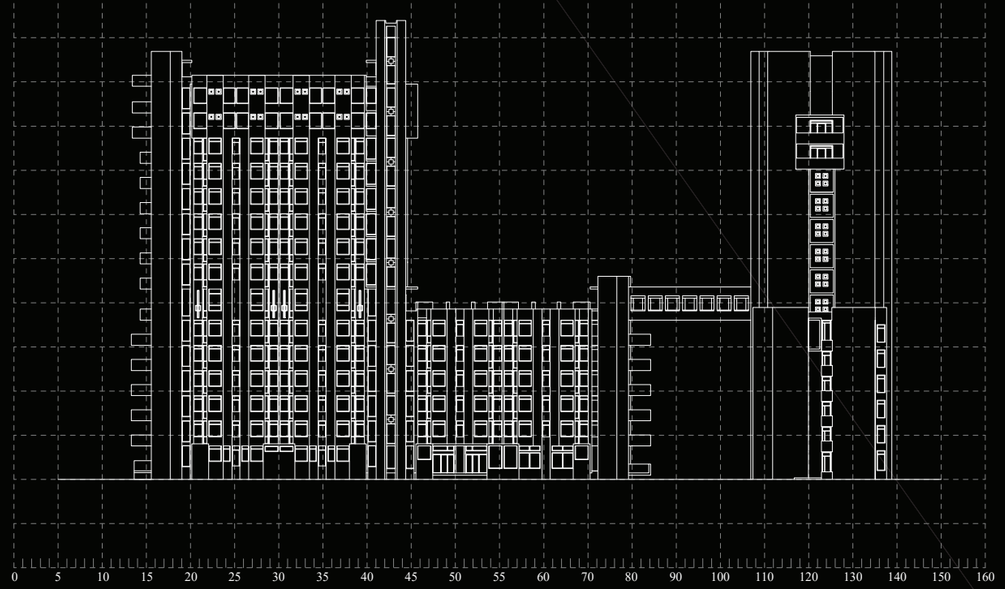
Image 131

The cores (staircases and services)

The four high rise towers express Konstantinovski attempt to colonize the air, idea which roots can be find in the Japanese metabolism trough the projects of Kikutake (Tower-Shaped Community), Tange (Office buildings, Plan for Tokyo 1960), Isozaki (City in the Air). In the formal articulation of the composition the architect strives to reinvent the core as a three dimensional space network imagining the cores as vertical streets and the horizontal spaces connecting them are like the buildings along the streets in a city.



img.132 Diagram_*Group Form*



img. 133_Elevation
Student Dormitory "Goce Delchev"

GENERAL INFORMATION

ANALITIC MODEL
concept elevation

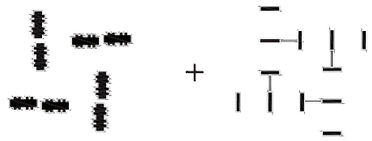
GEOMETRIC DIAGRAM
spatial syntax analysis

Group

group, n. /gru:p/
1. A number of people or things that are located, gathered, or classed together. 2. A set of elements occupying a column in the periodic table and having broadly similar properties arising from their similar electronic structure.

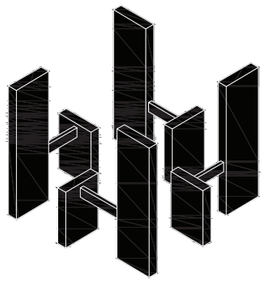
Diagram 132
The composition of the four units (A, B, V and G) and their relations shown trough a parallel isometric drawing in order to give an accent to the composition as a group form.

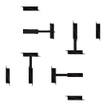
The design of the dormitory complex Goce Delchev withnesess Konstantinovskis interest in exploring new spatial organizational patterns. Thus, the formal expression of the complex emerges as a sum of complementary parts that are combined in a layout that enhance the qualities of each other seen as a group form[53] that can be described as dynamic and monumental. Maki described this kind of arrangements with the words 'it is not necessary to limit composition to inorganic, geometrical, structural, or mechanical patterns. Group form is an intuitive, visual expression of the energy and sweat of millions of people in our cities, of the breath of live and the poetry of living[54].



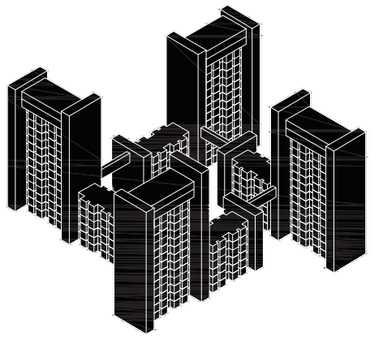
Operation_EXTRUDE+add
extrusion of the clustered floor plan and adding the rectangular prism at the top of the higher volume

Operation_GROUPING
The base extruded volume has been multiplied and grouped into a spatial cluster





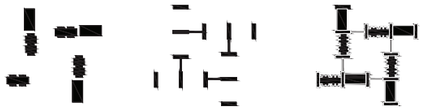
Operation_GROUPING LINKS
Stair towers, services and bridges
have been grouped into a complex system of relations



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis



Infill

infill, n. /ˈɪnfɪl/
1. Material that fills or is used to fill a space or hole. [v] 1. Fill or block up (a space or hole).

The main architectural elements that are involved into the articulation of the volumetric composition of the dormitory are three different functional units, the housing tower, the vertical cores where the staircases and the services are situated and the bridges that establishes the relations among the towers. The process of constructing the complex final form of the dormitory employs multiple volumes as well as multiple operations such as: extruding, adding, multiplying, grouping and infill. The imprint of the clustered floor plan of the tower has been extruded into a massive, bold and powerful volume with two different heights. A rectangular prism of two floors where the individual rooms are placed has been added at the top of the higher volume. This kind of articulated volume has been multiplied and grouped into a spatial system of four autonomous forms that have been infilled into an interconnected system of joint cores.

Student Dormitory “Goce Delchev”

img. 134_Isometric view
Student Dormitory "Goce Delchev"

img. 135_Frontal view
Student Dormitory "Goce Delchev"

img. 136_Isometric view
Student Dormitory "Goce Delchev"

img. 137_Isometric view
Student Dormitory "Goce Delchev"

[D4.2]
City Shopping Center

Architect
Zhivko Popovski

Date of construction
1969-73

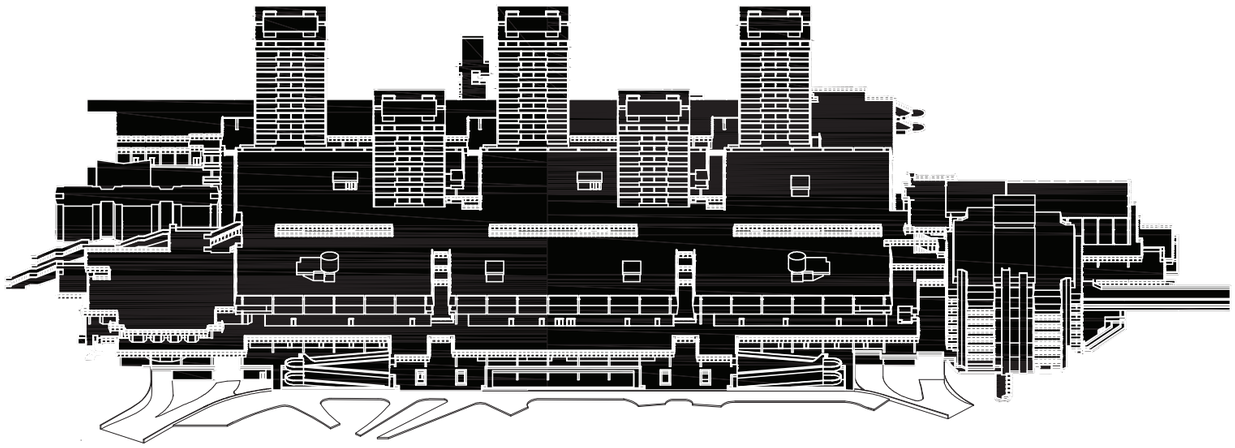
Building area
6000m2

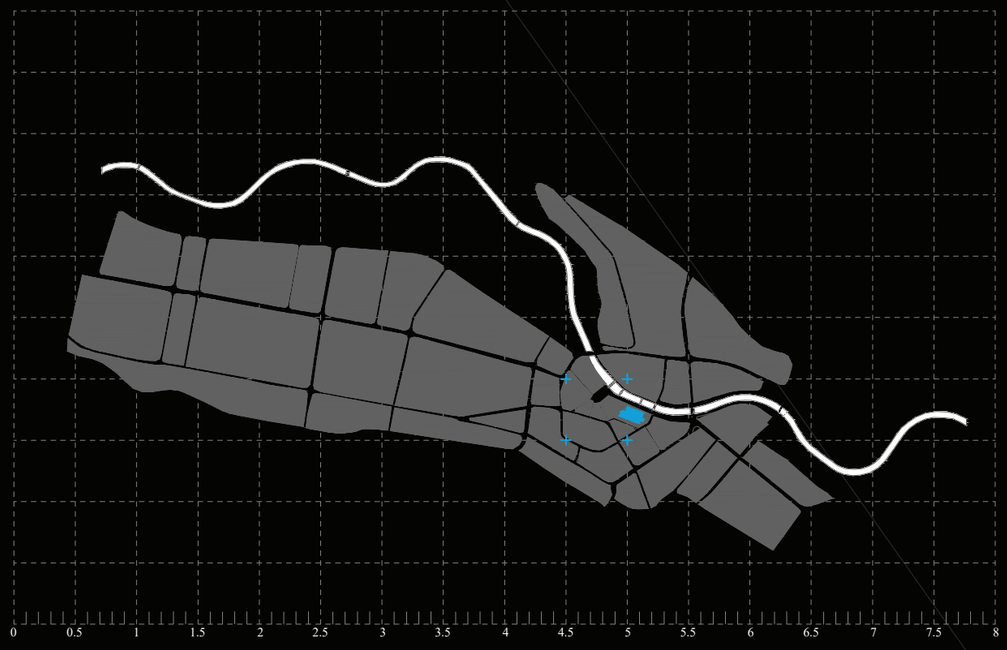
Size
XXL

Category
Continuous

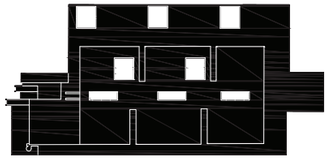
Concept
Urban Infrastructure, Mosaic, Intertwined Trajectories, New Ground

Operative verbs
Layering





img. 138_Location
City Shopping Center on the map od Skopje



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

City Shopping Center _Zhivko Popovski

The City Shopping Center of Zivko Popovski[55] takes up part of the main city square and represents a significant contribution to the urban planning development of the central city core. This capital and massive constructive endeavor officially began in 1969, while the central part of the structure was first opened to the public in 1974, thus marking the begging of its use as a shopping complex. A joint and large team of architects and technicians participated in the preparation of its concept and construction planning documents, coming from three different offices. This project represents a synthesis of many different proposals which were awarded prizes or honorable mentions at the nationwide competition that invited architects from all over Yugoslavia to submit their proposals in 1967.

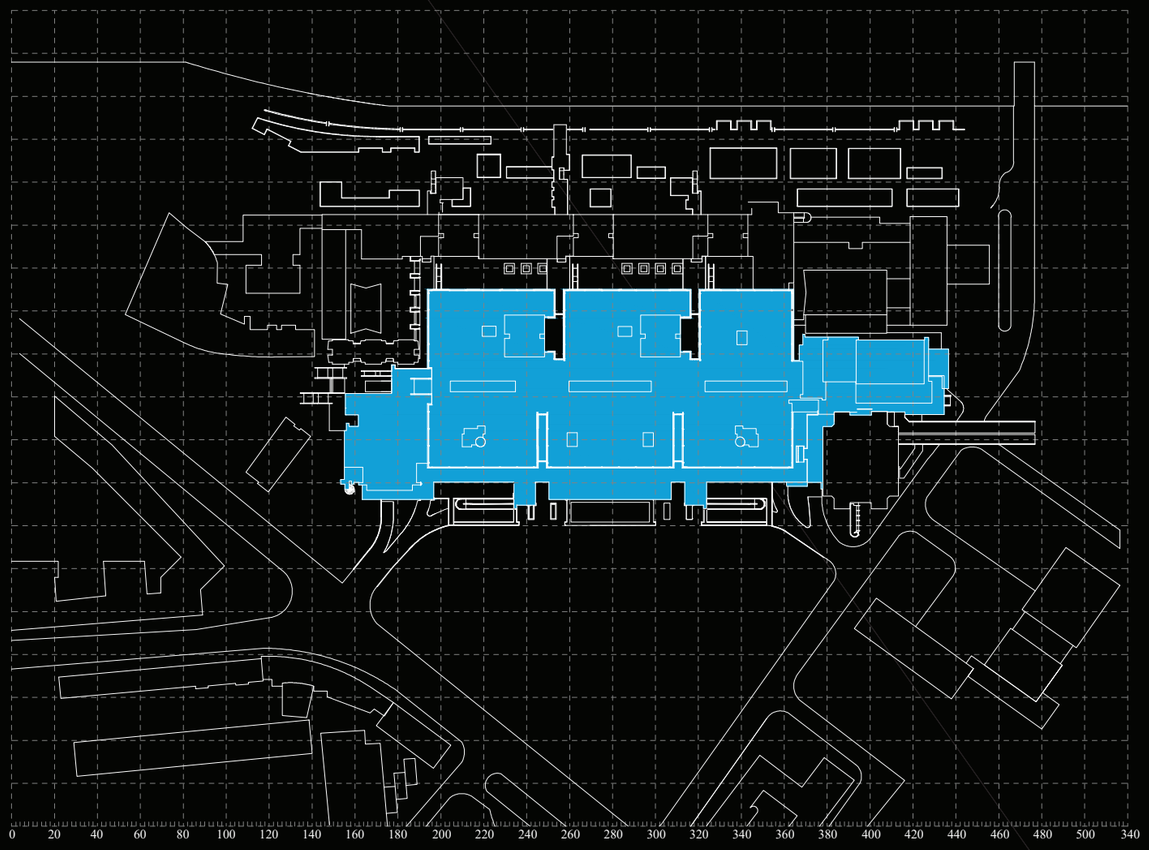
In an environment of a complex urbanistic, technical, organizational and aesthetical dynamic, the constructed shopping center with its acknowledged balance in all aspects of the construction venture, represents one of the most significant Yugoslavian achievements in the field of architecture in the seventies.

The functional draft of the ideological project, with a complex treated program, with a composition of the basic groups of the building and spaces in the exterior, made a successful integration of the new architectonic and urban elements with a general space system of the other neighboring realized buildings and green surfaces. The composition of the floor plan which covers over 150 000 square meters embodies a unity of six identical and asserted volumes with two additional interconnected groups on the east and the west side. Furthermore, five residential buildings are consolidated within the complex via which the shopping center extends to the bank of the river Vardar to the north. The clear differentiation of the visitor zone and the service zone devised by the carefully executed plan, provides impeccable flow of visitors and service personal without interference. The pedestrian flow is directed along the main longitudinal axis east to west, which internally branches out into smaller intersections.

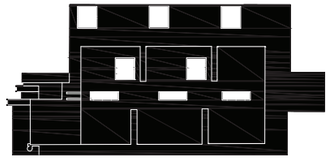
This functional concept became the perfect ground for a display of the harmonious rhythm of the white wall surfaces extending horizontally on the second floor versus the transparency of the ground floor and the first floor, subtly interrupted by the parapet of the balcony in a form of a white continuous band.

Today, the monumental building of the City Shopping Center represents one of the main spatial symbols of Skopje. This architectural creation enriches Skopje's and Macedonia's image and is quite deservingly compared with other famed projects of its kind in the country and abroad.

img.139 Diagram_*Infrastructure*



img. 140_Masterplan
City Shopping Center



GENERAL INFORMATION

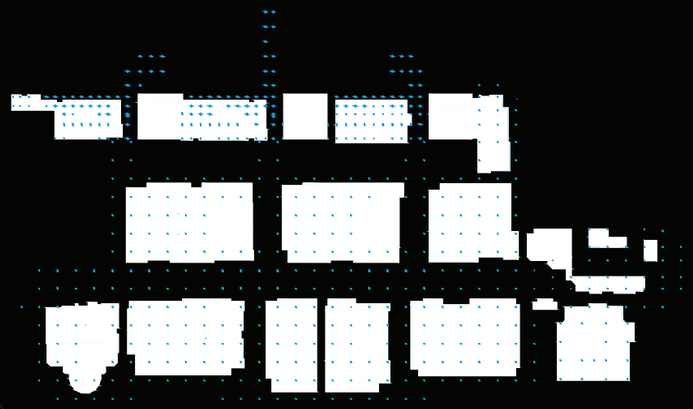
ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

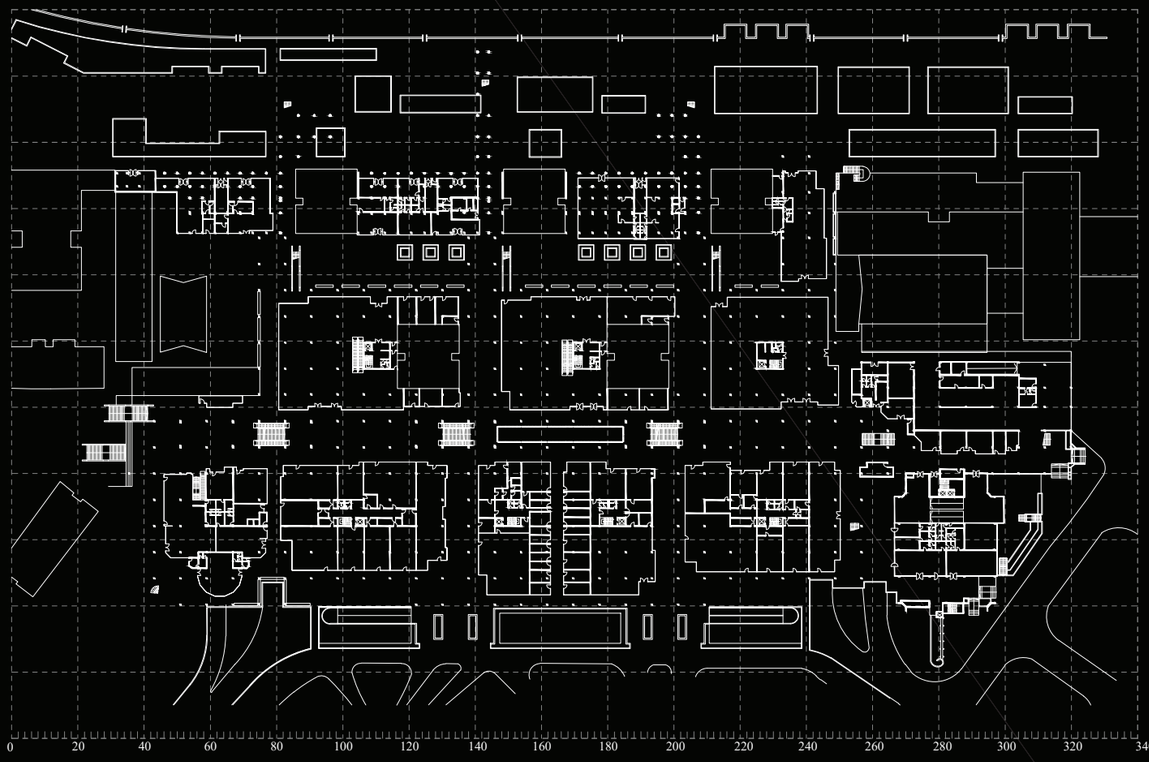
Infrastructure

Infrastructure, *n. / ˈɪnfrəstrʌktʃə/*
1. The underlying foundation or basic framework (as of a system or organization)

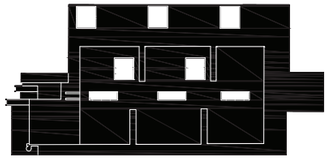
The formal articulation of the Trade Center finds its analogy in the model of the old bazar and its organic morphology where the streets are carved in the mass of the urban tissue. This entity and its logic have been reinterpreted in a regular matrix that becomes capable to absorb the future transformations and changes regarding the needs of the market. The pattern of streets and shops interpreted as pure glass volumes have been embodied on a large scale platform that works as an *urban infrastructure* accenting the east-west axes from Tange's masterplan and in the same time keeps its character of a porous structure towards the River Vardar on north and the park Zena Borec on south, reclaiming the concept of the old bazar ant its small scale structure interpolated in a mega structure.



img.141 Diagram_*Mosaic*



img. 142_Floor plan
City Shopping Center



GENERAL INFORMATION

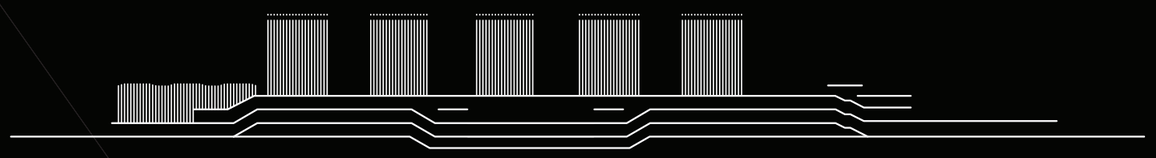
ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

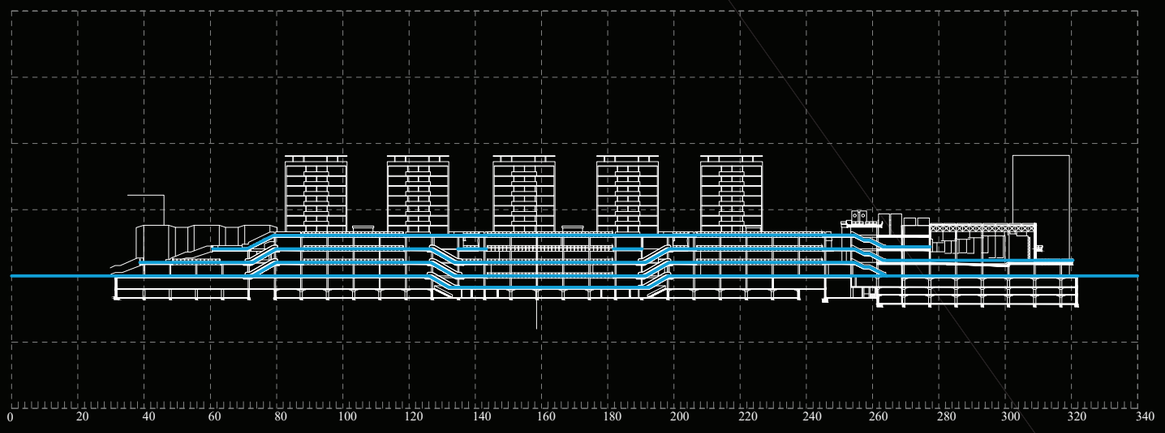
Mosaic

Mosaic, *n. / mō-ˈzā-ik /*
1. A surface decoration made by inlaying small pieces of variously colored material to form pictures or patterns. 2. Organism or one of its parts composed of cells of more than one genotype

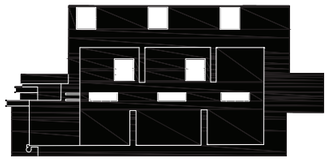
A complex system consisted of components that are arranged following the model of the old bazar (stara carshija) where the shops find their equal in the notion of the house while the pedestrian paths re-evoke the streets in the old bazar. This concept used as a base and inspiration for the composition of GTC has been further decomposed and re-elaborated, exploding it on diverse levels where the pedestrian paths in deferent segments expand in public spaces for social and cultural interaction. Organized in this kind of conditional composition, the system can't be reduced to the simple sum of its parts, but it can be observed as a complex living organism that is operative only when all of its segments are active.



img.143 Diagram_*Intertwined Trajectories*



img. 144_Section
City Shopping Center



GENERAL INFORMATION

ANALITIC MODEL
concept section

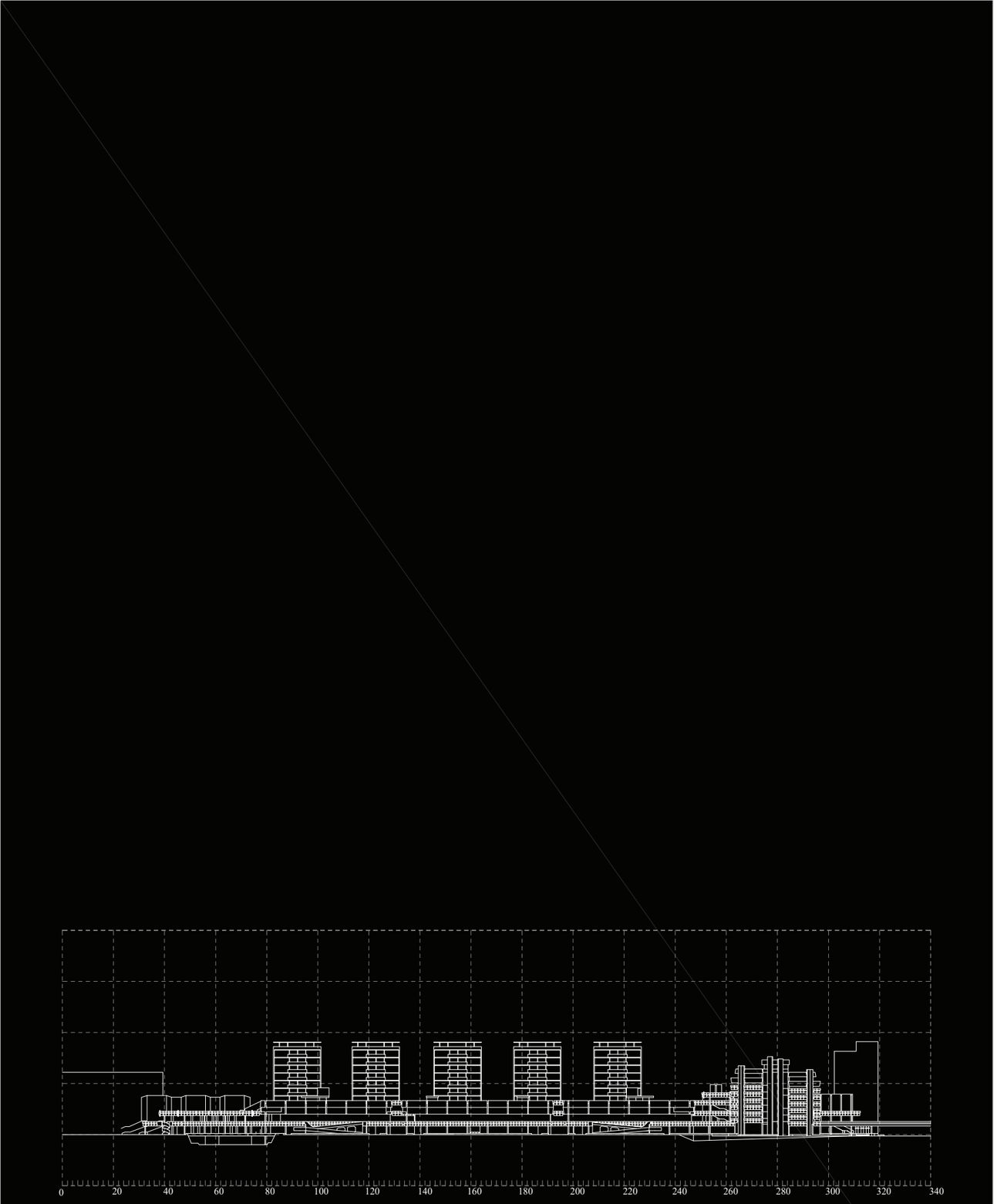
GEOMETRIC DIAGRAM
spatial syntax analysis

Intertwined Trajectories

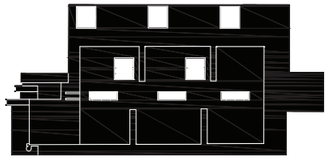
Intertwine, *v. /spʌɪn/*
1. To become mutually involved. 2. Twisted together or closely connected so as to be difficult to separate.

Trajectories, *n. / trə-ˈjek-t(ə-)rē /*
1. A path, progression, or line of development resembling a physical trajectory.

A complex system consisted of components that are arranged following the model of the old bazar (stara carshija) where the shops find their equal in the notion of the house while the pedestrian paths re-evoke the streets in the old bazar. This concept used as a base and inspiration for the composition of GTC has been further decomposed and re-elaborated, exploding it on diverse levels where the pedestrian paths in deferent segments expand in public spaces for social and cultural interaction. Organized in this kind of conditional composition, the system can't be reduced to the simple sum of its parts, but it can be observed as a complex living organism that is operative only when all of its segments are active.



img. 145_Elevation
City Shopping Center



GENERAL INFORMATION

ANALITIC MODEL
concept elevation

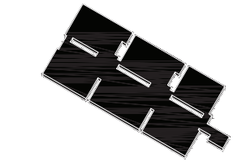
GEOMETRIC DIAGRAM
spatial syntax analysis

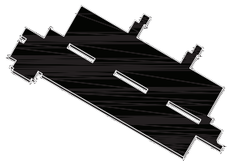
New ground

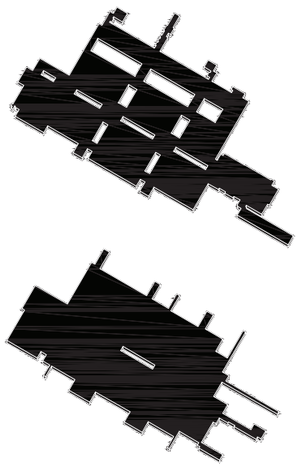
New, *n. / nju:/*
1. different from one that existed earlier.
Ground, *n. /graʊnd/*
1. the surface of the earth.

GTC is architecture of overlying surfaces or land over lands, creating artificial soil that is adaptable and elastic, indivisible urban-architectonic entirety, with attractive horizontal architecture constructing a system of separate pedestrian and vehicle connections. The horizontal tendency of the composition is further accented by simple framing of the terraces with facade elements where the relationship between the solid and void of the facade elements of lightweight concrete and glass surfaces confirms an original architectural expression that provides a rich architectural form obtained by multiplying the primary forms. Therefore, the trade center becomes a new ground, *hyperplace* that unfold on the slabs as flexible grids of diverse landscapes, spaces and interspaces that with its incremental potential can respond to the contemporary economic changes of the society.

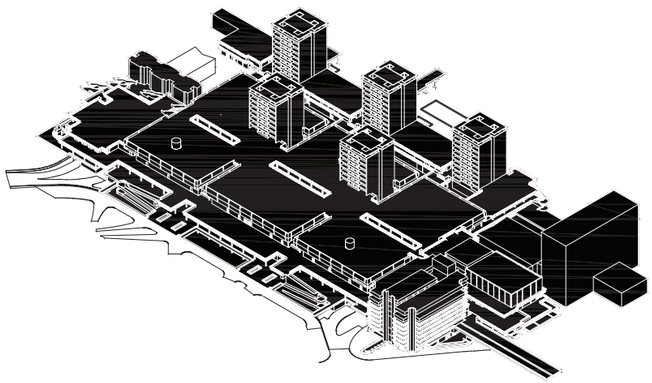
Operation_LAYERING
A set of architectural elements articulates
the whole composition trought the process of layering



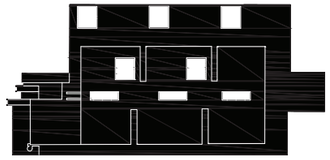




Operation_LAYERING
Different surfaces cuted differently compose
the complex composition of the trade center



Operation_LAYERING
A wholeness created by layering of
different surfaces with specific character



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Layering

Layer, *n. /ˈleɪ.ər/*
1. a level of material, such as a type of rock or gas, that is different from the material above or below it, or a thin sheet of a substance.

The composition of GTC represents a formal articulation of 45.00 square meters of public space, open as well as closed or just covered metastasized on diverse levels, expressed through streets, squares, platforms and bridges. In its composition Zivko Popovski incorporates the traces of Tange's masterplan for the city of Skopje, the knowledge he has gained from Van Den Broek and Bakema besides the local concepts recognized in the traditional architecture and reinterpreted in new principles that meet the needs of the modern and contemporary society and its inhabitants. Therefore the initial primary form of a rectangular surface has been further articulated by cuts that denote the border of the platform as well as perforations in the middle that allows the penetration of the natural light. The platforms have been layered one over other and in the in-between space the glass boxes where the shops are located have been in castrated.

City Shopping Center

img. 146_Isometric view
City Shopping Center

img. 147_Isometric view
City Shopping Center

img. 148_Isometric view
City Shopping Center

img. 149_Frontal view
City Shopping Center

[D4.3]
Museum Of Contemporary Art

Architect
Group Tigers (Wactaw Klyszewski, Jerzy Mokrzynski, Eugeniusz Wierzbicki)

Date of construction
1969-70

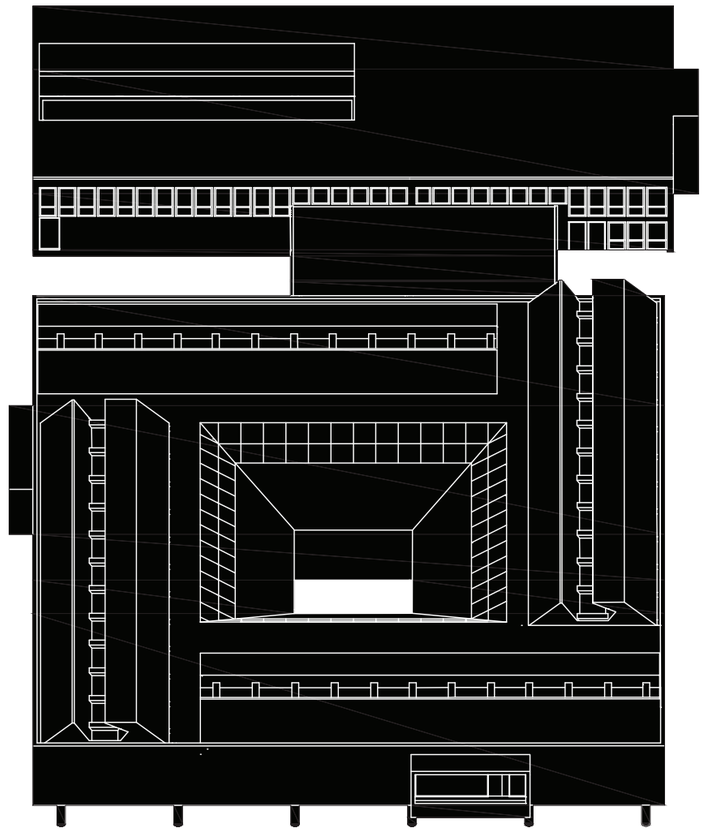
Building area
3200m2

Size
L

Category
Continious

Concepts
Dominance, Continuous Trajectories, Relation, Suspended

Operative verbs
Overlap



geographical position
42°00’11.0”N21°23’25.9”E

img. 150_Location
Museum Of Contemporary Art on the map of Skopje

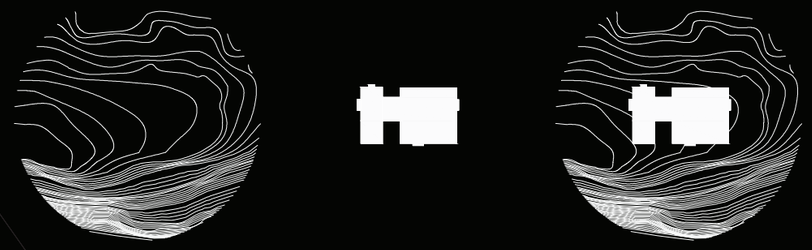
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

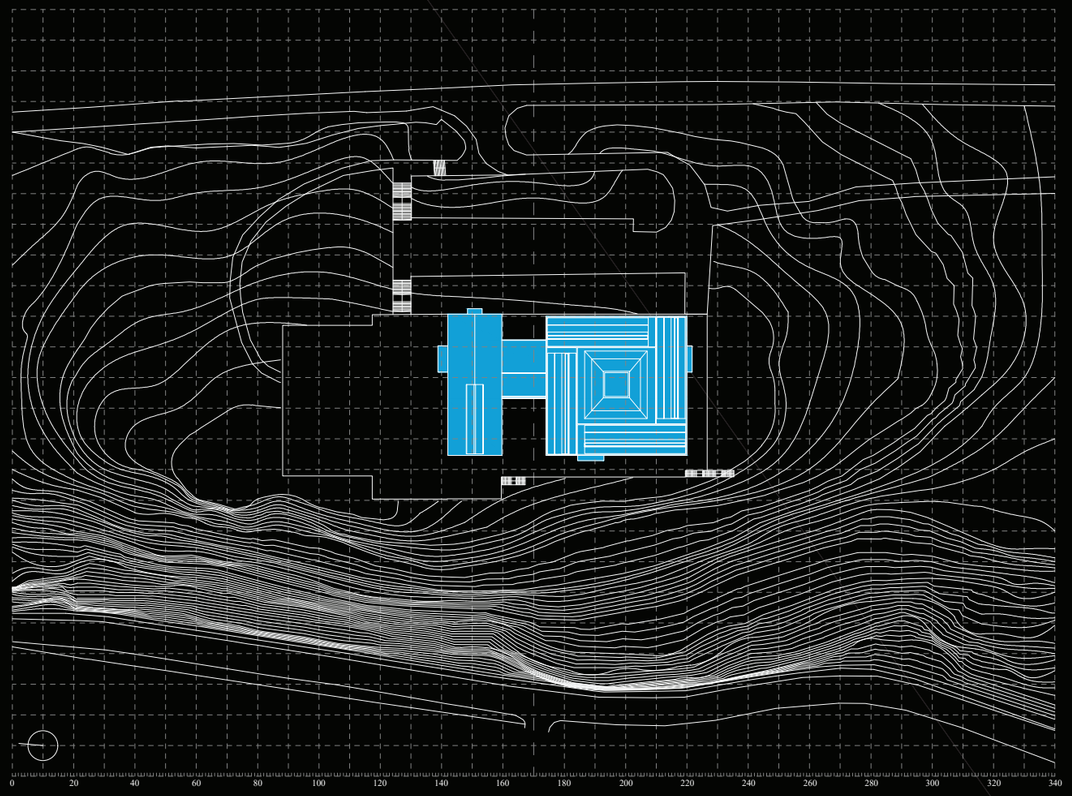
GEOMETRIC DIAGRAM
spatial syntax analysis

Museum Of Contemporary Art_Group Tigers

As part of the United Nations effort for mitigating the effects of the devastating earthquake in 1963, Poland offered a conceptual design, as well as a detailed construction plan for a public building in Skopje. Following the numerous art donations from all over the world and the necessity of housing them, a choice was made for that public building to be the Gallery of Contemporary Art in Skopje, later renamed into a museum. Therefore in 1966 the Association of Polish Architects announced the “Public Competition for the Design of the Museum of Contemporary Art in Skopje”. Out of total of 89 anonymous entries, the project submitted under the code *Tigers*[56] won the first prize. The construction began in April 1969 and the opening ceremony was held a year and a half later November 1970.
Situated on one of the highest hills in the center of the city, right across the medieval Kale fortress, the building of the museum with its clean, elegant lines subtly dominates the city horizon. The indigenous landscape in the surroundings, was the main reason for the choice of the location, as in the original project precisely this space was envisioned as a sculptural park. The building was intended to be a focal point of the rebuilding effort, promoted as a pioneering model of architecture and urban planning for sites at a risk of seismic activities. It is a fitting response to the multifaceted demands for the state of the art building, providing space not only for exhibitions but also for lectures, film screenings, poetry readings and music recitals. The design and the appearance of the building is a far cry from the typical design of the museums from the past and the period of monumentalism.
The access to the building from the Old Bazar is via a system of wide elegant stairs, which first lead to the building’s depot, partially submerged under the ground. One floor above it extends the building of the museum. Spatially the building consists of two differently sized and interconnected volumes, each having two floors spreading out to an area of more than 5000 square meters.
The structural system of reinforced concrete columns forms a regular square grid, which at the structurally demanding points is filled in by reinforced concrete walls. The remaining of the space is intentionally left open and empty, in order to address and to adapt to the versatile demands of an institution of this kind. A subtle accent on the lighting experience is provided by the centrally positioned atrium on the ground floor, along with the zenithal windows on the upper floor. In addition to the modular organization of the space, the choice of materials is also representative of the modernist architectural movement. The white marble façade, the whiteness of the interior walls and the abundance of glass with aluminum frames, all bound together form a perfect canvass for a display of diverse works of art.



img.151 Diagram_*Dominance*



img.152_Masterplan
Museum Of Contemporary Art

GENERAL INFORMATION

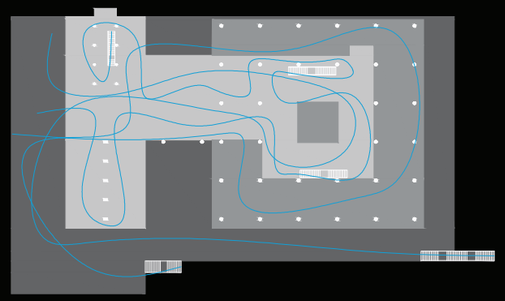
ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

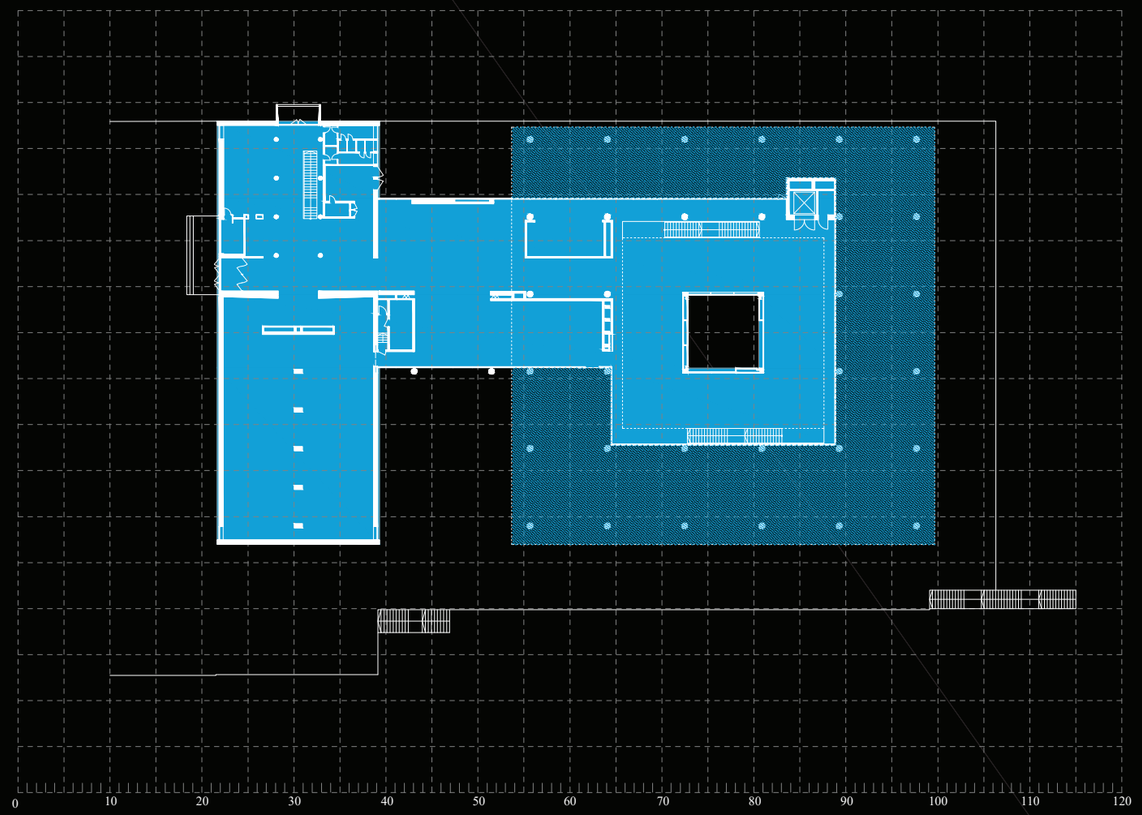
Dominance

Dominance, *n. /ˈ dä-mə-nən(t)s/*
1. Power and influence over others. 2. The phenomenon whereby, in an individual containing two allelic forms of a gene, one is expressed to the exclusion of the other.

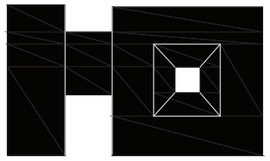
A monolithic eruption of constructed mass that *dominate* over the hill of the fortress Kale*, an acropolis that stands above the city of Skopje like a temple of modern and contemporary art. Settled near the tissue of the old bazar on one side and surrounded of nature on other side brings in evidence its capacity of transforming the natural state of the architecture as discipline into a cultural with its rationality, geometry and the mathematical precision that establish a dialogue between the nature and the culture. Those parameters as well as the basic properties of the elements constructs the footprint of the museum, like its pure volumes as well as the paths and plateau combined in a specific spatial articulation that brings in evidence the identity and the synergy of the place.



img.153 Diagram_*Continuous trajectories*



img.154_Floor plan
Museum Of Contemporary Art



GENERAL INFORMATION

ANALITIC MODEL
concept plan

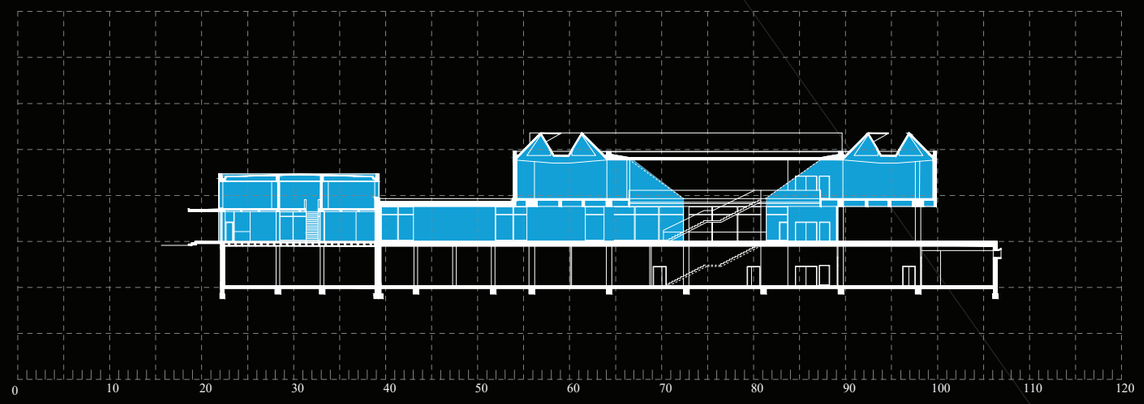
GEOMETRIC DIAGRAM
spatial syntax analysis

Continuous trajectories

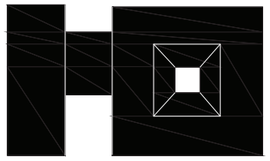
Continuous, *n. /kənˈtɪn.ju.əs /*
1. Without a pause or interruption. 2. Forming an unbroken whole; without interruption. 3. Marked by uninterrupted extension in space, time, or sequence
Trajectories, *n. / trə-ˈjek-t(ə-)rē /*
1. A path, progression, or line of development resembling a physical trajectory.

The concept of the floor plan of the museum brings in evidence the value of the architecture that is no longer just a result of creating shapes in space, but rather fostering relationships within it. Combined relationships and actions in a definitively open, flexible and transformable reality that is more qualitative and non-predetermined in positive synergy with the environment. This articulation of the space point a latent change of this kind of architecture that has always been perceived as designed, finished with total expression of the image into a condition of strategy of processes, open to change, transform and absorb different realities.

img.155 Diagram_*Relation*



img.156_Section
Museum Of Contemporary Art



GENERAL INFORMATION

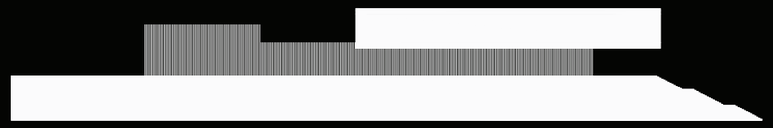
ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

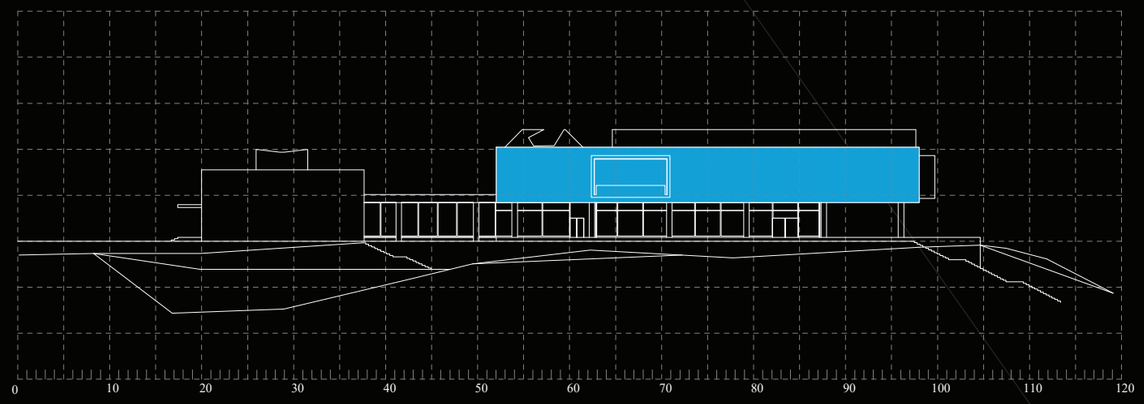
Relation

Relation, *n. / ri-ley-shuhn /*
1. An existing connection; a significant association between or among things.

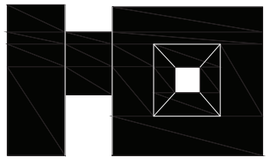
The articulation of the section reveals different levels of relations, on one hand with the soil as a system of diverse typologies of public spaces related in a unique narrative of experience in sequences and, on other hand, relation with the sky as a unique model for natural light in correspondence to the functional declination of the building. The section relates the open public space together with the flexible solution of the floor plan in a linear dynamic system that intertwine the artificial and the natural entities.



img.157 Diagram_*Suspend*



img.158_Elevation
Museum Of Contemporary Art



GENERAL INFORMATION

ANALITIC MODEL
concept elevation

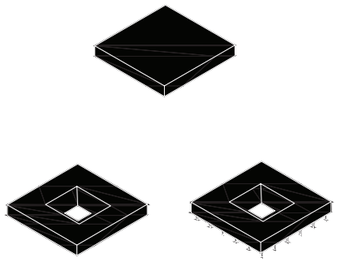
GEOMETRIC DIAGRAM
spatial syntax analysis

Suspend

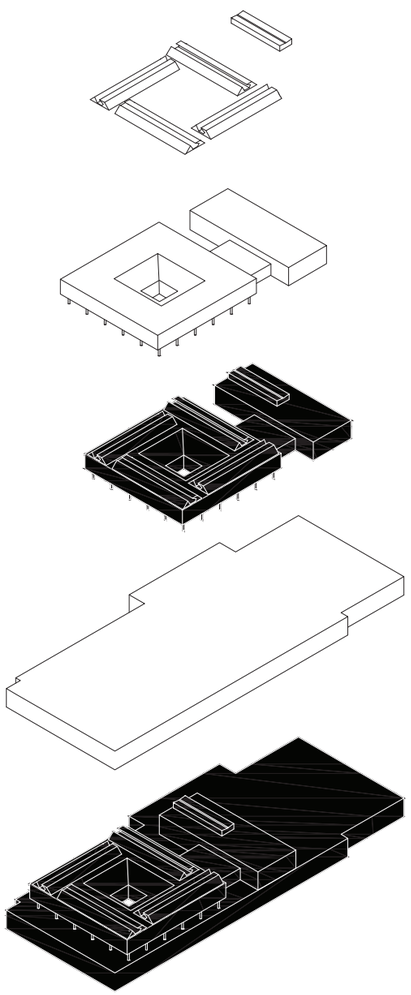
Suspend, *n. /sə-ˈspend/*
1. To hang by attachment to something above.
2. To attach so as to allow free movement.

The concept behind this building regarding the elevation centers on the notion of an elevated volume on one side towards the city under which an open public platform has been located. The elevated volume over a ground-level plan constructs a visible landmark that demark the territory. The whole platform where the public space is metastasized overlooks the city and maintains access to the whole program. The building is essentially a horizontal construct that towards south is elevated and constructs the platform underneath and towards north with its monolithic expression define the conventional articulated plateau where the entrance is located.

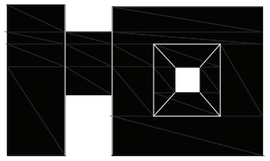
Operation_LODGE
Three main volumes attached one to the other,
forming an integrative communication axis



Operation_CARVE
Dual exhibition space, a result
of carving the central part of a prism



Operation_OVERLAP
Each element added above ads a new
content and a new value to the whole



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Overlap

Overlap, *n. / ō-vər-ˈlap/*
1. To lap over (something else or each other); extend over and cover a part of; imbricate. 2. To cover and extend beyond (something else)

The final formal expression of the museum of contemporary art is a result of a multiple operations applied on a multiple volumes that have been *lodged* together in a simple composition with a complex functional character. Therefore the order of the architectural form can be described as a balance between the orders of the individual elements that define their relative autonomy and the order of the whole form that defines their links. The final result is a unitary order, composite as an order of different entities, that is more than just a sum of the individual elements. This order is established through a system of overlapping the clearly distinguished constructive system, the plateau that defines the public space, the pure volume of the exposition space as well as the elements that articulate the penetration of the intimate light.

img. 159_Isometric view
Museum Of Contemporary Art

img. 160_Isometric view
Museum Of Contemporary Art

[D4.4]
City wall

Architect
Kenzo Tange

Date of construction
1967-76

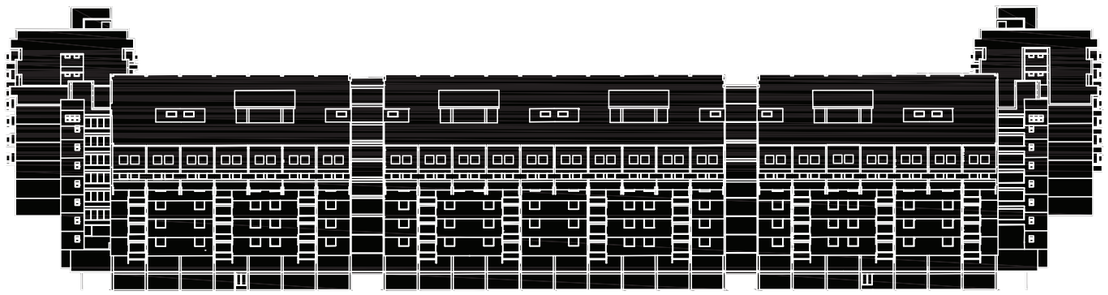
Building area
28700m2

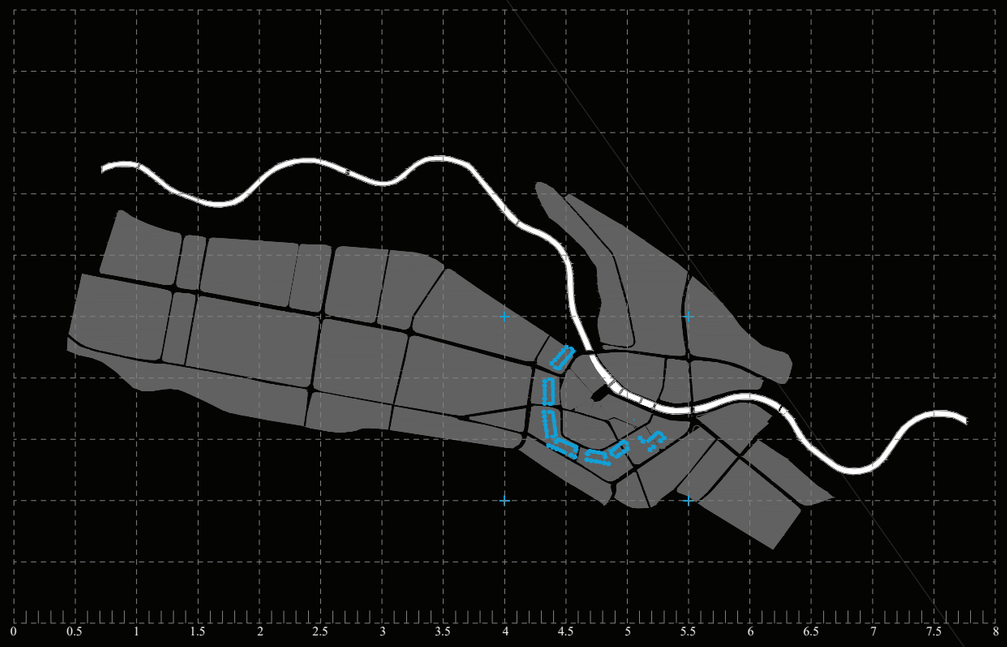
Size
XXL

Category
Continuous

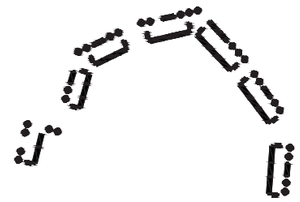
Concept
Trace, System, Superposed order

Operative verbs
Overlap





img. 161_Location
City Wall on the map of Skopje

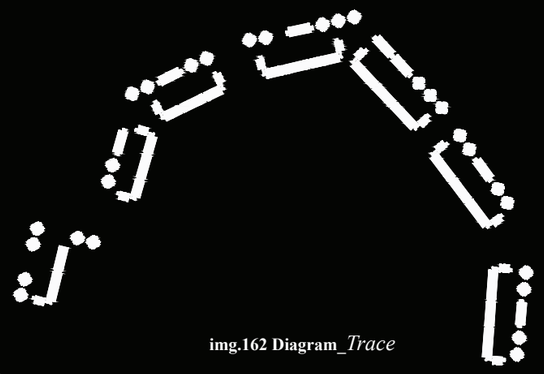


GENERAL INFORMATION

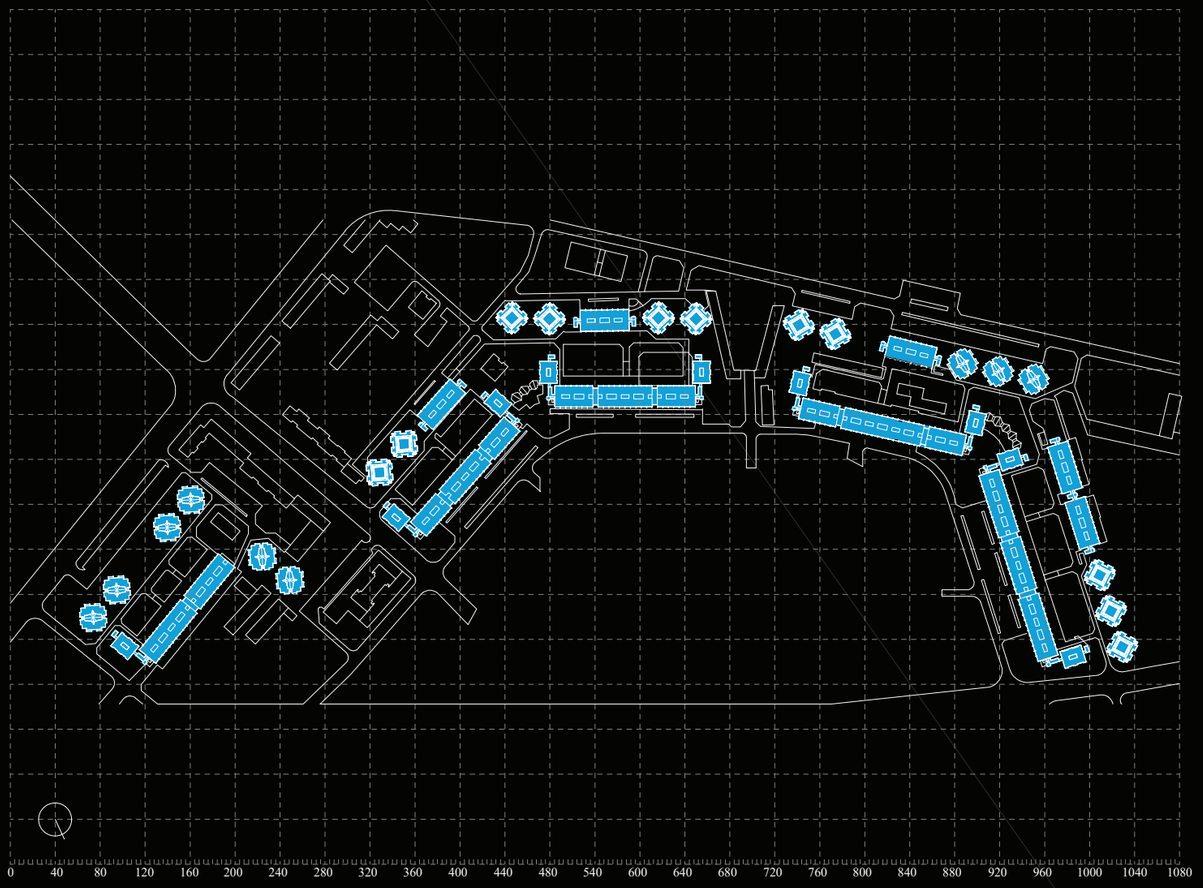
ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

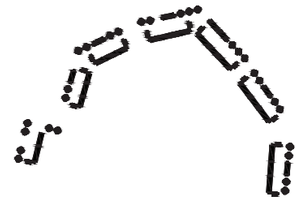
In 1967 a new master plan, devised by the world renowned architect Kenzo Tange was adopted by the city of Skopje. Its implementation began almost instantly with the complex of apartment buildings, the so called City Wall. Numerous Macedonian architects from different firms collectively worked on the detailed design of the complex. The construction work began that same year, however it took almost ten years for the estate to be finished in 1976. The City Wall with its strong and bold volumetric and architectural composition, as a ***linear threshold*** underline and separates the city center from the rest of the city.
Spatially the complex consists of several housing blocks (ground floor + 4 floors) and (ground floor + 6 floors), as well as several high rise blocks ((ground floor + 12 floors) with over 3500 units in total. In addition to the high density residential apartments, the city wall was envisioned as a mixed use development with the ground floor and the mezzanine reserved for retail and commercial use. All of the housing blocks with six floors have greater depth of the overall volume, therefore the placement of internal courtyards was an obvious choice, to compensate for the deficit of light that would've occurred have they been omitted. Furthermore, the top two floors have bold cantilevered cantilevers balconies, extending over the whole length of the building as well as the a free standing concrete stairwell towers add to the sculptural quality of the project, as do the extensions of the beams on the façade. The facade of the high rise blocks, is marked by the use of crude concrete, which additionally accentuates the verticality of the buildings. The design of the apartment units was focused on light filled, open plan interiors, with a feeling of spaciousness. Customary of that period, the most attractive part of the apartments was reserved for the kitchen and the dining area, as a space where the whole family gathers and actively uses.



img.162 Diagram_*Trace*



img.163_Masterplan
City Wall



GENERAL INFORMATION

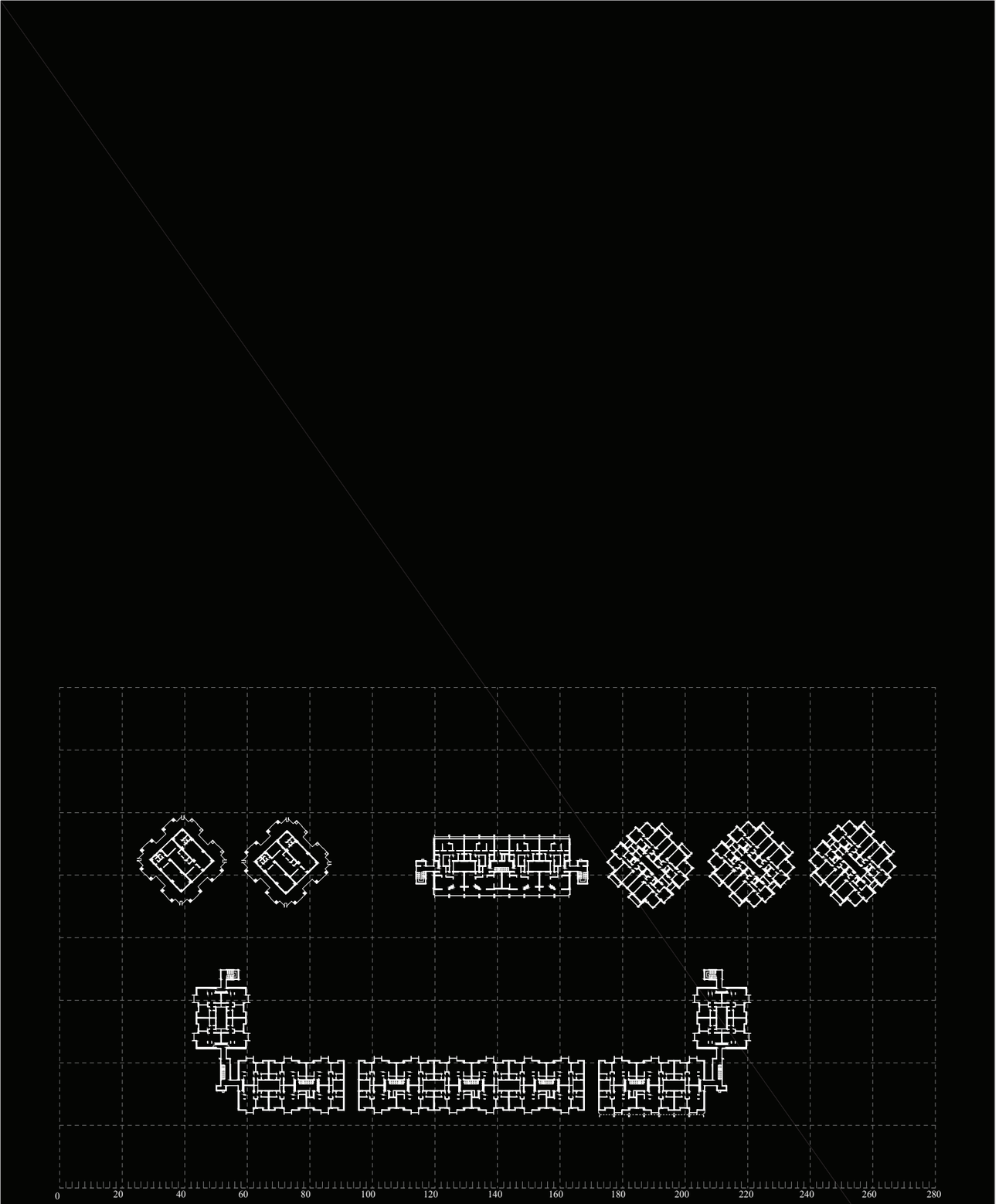
ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

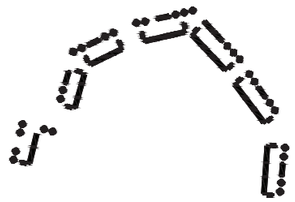
Trace

Trace, *n. /treɪs/*
1. To follow the shape or outline of something.
2. To find the origin or cause of something [v]
1. To impress or imprint (a design or pattern)

The city wall with its length of 1200 meters traces the area of great importance of the city of Skopje, it define, shape and emphasize the role of the city center. It is a system of fourteen linear blocks with 25 meters height, twenty nine towers of 40 meters height, seven courtyards and one linear park[49] that establish a relation between all the entities that form the entire intervention. The notion of wall as a defensive and bold border has been reinterpreted into a continuous modular structure, permeable and interrupted only by the access roads to the center. The wall exaggerates the conventional urban residential block by merging various programs and giving the accent to the community life with its approach towards the public areas and common areas.



img.164_Floorplan
City Wall



GENERAL INFORMATION

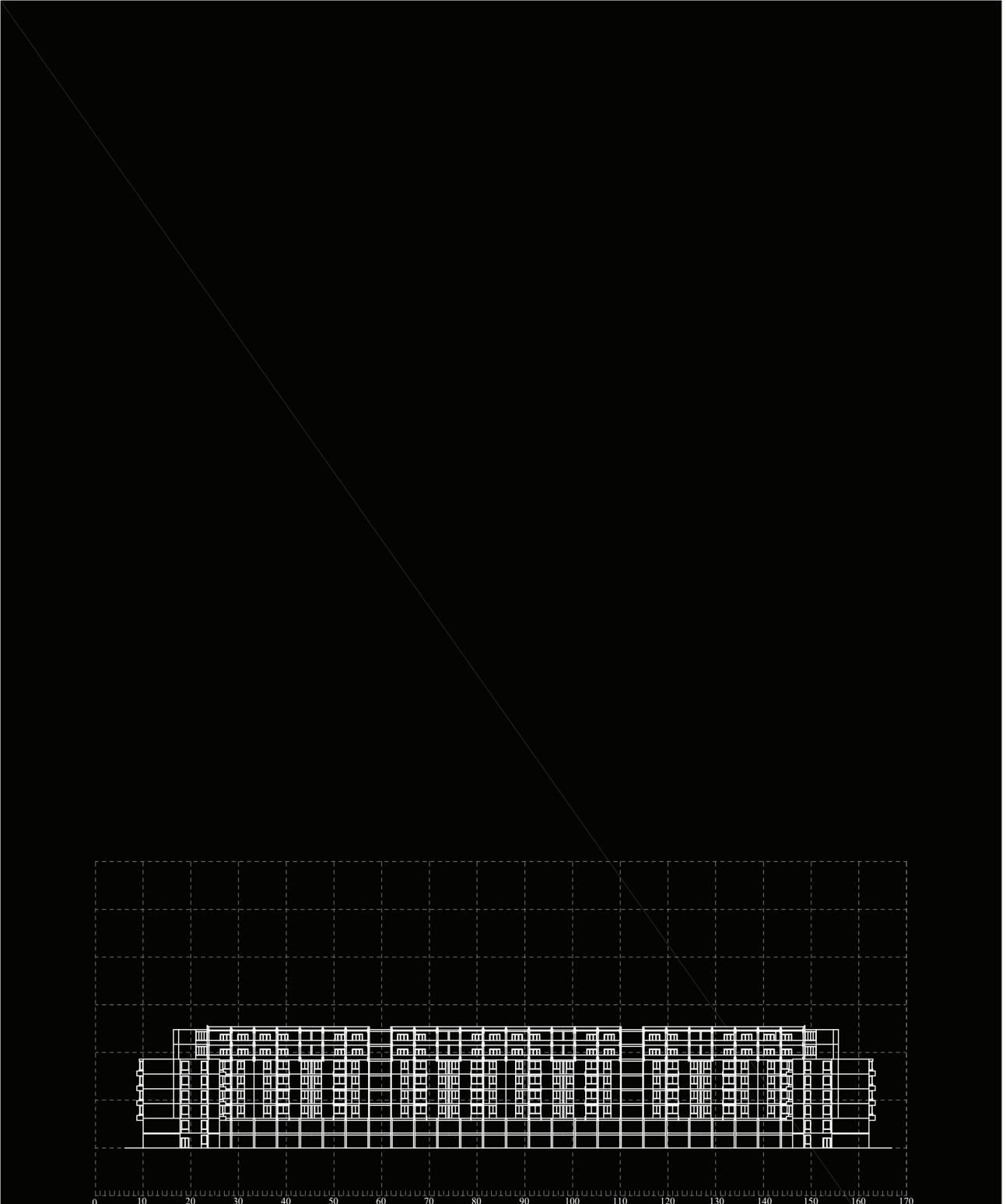
ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

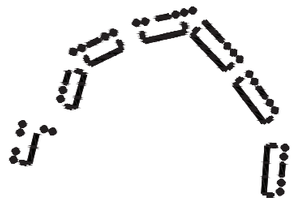
System

System, *n. /ˈsi-stəm/*
1. A set of things working together as parts of a mechanism or an interconnecting network; a complex whole. 2. a set of principles or procedures according to which something is done; an organized scheme or method.

The intervention of the city wall observed as a system has its significance on different scales, on territorial with its symbolic means of a wall, on urban scale as a system of various typologies of architectural formations (linear block, tower ect.), and on architectural scale as a system of horizontal and vertical communications in relation to different units, residential or commercial. The architectural composition can be described as attached units on a system of connections, some of them as separate components located in a vertical towers and others as central cores incorporated into the body of the buildings.



img.165_Section
City Wall



GENERAL INFORMATION

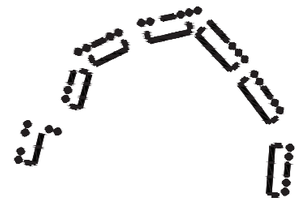
ANALITIC MODEL
concept section

GEOMETRIC DIAGRAM
spatial syntax analysis

Superposed order

Superposed, *v. /ˌsü-pər-ˈpōzd /*
1. To place or lay over or above whether in or not in contact : superimpose. 2. To lay (something, such as a geometric figure) upon another so as to make all like parts coincide.
Order, *adj. / ˈȯr-dər-lē /*
1. The arrangement or disposition of things in relation to each other according to a particular sequence, pattern, or method.

The articulation of the façade finds its similarities in the concept of the inverted superposition. Whilst in the ancient Greek and Roman architecture the heaviest orders are at the bottom of a building and the lightest come at the top, the elevation of the linear block of the wall has inverted order. The ground floor where the commercial activities are located is articulated in light glass façade instead the top of the block with its residential program has bold and heavy expression. Two different typologies of towers rich in their plasticity emphasize each of the five segments constructing the city wall. Therefore, the system of blocks and towers of the wall as evocative architectural symbolism* gives an overall monumentality to the intervention conceived as bold linear megastructure that delineates the city center.



GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Spatial Layering

Spatial, n. */ˈspeɪʃ(ə)l/*
1. Relating to or occupying space.

Layer, n. */ˈleɪərɪŋ/*
1. A thickness of some material laid on or spread over a surface. [v] 1. To form out of superimposed layers

The elements of the City wall, a contemporary infrastructure corridor, are consolidated by a strong pedestrian platform and a car corridor, resembling a “village along a road”. “The main feature of linear concept is rapid and efficient movement of people and goods“. It is the first layer that reveals the idea of linear spatial layering, that should provide the necessary commercial movement and capacities, but also the essential citizen presence, as a potential buyer and customer. Unlike the predecessor urban structures, the first layer creates a wide, dense and pleasant pedestrian movement, on the inner side of the horseshoe, and a intimate residential parks in its interior parts. The second two storey layer contains everything that the pedestrian need, and resembles a semi-porous urban tissue that is strongly incorporated in the city life. The third layer, mounted on the second, provides the needed residential density and gives its residents a seemingly quiet escape from the central crowds.

img. 166_Isometric view
City wall

img. 167_Isometric view
City wall

[D4.5]
Transportation Center Skopje

Architect
Kenzo Tange

Date of construction
1971-81

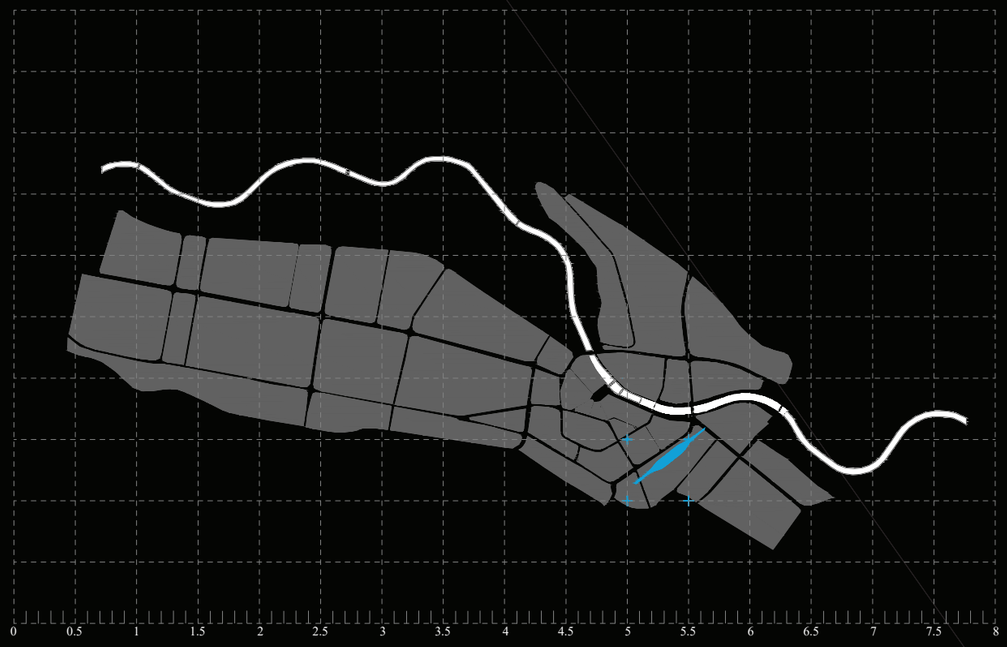
Building area
65400m2

Size
XXL

Category
Continious

Concept
Threshold, Evolutionary, Artificial Soil, Platform

Operative verbs
Elevation



img. 168_Location
Transportation Center on the map of Skopje

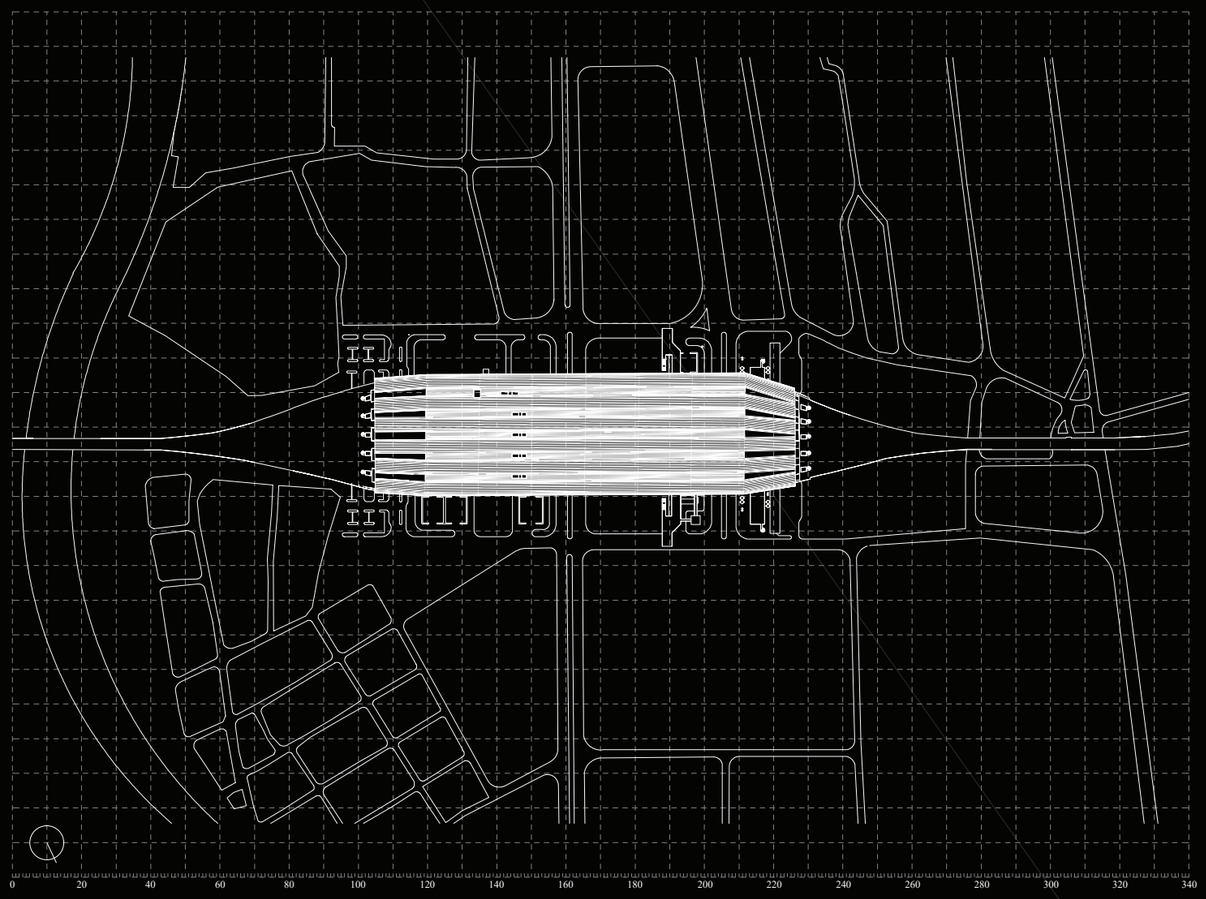
GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis

Transportation Center Skopje _Kenzo Tange

One of the most important infrastructure projects in the 1960s in Macedonia planned with the, then, newly developed master plan, was the reconstruction of the railway network which began in 1966. The master plan proposed relocation of the railway offices and ticket counters, as well as the railway tracks from the central city area. With its emergence, the mega structure changed the physiognomy of the city and it is the only part of the master plan for which the design, planning and the construction documentation were all being prepared in Japan, by the Kenzo Tange's office. After a contract was signed between Yugoslavian railways, City of Skopje and Kenzo Tange the work on the plan and the detailed design began in 1968. After more than two years, the preparation of the site began, by clearing up the debris and the initial construction work. On May 14th 1971 the long awaited construction officially began, with a grand groundbreaking ceremony at which Kenzo Tange and his team were in attendance. It was on July 27th 1981 that the first train arrived from Belgrade at the Transportation Center in Skopje. The groundbreaking of the next phase of the construction, the bus station, was planned for the following year of 1982, however it took more than 20 years for it to be built and for the project to be fully completed.
The transportation center represents a great urban and architectural composition which is of immense importance for the city of Skopje. Located at a walking distance from the south bank of river Vardar, it is situated between the neighbourhoods of Prolet, Vardar, Ostrovo and Madzir Maalo.
In order to span the boulevard, while providing passage to the vehicular and pedestrian traffic underneath, the Transportation center is elevated 10.5 meters above ground on a tightly knit grid of reinforced concrete columns, running perpendicular to the boulevard. This columnar grid structure is filled with two independent volumes, the south volume hosts the railway station and the bus station, while the north volume hosts a post office and the administration offices of the railway services. The remaining space today is mostly used as a parking area, while a large portion of it is deserted, thus providing an opportunity for development of a new creative content, both temporary and permanent.
The transportation center was conceived as a regulator of the city traffic, an all-encompassing complex mechanism, interlacing passenger, railway, postal and bus transportation. Within the initial vision , the transportation center was the centerpiece of the complex megastructure City Gate, a grand landmark signifying the entry to the newly built city.
The transportation center represents an infrastructural edifice, visually conveying the fundamental principles of the Japanese metabolism - pristine aesthetics and the use of reinforced concrete, devoid on any additional ornamentation. This frame represents the metabolism concept of a spine-like infrastructure upon which the additional cell-like parts are attached, such as the railway station and the post office. Furthermore, the addition of the bus station some twenty years later, corroborates the axiom for the metabolic growth of the structure. Even though the transportation center never reached its full and planned potential, and its grave state today is with a tendency towards decay instead of further growth, it stands as a testament for a different time, a time of idealism, rationalism and progressive thought.



img.169_Masterplan
Transportation Center

GENERAL INFORMATION

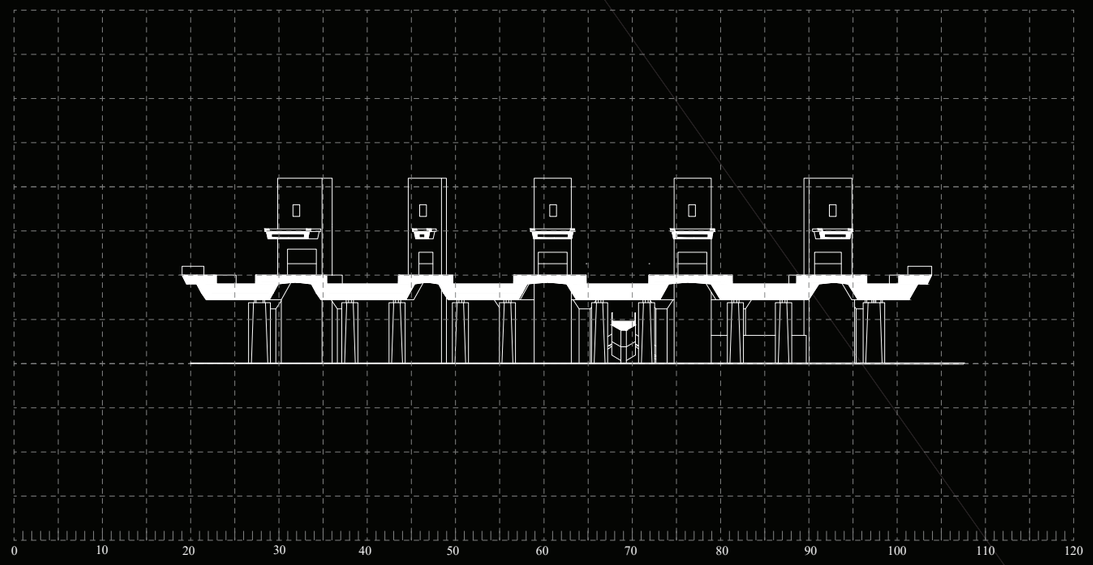
ANALITIC MODEL
concept context

GEOMETRIC DIAGRAM
spatial syntax analysis

Threshold

Threshold, n. */ˈθrɛʃəʊld /*
1. A point of entry or beginning.

The post earthquake urbanism of Skopje kept partially Tange's idea for a "city gate", the beginning of a bigger entryway complex, and an unifying transportation centre, a point from where the city will get and send the biggest daily input of working migrants. The gates that were to be crossed from areas of concentrated population towards the areas of ground liberation created metaphorical *thresholds* that should emphasize the difference and the potential of the bordering areas, and the different urban politics. This function was additionally emphasized with the deleveling of the two main means of transport, and giving priority to the ground pedestrian and car communication between the city centre and a then new prospect settlement.



img.170_Section
Transportation Center

GENERAL INFORMATION

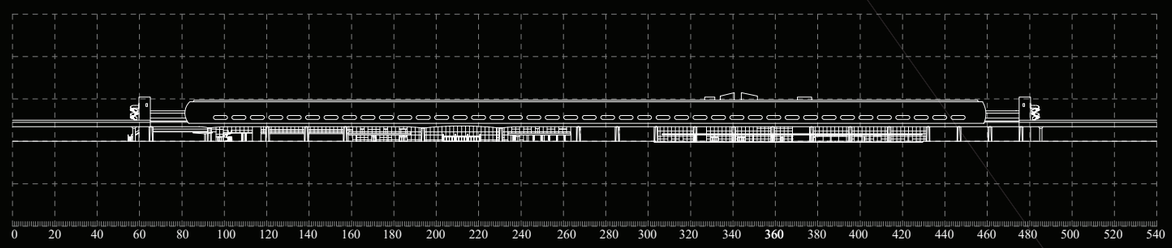
ANALITIC MODEL
concept plan

GEOMETRIC DIAGRAM
spatial syntax analysis

Evolutionary

Evolutionary, adj. /ɛvəˈluːʃ(ə)n(ə)ri /
1. Relating to the gradual development of something.

This megastructure made by Kenzo Tange contrasts on many levels its circumferential surrounding, of either temporary or permanent nature. The idea of the post-war Japanese architectural metabolism movement, that fused ideas about architectural megastructures and of their organic biological growth*, it is applied strictly in the structural composition of the Skopje Transportation Centre. Its main construction elements form a skeleton that is dimensioned to support incremental and guided change across multiple spans, as a primary philosophy for its development. This porous edifice has the capacity for accepting different infill depending of the needs, never the less resisting to any content significant influence, on the contrary accenting the temporariness of the same.

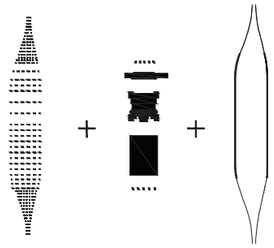


img.170_Elevation
Transportation Center

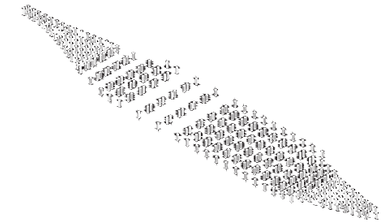
Artificial soil

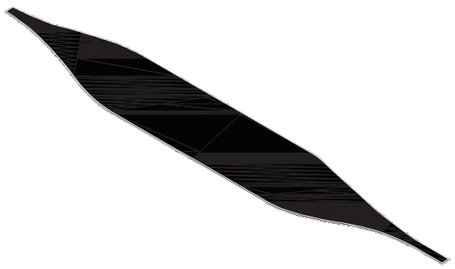
Artificial, adj. */aːtɪˈfɪʃ(ə)l/*
1. Made or produced by human beings rather than occurring naturally, especially as a copy of something natural.
Soil, n. */sɔɪl /*
1. The upper layer of earth.

Just another metabolist operation can be recognized in the process of the soil differentiation and the creation of the railway flyover. This artificial soil creation, a tool of the urban landscape planing, provides not only growth of the available building area by multiplying, but due to its scale can be perceived and used for a palette of functions, sticking generally the two main functions like a “storage” space under, and a clear railway transportation area above. It is important to notice that scaling the city infrastructural elements in this manner, transcends the building influence from the local surrounding, towards the city as a whole, and that this great impact on the city landscape one can read figuratively , but also metaphorically as a city gate, a threshold etc.

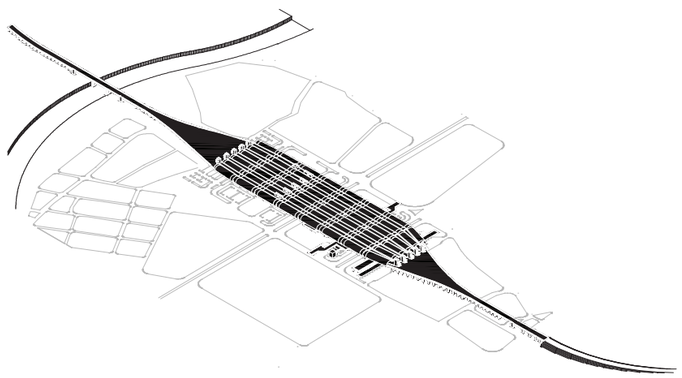


Operation_ELEVATION
A set of pillars support a suspended platform
that looks like an elevated arteficial soil





Operation_ELEVATION
A set of pillars support a suspended platform
that looks like an elevated arteficial soil

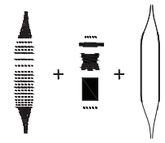


Operation_ELEVATION
A wholeness created by elevating
a massive platform

GENERAL INFORMATION

ANALITIC MODEL
concept context/plan/section/elevation

GEOMETRIC DIAGRAM
spatial syntax analysis



Platform

Platform, n. */ˈplatfɔːm /*
1. A raised level surface on which people or things can stand.

The city's content congestion makes landscaping in urban areas face many functional challenges. If the areas provided for certain function are perceived as individual platforms, the landscaping becomes an operation of their fitting and deleveling. In this sense the Transportation center building Tange envisaged as an elevated railway platform whose immediate context is left open to gradual development of contents and functions. This sort of a side effect of raising the railway flyover, followed by contents infill, a metabolic process, of actions that induct reactions, results in contents temporariness, high rate of people and things fluctuation and a rare city structure nondiscriminatory to any future changes.

Transportation Centre

img. 171_Isometric view
Transportation Centre

img. 172_Isometric view
Transportation Centre

img. 173_Isometric view
Transportation Centre

img. 174_Isometric view
Transportation Centre

5. Conclusions

The research establish a new reinterpretation of a particular legacy from the post-earthquake reconstruction of the city of Skopje, that is fundamental for the configuration of the contemporary city and which can influence on a particular urban identity. For a long time now, this heritage has been inaudible and at the risk of disappearing. Some of the exemplars were removed from the city map, thus from the local architectural history, before sufficient studies have been performed, and possibly inscribed into the history of architecture as a valuable local, regional or even worldwide, architectural specimen.
After the fall of the socialism and declaring independence from Yugoslavia in 1991, the Republic of Macedonia went through a long period of post-socialistic transition. This process caused dramatic transformations to its cities' spatial structure, particularly to the modernist legacy from the post-earthquake reconstruction. The material heritage from this period was continuously questioned from an ideological point of view, but also in relation to its content, form and materiality. Therefore, the research is concentrated on the capital's architecture that was created in the socialist period, particularly to the Brutalist one, raising awareness and providing data for the following issues:

- deficiency of systematized scientific materials that can be used as base for an analytical reading of architectural composition regarding these architectures;
- identification of categories of brutalist architectures that share similar characteristics;
- deficiency of studies that determine the compositional principals, concepts and prototypes embodied to these architectural artefacts that bring pluralism in the architectural discipline.

The Brutalist architectures have been analyzed as a particular layer of the architectural history that intertwines complex relationships with the city, or as Vlatko P. Korobar nominates part of them - Cities within the city. After an overview of the historical background of the city and through investigation of 15 cases, the mentioned issues are elaborated through a lexicon of notions and spatial verbs that configure the atlas. It can be seen as new re-interpretative operative tool that is in a quest of finding the right balance between a catalogue and book, between a raw presentation of the work and its integration into a comprehensive interpretative model or taxonomic system. The atlas as index of design and research partially decouple projects from the presupposed authencity of their context and relocate them within a broader nexus of affiliations and connections. Therefore the notion of index has been implemented as a method to systematize the multiple layers of concepts incorporated within the selected case studies.
Further on, in the four diferent categories, group form, compact, continuous and composite in the section of analytical model and geometric diagram, 60 diverse diagrams, notions and spatial verbs, have been identified. This revealed 45 different concepts of incorporation in the context of 15 brutalist architectures, and later, concepts of spatial articulation as well as implemented operations that explain the evolution of the architectural composition, have been described.

This variety of concepts depicts different narratives with pliable parallels that might be drawn from one work to another, and in this way the works create virtual relationships between them that go beyond the literal appearance of the architectural entities.

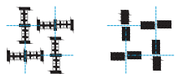
a	**e**	**l**	**r**
architecture of elements	embed	layering	relation
artificial soil	evolutionary	lodge	roofing
attaching	**f**	locus	**s**
autonomous form	field	**m**	sequential
axial arrangement	figure ground	monolith	spatial Layering
axial fluidity	forum	mosaic	superposed order
c	**g**	multilayered	suspend
colaging,	group	**n**	system
compound	**h**	new ground	**t**
continuous trajectories	hinge	no hierarchical space	tabula plena
circuits	**i**	**o**	taxonomy
cluster	in between	operative topography	tectonic metamorphose
chain	infrastructure	overlap	terraform
d	infill	**p**	trace
demarking	insert	patchwork	threshold
density	interlock	pattern	**u**
dichotomy	intertwined trajectories	platform	urban Interior
displacing by sliding	**j**	profile	
dominance	join	topography	
	joint cores		

Lexicon of notions and spatial verbs as an outcome of the analytical model and geometric diagrams

Therefore, unlike previous studies of the modern legacy of Skopje, that were focused on understanding the socio, political, cultural and historical background of this legacy, its functional and esthetical value, this thesis gives a new overview regarding the architectural articulation of these architectures. The atlas, doesn't describe the historical evolution of the city, but proposes an update of the disciplinary dictionary as an indispensable tool for the current transformations of the contemporary Balkan architecture and urbanism. Articulated in this manner it can serve as a methodology towards the establishment of an applicable framework for exploring also other realities that share similar characteristics.

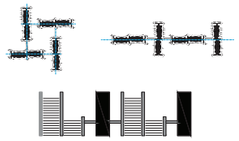
A group of similar things or people positioned or occurring closely together

CLUSTER



A roughly circular line, route, or movement that starts and finishes at the same place

CIRCUIT

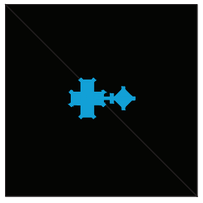


A point at which parts of an artificial structure are joined

JOINT CORES

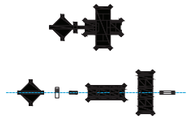
A number of things that are located, gathered, or classed together

GROUP FORM



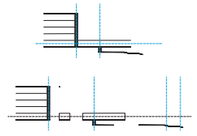
A large single upright block of stone, especially one shaped into or serving as a pillar or monument

MONOLITH



Located on, around, or in the direction of an axis.
The action, process, or result of arranging or being arranged

AXIAL ARRANGEMENT



The ability of a substance to flow easily

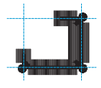
AXIAL FLUIDITY

The effective or perceived location of something abstract

LOCUS

Operation oposite of tabula rasa

TABULA PLENA

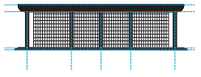


A series of linked metal rings used for fastening or securing something, or for pulling loads

CHAIN

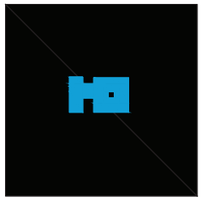
A division or contrast between two things that are or are represented as being opposed or entirely different

DICHOTOMY



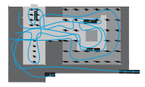
Situated somewhere between two extremes or categories; intermediate

IN BETWEEN



The phenomenon whereby, in an individual containing two allelic forms of a gene, one is expressed to the exclusion of the other

DOMINANCE

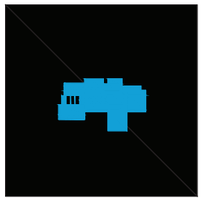


A path or progression without a pause or interruption

CONTINIOUS TRAJECTORY

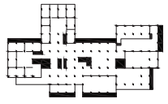
To hang by attachment to something above

SUSPEND



Something composed of miscellaneous or incongruous parts

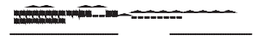
PATCHWORK



Arranged in an order from the most to the least important

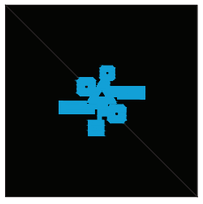
NO HIERARCHICAL SPACE

NO CHERARCHICAL SPACE



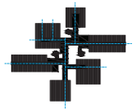
A particular way in which something is done or organized, or in which something happens

PATTERN



Making known a territory

DEMARKING



Join or fasten (something) to something else

ATTACH

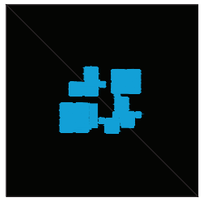
Raise or lift (something) to a higher position

ELEVATE

A range of different things

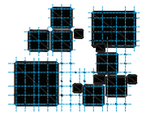
DIVERSITY

Synoptic sheet of diagrams explaining the notions and spatial verbs of the analytical model and geometric diagrams



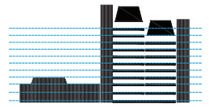
A thing that is composed of two or more separate elements; a mixture

COMPOUND



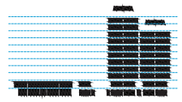
A large area covered by something or having something under its surface

FIELDS



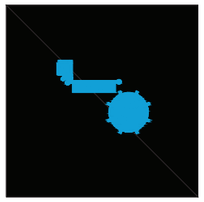
A thickness of some material laid on or spread over a surface

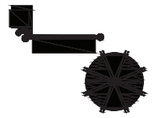
SPATIAL LAYERING



A thickness of some material laid on or spread over a surface

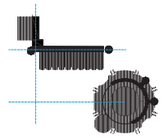
SPATIAL LAYERING





An unroofed area that is completely or partially enclosed by walls or buildings, typically one forming part of a castle or large house.

OPEN COURTYARD



A movable joint or mechanism on which a door, gate, or lid swings as it opens and closes or which connects linked objects

HINGE

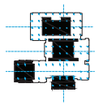
Having the freedom to govern itself or control its own affairs

AUTONOMOUS FORMS

ARCHITECTURE OF ELEMENTS

To force something or someone out of its usual or original position

DISPLACING BY SLIDING

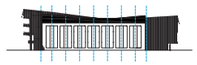


Something resembling a spinal column or constituting a central axis or chief support

SPINE

The structure forming the upper covering of a building or vehicle

ROOFING

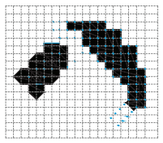


Forming or following a particular order

SEQUENTIAL

A set of numbers, amounts, etc., used to measure or compare the level of something

SCALE

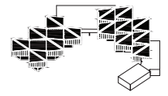


A large area covered by something or having something under its surface

FIELDS

The physical appearance of the natural features of an area of land, especially the shape of its surface

TOPOGRAPHY

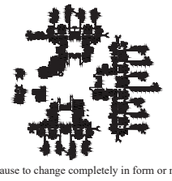


The quantity of people or things in a given area or space

DENSITY

The marketplace or public square of an ancient Roman city, the center of judicial and business affairs and a place of assembly for the people

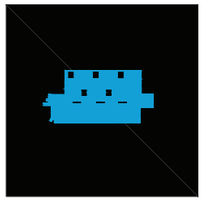
FORUM



Change or cause to change completely in form or nature

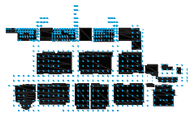
URBAN INTERIOR

CARDO DECUMANUS MAXIMUS



The underlying foundation or basic framework (as of a system or organization)

INFRASTRUCTURE



A surface decoration made by inlaying small pieces of variously colored material to form pictures or patterns

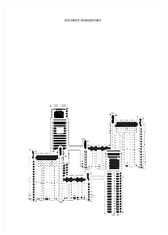
MOSAIC

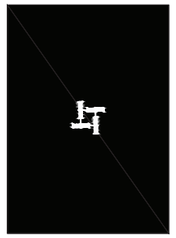
Twisted together or closely connected so as to be difficult to separate

INTERTWINED TRAJECTORIES

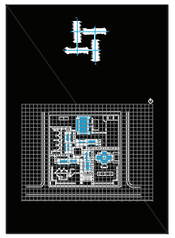
CONNECTION

Synoptic sheet of diagrams explaining the notions and spatial verbs of the analytical model and geometric diagrams

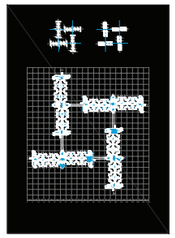




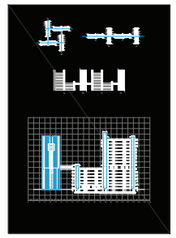
CLUSTER



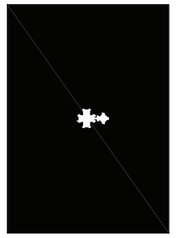
CIRCUIT

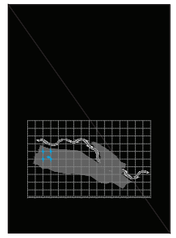


JOINT CORES

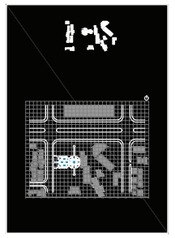


GROUP FORM

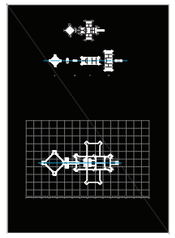




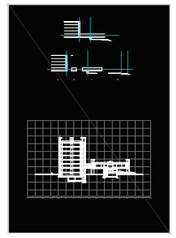
MONOLITH



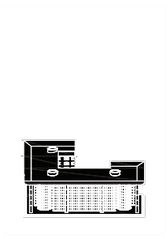
AXIAL ARRANGEMENT

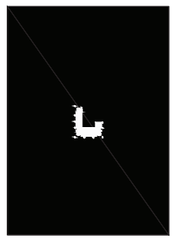


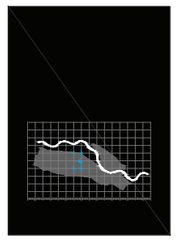
AXIAL FLUIDITY



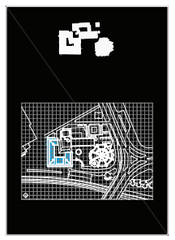
LOCUS



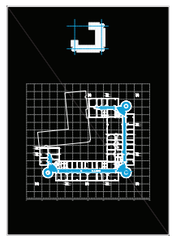




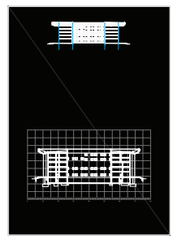
TABULA PLENA



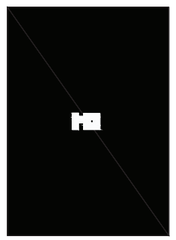
CHAIN

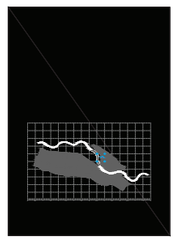


DICHOTOMY



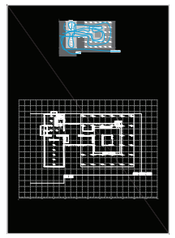
IN BETWEEN

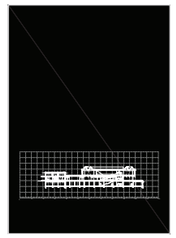




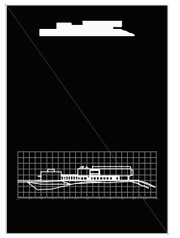
DOMINANCE

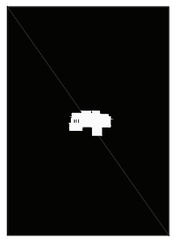
CONTINIOUS TRAJECTORY

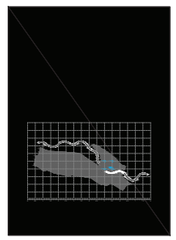




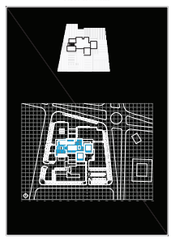
SUSPEND



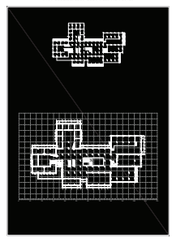




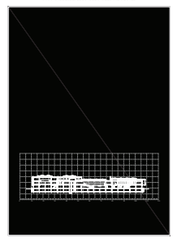
PATCHWORK



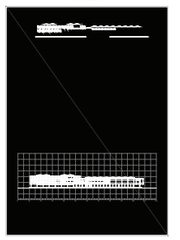
NO HIERARCHICAL SPACE

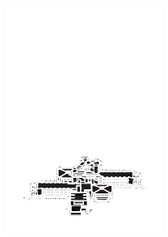


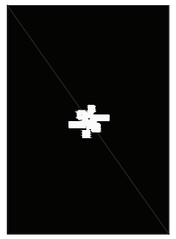
NO CHERARCHICAL SPACE

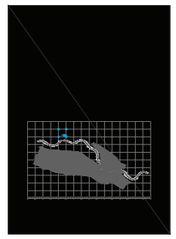


PATTERNS

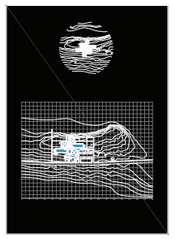




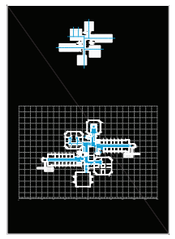




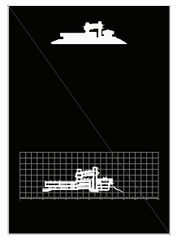
DEMARKING



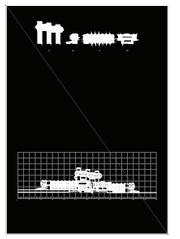
ATTACH

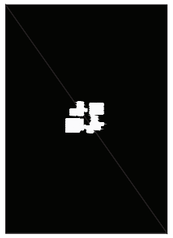


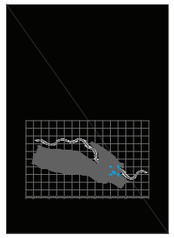
ELEVATE



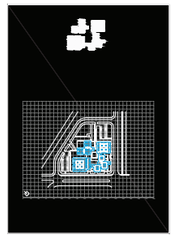
DIVERSITY



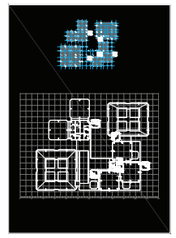




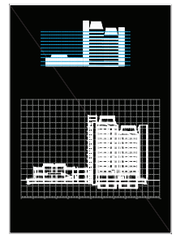
COMPOUND



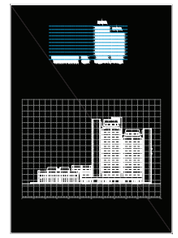
FILDS

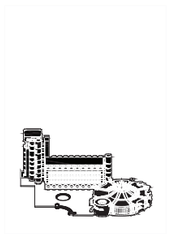


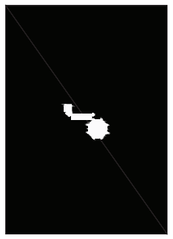
SPATIAL LAYERING

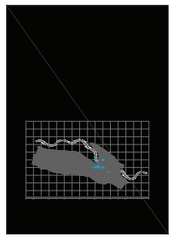


SPATIAL LAYERING

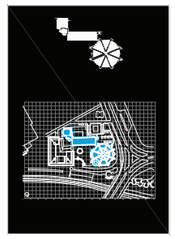




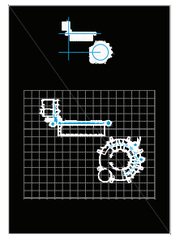




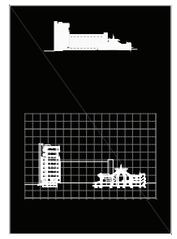
OPEN COURTYARD



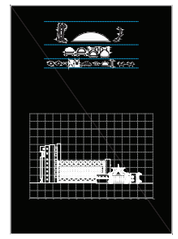
HINGE

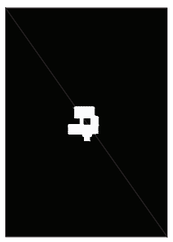


AUTONOMOUS FORMS

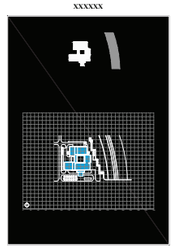


ARCHITECTURE OF ELEMENTS



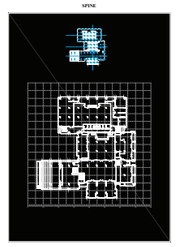


XXXXXX

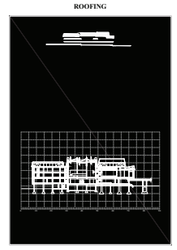


DISPLACING BY SLIDING

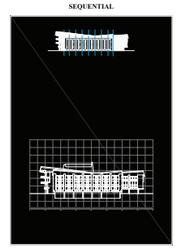
SPINE

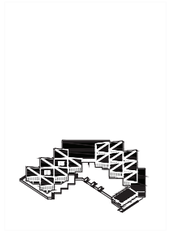


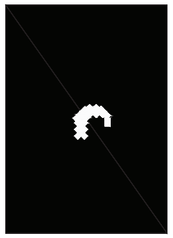
ROOFING

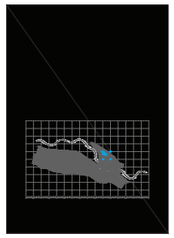


SEQUENTIAL

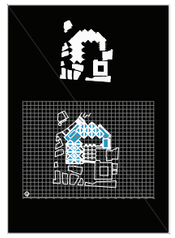




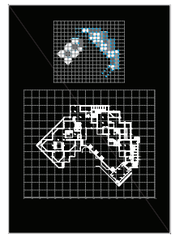




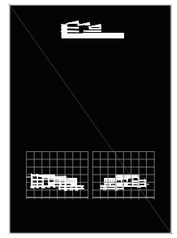
SCALE



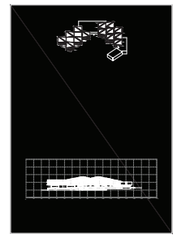
FIELDS

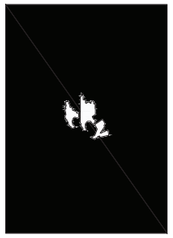


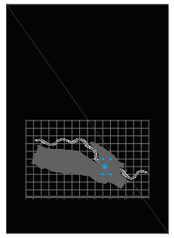
TOPOGRAPHY



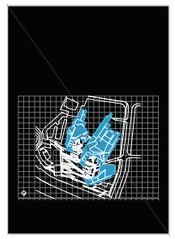
DENSITY



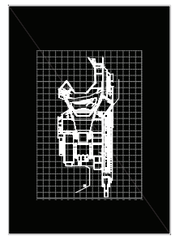


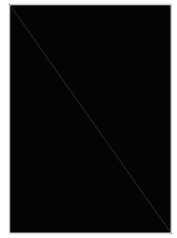


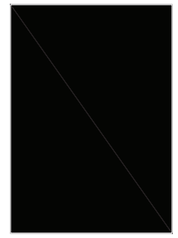
TECTONIC METAMORPHOSE

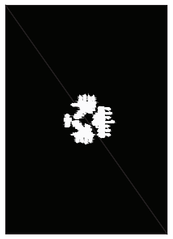


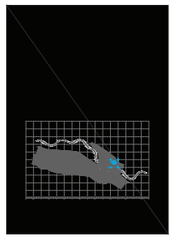
TOPOGRAPHY



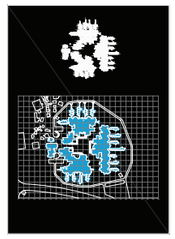




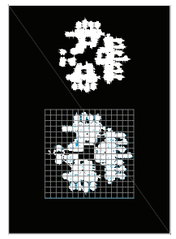




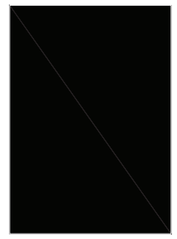
FORUM

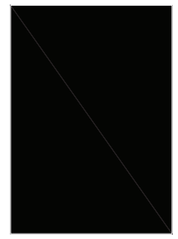


URBAN INTERIOR



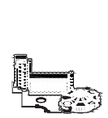
CARDO DECUMANUS MAXIMUS



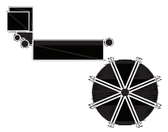


GROUP FORM

independent structures, separation of functions



[C.4.1]
TELECOMMUNICATION CENTER
MULTIVAVED STRUCTURE

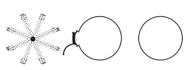


MULTIPLE OPERATIONS

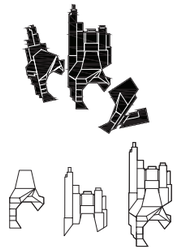
TOWER
operation_MULTILAYERING
merging

LINEAR BLOCK
operation_ MULTILAYERING
overlap (overimposition)

THE ROTUNDA
operation_ MULTILAYERING
fluctification



[C.4.2]
MACEDONIAN OPERA AND BALLET
TOPOGRAPHY

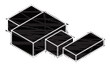


MULTIPLE OPERATIONS

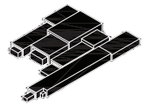
primary volume

operation_ EXTRUSION

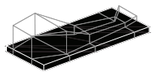
primary volumes



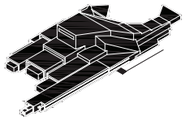
operation_ EXTRUSION



primary volume



operation_ TECTONIC METAMORPHOSY



COMPACT

all the functions concentrated in one structure

[D.4.4]
REPUBLIC DISPATCH CENTER
STRATIGRAPHY

operation_ INSERT

A
corporations
(subsidiary)

B
extraordinary
(Parliament 1d)

C
infill

INSERT

[D.4.5]
MUSEUM OF MACEDONIA
GRIDDED MONOLITH

operation_ JOIN

A

B

C

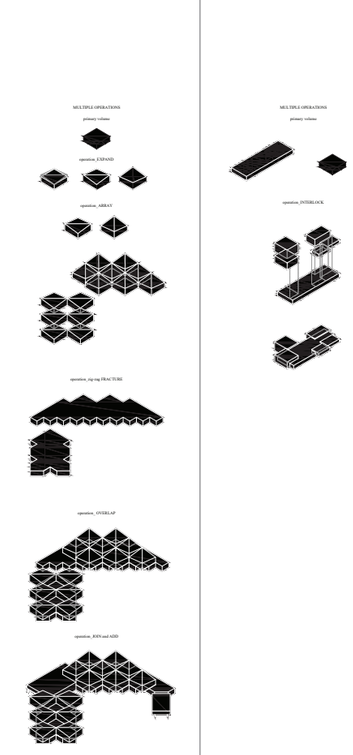
JOIN

base units

A
assigned
plexuses

B
symmetrico
extruder

C
added
volume



MULTIPLE OPERATIONS

primary volume

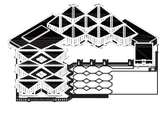
operation_ EXPAND

operation_ ARRAY

operation_ zig-zag FRACTURE

operation_ OVERLAP

operation_ JOIN and ADD



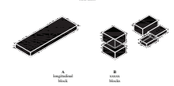
[D.4.3]
NATIONAL AND UNIVERSITY LIBRARY ST. CLEMENT OF OHRID
INTERLOCK

A

B

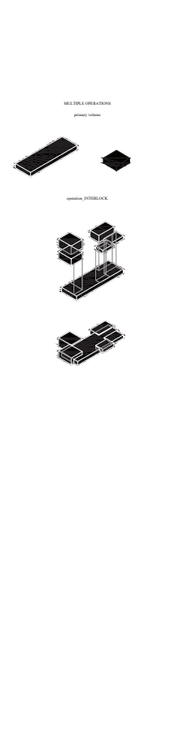
INTERLOCK

base units



A
longitudinal
block

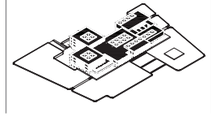
B
vertex
blocks



MULTIPLE OPERATIONS

primary volume

operation_ INTERLOCK



CONTINUOS

objects in relation, uninterrupted circulation

[D.4.1]
STUDENT DORMITORY GOCE DELCHEV
CLUSTER

operation_ INFILL

A

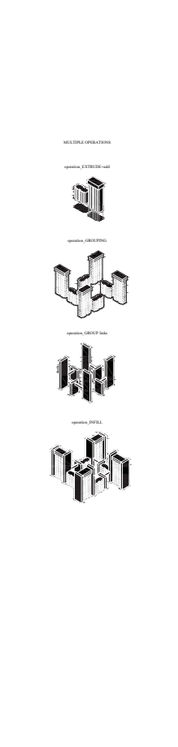
C=B

INFILL

base units

A
infilled volumes

link



C
horizontal-bed
bridge

D
vertical-bed
stair tower

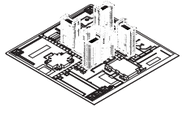
MULTIPLE OPERATIONS

operation_ EXTRUDE-add

operation_ GROUPING

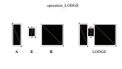
operation_ GROUP links

operation_ INFILL



[B.4.3]
MUSEUM OF CONTEMPORARY ART SKOPJE
MONOLITH

operation_ LODGE



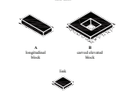
A

C

B

LODGE

base units

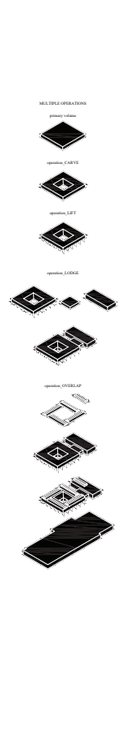


A
longitudinal
block

B
vertical-slivered
block

link

C
corridor



MULTIPLE OPERATIONS

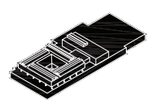
primary volume

operation_ CARVE

operation_ LIFT

operation_ LODGE

operation_ OVERLAP

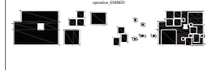


COMPOSITE

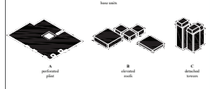
composition of two or three diferent building types

[B.4.2]
NATIONAL BANK OF THE REPUBLIC OF MACEDONIA
ENSAMBLE / ARCHIPELAGOS

operation_ EMBED



base units

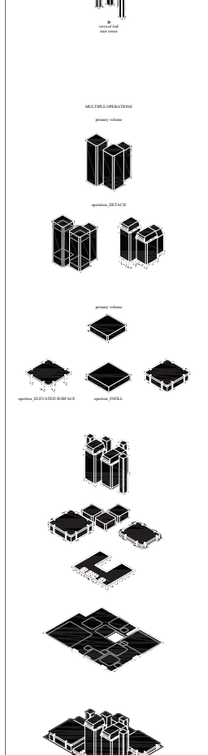


pavilion-
shaped
plan

B
elevated
voids

C
elevated
towers

link



D
vertical-bed
stair tower

MULTIPLE OPERATIONS

primary volume

operation_ DETACH

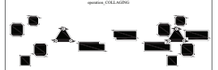
primary volume

operation_ ELEVATED SURFACE

operation_ INFILL

[A.4.3]
HIDROMETEOROLOGICAL SERVICE BUILDING
COLLAGE/MULTIFORM

operation_ COLLAGING



A

B

C

COLLAGING

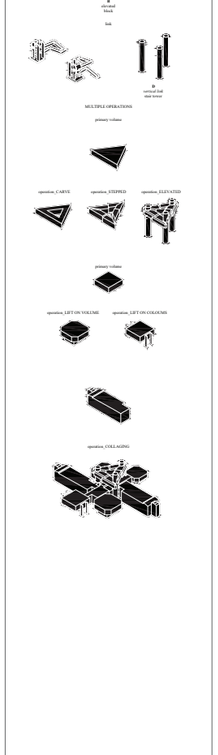
base units

A
infilled
blocks

B
elevated
blocks

C
elevated
towers

link



D
vertical-bed
stair tower

MULTIPLE OPERATIONS

primary volume

operation_ C.CARVE

operation_ STEPPED

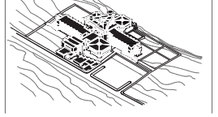
operation_ ELEVATED

primary volume

operation_ LIFT ON VOLUME

operation_ LIFT ON COLUMNS

operation_ COLLAGING



[A.4.4]
SKOPJE CITY ARCHIVE
MONOLITH

operations: LODGE-AXIAL ALIGMENT

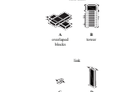
A

C+B

B

LODGE

base units



A
elevated
blocks

B
towers

link

C
horizontal-bed
bridge

D
vertical-bed
stair tower

MULTIPLE OPERATIONS

primary volume

primary volume

operation_ LODGE

Endnotes

1 Mrduljaš, M., Kulić, V., *Unfinished Modernisation*, Kolorklinika, Zagreb, 2012, pag.5
2 Stithson A., Stithson P., Struttura Urbana, Calderini, Bologna, 1971
3 Smithson A., Smithson P., *The New Brutalism* in October 136, 2011
4 https://dictionary.cambridge.org/dictionary/english/brutalism
5 https://www.merriam-webster.com/dictionary/brutalism
6 https://www.lexico.com/definition/brutalism
7 https://www.collinsdictionary.com/dictionary/english/brutalism
8 https://www.oxfordlearnersdictionaries.com/definition/english/brutalism
9 Jurgen Joedicke, Moderne Architectur. Stromungen und Tendenzen, Stuttgart/Bern: Kramer, 1969
10 Bruno Zevi, Capolavoro del Brutalismo di Viganò, L'Espresso , march 2 1958. The quotation is taken from the text of Luca Molinari, The Italian Way to New Brutalism. The Experiences of Vittoriano Viganò, Giancarlo De Carlo and Gino Valle published in Brutalism, Contributions to the international symposium in Berlin 2012, Edited by Wustenrot Fondation, Park Books, 2017
11 Reyner Banham, New Brutalism, The architectural Revie, December 1955
12 Quted in Eduard F. Sekler, William Curtis, *Le Corbusier at work. The Genesis of the Carpenter Center for the Visul Arts,* Cambridge, Harward University press
13 The Columbia Electronic Encyclopedia, Columbia University Press, 2013
14 The Great Soviet Encyclopedia, 3rd Edition (1970-1979), The Gale Group, 2010
15 Among its members were artists Richard Hamilton, Eduardo Paolozzi and William Turnbull, critics and writers Reyner Banham and Lawrence Alloway, and architects James Stirling, Colin St John Wilson and Alison and Peter Smithson, who had established their practice in 1950 and were honing their signature raw style eventually known as New Brutalism
16 Art brut is a French term that translates as 'raw art', invented by the French artist Jean Dubuffet to describe art such as graffiti or naïve art which is made outside the academic tradition of fine art.
17 P.D.S., House in Soho, Architectural Design 23, no.12, December 1953
18 Banham R., The New Brutalism, Achitectural Reviw 118, no.708, December 1955, pag. 355-61
19 Reyner Banham, "The New Brutalism", October 136 2011, pag 25
20 Ibid., pag. 25
21 Ibid., pag. 28
22 Jürgen Joedicke, *New Brutalism - Brutalism in Architecture*, pag. 421-425
23 Jürgen Joedicke, *New Brutalism - Brutalism in Architecture*, pag. 421-425
24 Ibid.
25 Ibid.

26 Ibid.
27 Ibid.
28 Venturi R., *Complexity and Contradiction in Architecture,* New York:The Museum of Modern Art, 1977
29 Bakalchev M., *Домување како урбан фрагмент на примерот на Скопје*, Unpublished PHD dissertation, Faculty of Architecture Skopje, 2004
30 https://yomadic.com/communist-architecture-skopje-kenzo-tange/
31 With the approval of the Board of Consultants, invitations to compete were sent to and accepted by the following: Slavko Brezovski and hiss associates in the Makedonijaproekt of Skopje, J.H. van den Broek and Bakema of Rotterdam, Aleksander Djordjevic and his colleagues in the Belgrade Institute of Town Planning , Radovan Miscevic and Fedor Wnzler of the Croatian Institute fo Town Planning at Zagreb, Luigi Piccinato (with studio Scimemi) of Rome, Eduard Ravnikar and associates of Ljubljana, Maurice Rotival of New York and Kenzo Tange of Tokio.
32 Ernest Weissmann at that time was the chief of the UN Centre of Housing, Building and Planning and was leading the mission in Skopje
33 Bettinoti M., *Kenzo Tange 1946-1996. Architecture and Urban Design*, Mondadori Electa, Milano, 1996
34 AA.VV., *Findings,* Youth Cultural Center, Skopje, 2014, pag 54
35 Unwin S., *Analyzing Architecture*, Routledge, London, 1997, pag. 23
36 The materials have been collected from six different archives: Skopje City Archive, The Institute for Urbanism (the materials have been retreated from Divna Pencic), Macedonian Opera and Ballet Archive, Transportation center Archive, Private Archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski, Private Archive of Mimoza Tomic
37 Graf D., (1986) Diagrams in Perspecta, Vol. 22, Paradigms of Architecture., pp. 42-71
38 Roberts, B. (2016). Tabula plena, forms of urban preservation, Lars Muller Publishers, Zurich
39 Biro71 is Slovenian architectural office situated in Ljubljana consisted of Roman Cizej, Oton Gashpari, Shtefan Kacin, Peter Kershovan, Jurij Princes, Marjan Urshic and Peter Zidanovic
40 https://snohetta.com/project/42-norwegian-national-opera-and-ballet
41 Boris Splinder, personal correspondence to Zoran Petrovski, in Heroes for One Day
42 Marko Marijan Mušič is born in Ljubljana, architect, architectural historian and theoretician. Studied architecture and graduated in 1966 in Ljubljana (Edvard Ravnikar). Acquired additional expertise in Denmark (Ejnar Dyggve) and in the United States of America (Louis I. Kahn).
43 Janko Konstantinov graduated from the Faculty of Architecture in Belgrade in the class of professor Mate Bajlon. In 1954, he went on to specialize in his field at the Royal Danish

Academy of Art and Architecture in Copenhagen. Konstantinov also gained experience working on projects in Finland, where he worked with the Finnish architect Alvar Aalto.
44 Zoran Shtaklev (born 1939) graduated at the faculty of architecture in 1966 in the class of professor Boris Cipan. After the graduation started working at design company *Beton* until 1994 when starts working as an autonomous architect.
45 Mimoza Nestorova-Tomić (born 1929) graduated at the Faculty of Architecture in Belgrade in the class of Branko Maksimovic. She is a Macedonian architect, planner, and urban designer, who played a significant role in the masterplan and reconstruction of Skopje after the 1963 earthquake. Initially she worked specifically in the team for social planning with Polservice, the Polish consultants, alongside Kenzo Tange.
46 Kiril Muratovski (born 1930) graduated at the Faculty of Architecture in Skopje in 1957. After the graduation has worked in the design offices *Proektant* and *Makedonijaproekt*.
47 Boris Cipan (born 1918) in Ohrid, graduated at the faculty of Architecture in Belgrade in 1941. From 1949 to 1983 he works as a part-time and full time professor at the Faculty of Architecture in Skopje where in 1969/70/71 he was the dean.
48 Petar Mulickovski (born 1929) graduated at the Faculty of Architecture in Ljubljana in 1957 in the class of professor Edo Ravnikar He specialized in Regional Spatial Planning at the University of California, Berkeley in 1964, and Harvard University in Massachusetts in 1965, at the Frank Lloyd Wright Studio in Thalassine West, Arizona, and at the same year at the Mies van der Rohe School - Illinois Institute of Technology.
49 According to the Ninth Version of the project
50 Georgi Konstantinovski (born July 29, 1930 in Kraguevac, Serbia) is Macedonian architect, writer and educator. Graduated from the Faculty of Architecture in Skopje, University SS Cyril and Methodius in 1956, he received his Master of Architecture Degree from Yale University in 1965, under the leadership of Paul Rudolph and Serge Chermayeff in New Haven, USA. His early works are considered as Brutalist. He worked and collaborated with I. M. Pei, Henry Cobb and Araldo Cossutta.
51 named after the Macedonian anti Ottoman revolutionary leader Georgi Nikolov Delcev, known as Goce Delcev
52 recalling the streets in the air proposed in the 1950s by British architects Alison and Peter Smithson
53 In 1964, Fumihiko Maki publishes his research on ‘group form’ in the publication Investigations in Collective Form, which contains an article written together with Masato Othaka and originally printed in the Metabolist manifesto, and an investigation on ‘Linkage’ written in collaboration with Jerry Goldberg
54 Maki, M. Toward Group Form, in Ockman, J. Architecture Culture 1943-1968. A Documentary Anthology. Rizzoli, New York, 2005, p. 324.
55 Zivko Popovski (born 1934-2017) graduated at the Faculty of Architecture, under the mentorship of prof. Boris Chipan. His academic and professional career is influenced also by the numerous study visits, as his study stay at the architectural office of Van den Broek and Jacob Bakema in Rotterdam, Netherland. From 1995 to 1999 he was the dean of the Faculty of Architecture, ending his career as a full professor.
56 Tigers is polish group of architects consisting of Waclaw Klyszewski, Jerzy Mokrzynski and Eugeniusz Wierzbicki
57 Rossi, A., *The Architecture of the City,* The Graham Foundation for Advanced Studies in the Fine Arts, Chicago, Ilinois, The Institute for Architecture and Urban Studies, New York, by The MIT Press Cambridge, Massachusetts, and London, England, 1982
58 Radomir Lalovikj (born 1933) in 1960 graduated at the Faculty of Architecture in Skopje and immediately after started working as professional architect realizing numerious architectural projects.
59 Olga Papesh (born 1930-2011) graduated at the Faculty of Architecture in Skopje in the class of Milan Zlokovikj. After the graduation had a short work experience in Hague and afterwards started working at the design company *Beton*
60 Krsto Todorovski (born 1930-2016) graduated at the faculty of Architecture in Skopje in the class of prof. Dragoljub Jovanovikj. After the graduation started working at the design company *Makedonija Proekt* and in many occasions has collaborated with Ludek Kubesh.

6. Bibliography

General

Aureli V.P., The City as a Project, Ruby Press, Berlin, 2016
Koolhaas R., Delirious New York: A Retroactive Manifesto for manhattan, 010 Publishers, Rotterdam, 1994
Rowe C., Koetter F., Collage city, Mit Press, Cambridge,1985
Venturi R., Complexity and Contradiction in Architecture, The Museum of Modern Art, New York, 1977
Venturi R., Scott-Brown D., Izenour S., Learning From Las Vegas, MIT press, Cambridge, 1972

Brutalism

Stierli M., Kulic V., Toward a Concrete Utopia: Architecture in Yugoslavia 1948-1980, Museum of Modern Art, New York, 2018 Grindrod J., How to Love Brutalism, Batsford, London, 2018
Elser O., Kurz P., Schmal P.C., SOS Brutalism, Global Survey, Deutsches Architekturmuseum, Zurich, 2017
Wunstenrot Foundation, Brutalism, Contributions to the international symposium in Berlin 2012, Park Books, Zurich, 2017
Henley S., Redefining Brutalism, RIBA Publishing, New Castle, 2017
Gatley J., King S., Brutalism Resurgent, Routledge, New York, 2017
Koolhaas R., Obrist U.H., Project Japan Metabolism Talks…, Tascen, Spain, 2016
Beanland C., Concrete Concept, The Quarto Group, London, 2016
Emili R.A., Puro e semplice Pure and simple, Edizioni Kappa, Roma, 2008
AA.VV., “Brutalism”, CLOG, Canada, 2013
Banham R., “The New Brutalism”, October 136, 2011
Banham R., Megastructure: Urban Futures of the Recent Past, Harper and Row, 2011
Kulterman U., Tange K., 1946-1969, Architecture and Urban design, Verlag fur Architektur, Artemis, Zurich, 1970
Maki F., Masato O., Investigations in Collective Form, The School of Architecture, Washington University, 1964
Smithson A., Smithson P., “Cluster city, a new shape for the community”, Architectural Review CXXII n.730, November 1957
Banham R., “The New Brutalism”, Architectural Review, no.708, December, 1955
Smithson A., Smithson P., “The new brutalism”, Architectural Design vol. XXV, January 1955

Skopje

Hefti S., Kokalevski D., Скопје воки токи, Spector books, Leipzig, 2019
Христова-Поповска А., Батакоја М., На Скопје Со Љубов! Архитектонската Мисла на Живко Поповски, Приватен Принт, Скопје, 2017
AA.VV., SKOPJE Architektur im mazedonischen context Macedonian architecture in context, Mury Salzman Verlag, Vienna, 2017
Serafimovski D., Prlja N., Heroes For One Day, Skopje, 2016
Ivanovska A., Архитектурата од периодот на постземјотресната обнова на Скопје- Вредности и состојба во рамки на современиот контекст, Unpublished PHD dissertation, Faculty of Architecture Skopje, 2015
AA.VV., Биографија на Едно Архитектонско Дело: Телекомуникациски Центар Скопје, Музеј на Град Скопје, Скопје, 2016
AA.VV., Findings, Youth Cultural Center, Skopje, 2014
Бакалчев В., Бакалчев М., „Фрагменти на сеќавањата: за архитектурата на македонската опера и балет“, Пресинг, Списание на комората на овластени архитекти и овластени инженери на Македонија, III/18, Skopje, 2013
Mrduljash M., Kulich V., Unfinished Modernizations, Between Utopia and Pragmatism, Croatian Architects' Association Zagreb, 2012
Kulic V., Mrduljas M., Thaler W., Modernism In-Between, The Mediatory Architectures of Socialist Yugoslavia, jovis Verlag GmbH, Berlin, 2012
Бакалчев М., Домување како урбан фрагмент на примерот на Скопје, Докторска дисертација, Универзитет „Св. Кирил и Методиј“-Архитектонски факултет- Скопје, Скопје, 2004
Константиновски Г., Градителите во Македонија XVII-XX, Книга 1 и 2, Табернакул, Скопје, 2001
Straus I., Arhitektura Jugoslavije 1945-1990, Svjetlost, Sarajevo, 1991
Арсовски Т., Скопје, урбанизам и архитектура 1945-1985, книга 2, Собрание на Град Скопје, Скопје, 1989
Арсовски Т., Скопје, урбан развиток, Собрание на Град Скопје, Скопје
Радовиќ В., Скопје 1963-83, Партизанска књига, Љубљана, 1983
AA.VV., Градски трговски центар Скопје, Основна заедница за деловен простор-Скопје, Скопје, 1981
Токарев М., 100 Години Амодерна Архитектура, Придонесот на Македонија и Југославија (1918-1990), Авторот, Скопје, 2006
AA.VV., Градски Трговски Центар, Младинска Книга, Љубљана, 1981
AA.VV., Градски трговски центар, Македонска книга, Скопје, 1981
AA.VV., Skopje Resurgent, The story of a United Nations Special Fund, Town Planing

Project, Stationery Office Books, New York, 1970
AA.VV., Скопје 30 години слободен развој, Младинска Книга, Љубљана, 1976
Поповски Ј., Скопје 1963, Агенција за фотодокументација, Загреб, 1976
Галиќ Р., Арсовски Т., Скопје 1963-73, Графички завод „Гоце Делчев“, Скопје, 1973
Галиќ Р., Скопје урбанистичка студија, книга 2, Завод за урбанизам и архитектура, Скопје

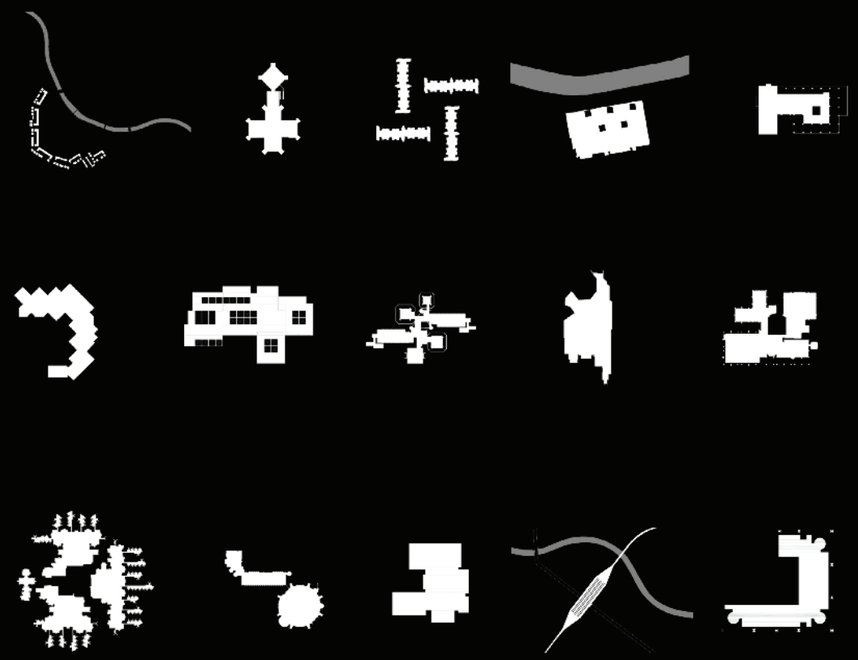
Dictionary
AA.VV., Platform 8, an index & design research, Harvard University Graduate School of Design & ActarD, New York, 2015
AA.VV.,The metapolis dictionary of advanced architecture, city, technology and society in the infirmation age , ACTAR,
Barcelona, 2003
Marini S., Corbellini G., Recycled Theory: Dizionario Illustrato/Illustrated Dictionary, Quodlibet, Macerata, 2016

WEB
http://www.quondam.com/
https://pluscitylab.com/filter/work/Revisiting-Urban-Grids
http://projectivecities.aaschool.ac.uk/portfolio/marcin-ganczarski-campus-and-the-city-in-zurich/
http://projectivecities.aaschool.ac.uk/portfolio/brussels-capital-of-europe/
https://issuu.com/projective/docs/t5_final_dissertation_simong
https://en.wikipedia.org/wiki/Potemkin_village
https://www.studioperforma.it/wp-content/uploads/2017/07/Proceedings-of-the-23rd-International-Seminar-on-Urban-Form-copia-ilovepdf-compressed.pdf
http://www.ugm.si/en/exhibitions/unfinished-modernisations-1010/
https://www.academia.edu/Documents/in/Brutalism_Architecture?page=2
https://www.academia.edu/14806292/Brutalism_Metabolism_and_its_American_parallel_Encounters_in_Skopje_and_in_the_architecture_of_Georgi_Konstantinovski
https://www.academia.edu/33206916/Архитектура_брутализма_у_Србији_Хотел_Златибор_на_Тргу_Партизана_у_Ужицу_Architecture_of_Brutalsm_in_Serbia_Hotel_Zlatibor_in_Užice
https://www.academia.edu/26595815/Conversation_on_Brutalism_Interview_with_Architect_Branislav_Jovin_Razgovor_o_brutalizmu_Intervju_sa_arhitektom_Branislavom_Jovinom_
https://www.cca.qc.ca/journeys/content/504_082-095%20skopje%20linke.pdf
https://seriousinterestsagency.com/background/
ts=RkfO3y81Tg&sig=ySre4gURVgCH2rNNFq909dVpSPU&redir_esc=y#v=onepage&q=brutalist%20architecture%20concepts&f=false
https://sita.uauim.ro/f/sita/art/07_Jones_Youtz_Haigh.pdf
https://www.academia.edu/2147576/Between_Concrete_Walls_-_an_archaeology_of_The_New_Brutalism_University_Medal_Winner_2009_University_of_Sydney_
https://www.academia.edu/33487495/Learning_from_Skopje_2014_Architectural_Spectacle_in_the_21st_Century._2017_LA_Interdisciplinary_Journal_of_Landscape_Architecture_5_66-73
https://www.academia.edu/24288958/Language_of_Architecture_Brutalism_in_Serbia_as_a_Matter_of_Cultural_Exchange
https://www.academia.edu/3549657/New_Brutalism_Topology_and_Image_some_remarks_on_the_architectural_debates_in_England_around_1950
http://www.andrew.cmu.edu/course/48-311/assignments/Past%20Papers/S08%20Langevin%20Paper.pdf
https://www.tandfonline.com/doi/abs/10.1080/13602365.2017.1351781
http://brutalistdc.com/defining-brutalism/
https://www.tandfonline.com/doi/full/10.1080/10331867.2015.1032480?src=recsys
https://www.academia.edu/7162984/Crude_visions_of_modernity_the_legacy_of_New_Brutalism_in_Great_Britain
https://www.archiprix.org/2019/qview/?id=3394
https://tracesf.com/2012/02/strange-atlas-02-pull-it-together/
https://www.academia.edu/people/search?utf8=%E2%9C%93&q=brutalism+and+megastructure
https://www.academia.edu/2184522/The_making_of_a_megastructure_architectural_modernism_town_planning_and_Cumbernauld_s_central_area_1955-75
https://www.academia.edu/6307275/Towards_a_Phenomenology_of_the_Concrete_Megastructure_Space_and_Perception_at_the_Brunswick_Centre_London
https://issuu.com/chiaramassimino/docs/chiara_massimino___skopje._una_citt
https://issuu.com/576554/docs/3_20reviving_20skopje_20-_20city_20
http://projectivecities.aaschool.ac.uk/portfolio/divine-character-the-evolution-of-religious-architecture/
https://david2389.myportfolio.com/taxonomy-of-the-insert
http://ecdm.eu/?p=8480

Università degli Studi *Mediterranea* di Reggio Calabria, Dipartimento di Architettura e Territorio dArTe
Dottorato di Ricerca in Architettura e Territorio - XXXII ciclo

Operative Atlas of Brutalist Skopje

REDESIGN

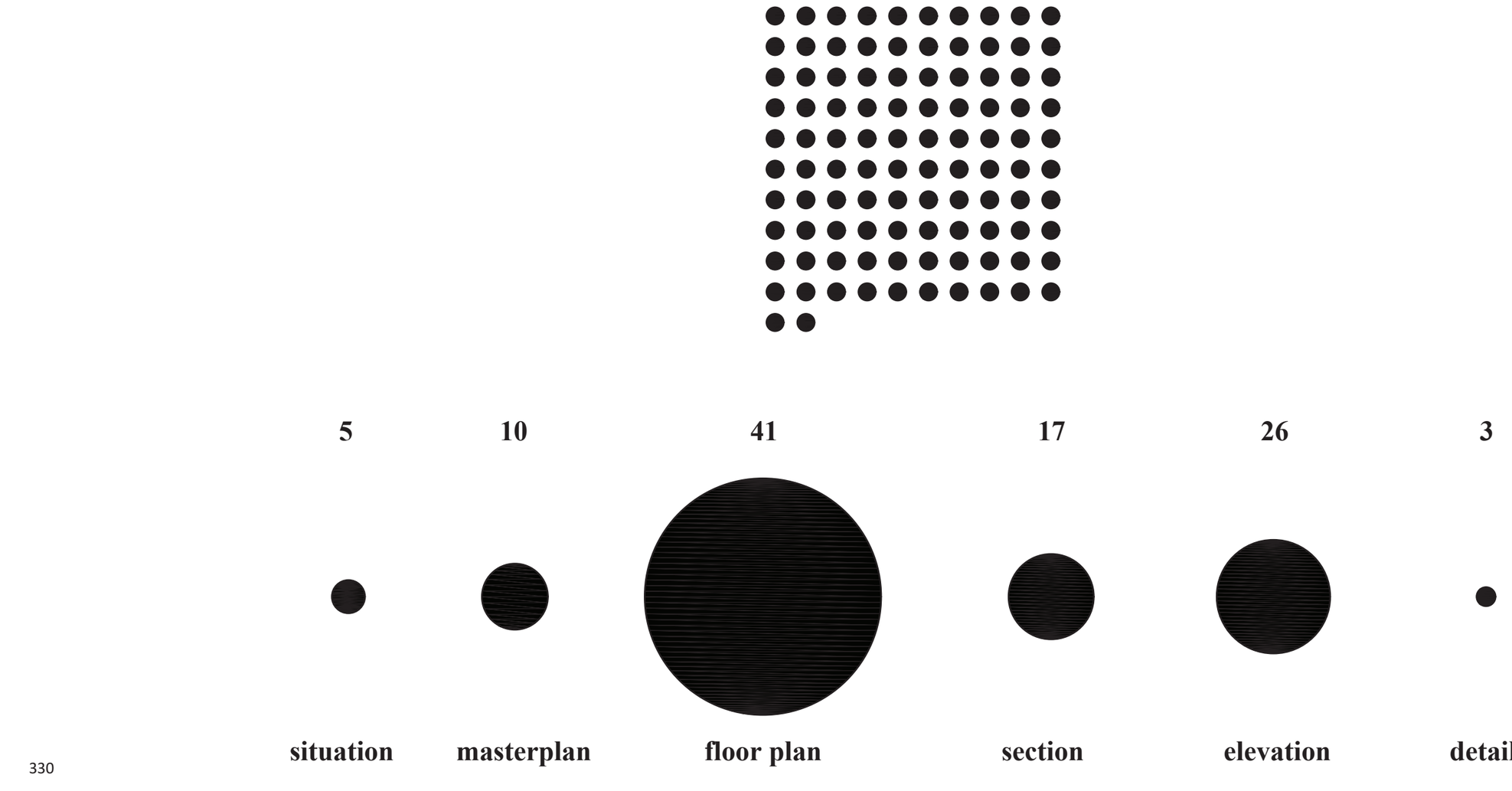


15
CASE STUDIES

5
Archives

Skopje City Archive
The Institute for Urbanism
Macedonian Opera and Ballet Archive
Transportation center Archive
Private Archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski

102
Drawings



[1]
CITY WALL
Kenzo Tange

masterplan
ink on transparent paper copied on insoluble paper
dim. xcm/xcm
Institute for Urbanism

ground floor
ink on transparent paper copied on insoluble paper
dim. xcm/xcm
Institute for Urbanism

floor I
ink on transparent paper copied on insoluble paper
dim. xcm/xcm
Institute for Urbanism

floor V
ink on transparent paper copied on insoluble paper
dim. xcm/xcm
Institute for Urbanism

floor VI
ink on transparent paper copied on insoluble paper
dim. xcm/xcm
Institute for Urbanism

[2]
CITY ARCHIVE
Georgi Konstantinovski

position
ink on transparent paper copied on insoluble paper
dim. 58cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 199

masterplan
ink on transparent paper copied on insoluble paper
dim. 76.2cm/59cm
Skopje City Archive
fund: Idadia municipality, box numer 199

ground floor
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

Ist floor
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

section
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

front elevation
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

side elevation
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

[3]
STUDENT DORMITORY "GOCE DELCHEV"
Georgi Konstantinovski

masterplan
ink on transparent paper copied on insoluble paper
dim. 93cm/78.7cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

ground floor
ink on transparent paper copied on insoluble paper
dim. 151cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

floor I-IV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

floor VI
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

floor VII-XII
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

floor XIII and XIV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

floor XIII and XIV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

section
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
Skopje City Archive
fund: Idadia municipality, box numer XLII
Skopje City Archive

section
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

front elevation
ink on transparent paper copied on insoluble paper
dim. 150cm/109.5cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

side elevation
ink on transparent paper copied on insoluble paper
dim. 151cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

room detail
ink on transparent paper copied on insoluble paper
dim. 101cm/95.5cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

[5]
MUSEUM OF CONTEMPORARY ART
W. Klyszewski, J. Mokrzynski, E. Wierzbicki

masterplan
ink on transparent paper copied on insoluble paper
dim. 100.5cm/105.5cm
Skopje City Archive
fund: Idadia municipality, box numer 219

ground floor
ink on transparent paper copied on insoluble paper
dim. 198.5cm/104.5cm
Skopje City Archive
fund: Idadia municipality, box numer 219

sections
ink on transparent paper copied on insoluble paper
dim. 192cm/105cm
Skopje City Archive
fund: Idadia municipality, box numer 219

[7]
NATIONAL AND UNIVERSITY LIBRARY
Petar Mulichkovski

masterplan
ink on transparent paper copied on insoluble paper
dim. 93cm/75cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

ground floor
ink on transparent paper copied on insoluble paper
dim. 149cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

floor I
ink on transparent paper copied on insoluble paper
dim. 150cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

floor II
ink on transparent paper copied on insoluble paper
dim. 150cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

section V-V
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

section Q-Q
ink on transparent paper copied on insoluble paper
dim. 131cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

section Z-Z
ink on transparent paper copied on insoluble paper
dim. 131cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

section X-X, Y-Y
ink on transparent paper copied on insoluble paper
dim. 117.2cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

elevation north
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

elevation east
ink on transparent paper copied on insoluble paper
dim. 126.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

elevation west
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

elevation south
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

[8]
HIDROMETEOROLOGICAL BUILDING
Krsto Todorovski

masterplan
ink on transparent paper copied on insoluble paper
dim. 106cm/70cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

ground floor
ink on transparent paper copied on insoluble paper
dim. 107.5cm/86.5cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

floot I
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

floot II
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

floot platform
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

sections
ink on transparent paper copied on insoluble paper
dim. 106cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

elevations
ink on transparent paper copied on insoluble paper
dim. 107.5cm/86.5cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

elevations
ink on transparent paper copied on insoluble paper
dim. 108cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

[9]
MACEDONIAN OPERA AND BALLET
Biro 77

masterplan
ink on transparent paper copied on insoluble paper
dim. 147cm/90.5cm
Macedonian Opera and Ballet

floor underground
ink on transparent paper copied on insoluble paper
dim. 150.7cm/67.5cm
Macedonian Opera and Ballet

ground floor
ink on transparent paper copied on insoluble paper
dim. 107.5cm/69.5cm
Macedonian Opera and Ballet

floor I
ink on transparent paper copied on insoluble paper
dim. 117cm/69.5cm
Macedonian Opera and Ballet

[10]
NATIONAL BANK OF MACEDONIA
Olga Papesh, Radomir Lalovikj

masterplan
ink on transparent paper copied on insoluble paper
dim. 58cm/29.7cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

ground floor
ink on transparent paper copied on insoluble paper
dim. 151cm/104cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

floor I
ink on transparent paper copied on insoluble paper
dim. 151cm/104cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

floor VII and IX
ink on transparent paper copied on insoluble paper
dim. 132cm/69.5cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

section A-A
ink on transparent paper copied on insoluble paper
dim. 131cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

section B-B
ink on transparent paper copied on insoluble paper
dim. 113.5cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

section G-G
ink on transparent paper copied on insoluble paper
dim. 131cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

elevation
ink on transparent paper copied on insoluble paper
dim. 130cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

elevation
ink on transparent paper copied on insoluble paper
dim. 112cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

elevation
ink on transparent paper copied on insoluble paper
dim. 113cm/88.5cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

elevation
ink on transparent paper copied on insoluble paper
dim. 129cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

[11]
SS CYRIL AND METHODIOUS UNIVERSITY
Marko Mushic

masterplan
ink on transparent paper copied on insoluble paper
dim. 144.5cm/109.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

section
ink on transparent paper copied on insoluble paper
dim. 148cm/45cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

elevations
ink on transparent paper copied on insoluble paper
dim. 225cm/50.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

ground floor Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/106cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

floor I Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/106.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

floor II Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/105.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

ground floor
ink on transparent paper copied on insoluble paper
dim. 81cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

floor I
ink on transparent paper copied on insoluble paper
dim. 81cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

floor II
ink on transparent paper copied on insoluble paper
dim. 84.5cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

elevations
ink on transparent paper copied on insoluble paper
dim. 113cm/49cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

[12]
TELECOMUNICATION CENTER
Janko Konstantinov

masterplan
ink on transparent paper copied on insoluble paper
dim. 107cm/70.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

masterplan ground floor
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski

ground floor counter hall
ink on transparent paper copied on insoluble paper
dim. 105cm/80.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

floor I counter hall
ink on transparent paper copied on insoluble paper
dim. 105cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

sections counter hall
ink on transparent paper copied on insoluble paper
dim. 104.5cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

sections counter hall
ink on transparent paper copied on insoluble paper
dim. 104.5cm/79.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

elevations counter hall
ink on transparent paper copied on insoluble paper
dim. 108.5cm/81cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

elevations counter hall
ink on transparent paper copied on insoluble paper
dim. 104.5cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

details counter hall
ink on transparent paper copied on insoluble paper
dim. 130cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

ground floor main building
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski

elevation main building
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski

[13]
MAC. ACADEMY OF SCIENCES AND ART
Boris Chipan

masterplan
ink on transparent paper copied on insoluble paper
dim. 142cm/75cm
Skopje City Archive
fund: Additional 1973, box numer 25

ground floor part A
ink on transparent paper copied on insoluble paper
dim. 171cm/80.5cm
Skopje City Archive
fund: Additional 1973, box numer 25

floor I part A
ink on transparent paper copied on insoluble paper
dim. 173.5cm/80.5cm
Skopje City Archive
fund: Additional 1973, box numer 25

floor II part A
ink on transparent paper copied on insoluble paper
dim. 179cm/80cm
Skopje City Archive
fund: Additional 1973, box numer 25

ground floor part B
ink on transparent paper copied on insoluble paper
dim. 127cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25

floor I part B
ink on transparent paper copied on insoluble paper
dim. 127.5cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25

floor II part B
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25

ground floor part V
ink on transparent paper copied on insoluble paper
dim. 150cm/174cm
Skopje City Archive
fund: Additional 1973, box numer 25

floor I part V
ink on transparent paper copied on insoluble paper
dim. 140cm/174cm
Skopje City Archive
fund: Additional 1973, box numer 25

floor II part V
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25

section
ink on transparent paper copied on insoluble paper
dim. 180cm/60cm
Skopje City Archive
fund: Additional 1973, box numer 25

section
ink on transparent paper copied on insoluble paper
dim. 125.5cm/64cm
Skopje City Archive
fund: Additional 1973, box numer 25

[13]
MAC. ACADEMY OF SCIENCES AND ART
Boris Chipan

elevation east
ink on transparent paper copied on insoluble paper
dim. 160cm/70cm
Skopje City Archive
fund: Additional 1973, box numer 25

elevation nort
ink on transparent paper copied on insoluble paper
dim. 180cm/70cm
Skopje City Archive
fund: Additional 1973, box numer 25

elevation south
ink on transparent paper copied on insoluble paper
dim. 184cm/72cm
Skopje City Archive
fund: Additional 1973, box numer 25

elevation west
ink on transparent paper copied on insoluble paper
dim. 165cm/71cm
Skopje City Archive
fund: Additional 1973, box numer 25

[14]
TRANSPORTATION CENTER
Kenzo Tange

section
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Transportation Center

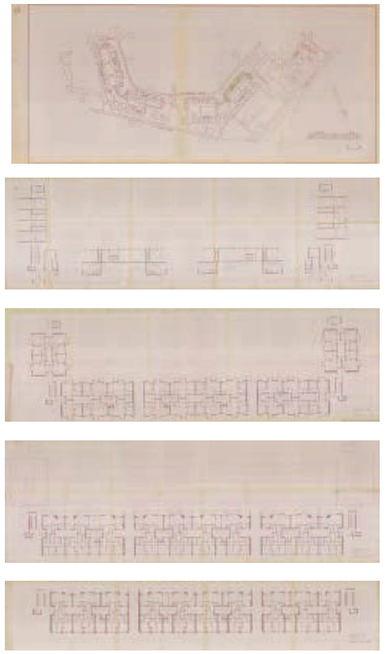
section
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Transportation Center

elevation
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Transportation Center

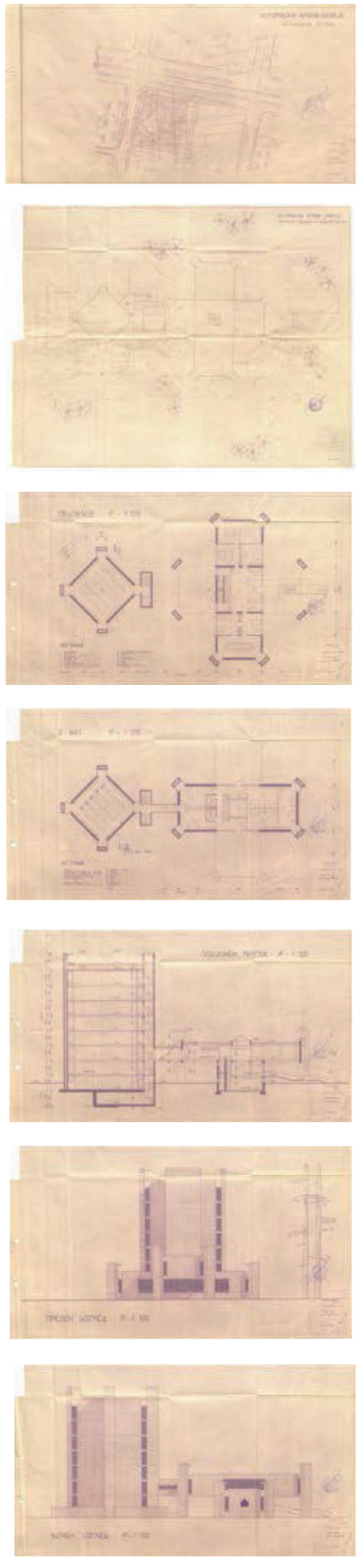
elevation
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Transportation Center

elevation
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Transportation Center

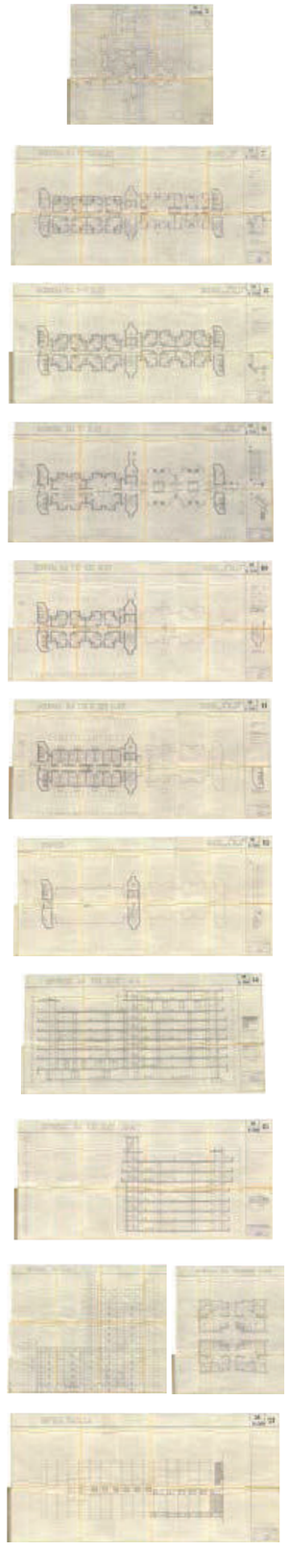
[1]
CITY WALL
Kenzo Tange



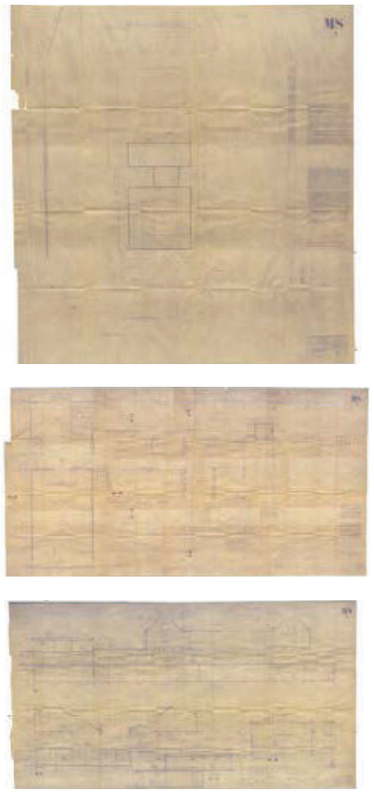
[2]
CITY ARCHIVE
Georgi Konstantinovski



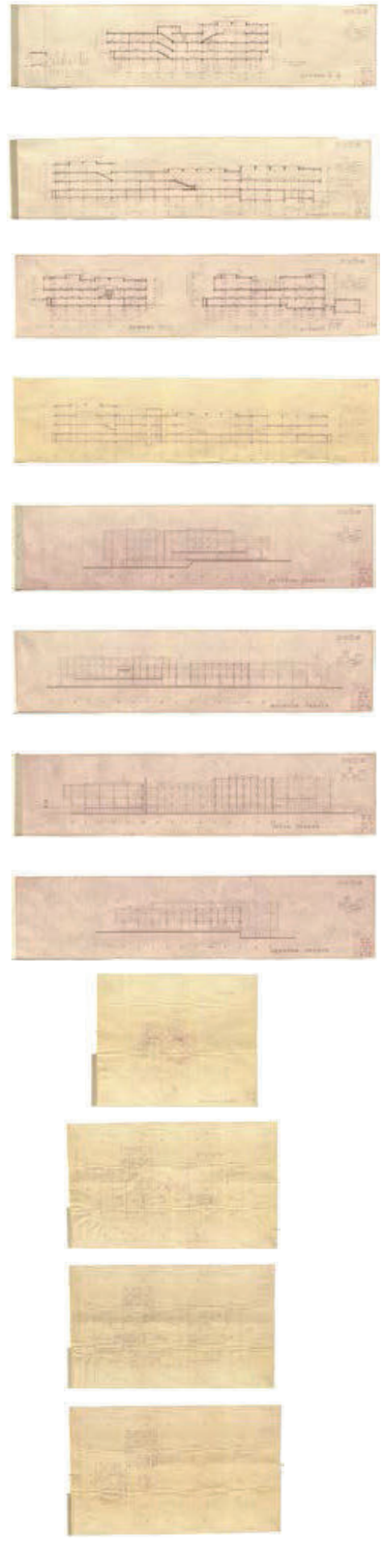
[3]
STUDENT DORMITORY "GOCE DELCHEV"
Georgi Konstantinovski



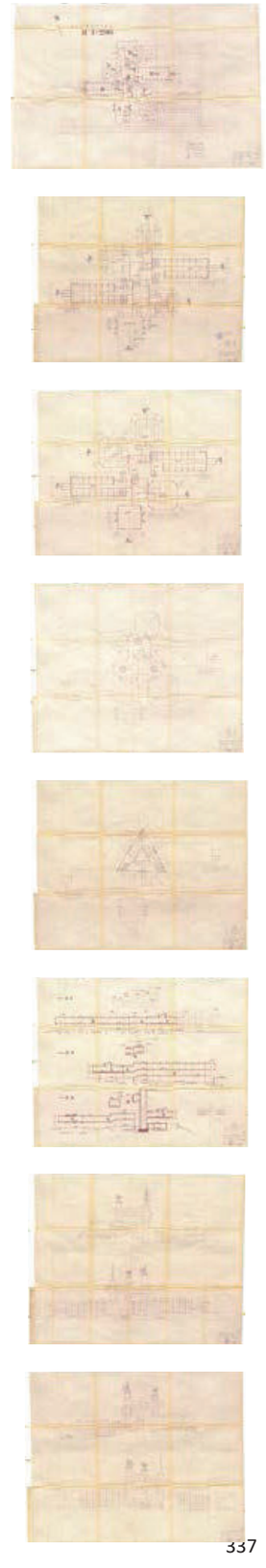
[5]
MUSEUM OF CONTEMPORARY ART
W. Klyszewski, J. Mokrzynski, E. Wierzbicki



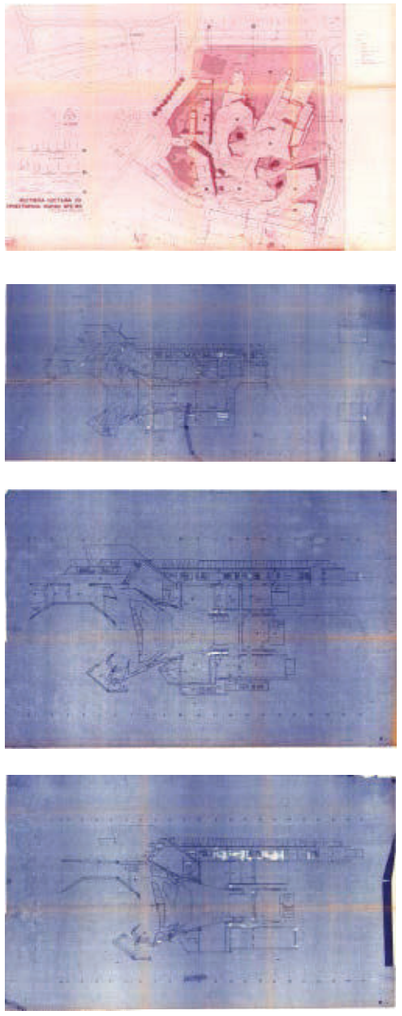
[7]
NATIONAL AND UNIVERSITY LIBRARY
Petar Mulichkovski



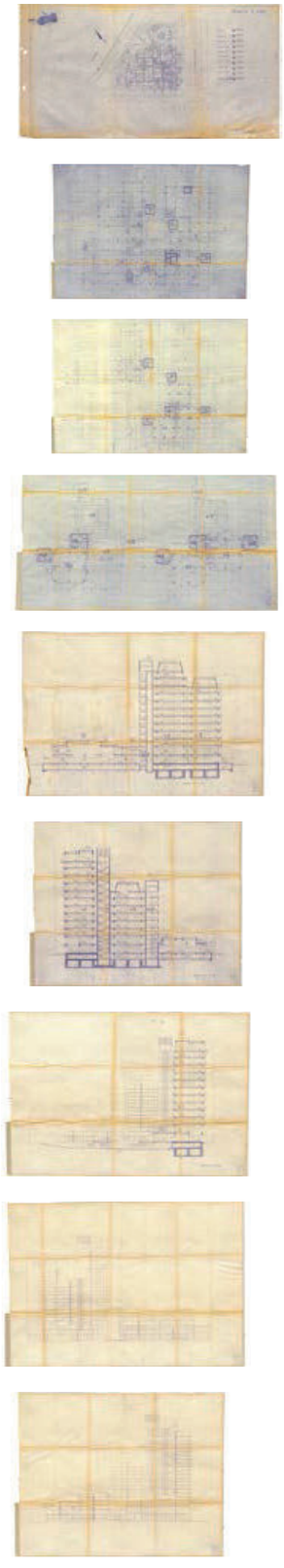
[8]
HIDROMETEOROLOGICAL BUILDING
Krsto Todorovski



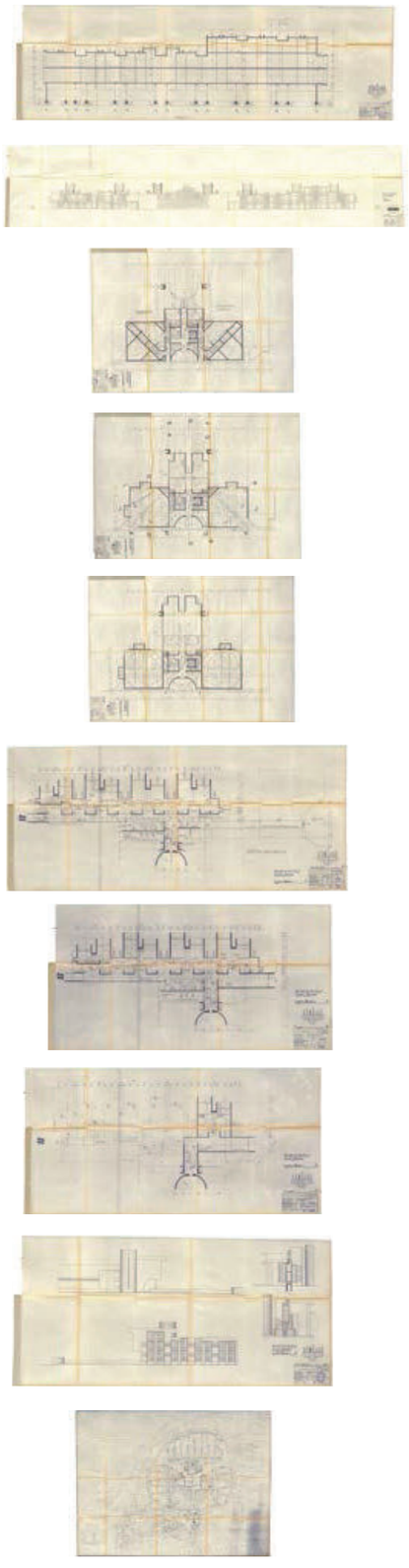
[9]
MACEDONIAN OPERA AND BALLET
Biro 77



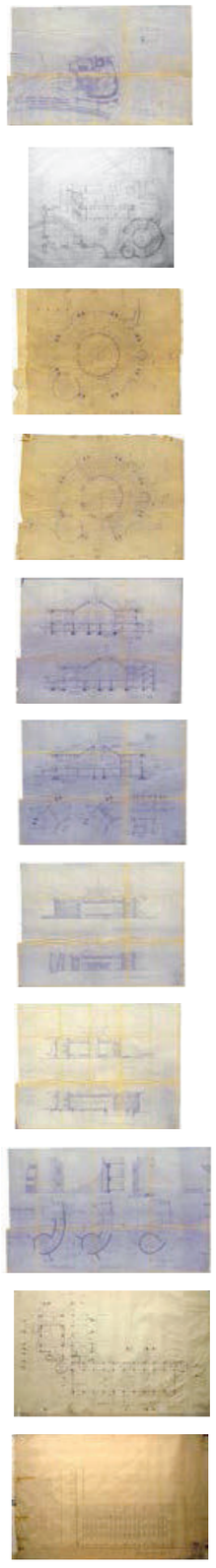
[10]
NATIONAL BANK OF MACEDONIA
Olga Papesh, Radomir Lalovikj



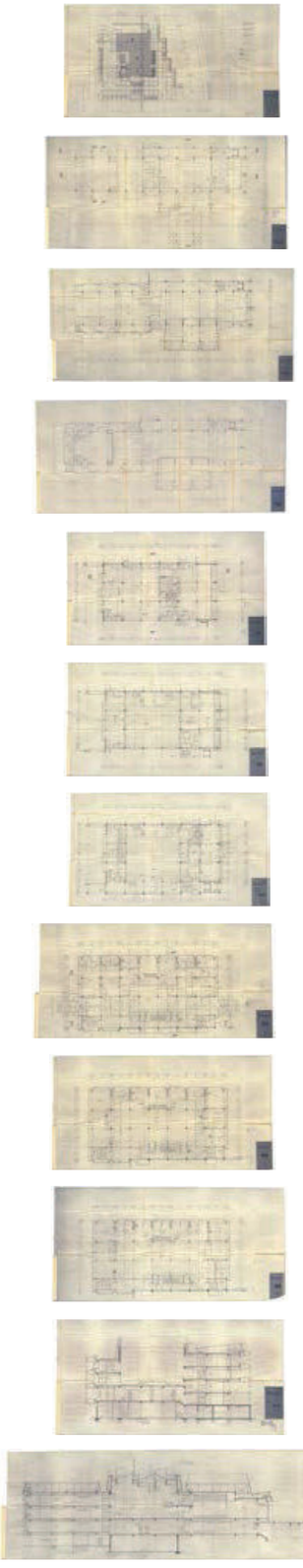
[11]
SS CYRIL AND METHODIOUS UNIVERSITY
Marko Mushic



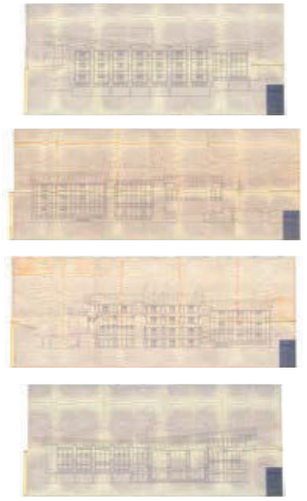
[12]
TELECOMUNICATION CENTER
Janko Konstantinov



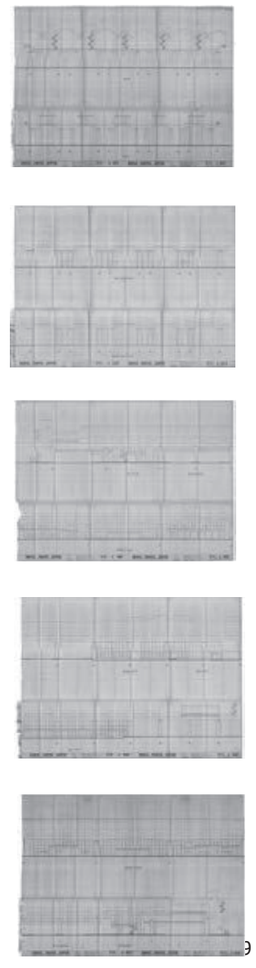
[13]
MAC. ACADEMY OF SCIENCES AND ART
Boris Chipan



[13]
MAC. ACADEMY OF SCIENCES AND ART
Boris Chipan



[14]
TRANSPORTATION CENTER
Kenzo Tange



[ARCHIVE MATERIALS] *City Archive_Georgi Konstantinovski*

position
ink on transparent paper copied on insoluble paper
dim. 58cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 199

masterplan
ink on transparent paper copied on insoluble paper
dim. 76.2cm/59cm
Skopje City Archive
fund: Idadia municipality, box numer 199

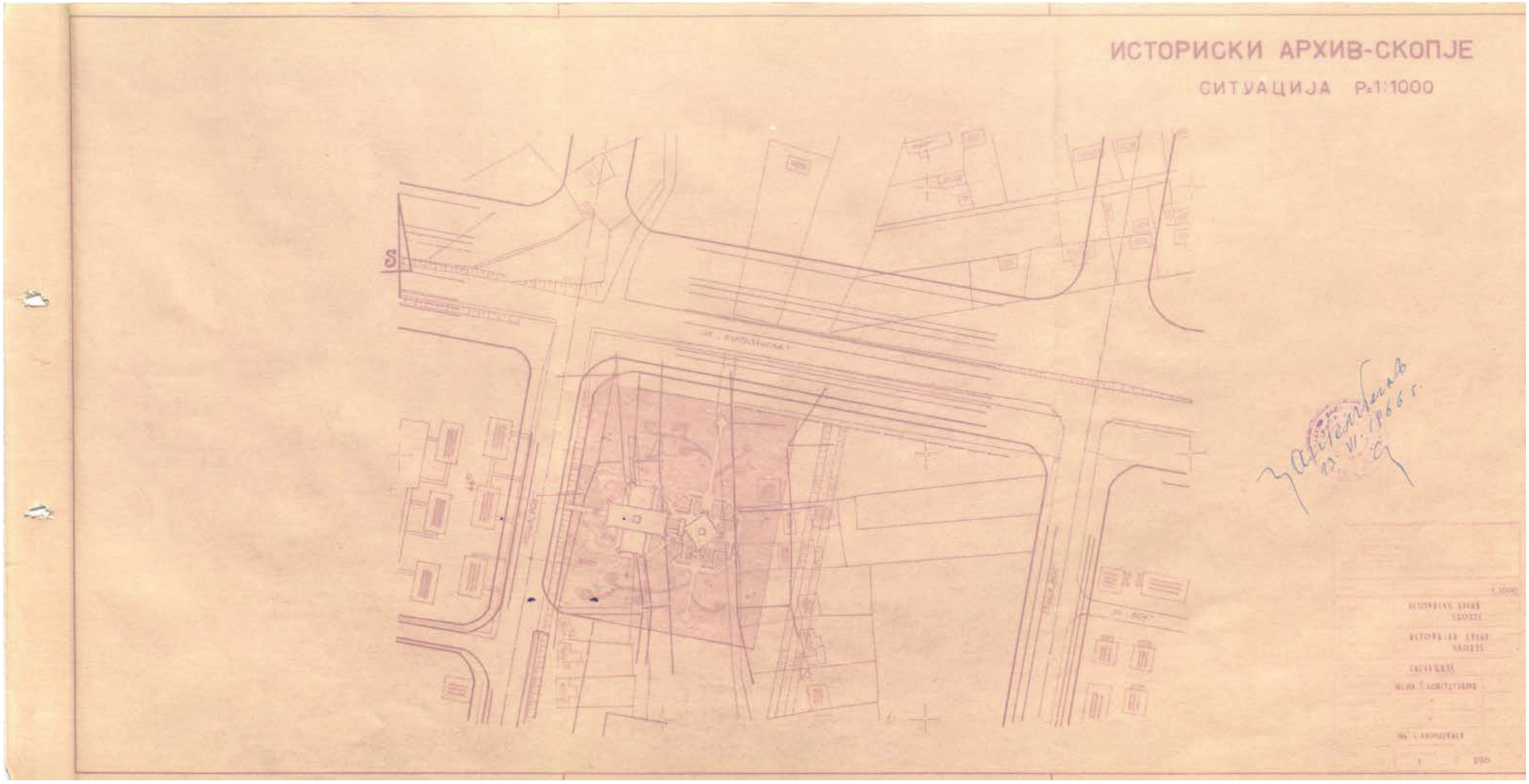
ground floor
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

Ist floor
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

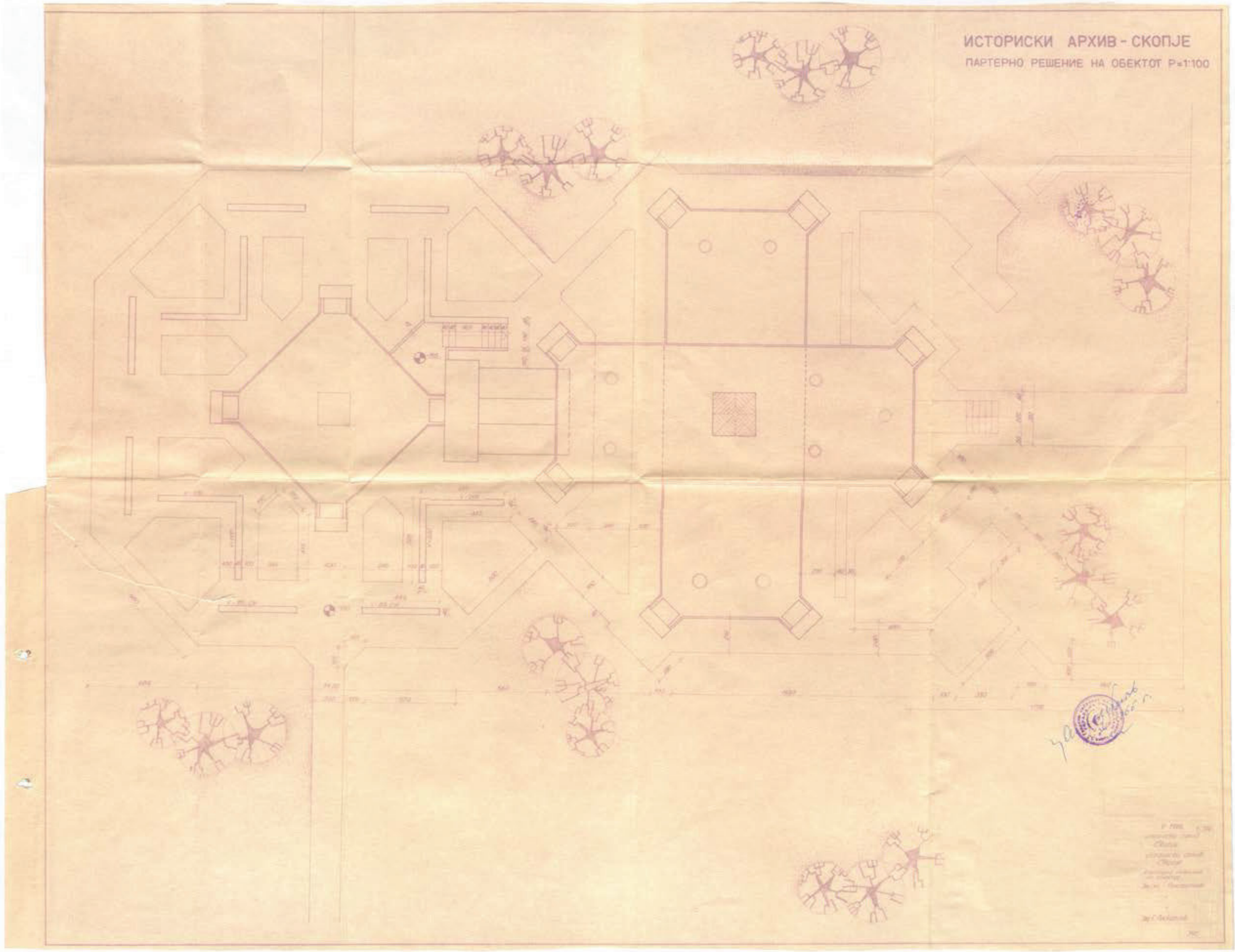
section
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

front elevation
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

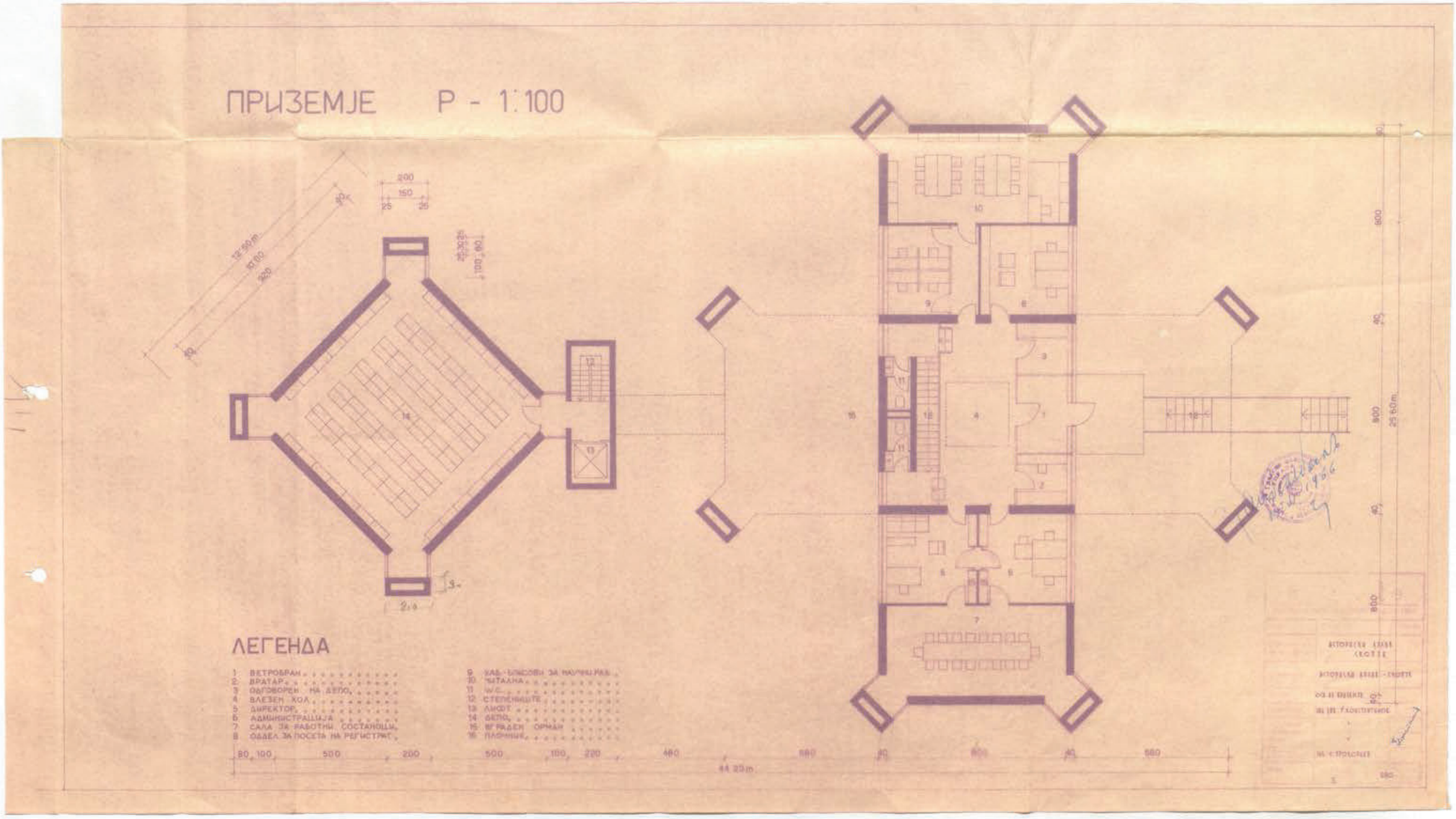
side elevation
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199



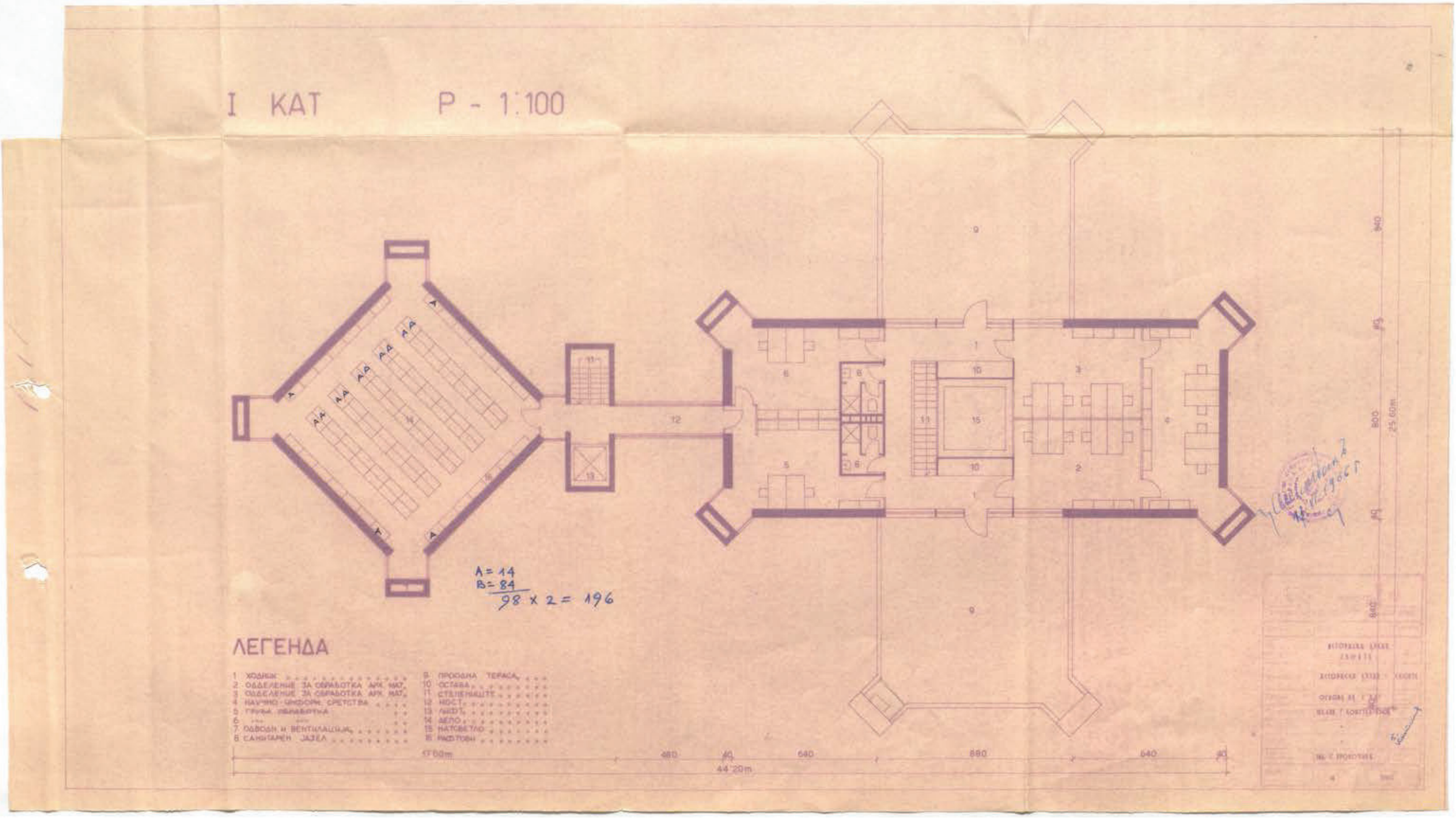
position
ink on transparent paper copied on insoluble paper
dim. 58cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 199



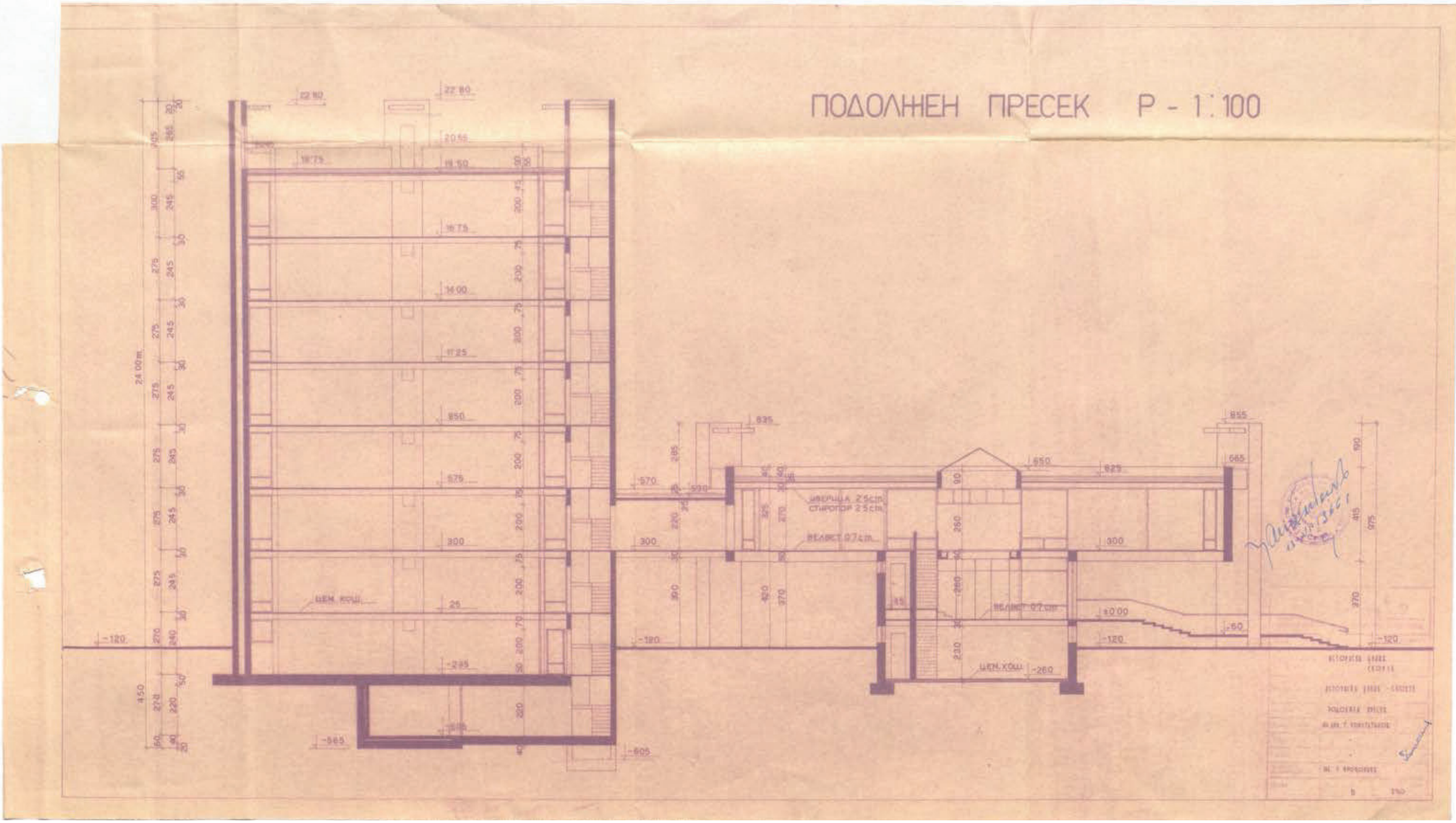
masterplan
ink on transparent paper copied on insoluble paper
dim. 76.2cm/59cm
Skopje City Archive
fund: Idadia municipality, box numer 199



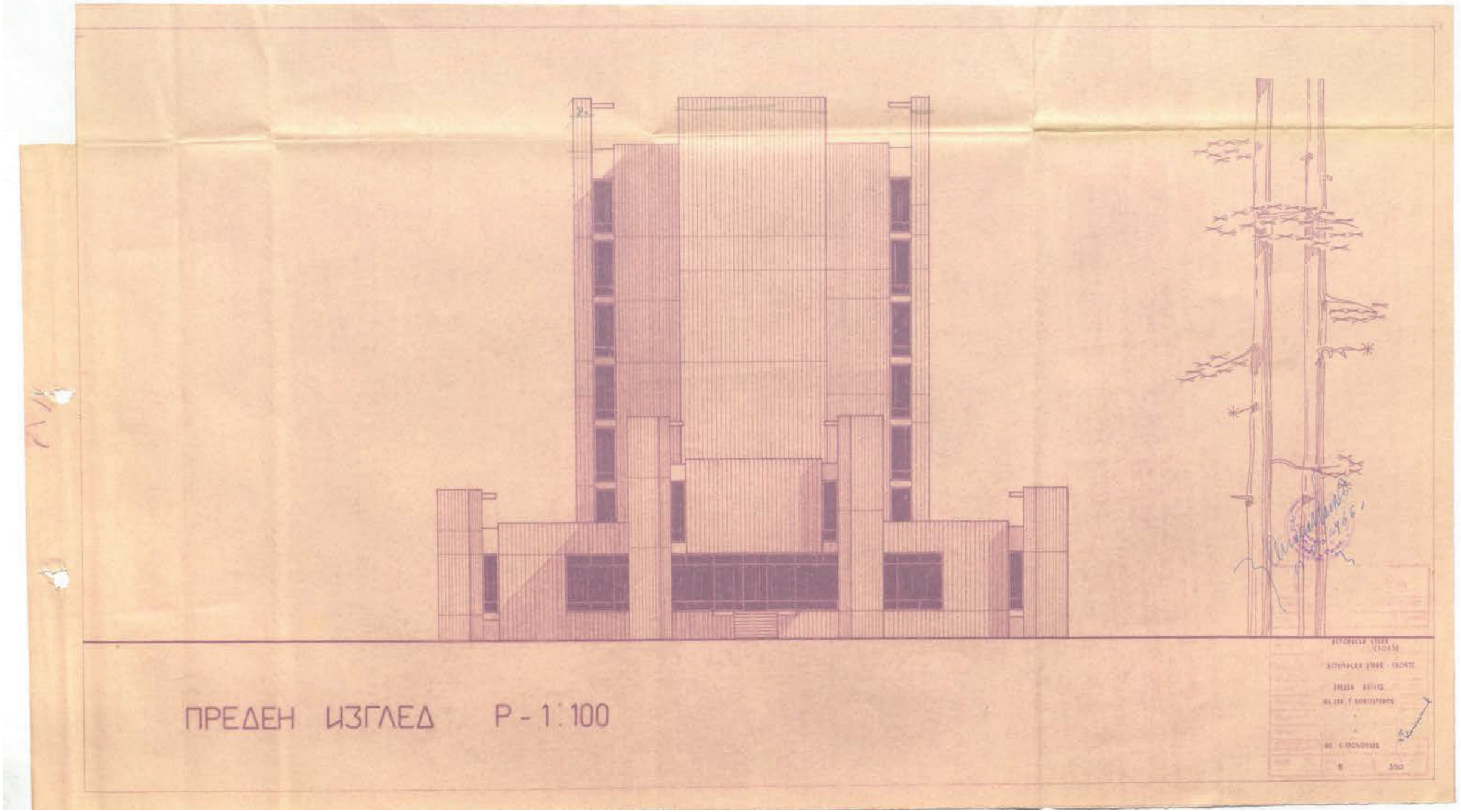
ground floor
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199



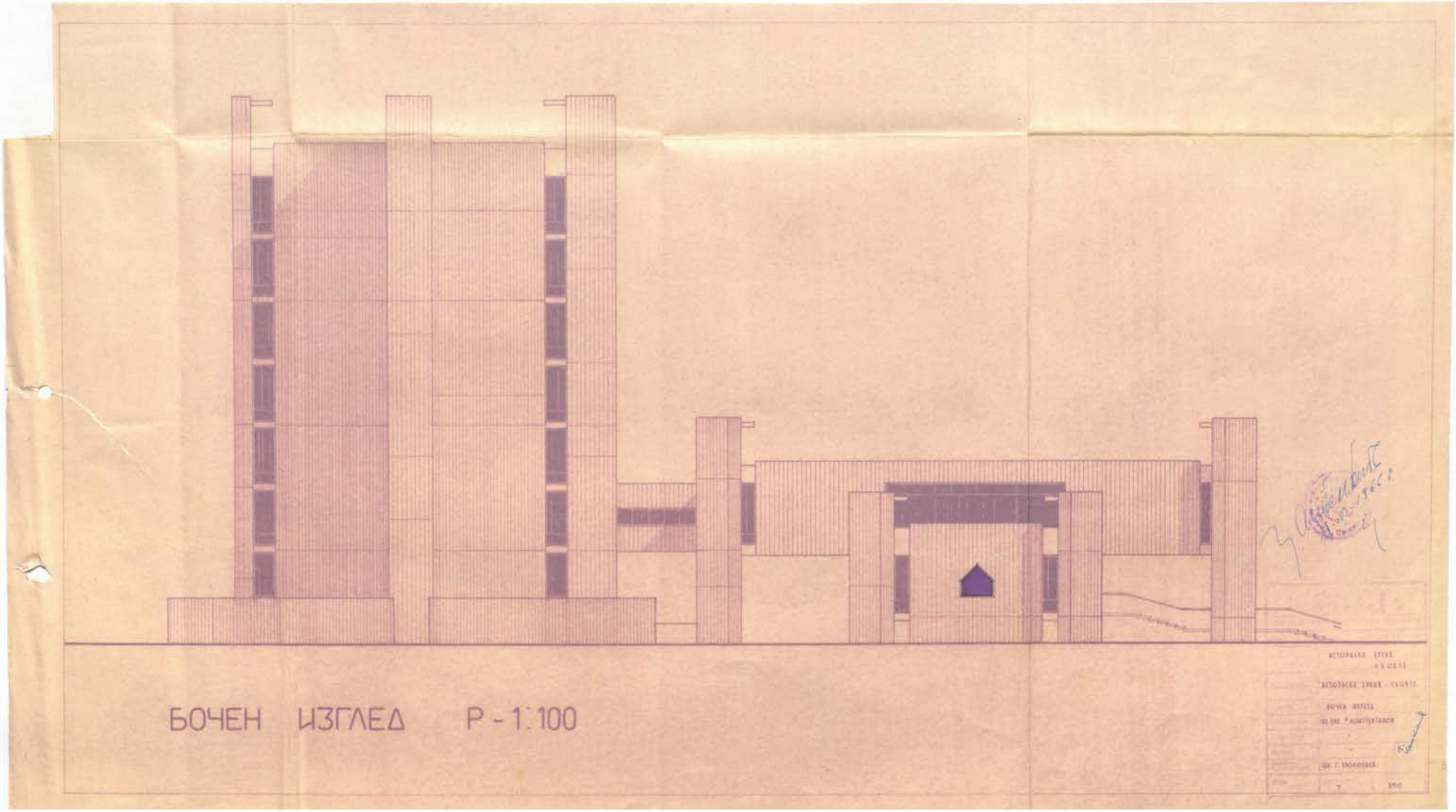
Ist floor
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199



section
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199



front elevation
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199



side elevation
ink on transparent paper copied on insoluble paper
dim. 63.5cm/35.5cm
Skopje City Archive
fund: Idadia municipality, box numer 199

masterplan
ink on transparent paper copied on insoluble paper
dim. 106cm/70cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

ground floor
ink on transparent paper copied on insoluble paper
dim. 107.5cm/86.5cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

floot I
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

floot II
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

floot platform
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

sections
ink on transparent paper copied on insoluble paper
dim. 106cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

elevations
ink on transparent paper copied on insoluble paper
dim. 107.5cm/86.5cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

elevations
ink on transparent paper copied on insoluble paper
dim. 108cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

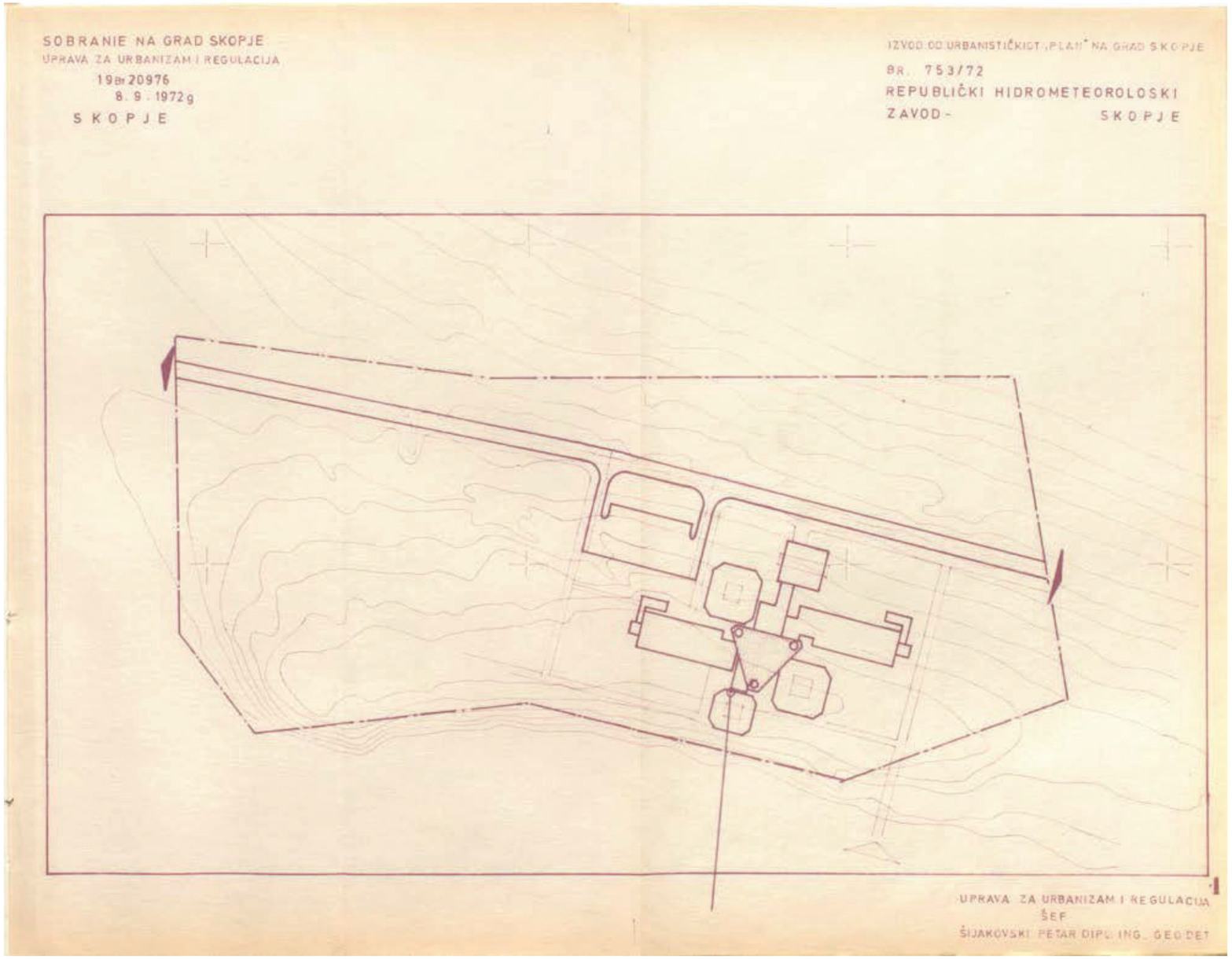


figure 1

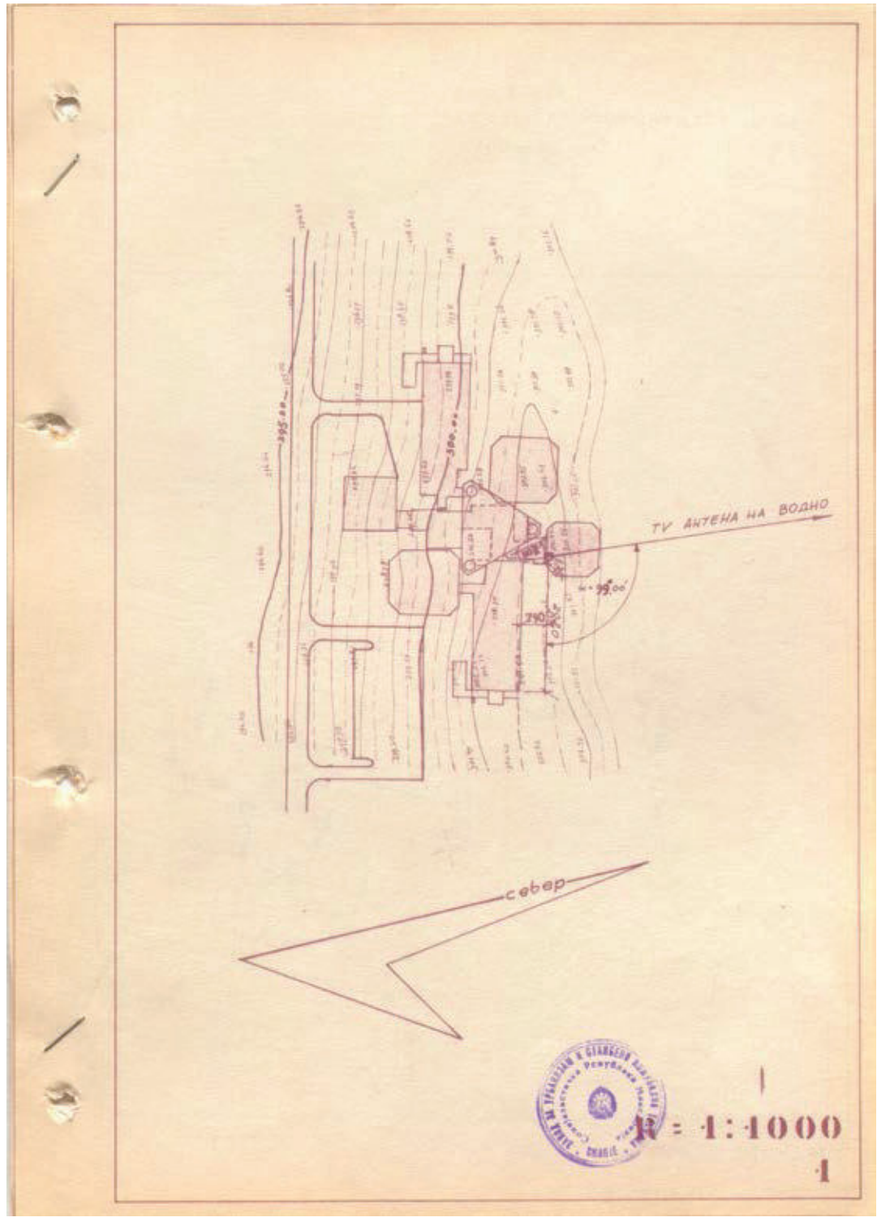
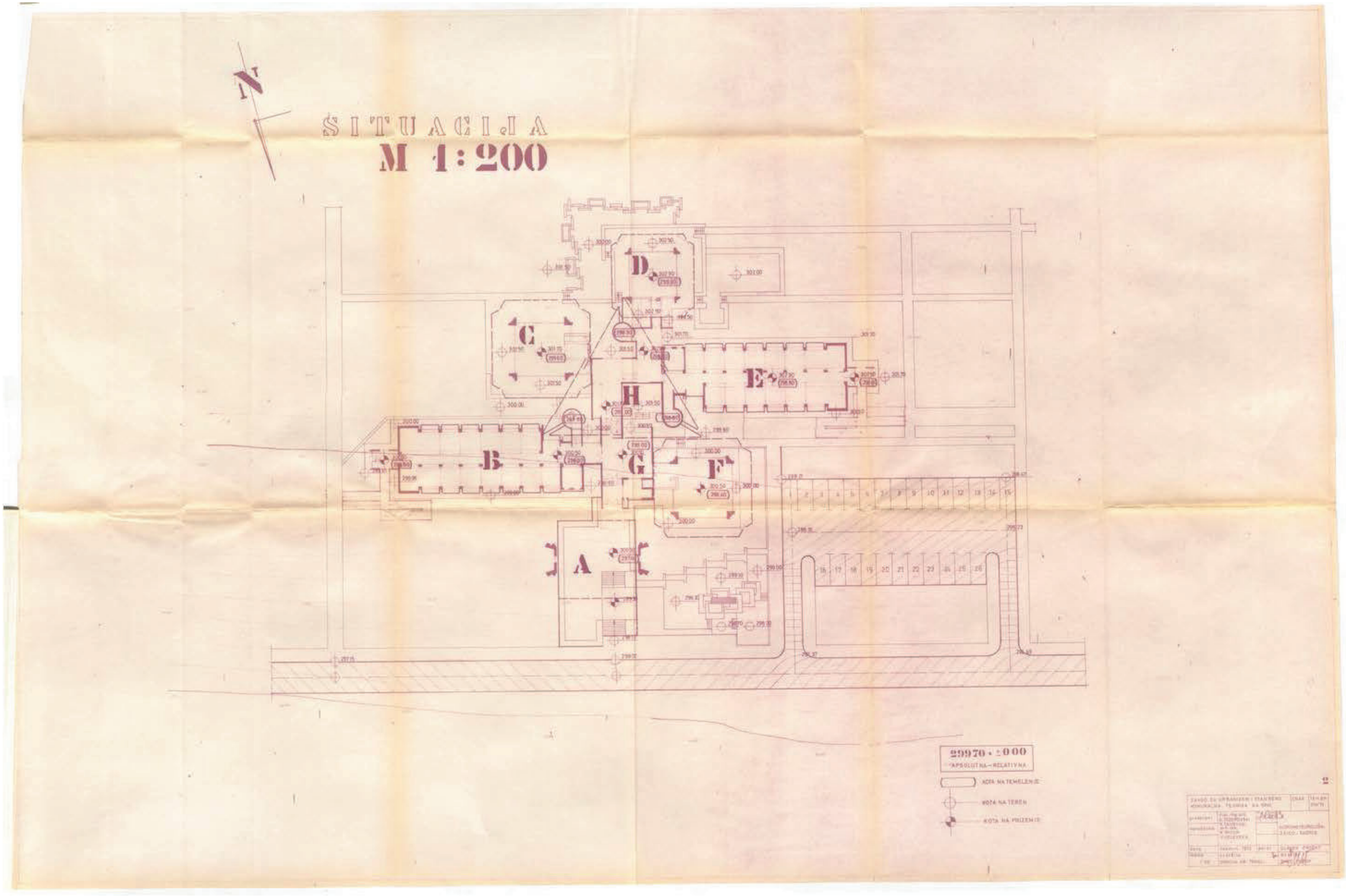


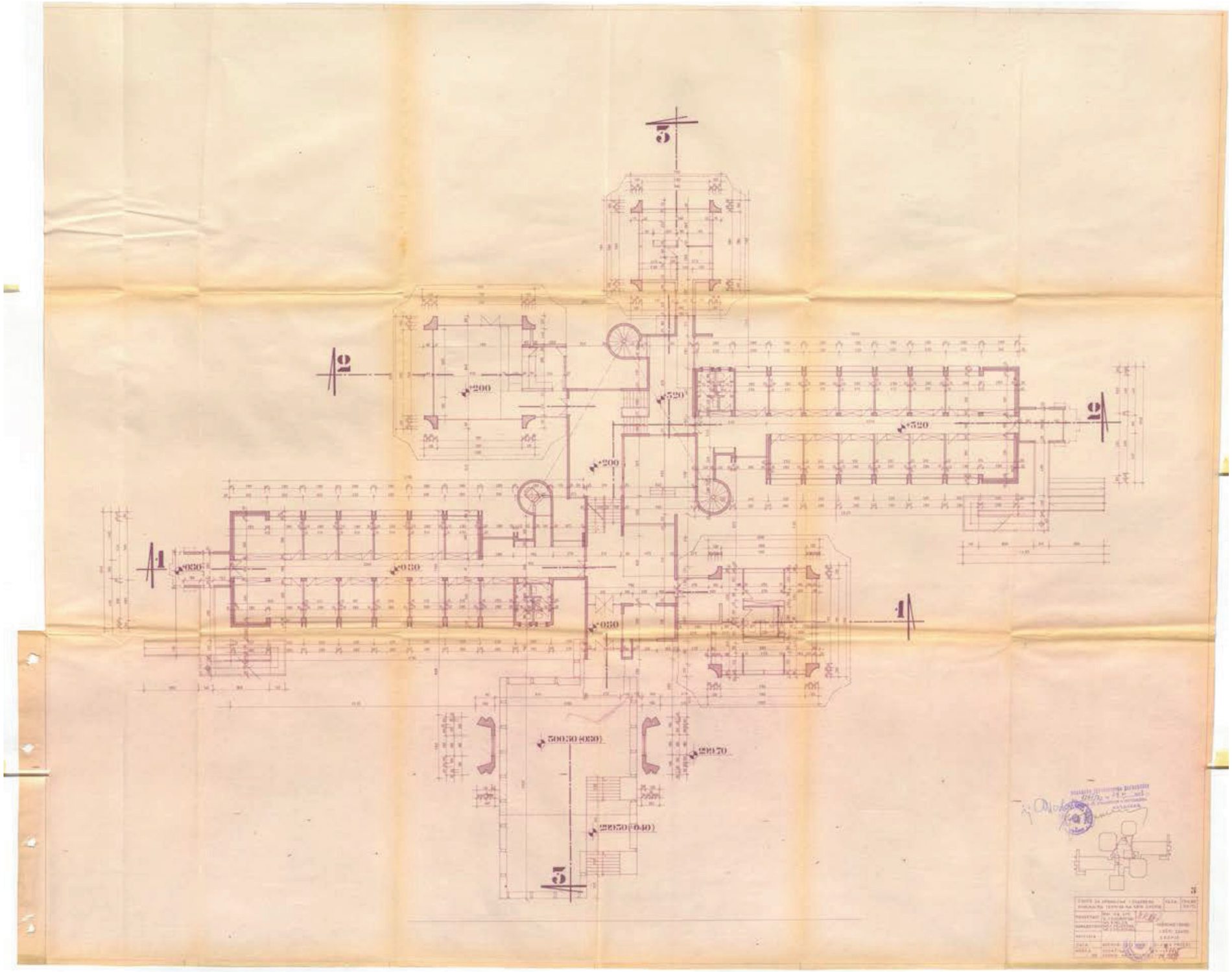
figure 2

figure 1
masterplan
ink on transparent paper copied on insoluble paper
dim. 42cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

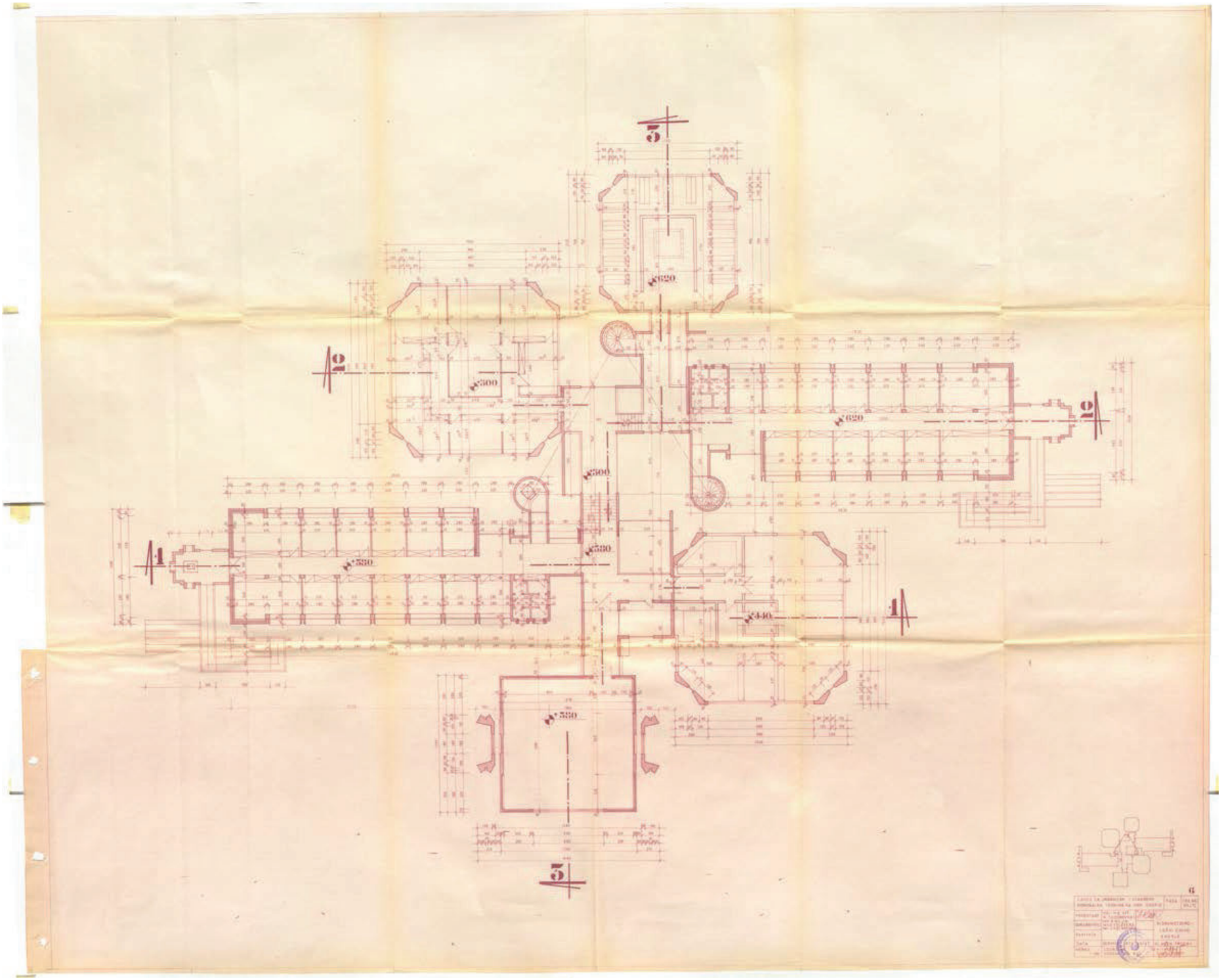
figure 2
elevation west
ink on transparent paper copied on insoluble paper
dim. 21cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208



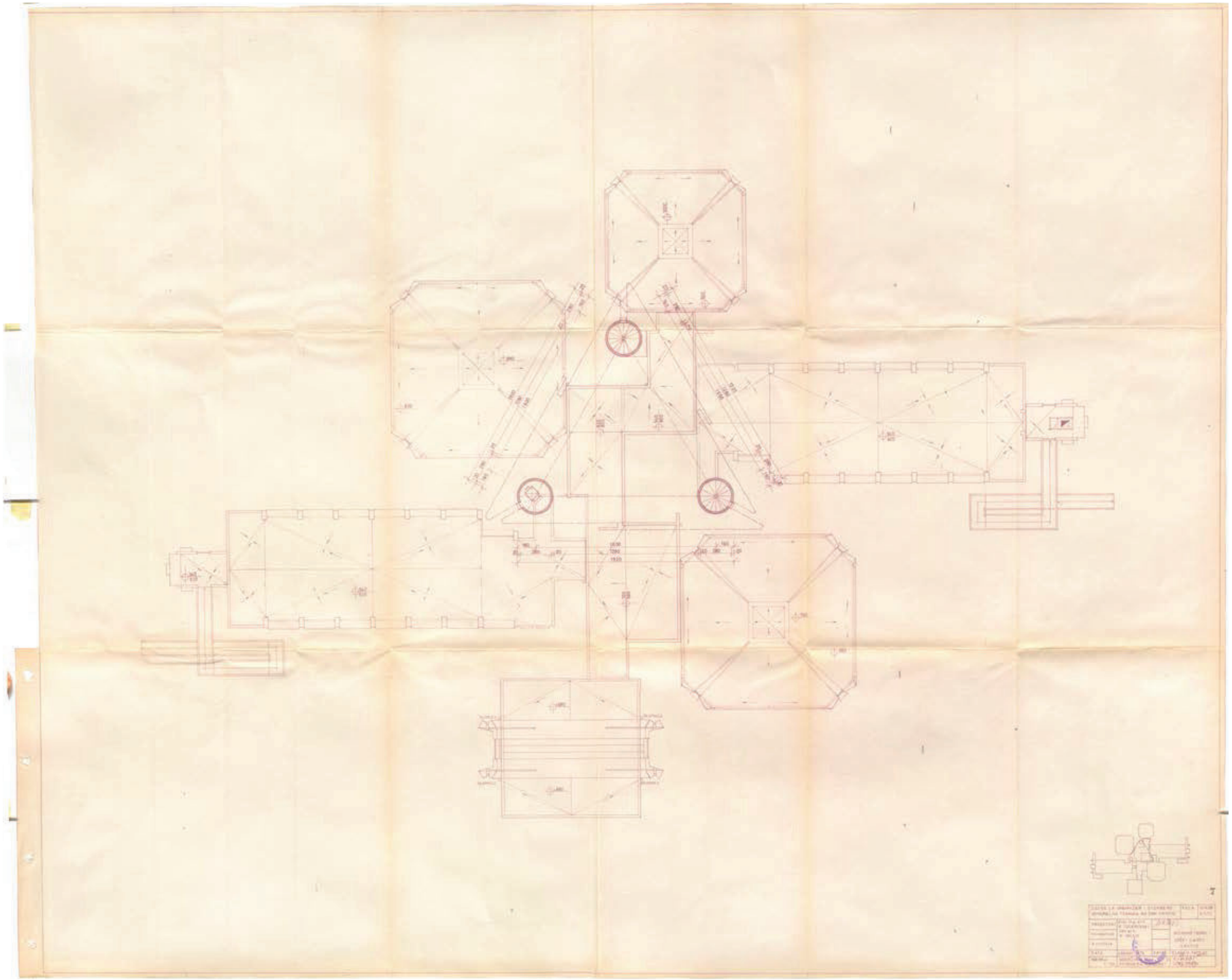
masterplan
ink on transparent paper copied on insoluble paper
dim. 106cm/70cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B



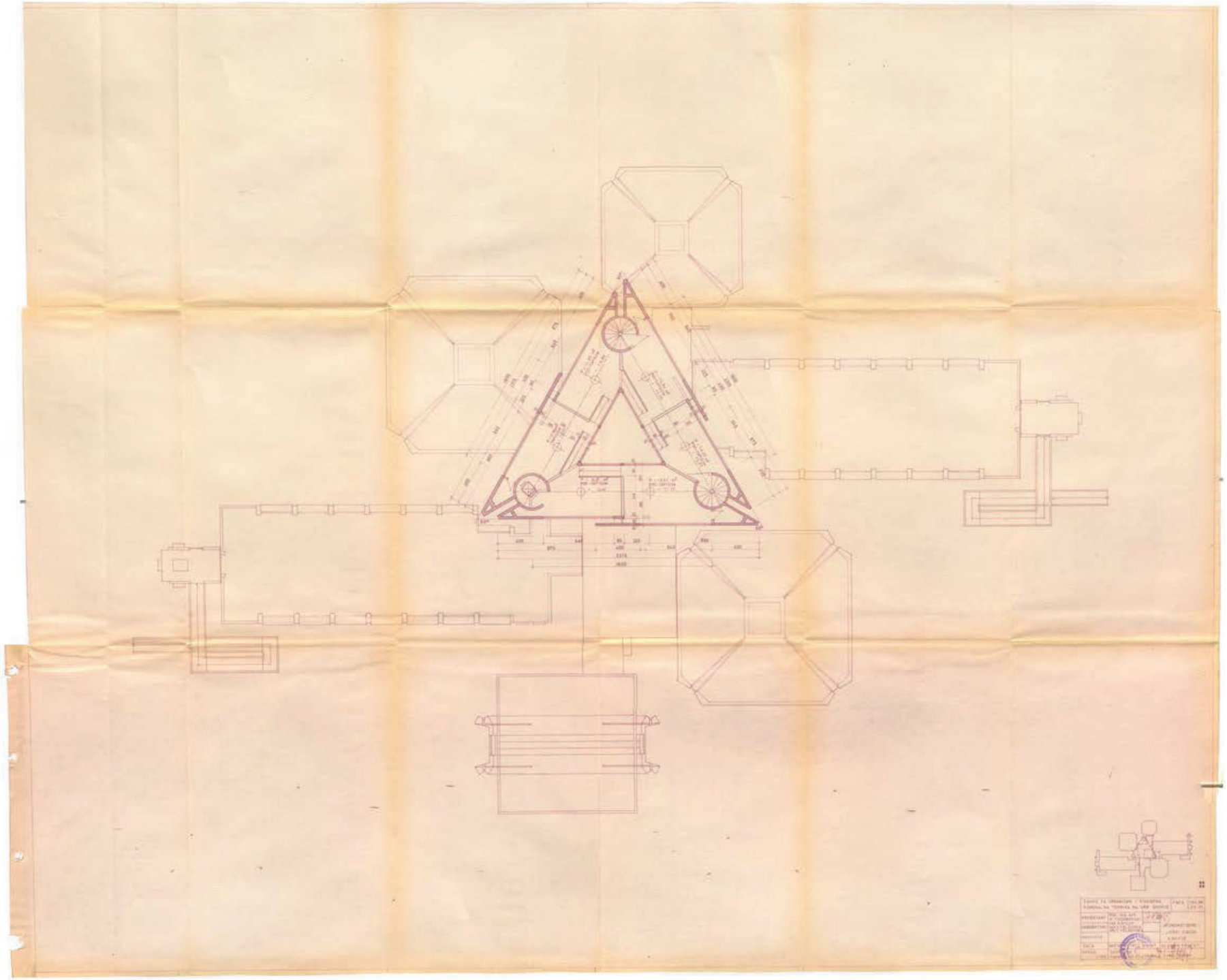
ground floor
ink on transparent paper copied on insoluble paper
dim. 107.5cm/86.5cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B



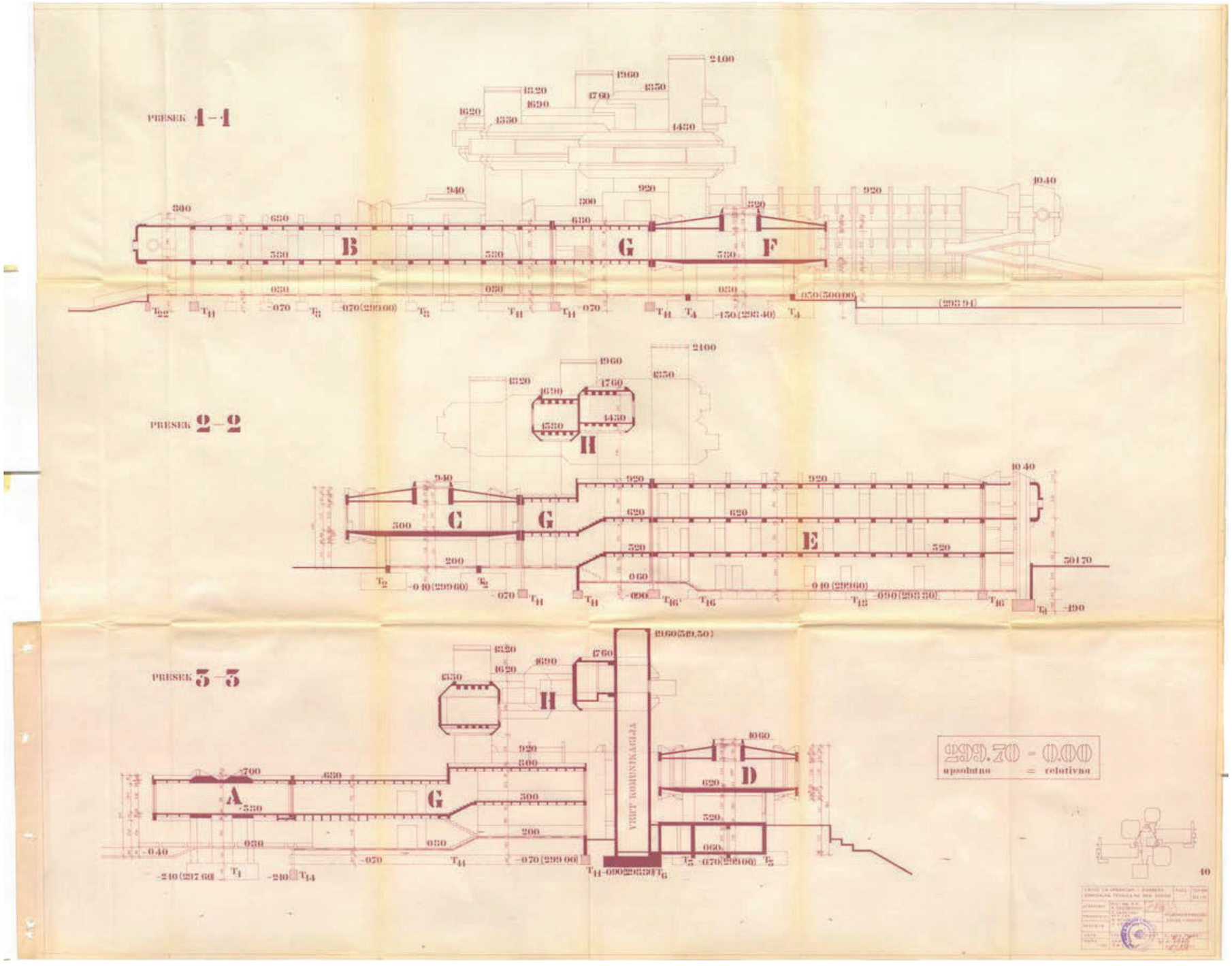
floot I
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B



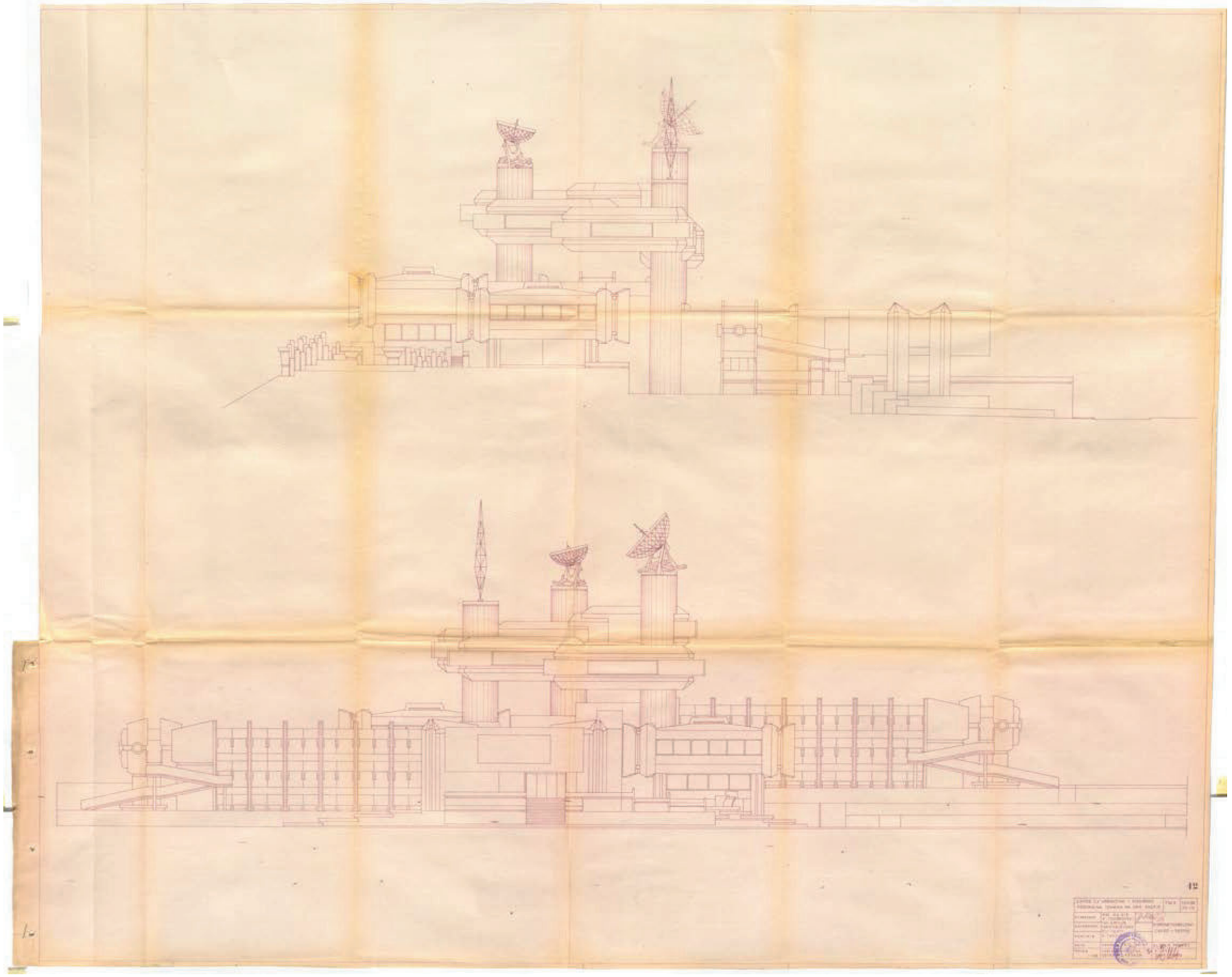
floot II
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B



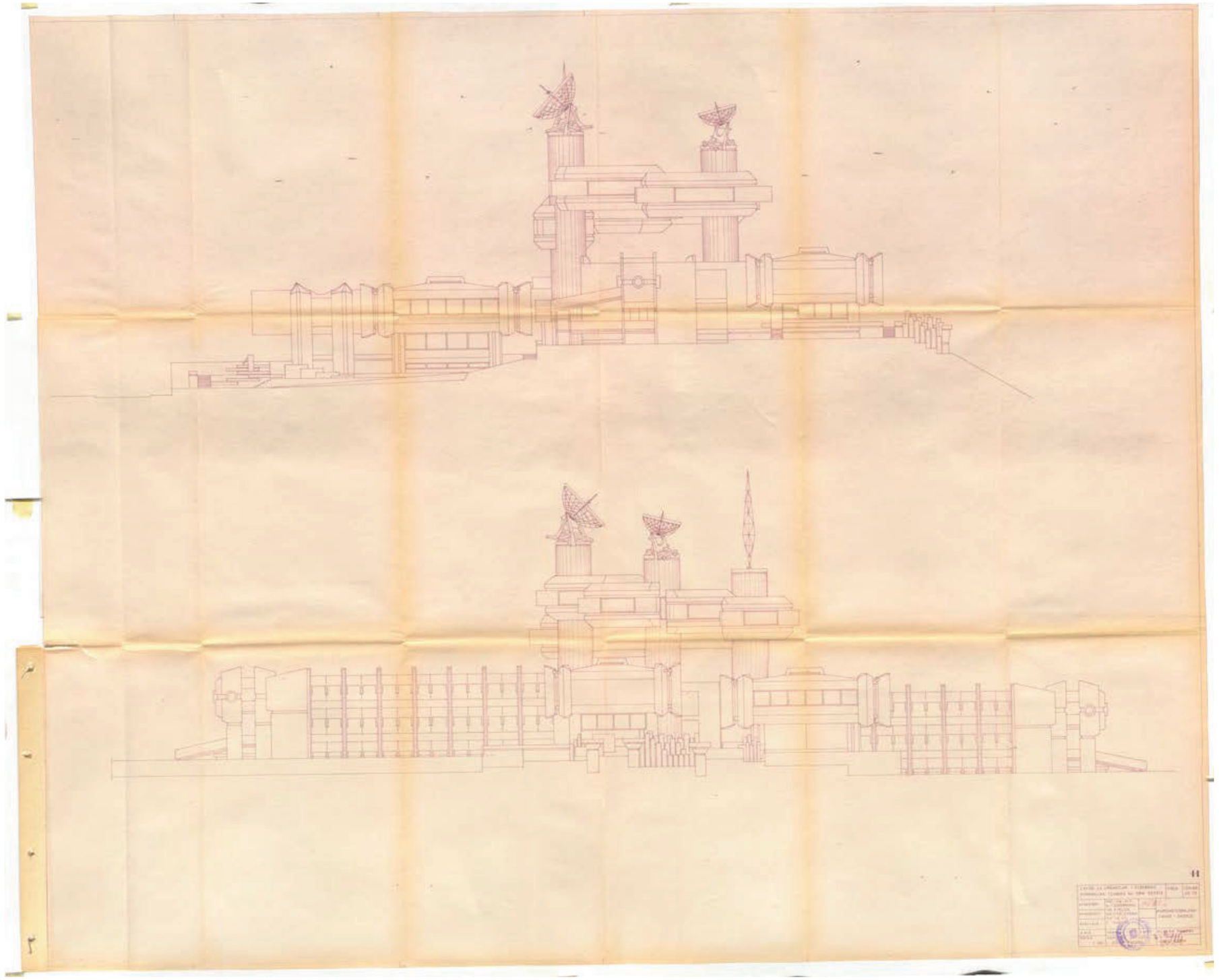
floot platform
ink on transparent paper copied on insoluble paper
dim. 107cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B



sections
ink on transparent paper copied on insoluble paper
dim. 106cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B



elevations
ink on transparent paper copied on insoluble paper
dim. 107.5cm/86.5cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B



elevations
ink on transparent paper copied on insoluble paper
dim. 108cm/86cm
Skopje City Archive
fund: 1973 additional, box numer 3A and 3B

[ARCHIVE MATERIALS] *National Bank of Tthe Republic of Macedonia _Radomir Lalovikj, Olga Papesh*

masterplan
ink on transparent paper copied on insoluble paper
dim. 58cm/29.7cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

ground floor
ink on transparent paper copied on insoluble paper
dim. 151cm/104cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

floor I
ink on transparent paper copied on insoluble paper
dim. 151cm/104cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

floor VII and IX
ink on transparent paper copied on insoluble paper
dim. 132cm/69.5cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

section A-A
ink on transparent paper copied on insoluble paper
dim. 131cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

section B-B
ink on transparent paper copied on insoluble paper
dim. 113.5cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

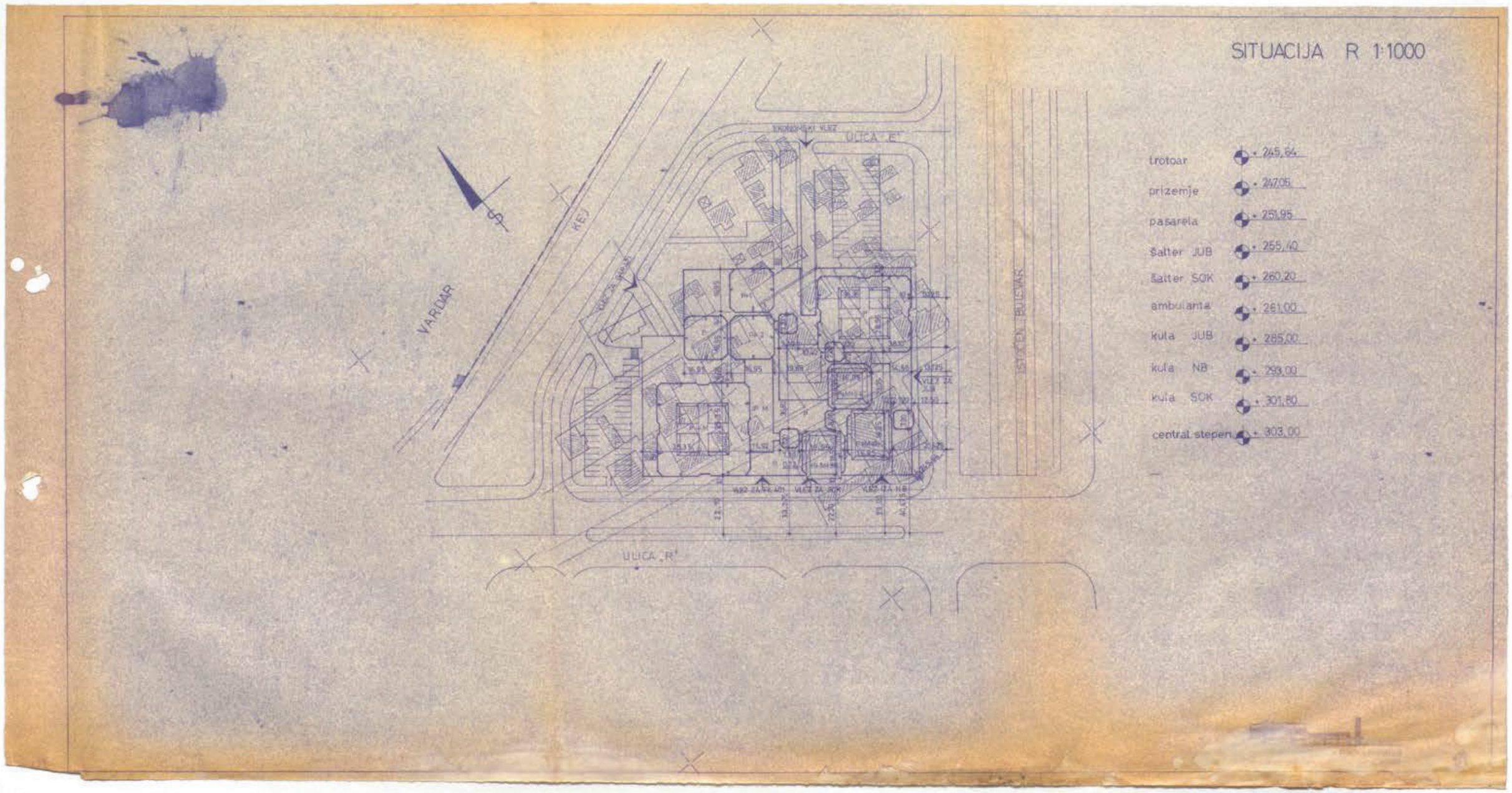
section G-G
ink on transparent paper copied on insoluble paper
dim. 131cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

elevation
ink on transparent paper copied on insoluble paper
dim. 130cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

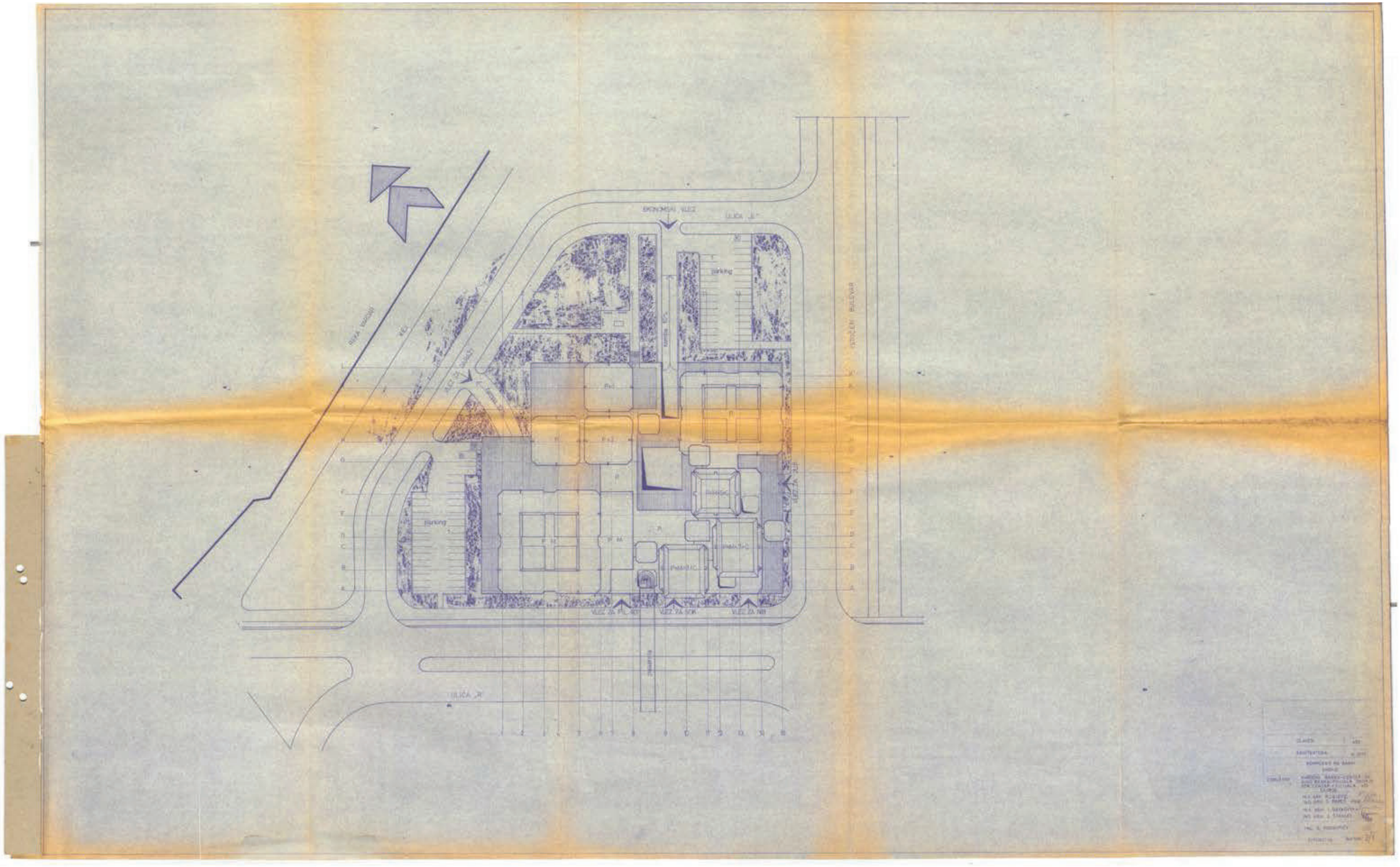
elevation
ink on transparent paper copied on insoluble paper
dim. 112cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

elevation
ink on transparent paper copied on insoluble paper
dim. 113cm/88.5cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

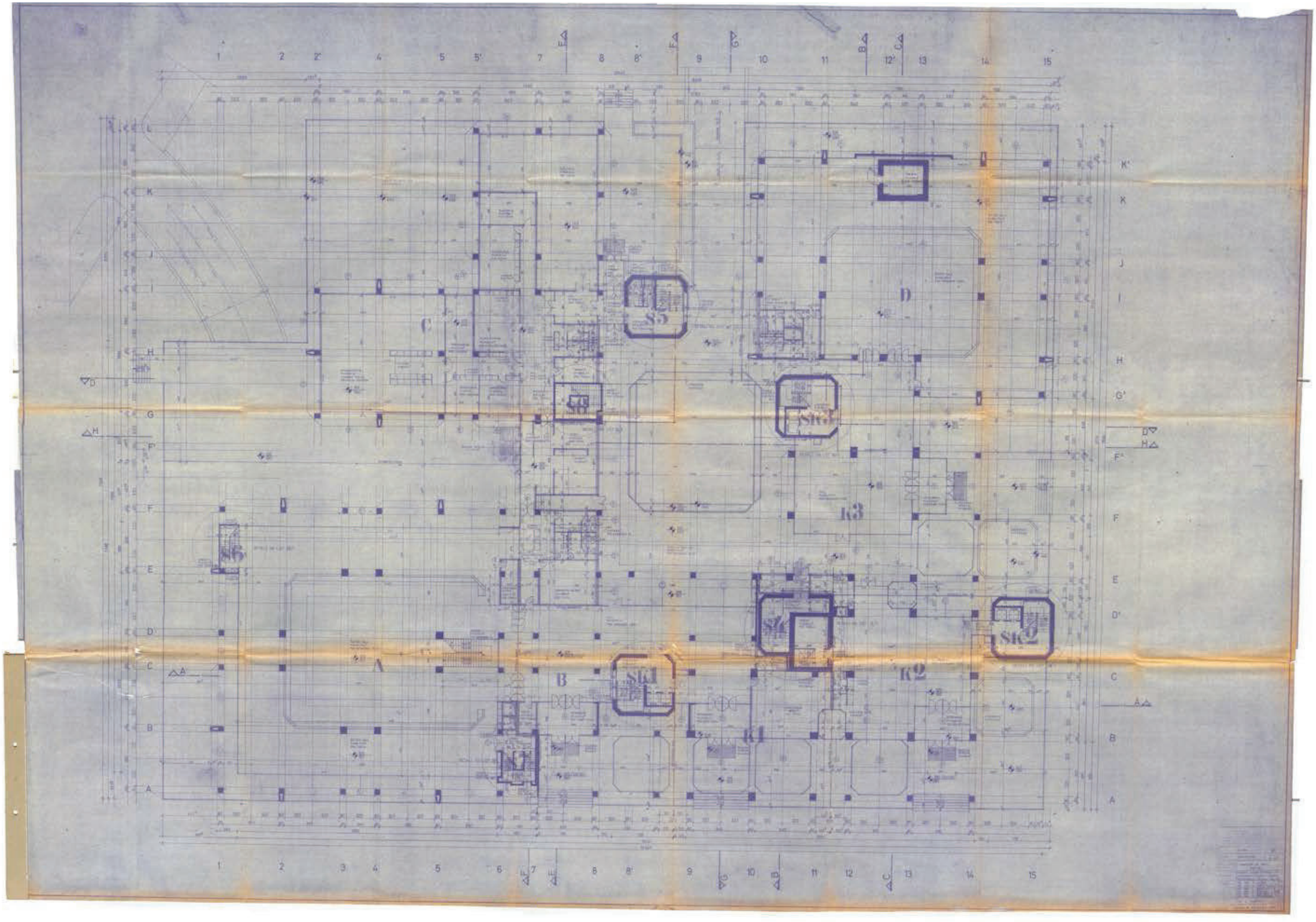
elevation
ink on transparent paper copied on insoluble paper
dim. 129cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



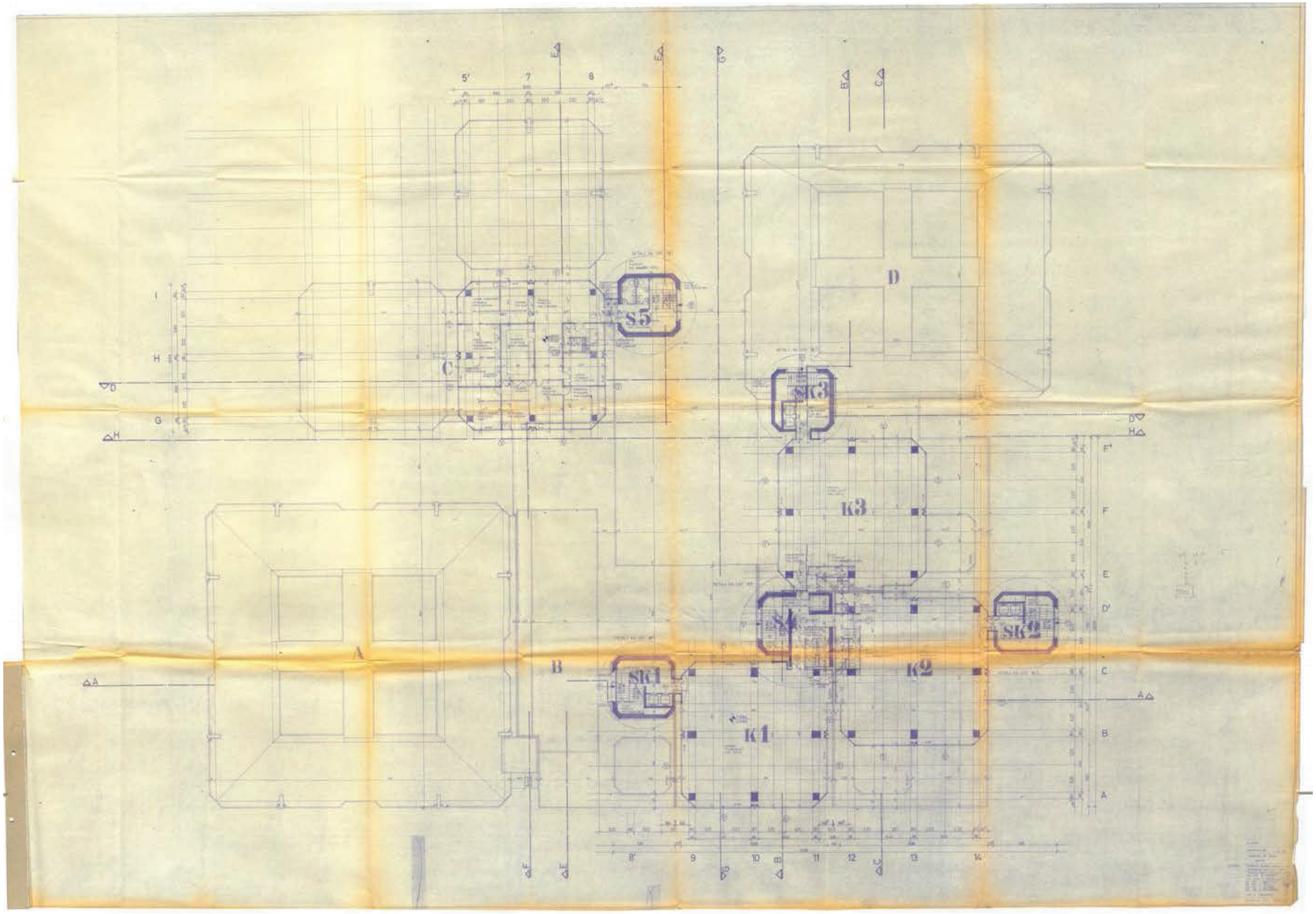
masterplan
ink on transparent paper copied on insoluble paper
dim. 58cm/29.7cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



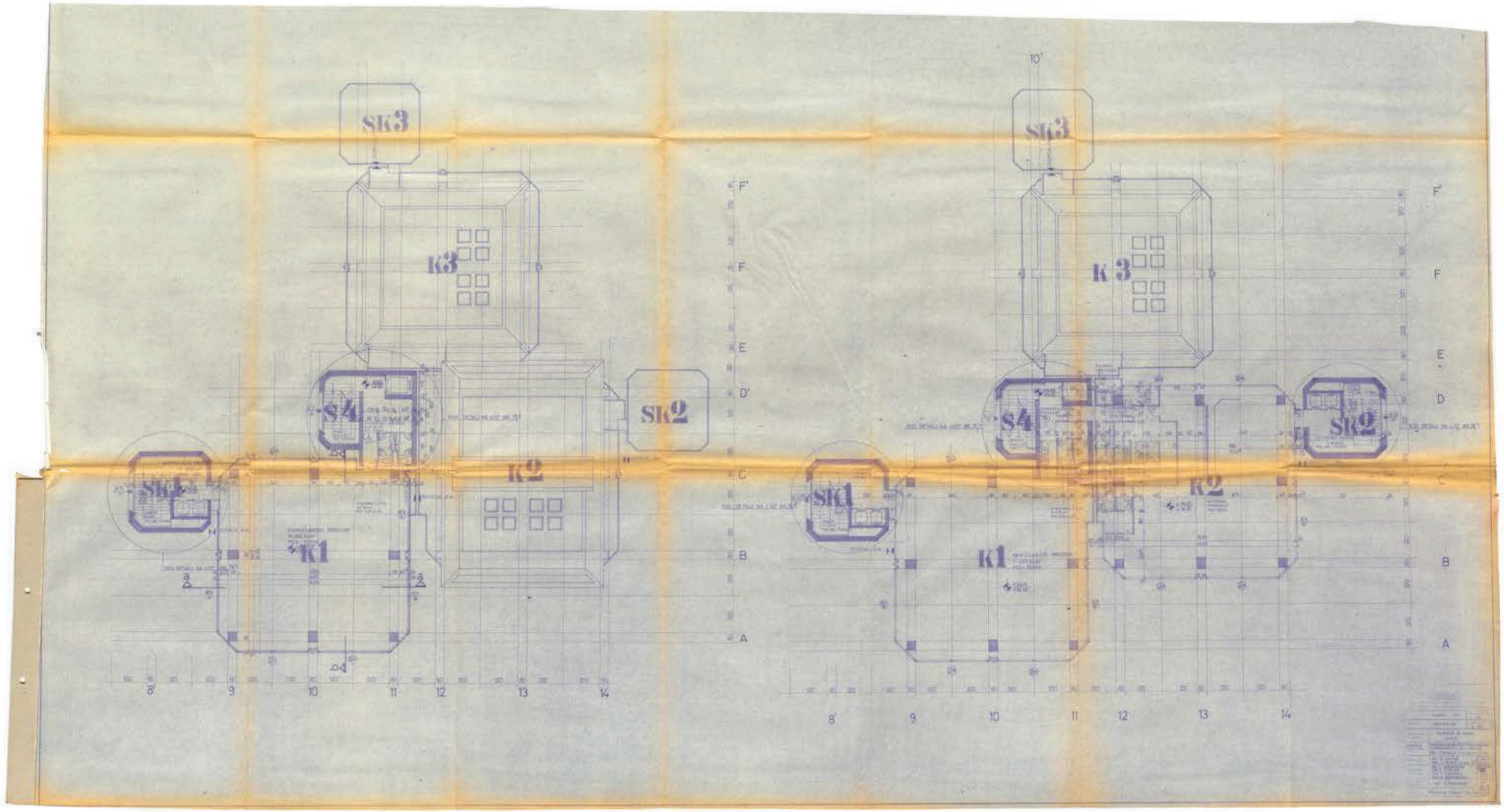
masterplan
ink on transparent paper copied on insoluble paper
dim. 58cm/29.7cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



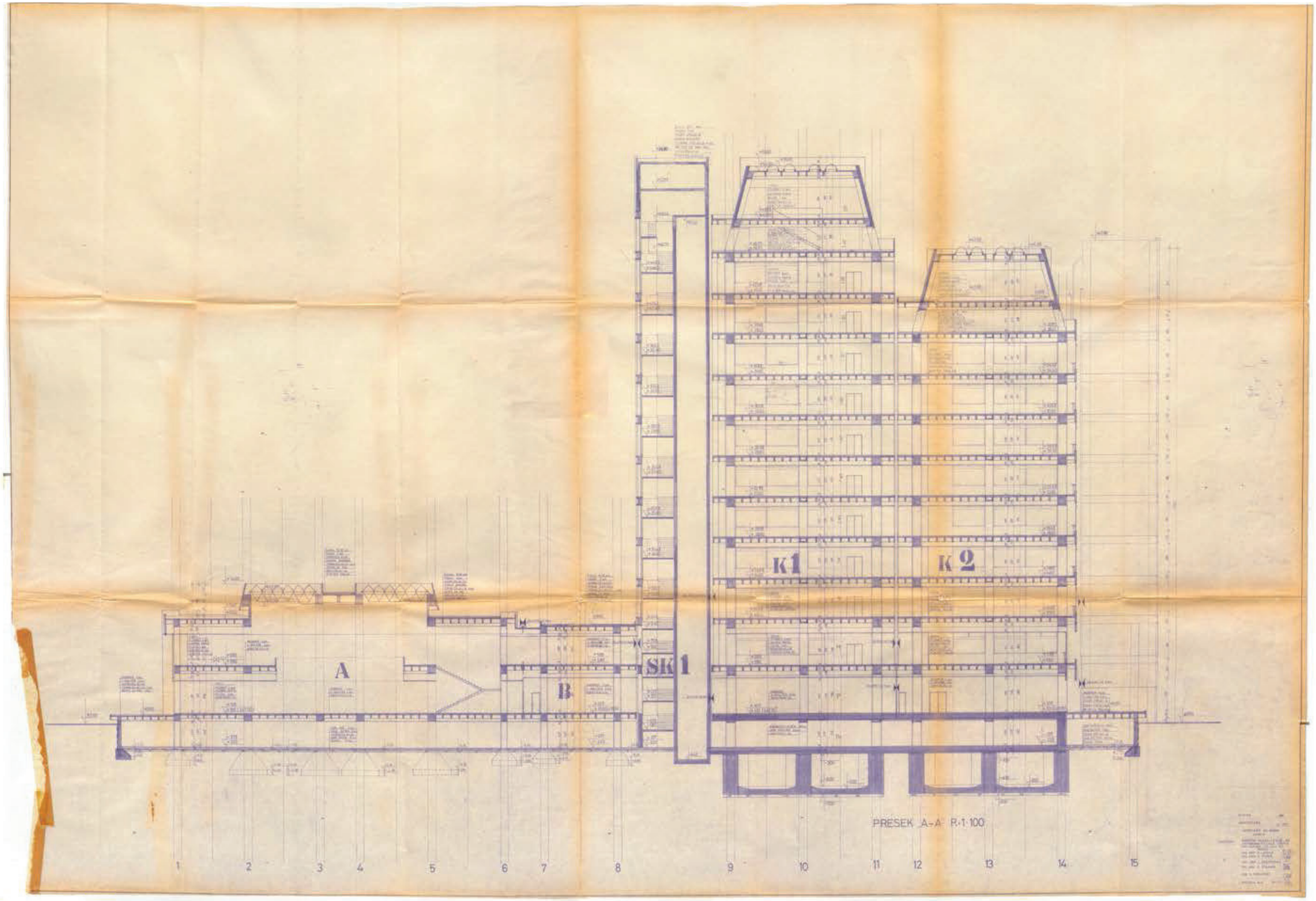
ground floor
ink on transparent paper copied on insoluble paper
dim. 151cm/104cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



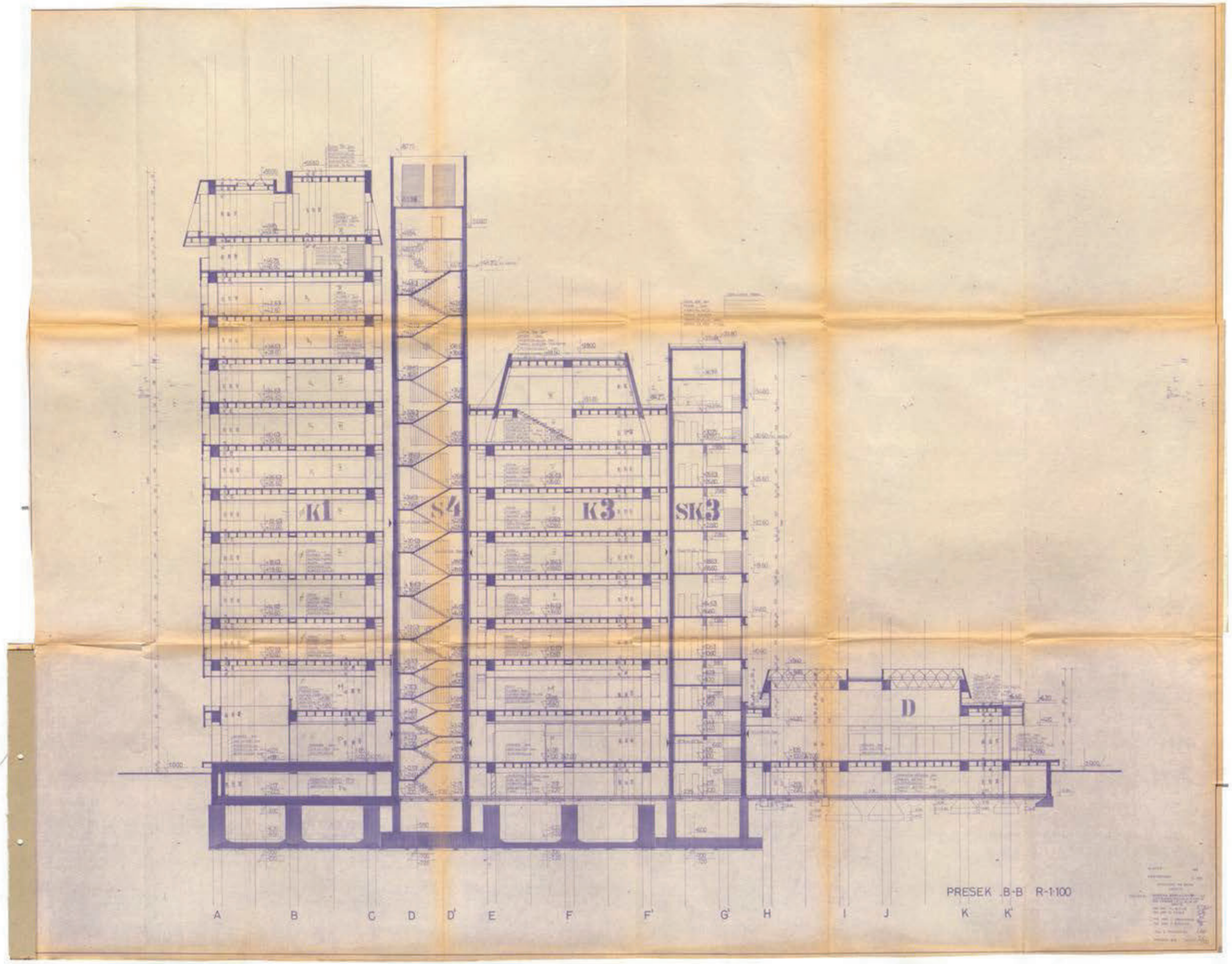
floor I
ink on transparent paper copied on insoluble paper
dim. 151cm/104cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



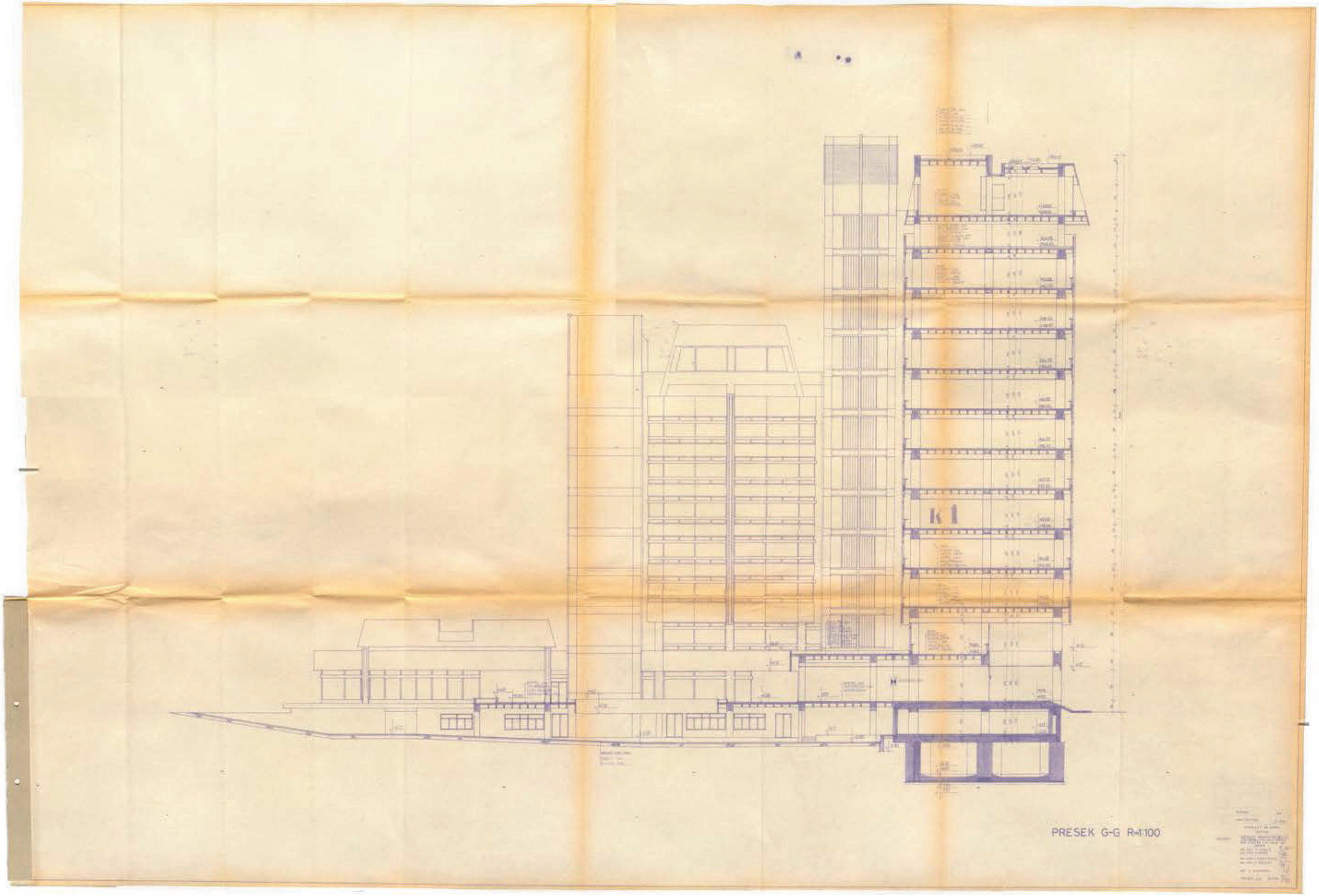
floor VII and IX
ink on transparent paper copied on insoluble paper
dim. 132cm/69.5cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



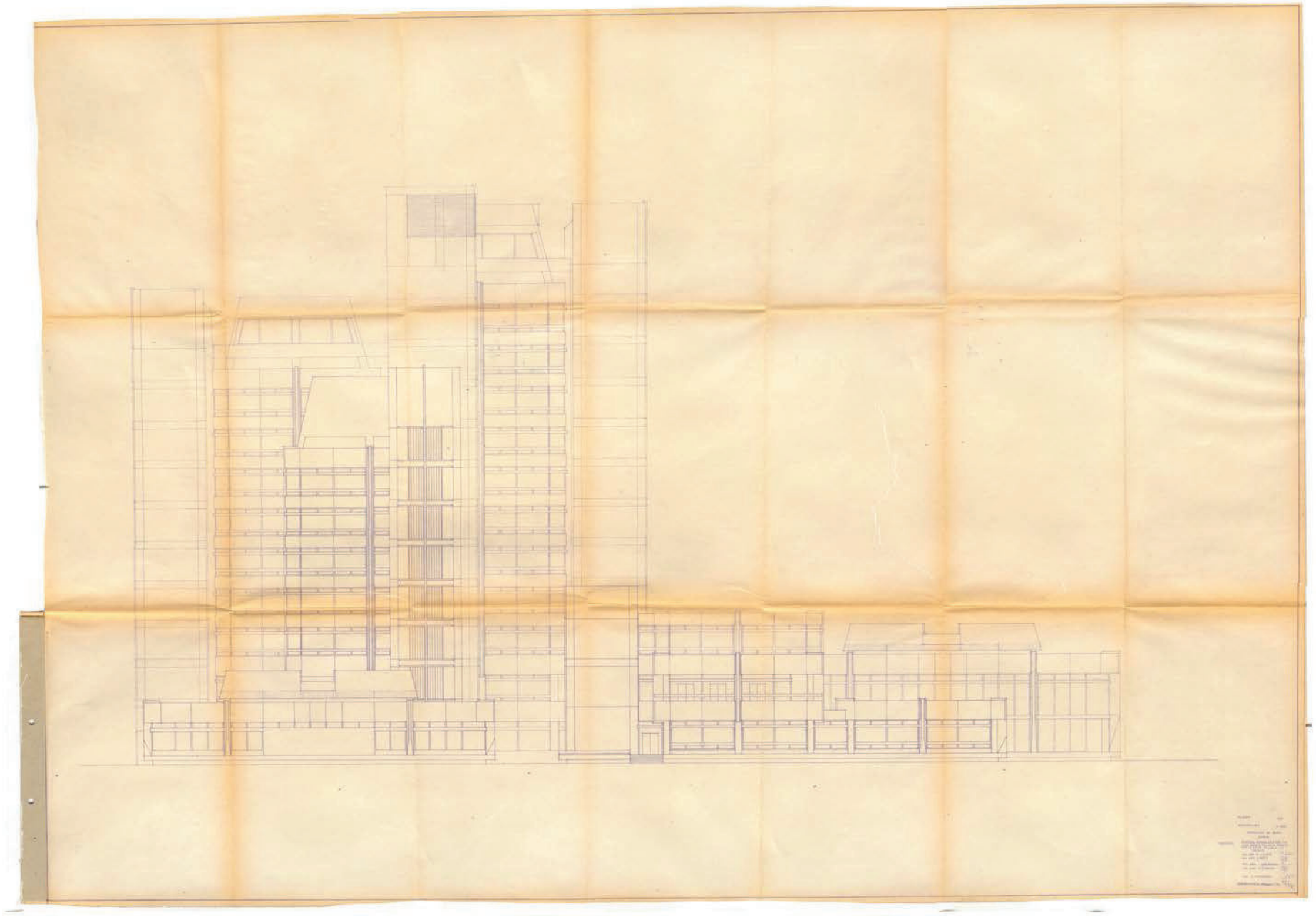
section A-A
ink on transparent paper copied on insoluble paper
dim. 131cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



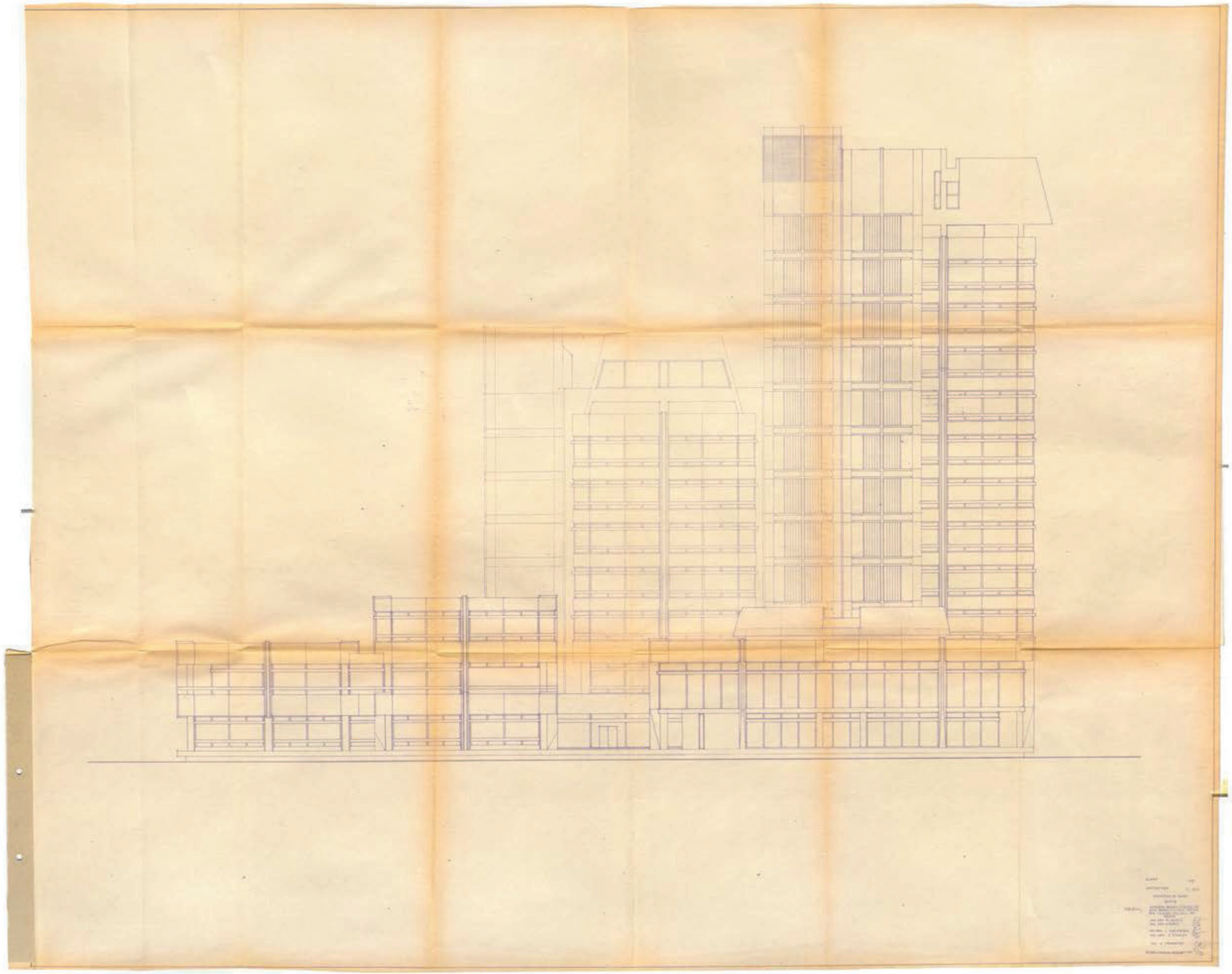
section B-B
ink on transparent paper copied on insoluble paper
dim. 113.5cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



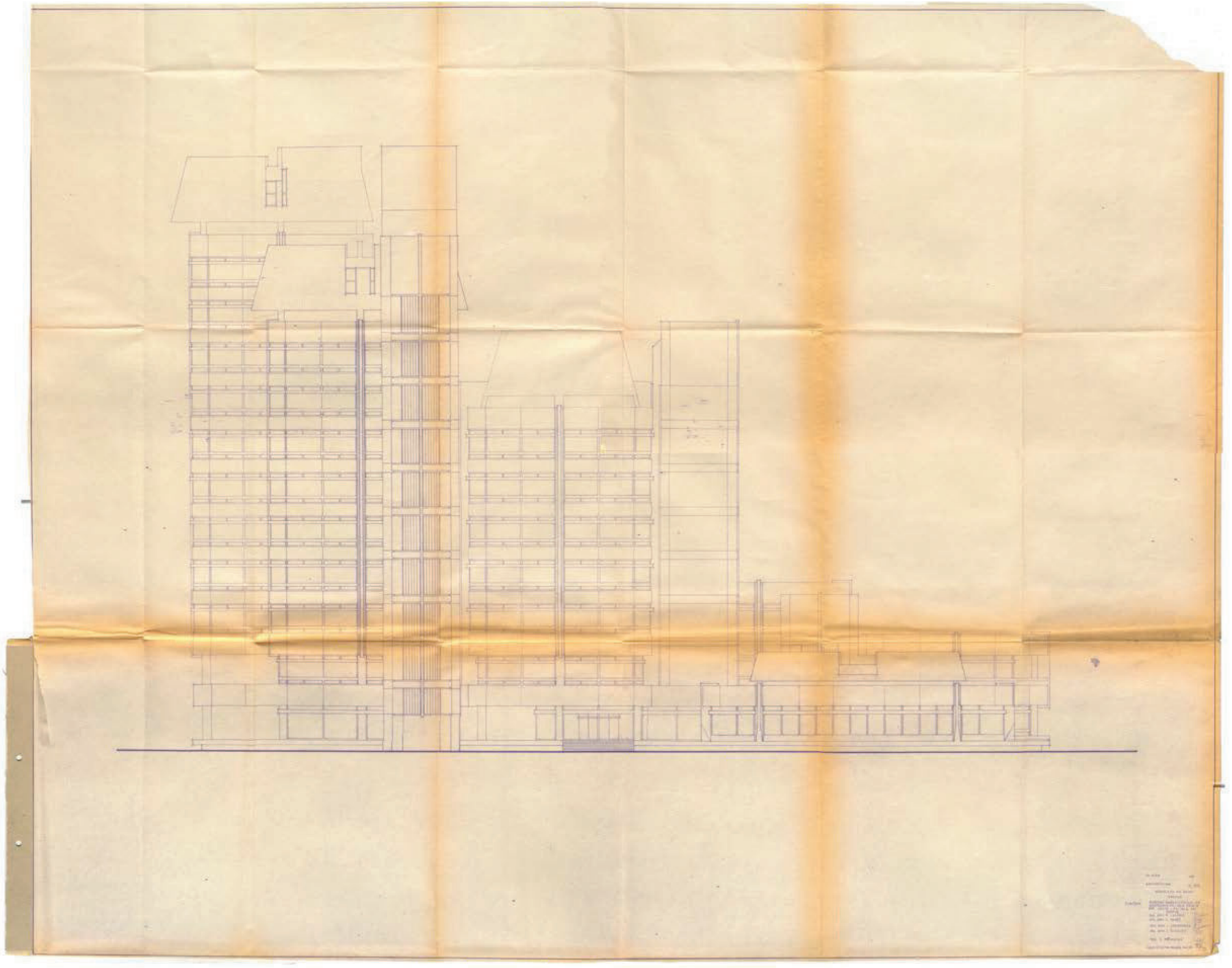
section G-G
ink on transparent paper copied on insoluble paper
dim. 131cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



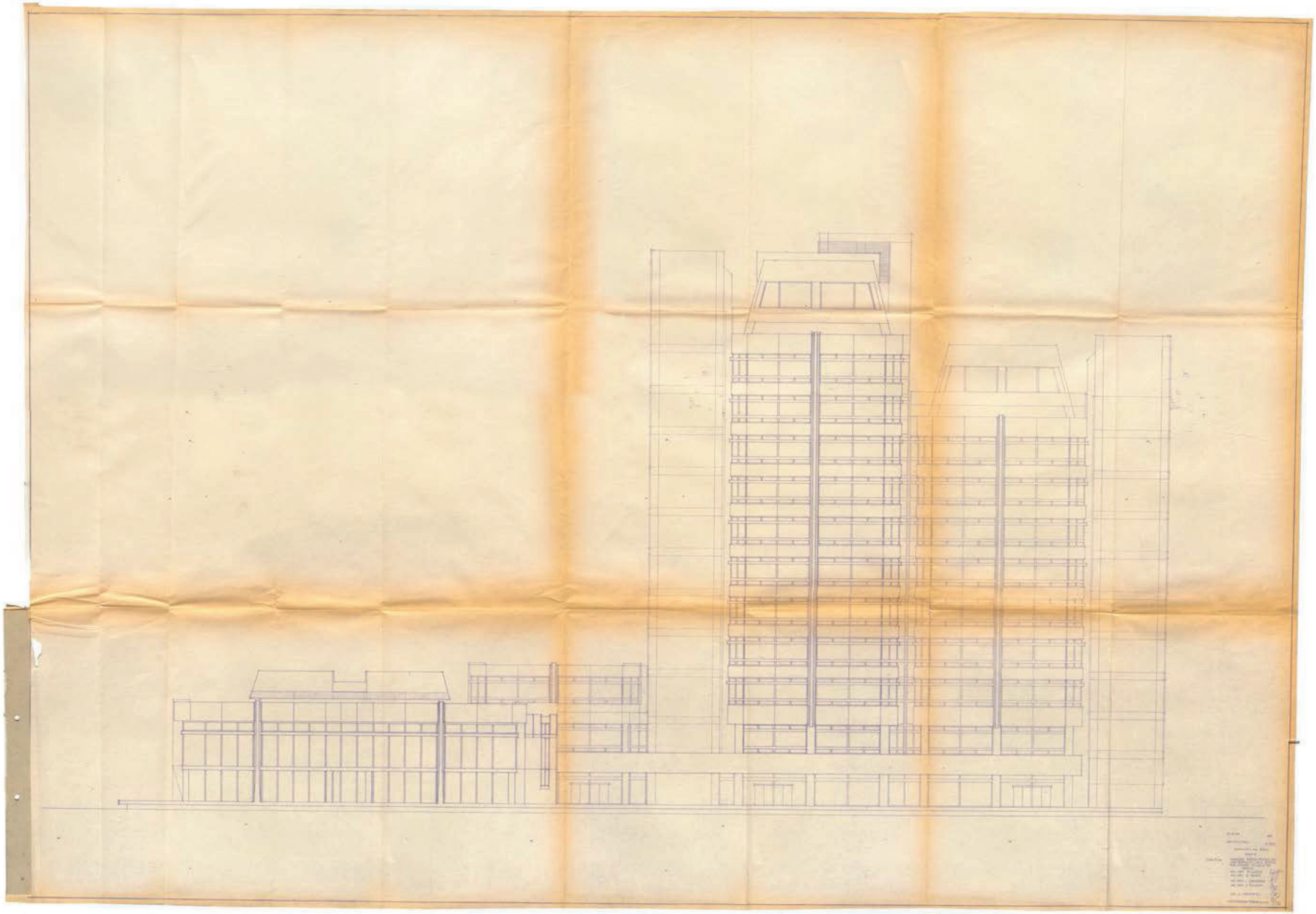
elevation
ink on transparent paper copied on insoluble paper
dim. 130cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



elevation
ink on transparent paper copied on insoluble paper
dim. 112cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



elevation
ink on transparent paper copied on insoluble paper
dim. 113cm/88.5cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341



elevation
ink on transparent paper copied on insoluble paper
dim. 129cm/88cm
Skopje City Archive
fund: Assembly of Skopje 1971, number 341

[ARCHIVE MATERIALS] *Macedonian Academy of Sciences and Art _Boris Cipan*

elevation east
ink on transparent paper copied on insoluble paper
dim. 160cm/70cm
Skopje City Archive
fund: Additional 1973, box numer 25

elevation nort
ink on transparent paper copied on insoluble paper
dim. 180cm/70cm
Skopje City Archive
fund: Additional 1973, box numer 25

elevation south
ink on transparent paper copied on insoluble paper
dim. 184cm/72cm
Skopje City Archive
fund: Additional 1973, box numer 25

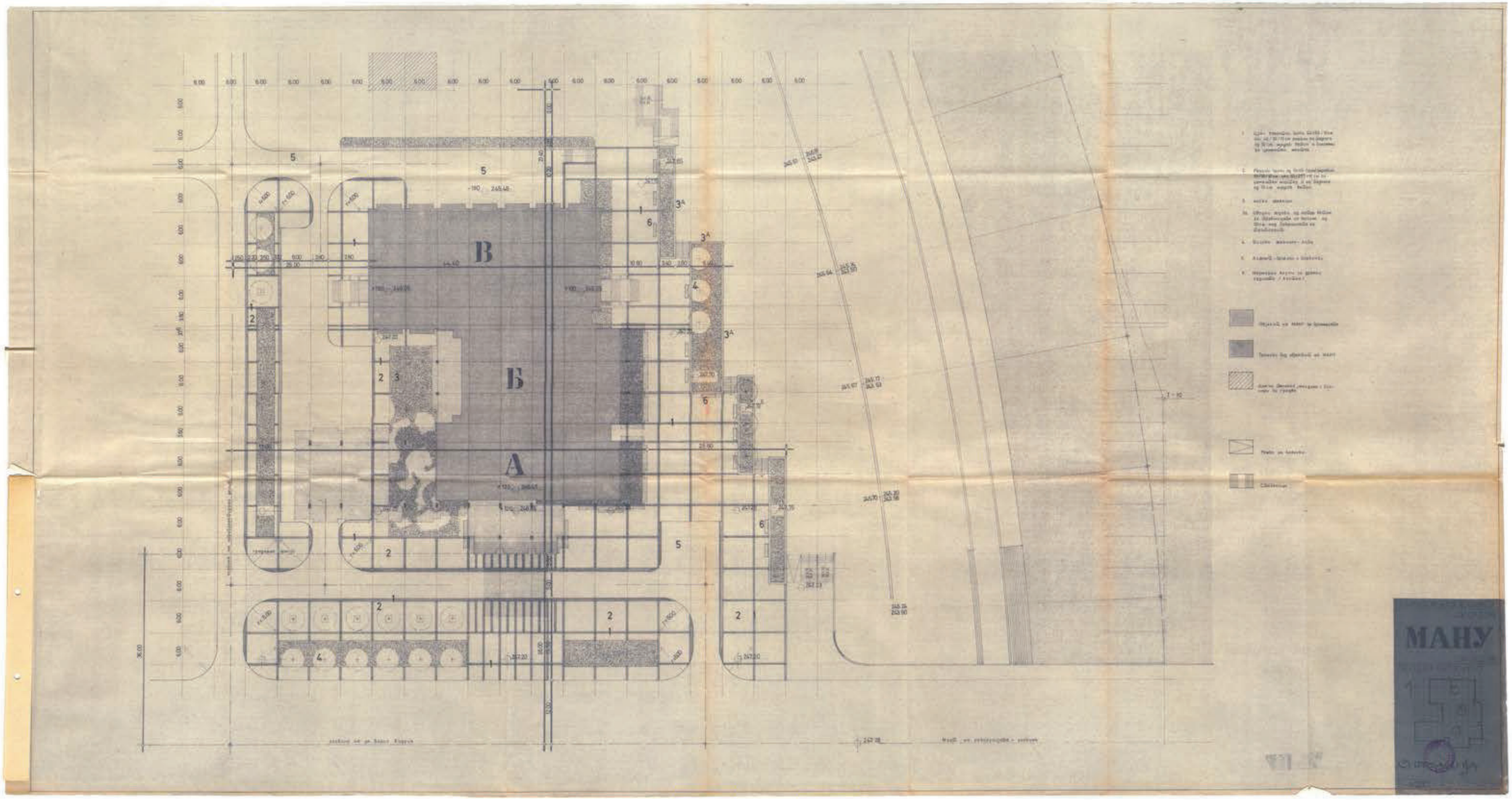
elevation west
ink on transparent paper copied on insoluble paper
dim. 165cm/71cm
Skopje City Archive
fund: Additional 1973, box numer 25

floor I part V
ink on transparent paper copied on insoluble paper
dim. 140cm/174cm
Skopje City Archive
fund: Additional 1973, box numer 25

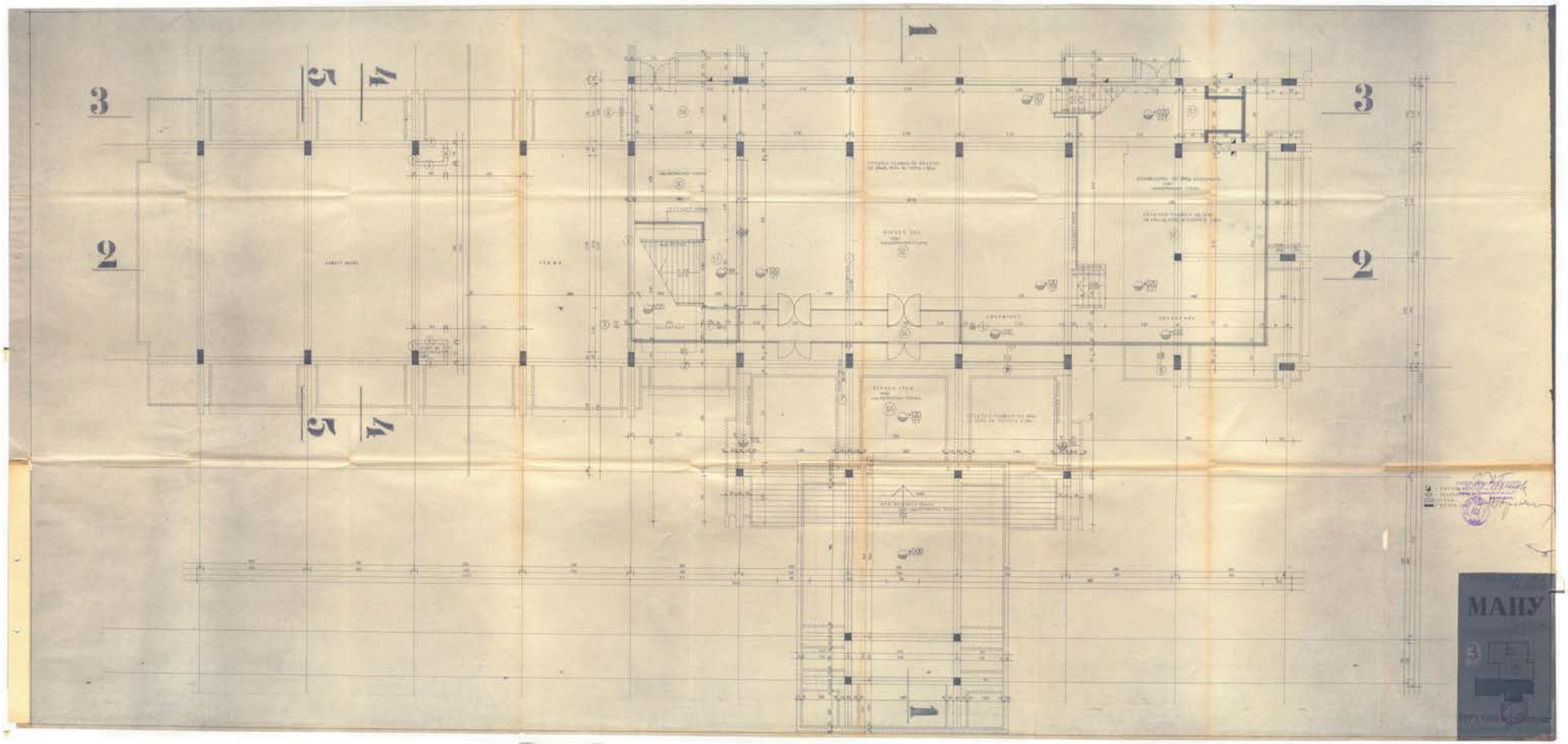
floor II part V
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25

section
ink on transparent paper copied on insoluble paper
dim. 180cm/60cm
Skopje City Archive
fund: Additional 1973, box numer 25

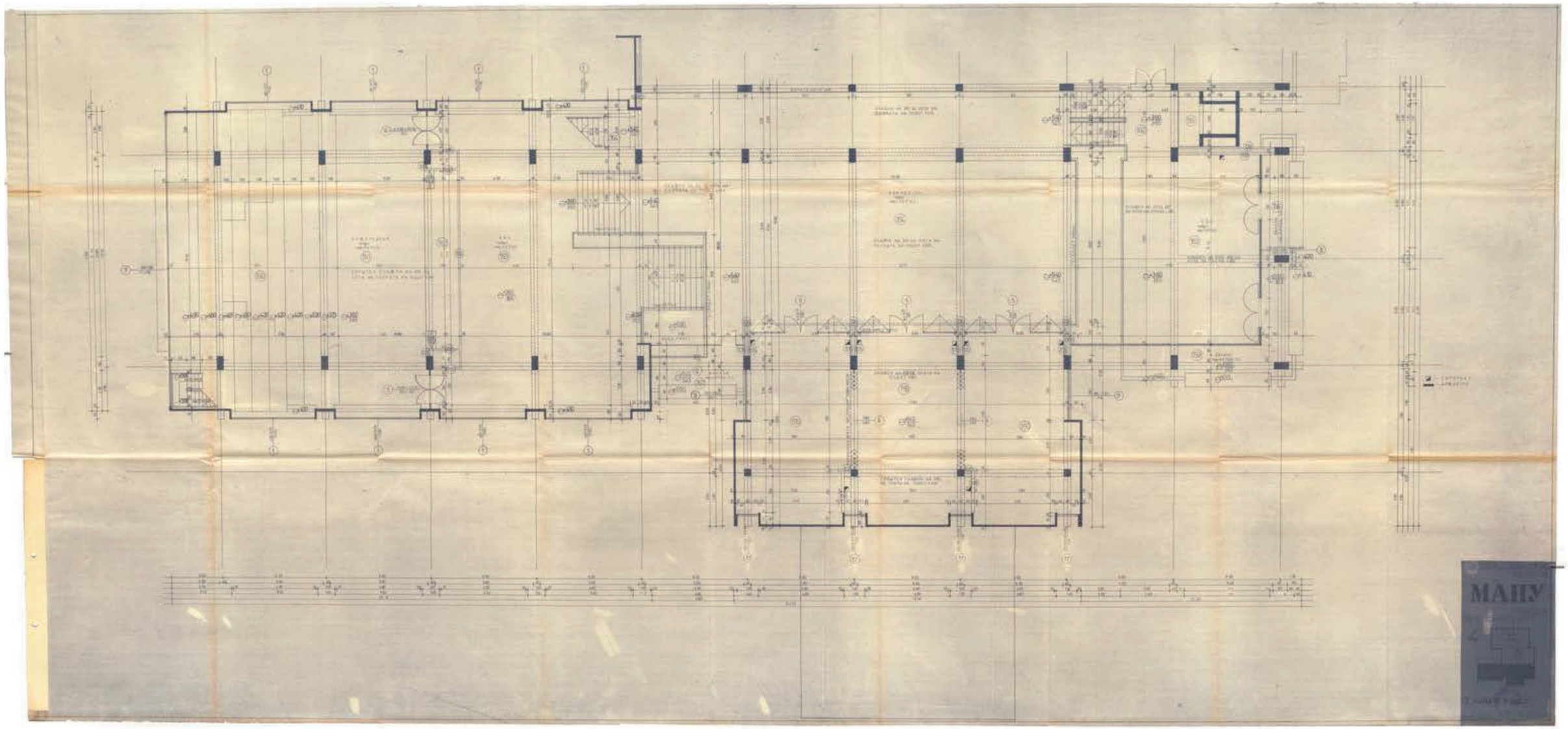
section
ink on transparent paper copied on insoluble paper
dim. 125.5cm/64cm
Skopje City Archive
fund: Additional 1973, box numer 25



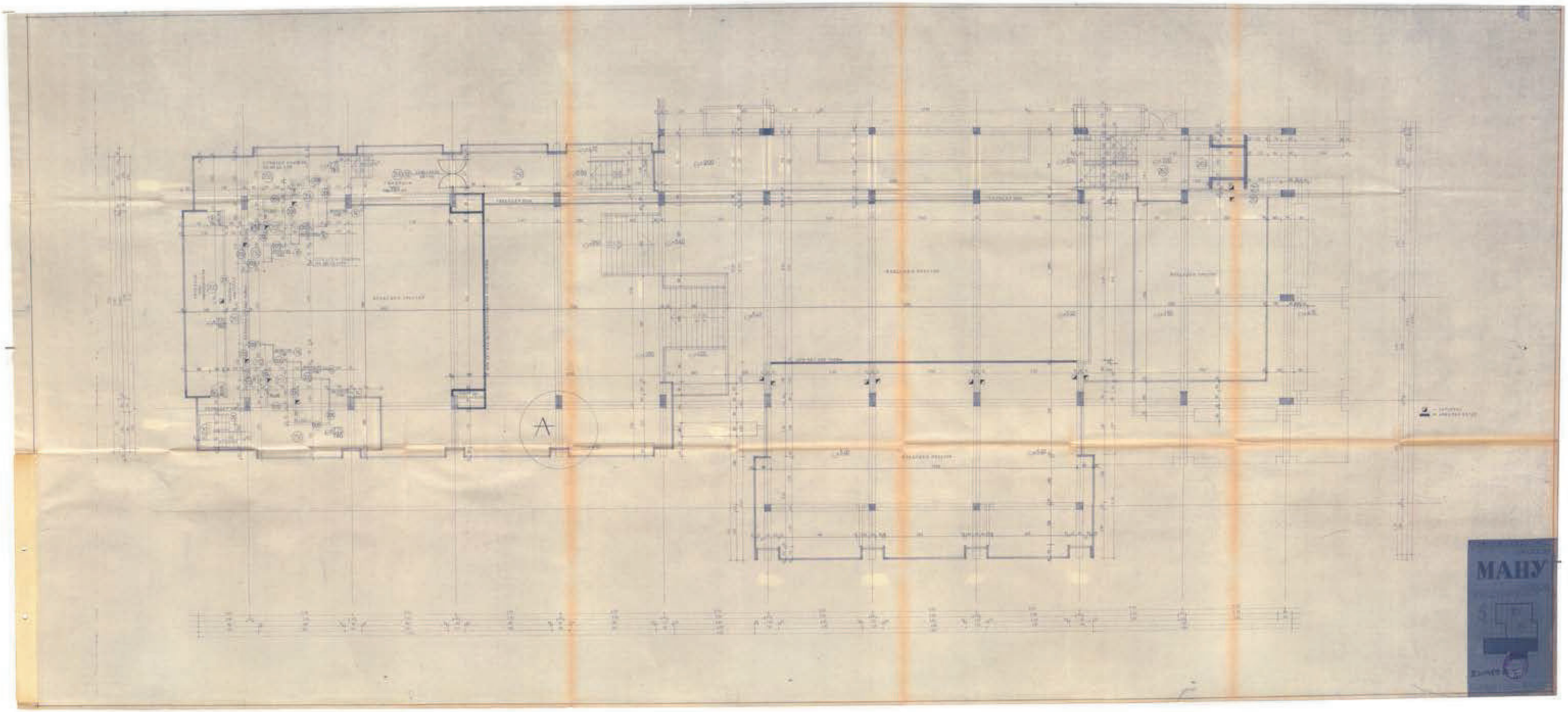
masterplan
ink on transparent paper copied on insoluble paper
dim. 142cm/75cm
Skopje City Archive
fund: Additional 1973, box numer 25



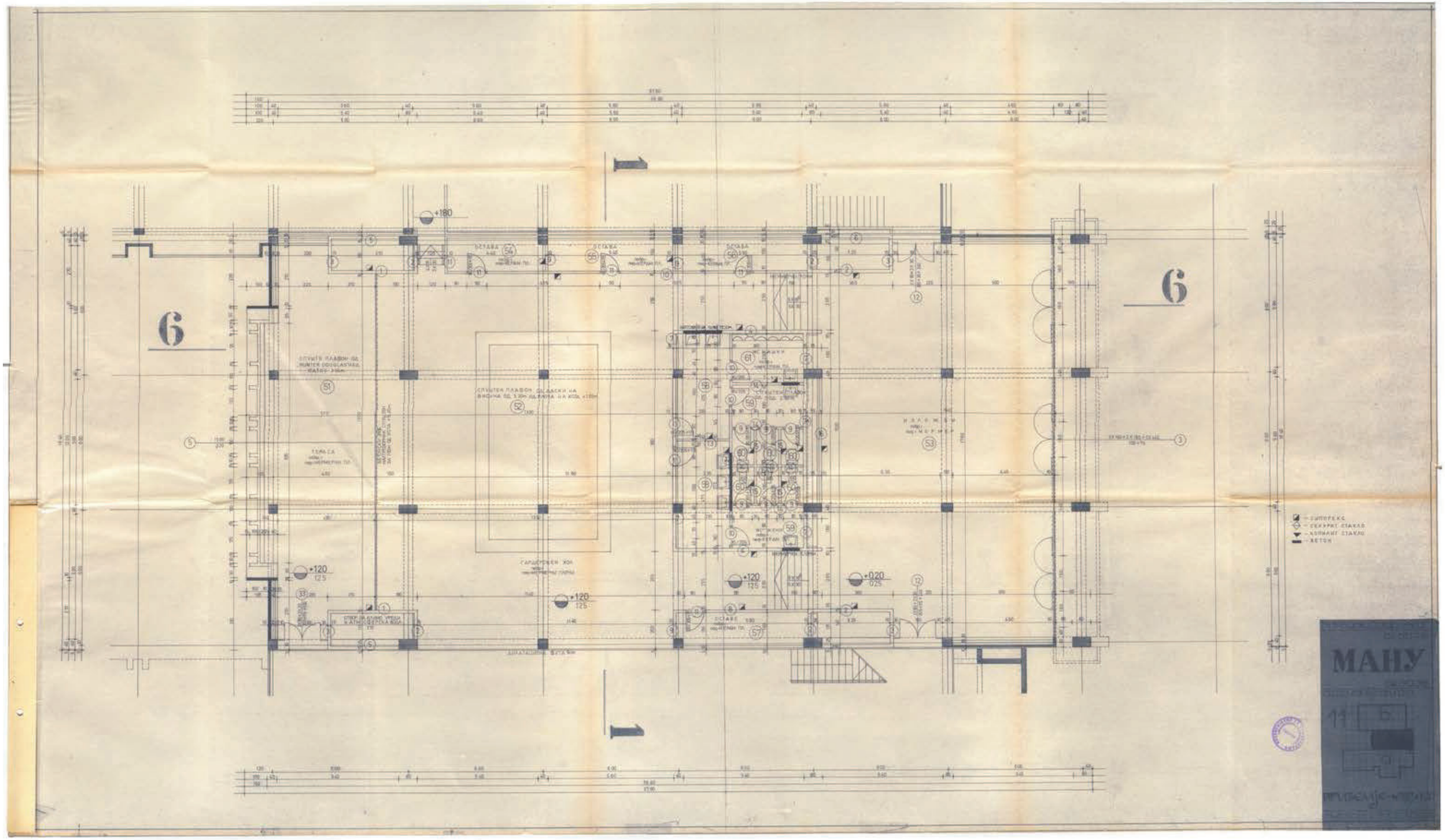
ground floor part A
ink on transparent paper copied on insoluble paper
dim. 171cm/80.5cm
Skopje City Archive
fund: Additional 1973, box numer 25



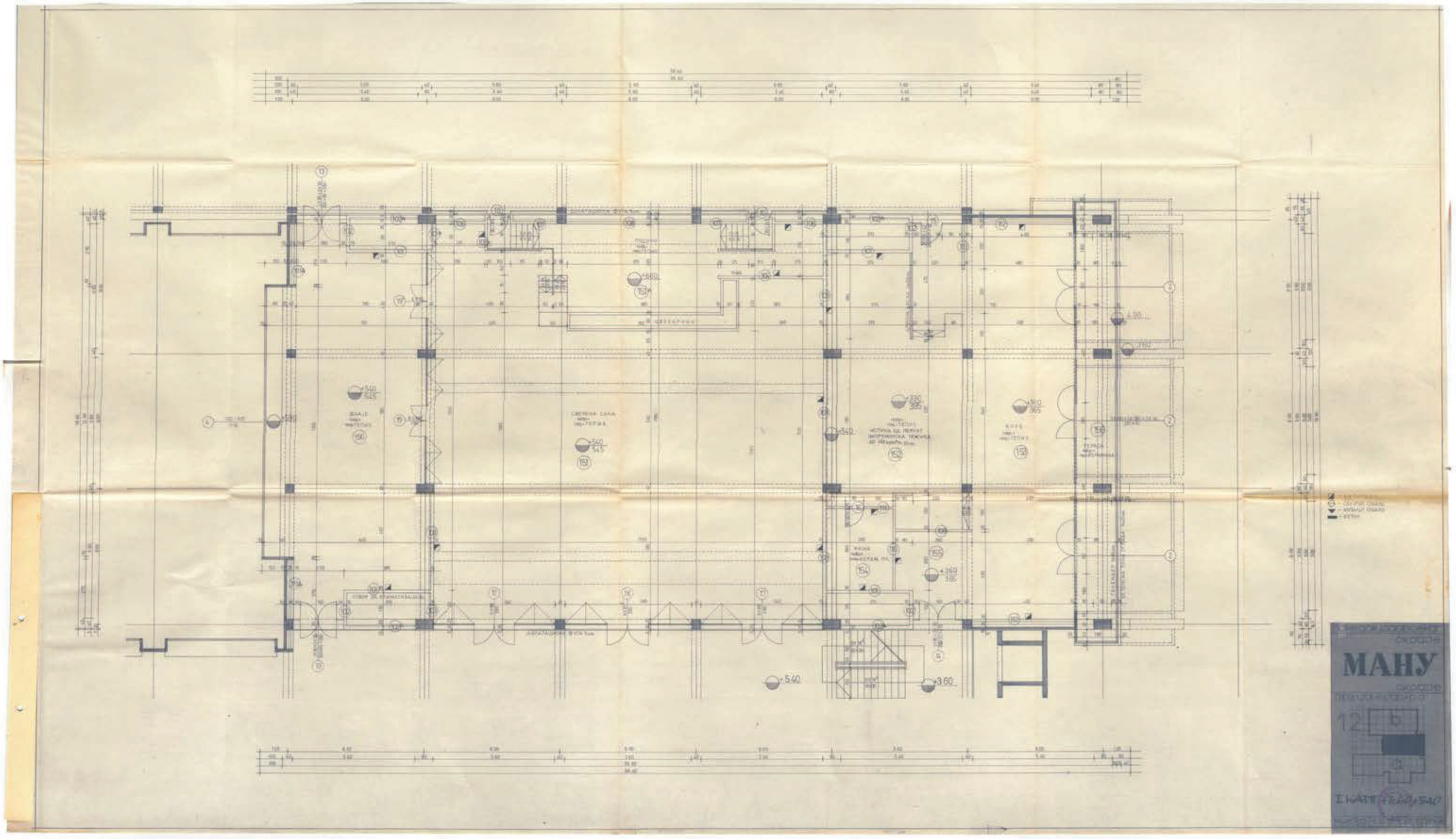
floor I part A
ink on transparent paper copied on insoluble paper
dim. 173.5cm/80.5cm
Skopje City Archive
fund: Additional 1973, box numer 25



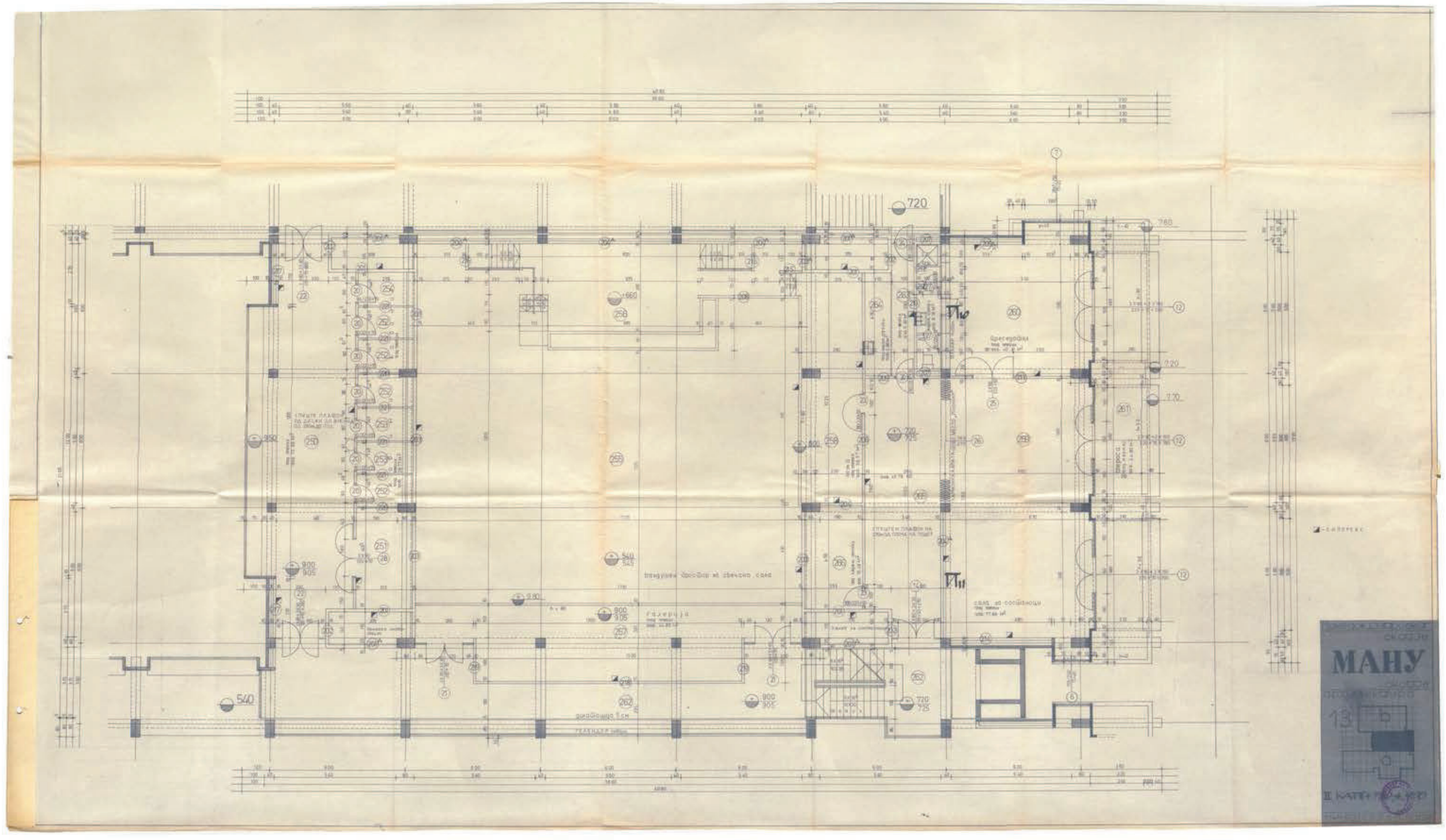
floor II part A
ink on transparent paper copied on insoluble paper
dim. 179cm/80cm
Skopje City Archive
fund: Additional 1973, box numer 25



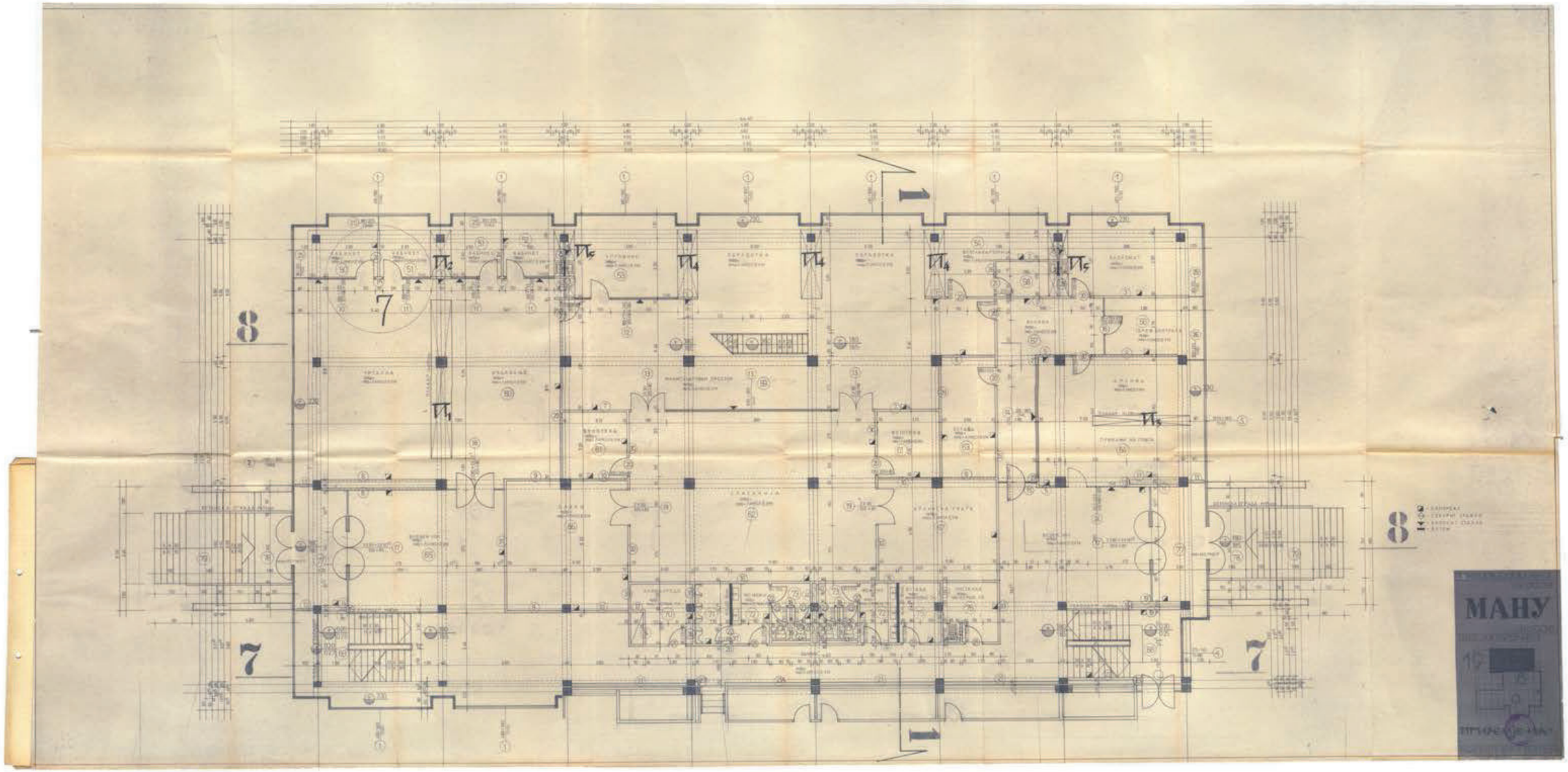
ground floor part B
ink on transparent paper copied on insoluble paper
dim. 127cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25



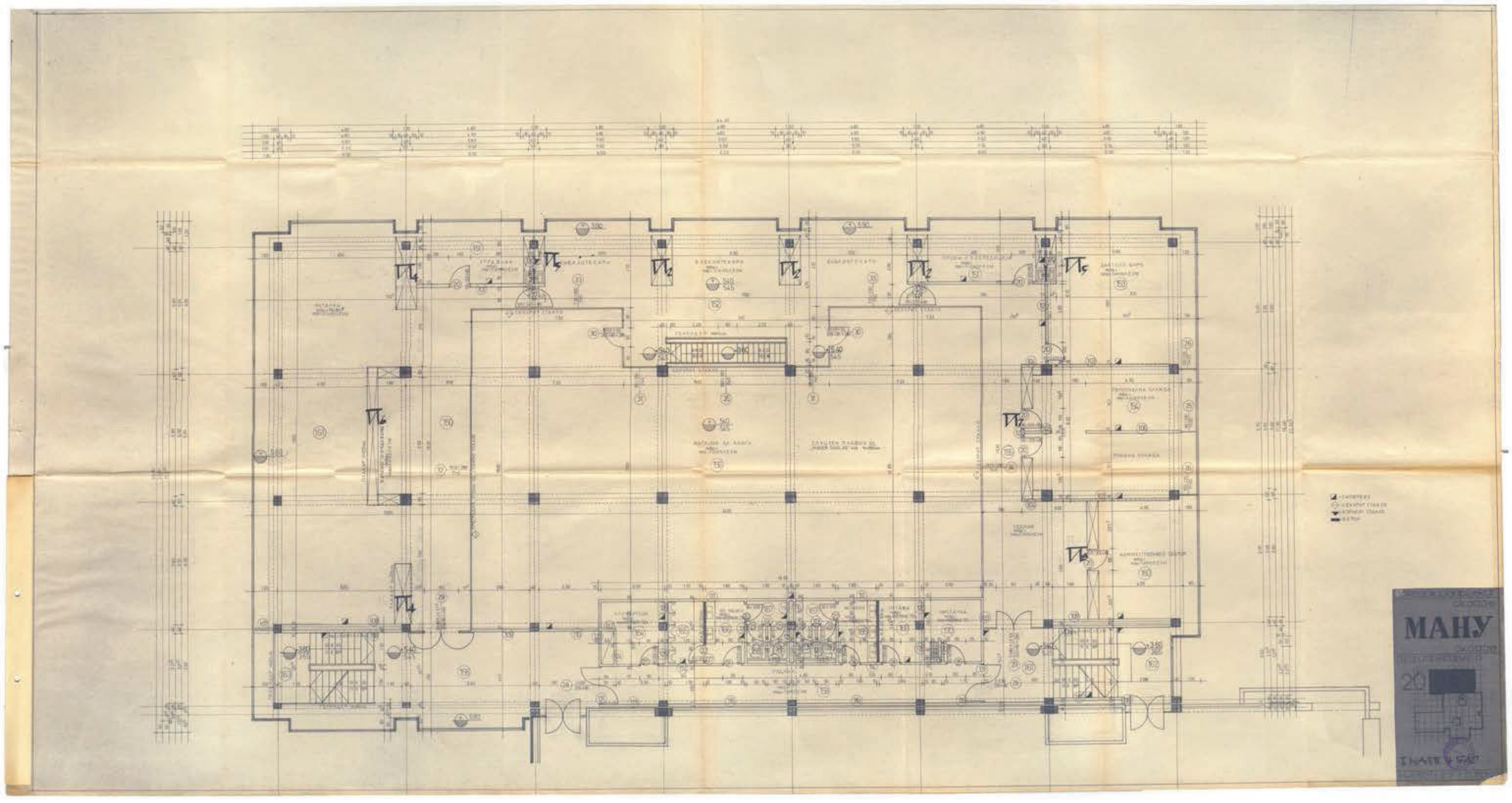
floor I part B
ink on transparent paper copied on insoluble paper
dim. 127.5cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25



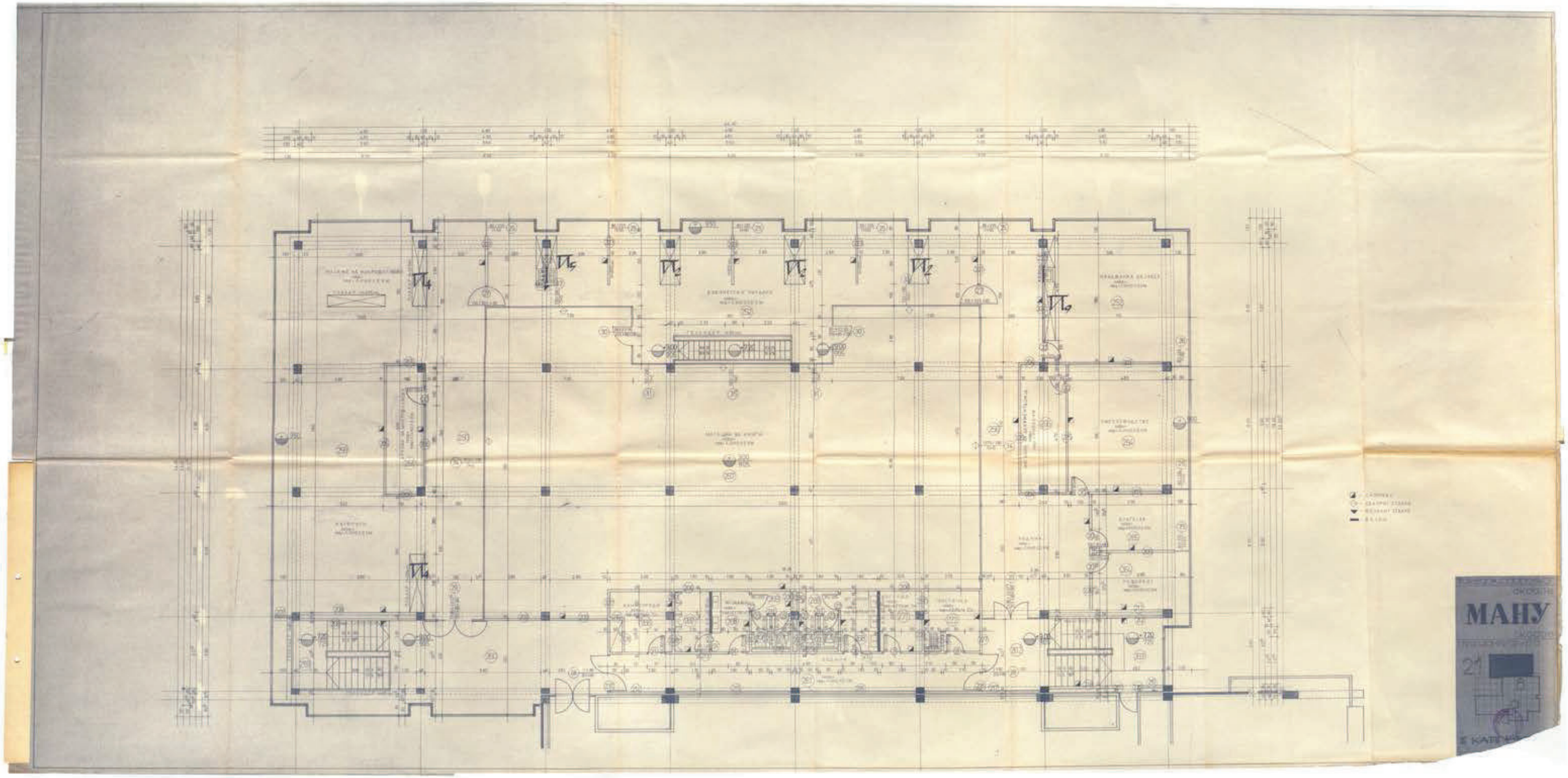
floor II part B
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25



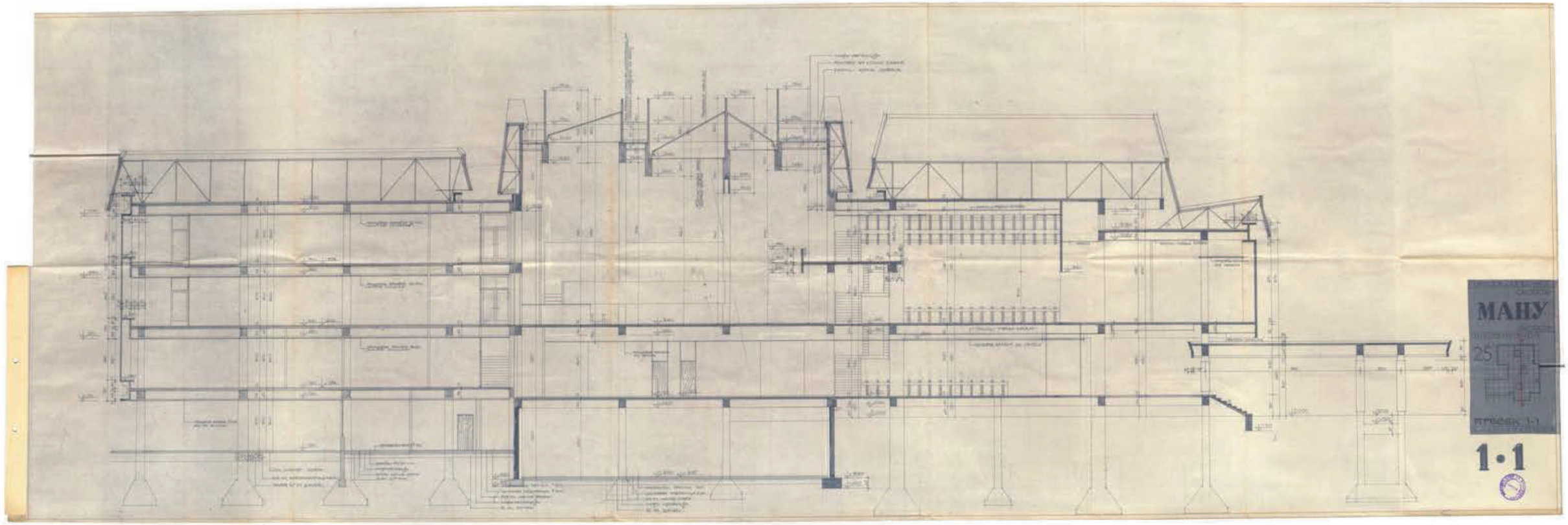
ground floor part V
ink on transparent paper copied on insoluble paper
dim. 150cm/174cm
Skopje City Archive
fund: Additional 1973, box numer 25



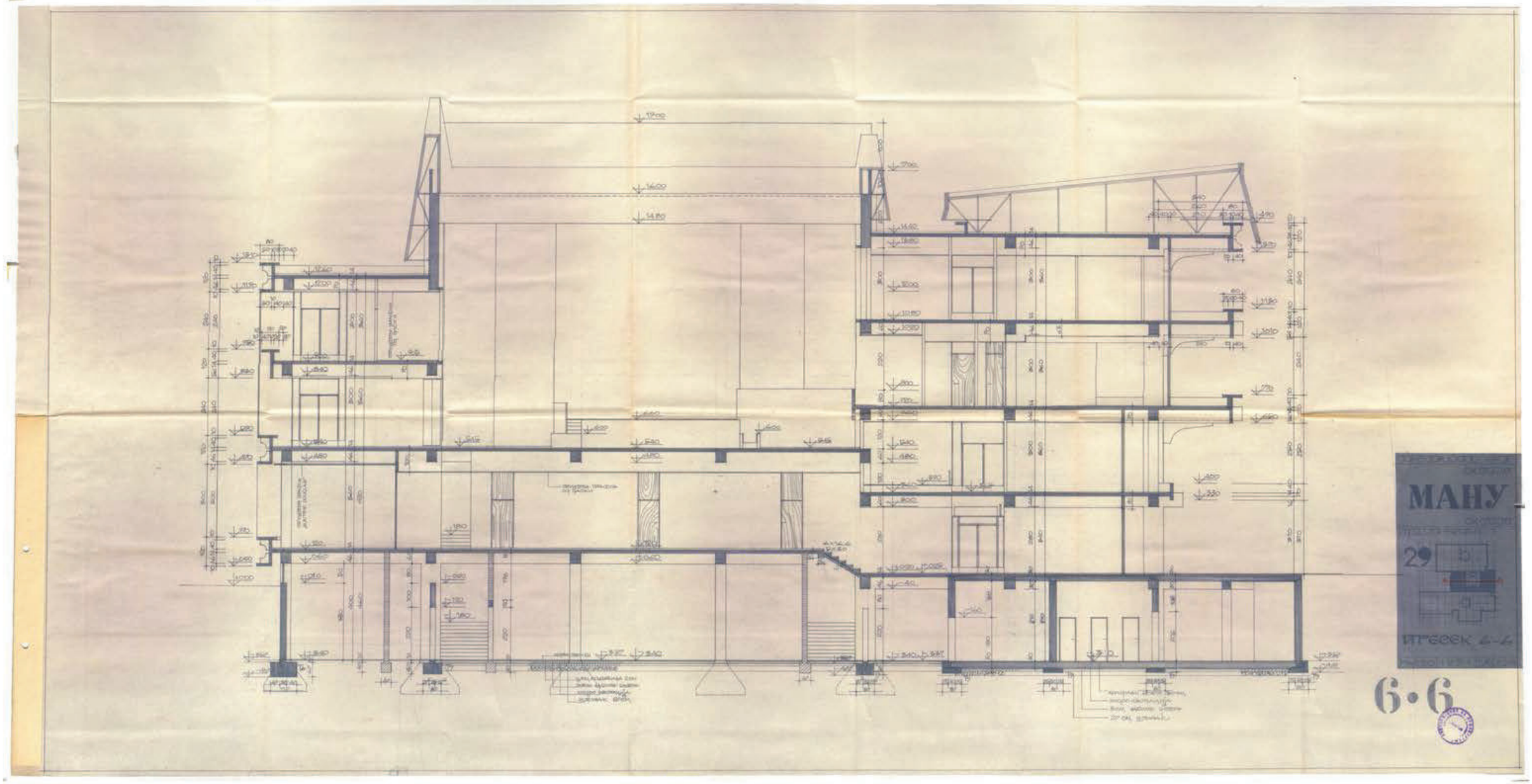
floor I part V
ink on transparent paper copied on insoluble paper
dim. 140cm/174cm
Skopje City Archive
fund: Additional 1973, box numer 25



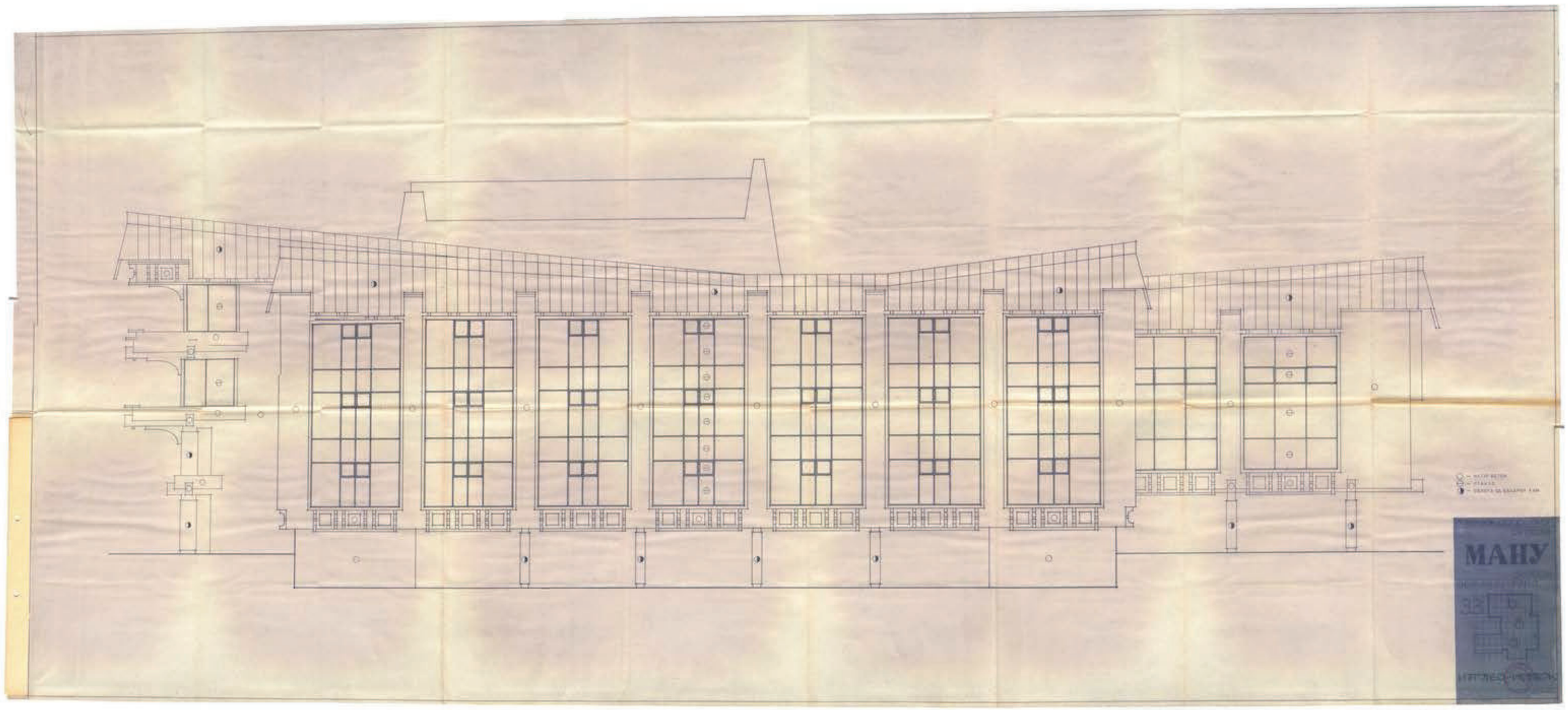
floor II part V
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
Skopje City Archive
fund: Additional 1973, box numer 25



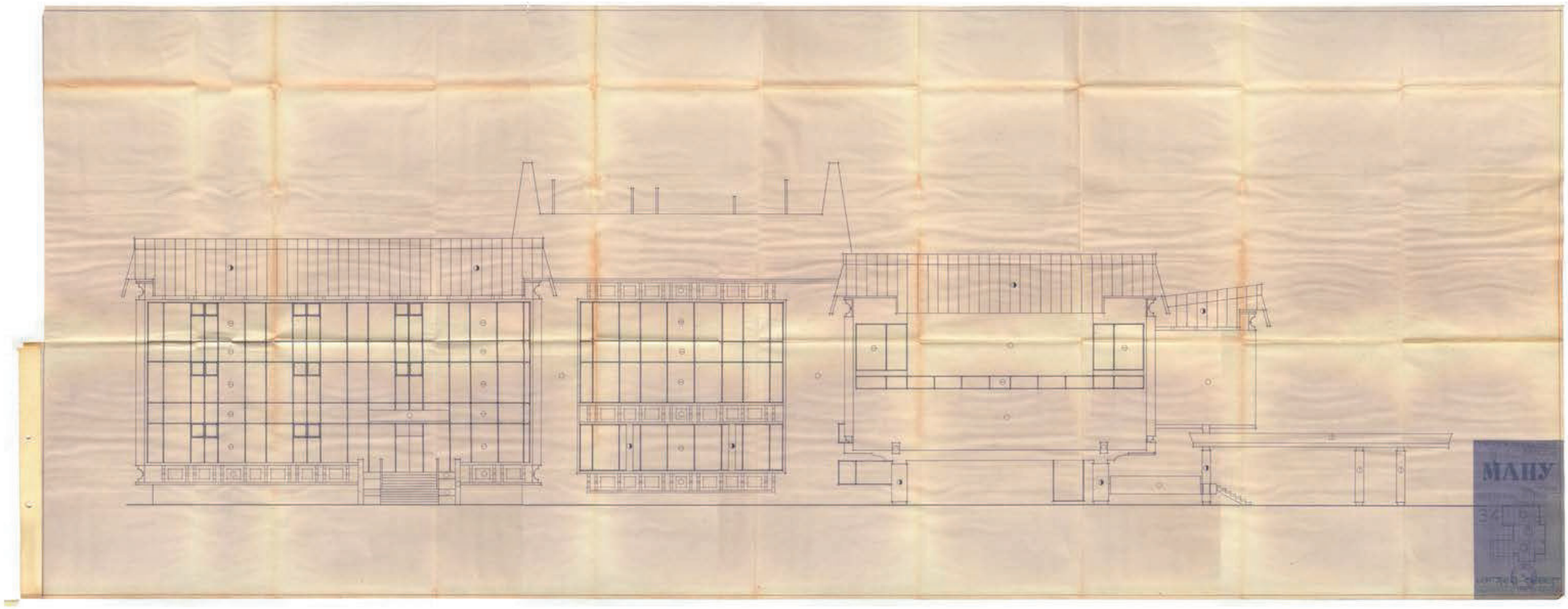
section
ink on transparent paper copied on insoluble paper
dim. 180cm/60cm
Skopje City Archive
fund: Additional 1973, box numer 25



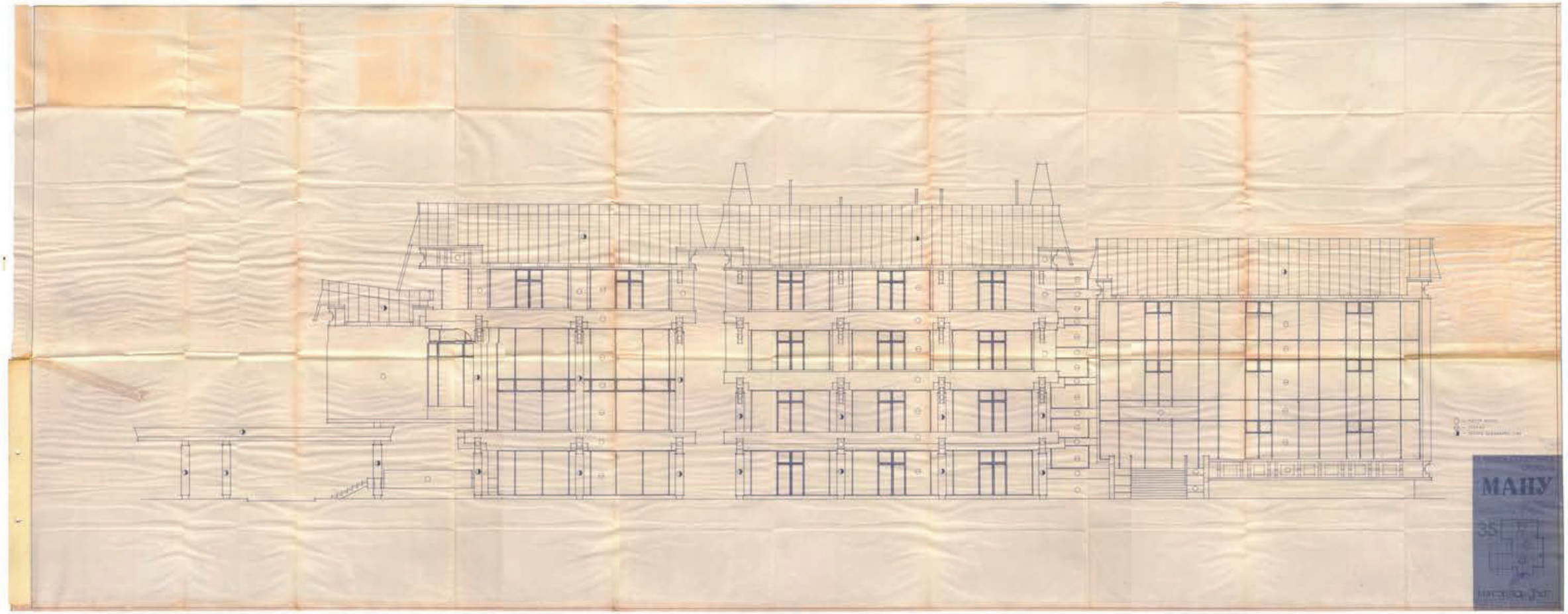
section
ink on transparent paper copied on insoluble paper
dim. 125.5cm/64cm
Skopje City Archive
fund: Additional 1973, box numer 25



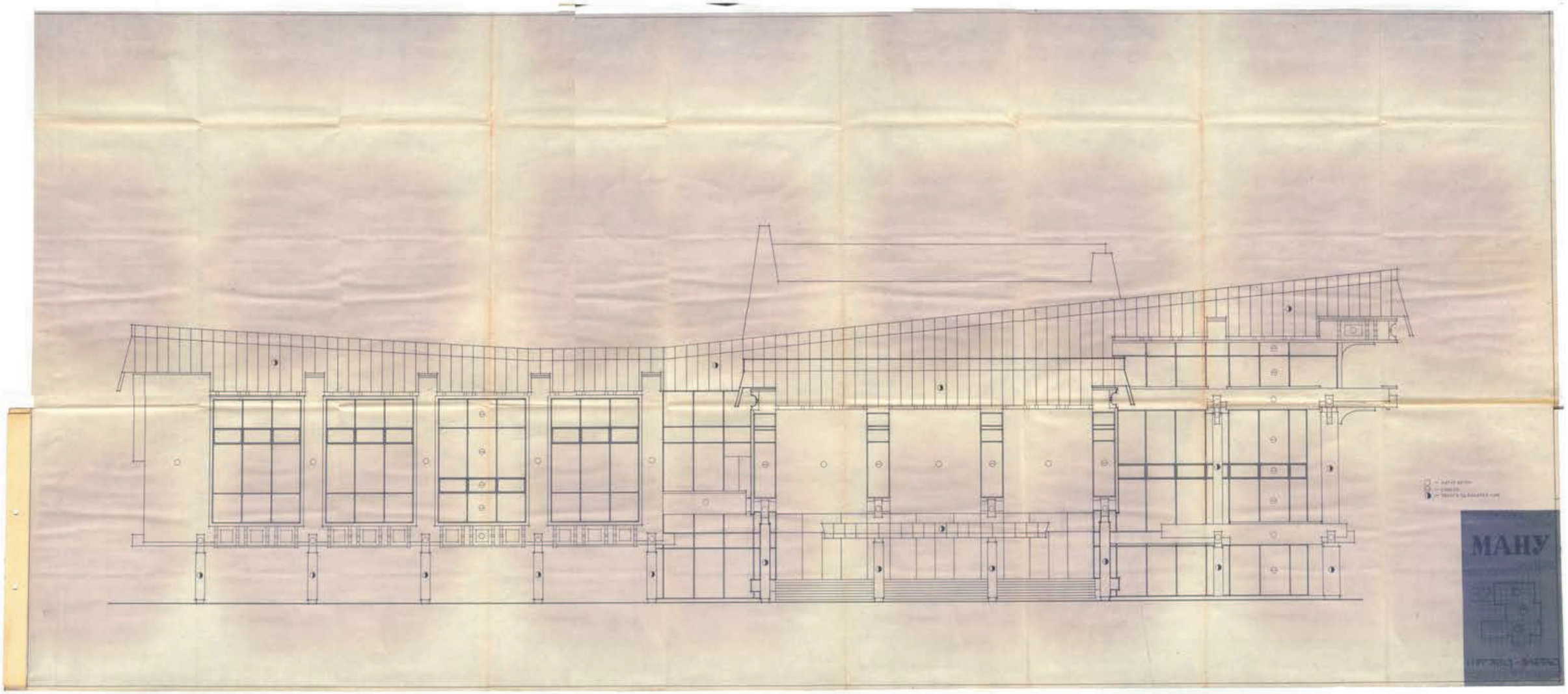
elevation east
ink on transparent paper copied on insoluble paper
dim. 160cm/70cm
Skopje City Archive
fund: Additional 1973, box number 25



elevation nort
ink on transparent paper copied on insoluble paper
dim. 180cm/70cm
Skopje City Archive
fund: Additional 1973, box numer 25



elevation south
ink on transparent paper copied on insoluble paper
dim. 184cm/72cm
Skopje City Archive
fund: Additional 1973, box numer 25



elevation west
ink on transparent paper copied on insoluble paper
dim. 165cm/71cm
Skopje City Archive
fund: Additional 1973, box numer 25

[ARCHIVE MATERIALS] *National And University Library _Petar Mulichkovski*

masterplan
ink on transparent paper copied on insoluble paper
dim. 93cm/75cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

ground floor
ink on transparent paper copied on insoluble paper
dim. 149cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

floor I
ink on transparent paper copied on insoluble paper
dim. 150cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

floor II
ink on transparent paper copied on insoluble paper
dim. 150cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

section V-V
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

section Q-Q
ink on transparent paper copied on insoluble paper
dim. 131cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

section Z-Z
ink on transparent paper copied on insoluble paper
dim. 131cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

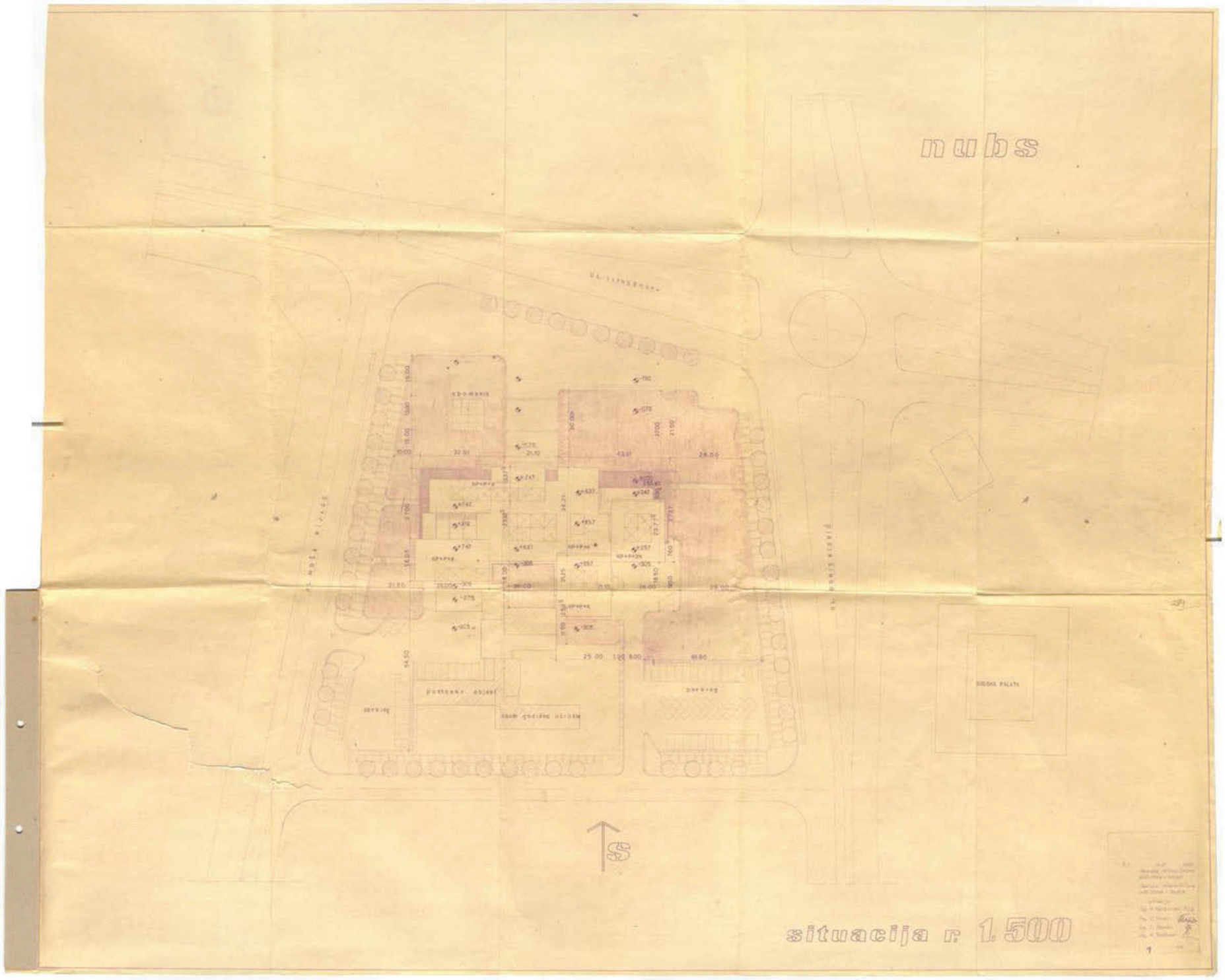
section X-X, Y-Y
ink on transparent paper copied on insoluble paper
dim. 117.2cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

elevation north
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

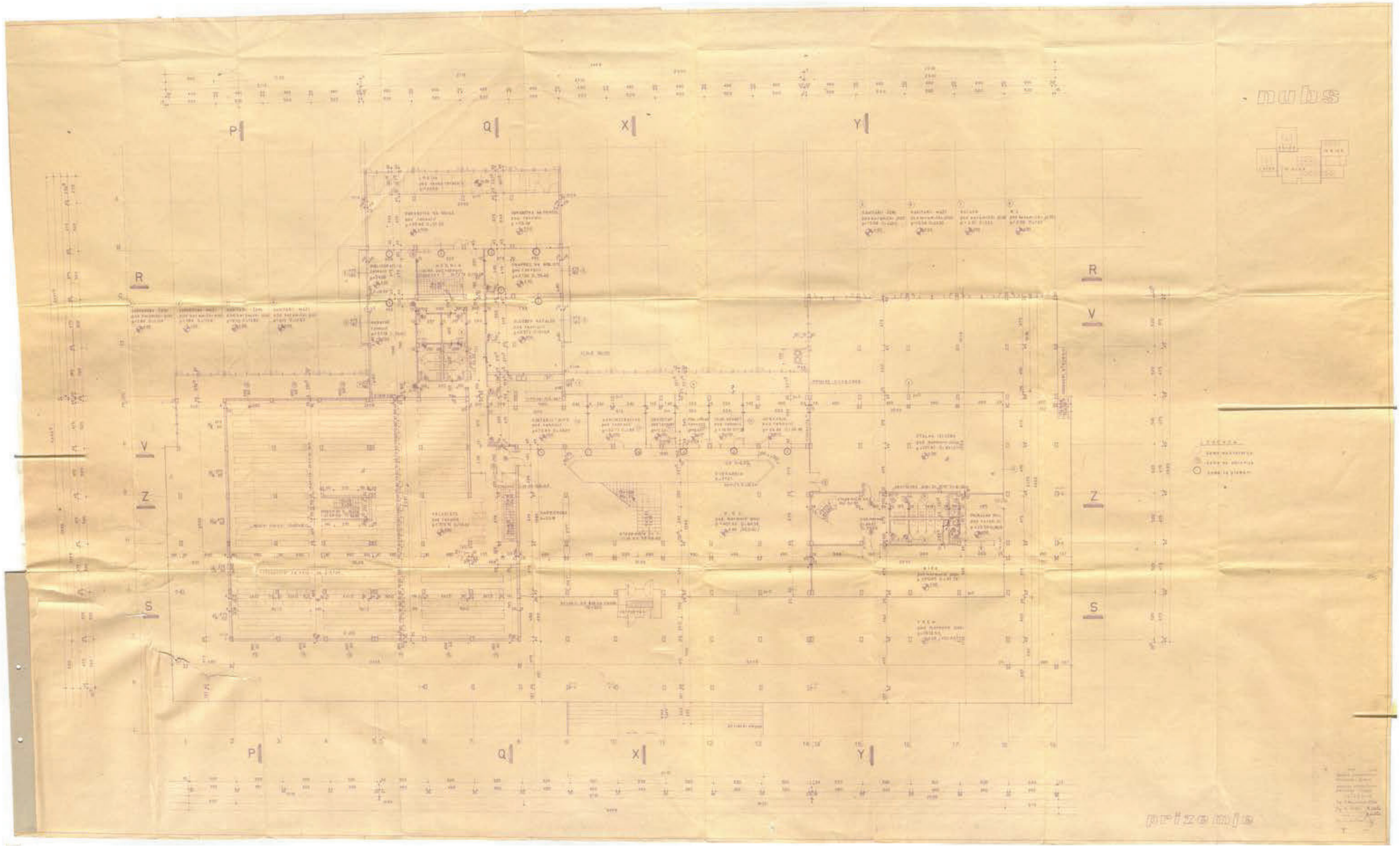
elevation east
ink on transparent paper copied on insoluble paper
dim. 126.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

elevation west
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

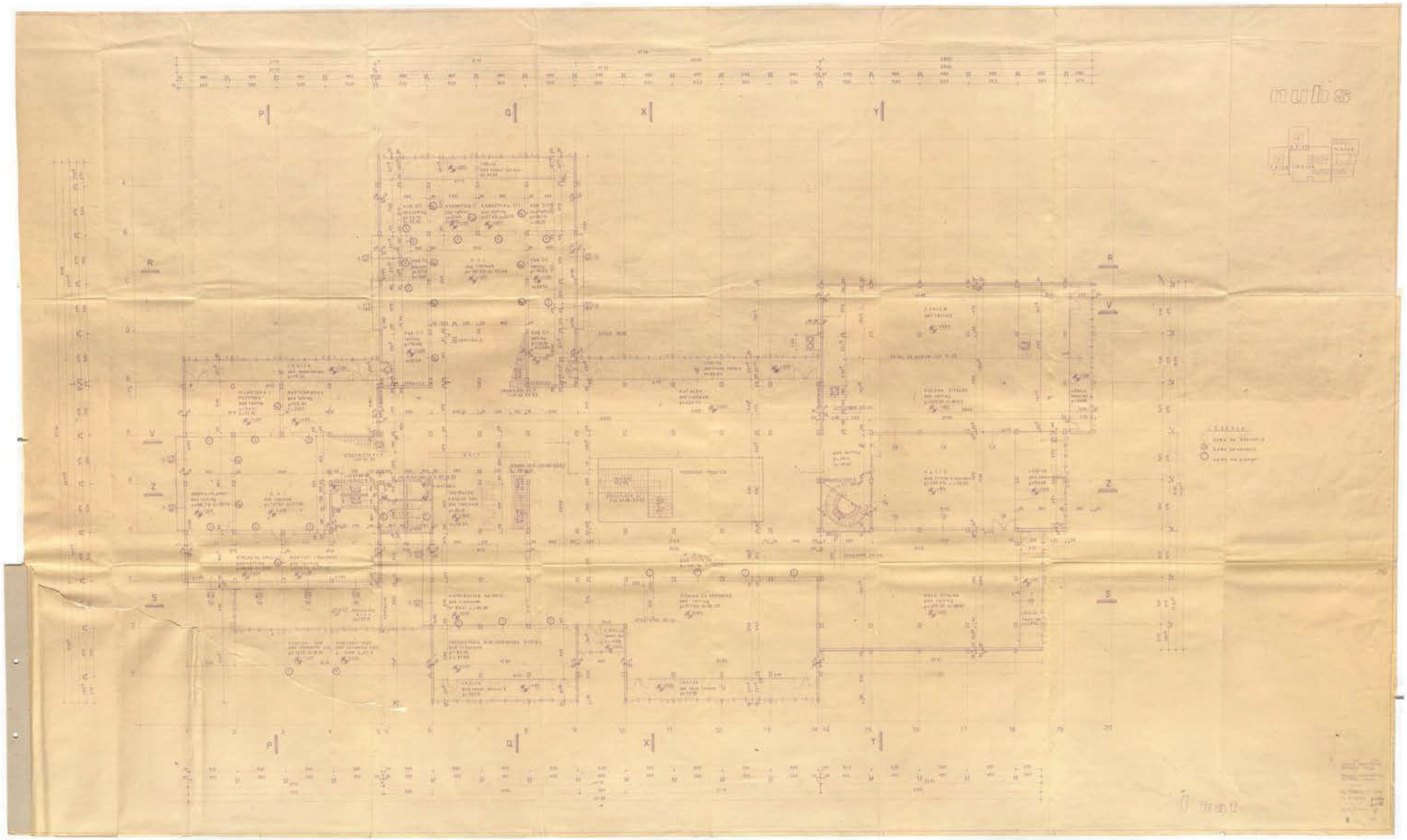
elevation south
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208



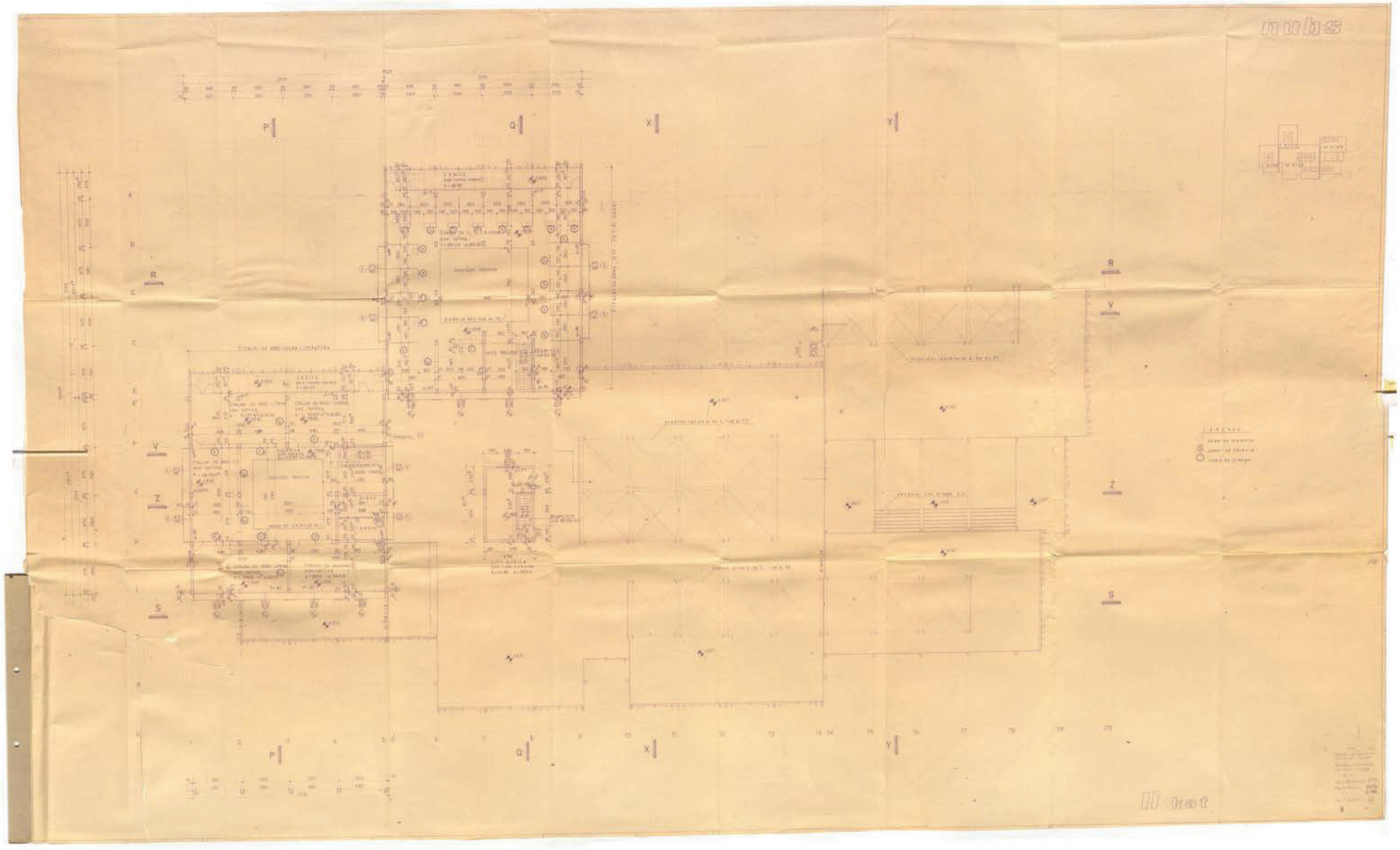
masterplan
ink on transparent paper copied on insoluble paper
dim. 93cm/75cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208



ground floor
ink on transparent paper copied on insoluble paper
dim. 149cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208



floor I
ink on transparent paper copied on insoluble paper
dim. 150cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208



floor II
ink on transparent paper copied on insoluble paper
dim. 150cm/88.5cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

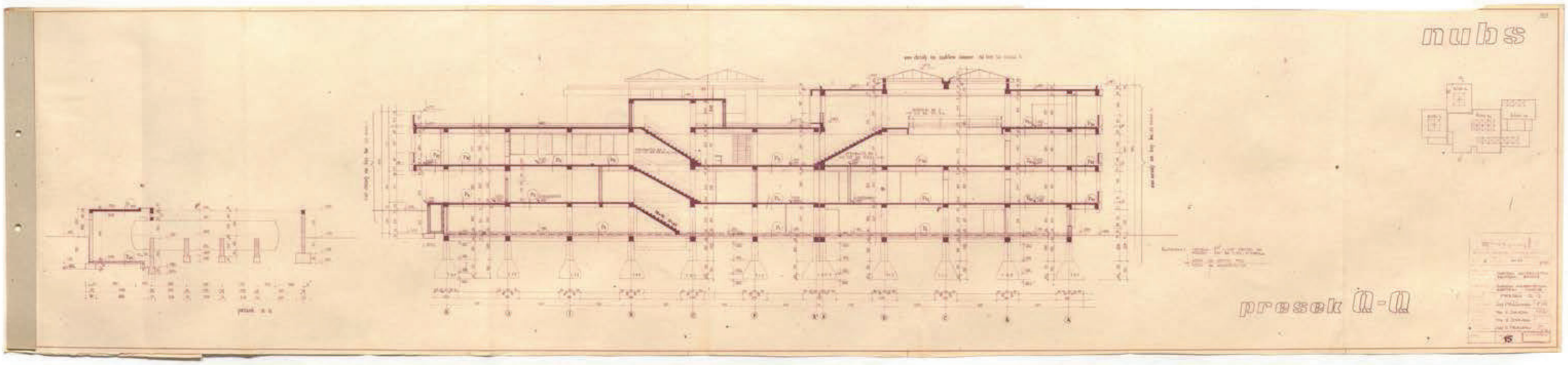


figure1

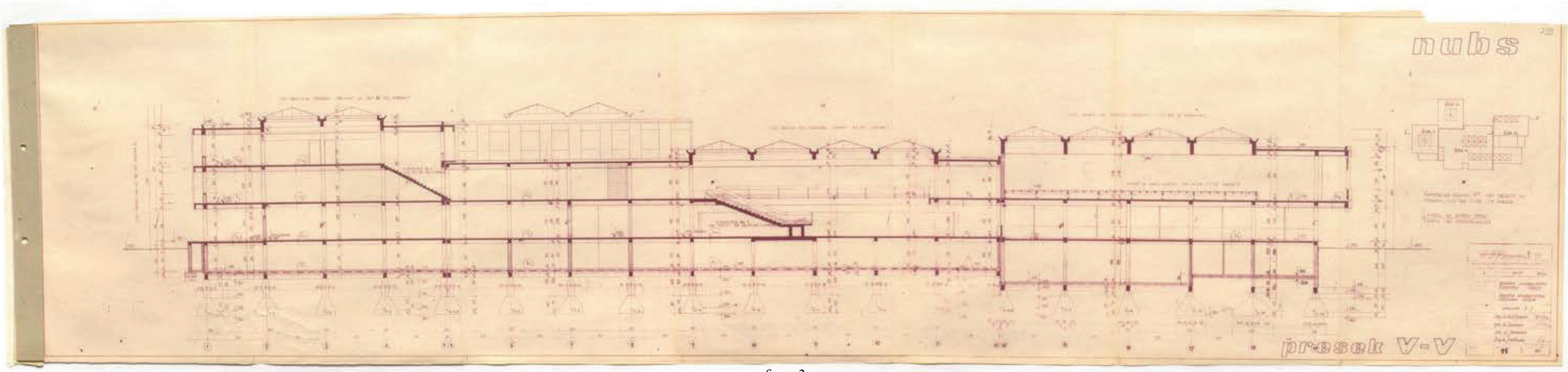


figure2

figure 1
section Q-Q
ink on transparent paper copied on insoluble paper
dim. 131cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

figure 2
section V-V
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive

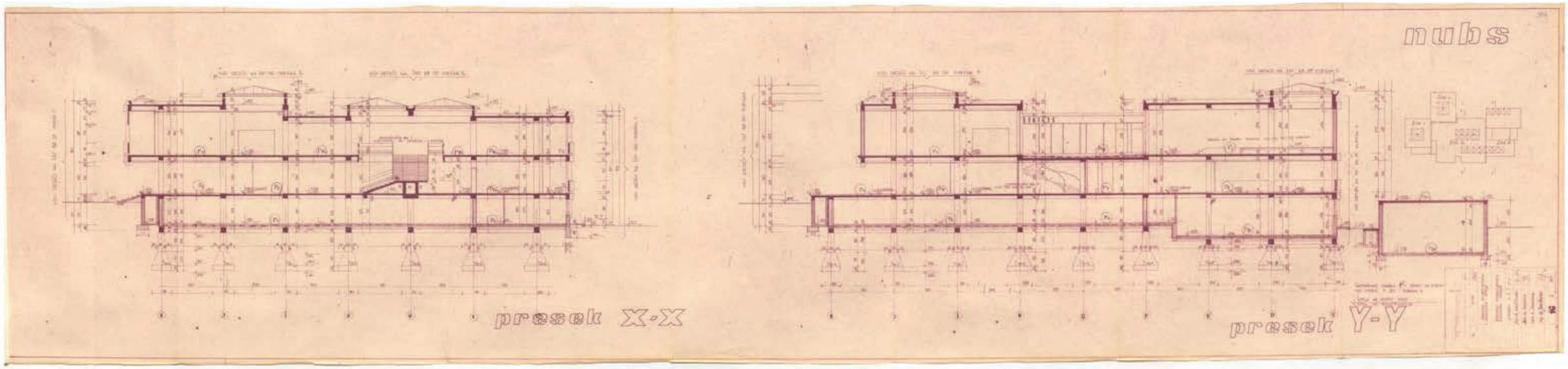


figure1

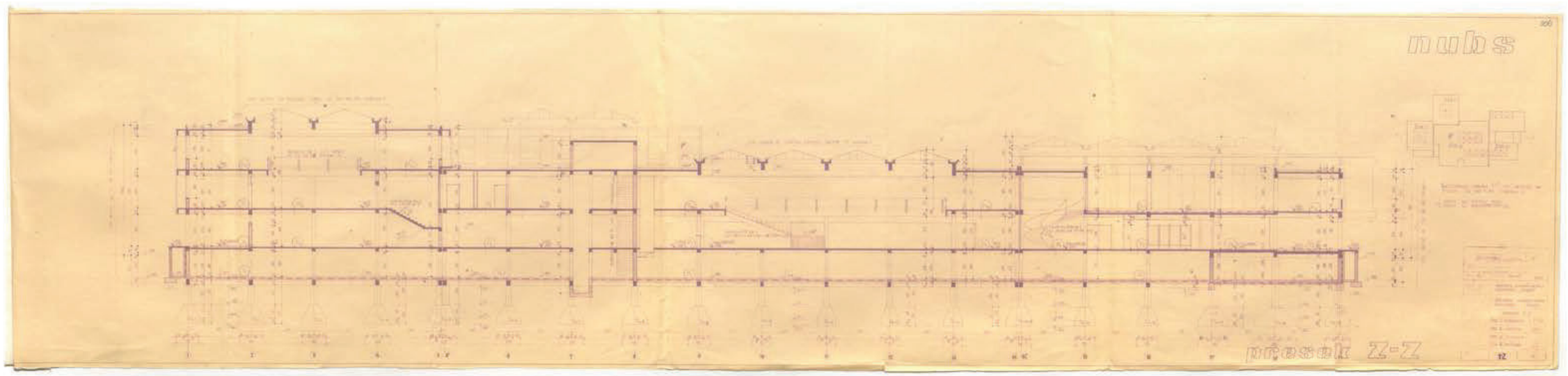


figure2

figure 1
section X-X, Y-Y
ink on transparent paper copied on insoluble paper
dim. 117.2cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

figure 2
section Z-Z
ink on transparent paper copied on insoluble paper
dim. 131cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

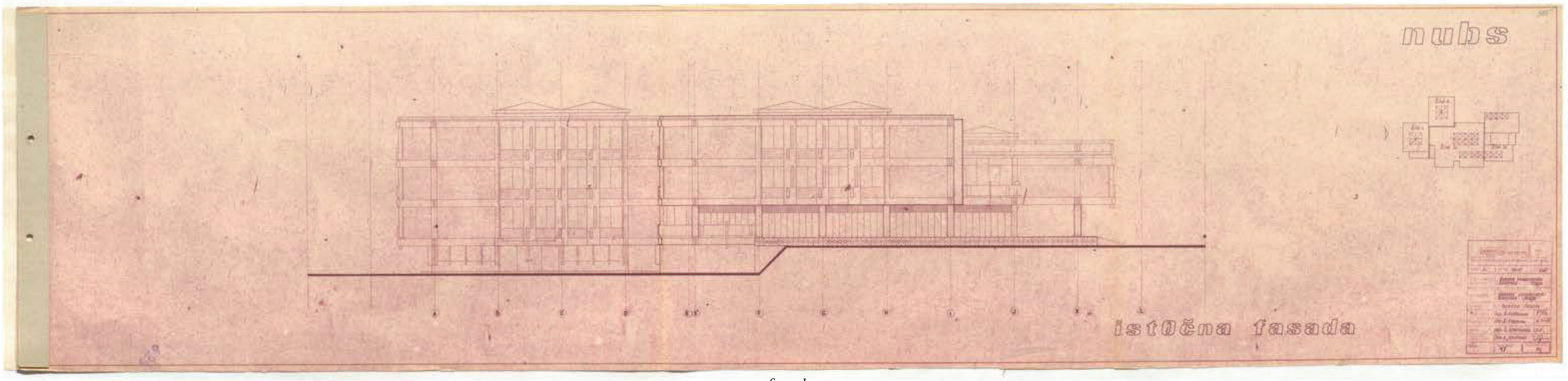


figure1

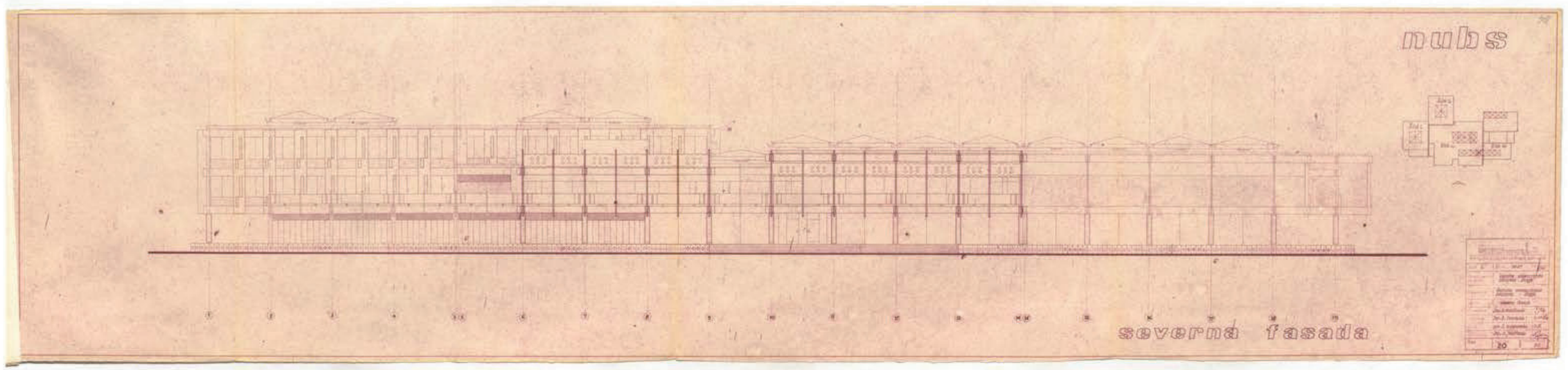


figure2

figure 1
elevation east
ink on transparent paper copied on insoluble paper
dim. 126.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

figure 2
elevation north
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

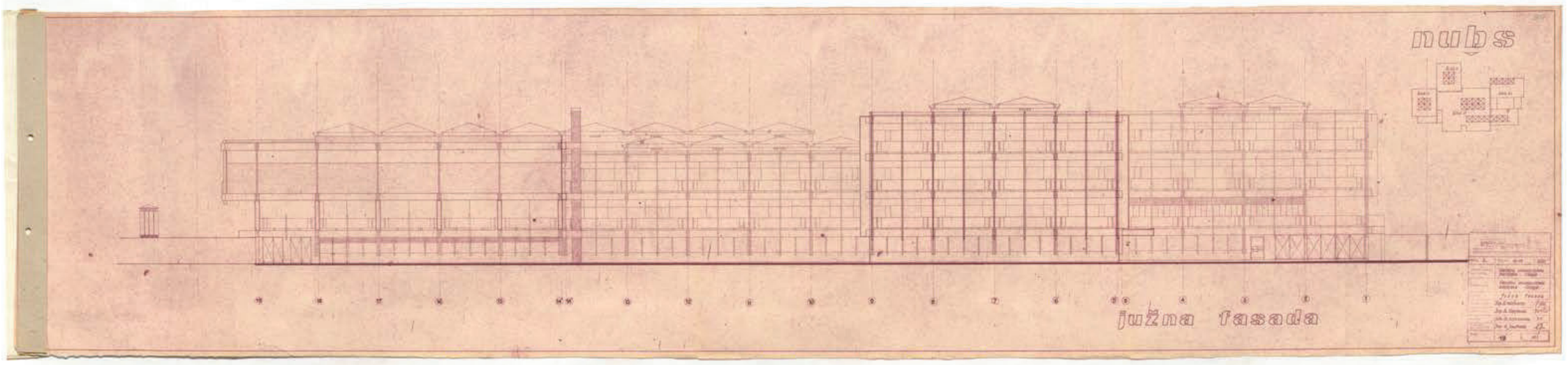


figure1

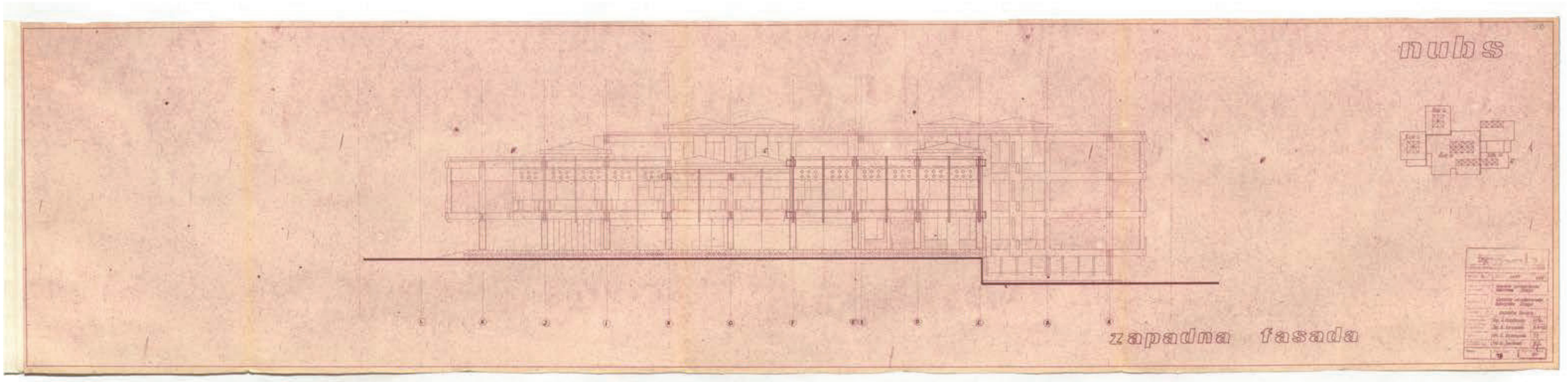
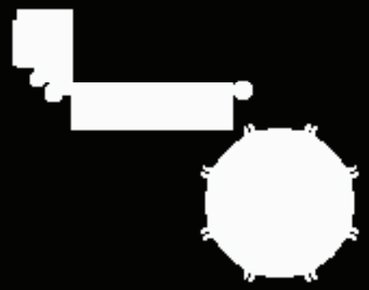


figure2

figure 1
elevation south
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208

figure 2
elevation west
ink on transparent paper copied on insoluble paper
dim. 131.5cm/29.7cm
Skopje City Archive
fund: Idadia municipality, box numer 207, 208



[ARCHIVE MATERIALS] *Telecomunication Centre _Janko Konstantinov*

masterplan
ink on transparent paper copied on insoluble paper
dim. 107cm/70.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

masterplan ground floor
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski

ground floor counter hall
ink on transparent paper copied on insoluble paper
dim. 105cm/80.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

floor I counter hall
ink on transparent paper copied on insoluble paper
dim. 105cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

sections counter hall
ink on transparent paper copied on insoluble paper
dim. 104.5cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

sections counter hall
ink on transparent paper copied on insoluble paper
dim. 104.5cm/79.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

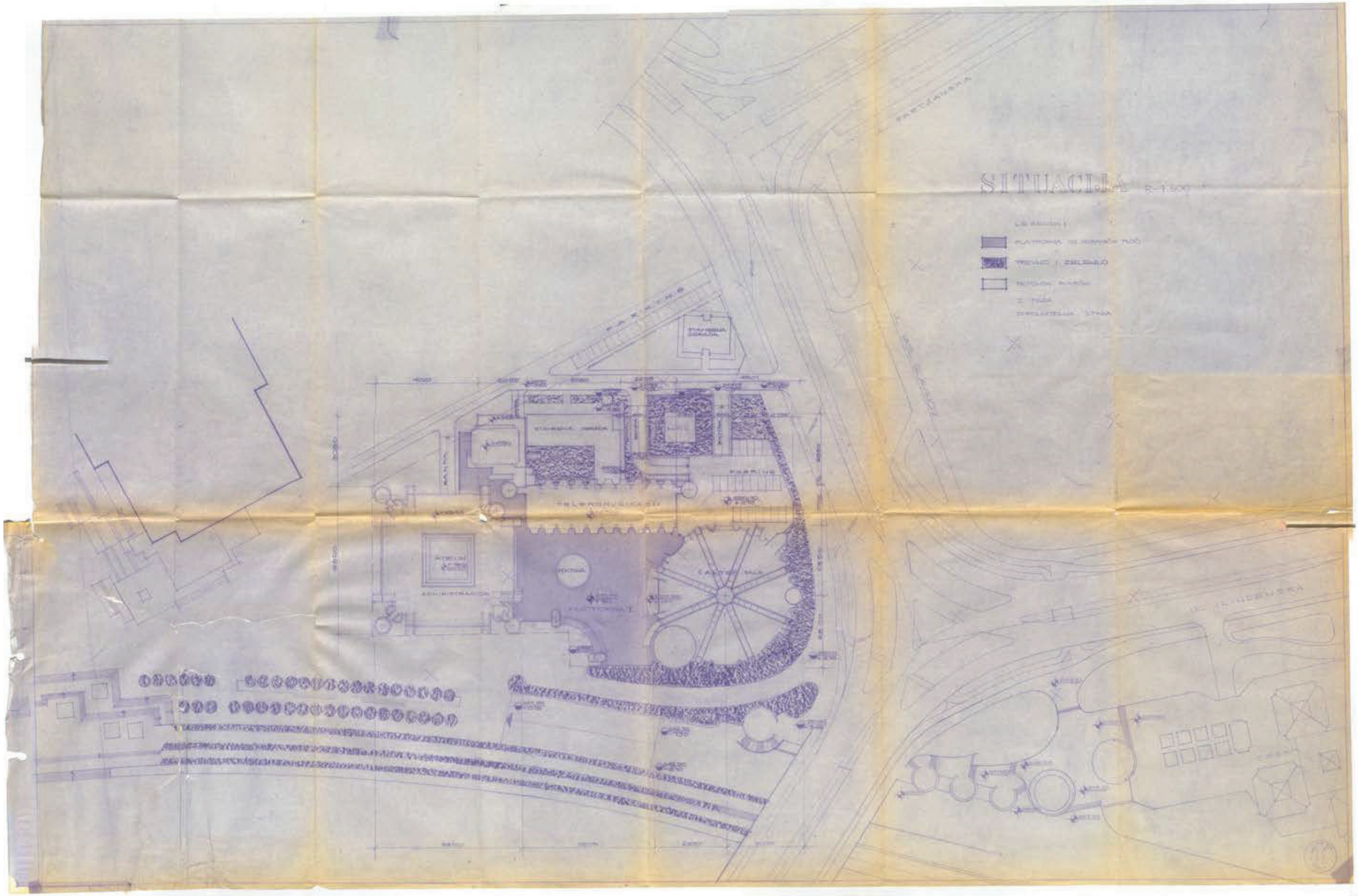
elevations counter hall
ink on transparent paper copied on insoluble paper
dim. 108.5cm/81cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

elevations counter hall
ink on transparent paper copied on insoluble paper
dim. 104.5cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

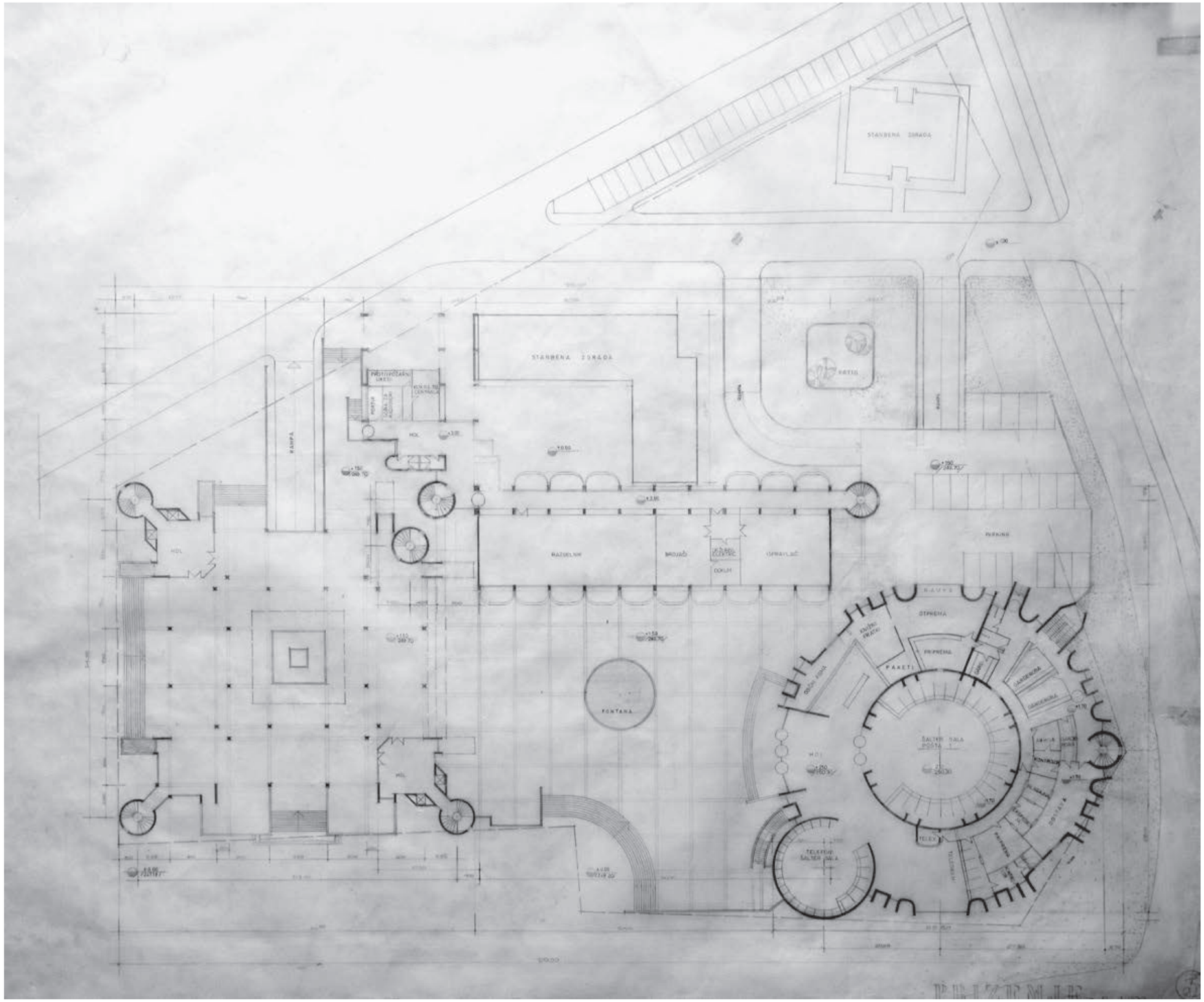
details counter hall
ink on transparent paper copied on insoluble paper
dim. 130cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

ground floor main building
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski

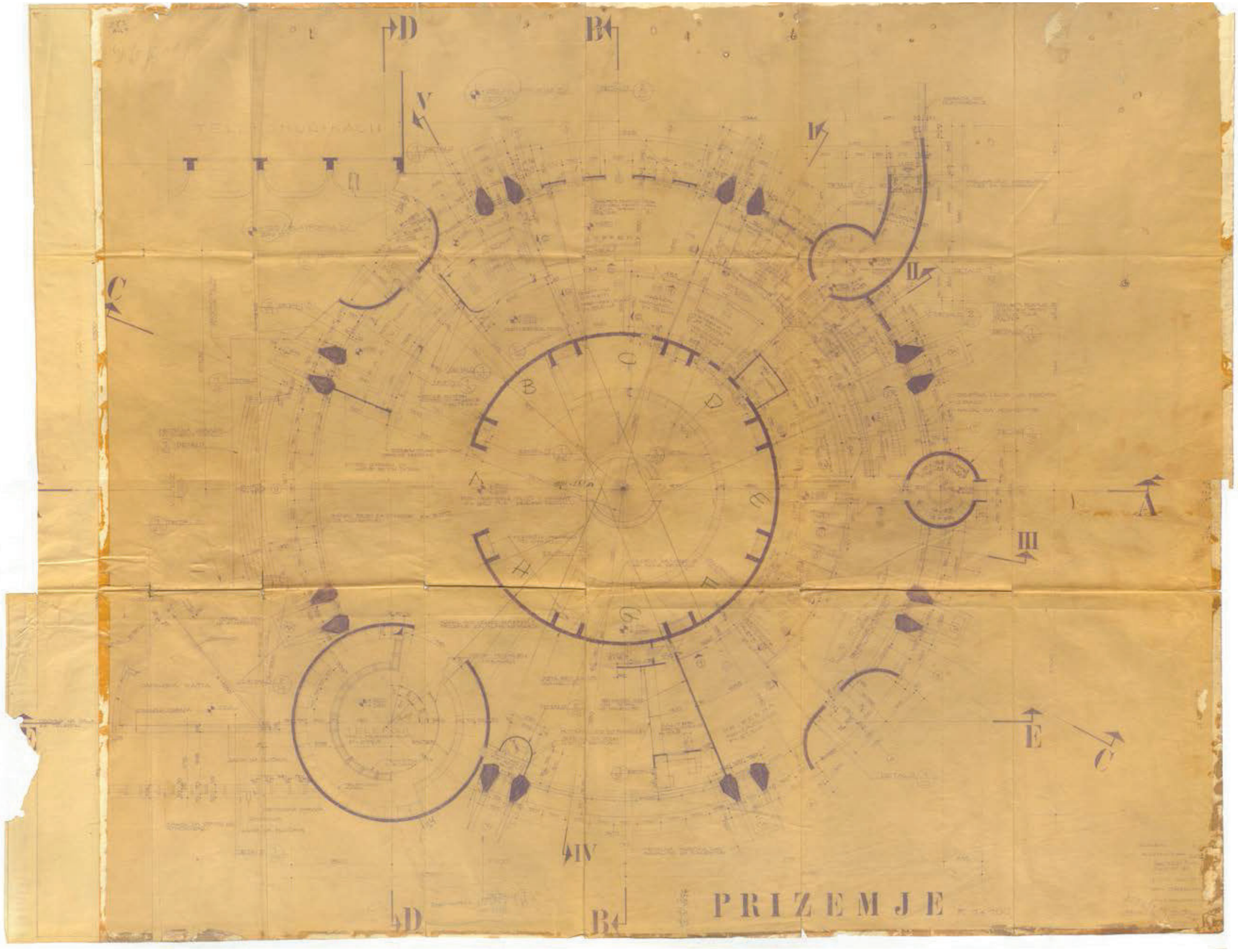
elevation main building
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski



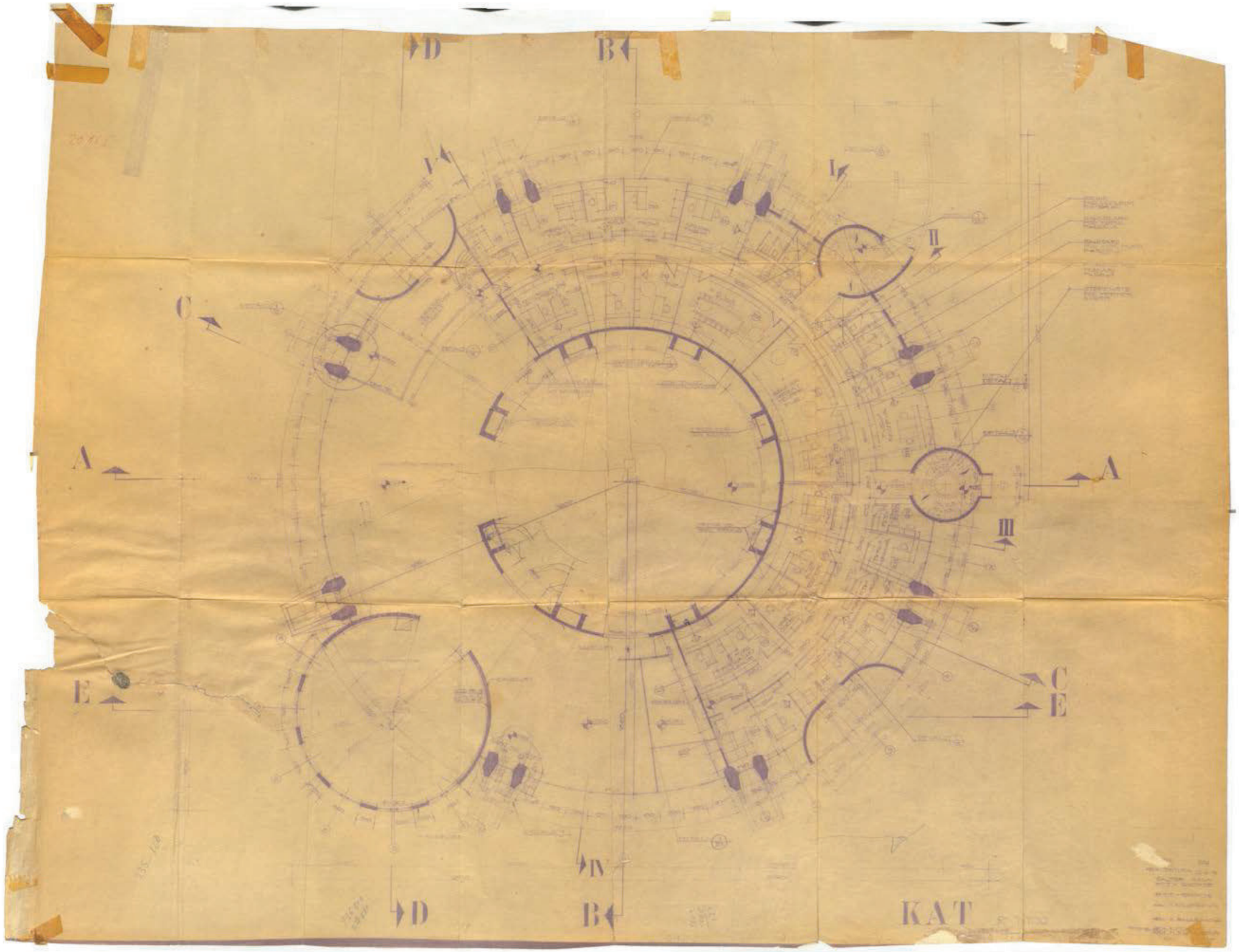
masterplan
ink on transparent paper copied on insoluble paper
dim. 107cm/70.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D



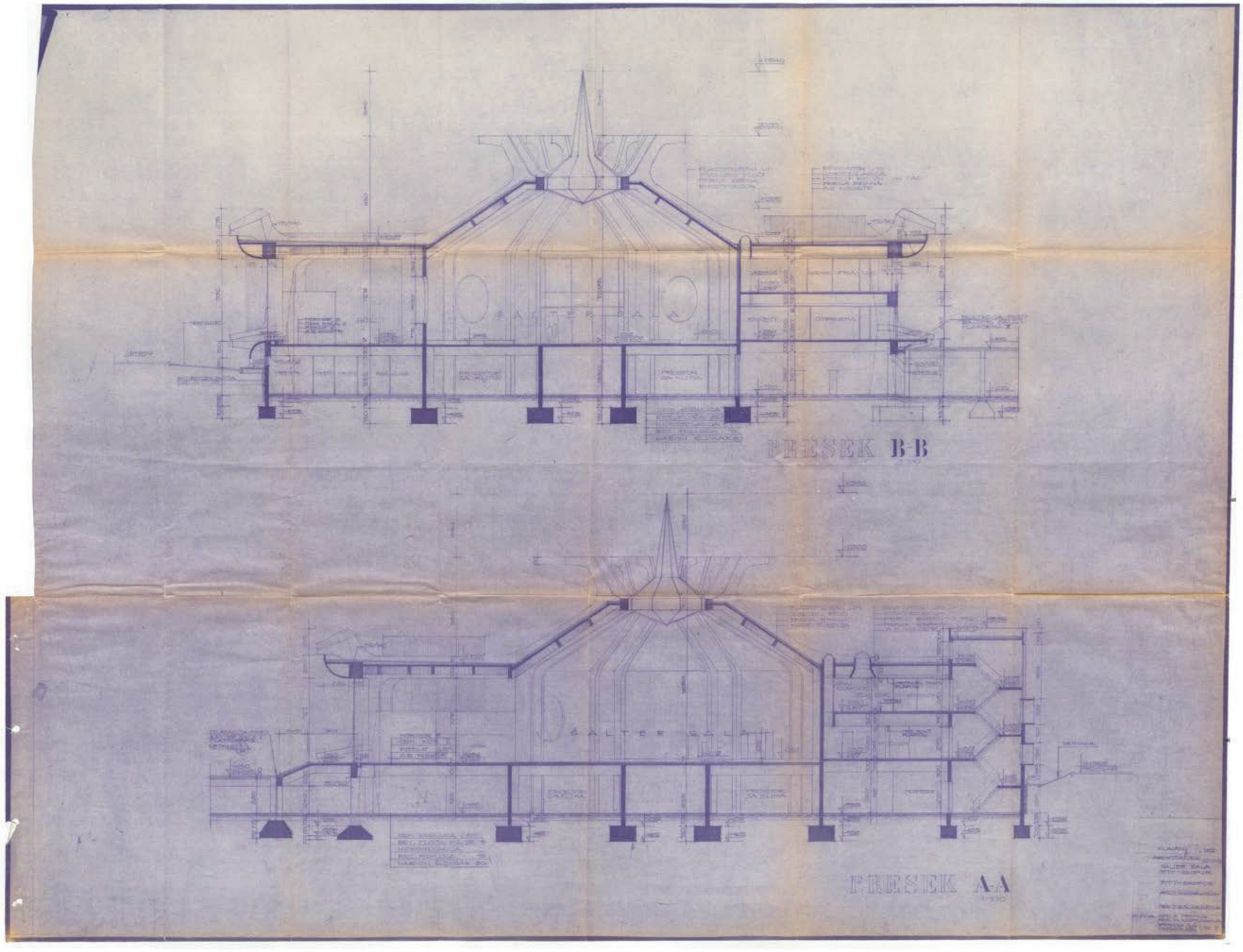
masterplan ground floor
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski



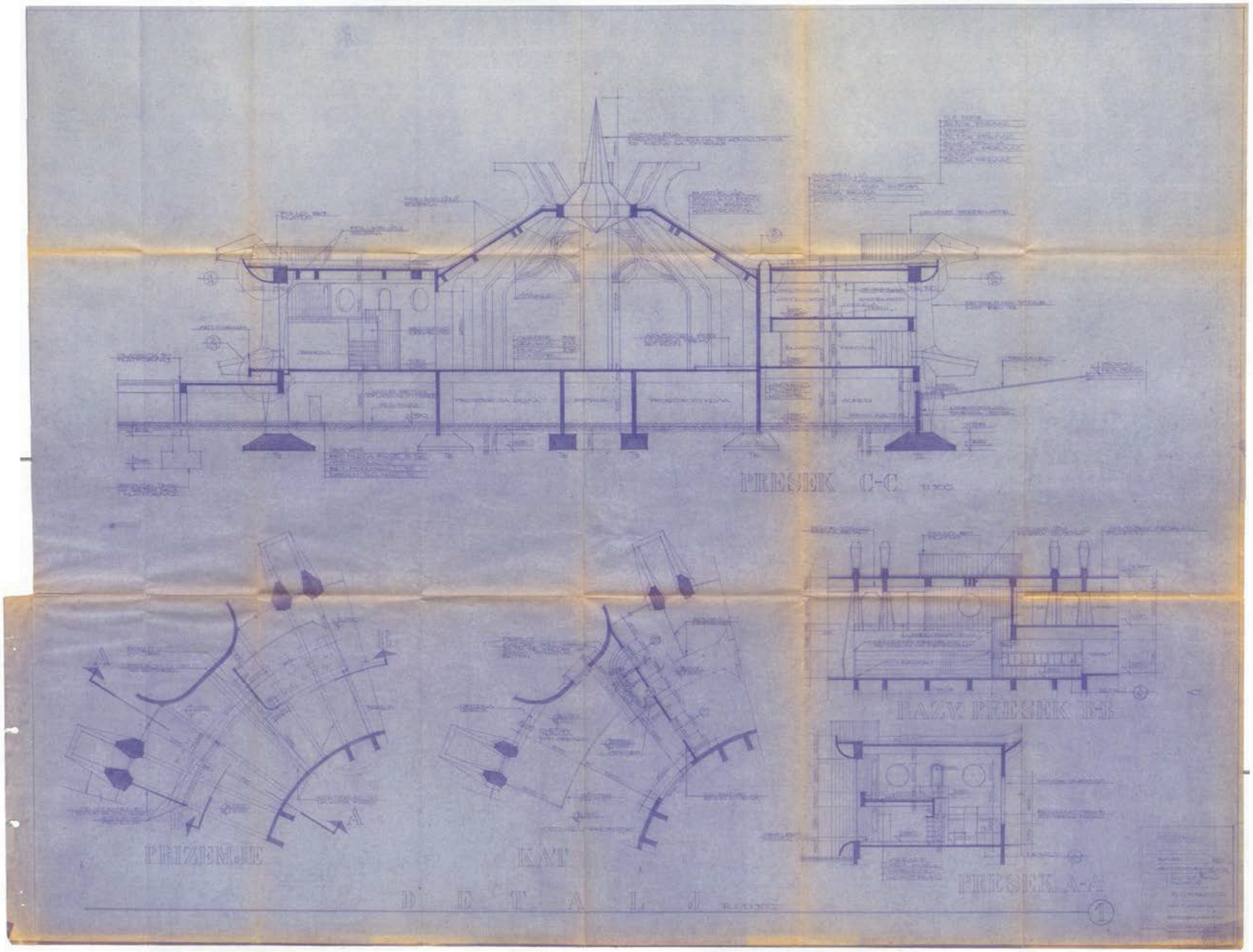
ground floor
ink on transparent paper copied on insoluble paper
dim. 105cm/80.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D



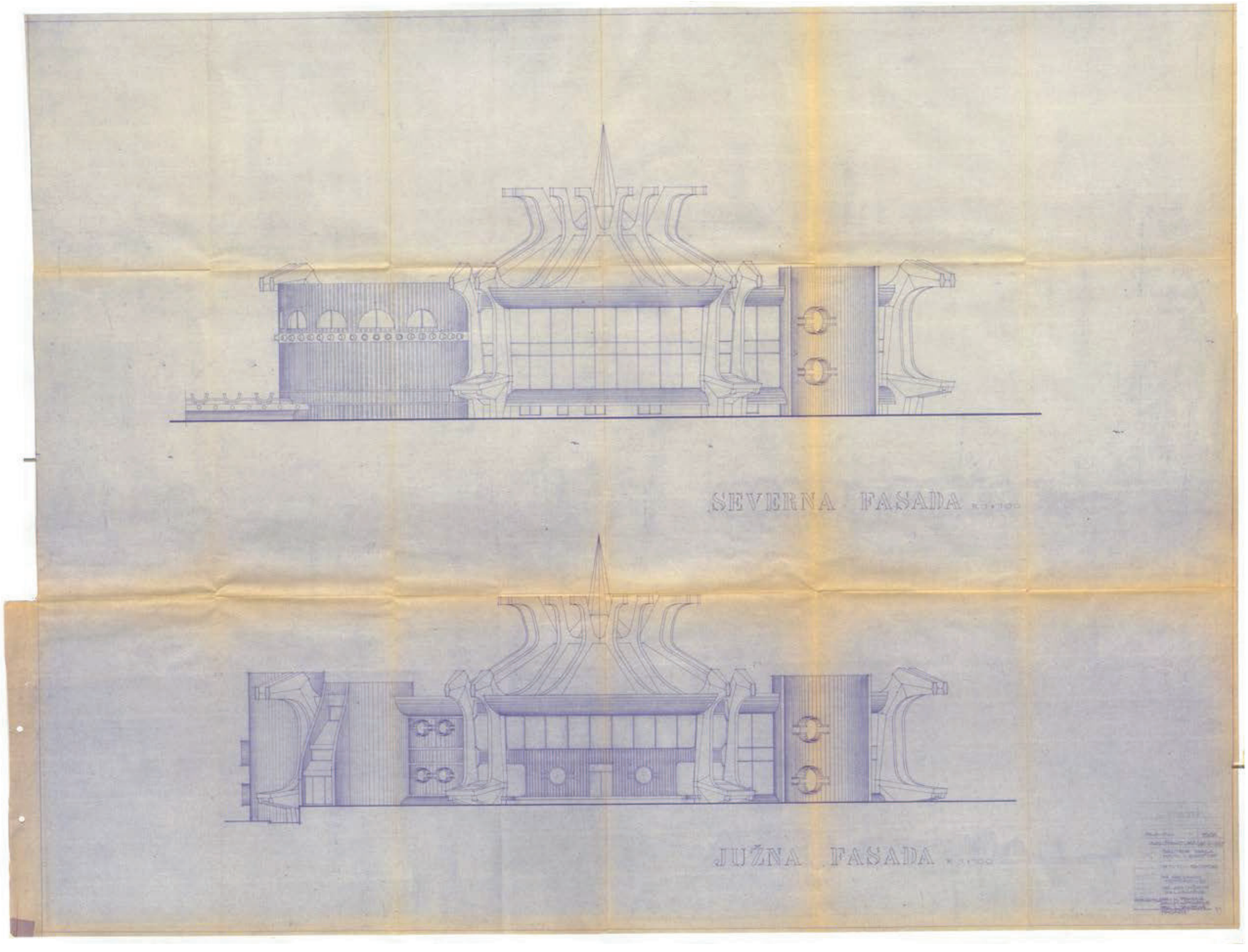
floor I
ink on transparent paper copied on insoluble paper
dim. 105cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D



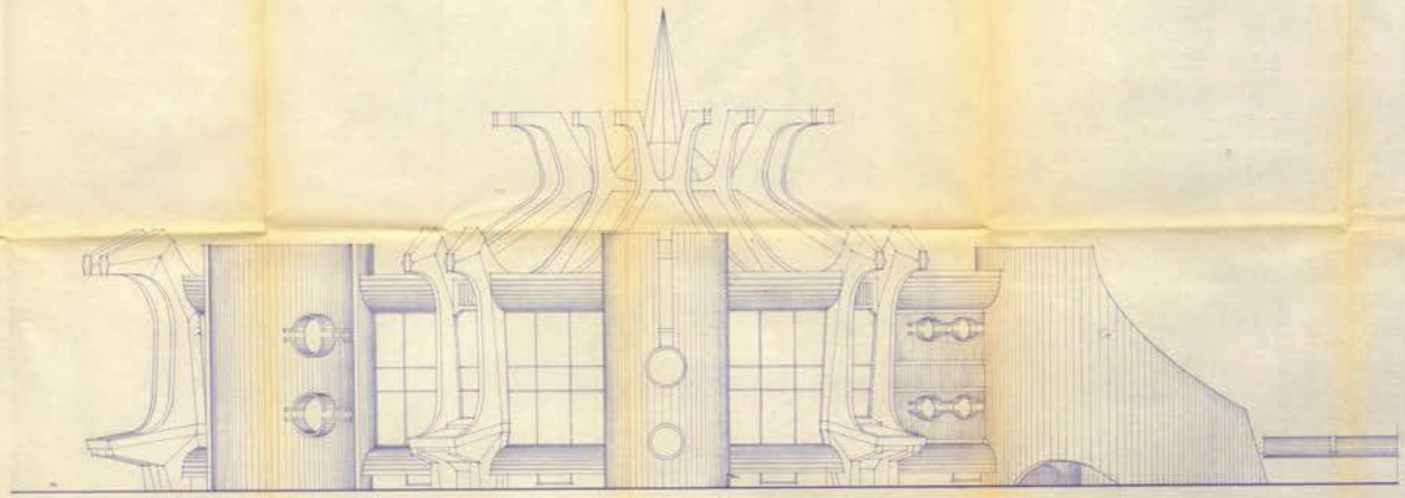
sections
ink on transparent paper copied on insoluble paper
dim. 104.5cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D



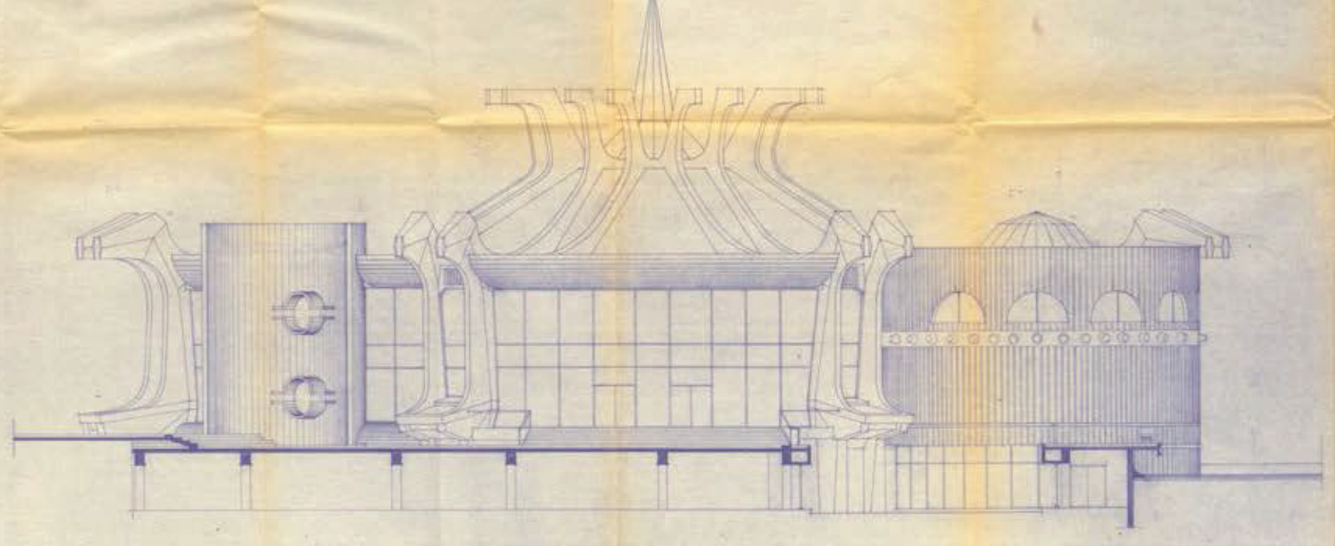
sections
ink on transparent paper copied on insoluble paper
dim. 104.5cm/79.5cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D



elevations
ink on transparent paper copied on insoluble paper
dim. 108.5cm/81cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D

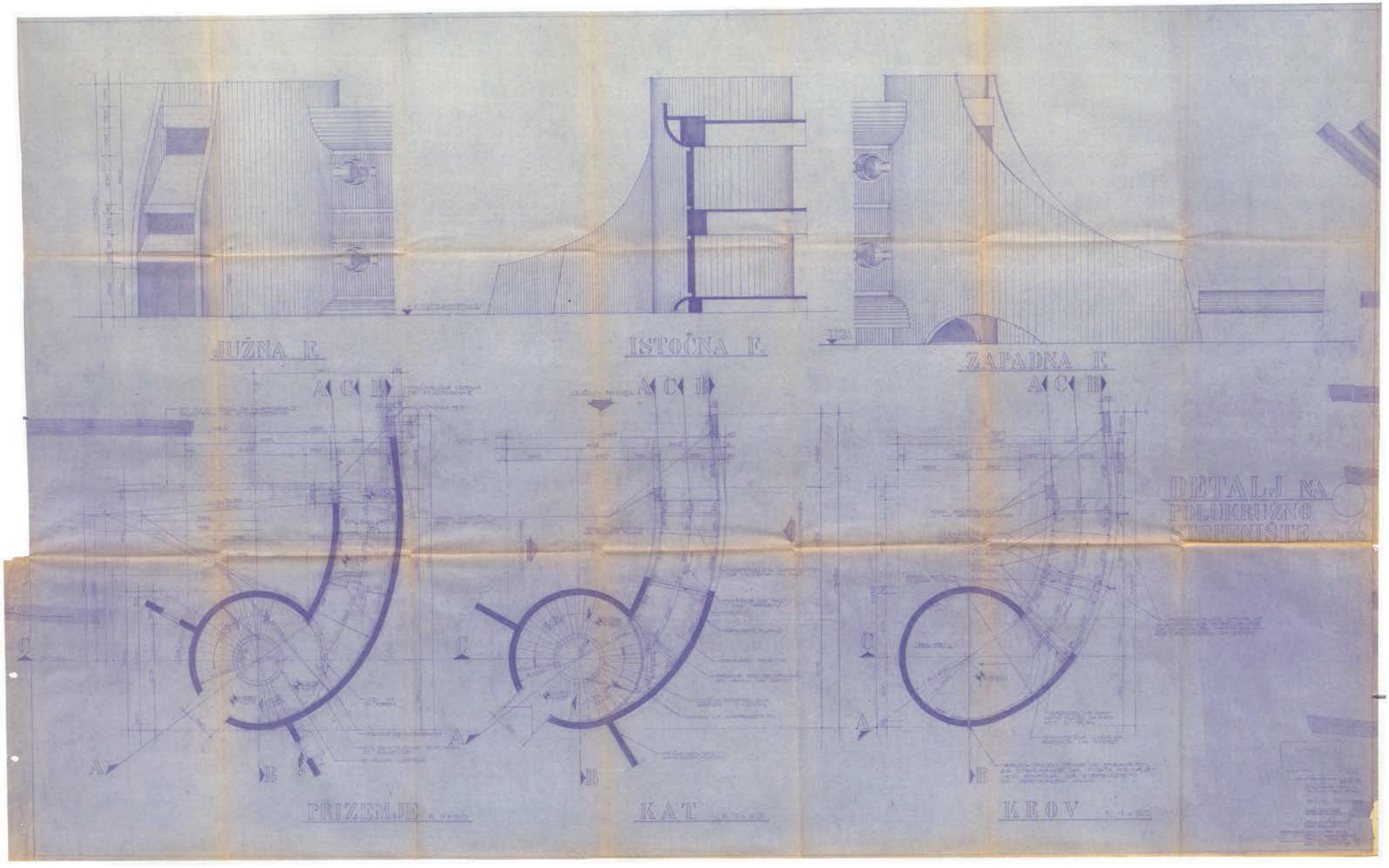


ZAPADNA FASADA

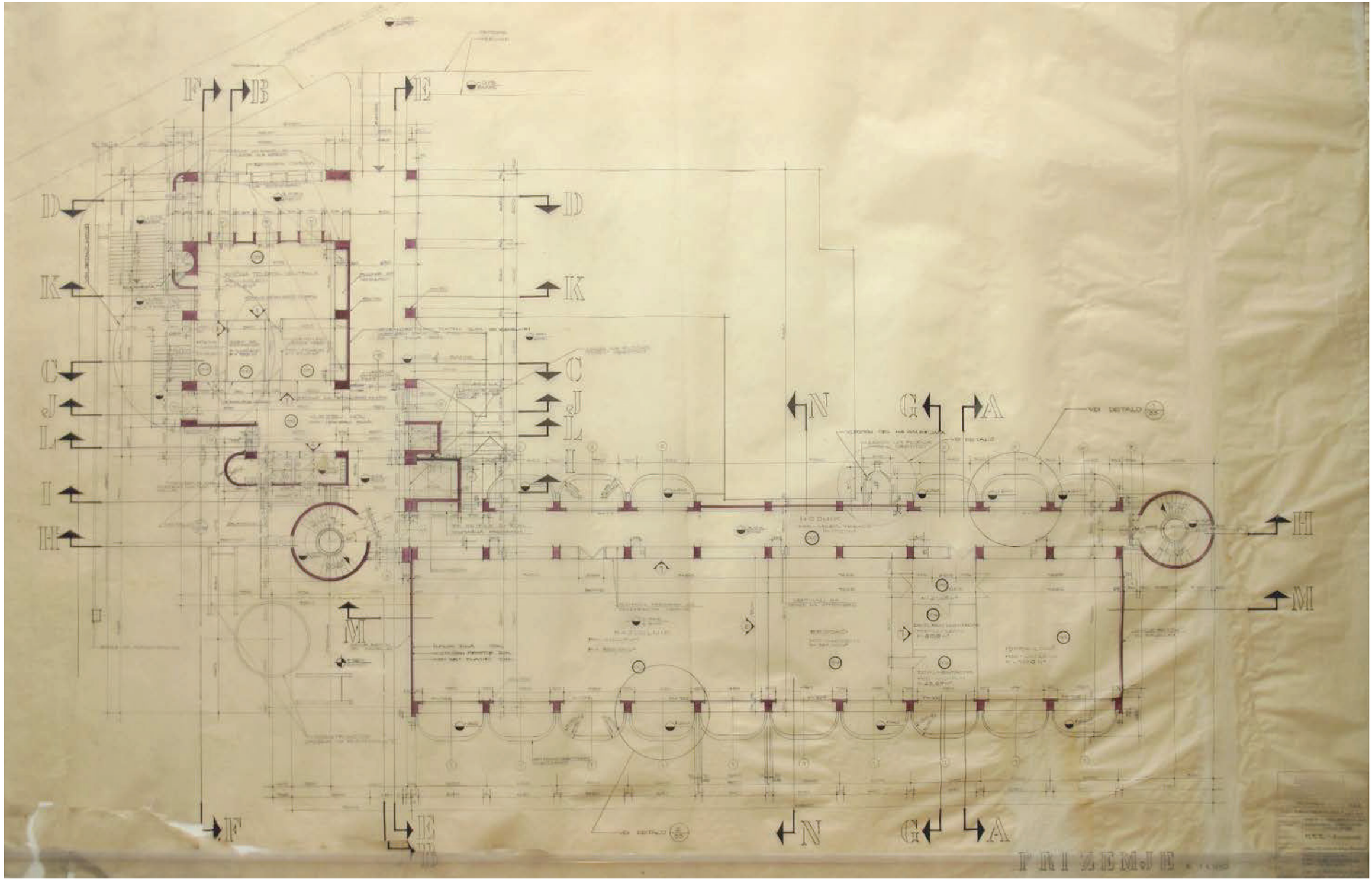


ISTOČNA FASADA

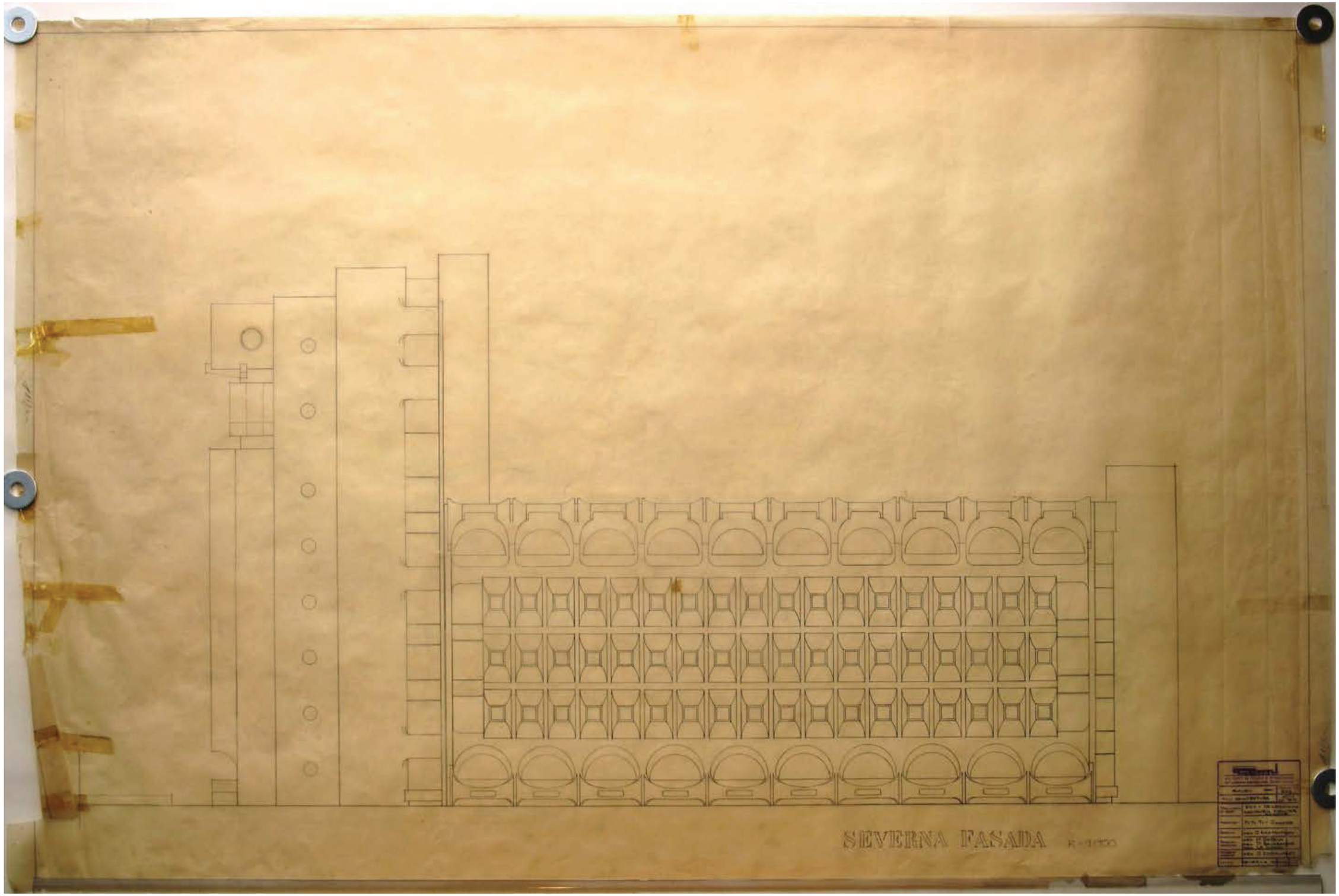
elevations
ink on transparent paper copied on insoluble paper
dim. 104.5cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D



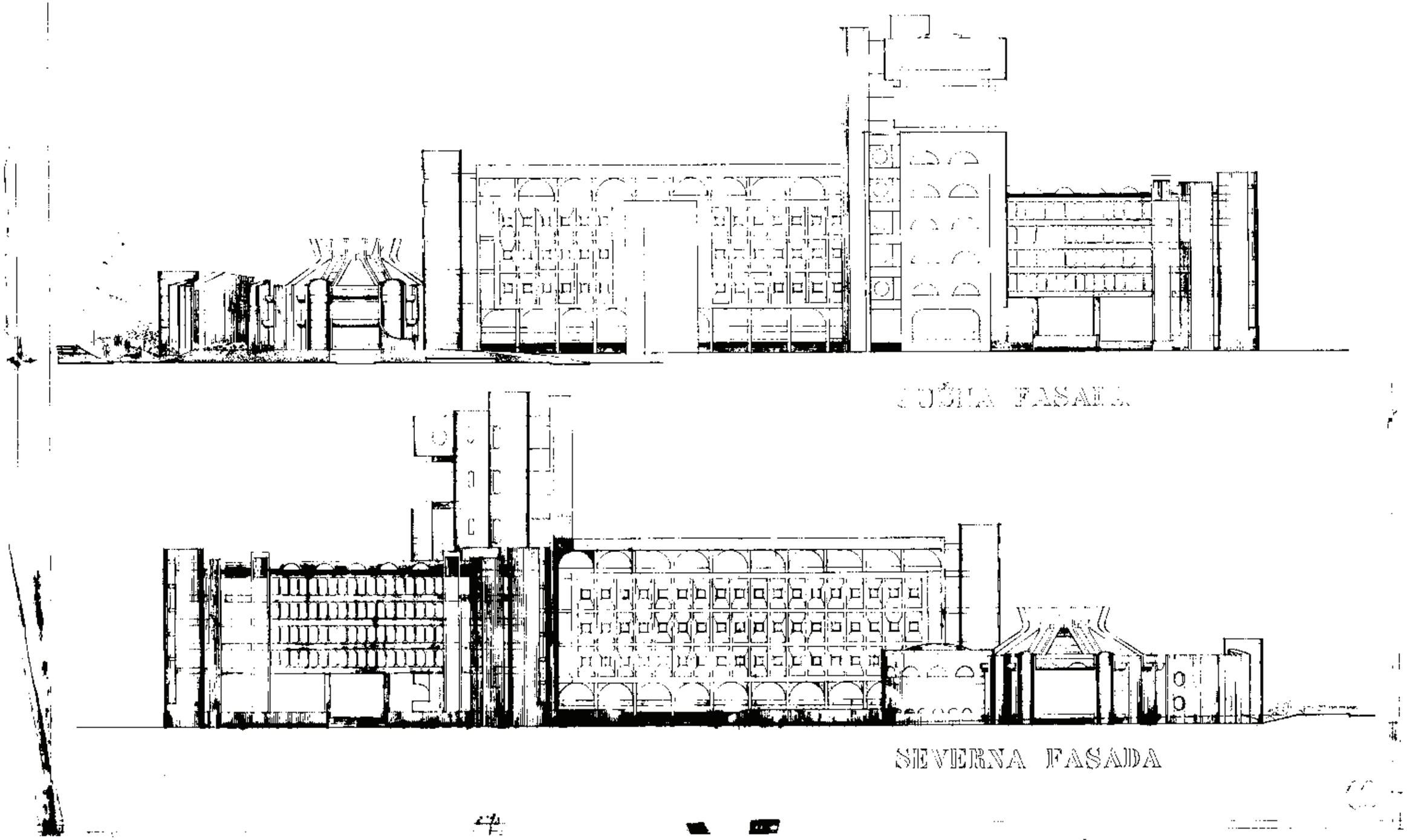
details
ink on transparent paper copied on insoluble paper
dim. 130cm/80cm
Skopje City Archive
fund: Assembly of Kale, number 50 A,V, D



groud floor
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski



elevation
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski



elevation
ink on transparent paper
dim. xxxcm/xxxcm
Private archive of Ana Ivanovska Deskova, Vladimir Deskov, Jovan Ivanovski

[ARCHIVE MATERIALS] *SS. Cyril and Methodius University Skopje_Marko Music*

masterplan
ink on transparent paper copied on insoluble paper
dim. 144.5cm/109.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

section
ink on transparent paper copied on insoluble paper
dim. 148cm/45cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

elevations
ink on transparent paper copied on insoluble paper
dim. 225cm/50.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

ground floor Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/106cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

floor I Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/106.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

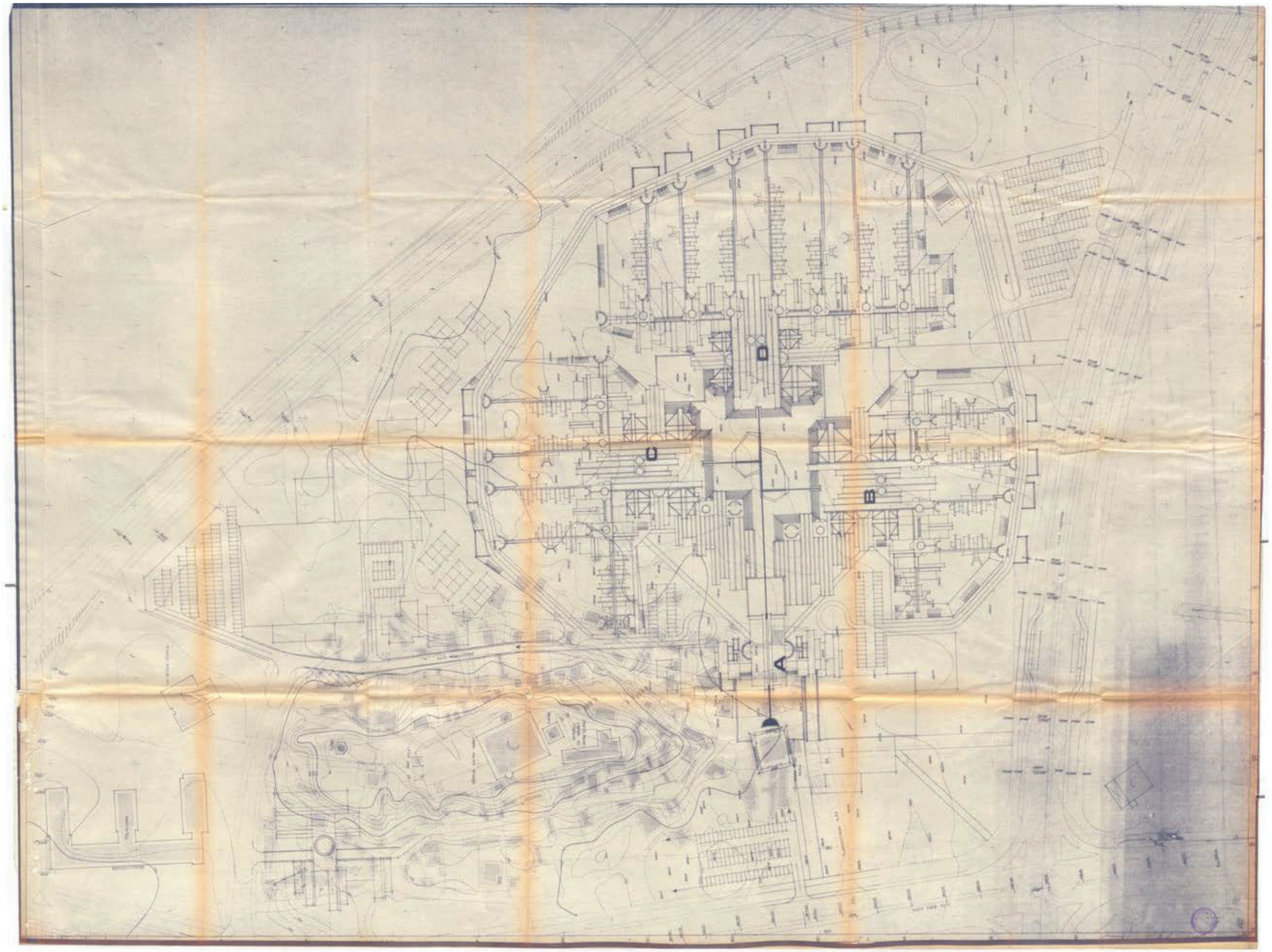
floor II Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/105.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

ground floor
ink on transparent paper copied on insoluble paper
dim. 81cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

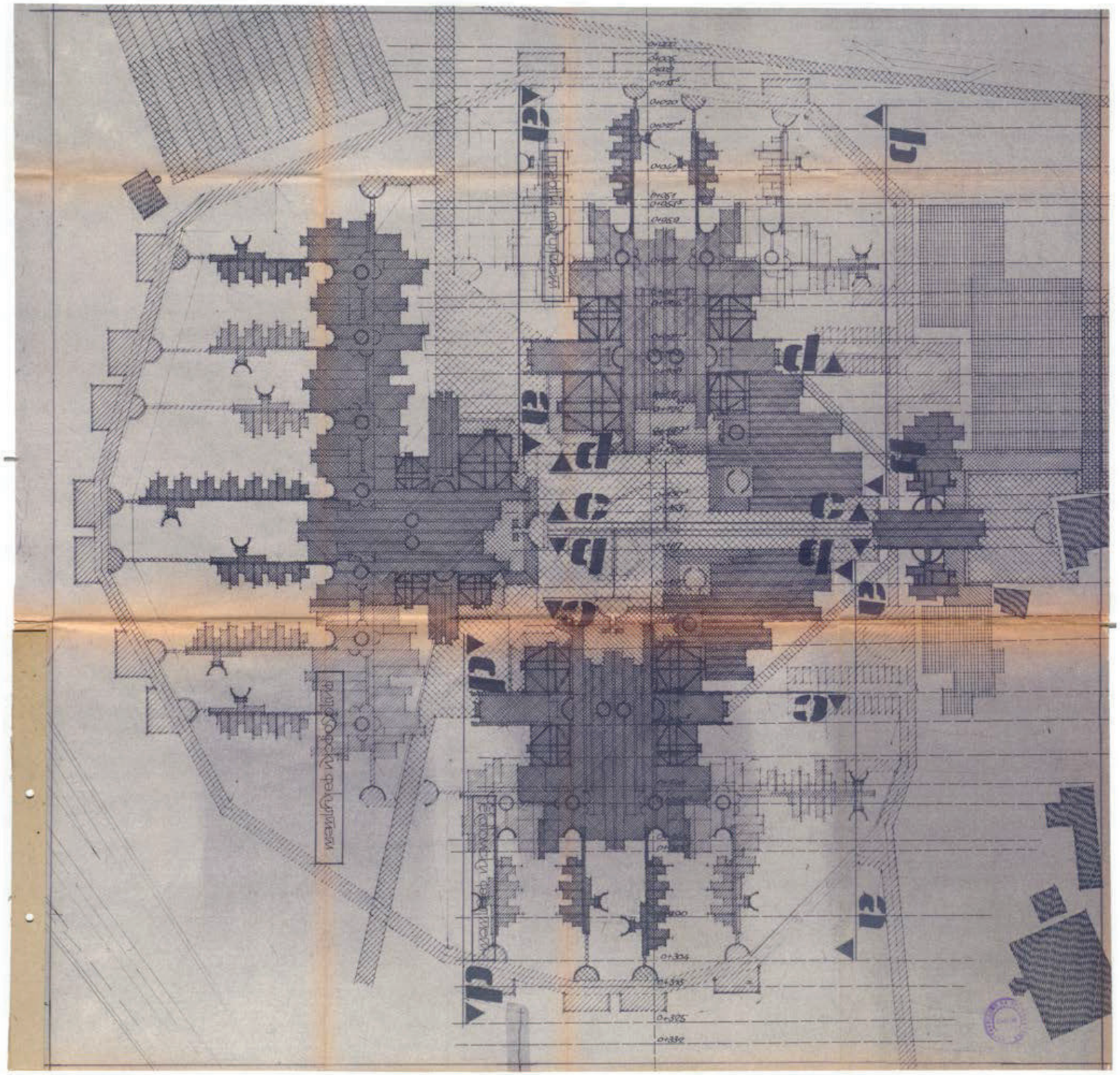
floor I
ink on transparent paper copied on insoluble paper
dim. 81cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

floor II
ink on transparent paper copied on insoluble paper
dim. 84.5cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107

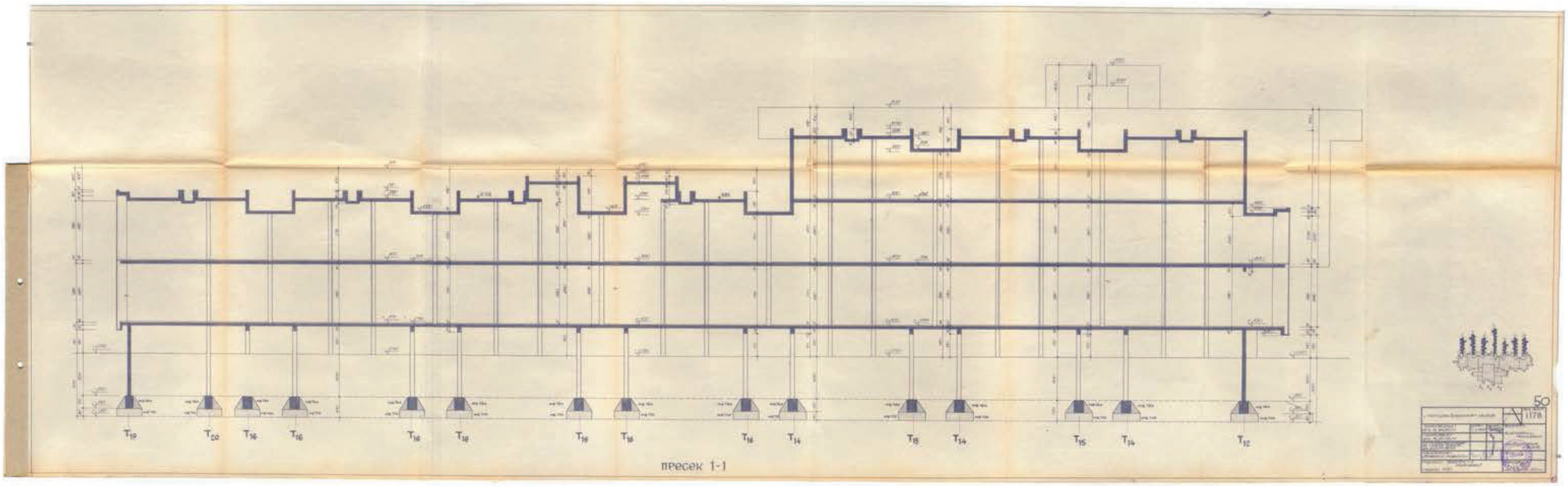
elevations
ink on transparent paper copied on insoluble paper
dim. 113cm/49cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106, 107



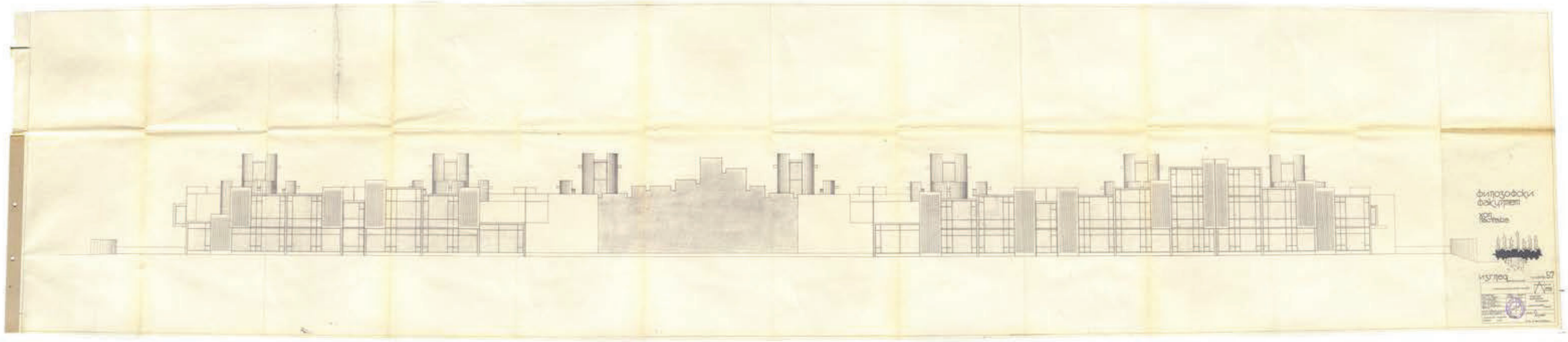
masterplan
ink on transparent paper copied on insoluble paper
dim. 144.5cm/109.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V

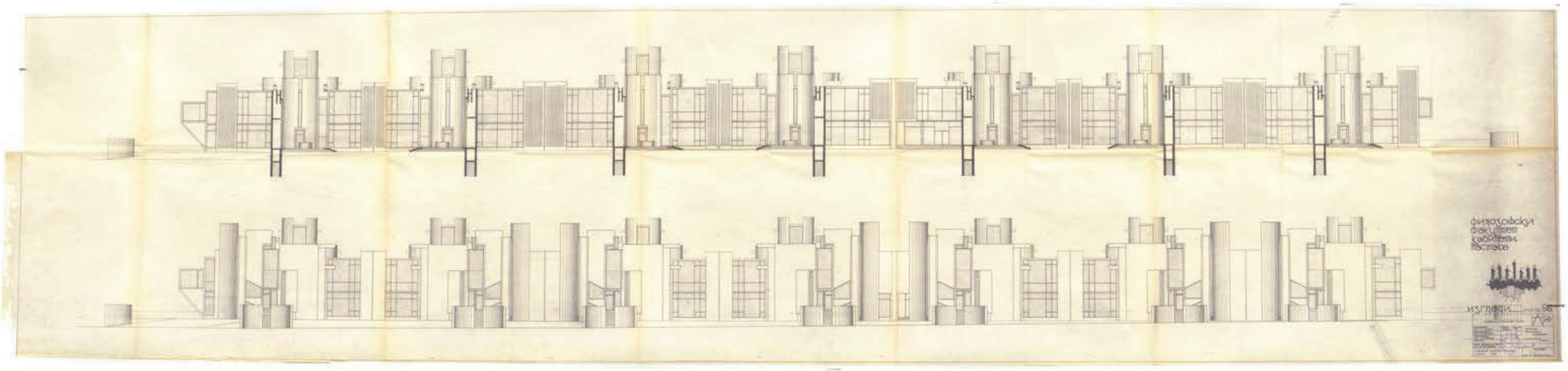


masterplan
ink on transparent paper copied on insoluble paper
dim. 73cm/71cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V

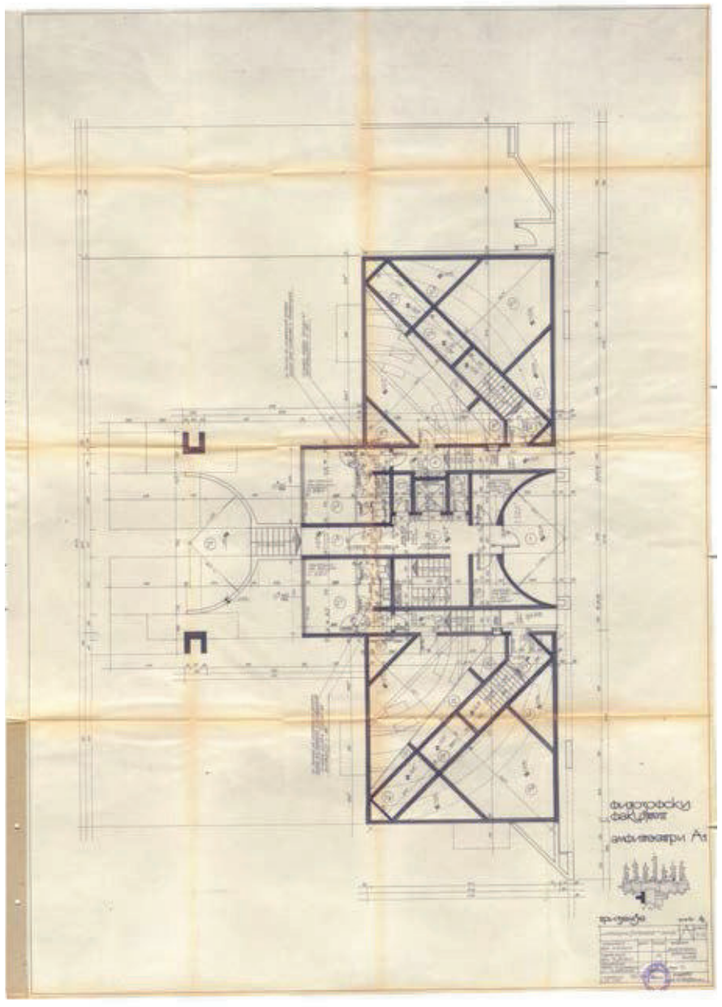


section
ink on transparent paper copied on insoluble paper
dim. 148cm/45cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V

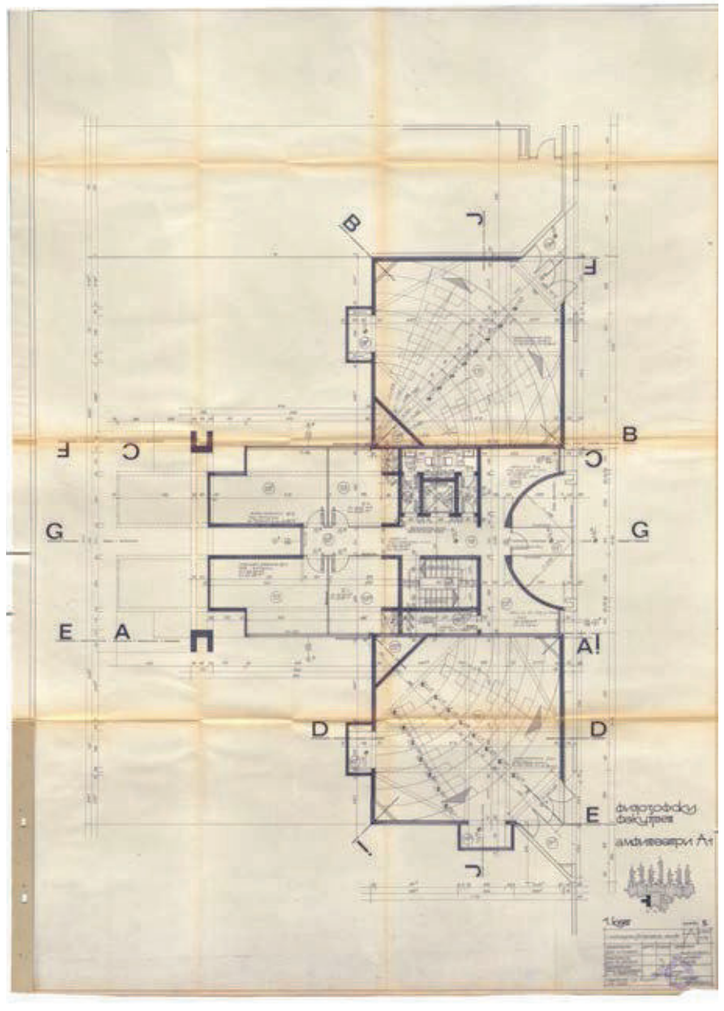




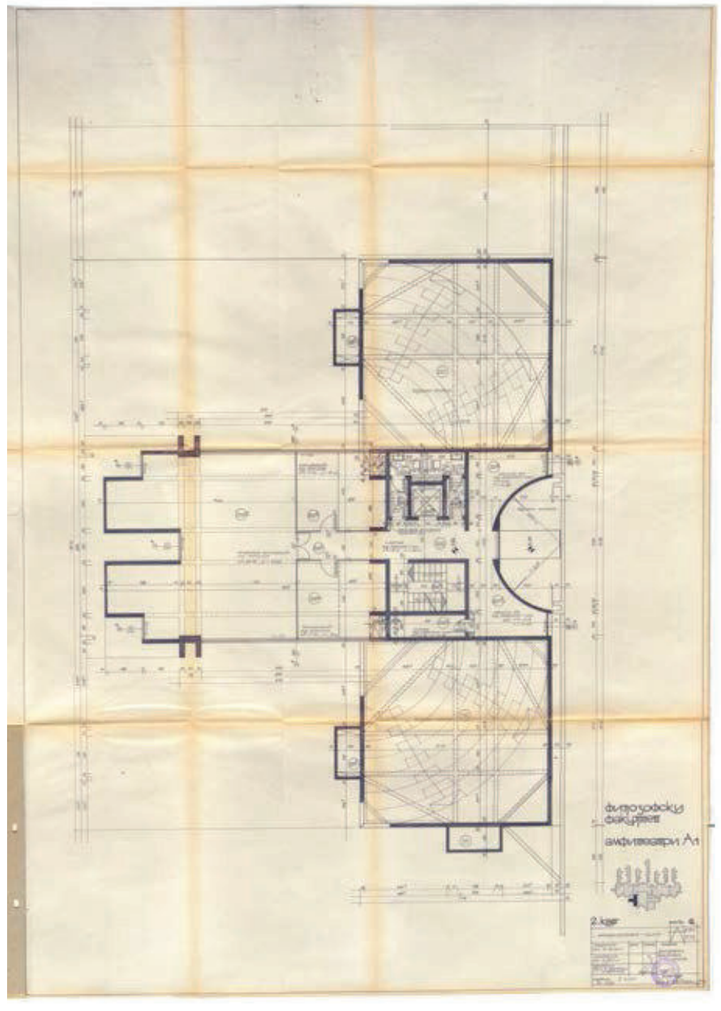
elevations
ink on transparent paper copied on insoluble paper
dim. 225cm/50.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



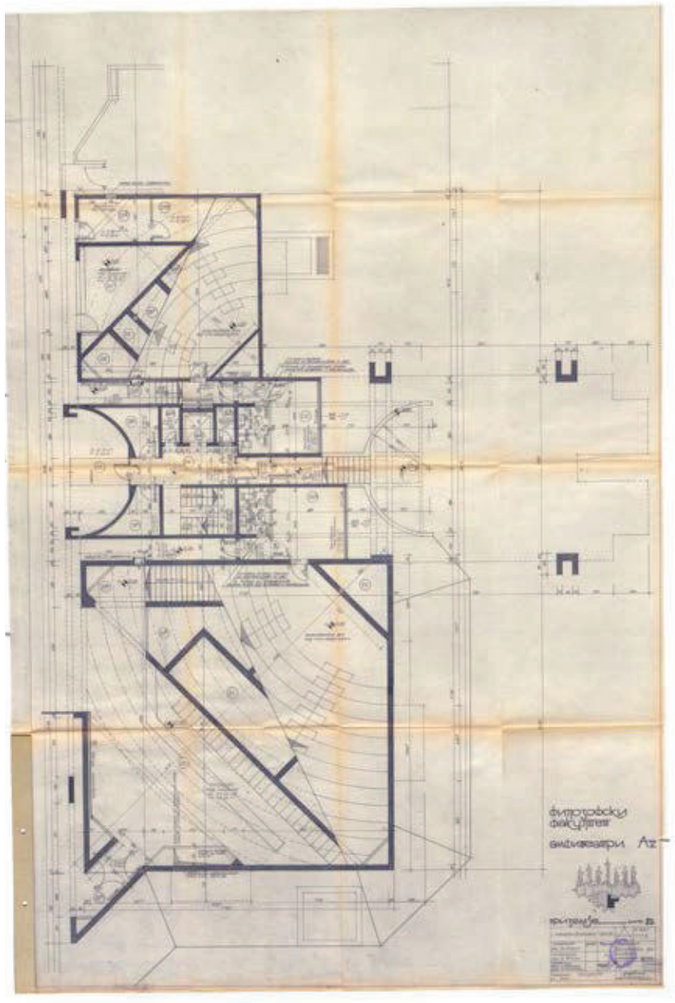
ground floor Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/106cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



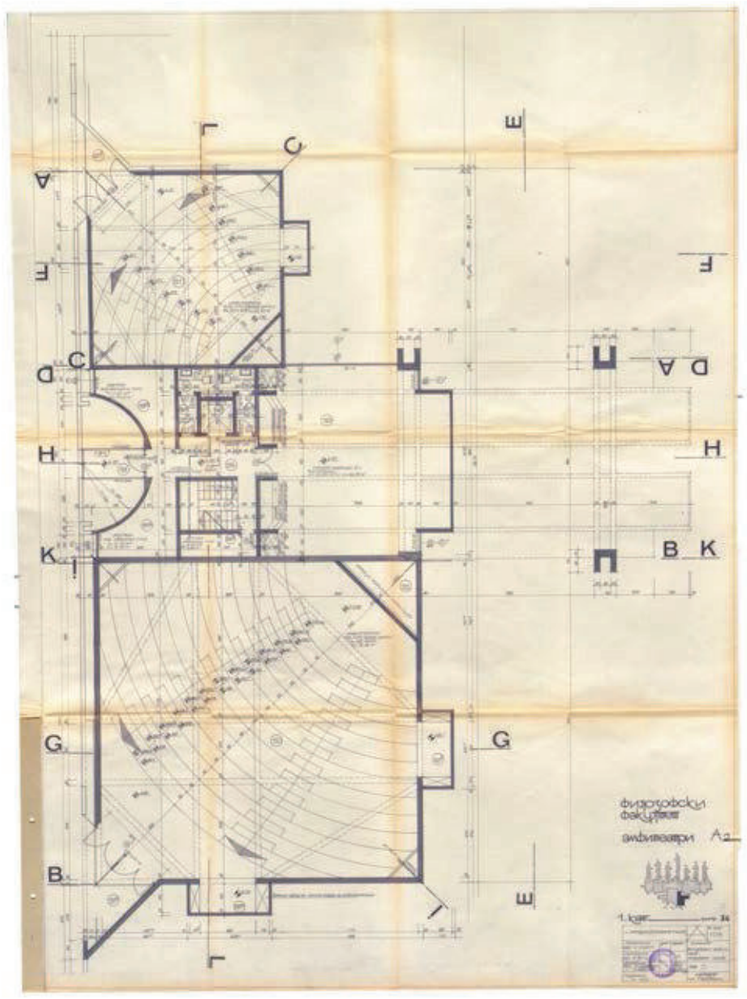
floor I Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/106.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



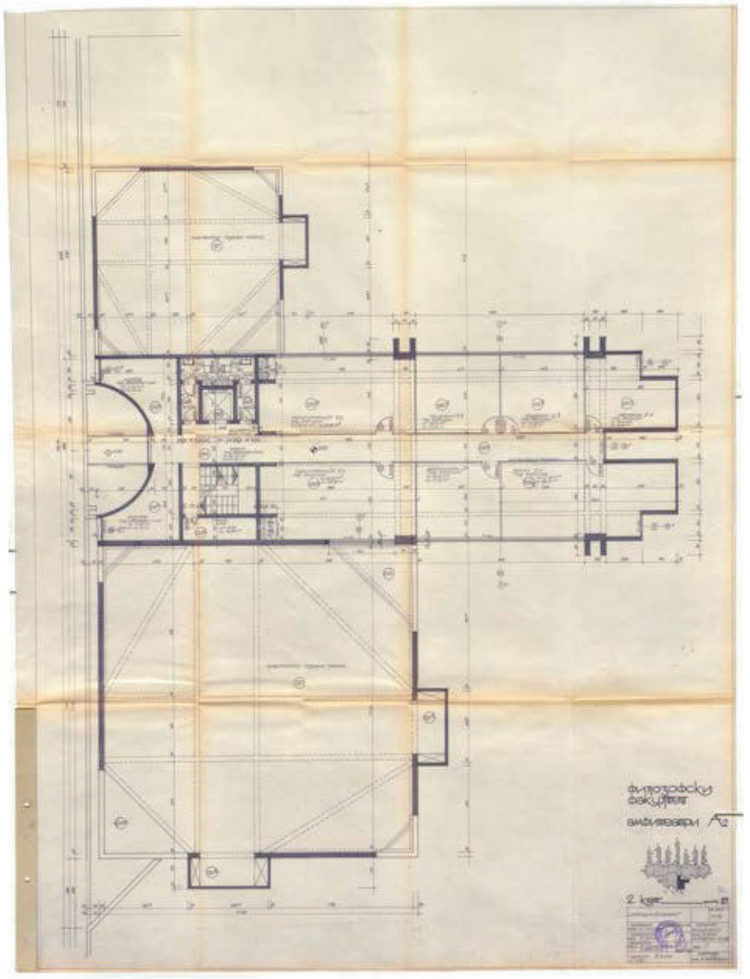
floor II Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/105.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



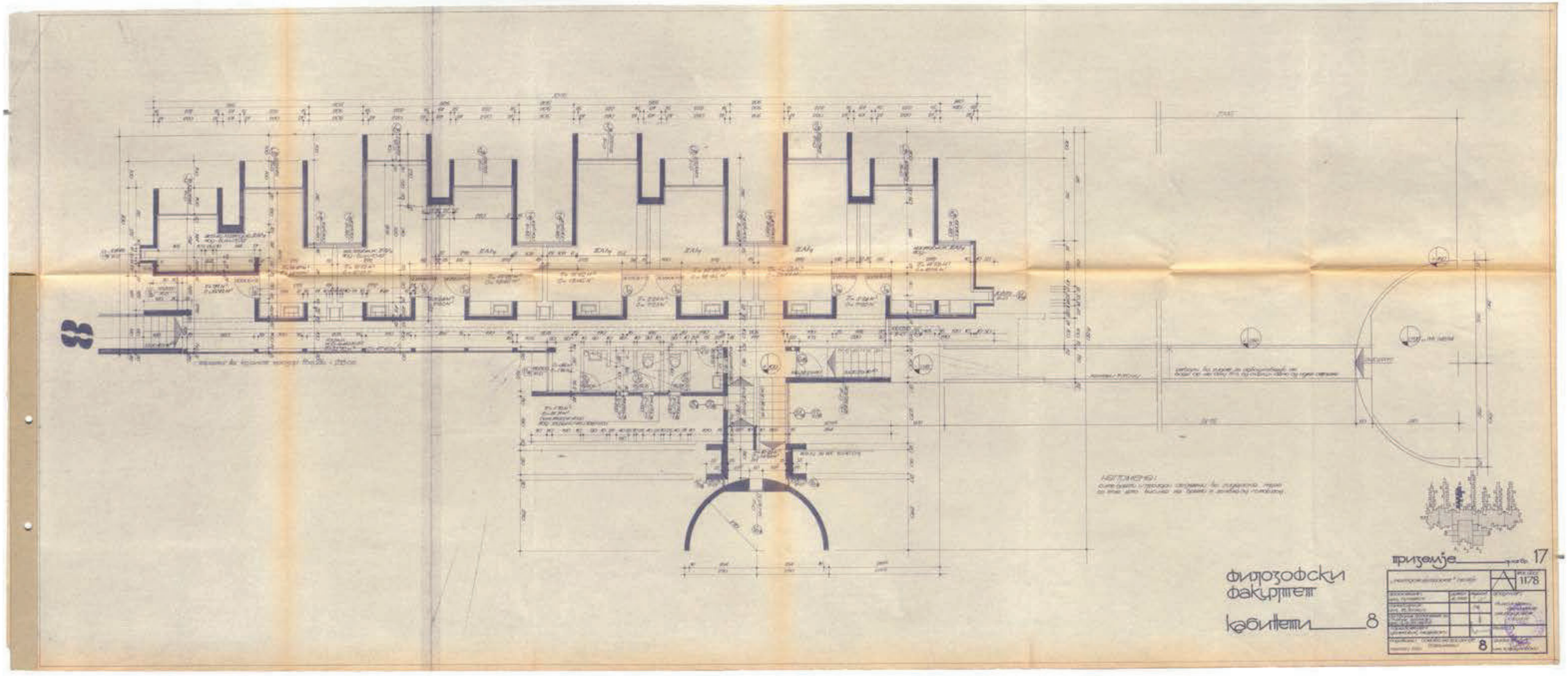
ground floor Amphitheater A2
ink on transparent paper copied on insoluble paper
dim. 73cm/110cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



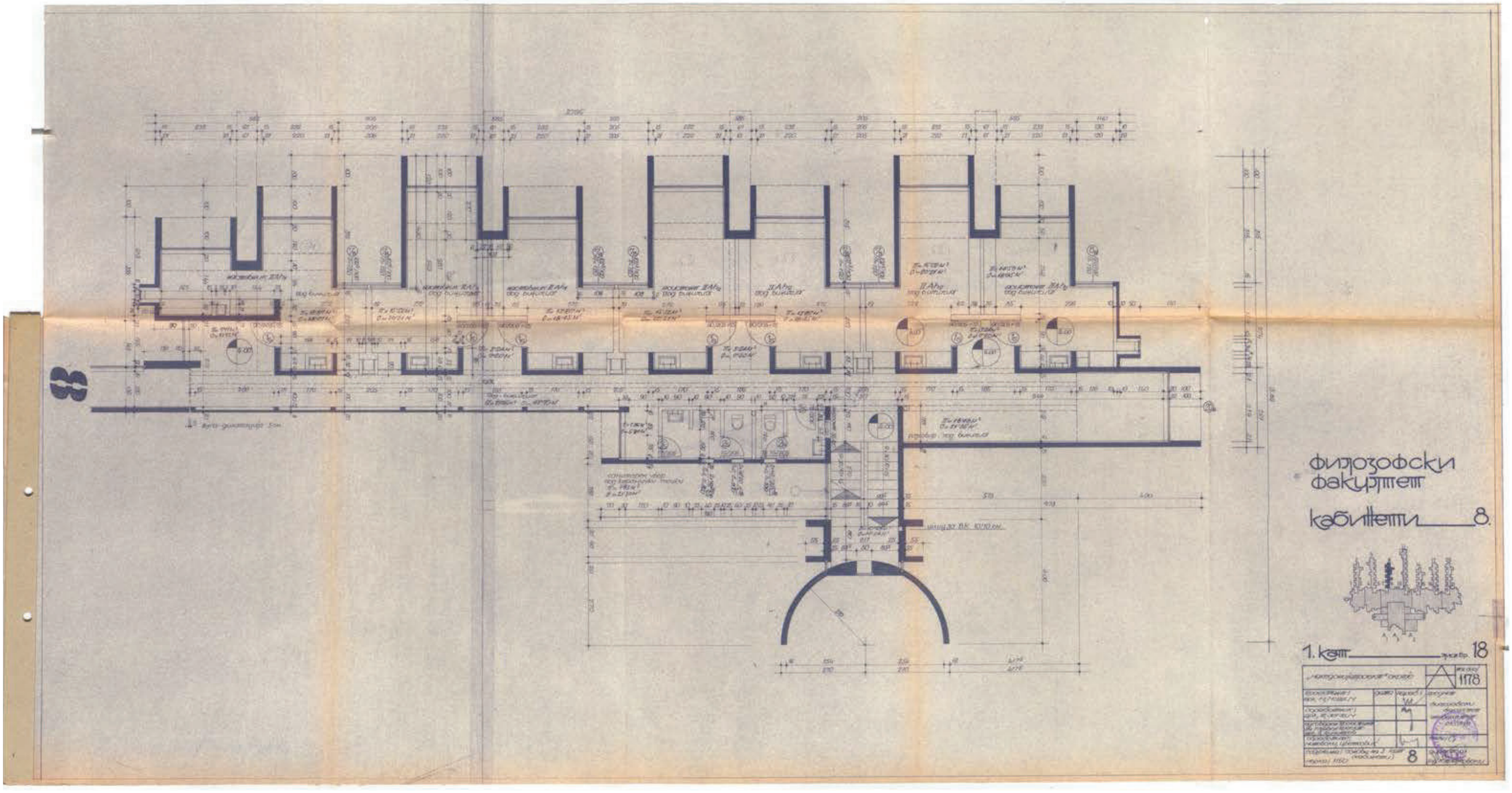
floor I Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 76.5cm/103.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



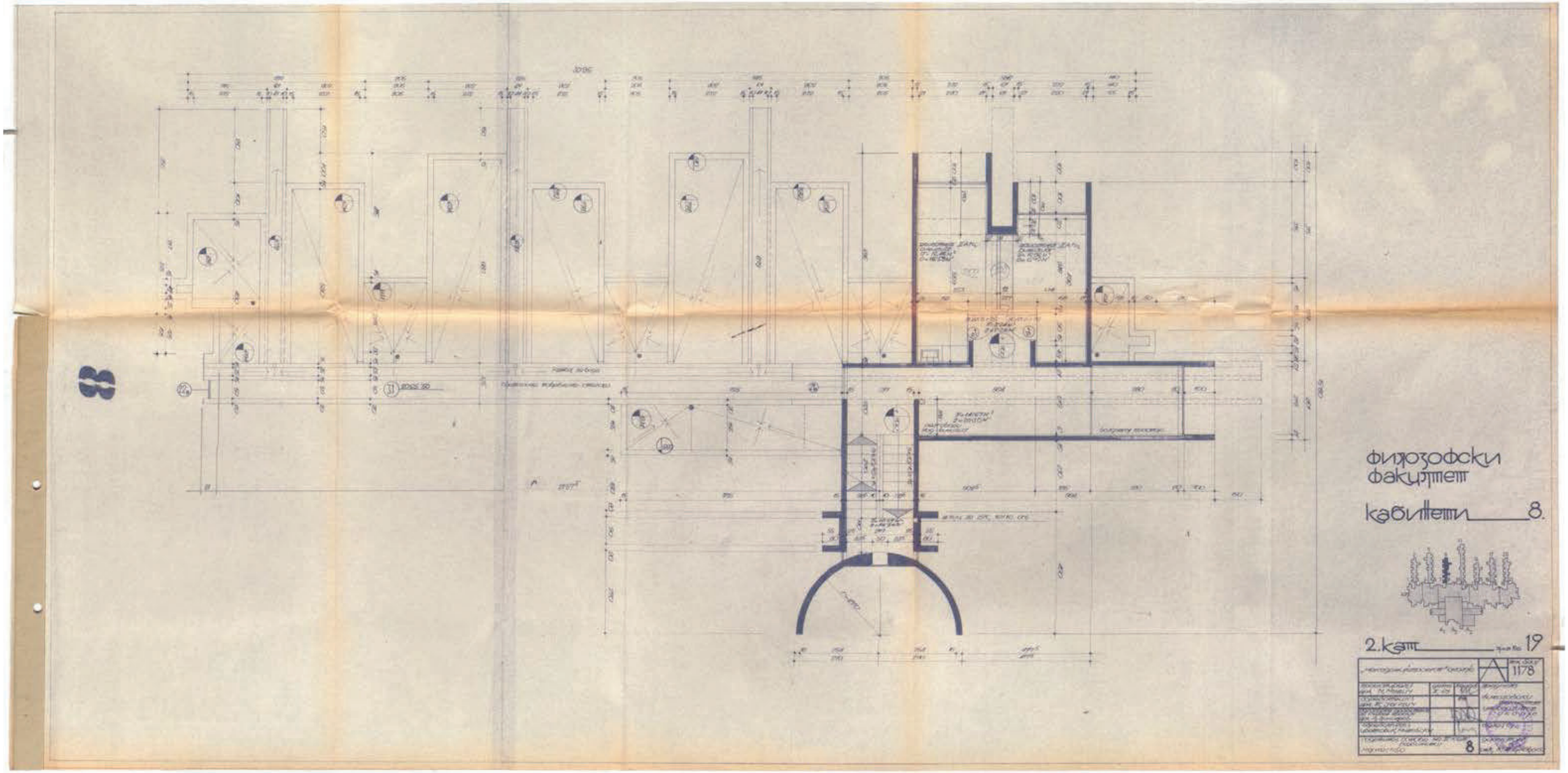
floor II Amphitheater A1
ink on transparent paper copied on insoluble paper
dim. 79cm/104.5cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



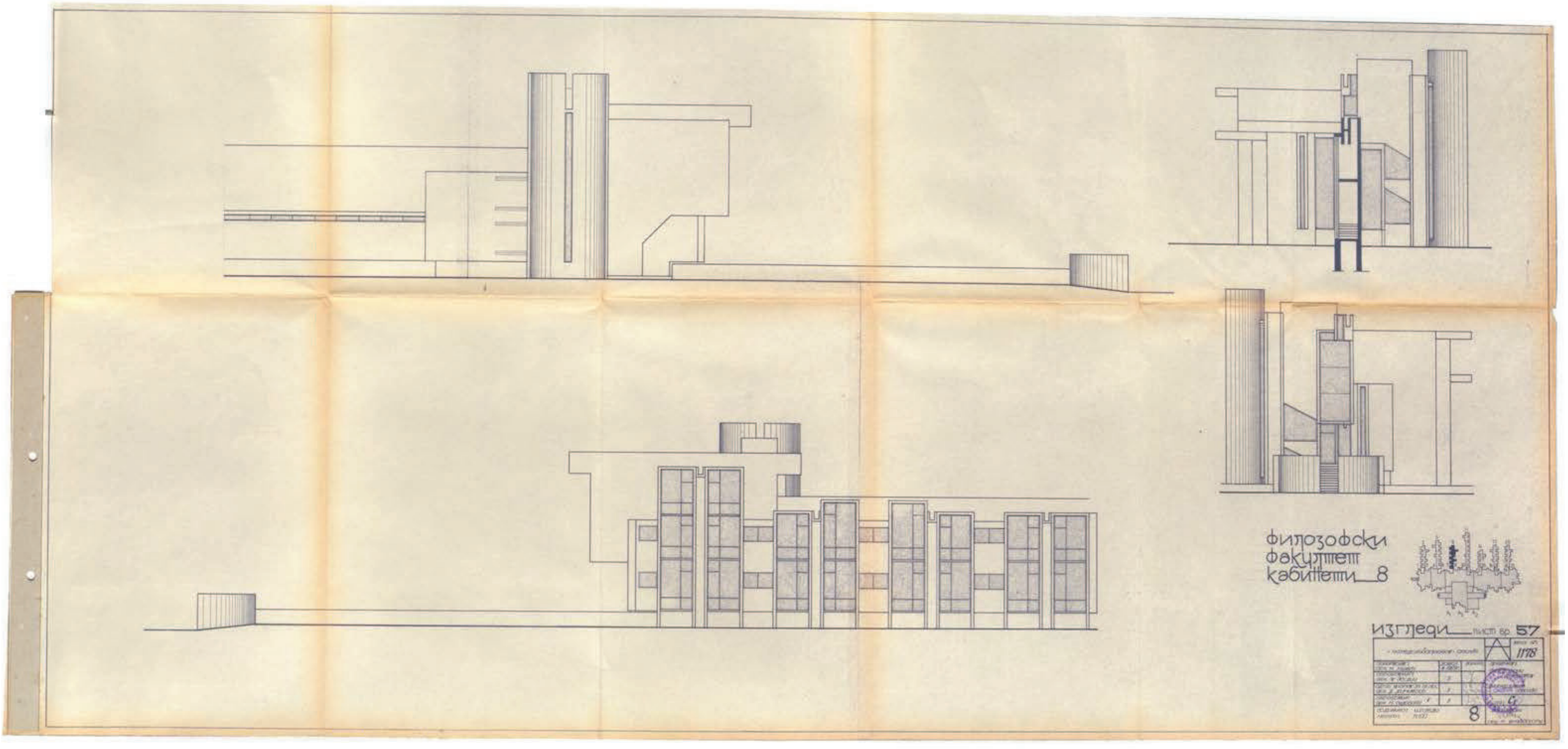
ground floor
ink on transparent paper copied on insoluble paper
dim. 81cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



floor I
ink on transparent paper copied on insoluble paper
dim. 81cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



floor II
ink on transparent paper copied on insoluble paper
dim. 84.5cm/50cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V



elevations
ink on transparent paper copied on insoluble paper
dim. 113cm/49cm
Skopje City Archive
fund: Assembly of Skopje 1969, number 106 A, B, V, G 107 A, B, V

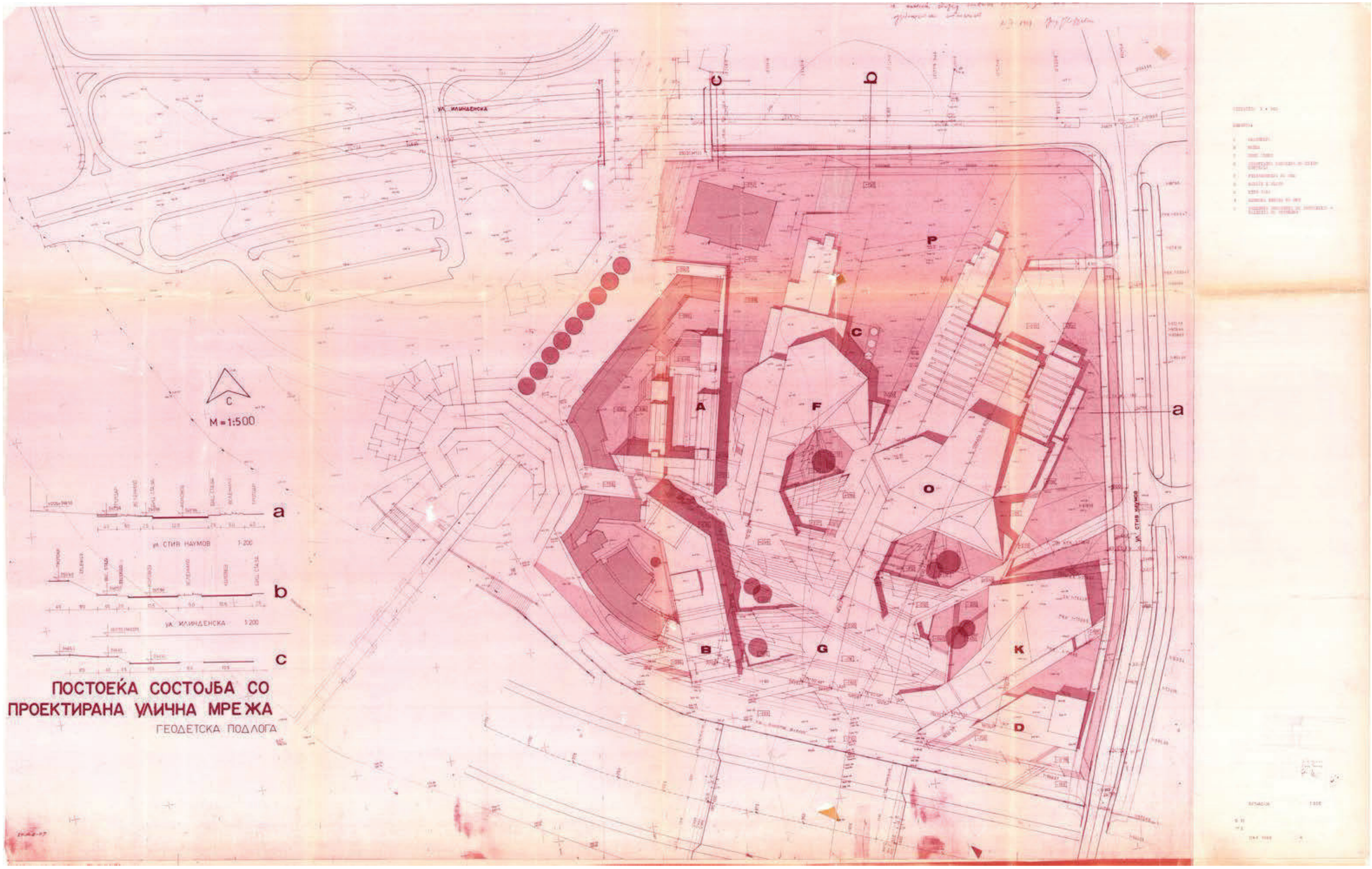
[ARCHIVE MATERIALS] *Macedonian Opera And Ballet_Biro 77*

masterplan
ink on transparent paper copied on insoluble paper
dim. 147cm/90.5cm
Macedonian Opera and Ballet

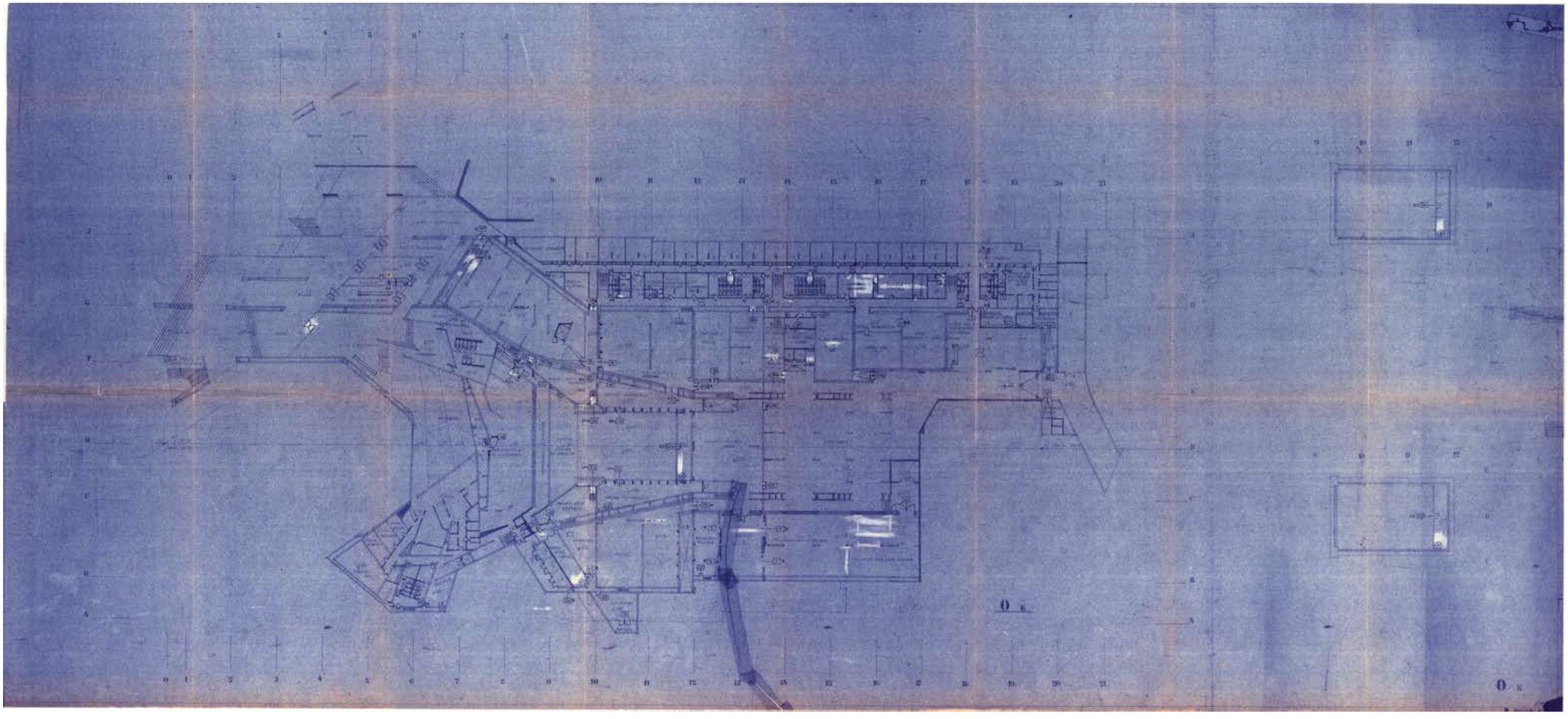
floor underground
ink on transparent paper copied on insoluble paper
dim. 150.7cm/67.5cm
Macedonian Opera and Ballet

ground floor
ink on transparent paper copied on insoluble paper
dim. 107.5cm/69.5cm
Macedonian Opera and Ballet

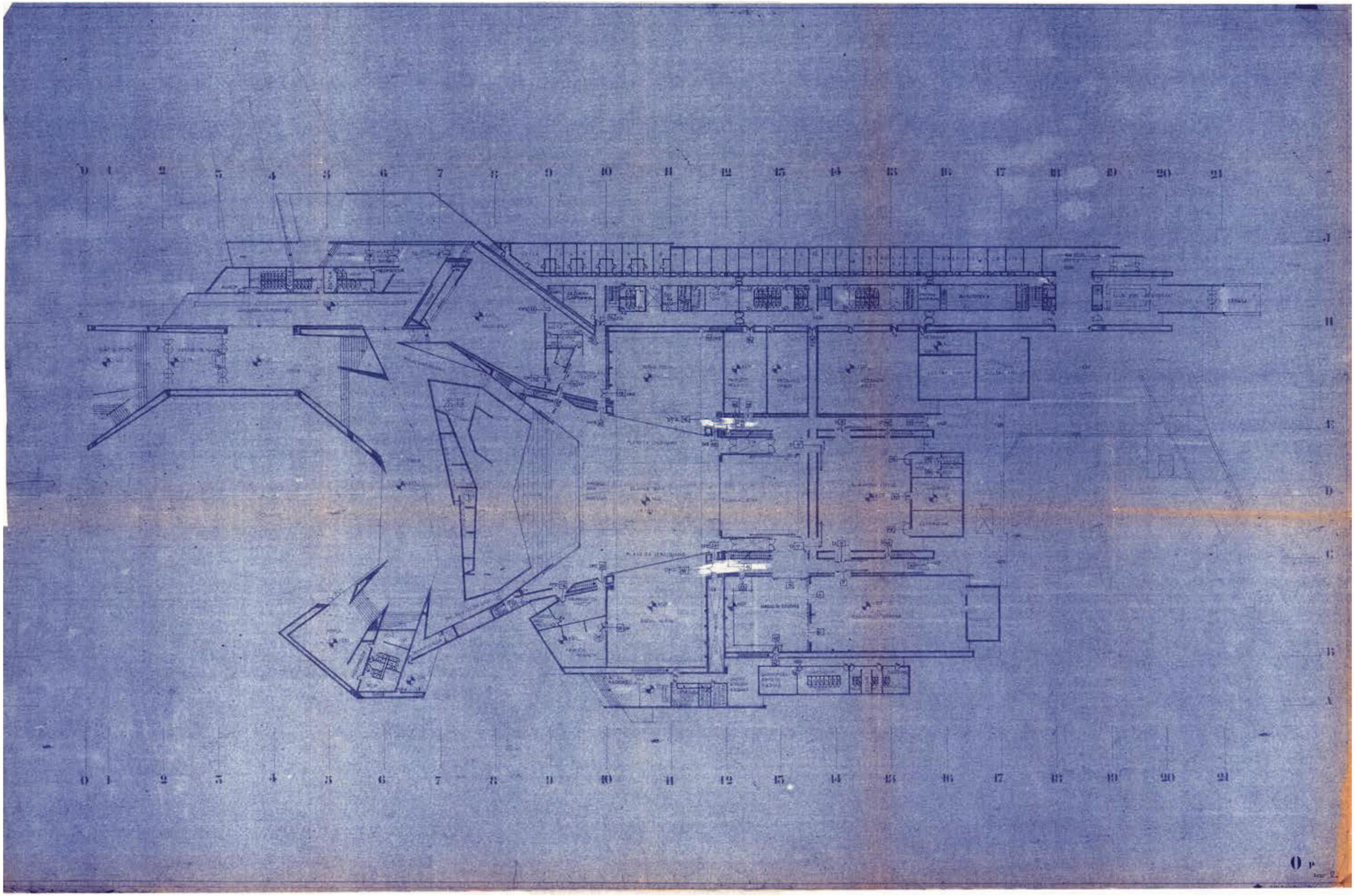
floor I
ink on transparent paper copied on insoluble paper
dim. 117cm/69.5cm
Macedonian Opera and Ballet



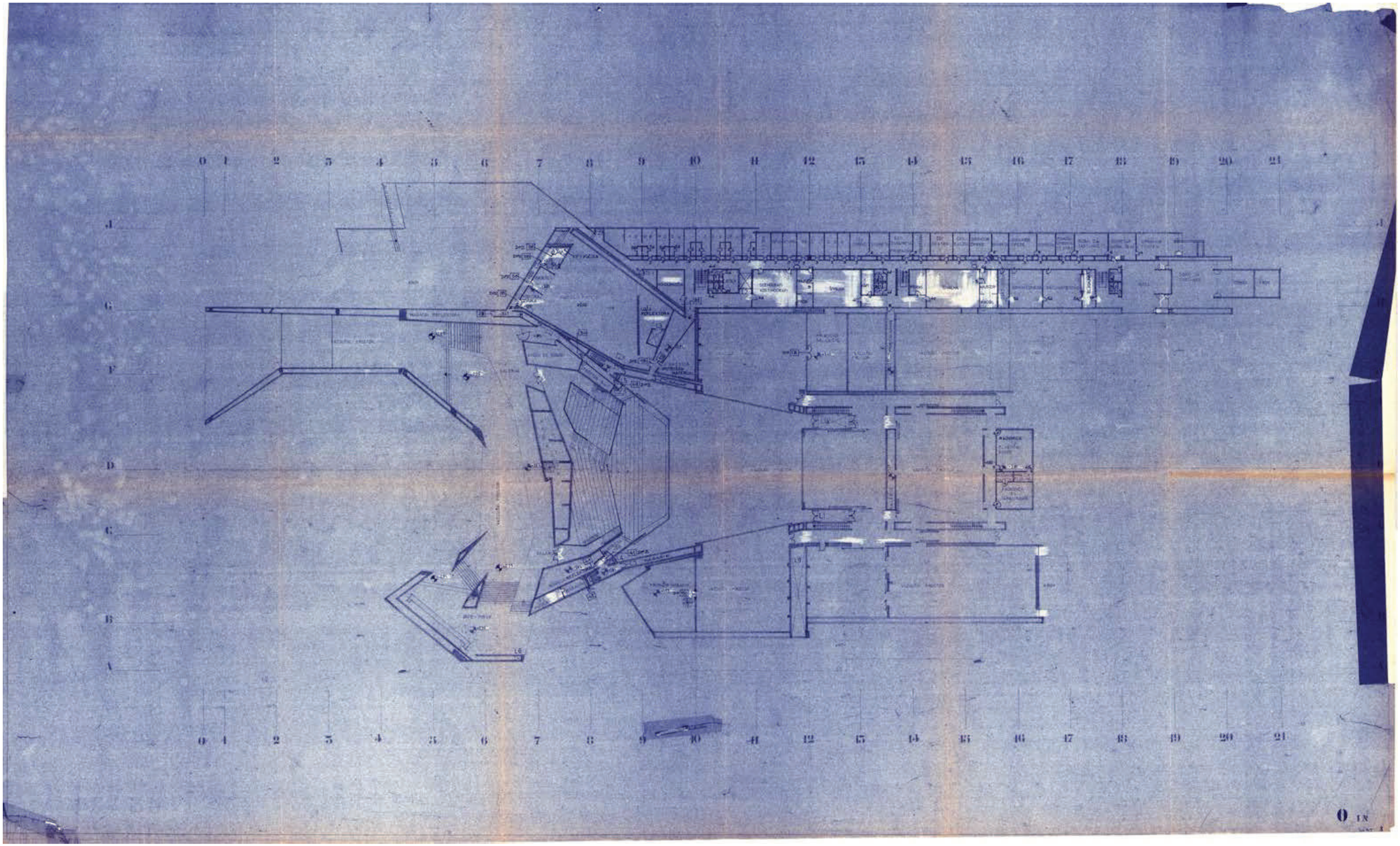
masterplan
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Macedonian Opera and Ballet



floor underground
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Macedonian Opera and Ballet



floor I
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Macedonian Opera and Ballet



floor II
ink on transparent paper copied on insoluble paper
dim. xxxcm/xxxcm
Macedonian Opera and Ballet

[ARCHIVE MATERIALS] *Student Dormitory "Goce Delchev"_Georgi Konstantinovski*

LIST OF ARCHIVE MATERIALS

masterplan
ink on transparent paper copied on insoluble paper
dim. 93cm/78.7cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

ground floor
ink on transparent paper copied on insoluble paper
dim. 151cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

floor I-IV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

floor VI
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

floor VII-XII
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

floor XIII and XIV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

floor XIII and XIV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

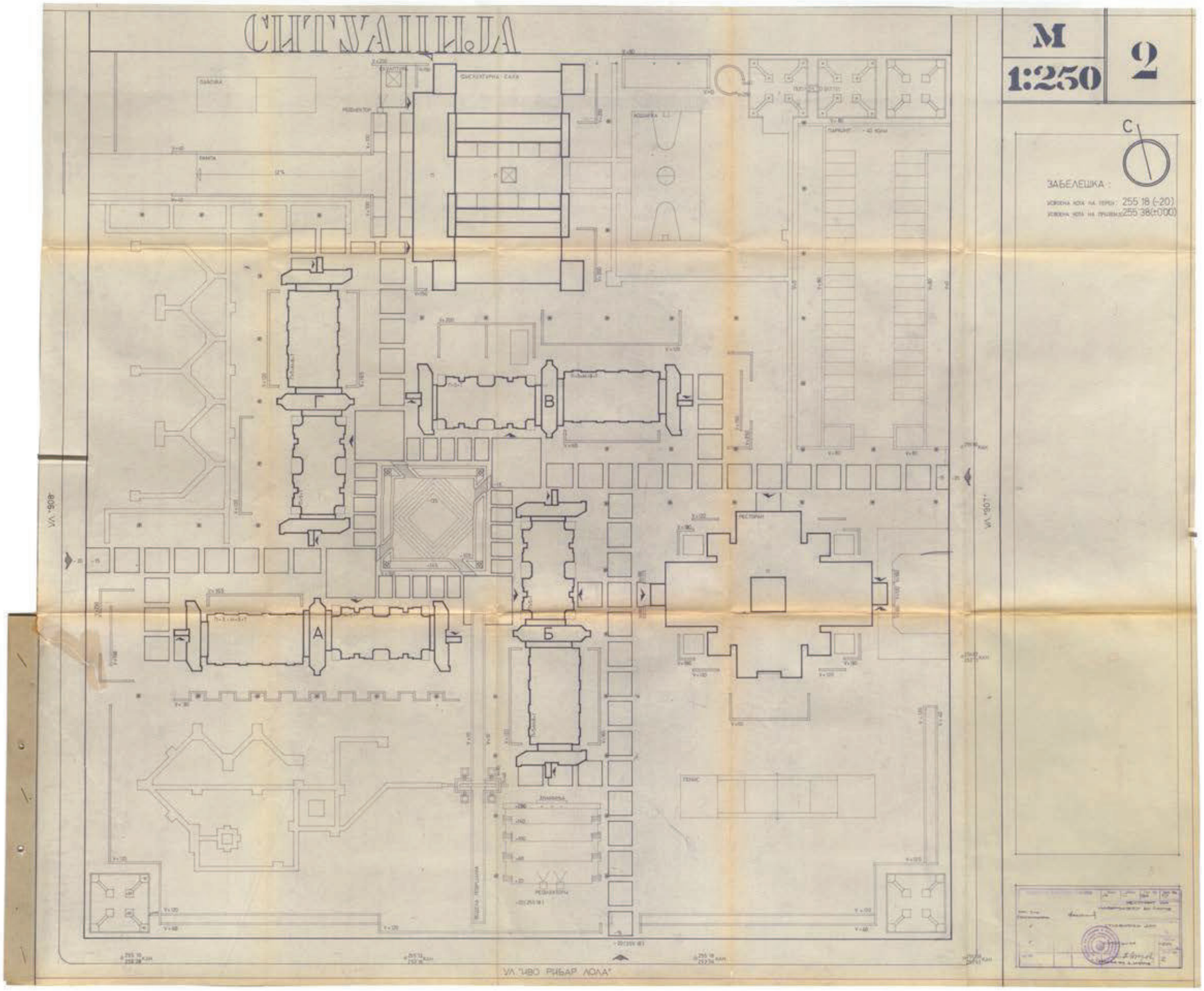
section
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII
Skopje City Archive

section
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

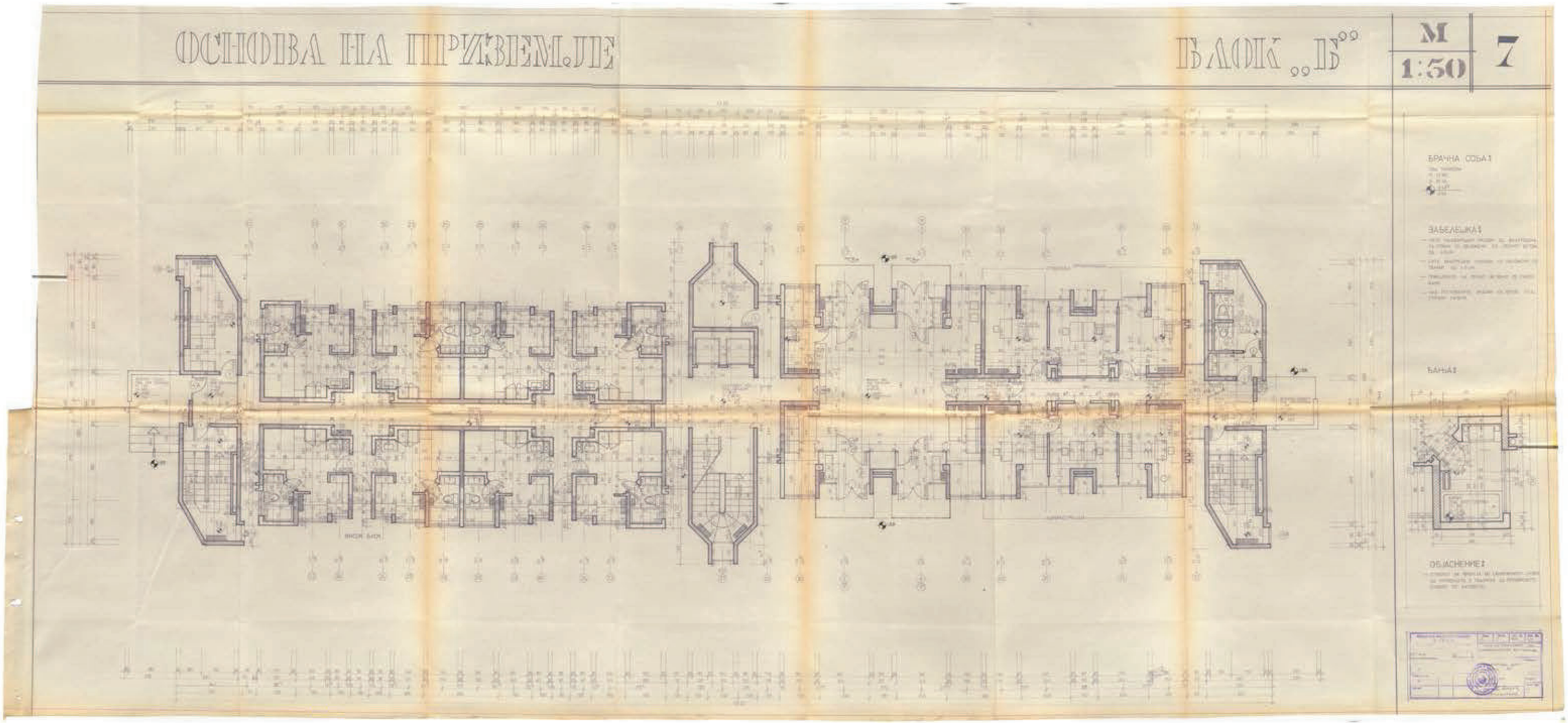
front elevation
ink on transparent paper copied on insoluble paper
dim. 150cm/109.5cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

side elevation
ink on transparent paper copied on insoluble paper
dim. 151cm/69cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII

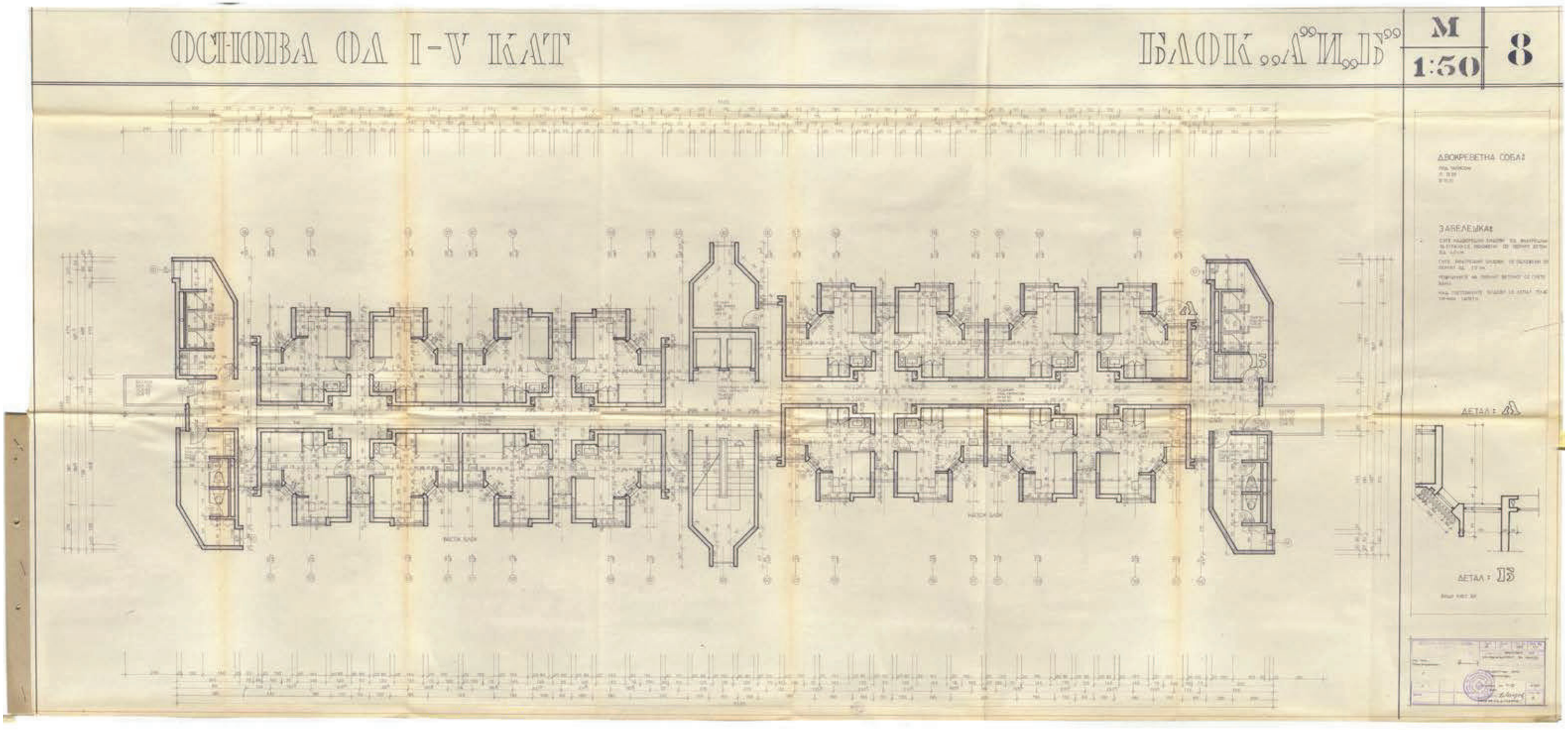
room detail
ink on transparent paper copied on insoluble paper
dim. 101cm/95.5cm
source: Skopje City Archive
fund: Idadia municipality, box number XLII



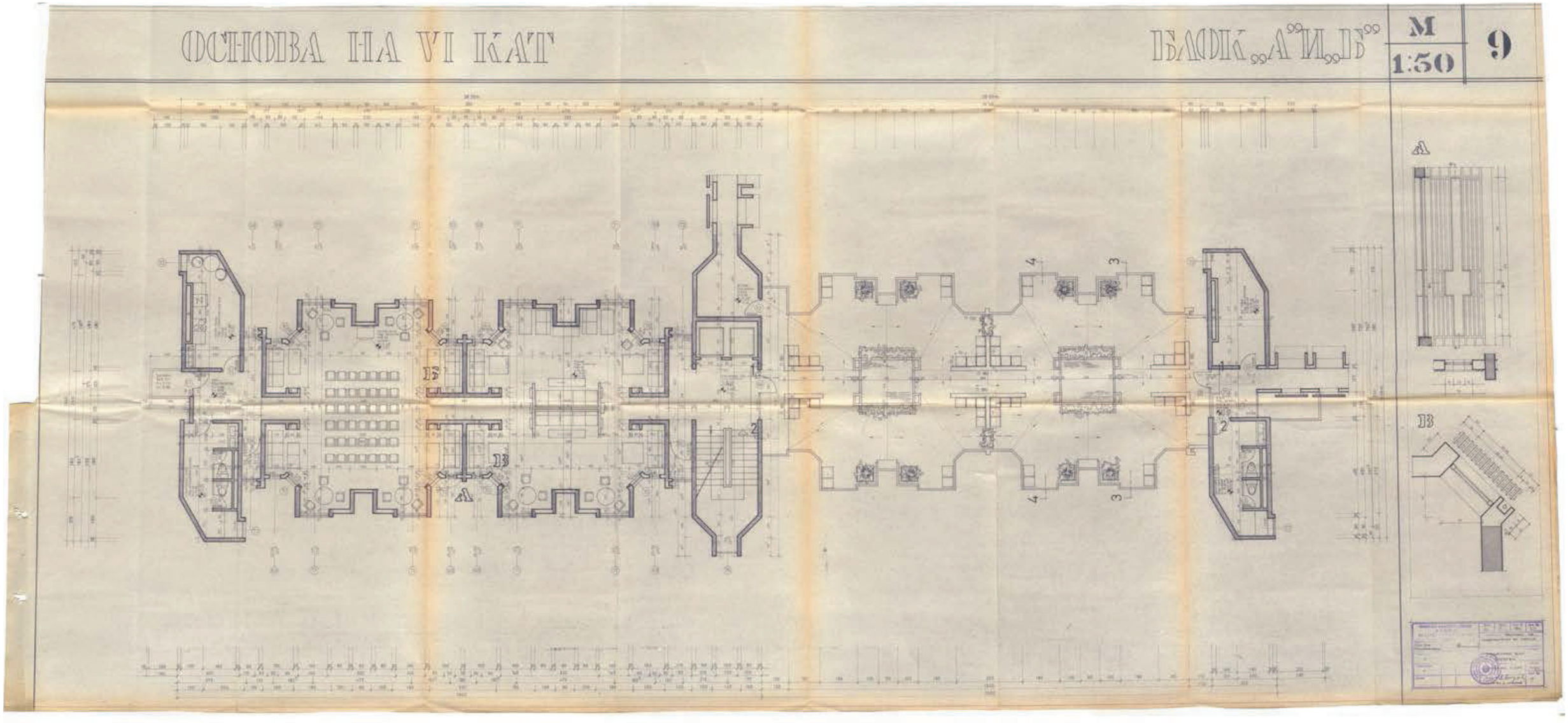
masterplan
ink on transparent paper copied on insoluble paper
dim. 93cm/78.7cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



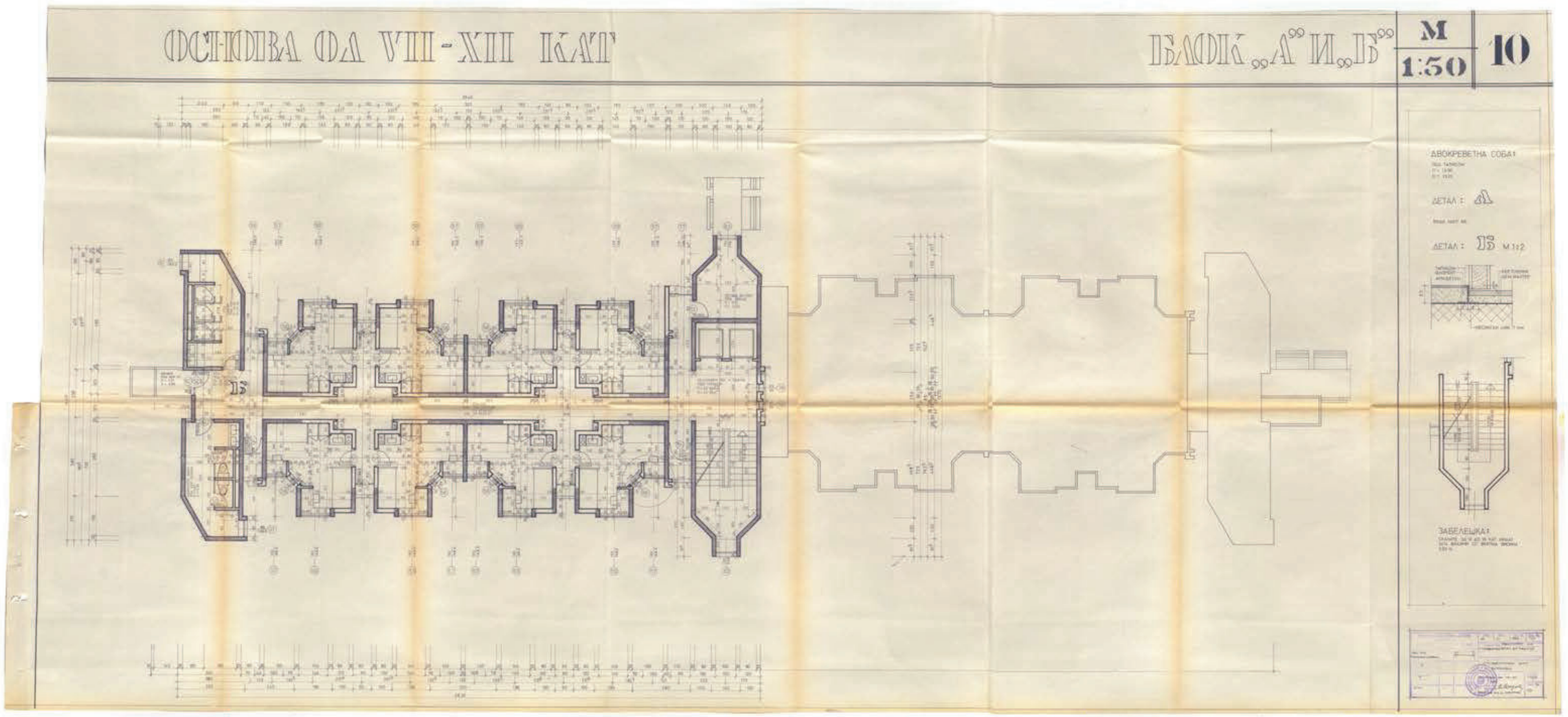
ground floor
ink on transparent paper copied on insoluble paper
dim. 151cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



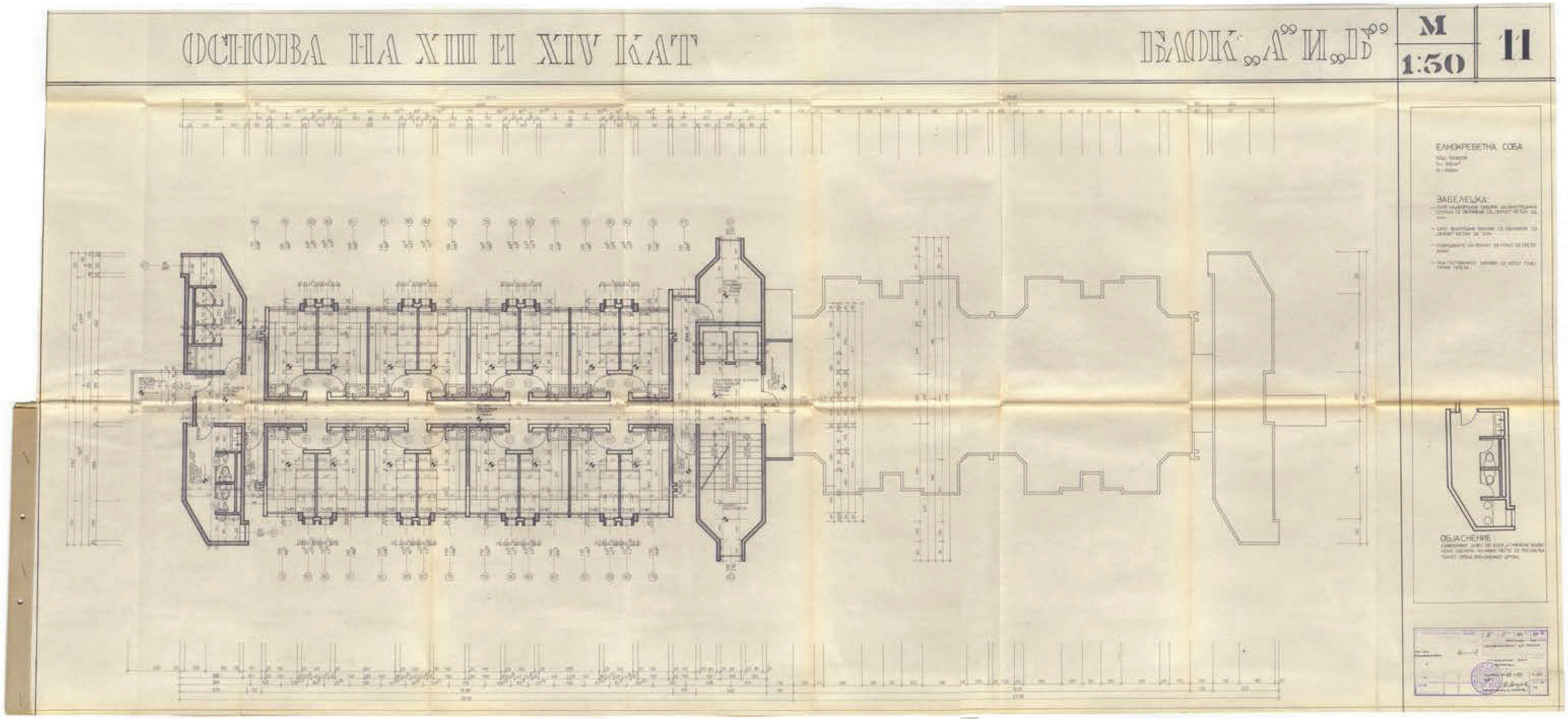
floor I-IV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



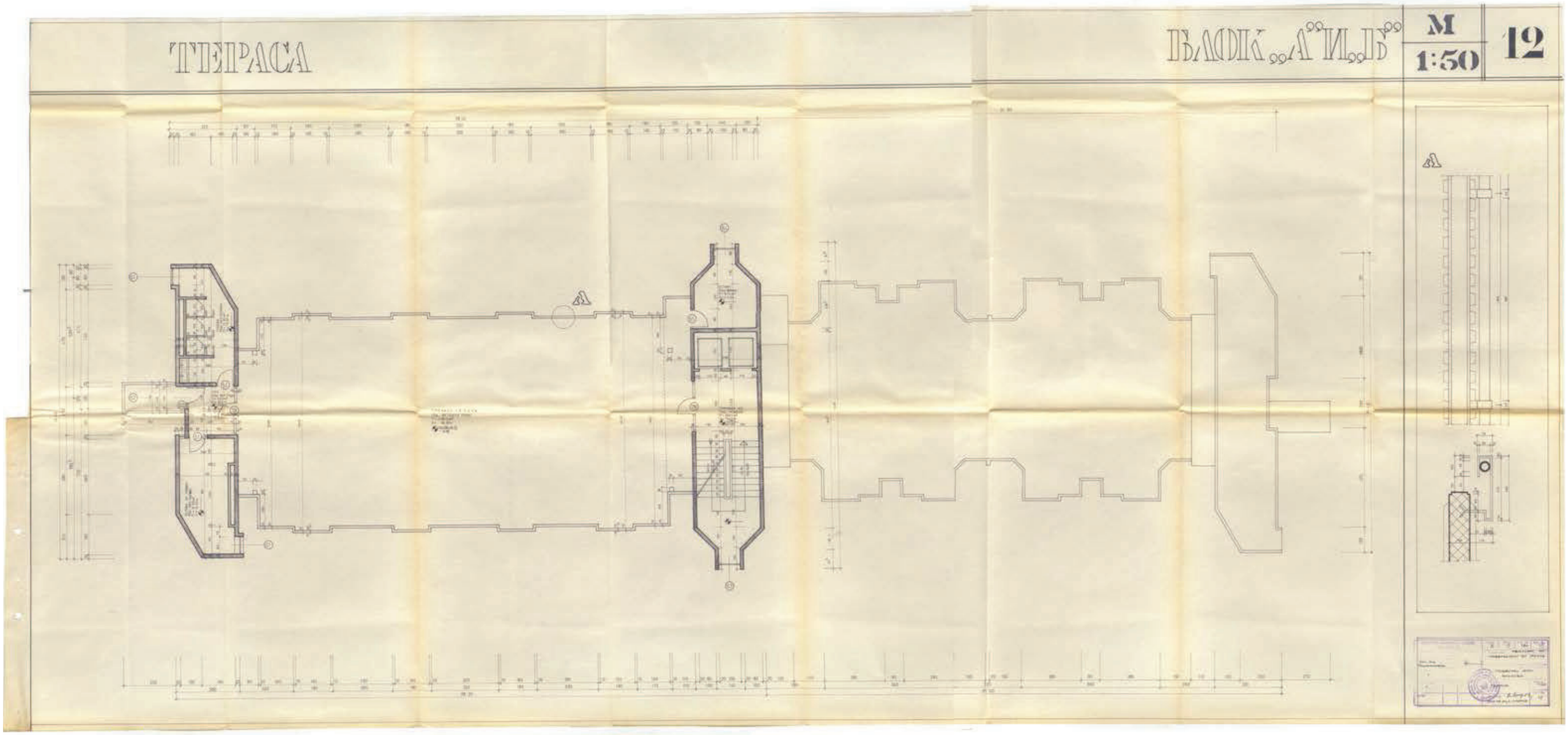
floor VI
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



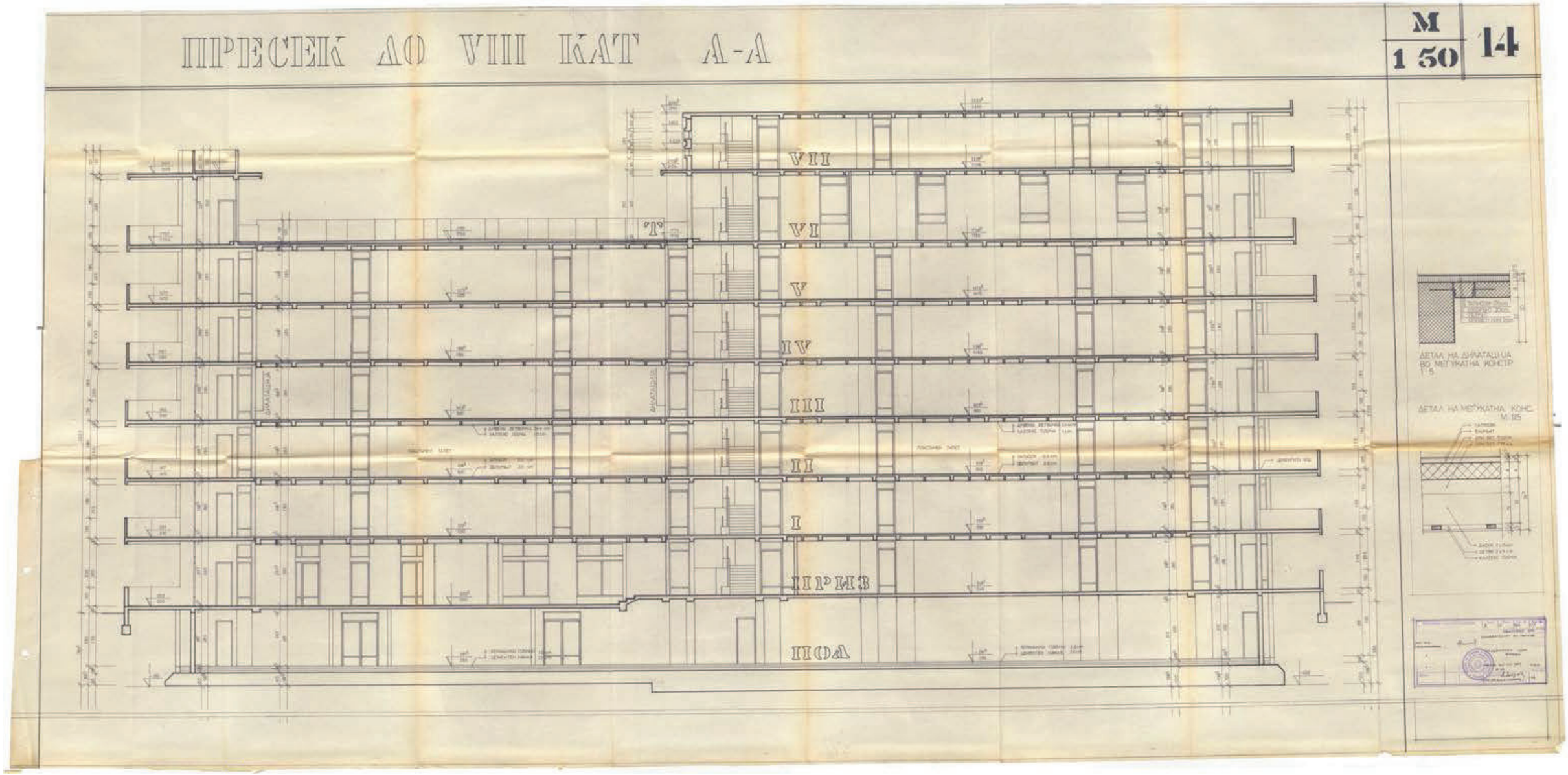
floor VII-XII
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



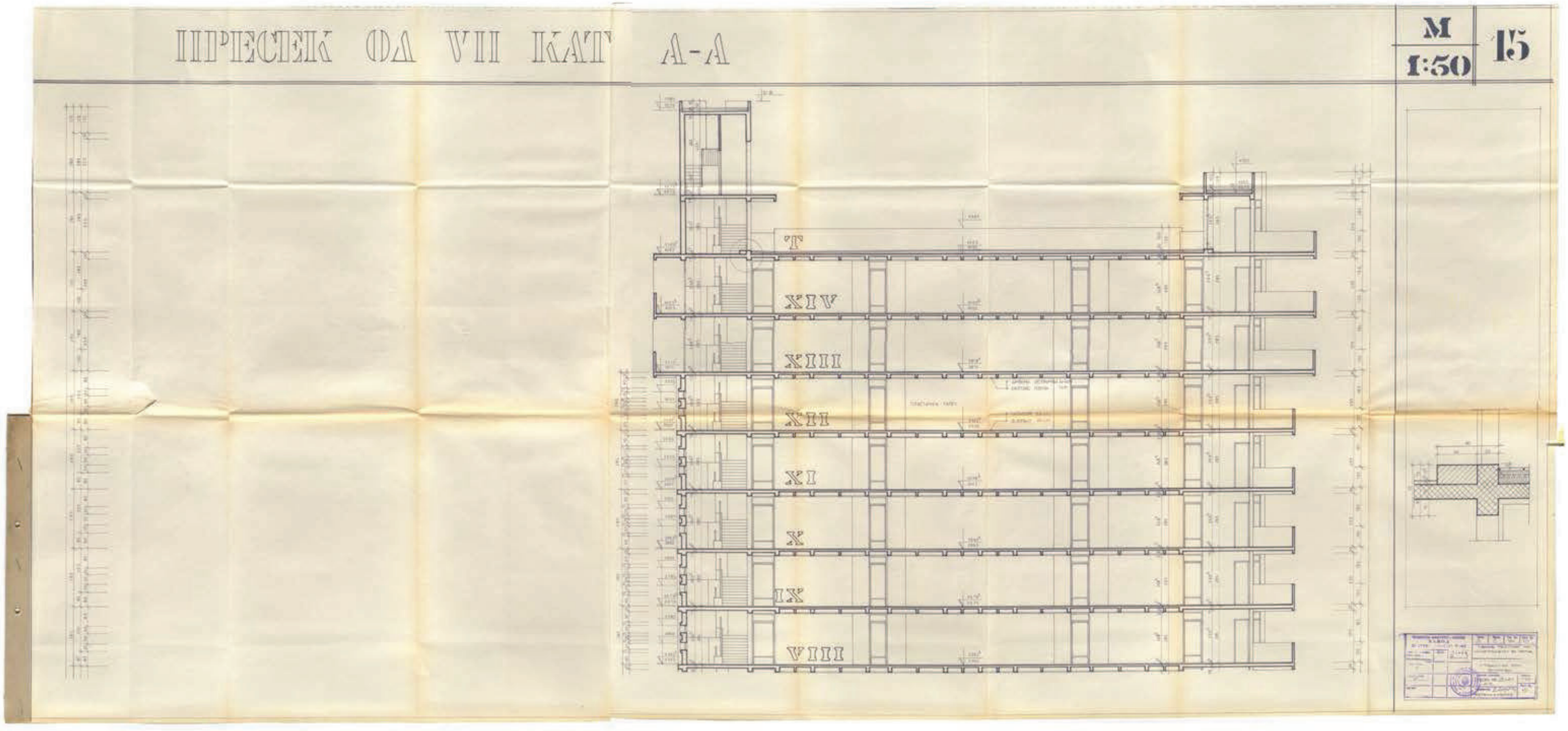
floor XIII and XIV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



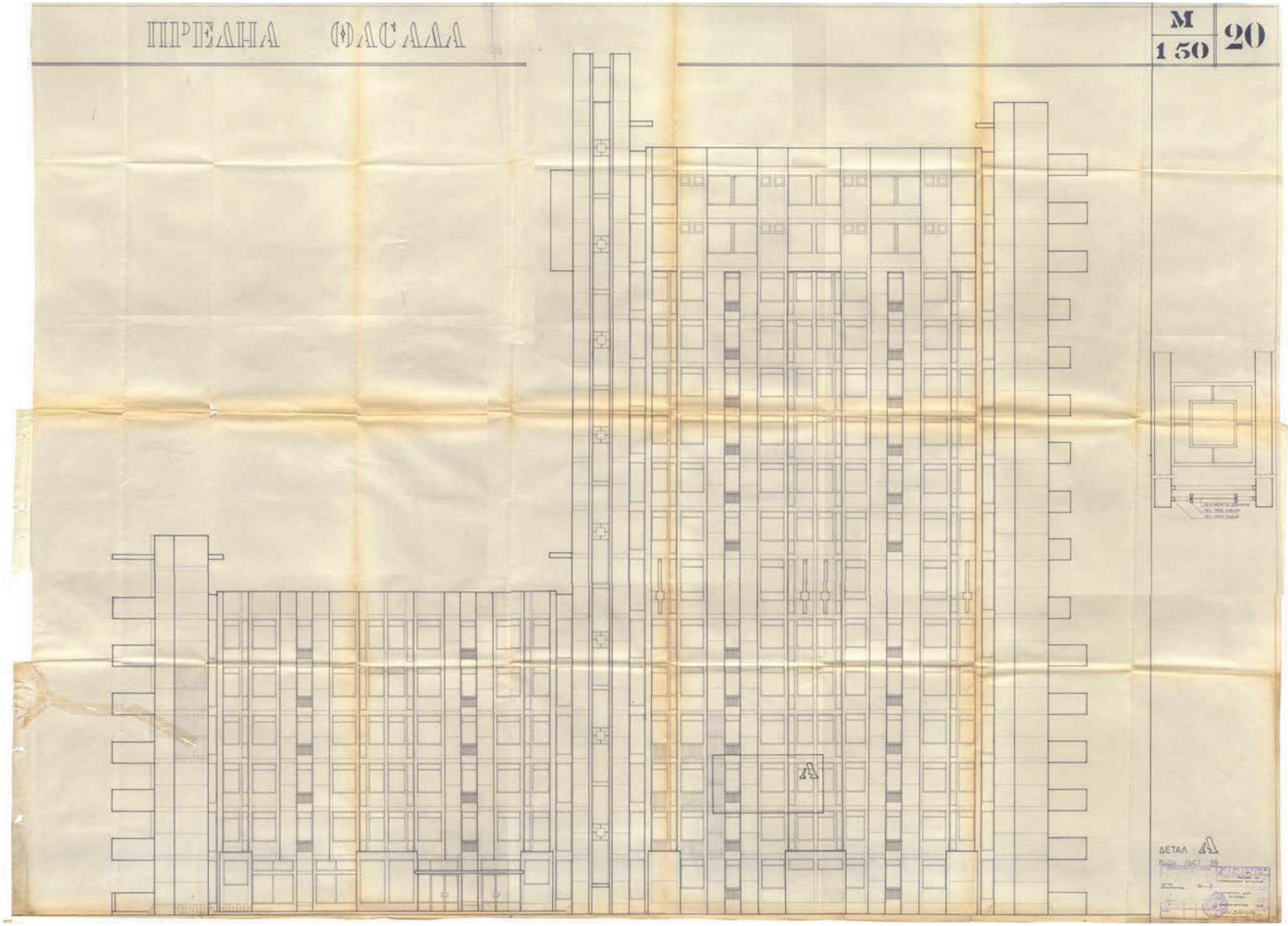
floor XIII and XIV
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



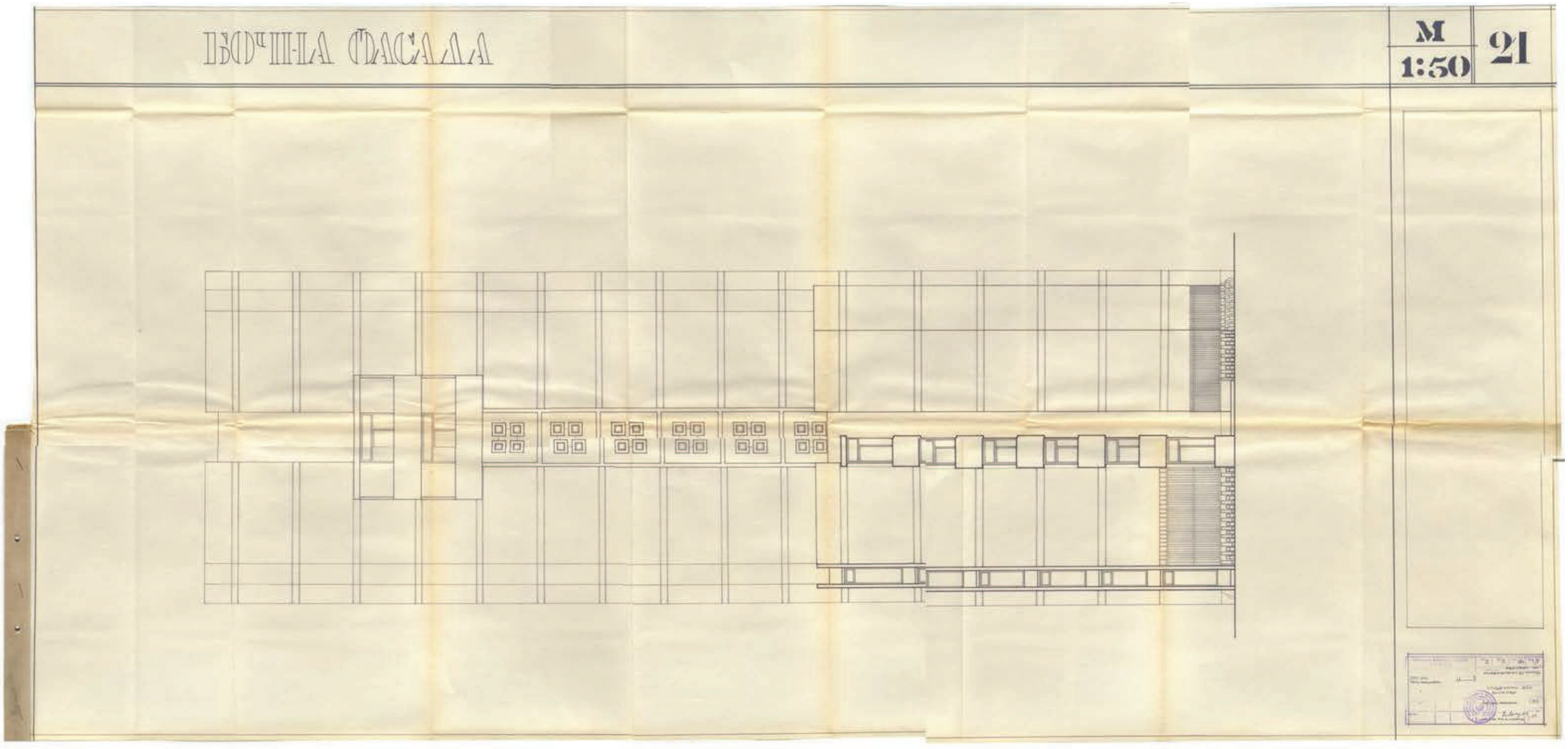
section
ink on transparent paper copied on insoluble paper
dim. 150cm/74cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



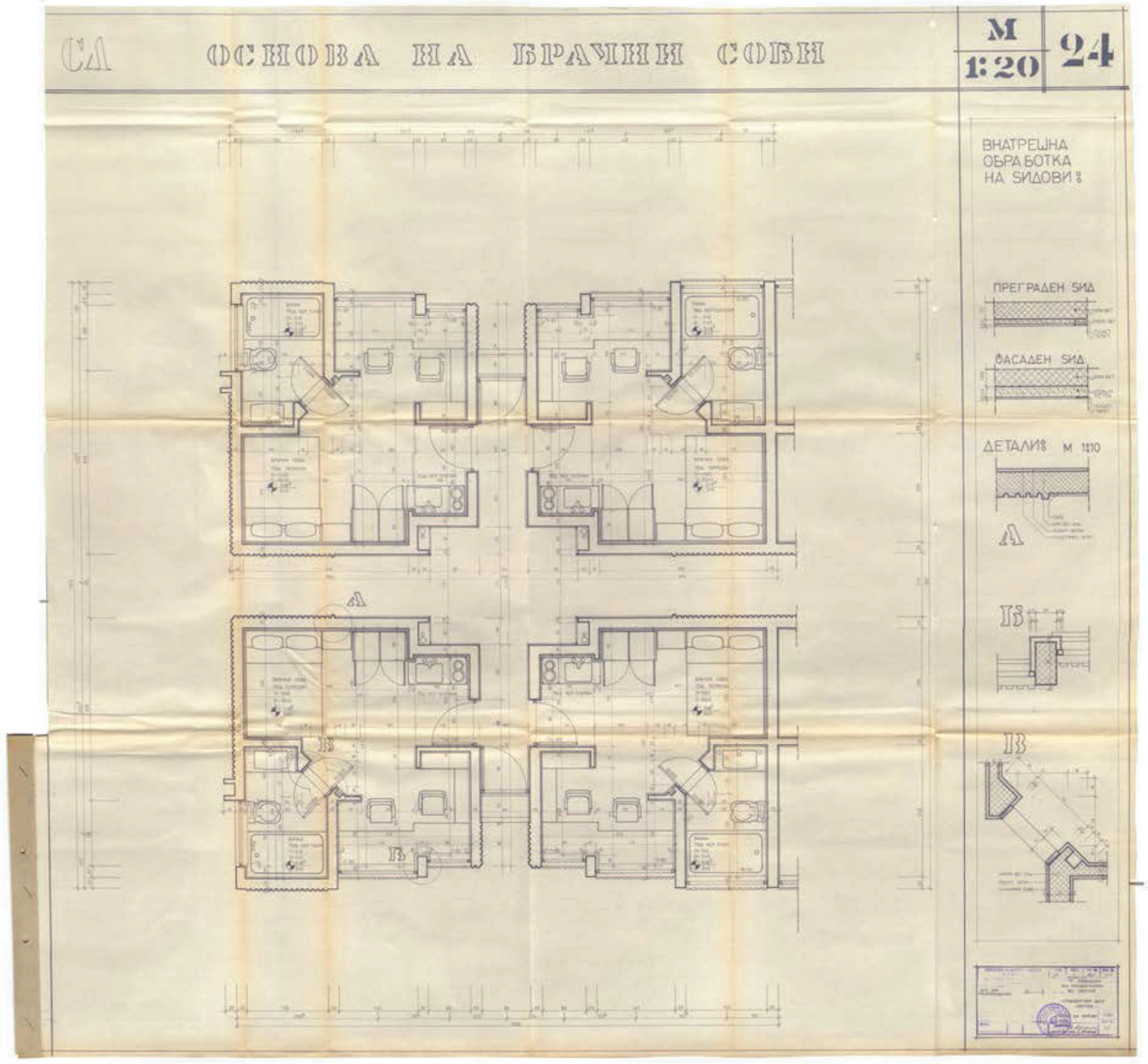
section
ink on transparent paper copied on insoluble paper
dim. 150cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



front elevation
ink on transparent paper copied on insoluble paper
dim. 150cm/109.5cm
Skopje City Archive
fund: Idadia municipality, box numer XLII



side elevation
ink on transparent paper copied on insoluble paper
dim. 151cm/69cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

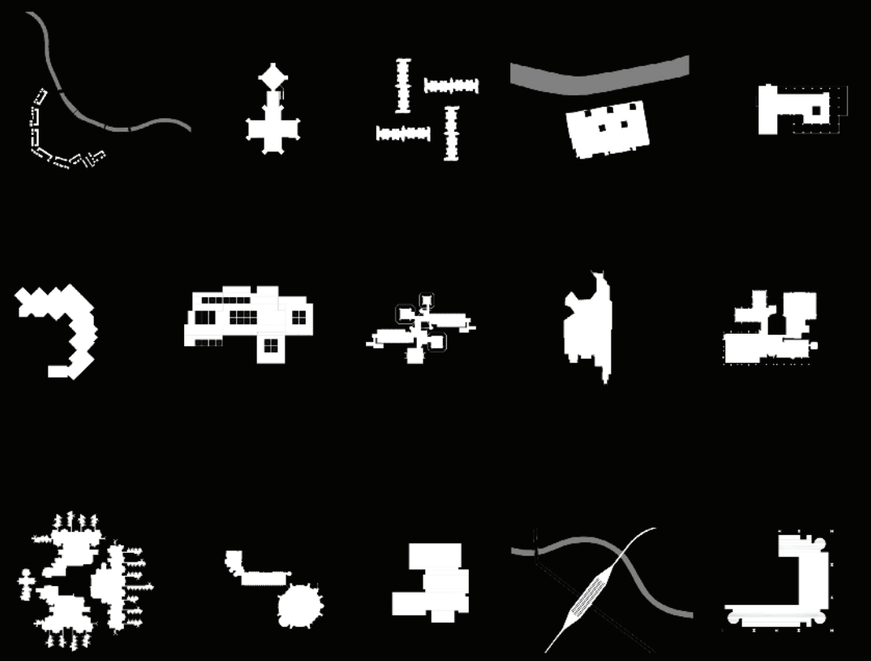


room detail
ink on transparent paper copied on insoluble paper
dim. 101cm/95.5cm
Skopje City Archive
fund: Idadia municipality, box numer XLII

Università degli Studi *Mediterranea* di Reggio Calabria, Dipartimento di Architettura e Territorio dArTe
Dottorato di Ricerca in Architettura e Territorio - XXXII ciclo

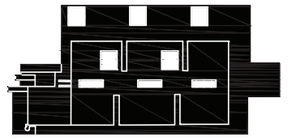
Operative Atlas of Brutalist Skopje

REDESIGNS



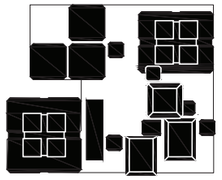
[INDEX] Case Studies

[CA] City Archive

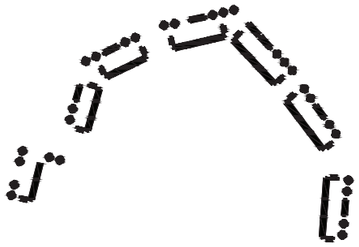


[CSC] City Shopping Center

[HSB] Hidrometeorological Service Building

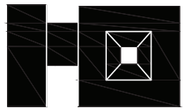


[NB] National Bank

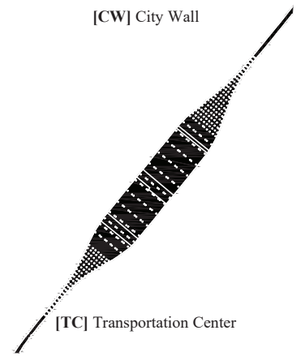


[CW] City Wall

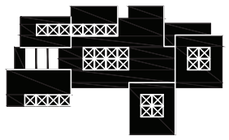
[SDGD] Student Dormitory Goce Delchev



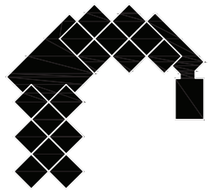
[MOCA] Museum of Contemporary Art Skopje



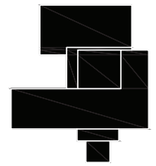
[TC] Transportation Center



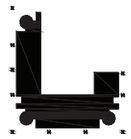
[NUL] National and University Library



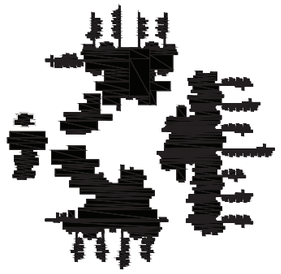
[MM] Museum of Macedonia



[MASA] Macedonian Academy of Sciences and Arts

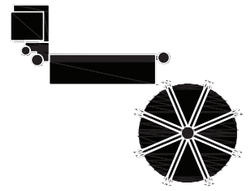


[RDC] Republic Dispatch Center

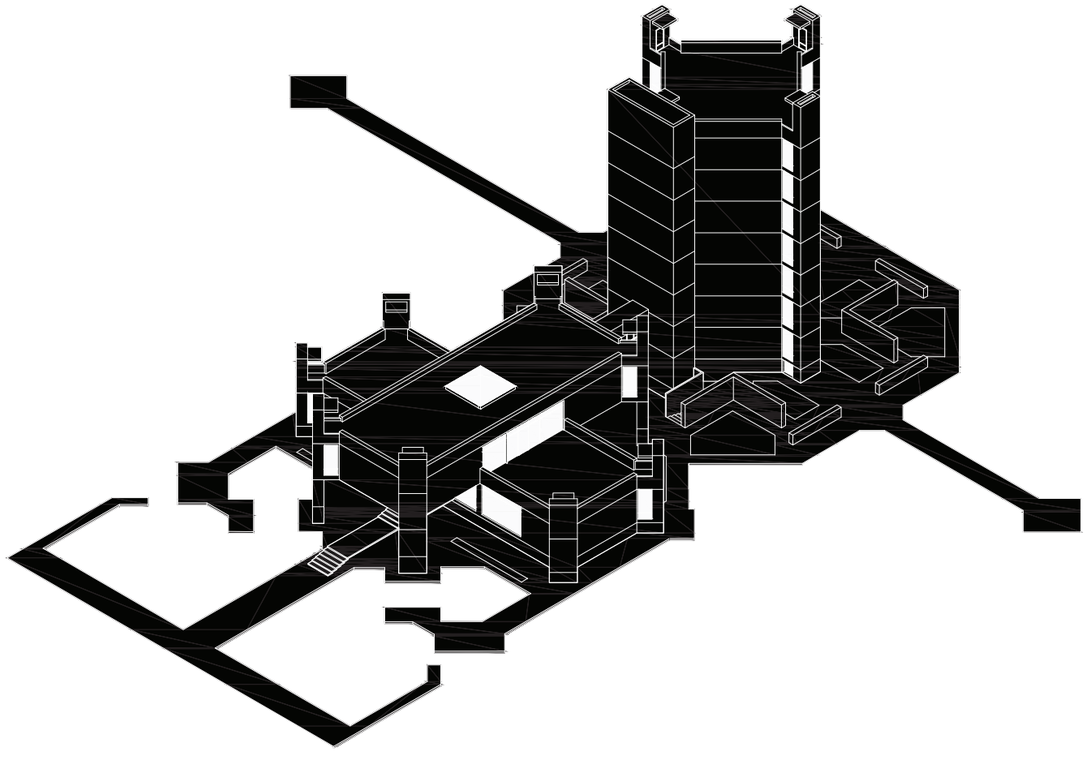


[UssCM] University SS Cyril and Methodius

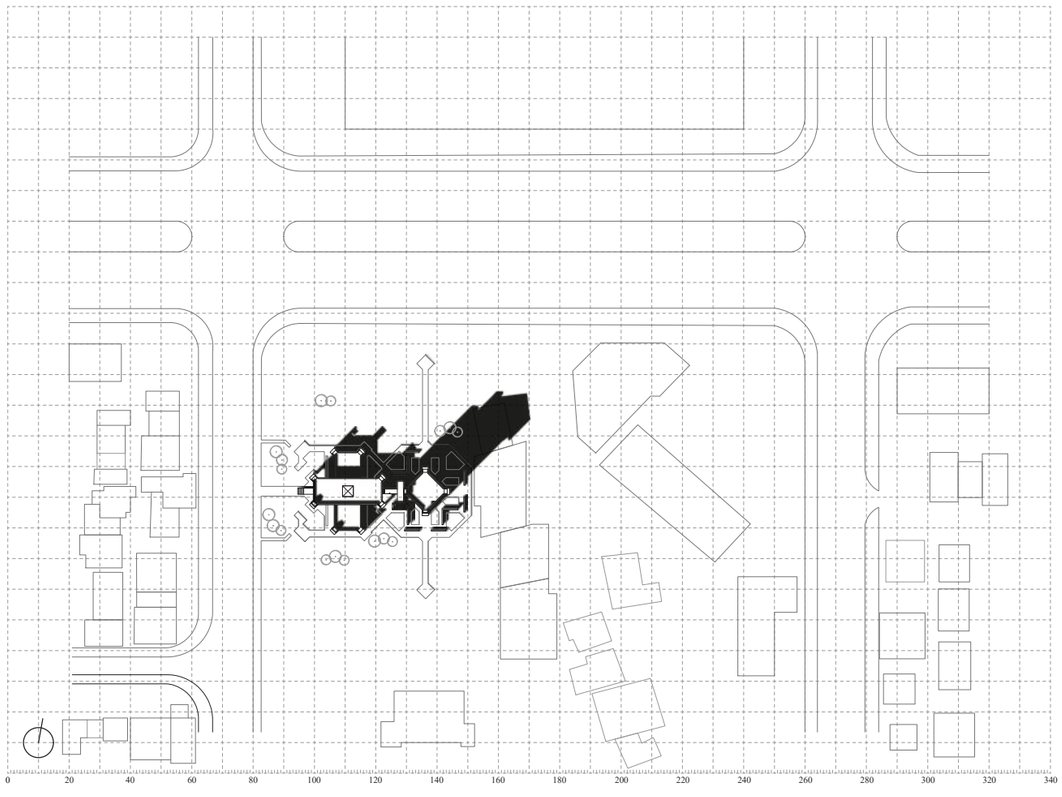
[MOB] Macedonian Opera and Ballet



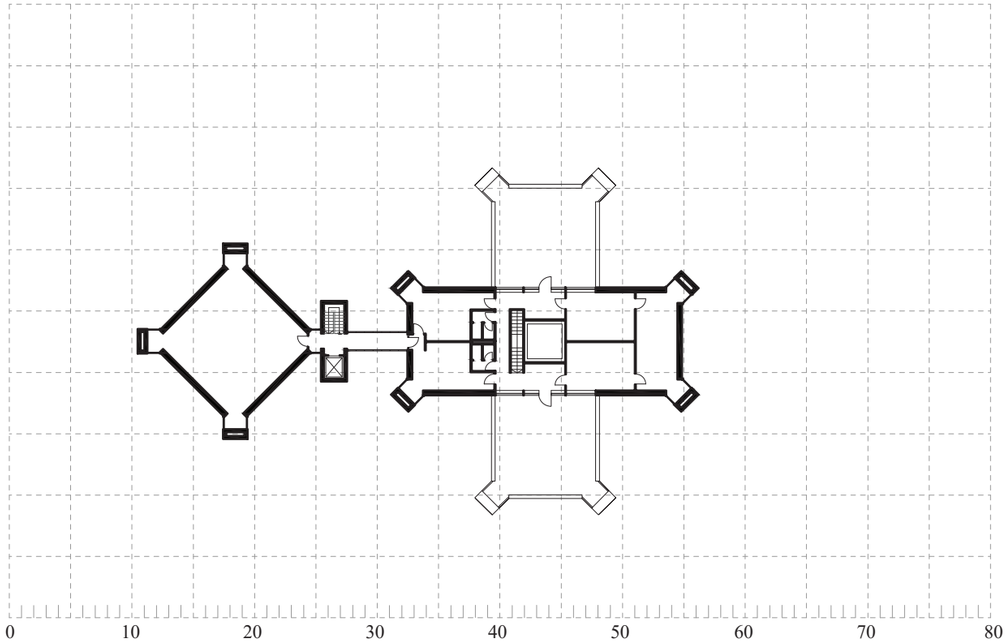
[TC] Telecommunication Center



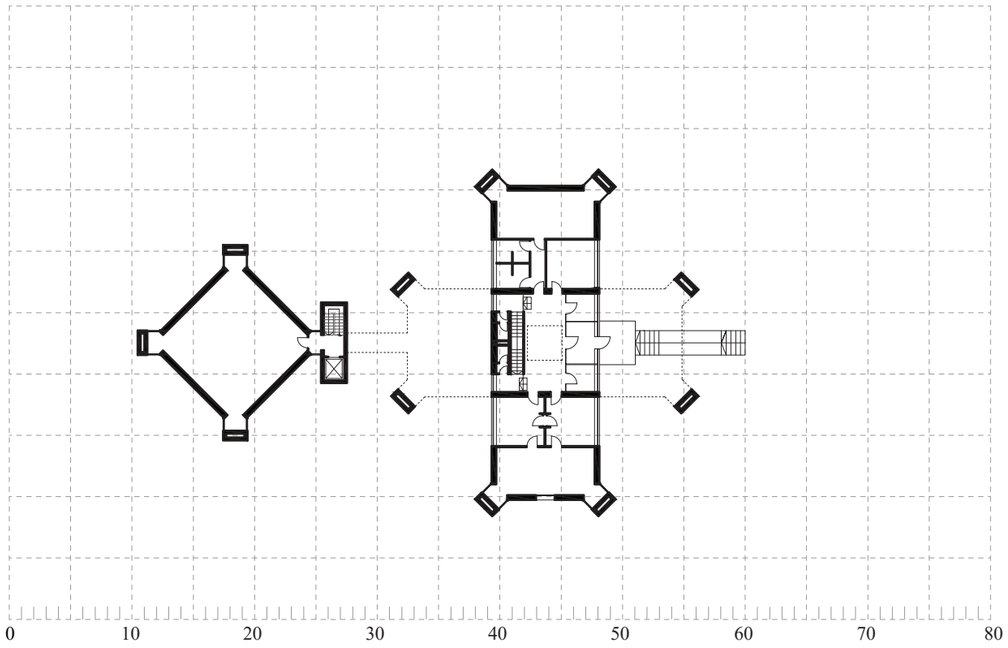
City Archive
Georgi Konstantinovski



img. 01_Masterplan
City Archive

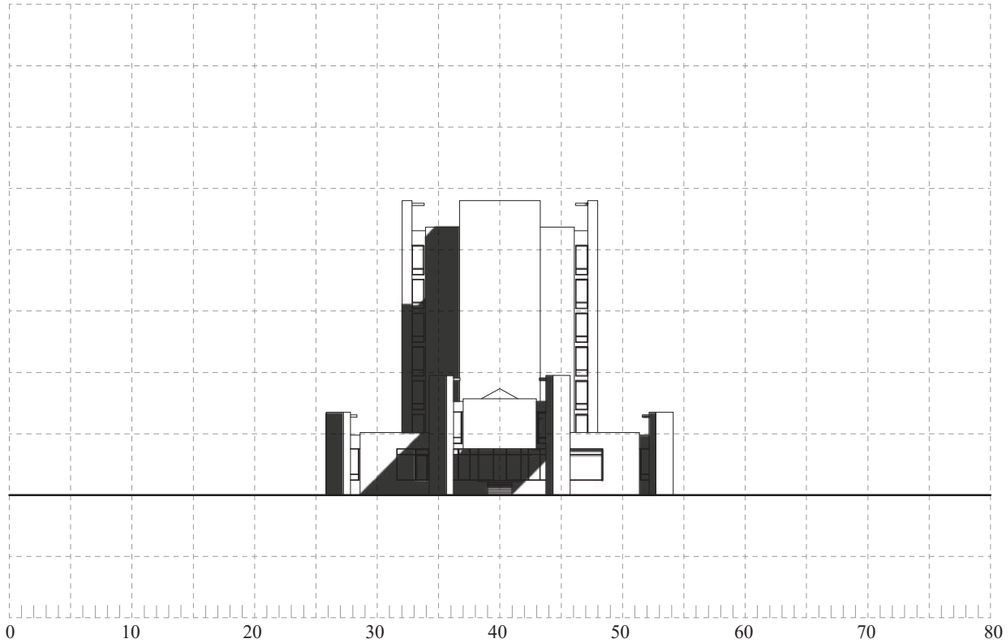


img. 02_Floor Plan
City Archive

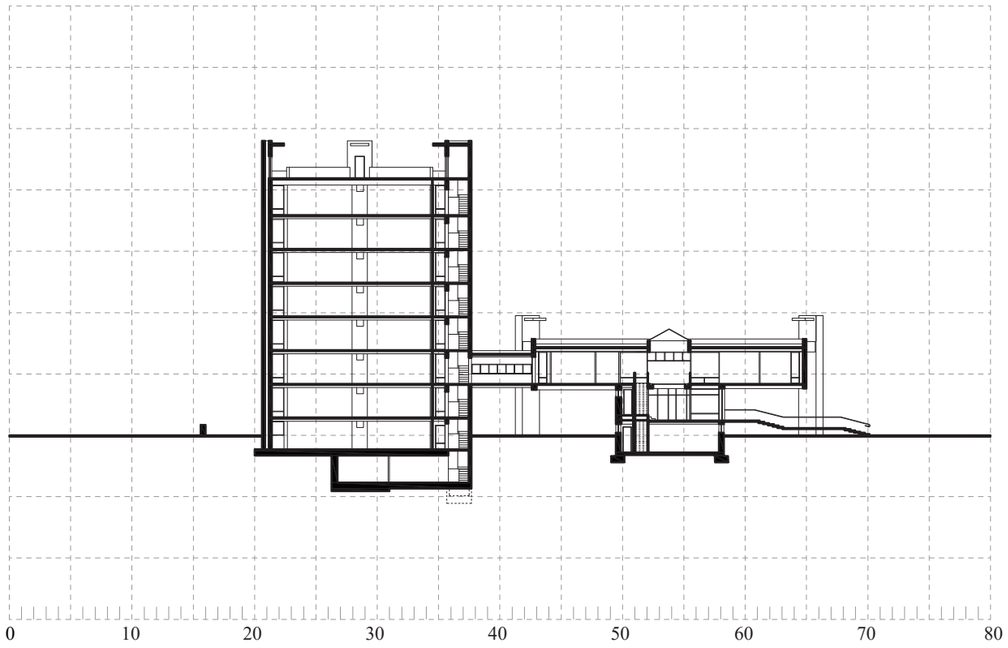


img. 03_Floor Plan
City Archive

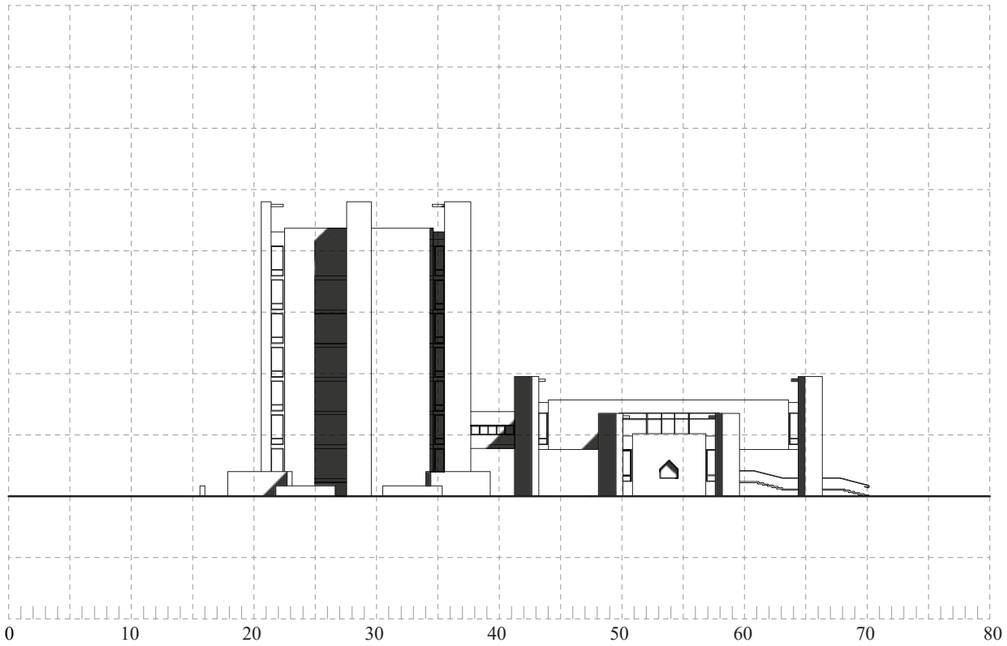
City Archive
Georgi Konstantinovski



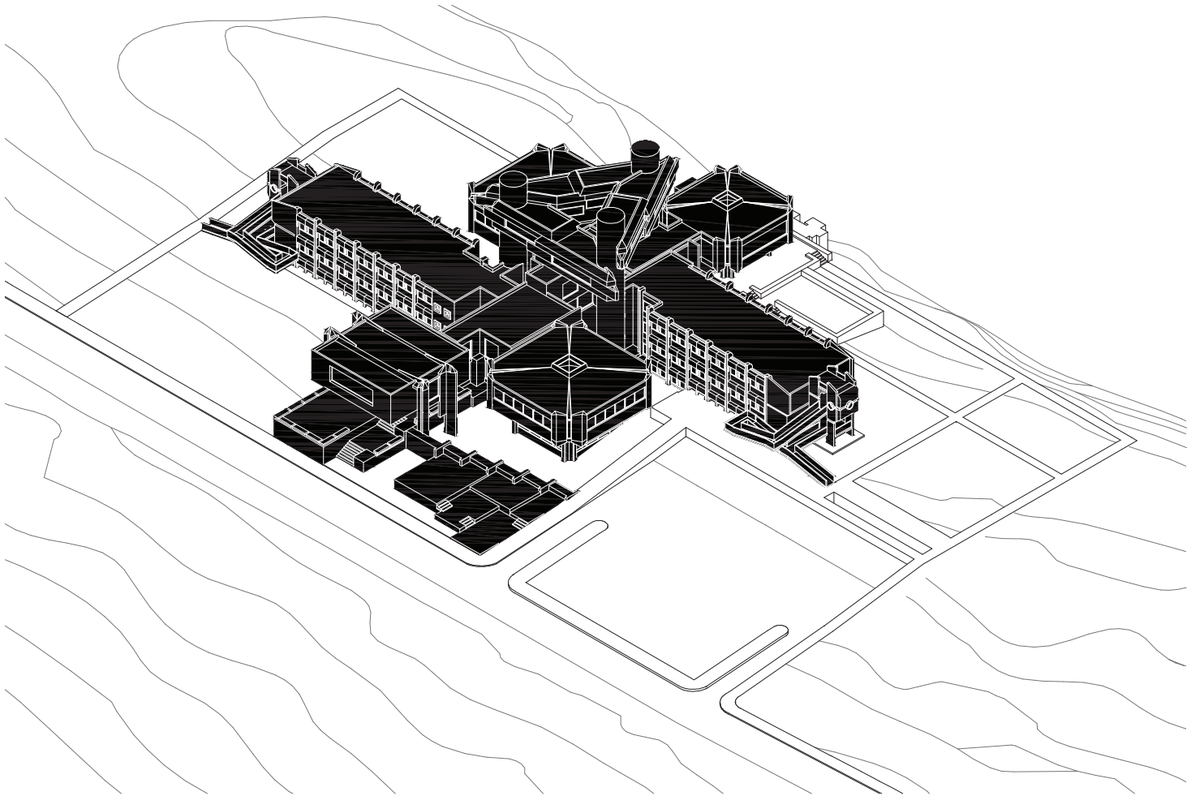
img. 05_Elevation
City Archive



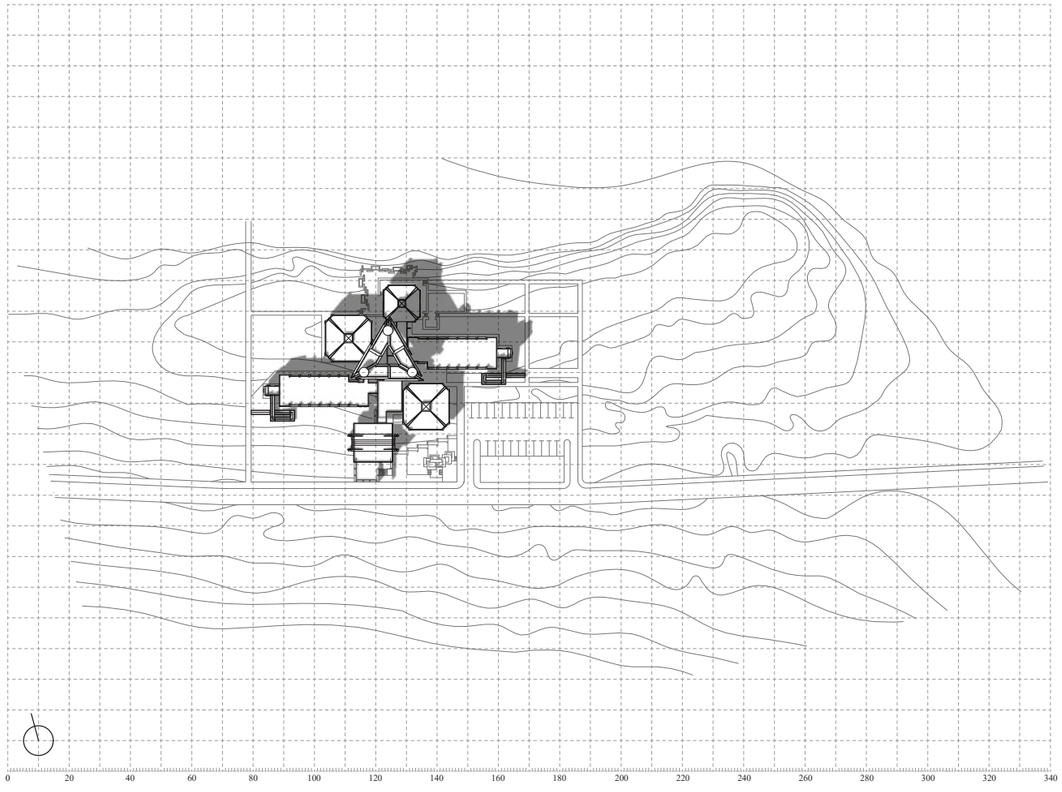
img. 06_Section
City Archive



img. 07_Elevation
City Archive

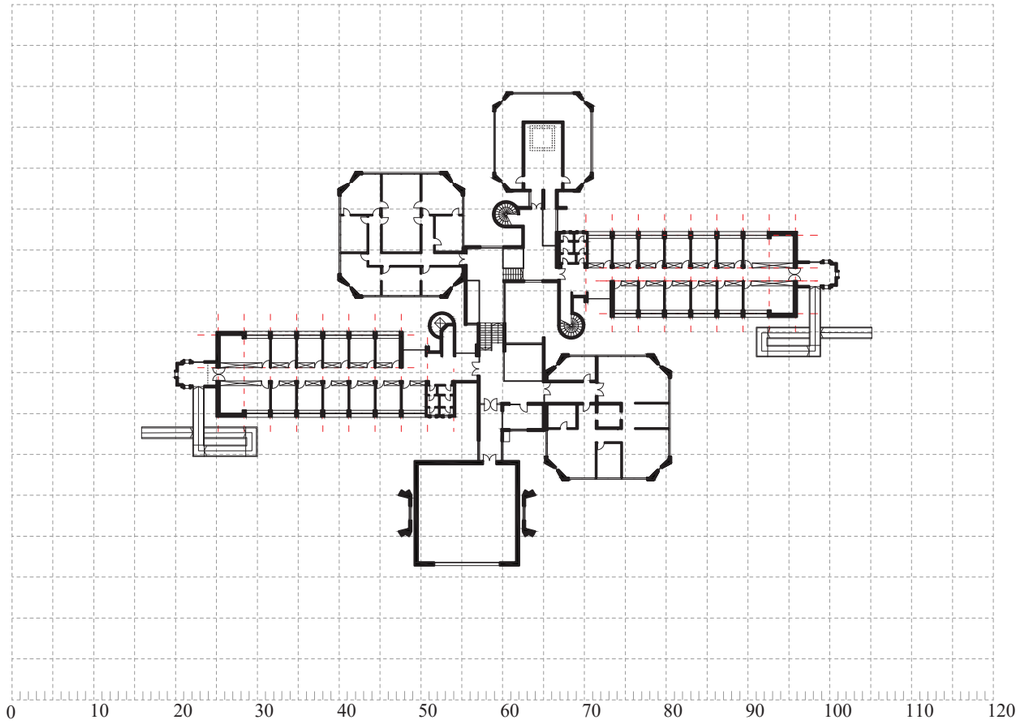


Hydrometeorologycal Service Building
Krsto Todorovki

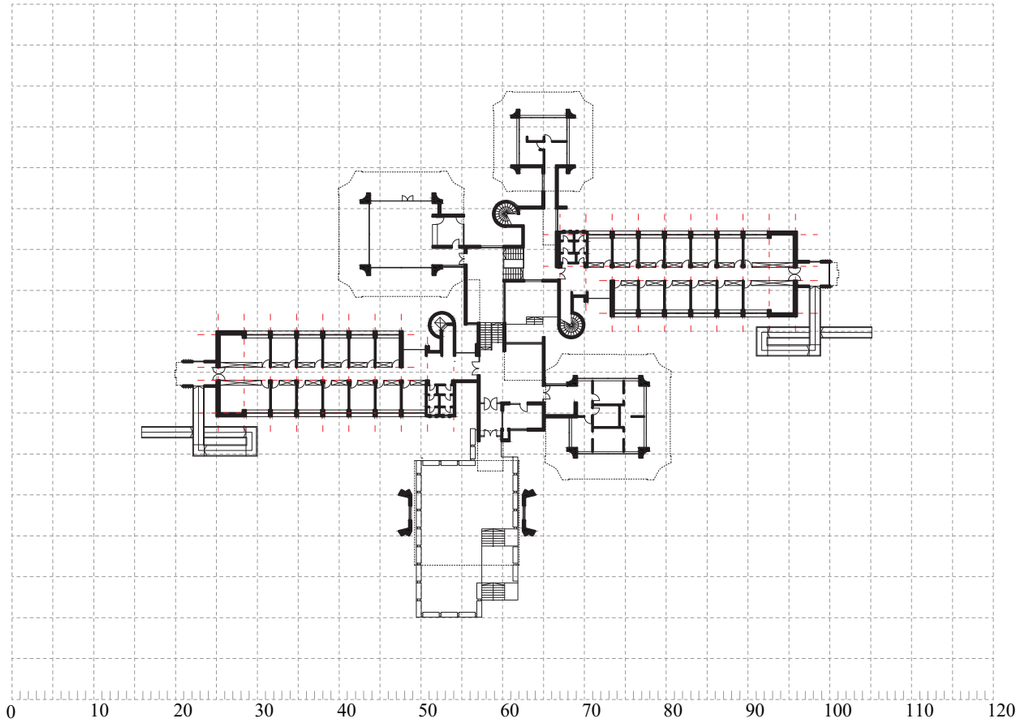


img. 01_Masterplan
Hydrometeorologycal Service Building

Hydrometeorologycal Service Building
Krsto Todorovki

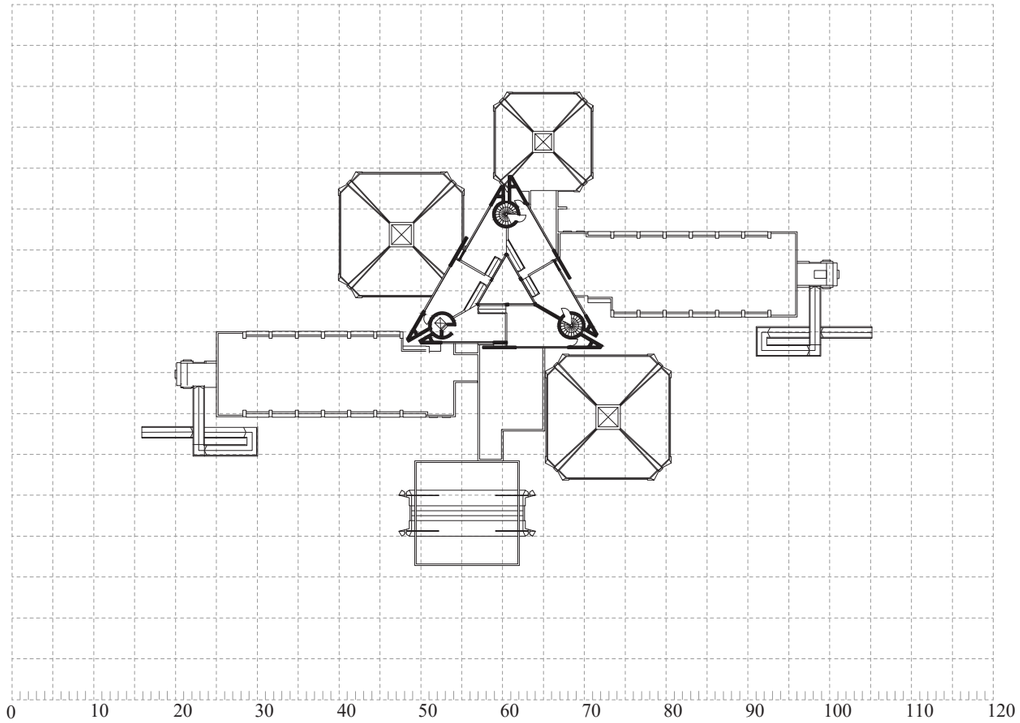


img. 02_Floor Plan
Hydrometeorologycal Service Building

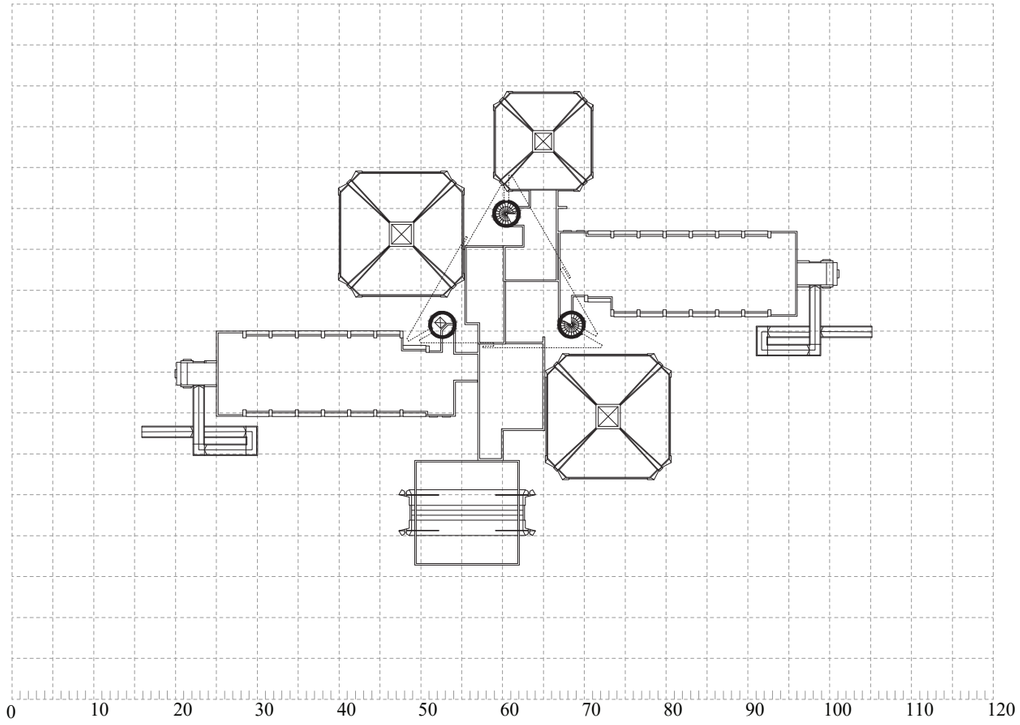


img. 03_Floor Plan
Hydrometeorologycal Service Building

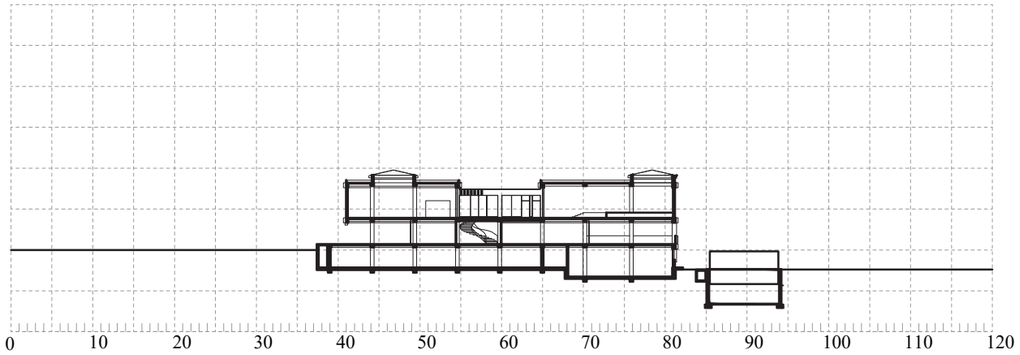
Hydrometeorologycal Service Building
Krsto Todorovki



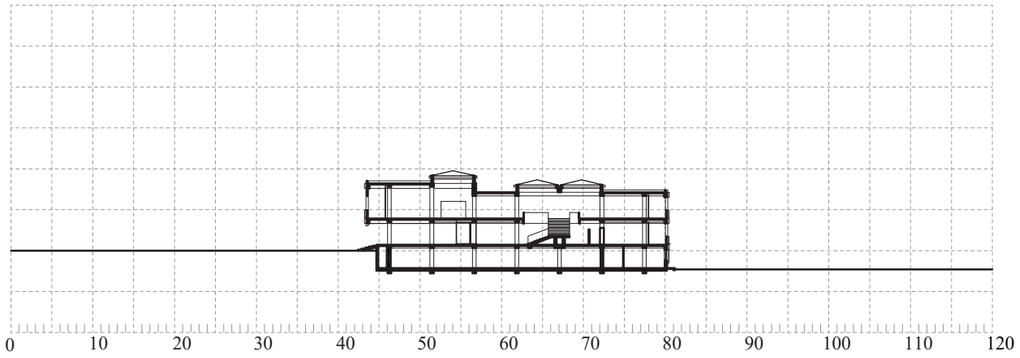
img. 04_Floor Plan
Hydrometeorologycal Service Building



img. 05_Floor Plan
Hydrometeorologycal Service Building

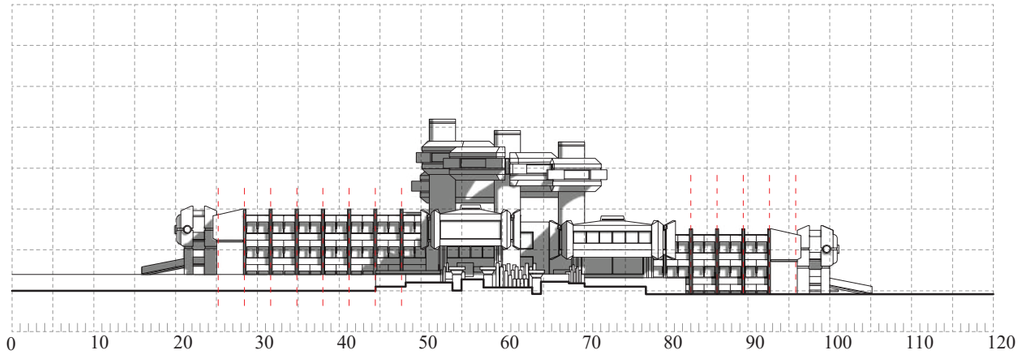


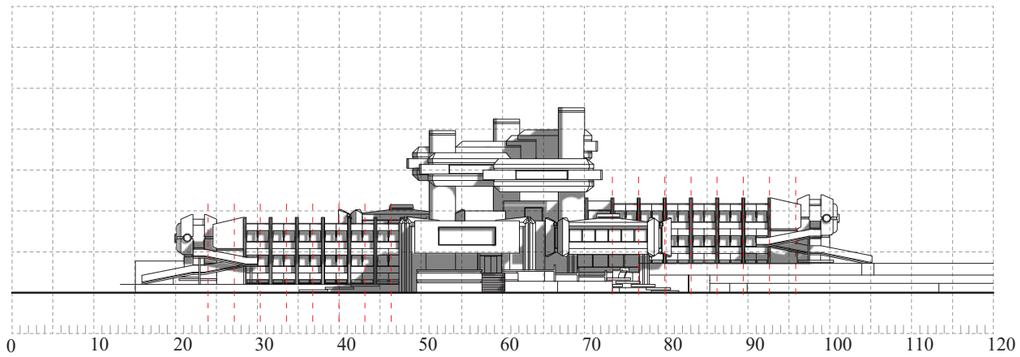
img. 06_Section
Hydrometeorologycal Service Building

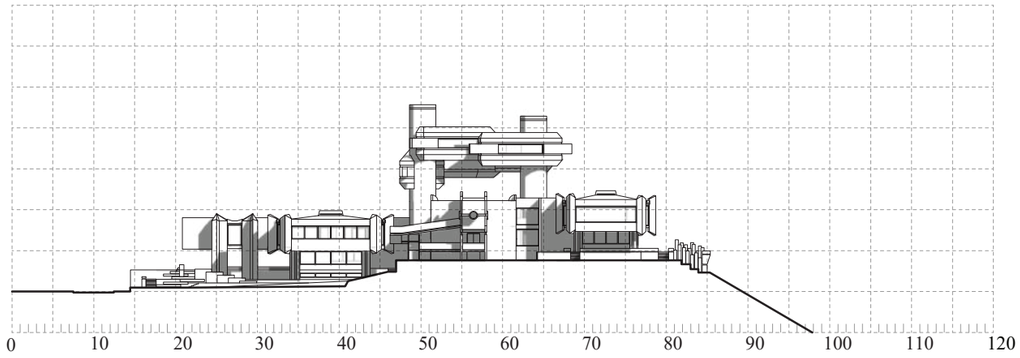


img. 07_Section
Hydrometeorologycal Service Building

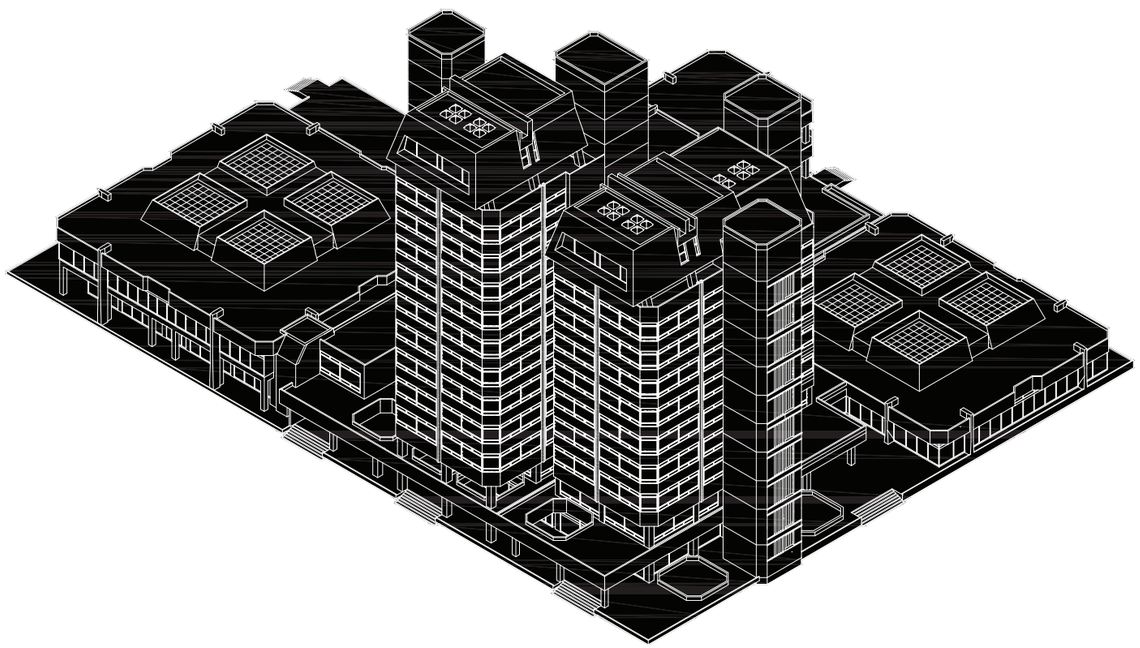
Hydrometeorologycal Service Building
Krsto Todorovki



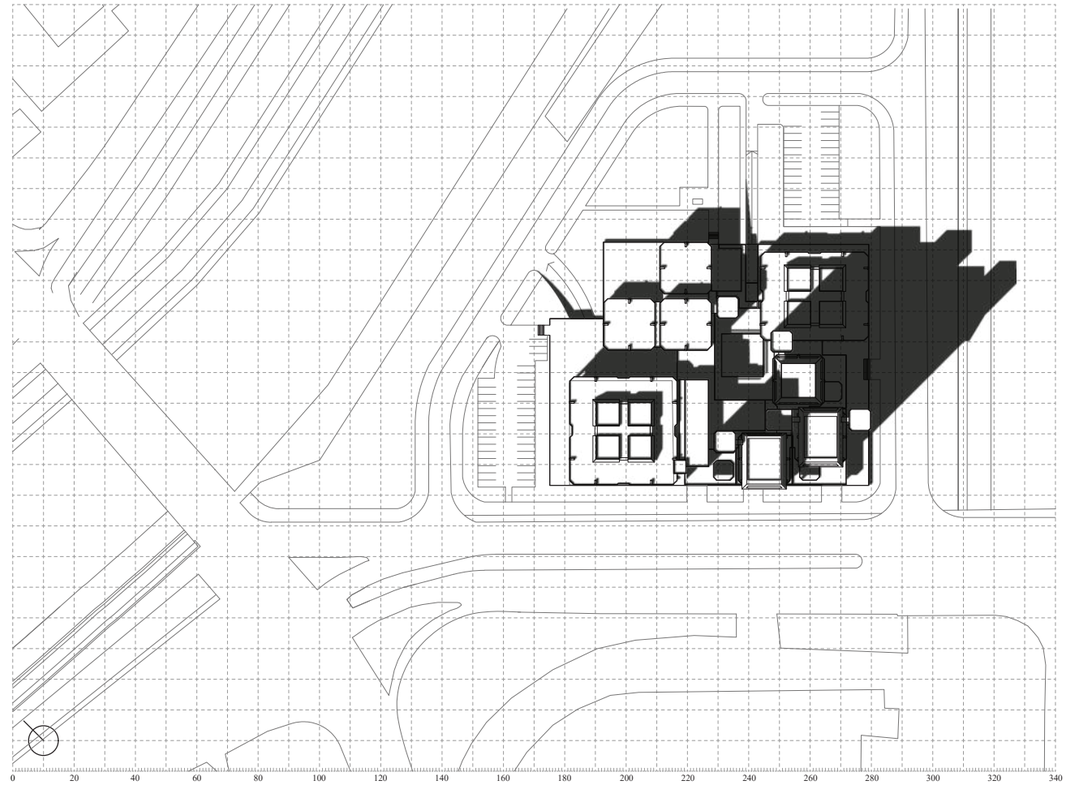




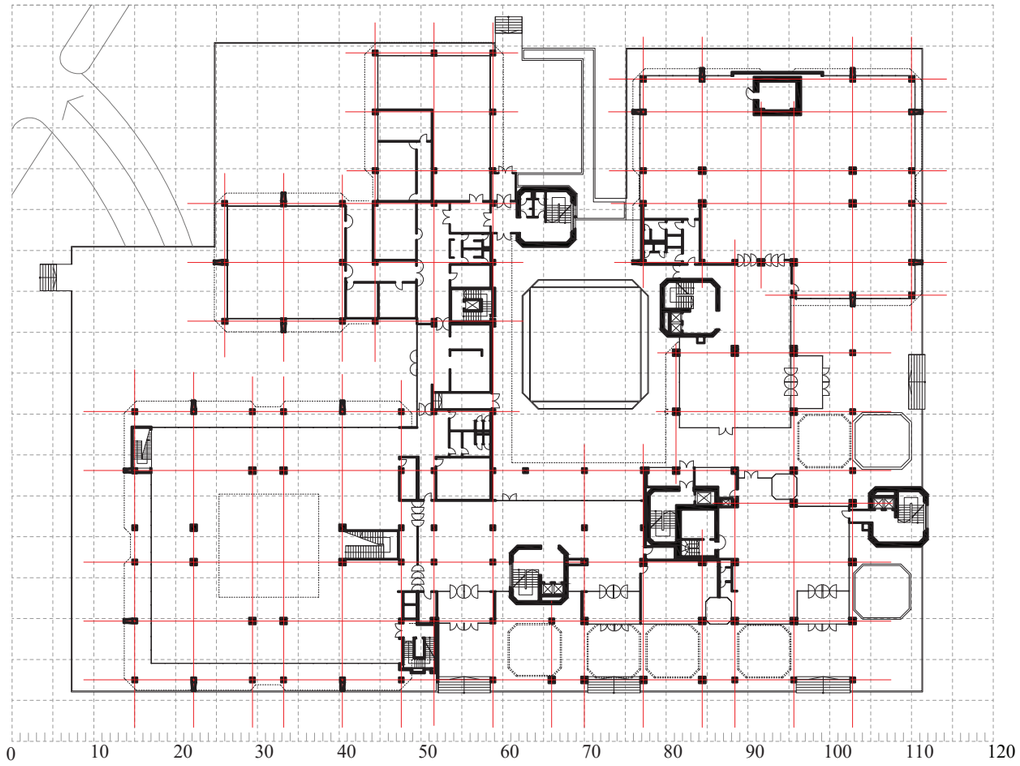
img. 07_Elevation
Hydrometeorologycal Service Building



National Bank of the Republic of Macedonia
Radomir Lalovikj, Olga Papech

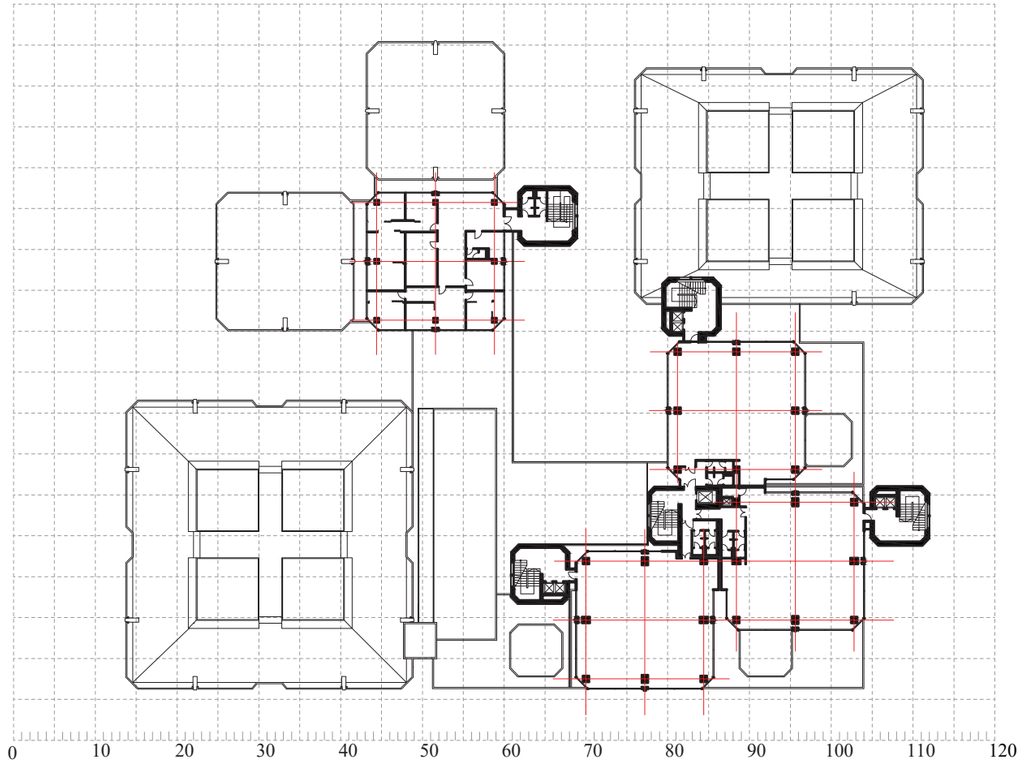


img. 01_Masterplan
National Bank of the Republic of Macedonia

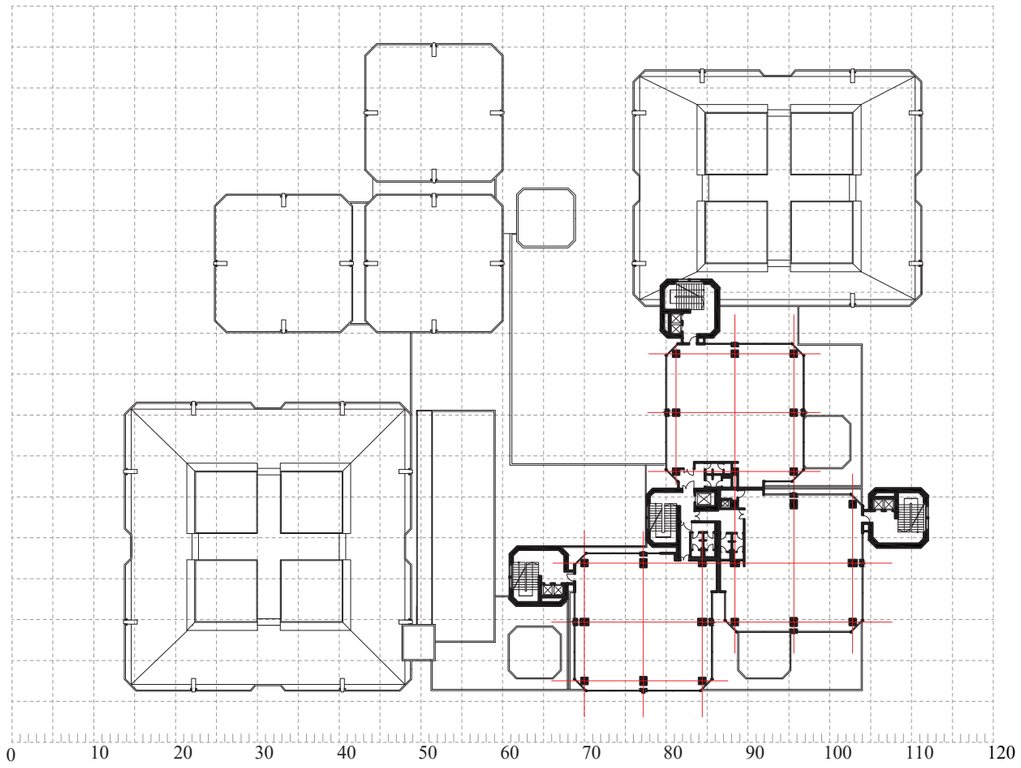


img. 02_Floor Plan
National Bank of the Republic of Macedonia

National Bank of the Republic of Macedonia
Radomir Lalovikj, Olga Papech

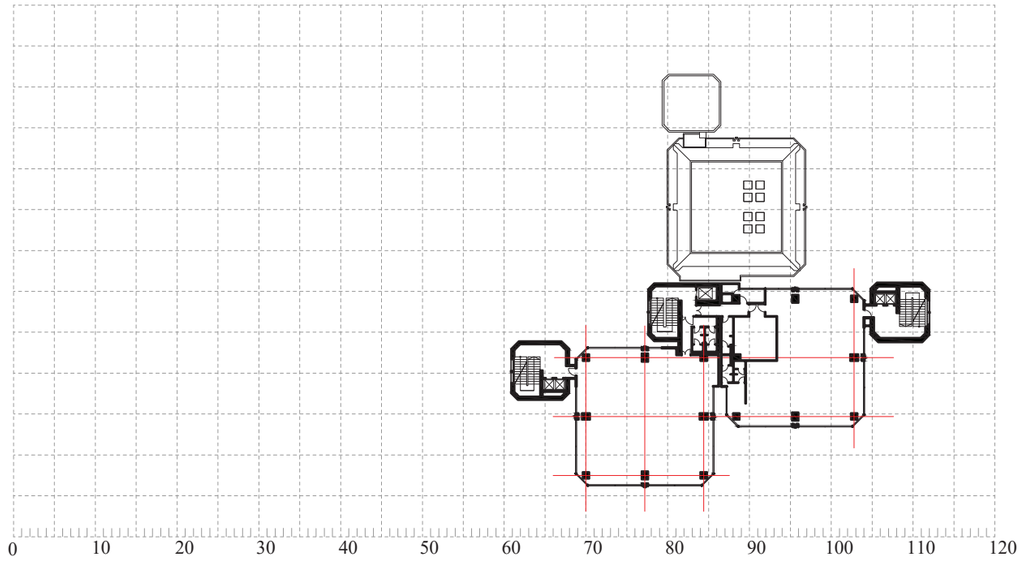


img. 03_Floor Plan
National Bank of the Republic of Macedonia



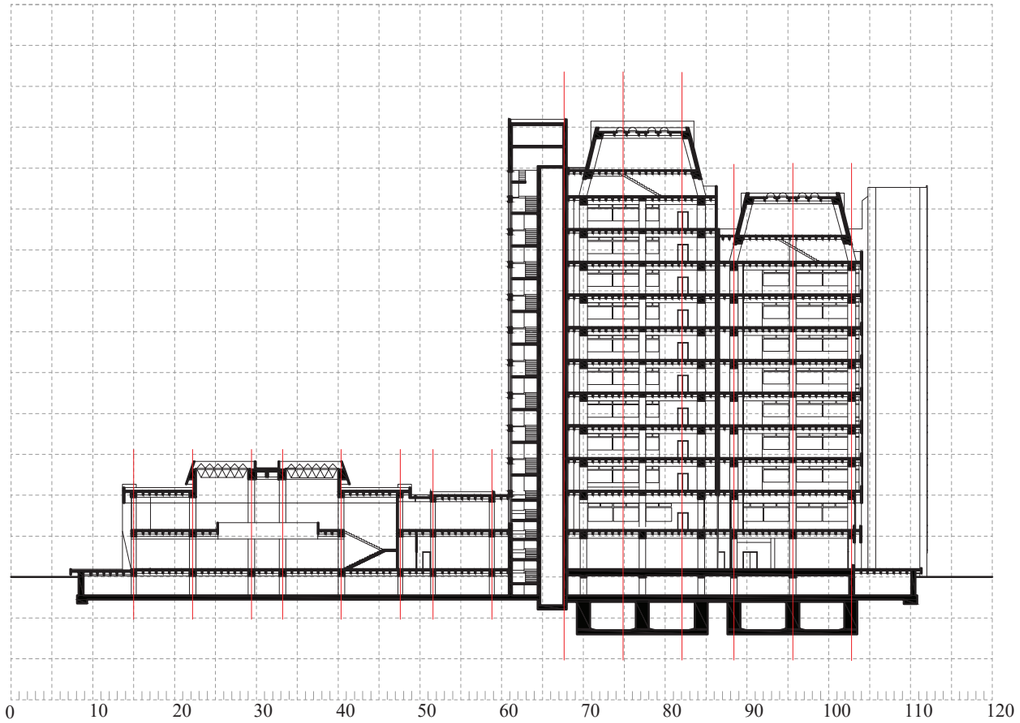
img. 04_Floor Plan
National Bank of the Republic of Macedonia

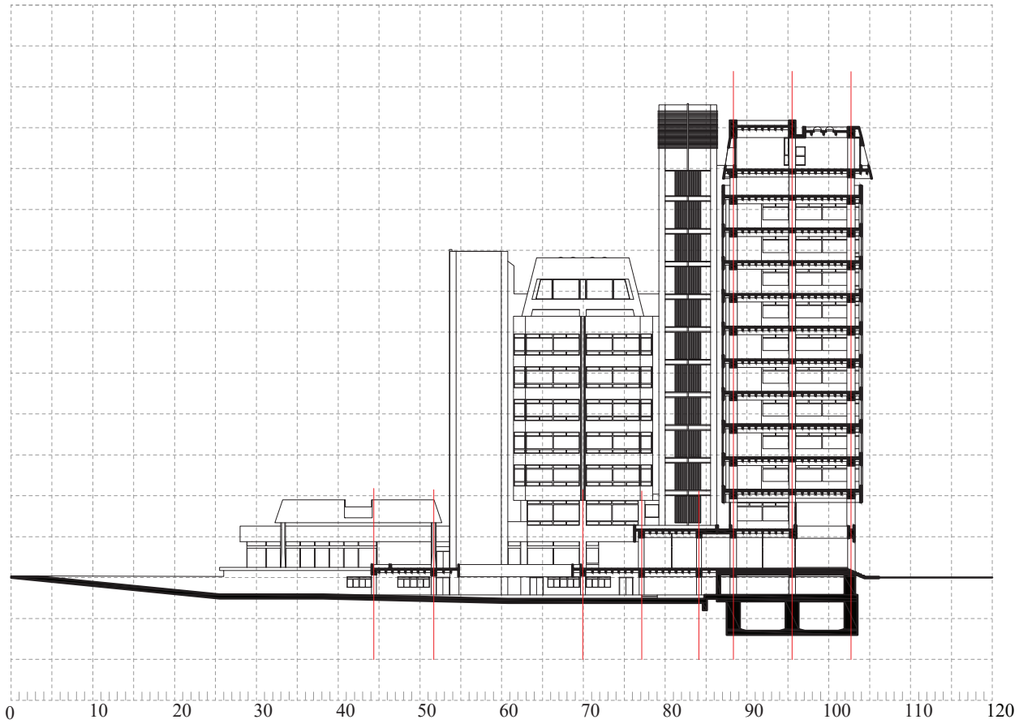
National Bank of the Republic of Macedonia
Radomir Lalovikj, Olga Papech



img. 05_Floor Plan
National Bank of the Republic of Macedonia

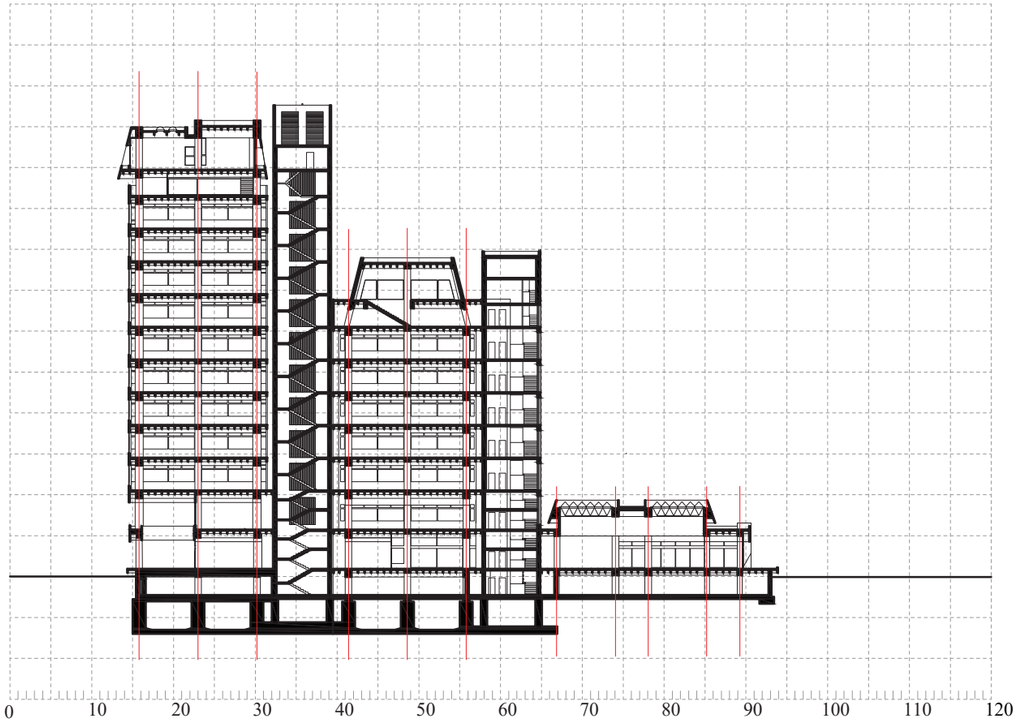
National Bank of the Republic of Macedonia
Radomir Lalovikj, Olga Papech





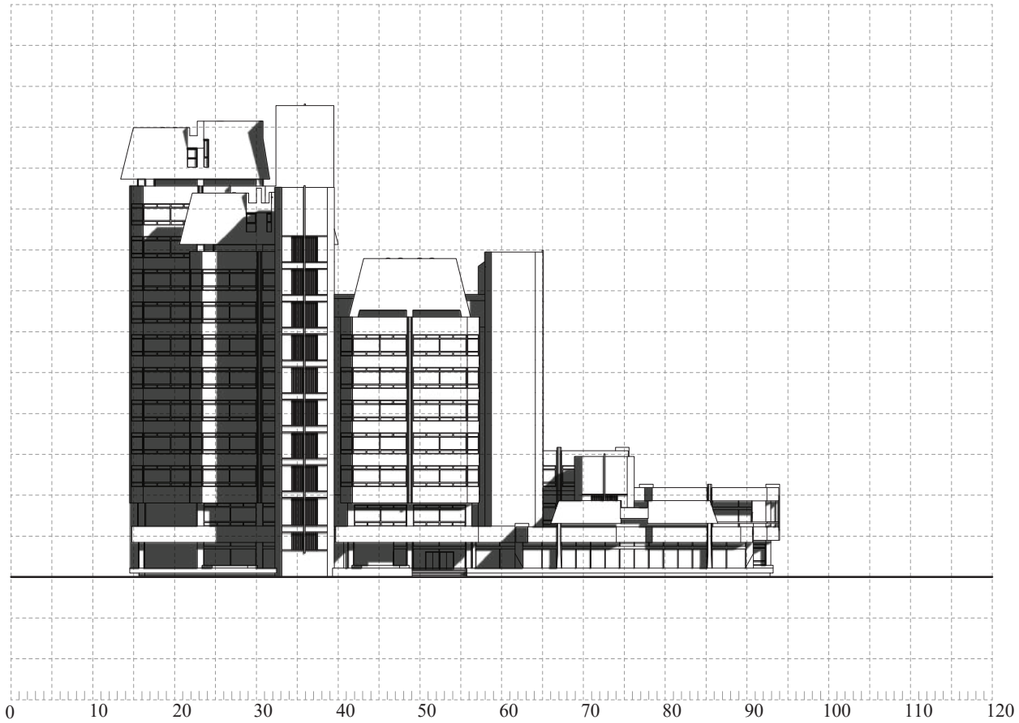
img. 06_Section
National Bank of the Republic of Macedonia

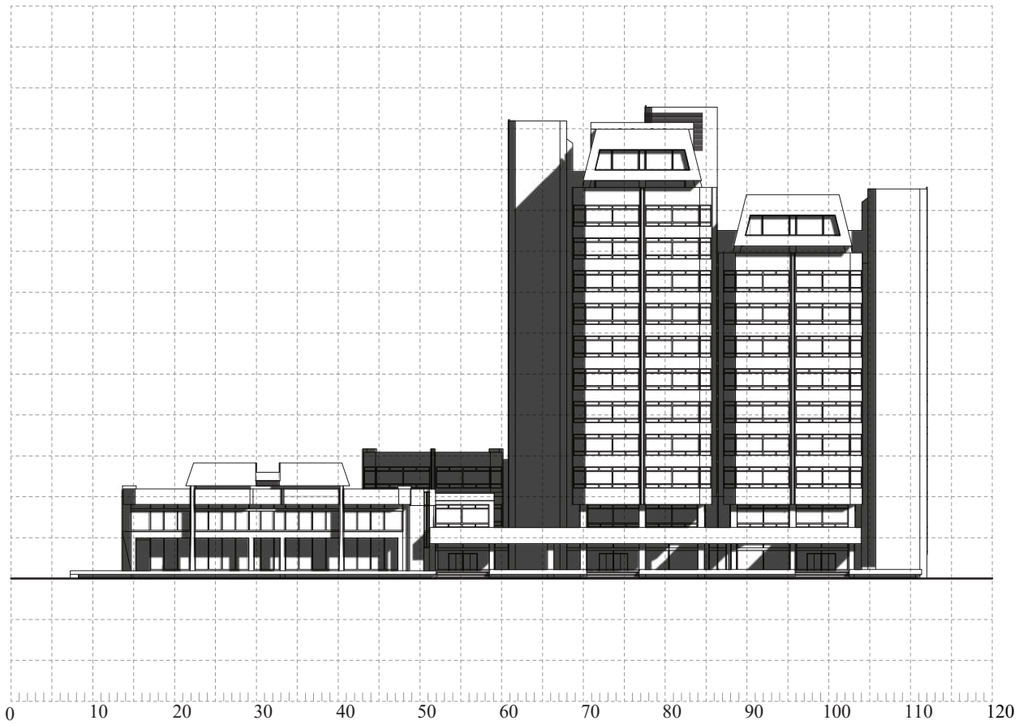
National Bank of the Republic of Macedonia
Radomir Lalovikj, Olga Papech



img. 07_Section
National Bank of the Republic of Macedonia

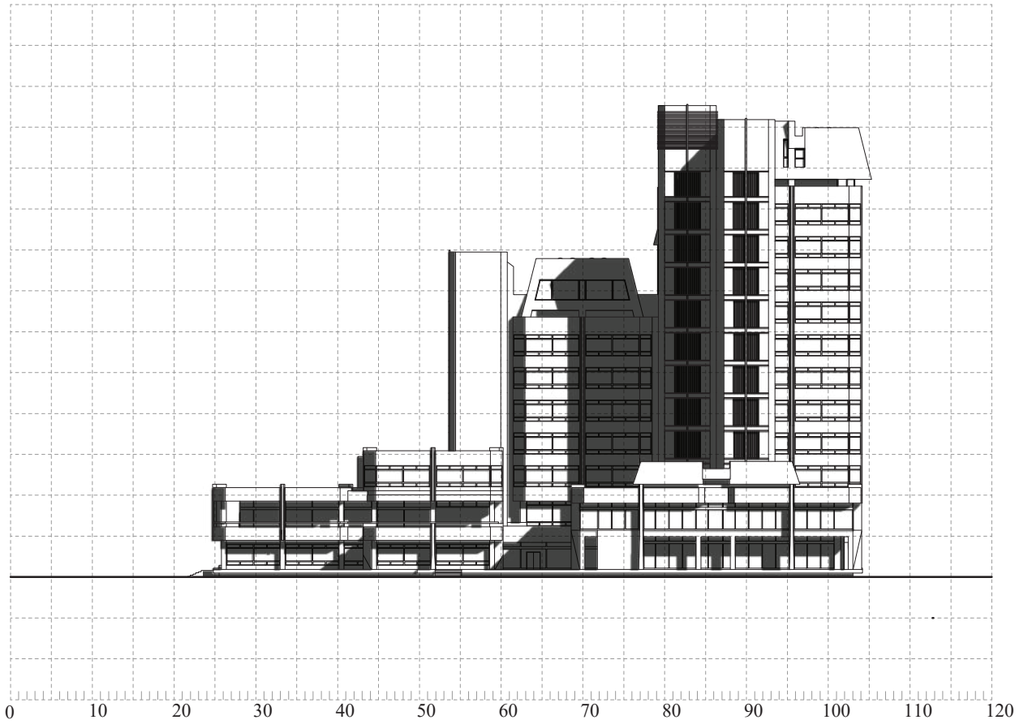
National Bank of the Republic of Macedonia
Radomir Lalovikj, Olga Papech

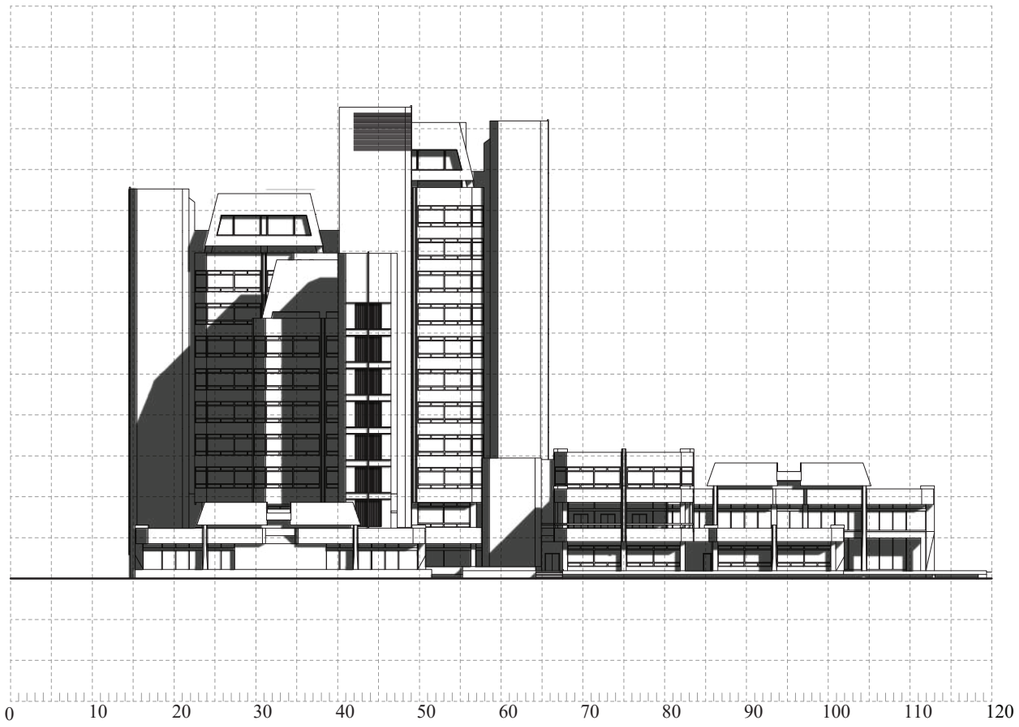




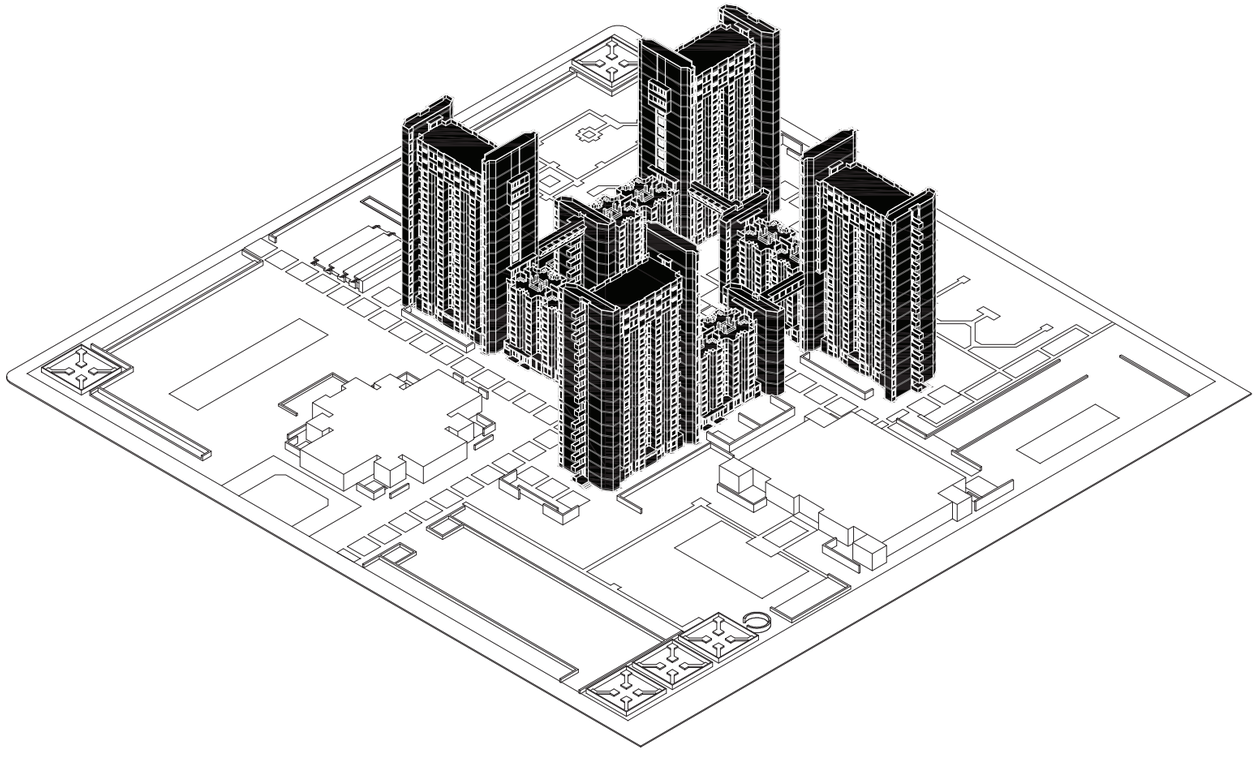
img. 08_Elevation
National Bank of the Republic of Macedonia

National Bank of the Republic of Macedonia
Radomir Lalovikj, Olga Papech

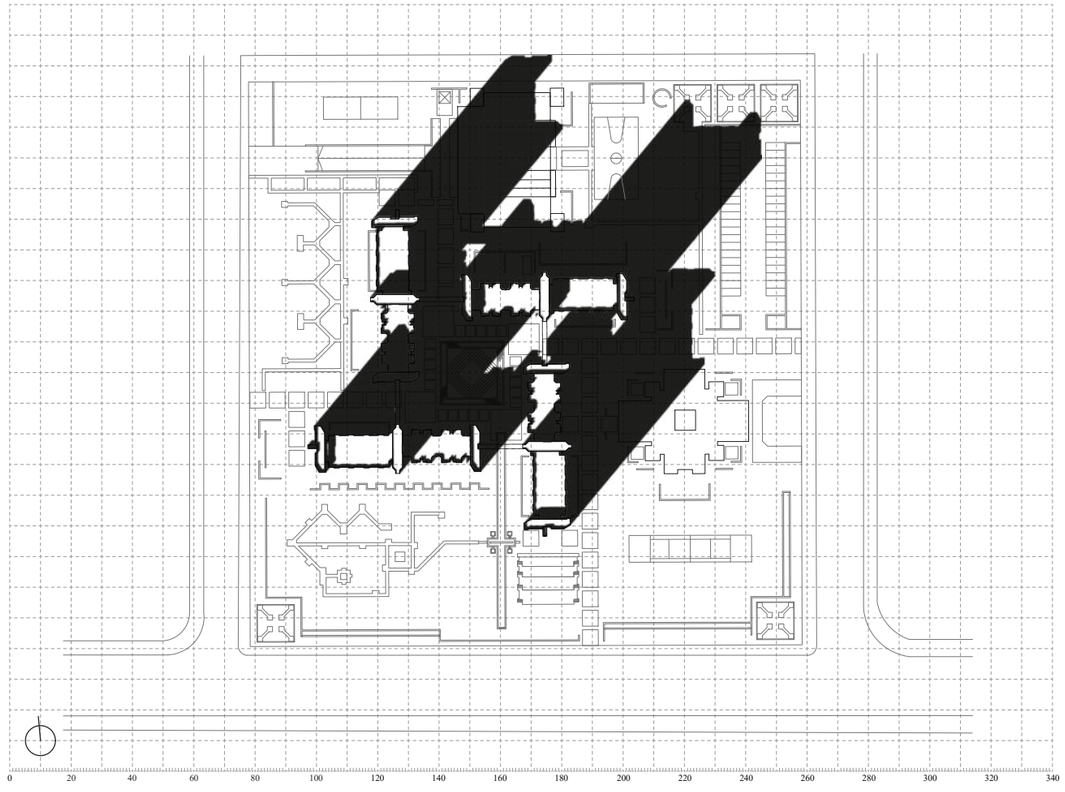




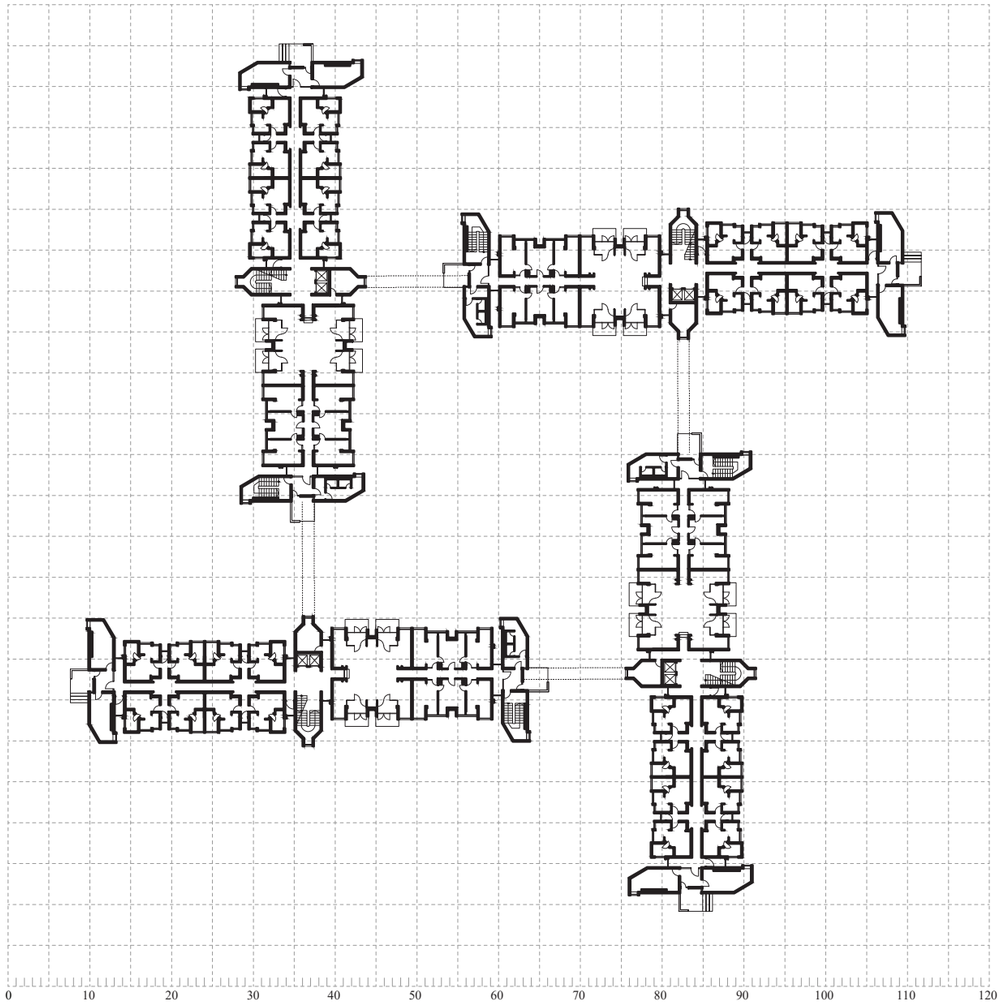
img. 07_Elevation
National Bank of the Republic of Macedonia



Student Dormitory “Goce Delchev”
Georgi Konstantinovski

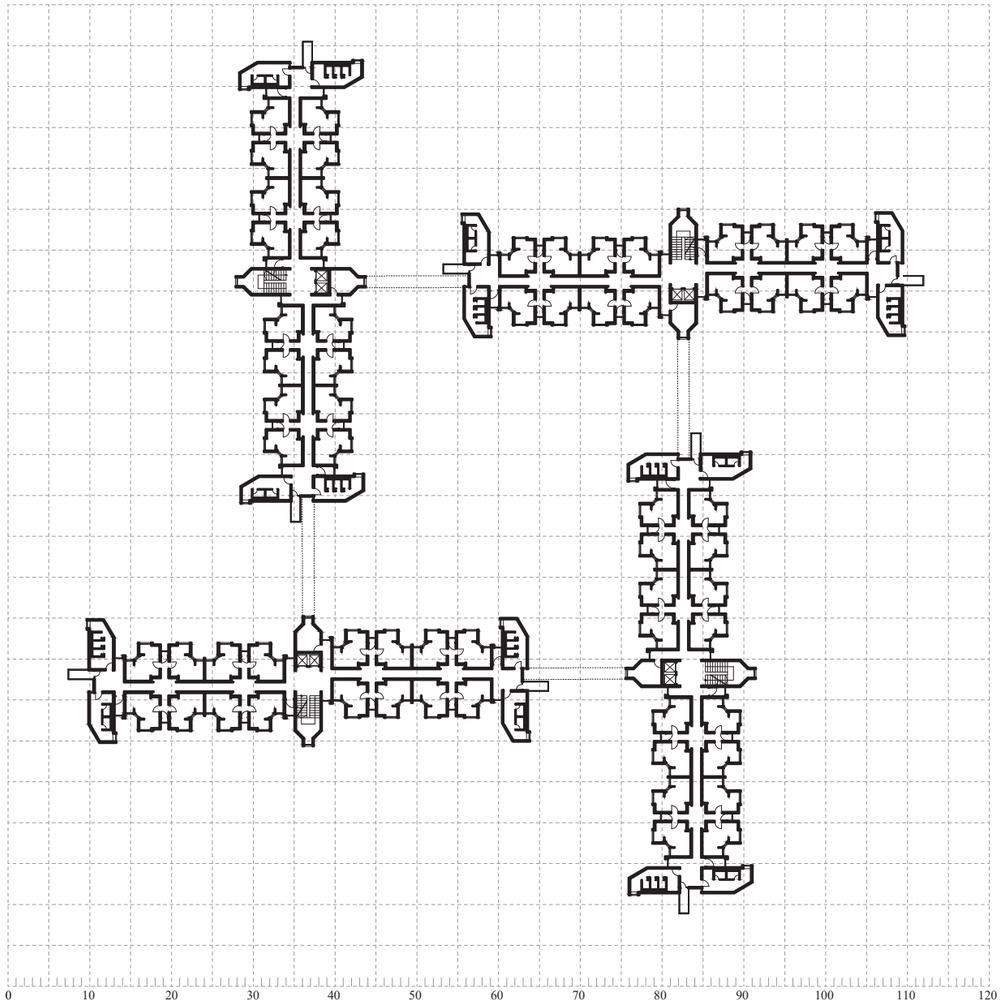


img. 01_Masterplan
Student Dormitory “Goce Delchev”

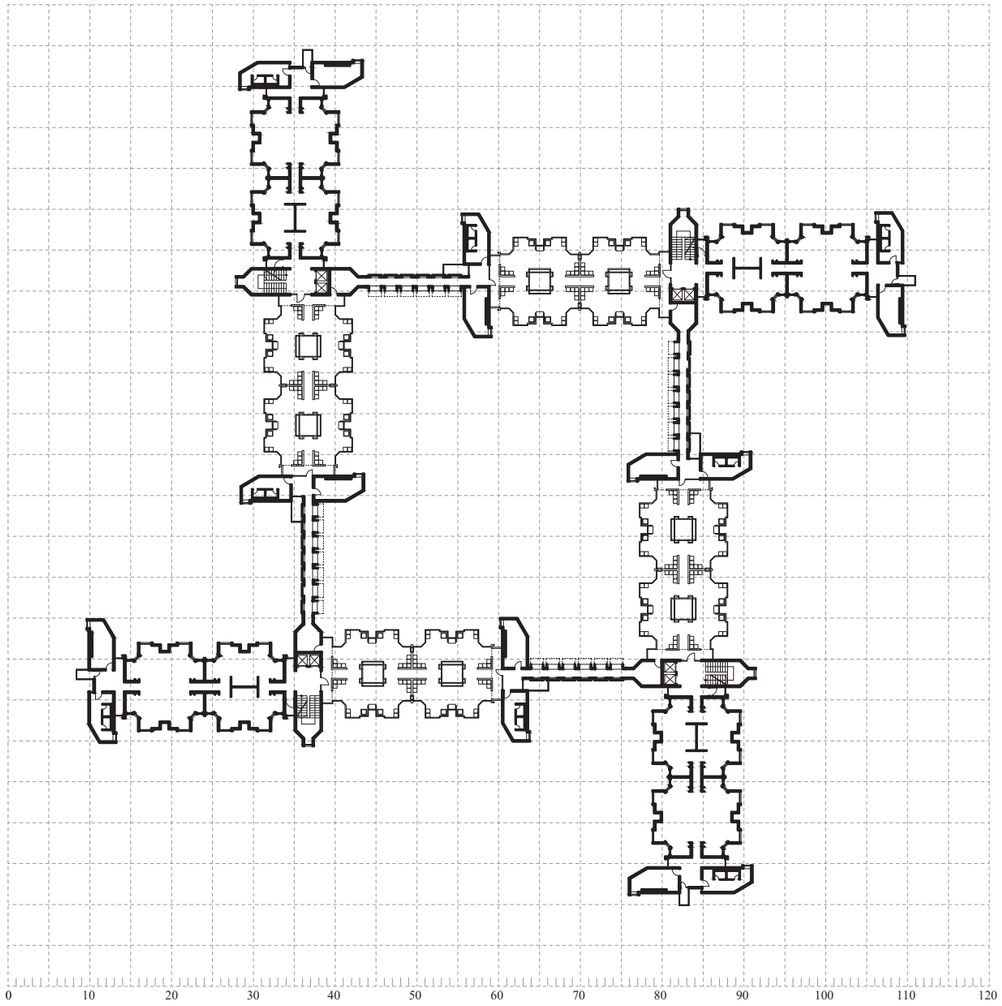


img. 02_Floor Plan
Student Dormitory “Goce Delchev”

Student Dormitory “Goce Delchev”
Georgi Konstantinovski

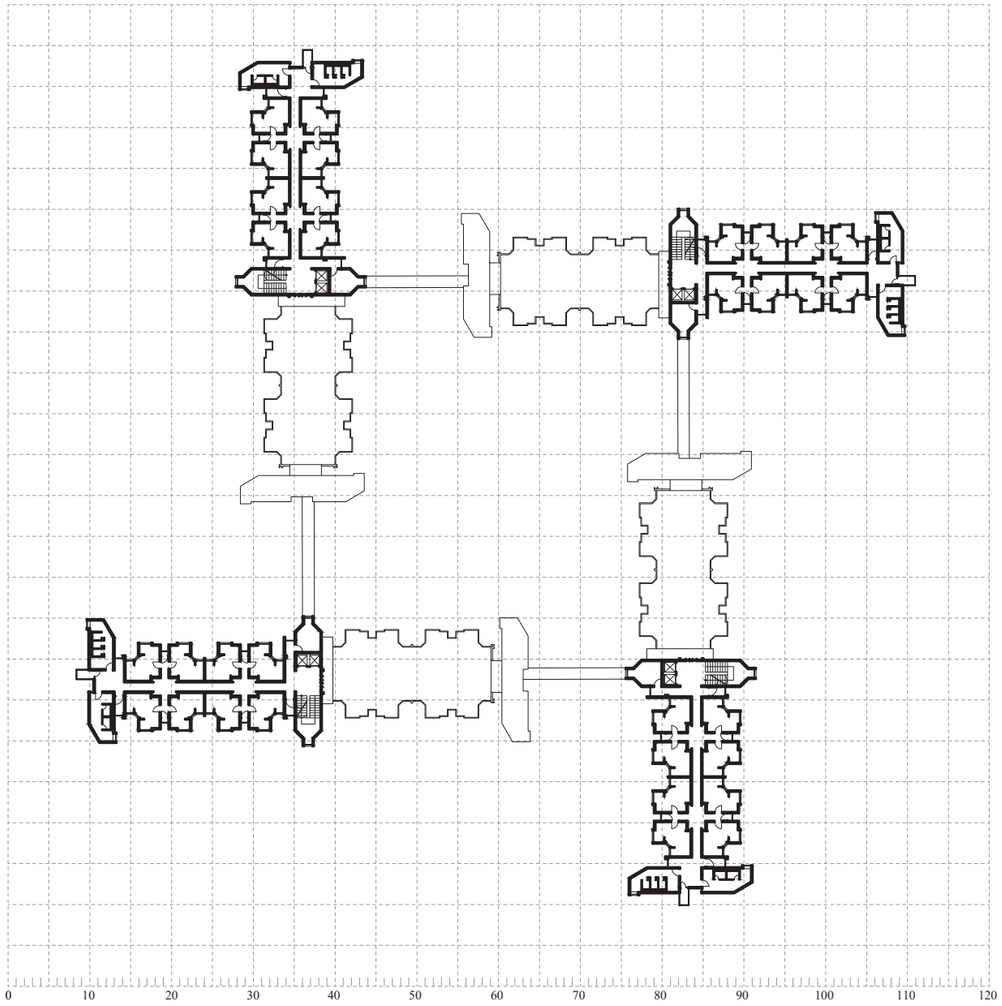


img. 03_Floor Plan
Student Dormitory “Goce Delchev”

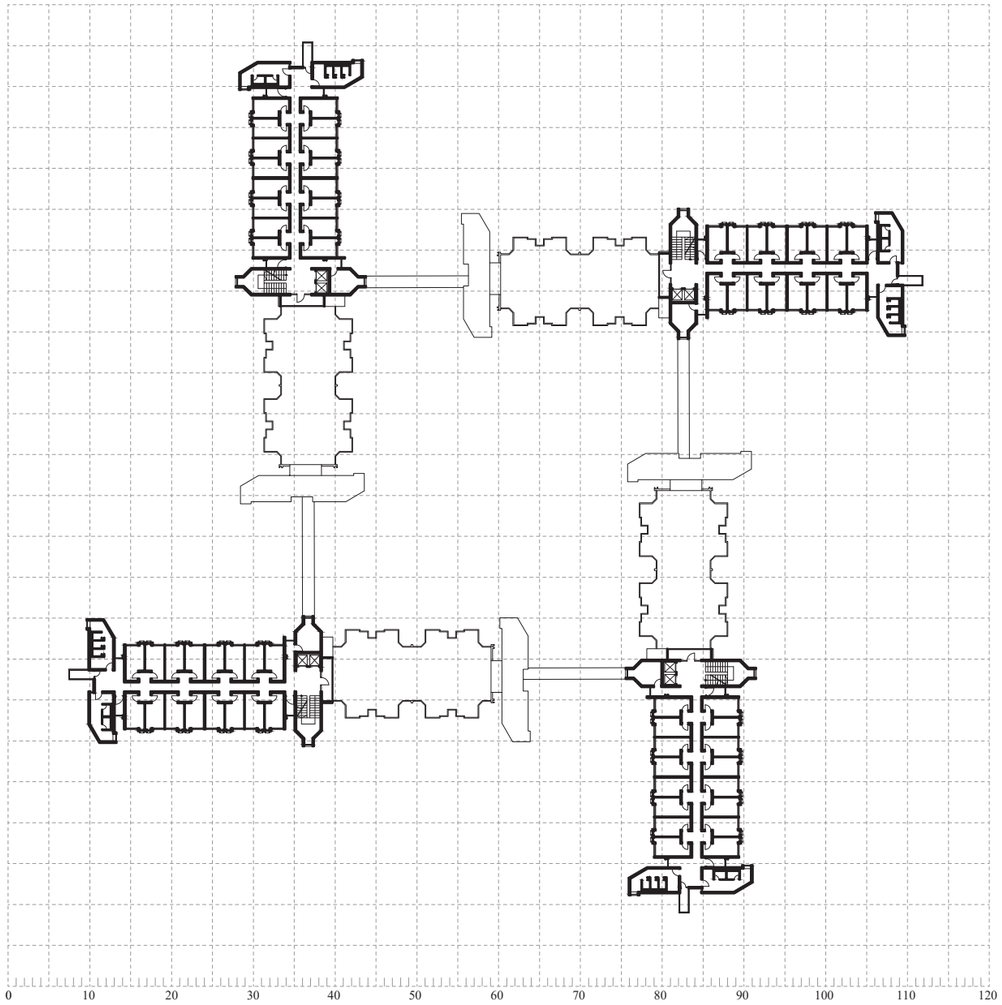


img. 04_Floor Plan
Student Dormitory “Goce Delchev”

Student Dormitory “Goce Delchev”
Georgi Konstantinovski

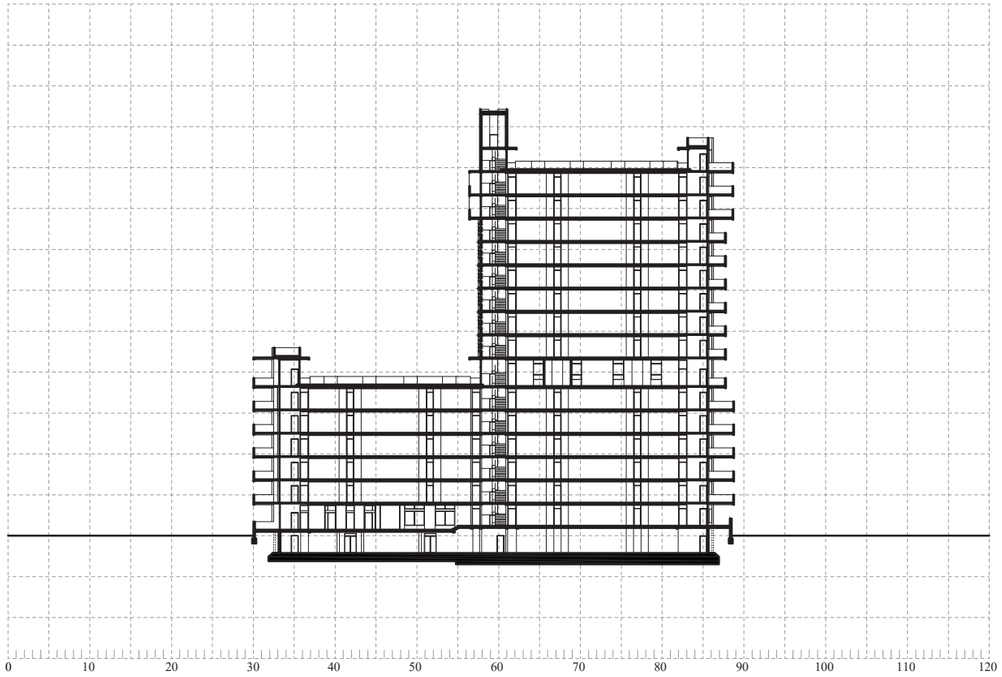


img. 05_Floor Plan
Student Dormitory “Goce Delchev”

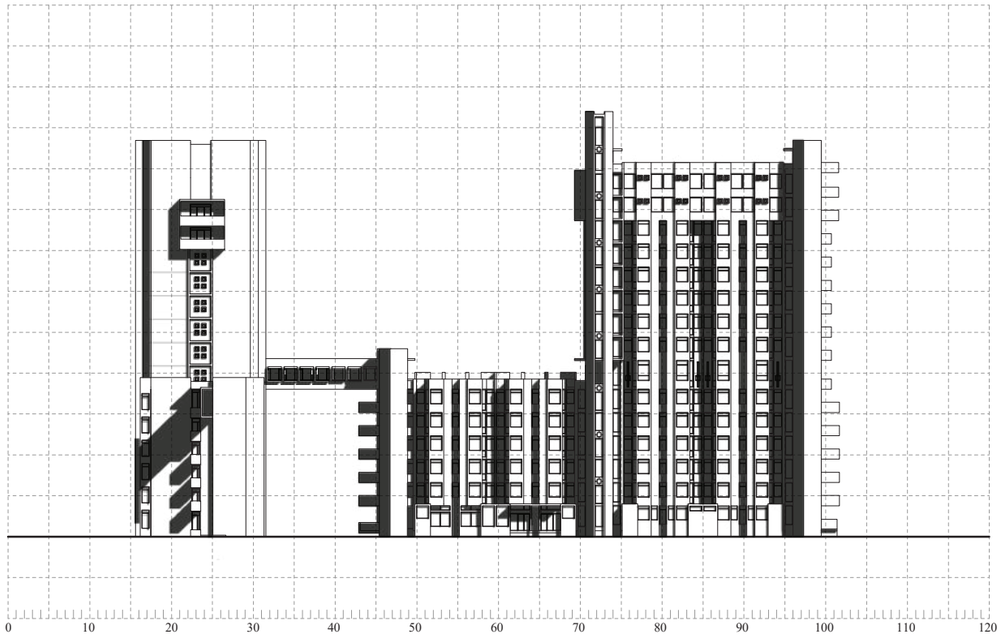


img. 06_Floor Plan
Student Dormitory “Goce Delchev”

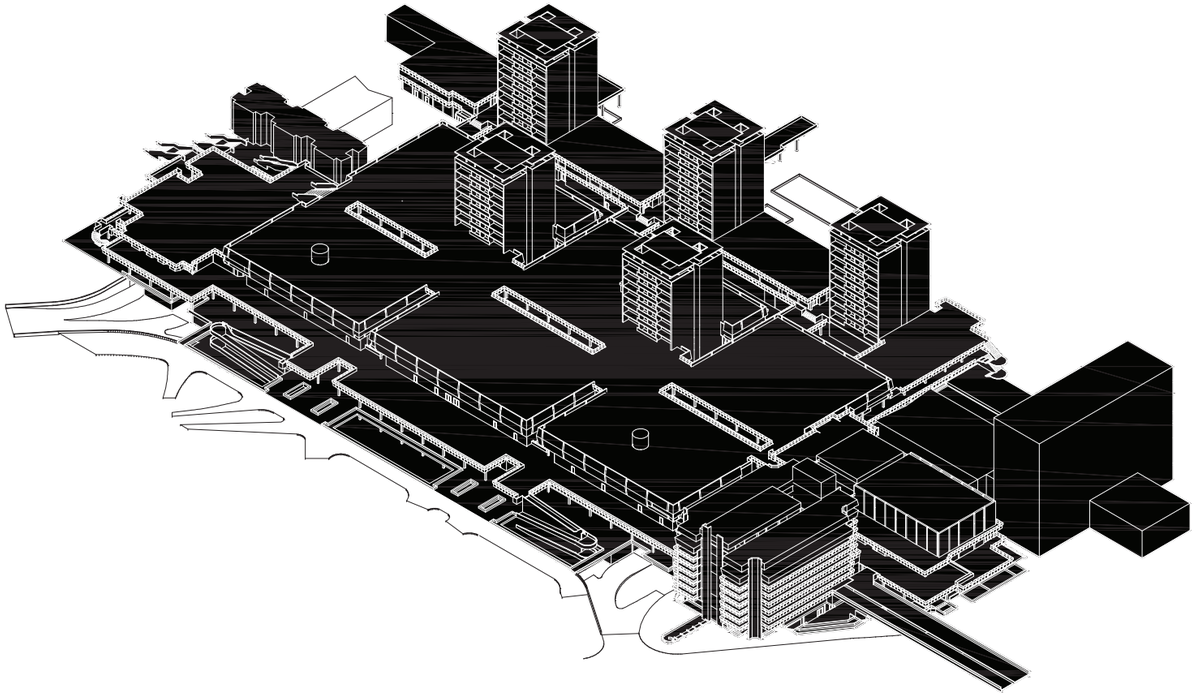
Student Dormitory “Goce Delchev”
Georgi Konstantinovski



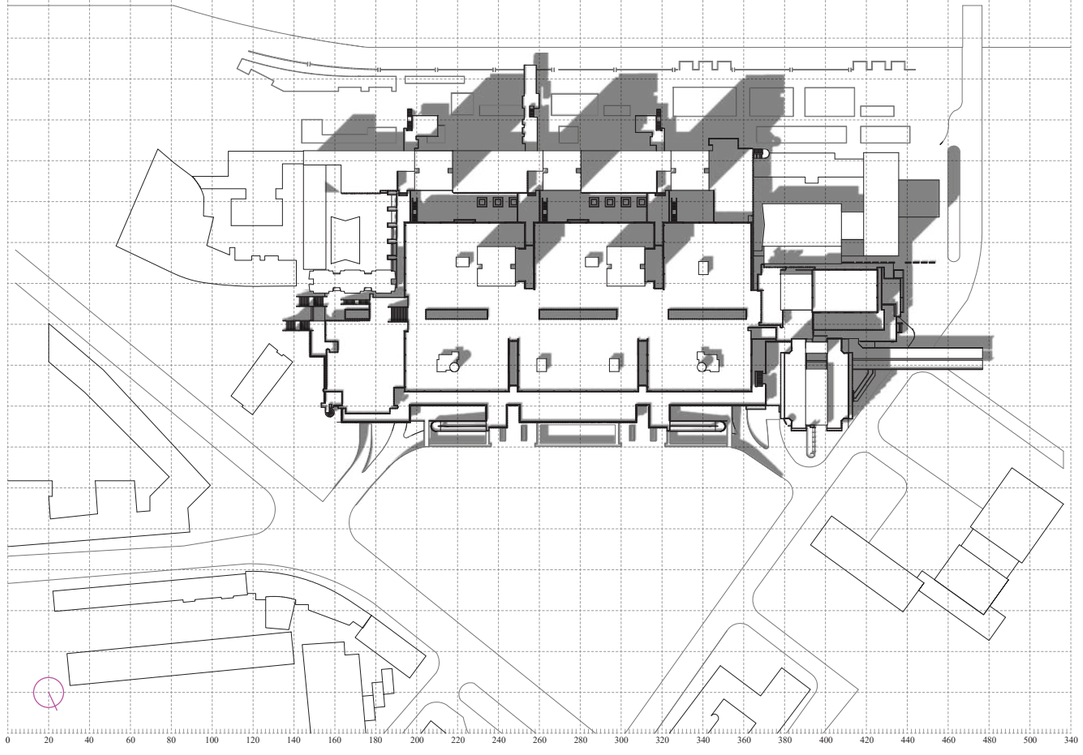
img. 07_Section
Student Dormitory “Goce Delchev”



img. 05_Elevation
Student Dormitory “Goce Delchev”

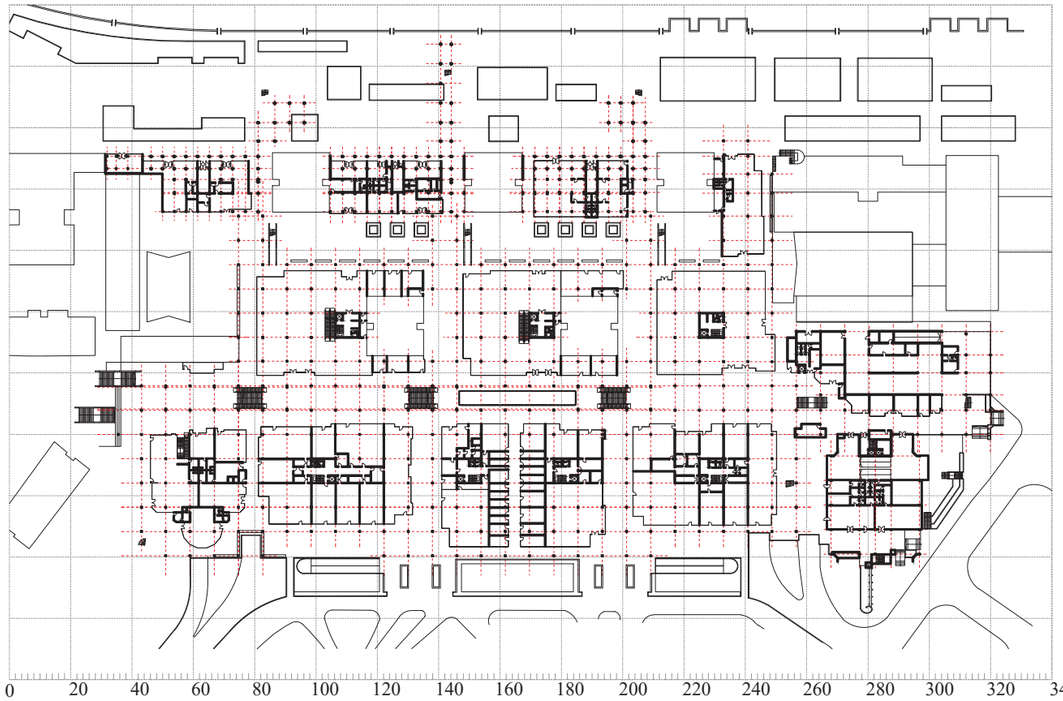


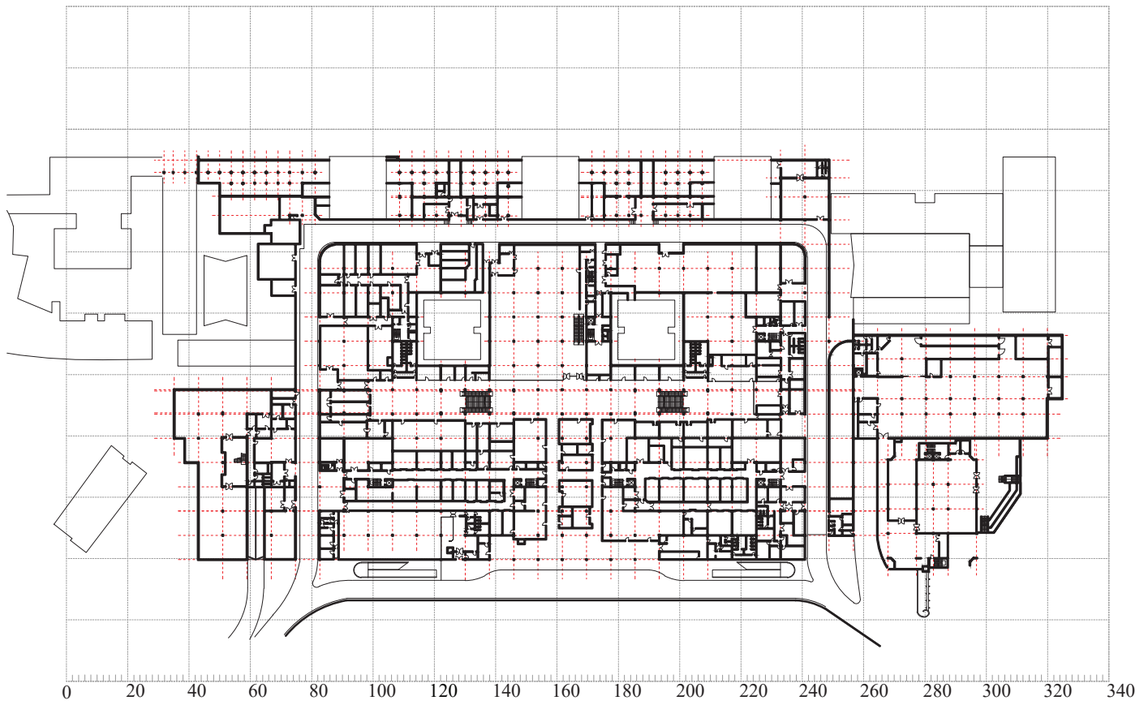
City Shopping Center
Zhivko Popovski



img. 01_Masterplan
City Shopping Center

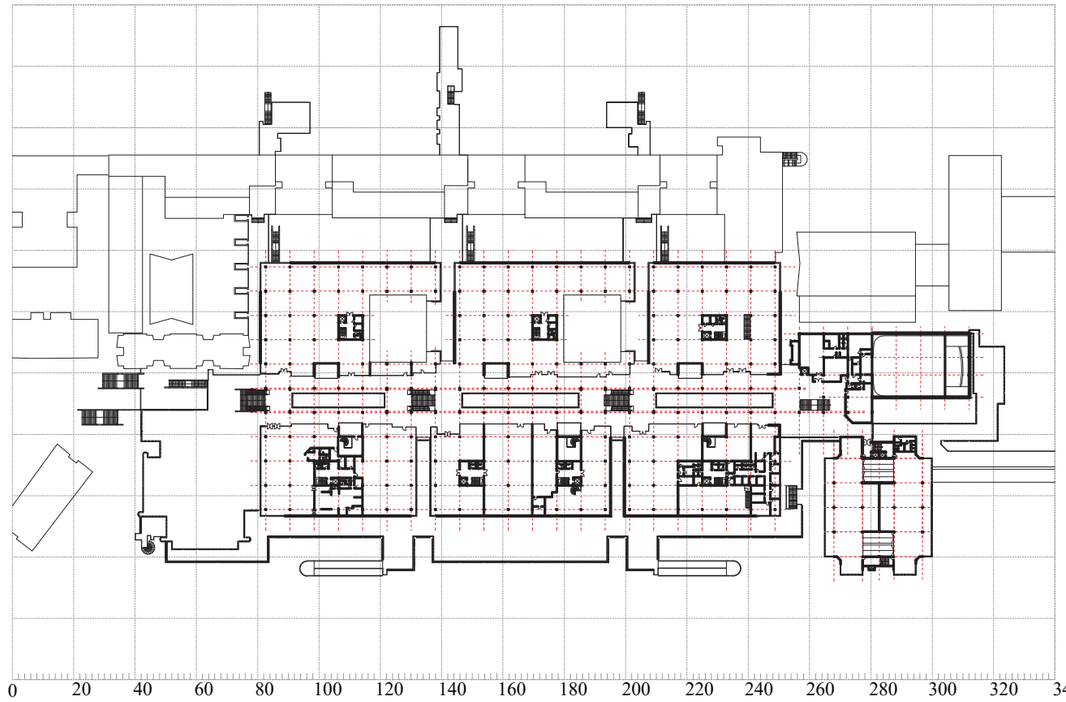
City Shopping Center
Zhivko Popovski

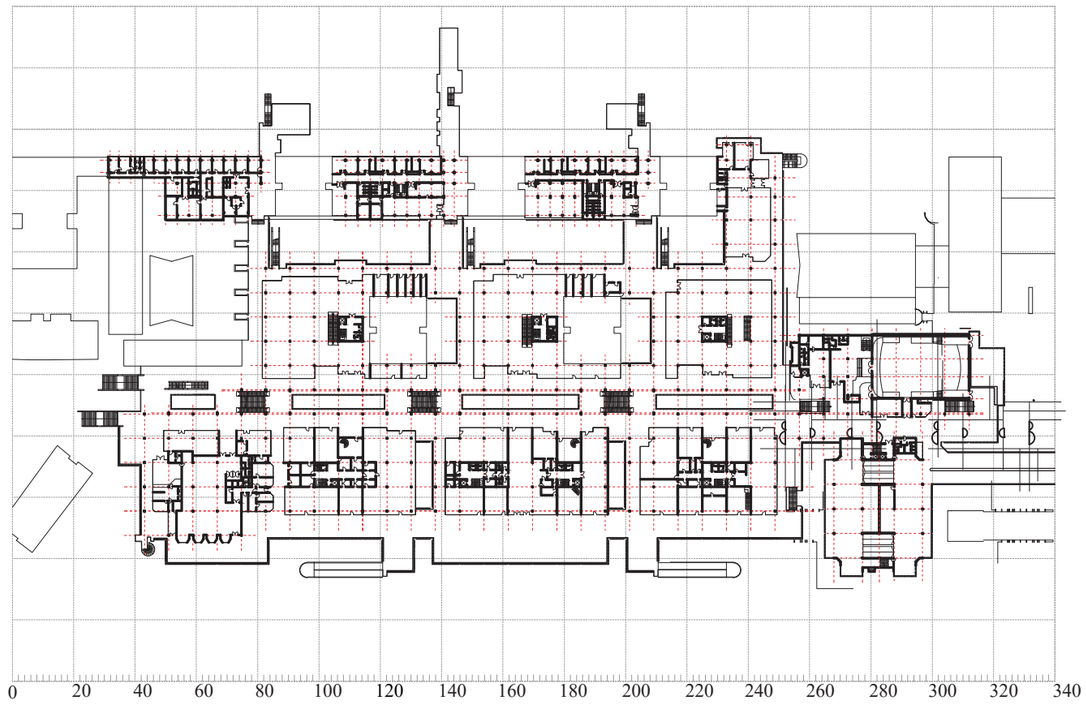




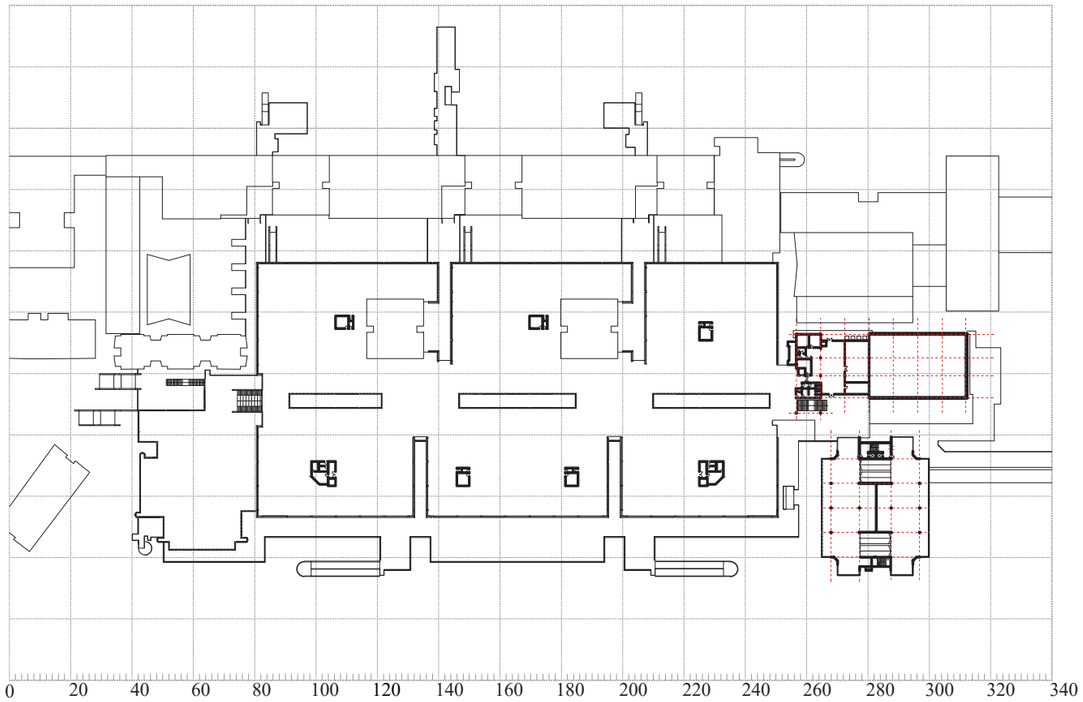
img. 02_Floor Plan
City Shopping Center

City Shopping Center
Zhivko Popovski



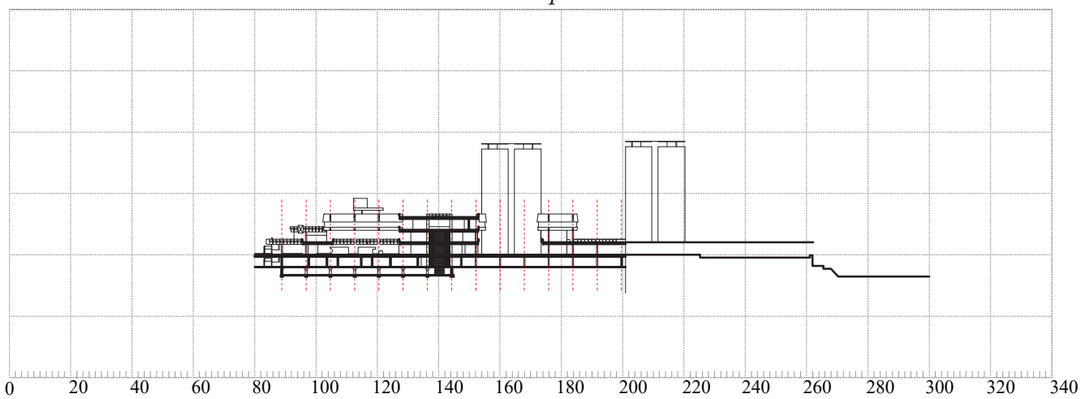


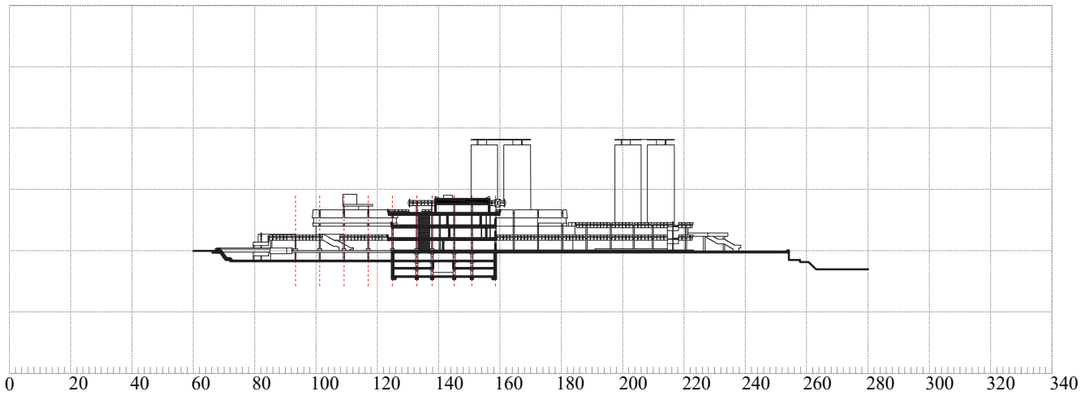
img. 03_Floor Plan
City Shopping Center

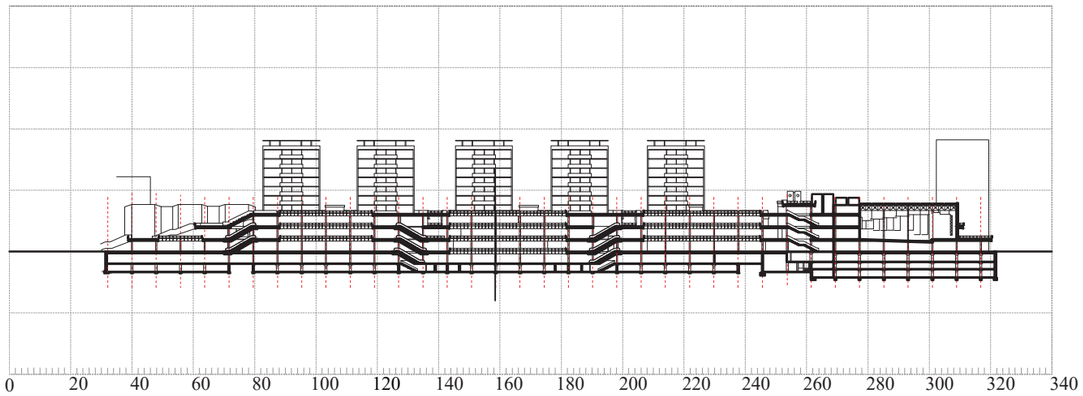


img. 04_Floor Plan
City Shopping Center

City Shopping Center
Zhivko Popovski

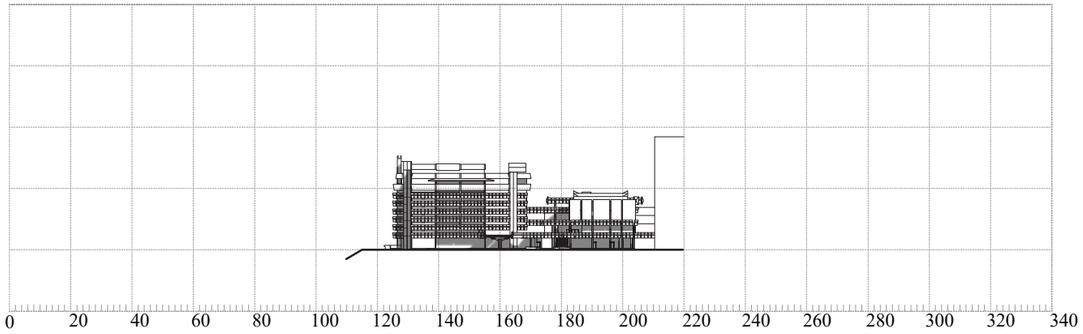


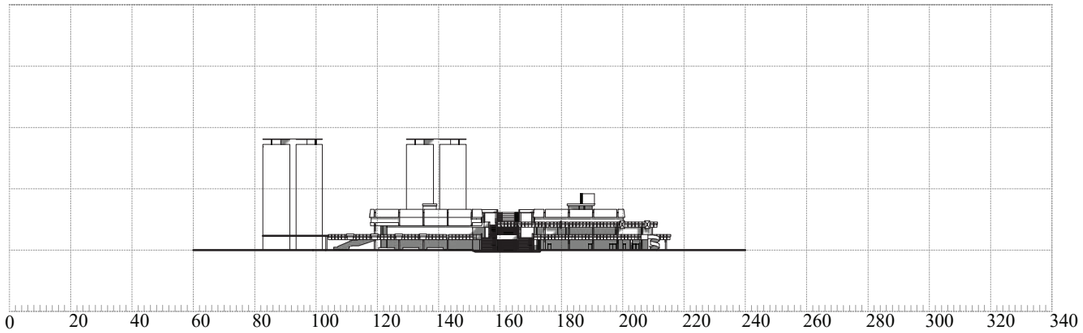


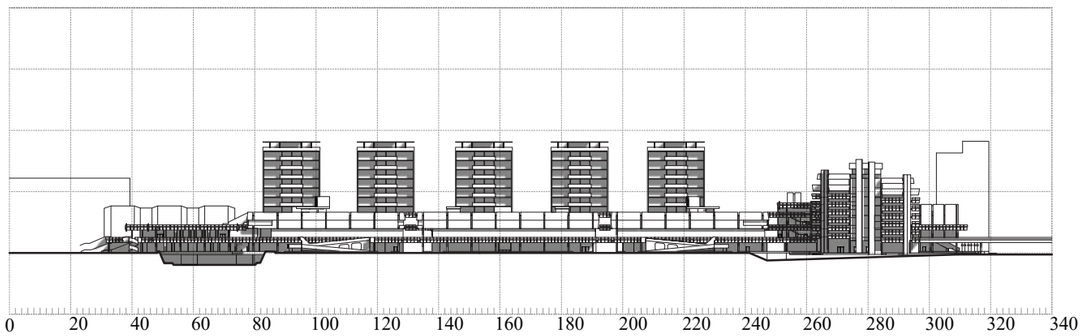


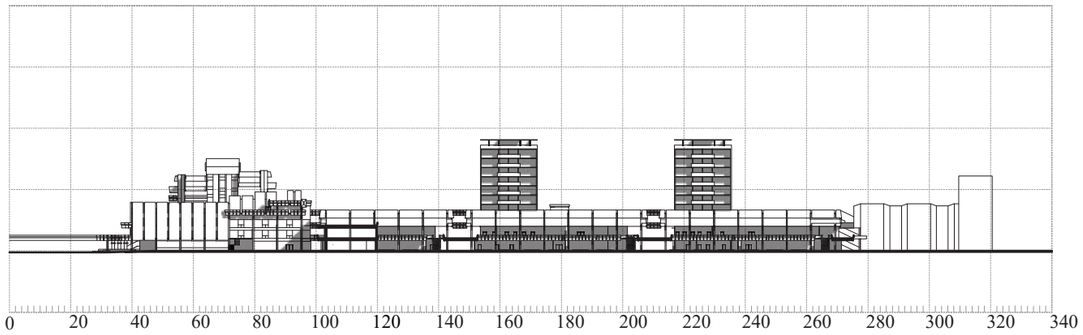
img. 05_Section
City Shopping Center

City Shopping Center
Zhivko Popovski



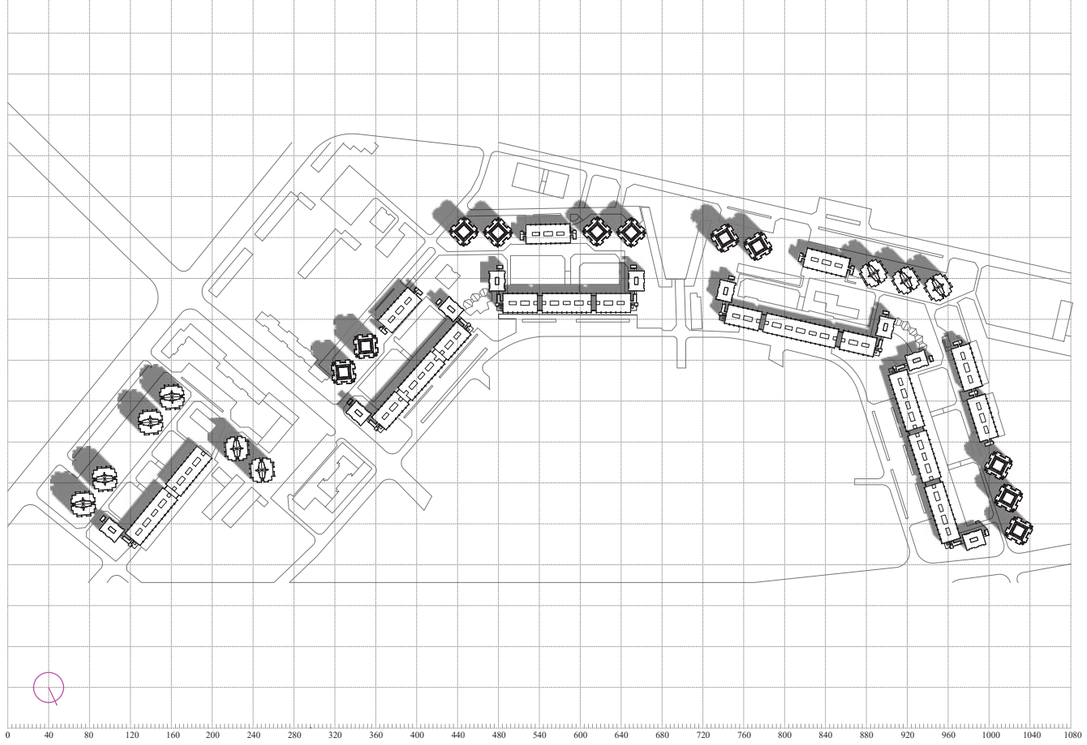






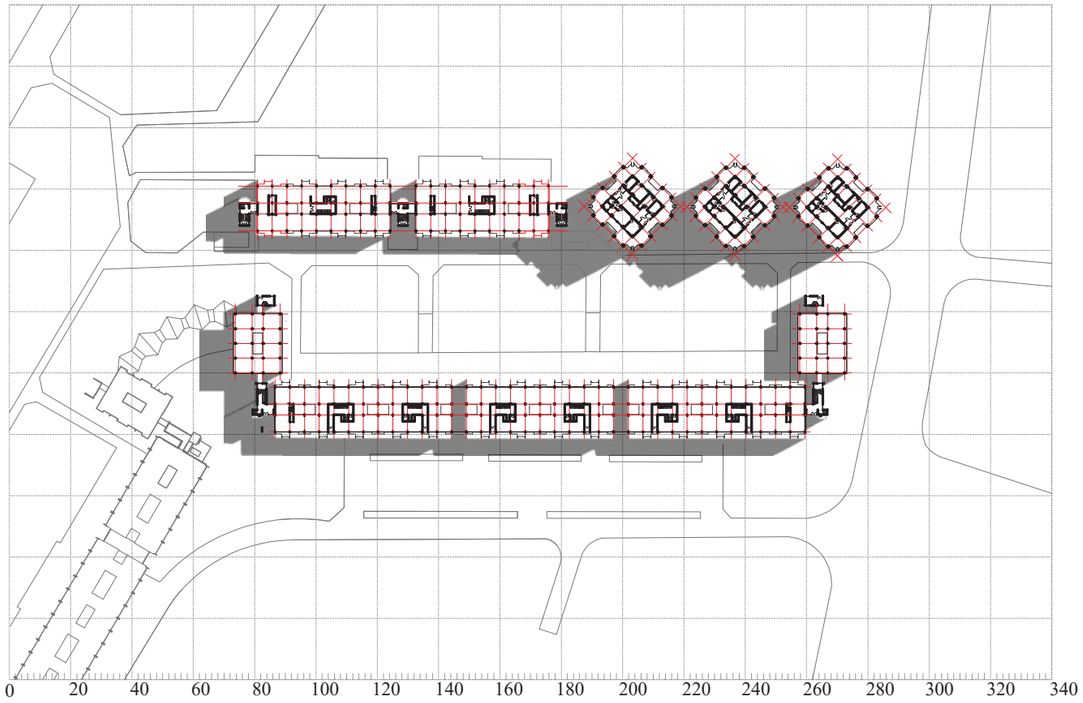
img. 06_Elevation
City Shopping Center

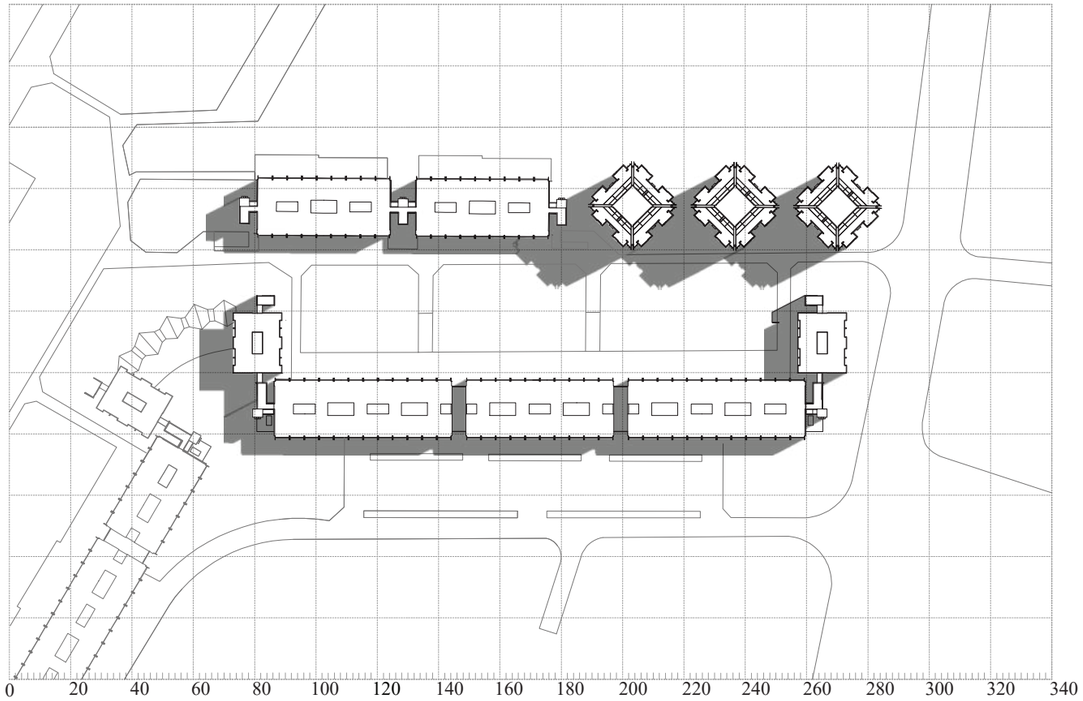
City Wall
Kenzo Tange



img. 01_Masterplan
City Wall

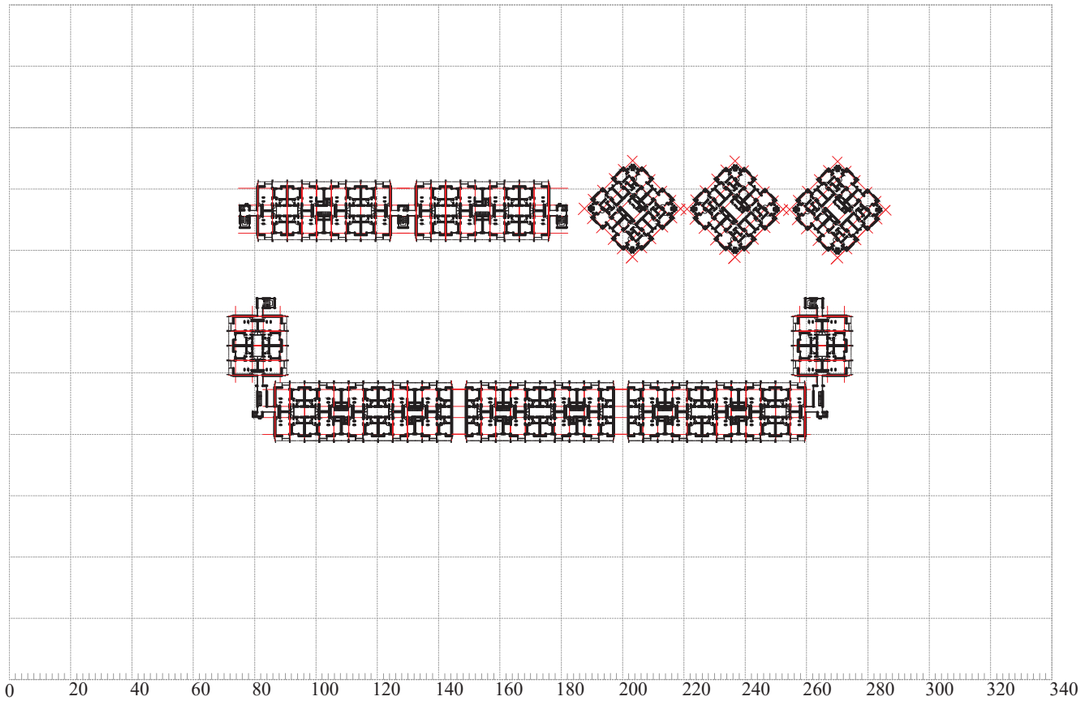
City Wall
Kenzo Tange

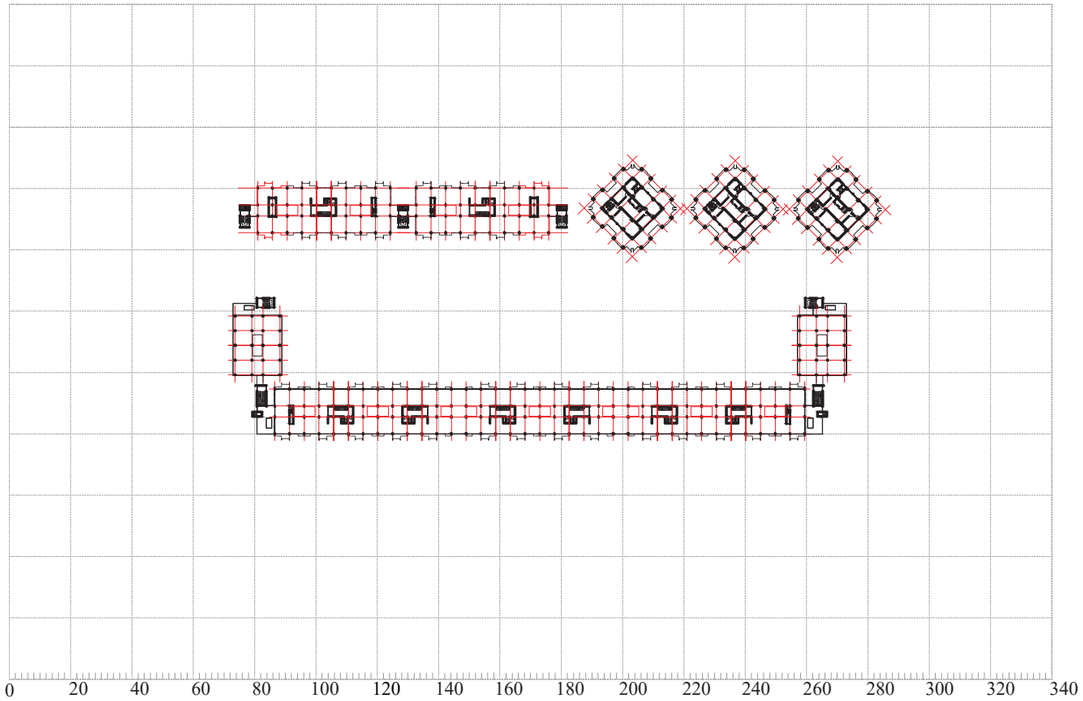




img. 02_Floor Plan
City Wall

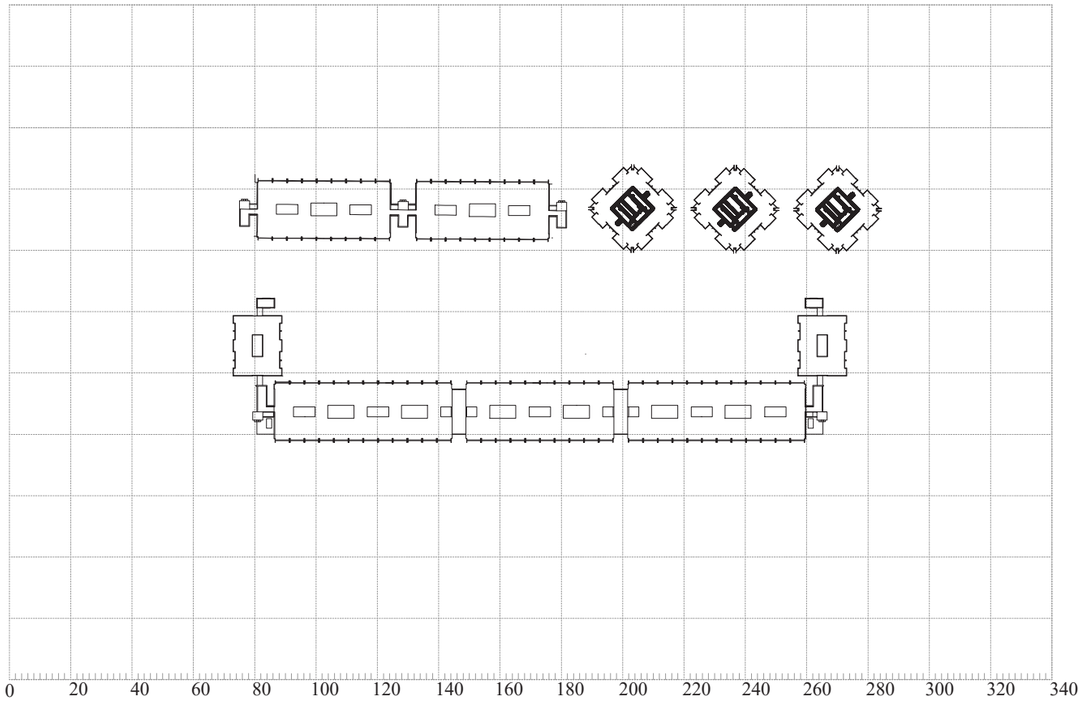
City Wall
Kenzo Tange

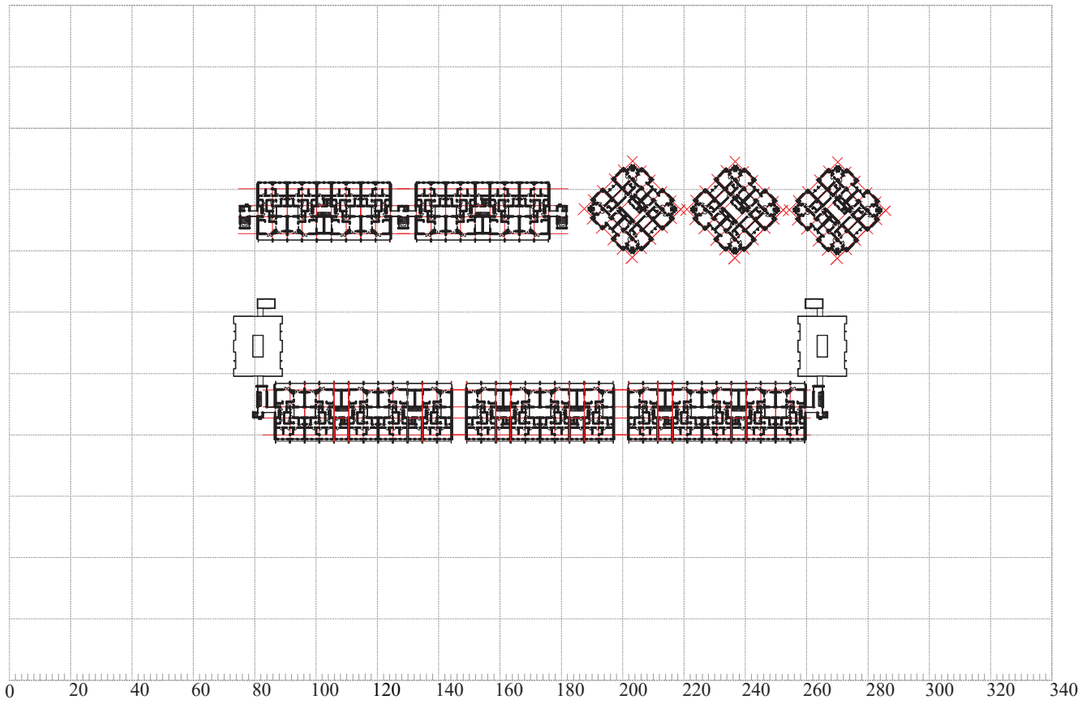




img. 03_Floor Plan
City Wall

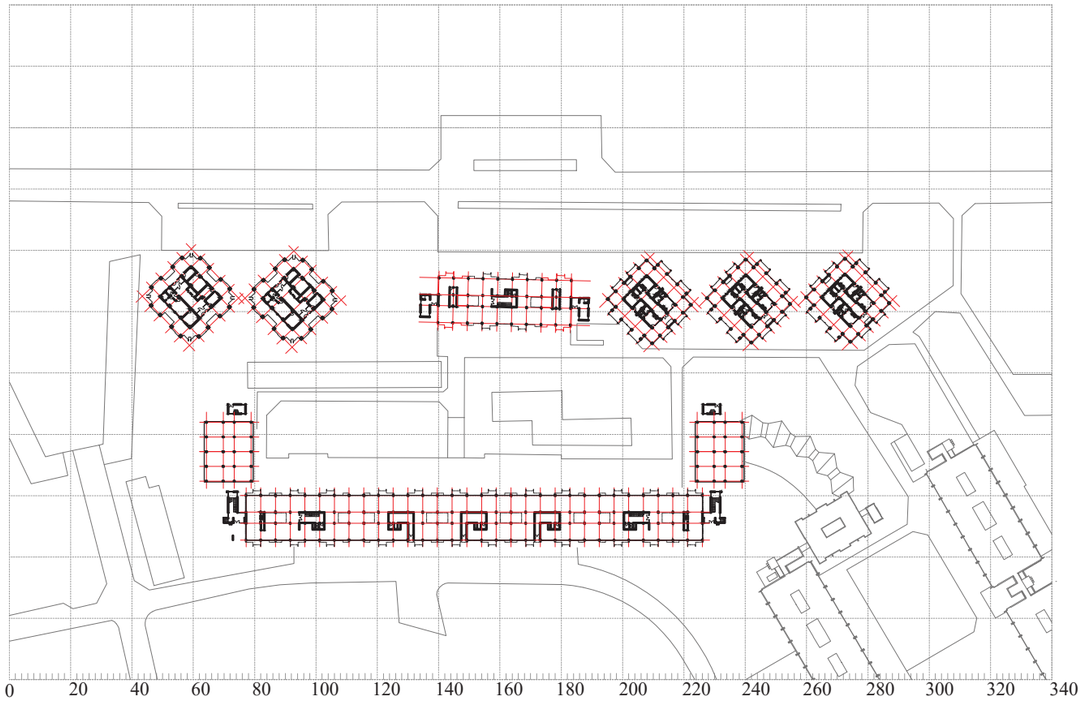
City Wall
Kenzo Tange

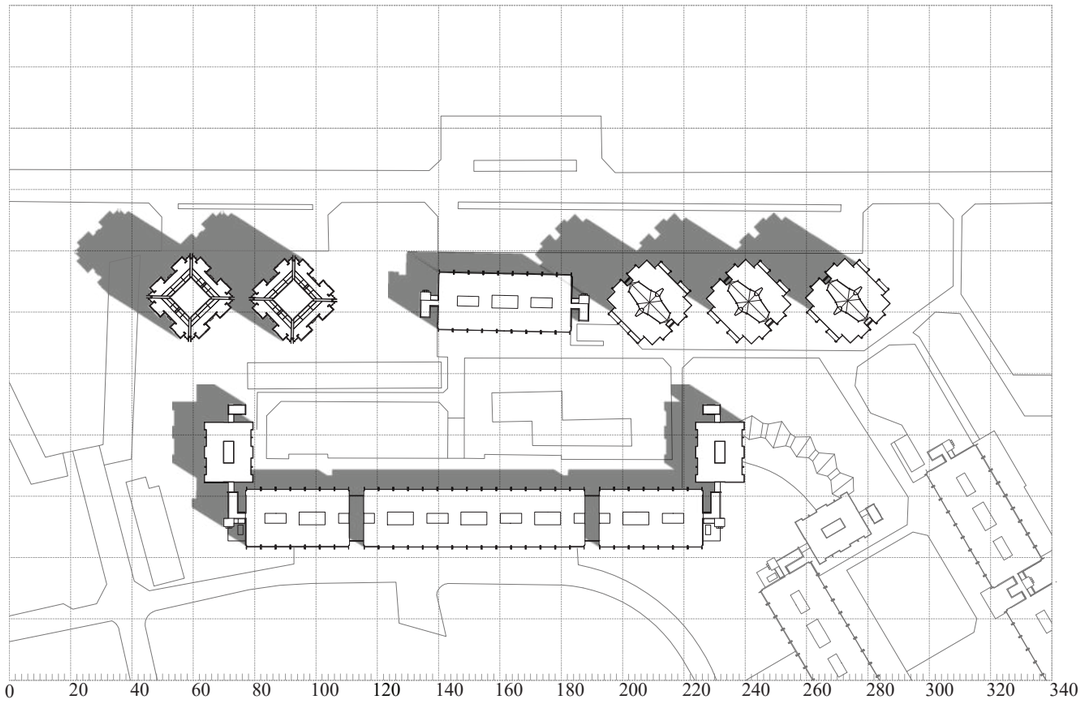




img. 04_Floor Plan
City Wall

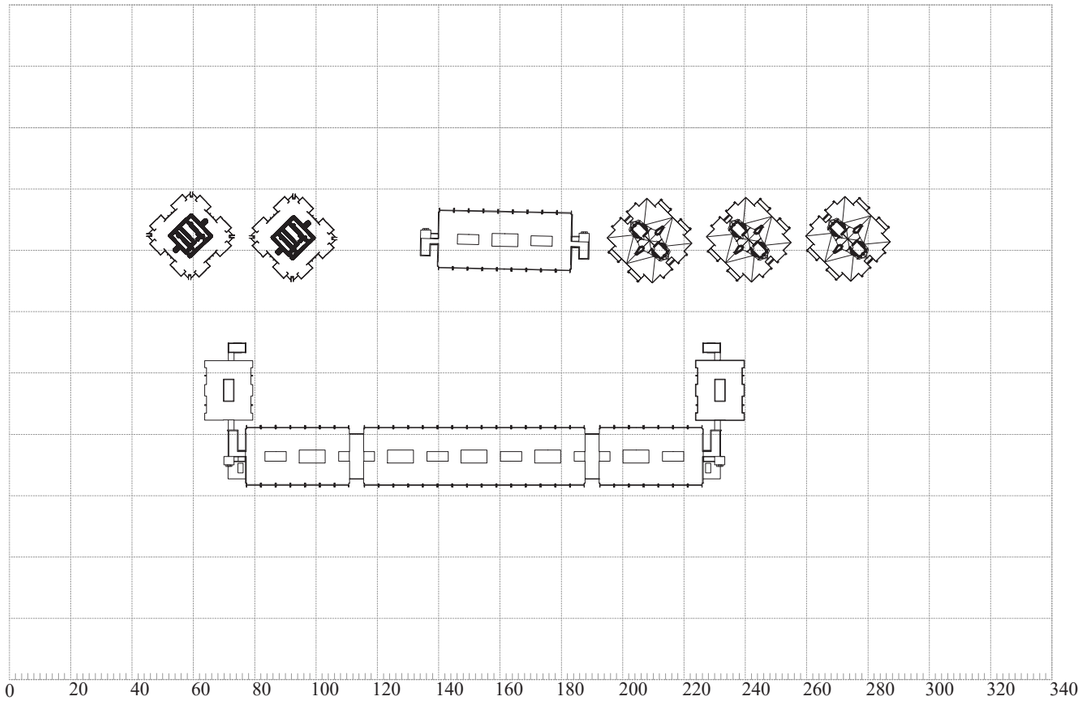
City Wall
Kenzo Tange

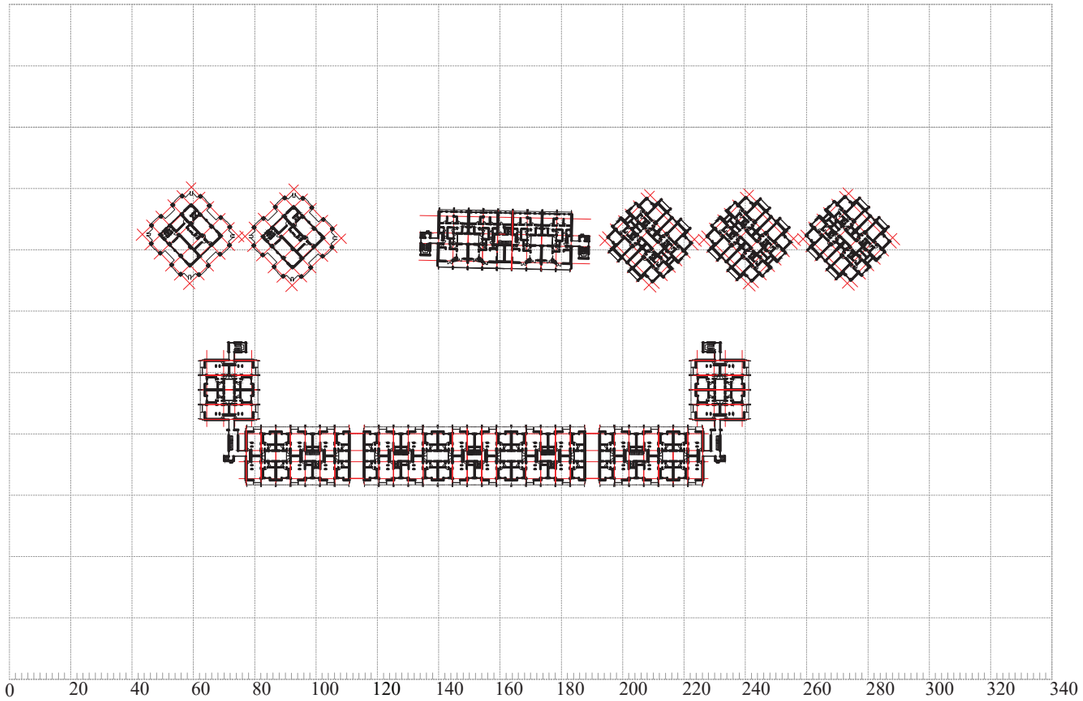




img. 05_Floor Plan
City Wall

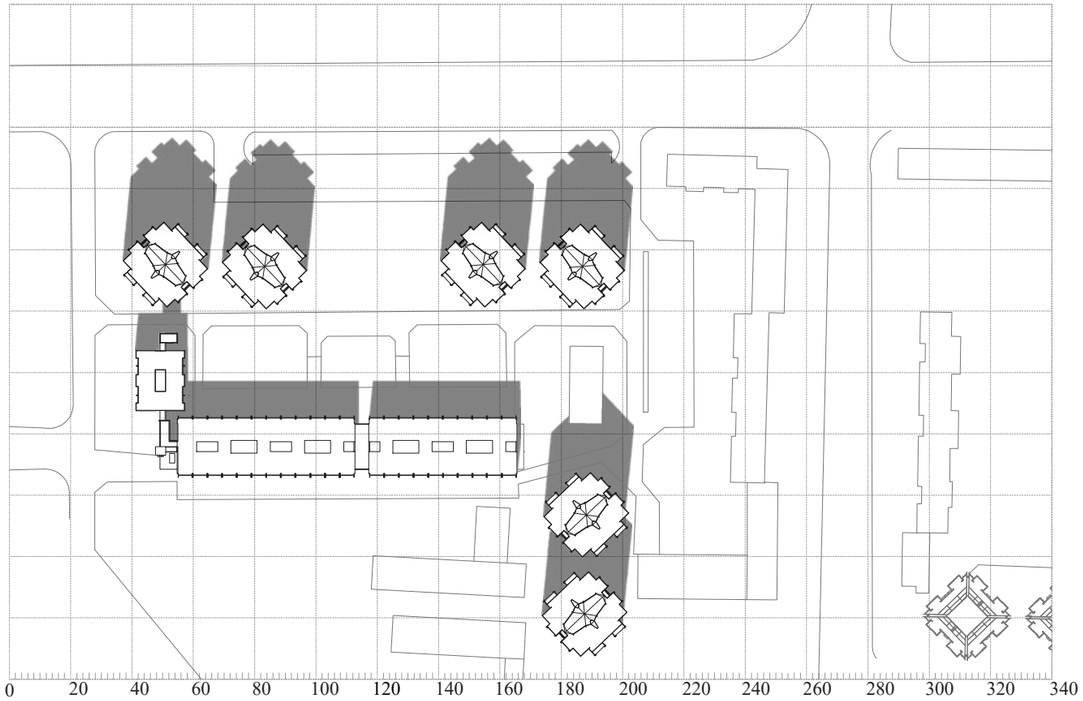
City Wall
Kenzo Tange





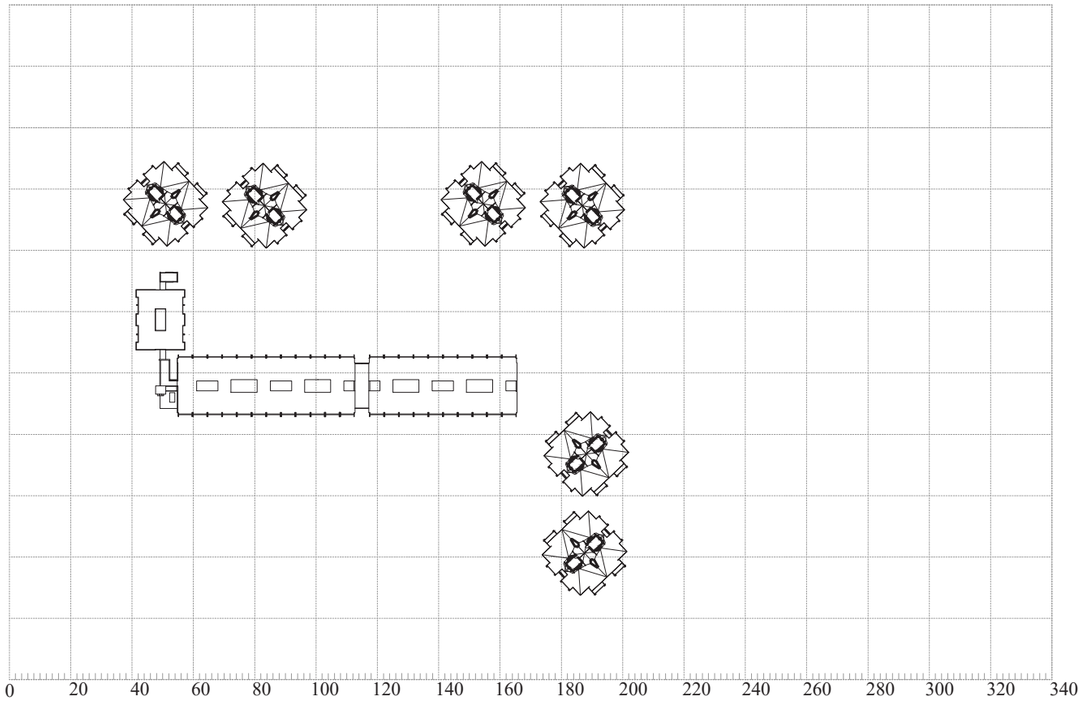
img. 06_Floor Plan
City Wall

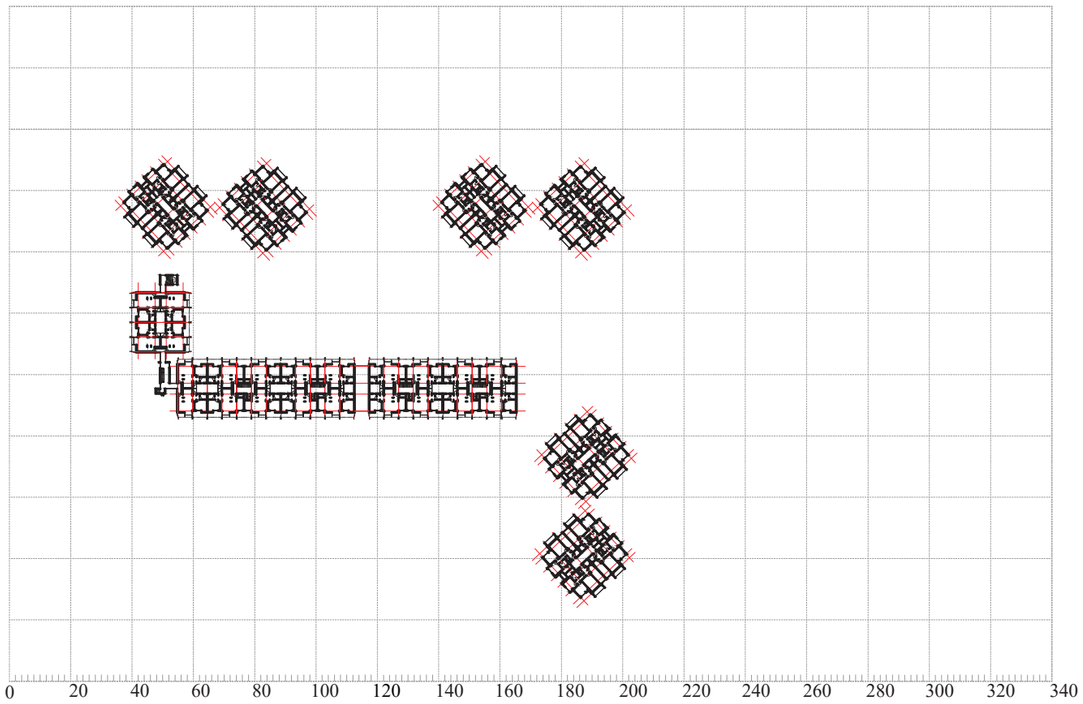
City Wall
Kenzo Tange



img. 07_Floor Plan
City Wall

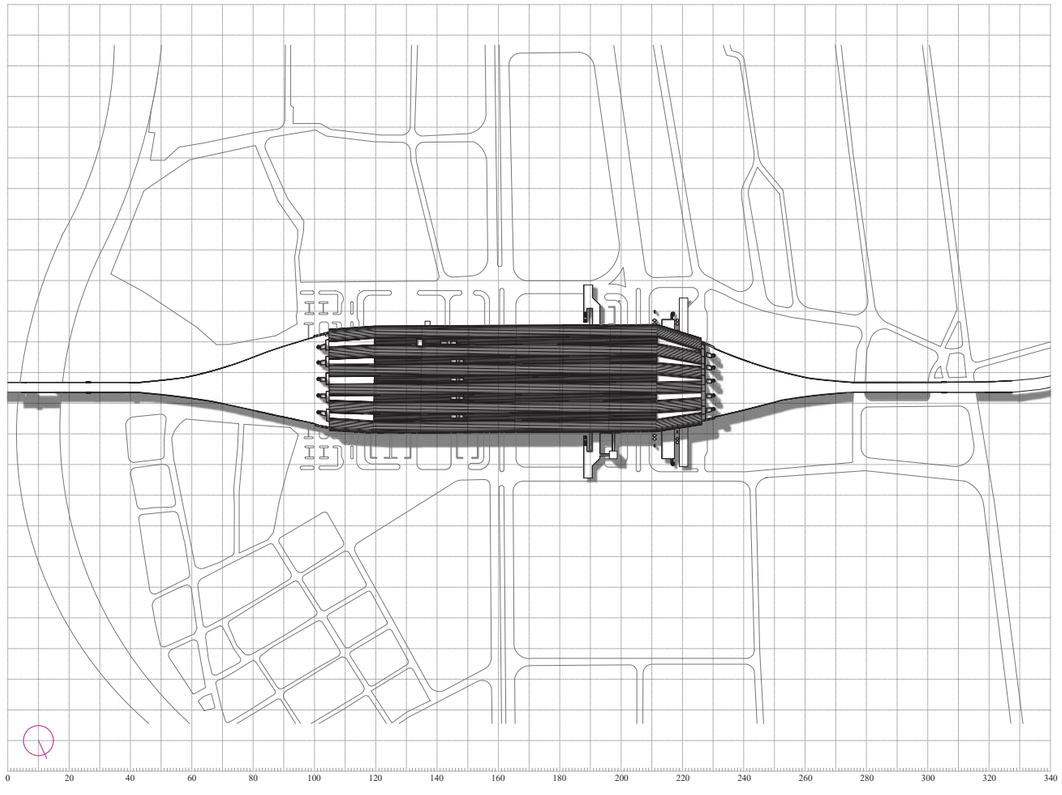
City Wall
Kenzo Tange





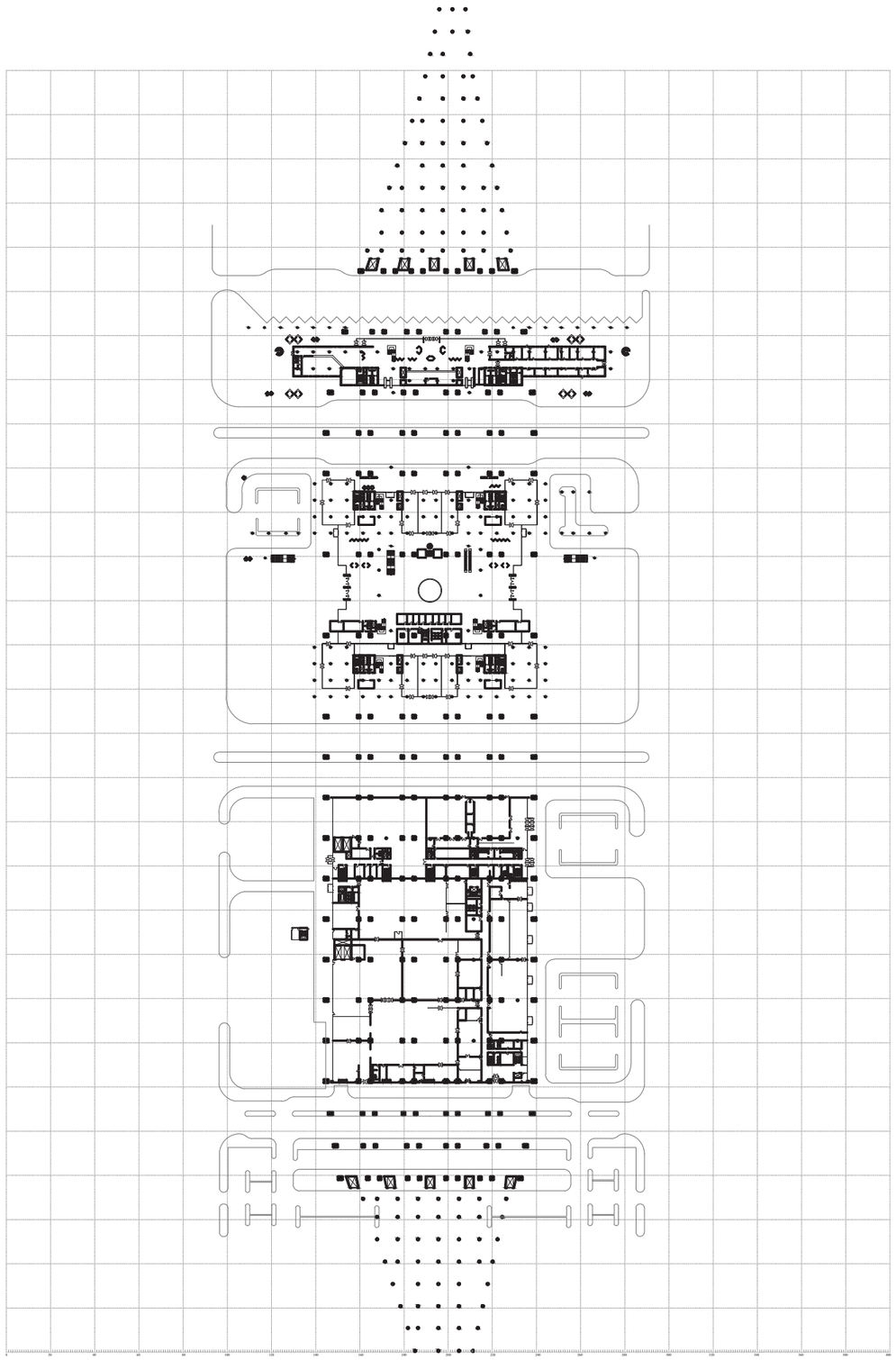
img. 08_Floor Plan
City Wall

Transportation Center
Kenzo Tange



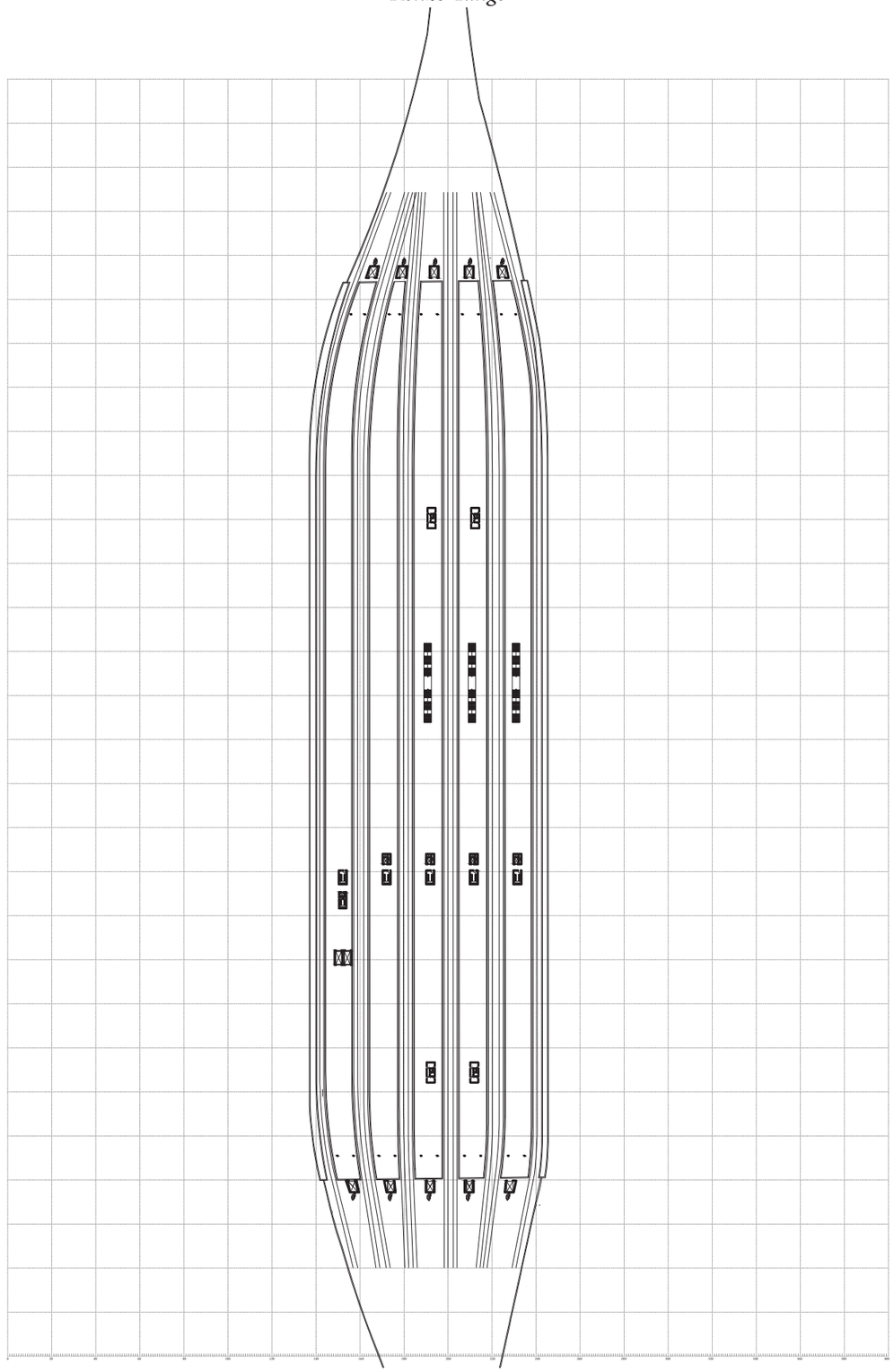
img. 01_Masterplan
Transportation Center

Transportation Center
Kenzo Tange



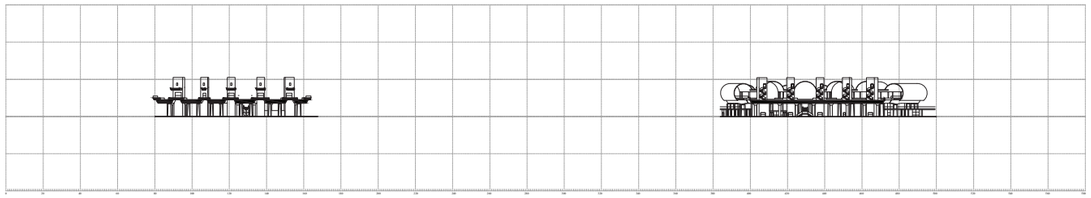
img. 02_Floor Plan
Transportation Center

Transportation Center
Kenzo Tange

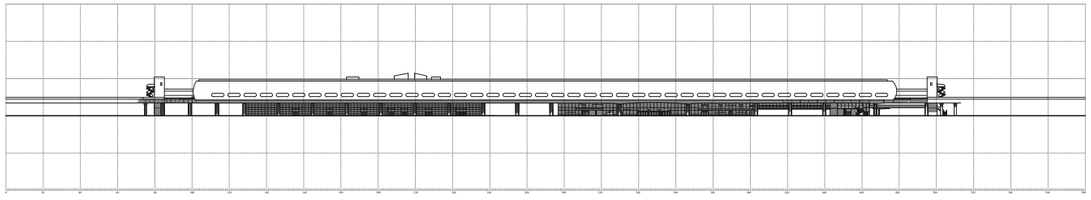


img. 03_Floor Plan
Transportation Center

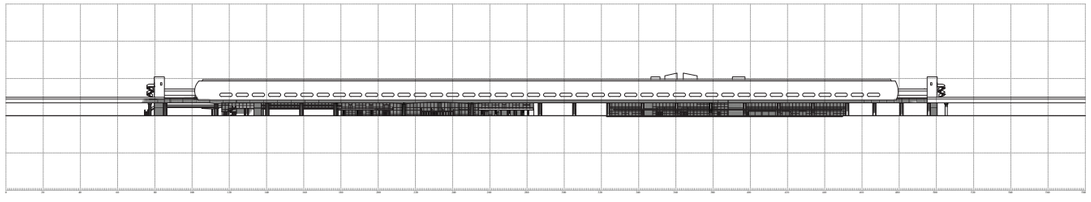
Transportation Center
Kenzo Tange



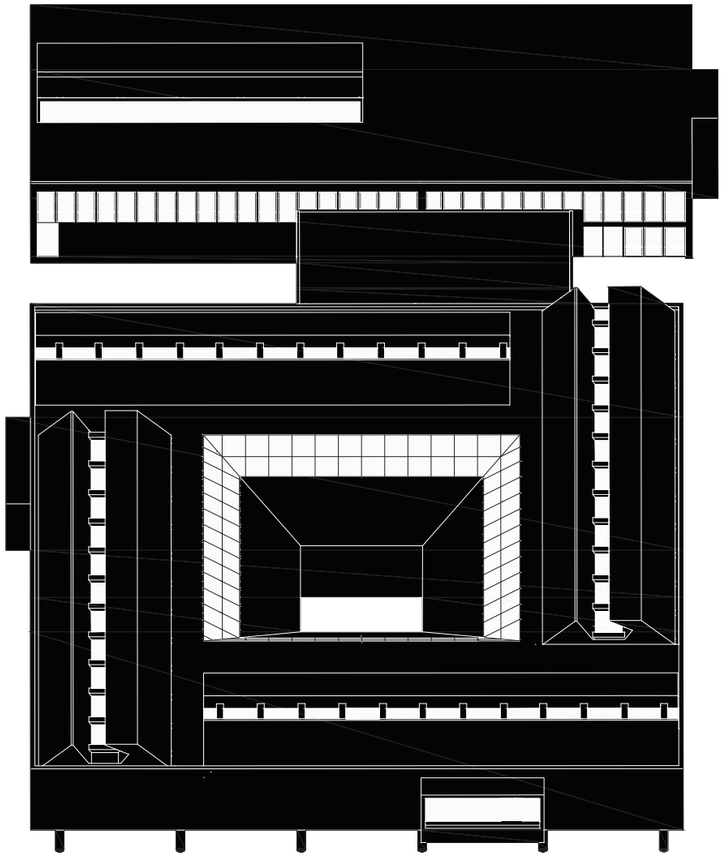
img. 04_Section
Transportation Center



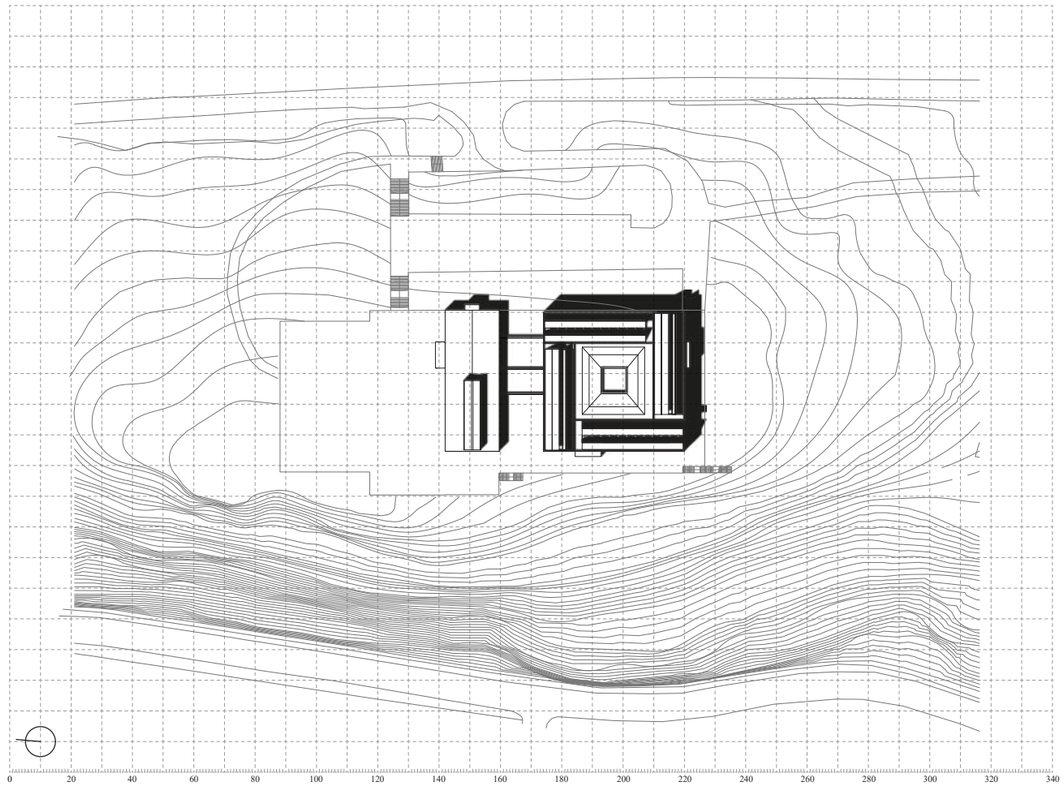
img. 05_Elevation
Transportation Center



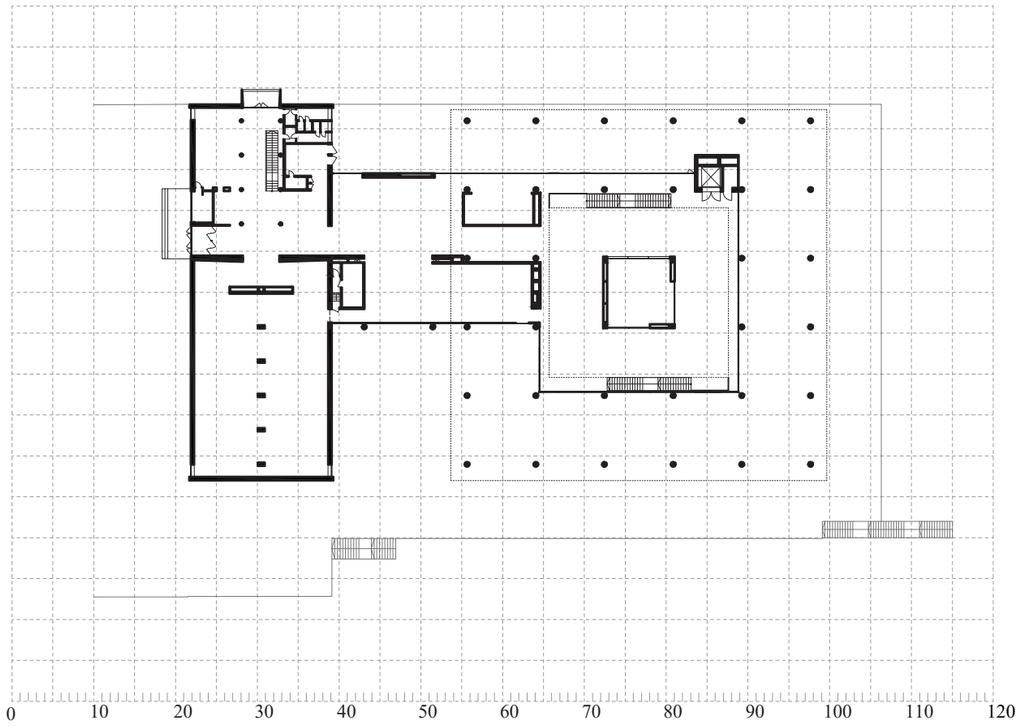
img. 06_Elevation
Transportation Center



Museum of Contemporary Art
Group Tigers



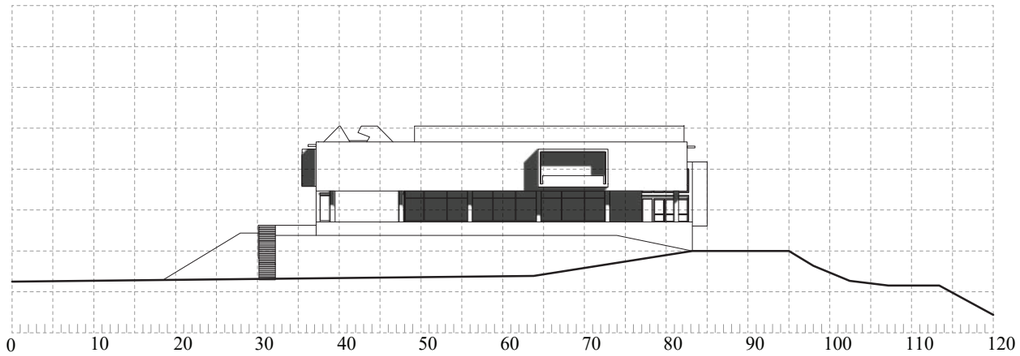
img. 01_Masterplan
Museum of Contemporary Art

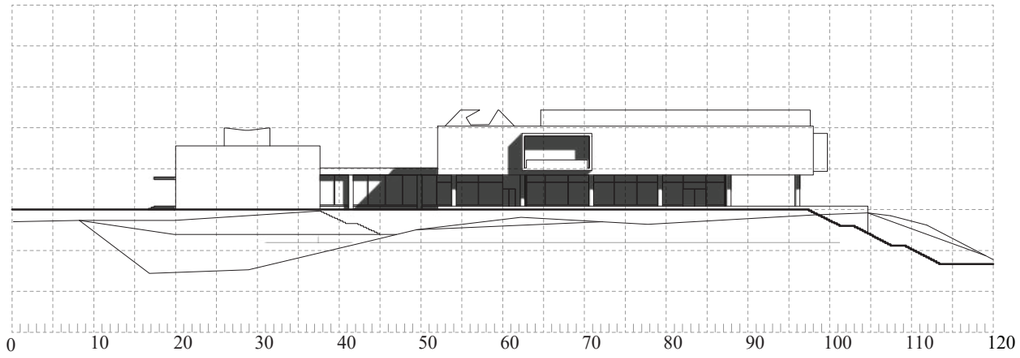


img. 02_Floor Plan
Museum of Contemporary Art

Museum of Contemporary Art
Group Tigers

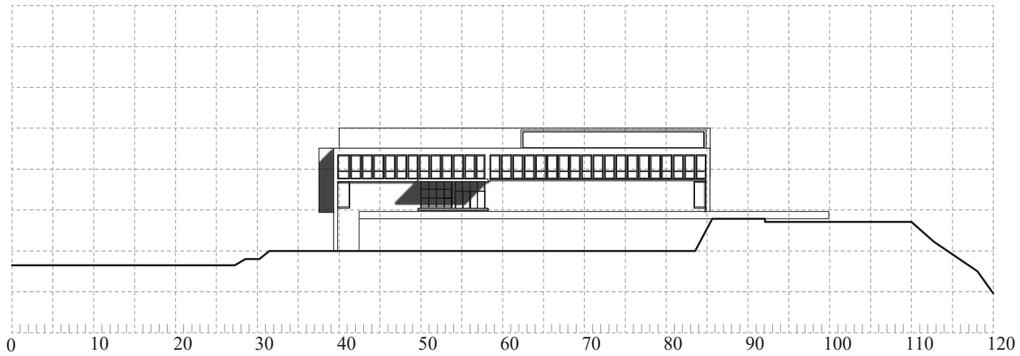
img. 03_Section
Museum of Contemporary Art

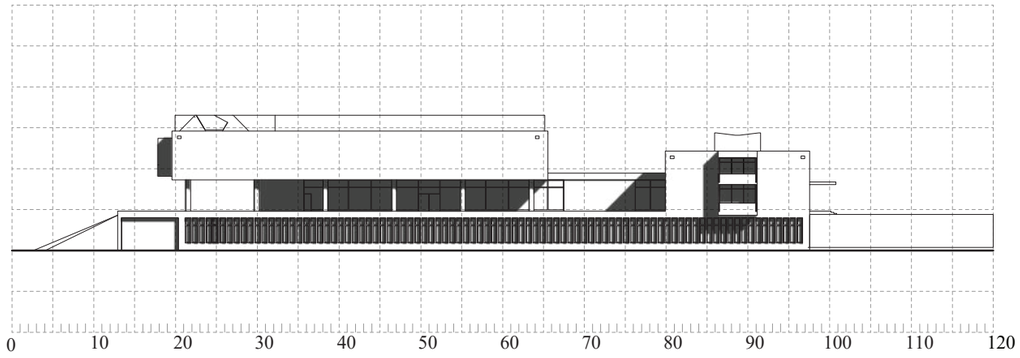




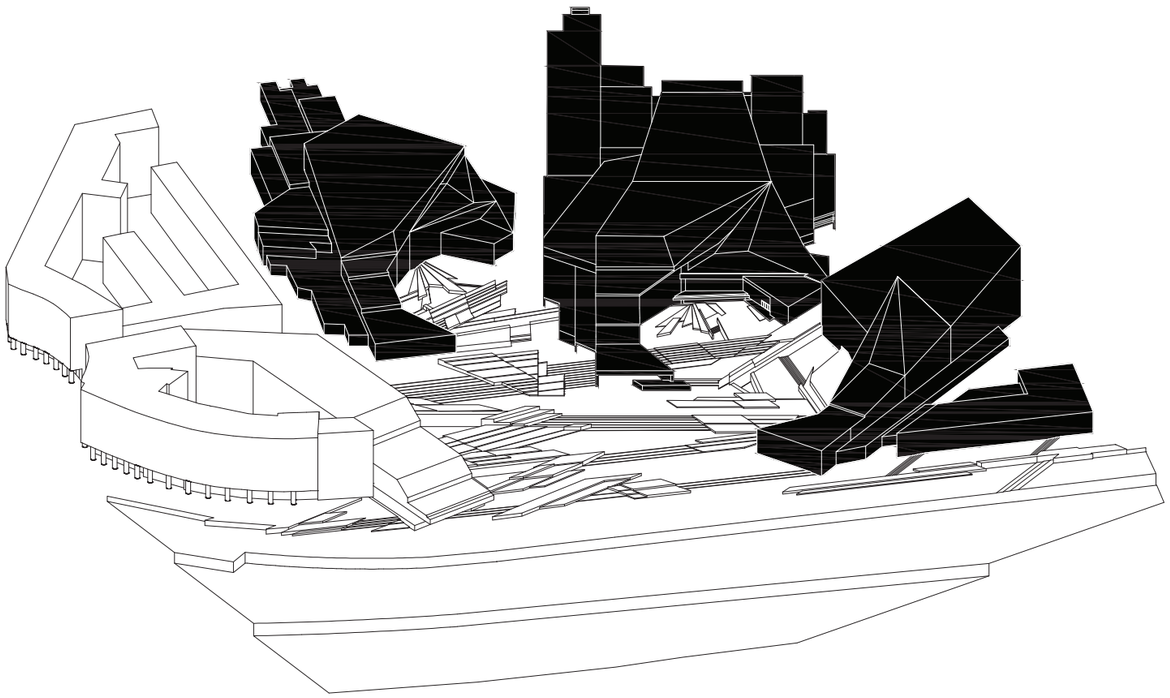
img. 04_Elevation
Museum of Contemporary Art

Museum of Contemporary Art
Group Tigers

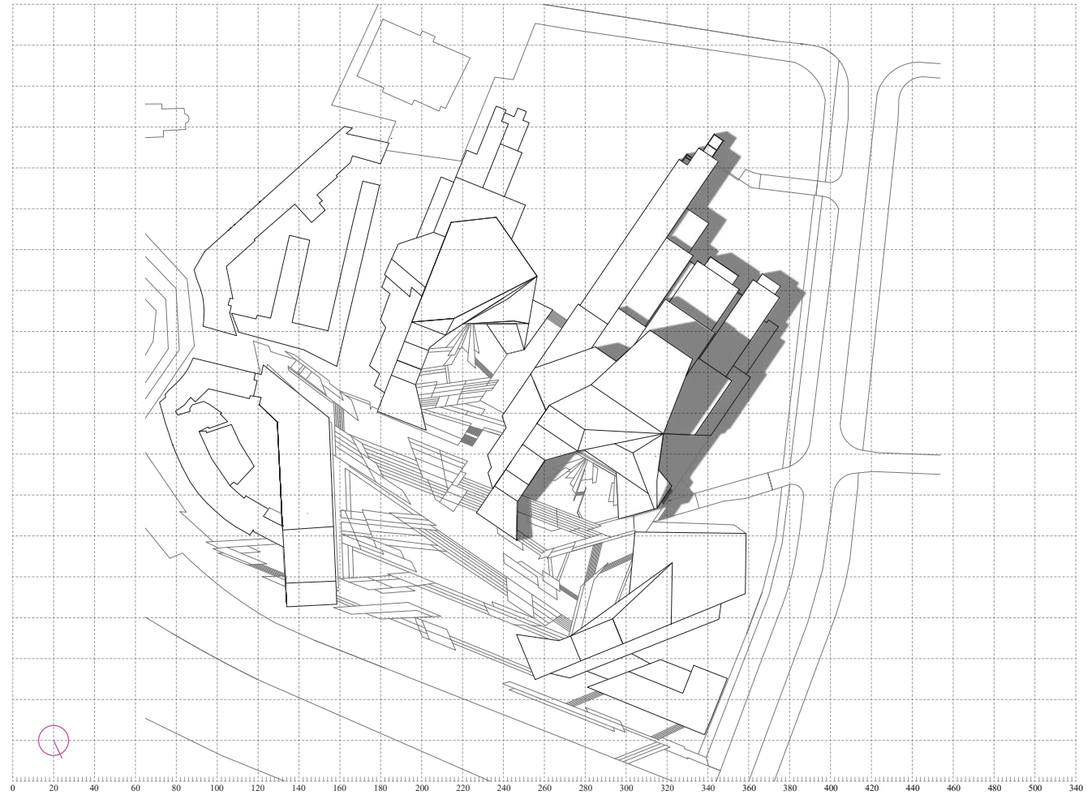




img. 04_Elevation
Museum of Contemporary Art

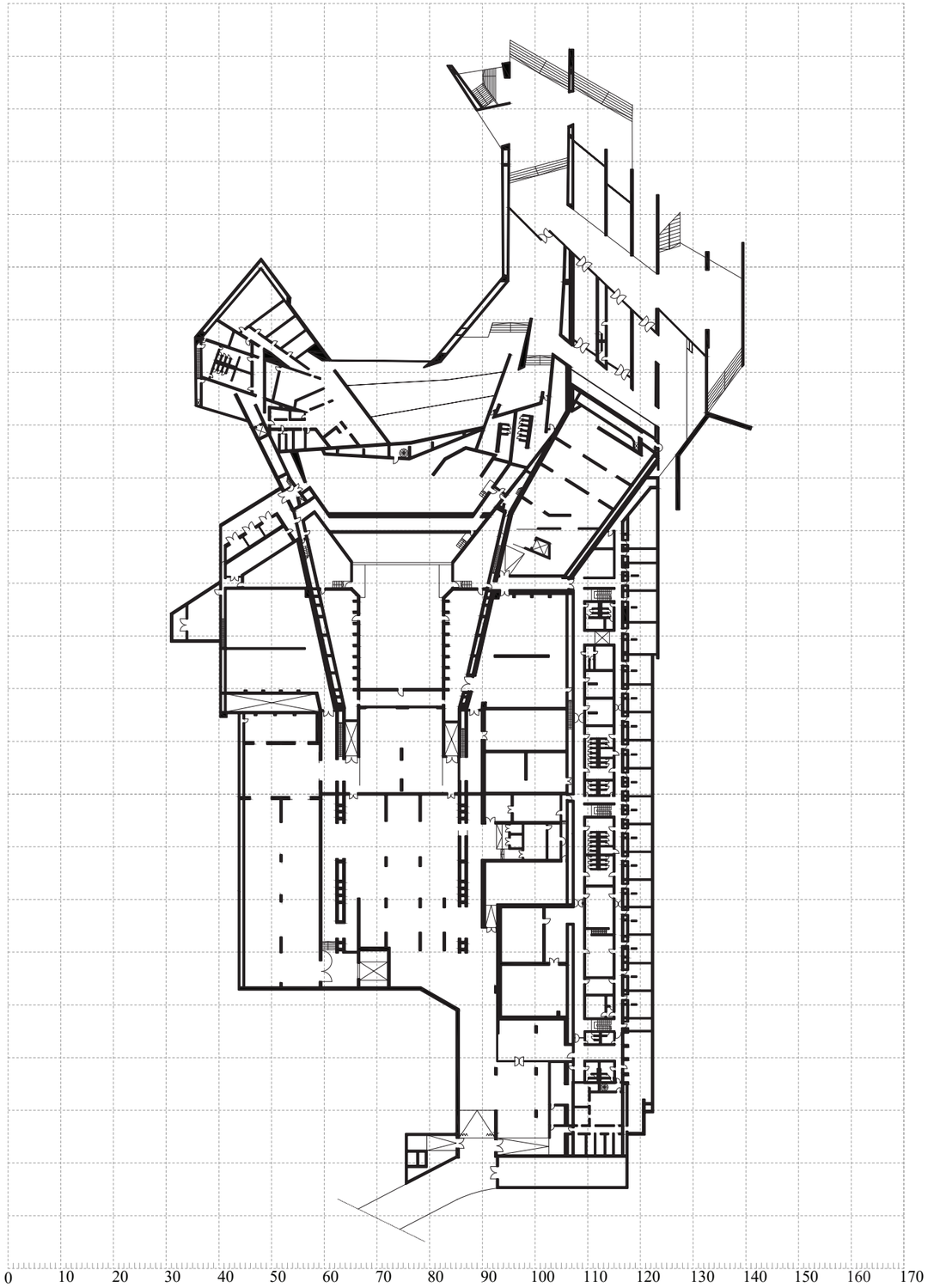


Macedonian Opera and Ballet
Biro 77



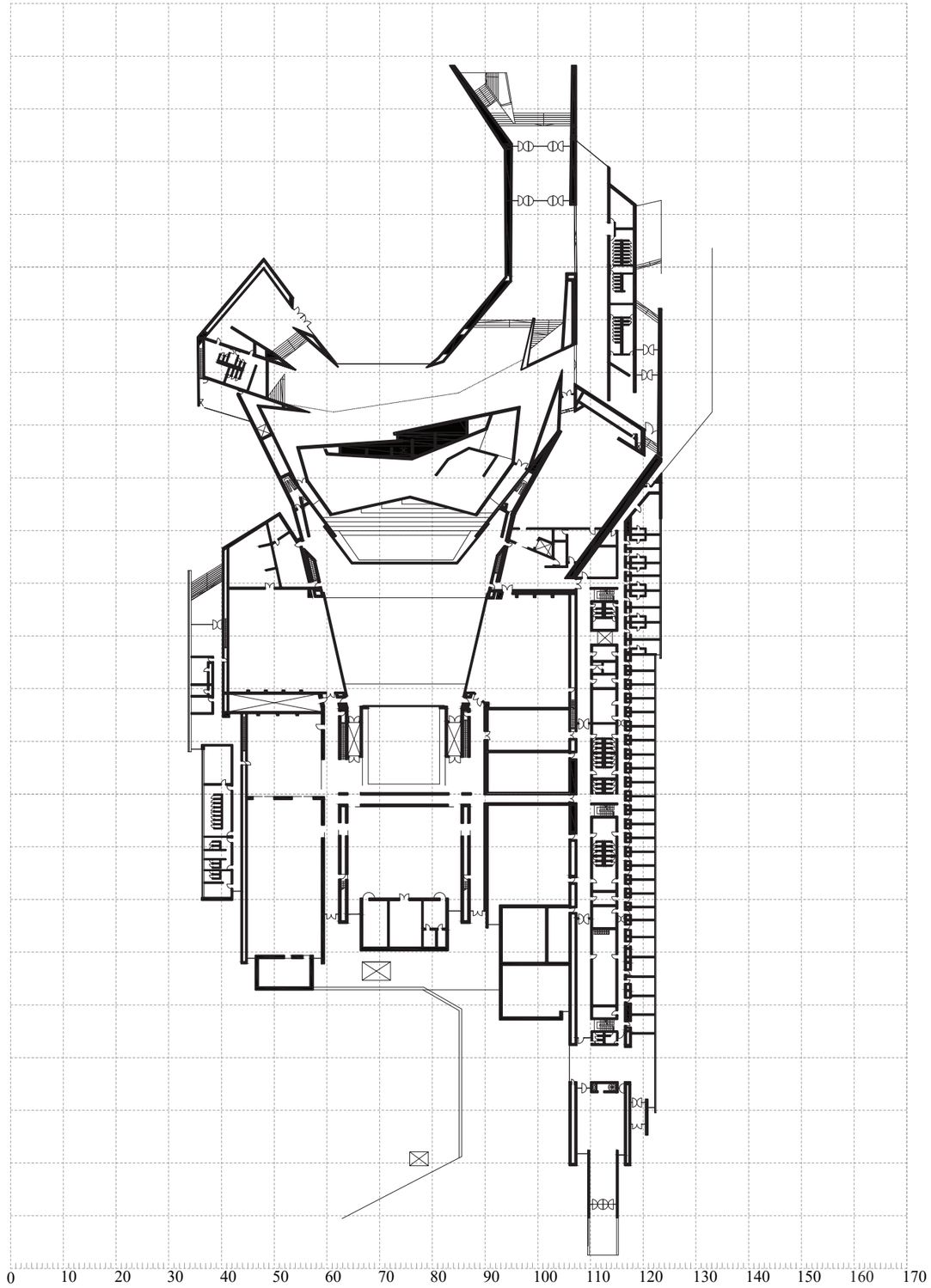
img. 01_Masterplan
Macedonian Opera and Ballet

Macedonian Opera and Ballet
Biro 77



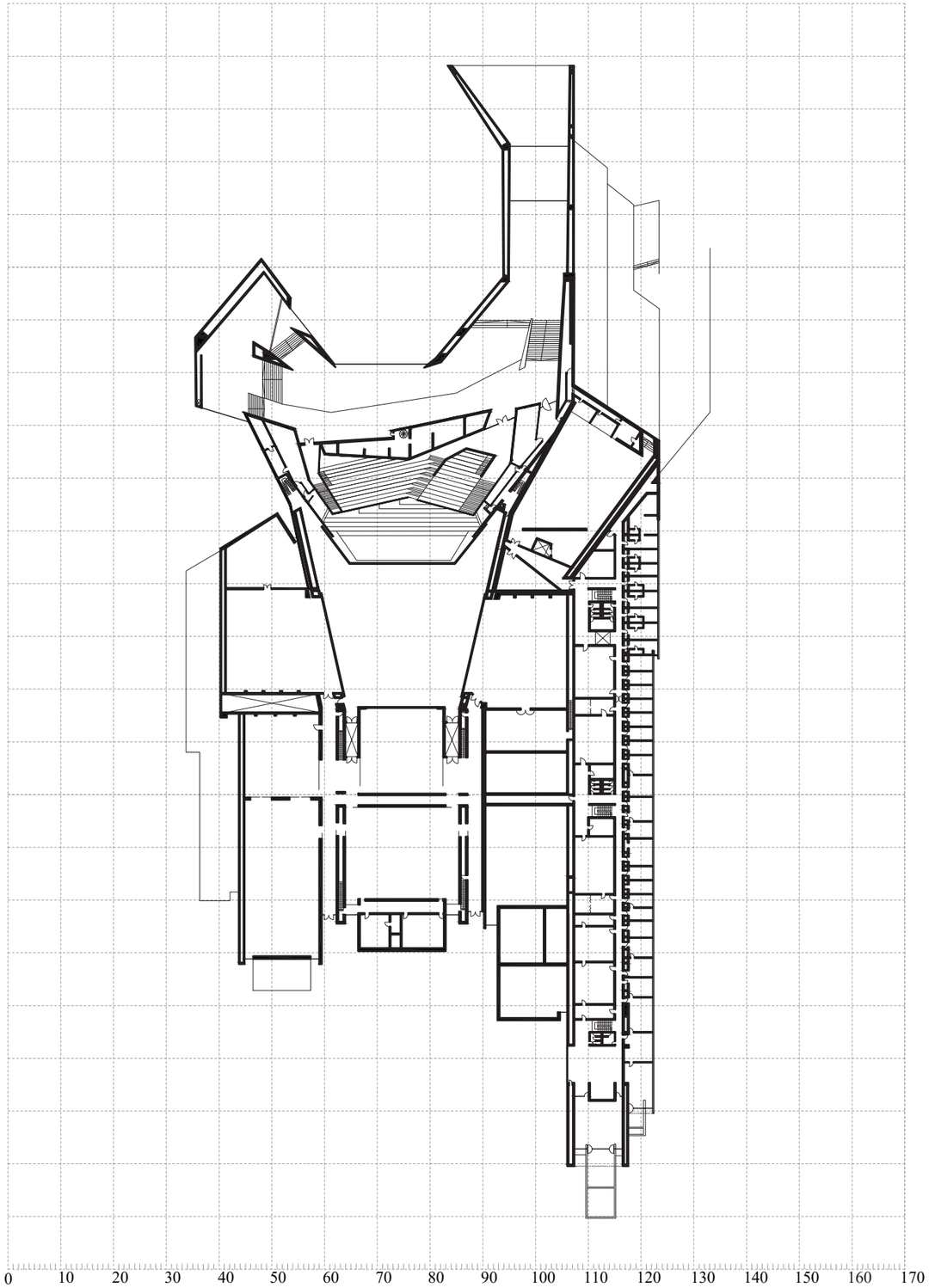
img. 02_Floor Plan
Macedonian Opera and Ballet

Macedonian Opera and Ballet
Biro 77



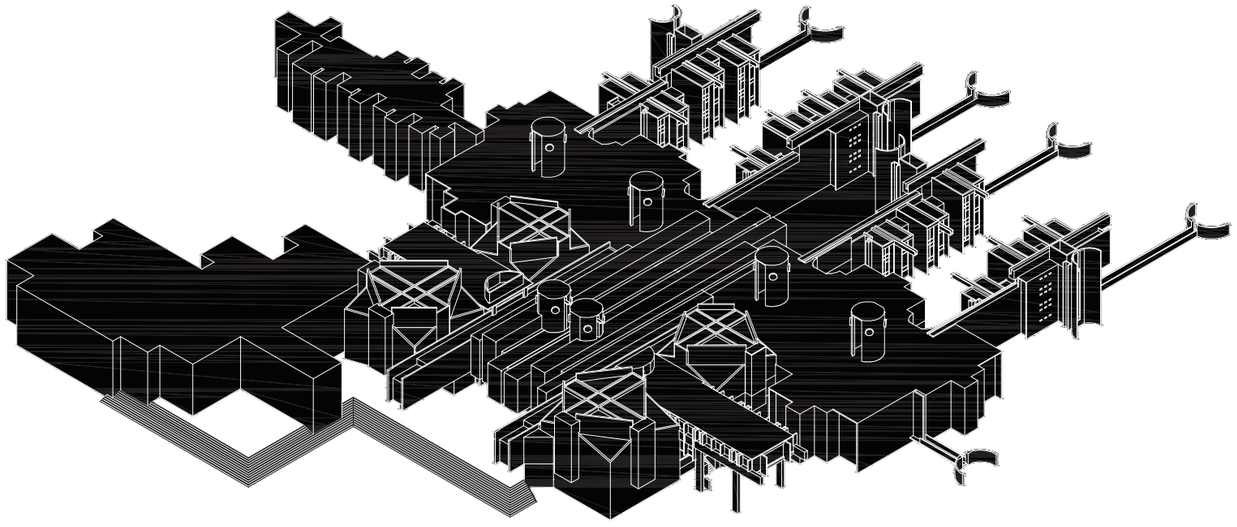
img. 03_Floor Plan
Macedonian Opera and Ballet

Macedonian Opera and Ballet
Biro 77

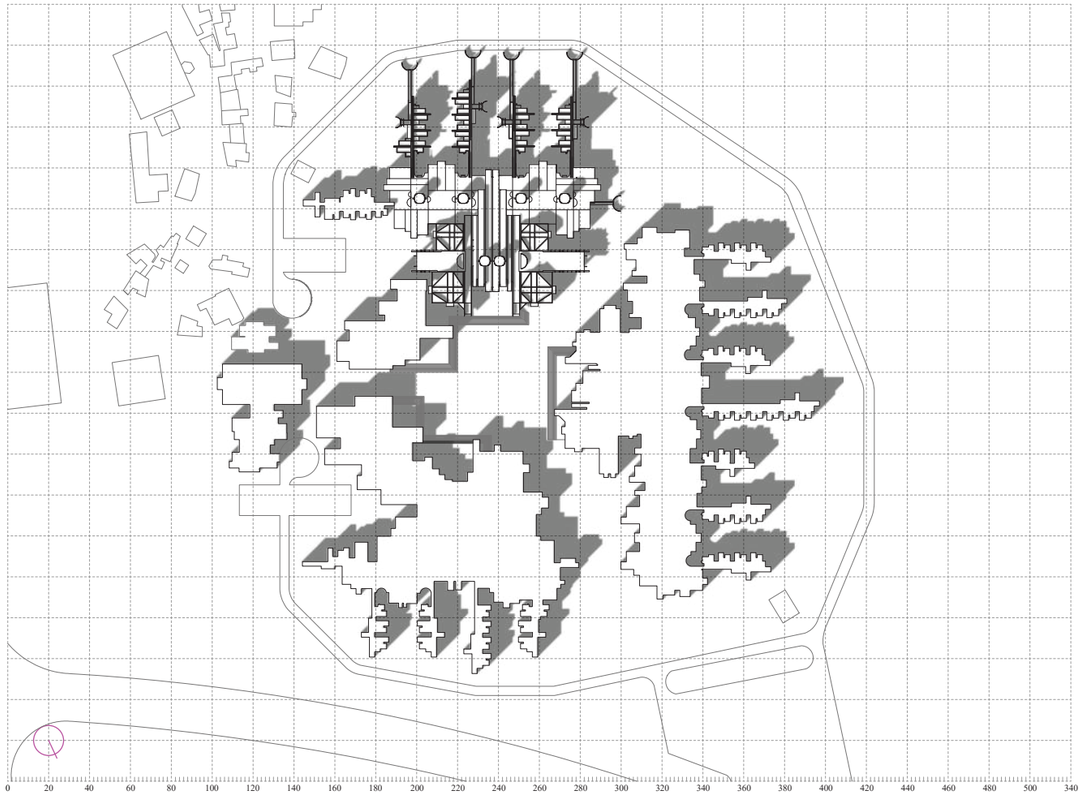


img. 04_Floor Plan
Macedonian Opera and Ballet

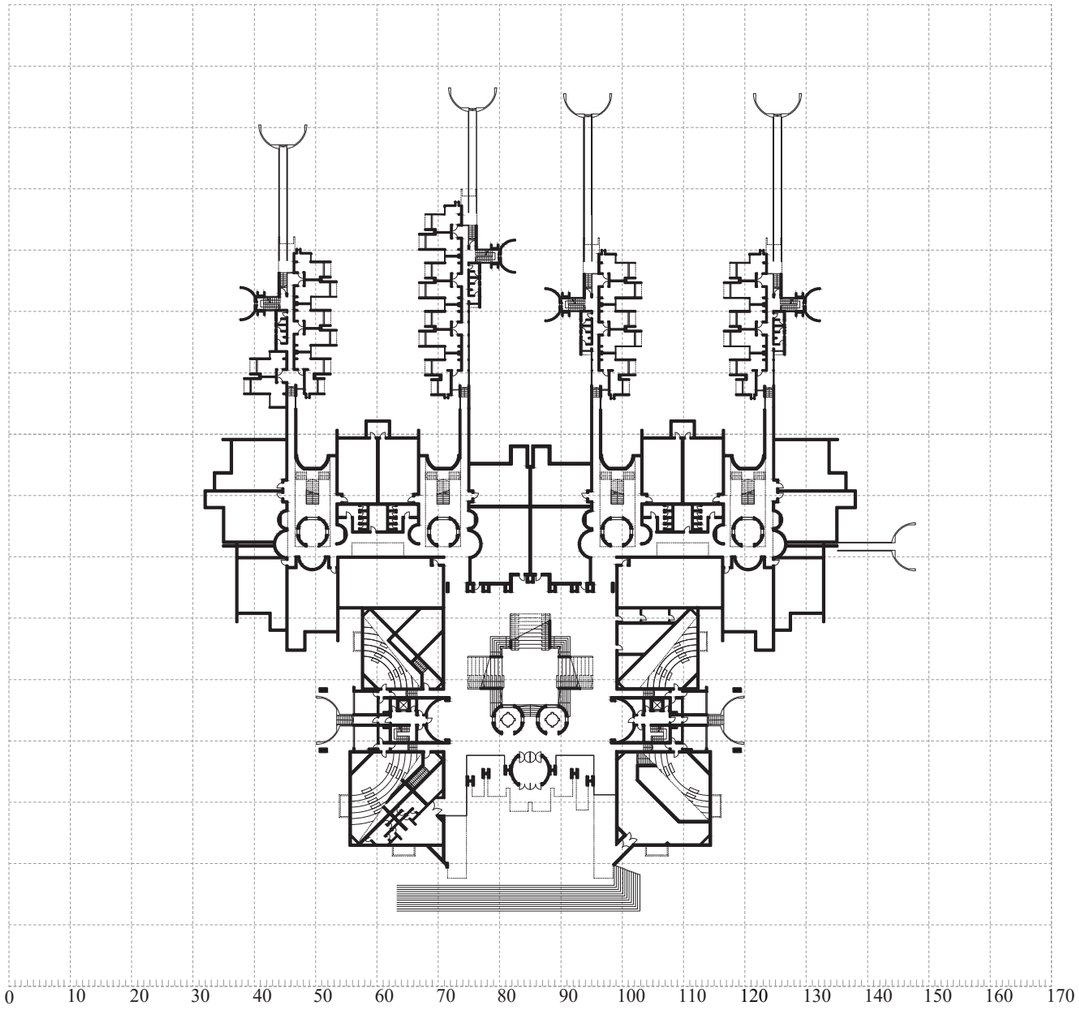
SS. Cyril and Methodius University
Marko Music



SS. Cyril and Methodius University
Marko Music

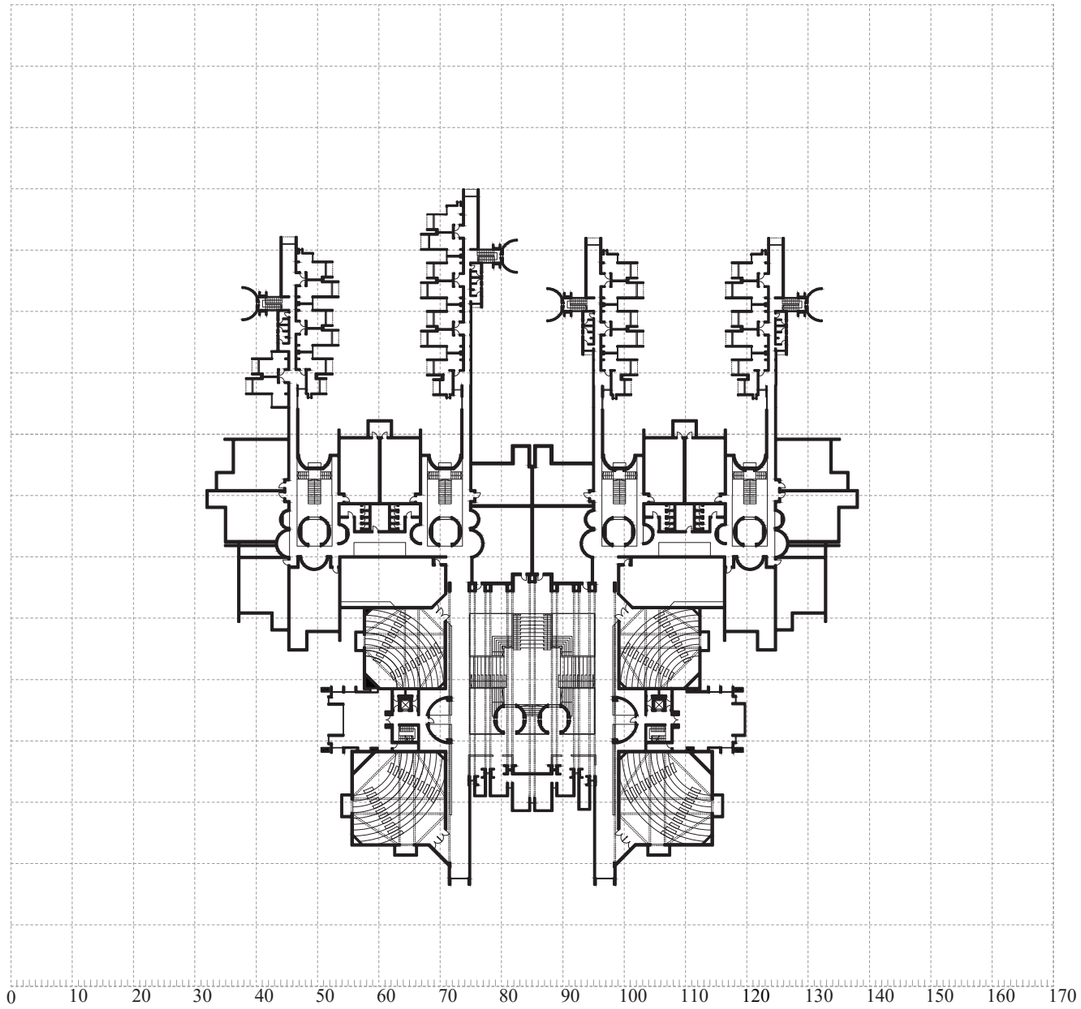


img. 01_Masterplan
SS. Cyril and Methodius University

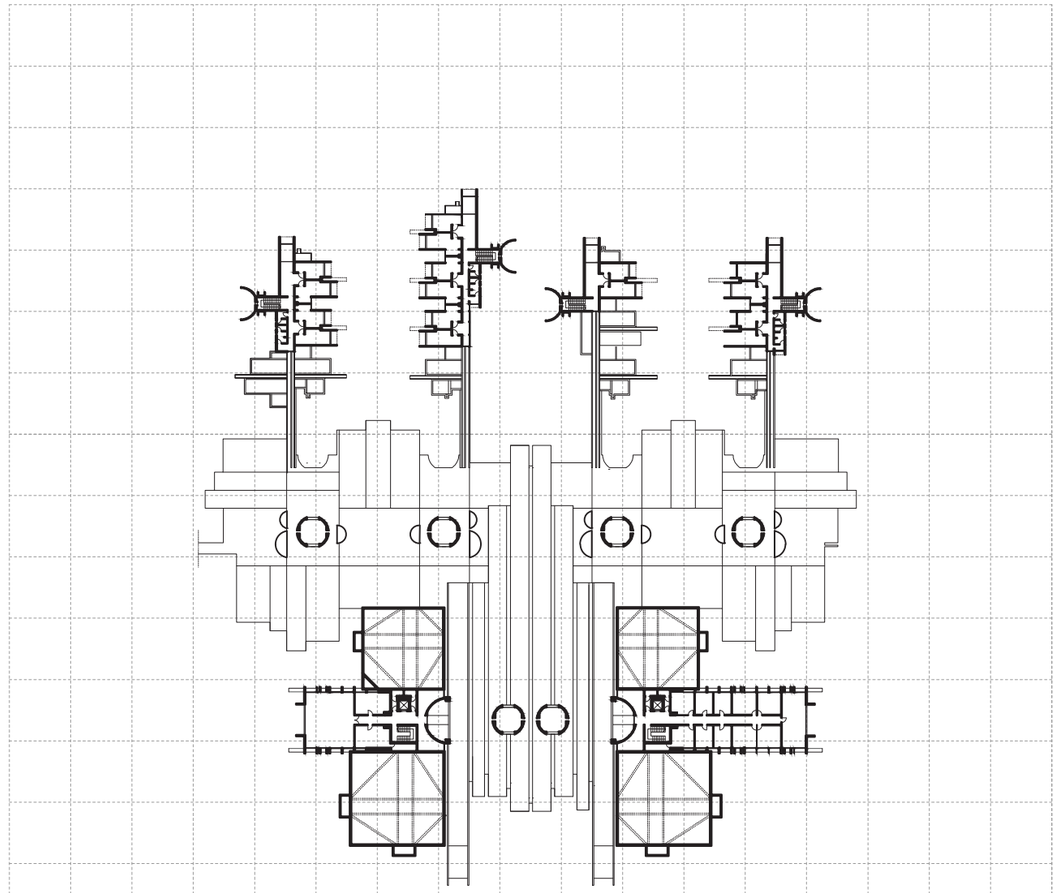


img. 02_Floor Plan
SS. Cyril and Methodius University

SS. Cyril and Methodius University
Marko Music

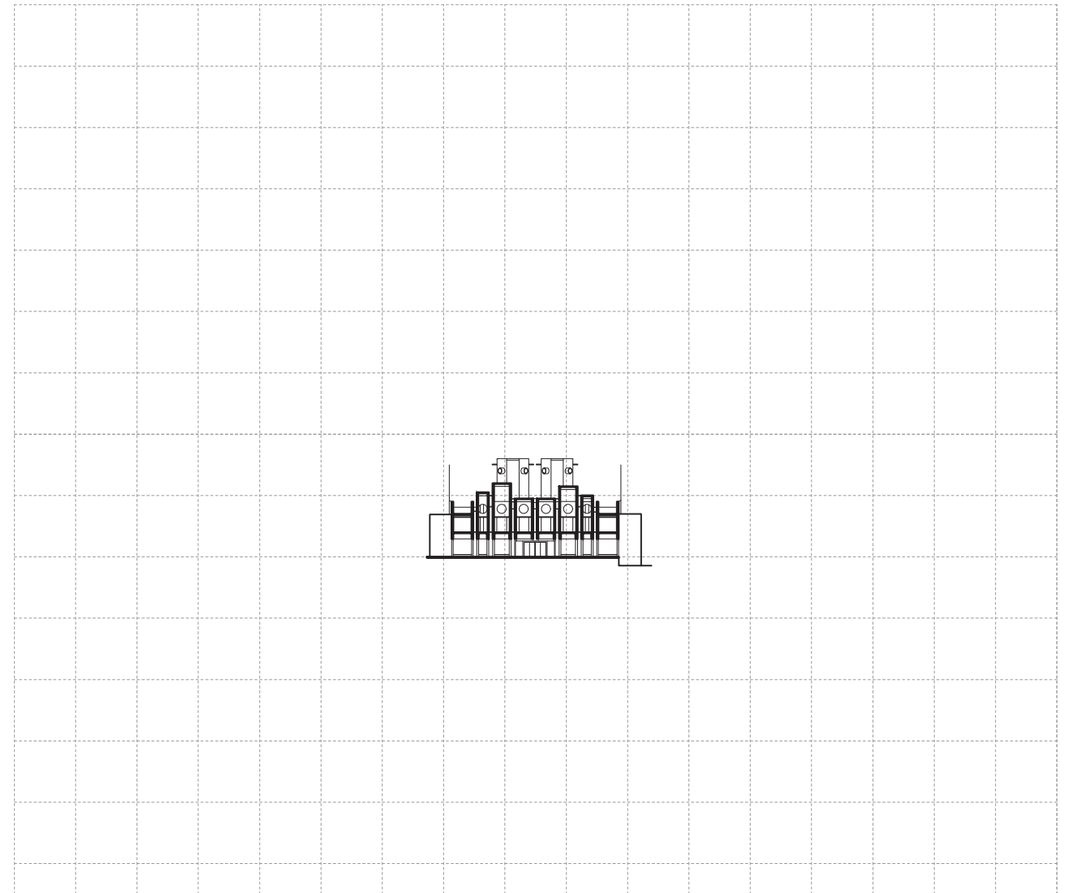


img. 03_Floor Plan
SS. Cyril and Methodius University

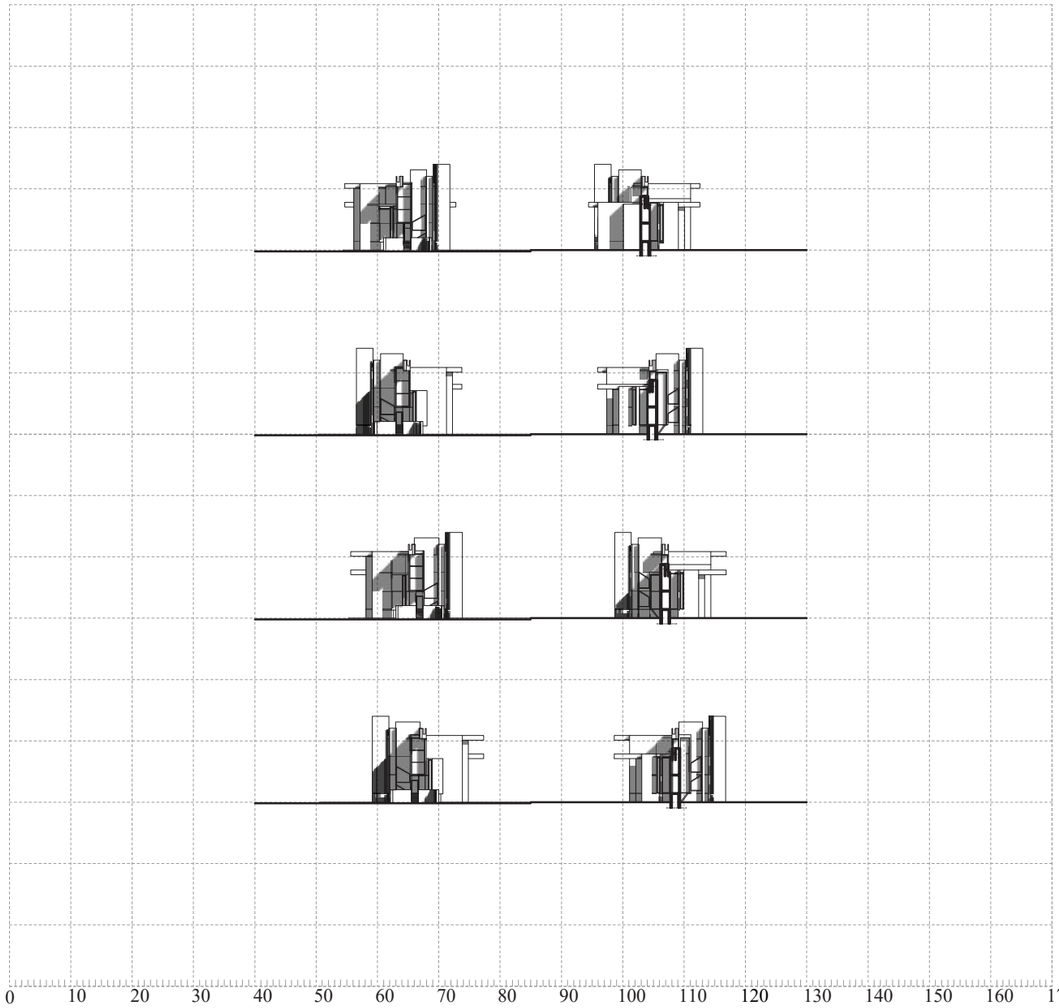


img. 04_Floor Plan
SS. Cyril and Methodius University

SS. Cyril and Methodius University
Marko Music

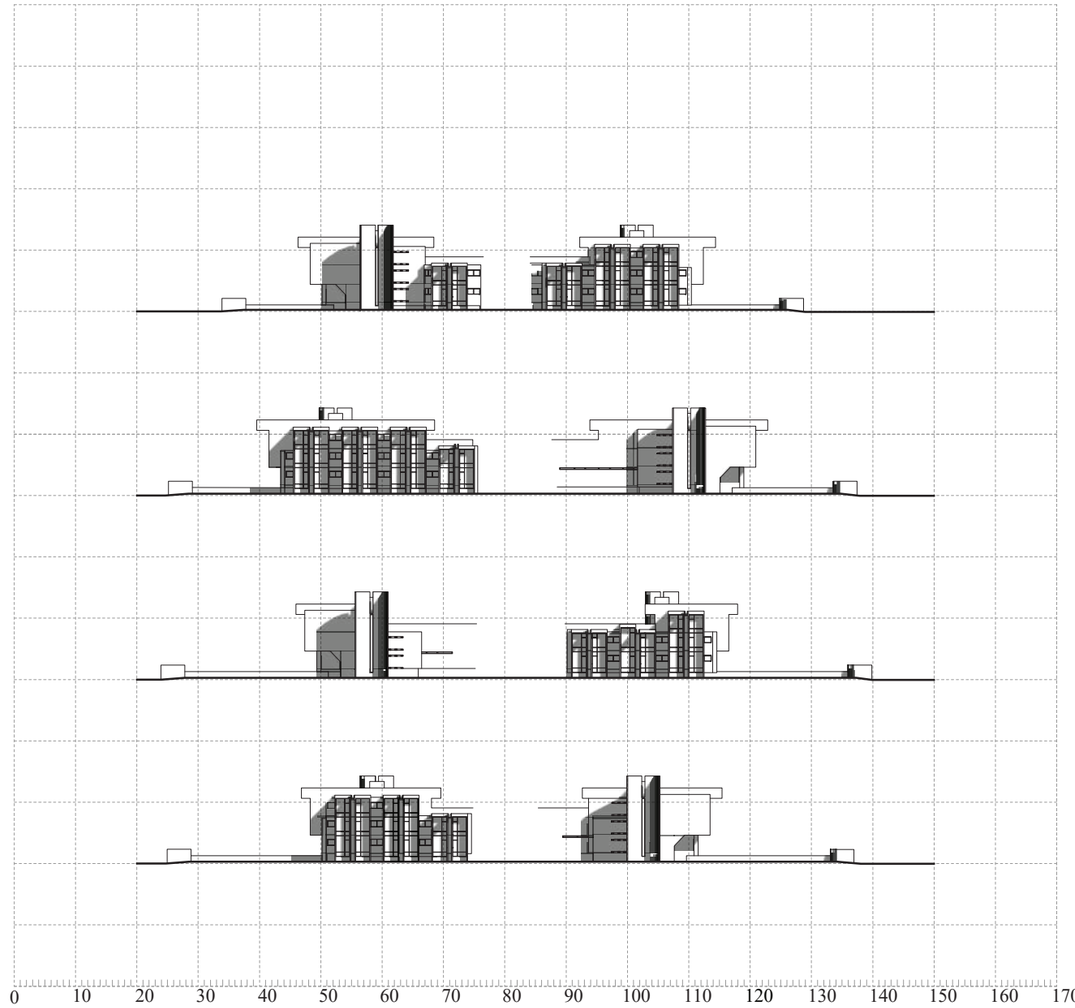


img. 05_Section
SS. Cyril and Methodius University

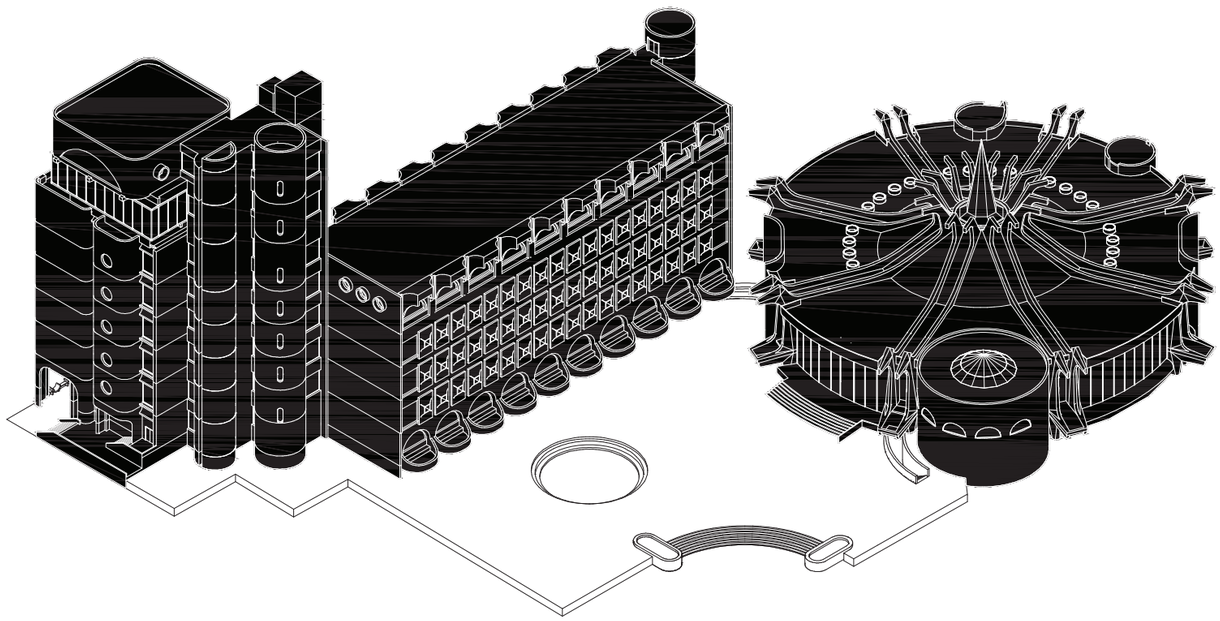


img. 06_Section
SS. Cyril and Methodius University

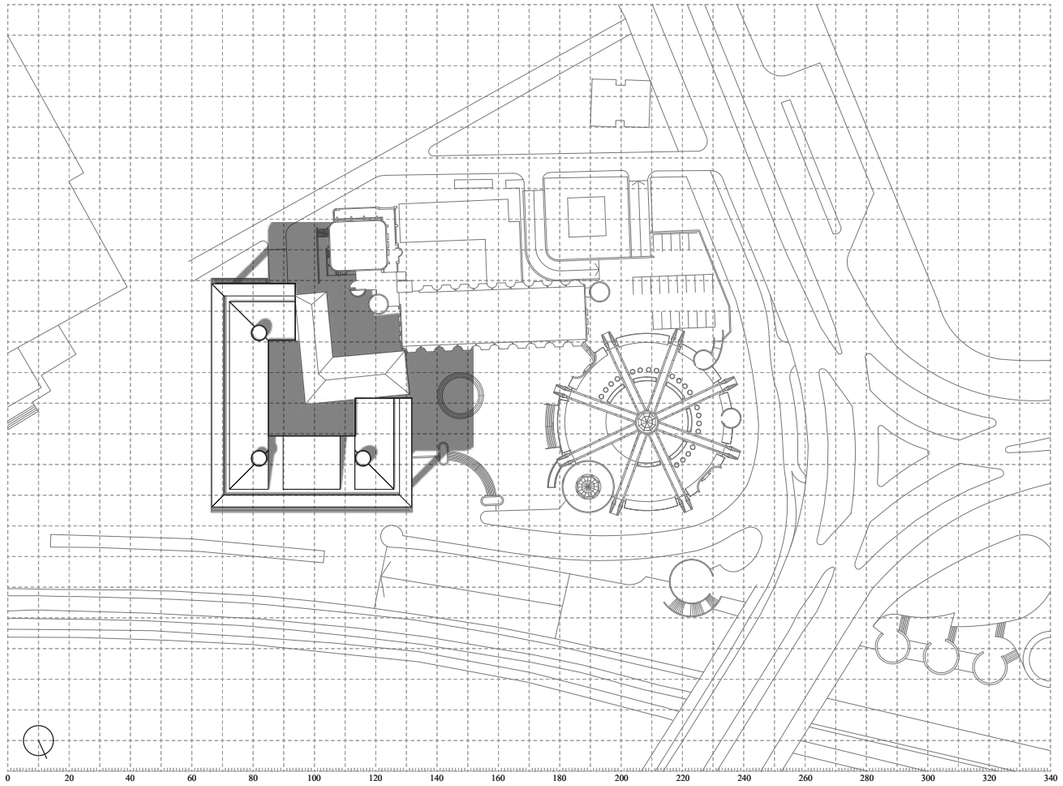
SS. Cyril and Methodius University
Marko Music



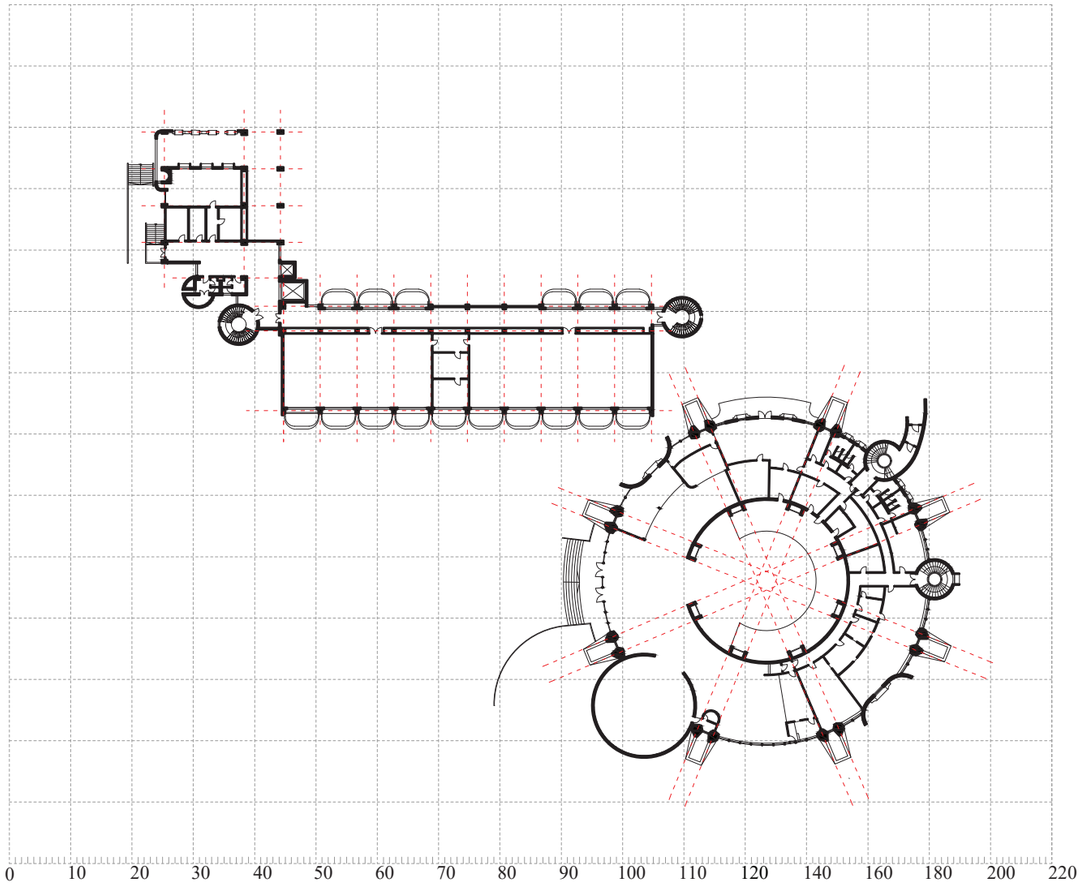
img. 07_Elevation
SS. Cyril and Methodius University



Telecomunication Centre
Janko Konstantinov

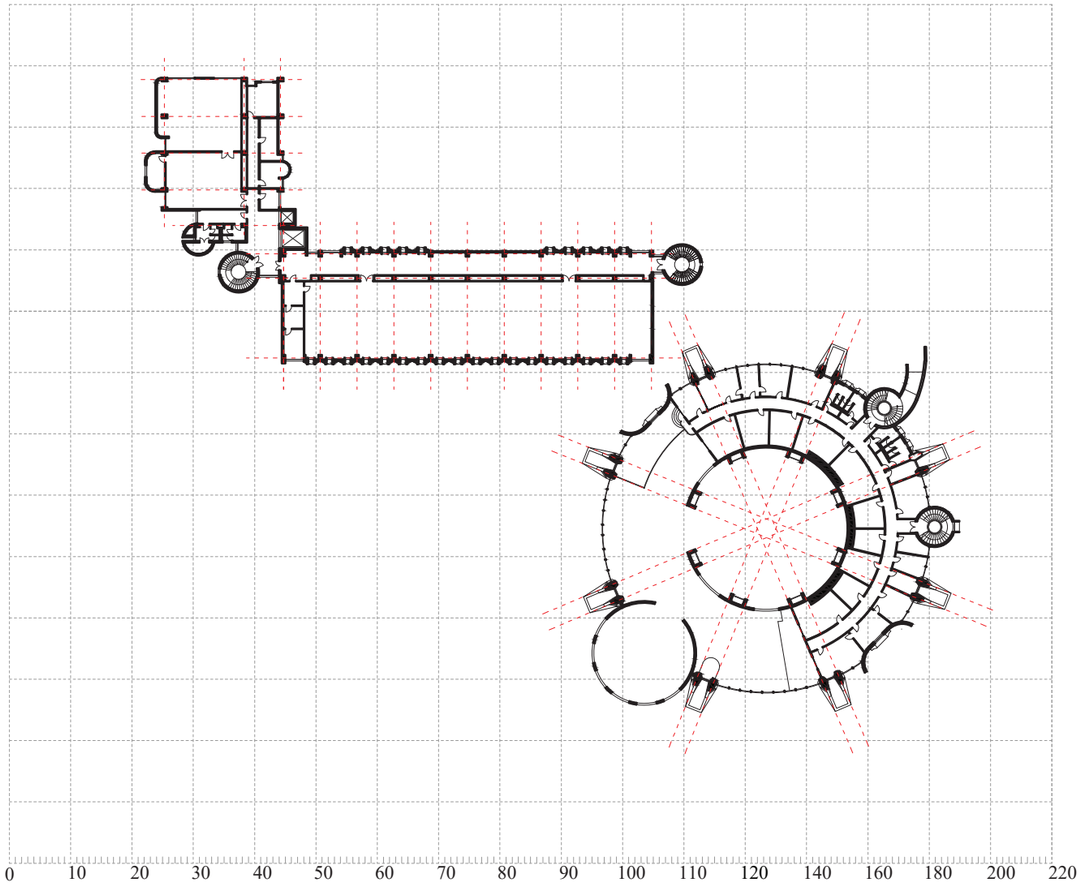


img. 01_Masterplan
Telecomunication Centre

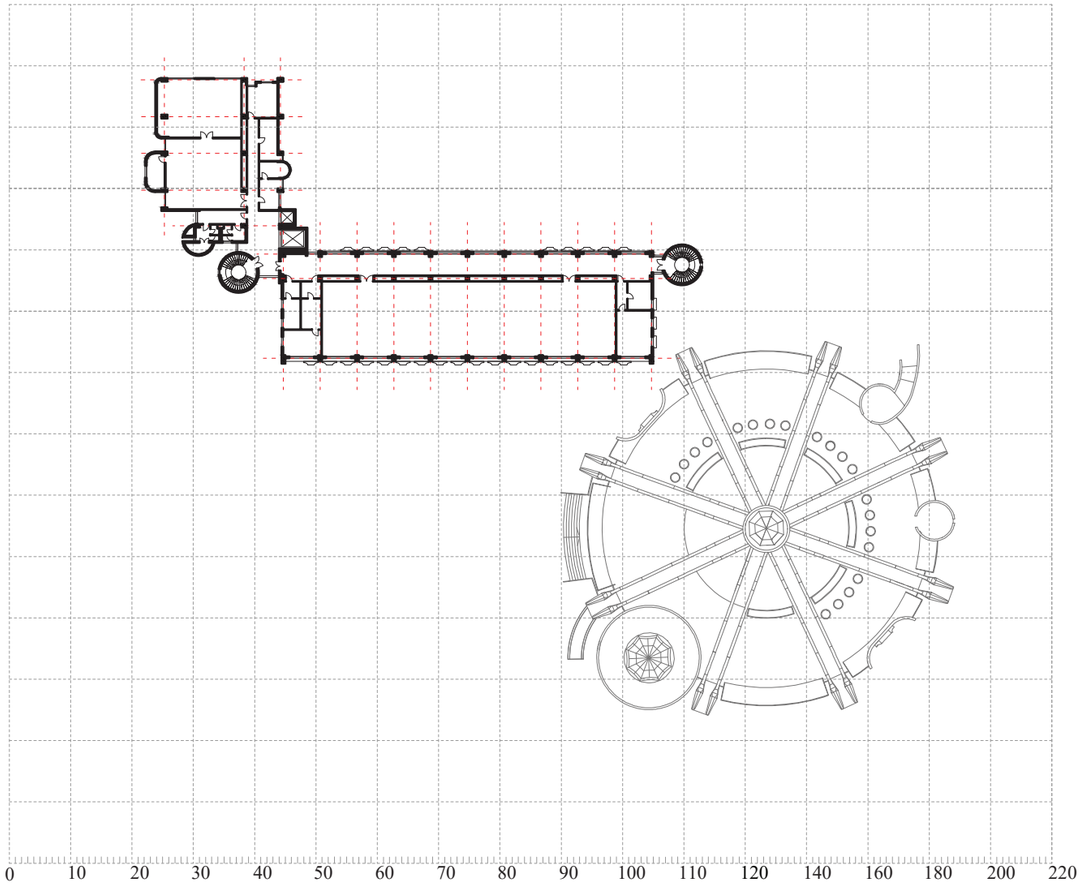


img. 02_Floor Plan
Telecomunication Centre

Telecomunication Centre
Janko Konstantinov

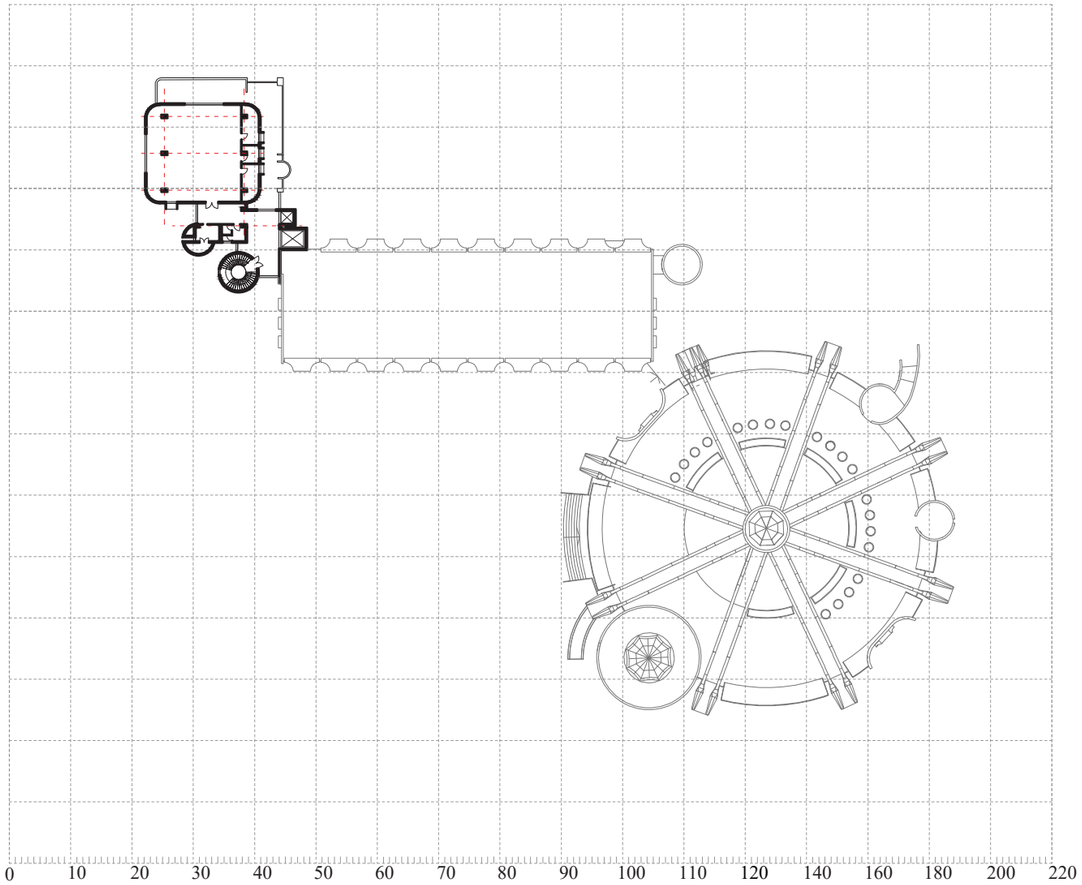


img. 03_Floor Plan
Telecomunication Centre

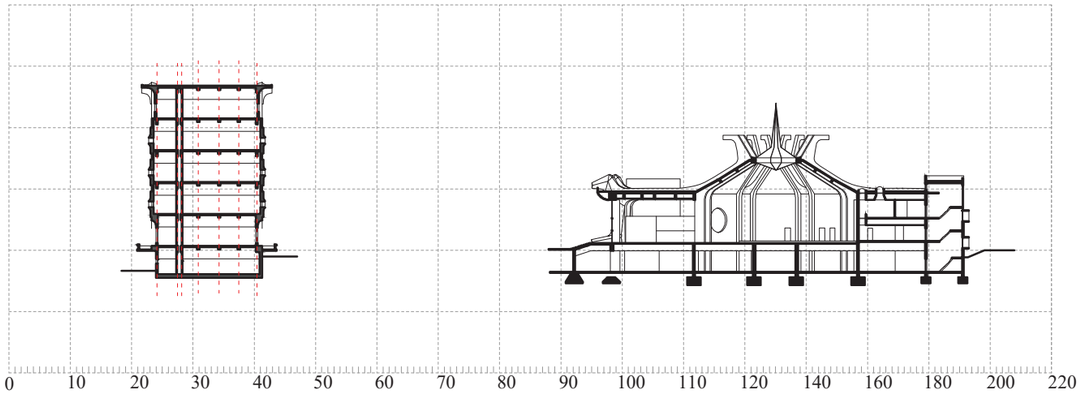


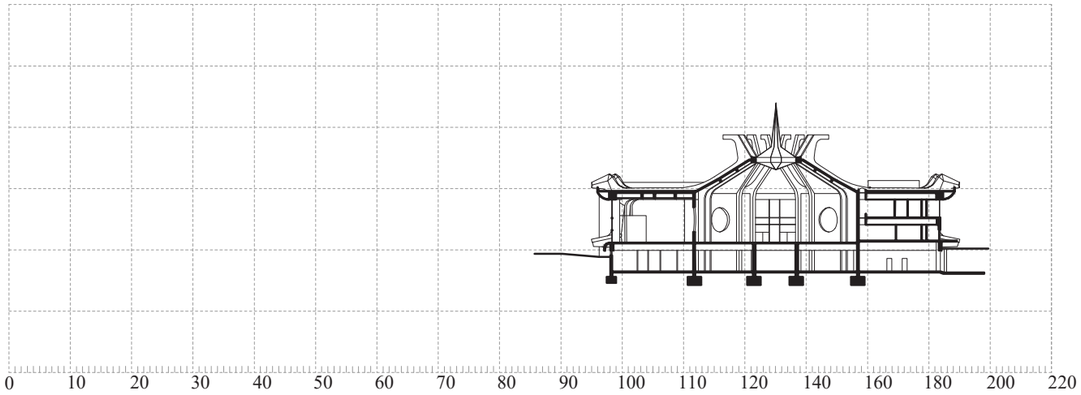
img. 04_Floor Plan
Telecomunication Centre

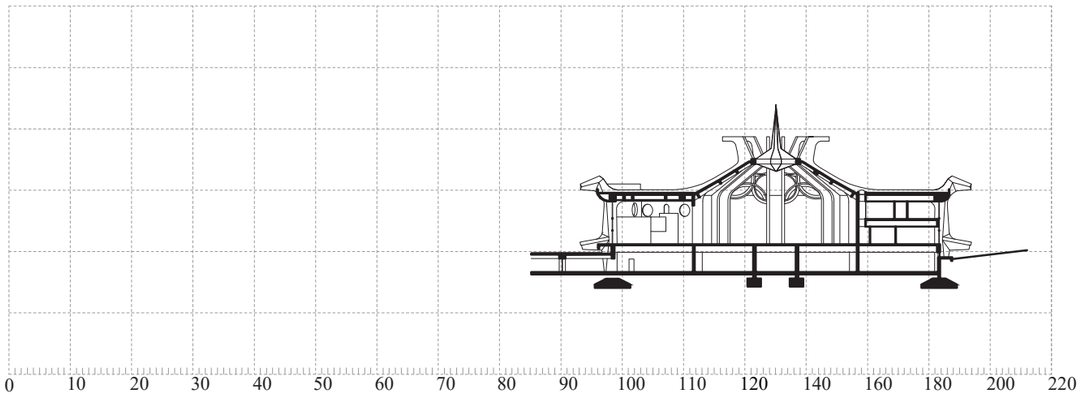
Telecomunication Centre
Janko Konstantinov



img. 05_Floor Plan
Telecomunication Centre

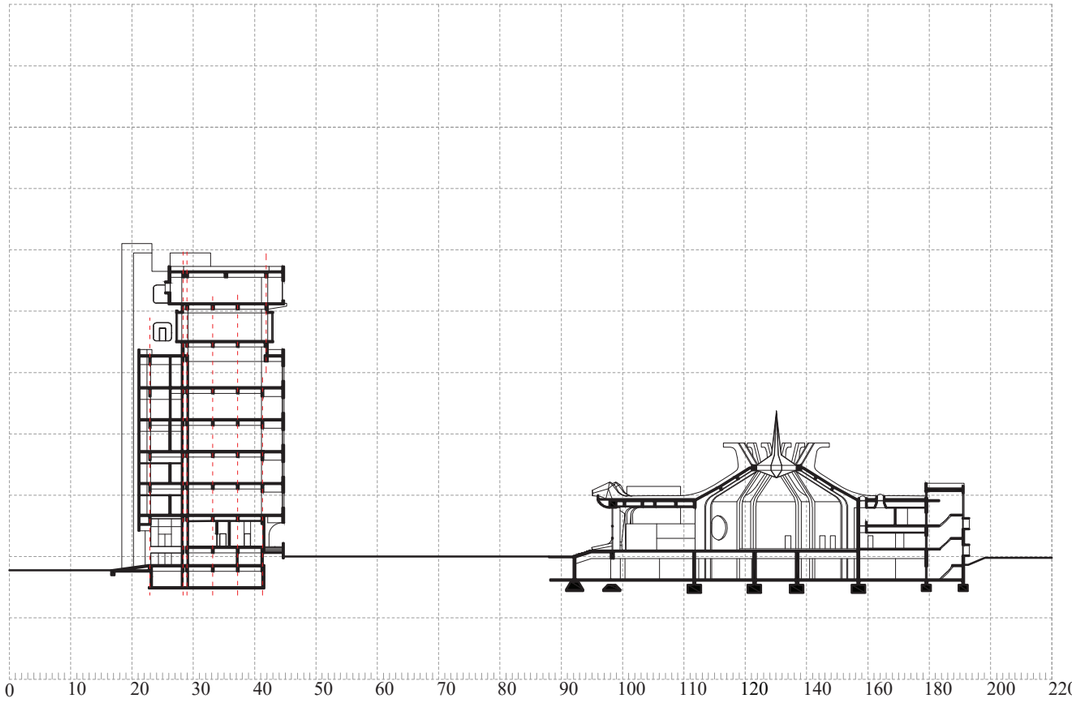






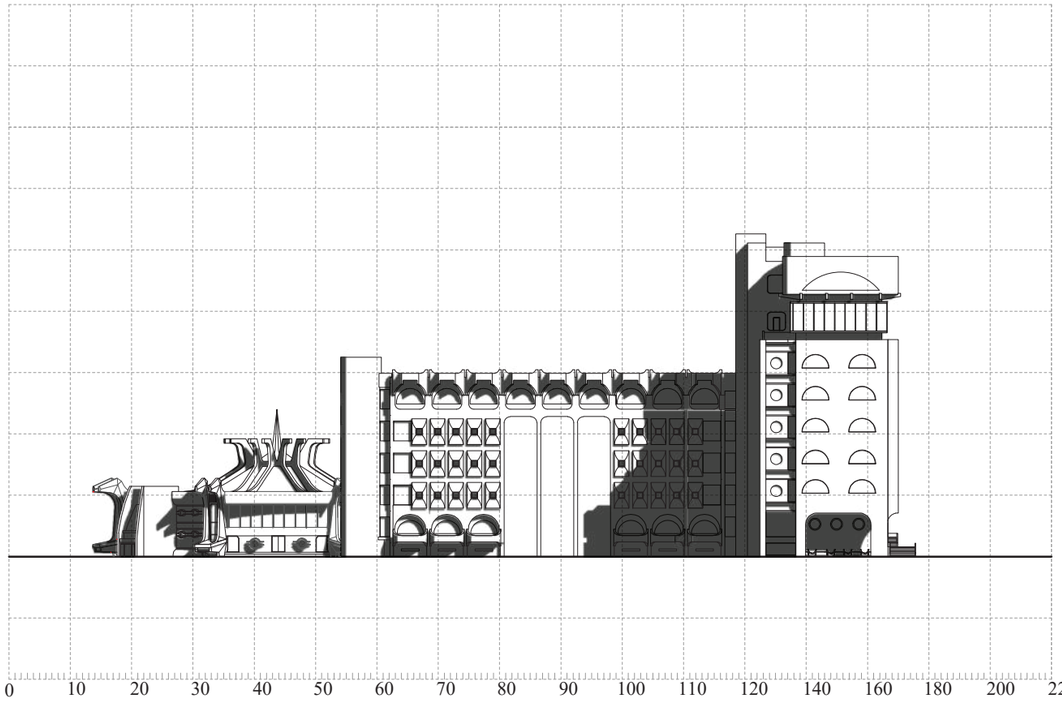
img. 06_Section
Telecomunication Centre

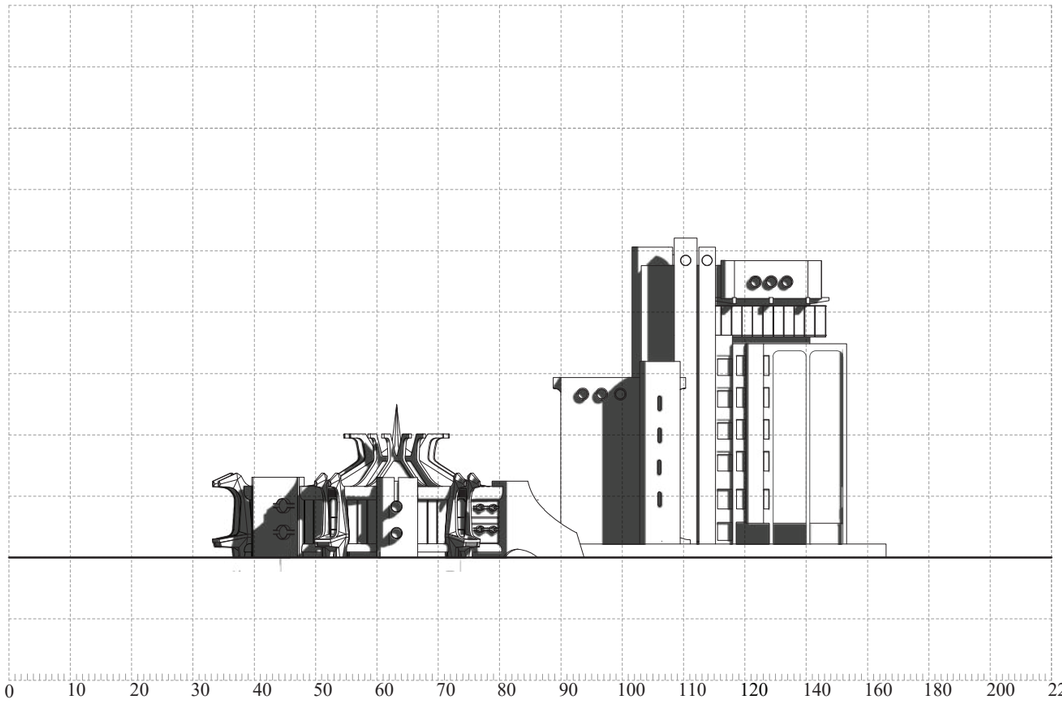
Telecomunication Centre
Janko Konstantinov



img. 07_Section
Telecomunication Centre

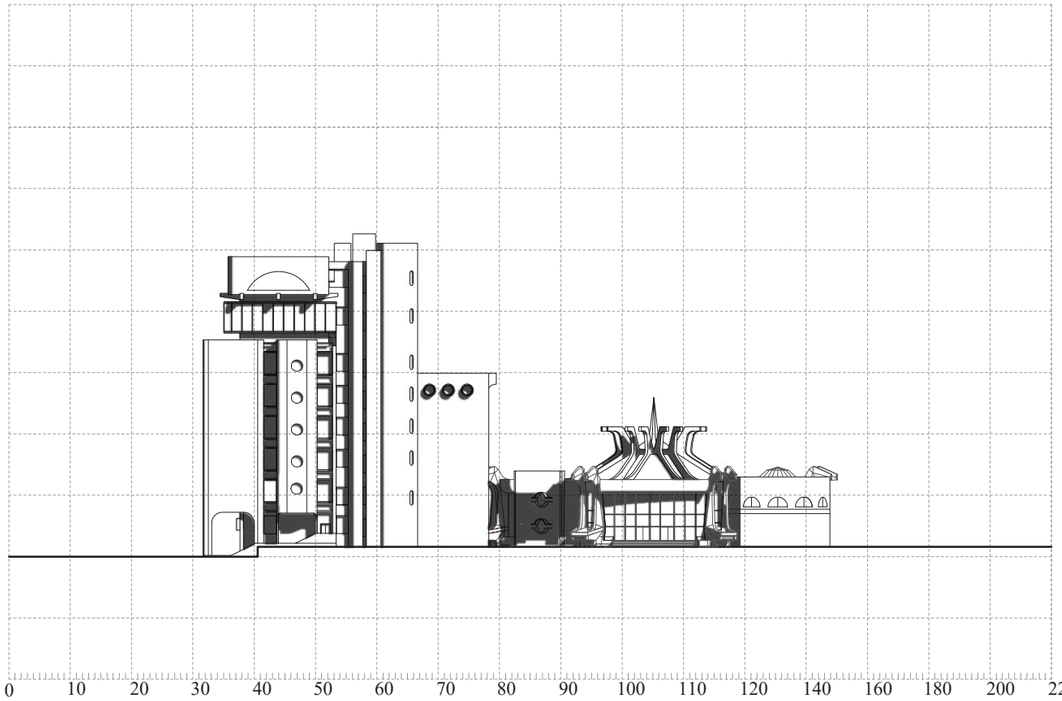
Telecomunication Centre
Janko Konstantinov

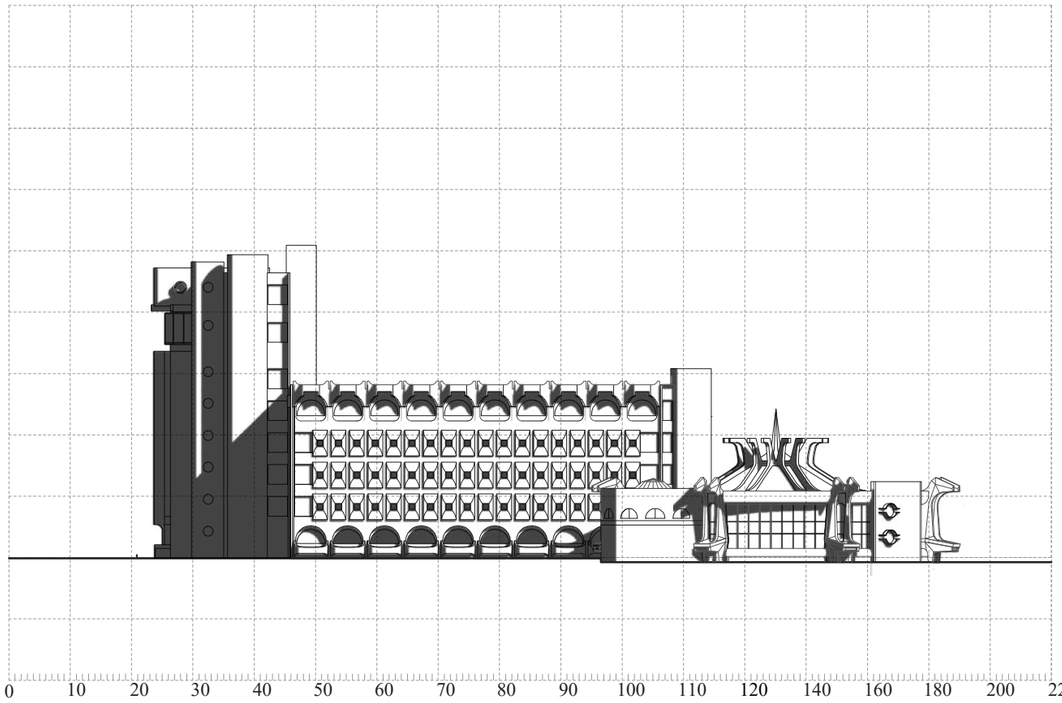




img. 08_Elevation
Telecomunication Centre

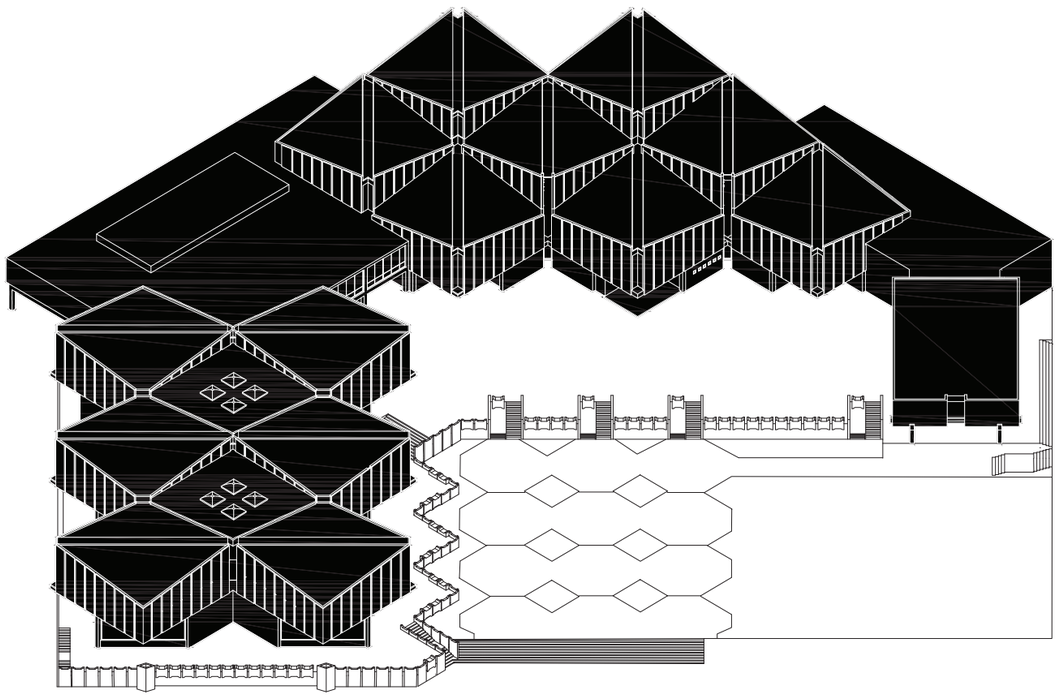
Telecomunication Centre
Janko Konstantinov



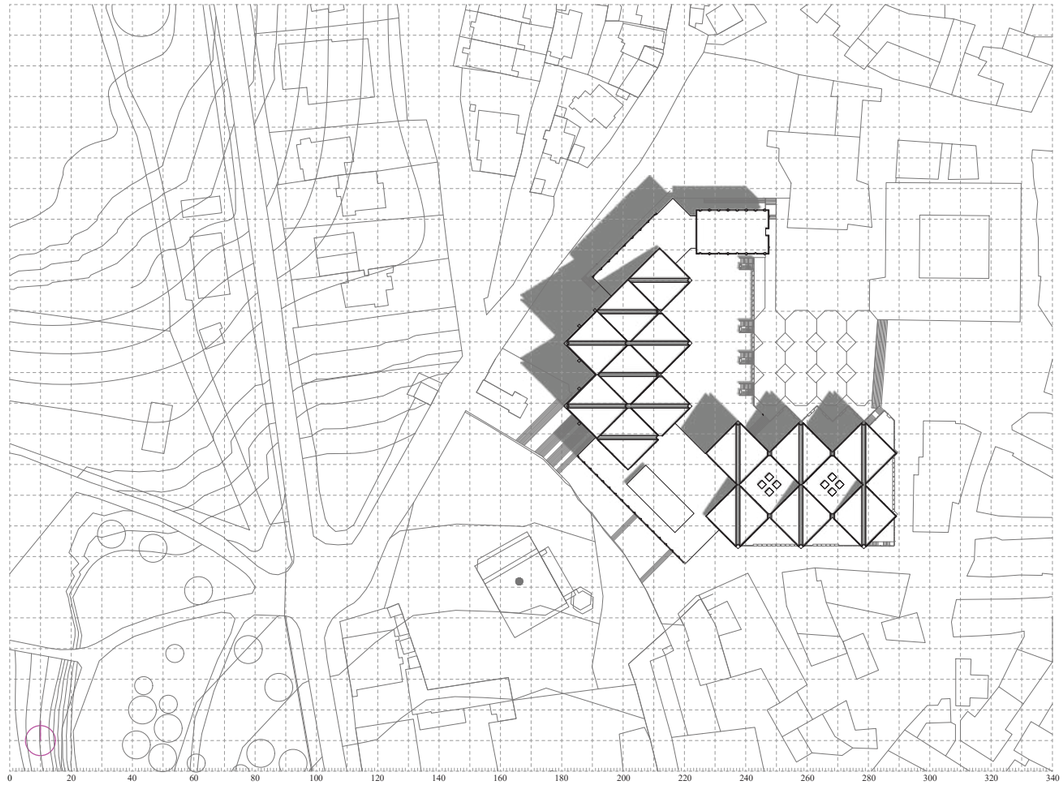


img. 09_Elevation
Telecomunication Centre

Museum of Macedonia
Mimoza Tomic, Kiril Muratovski

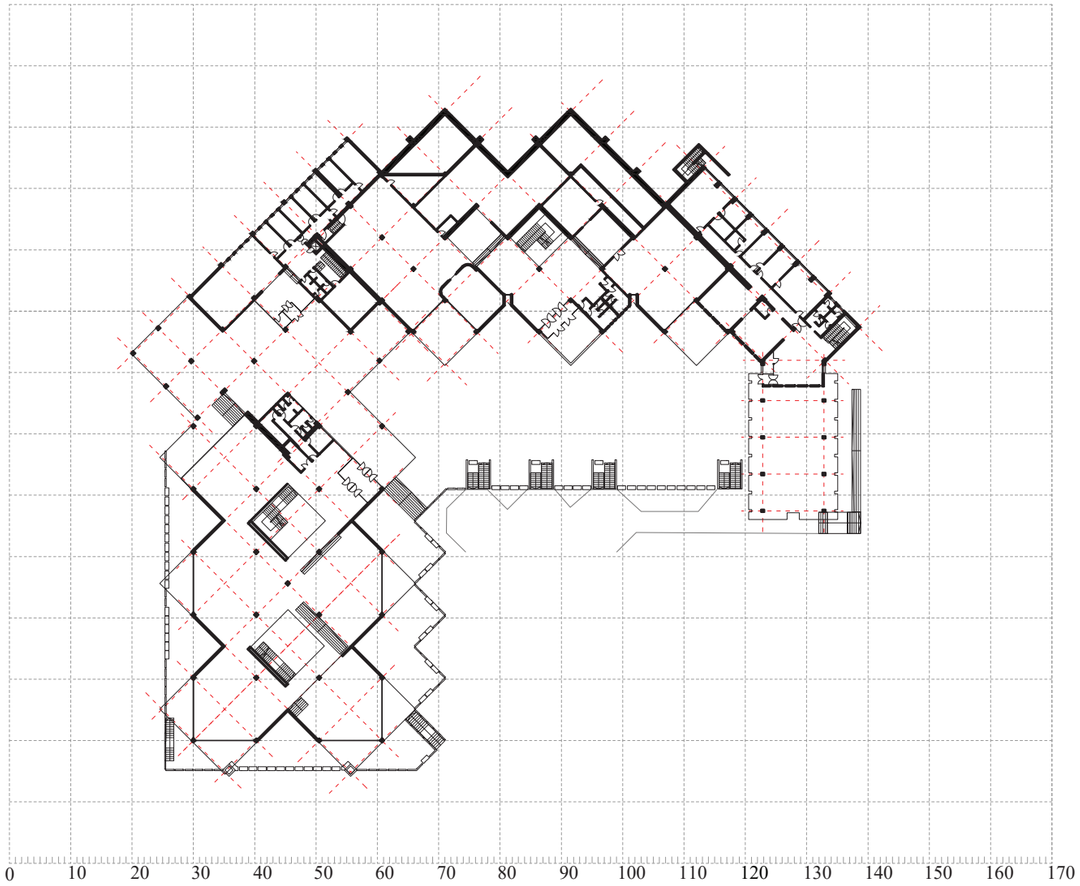


Museum of Macedonia
Mimoza Tomic, Kiril Muratovski



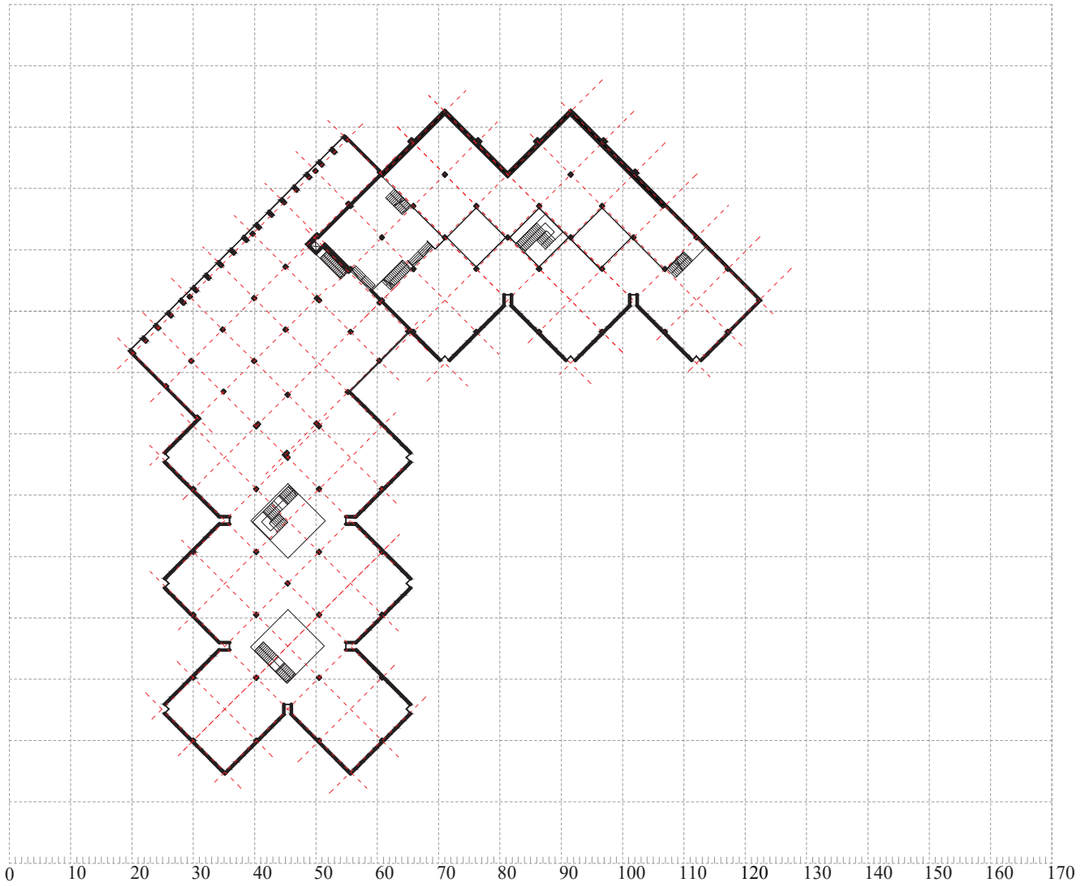
img. 01_Masterplan
Museum of Macedonia

Museum of Macedonia
Mimoza Tomic, Kiril Muratovski



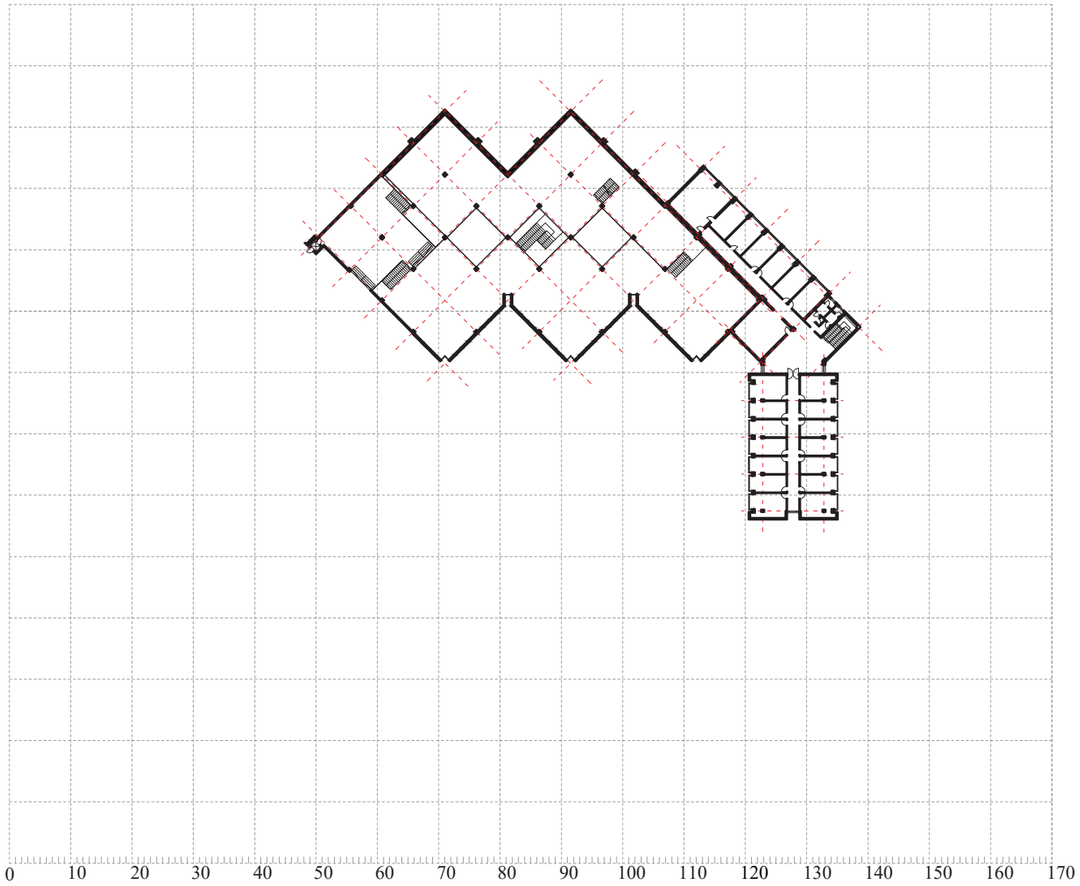
img. 02_Floor Plan
Museum of Macedonia

Museum of Macedonia
Mimoza Tomic, Kiril Muratovski



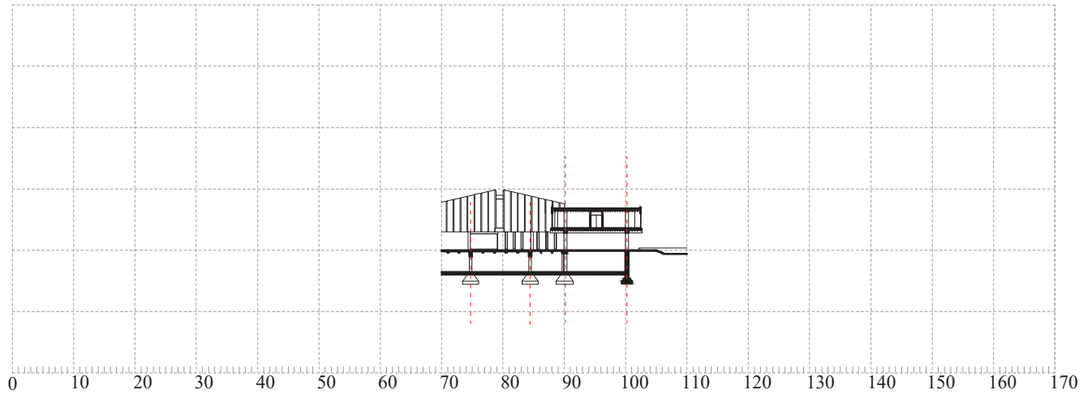
img. 03_Floor Plan
Museum of Macedonia

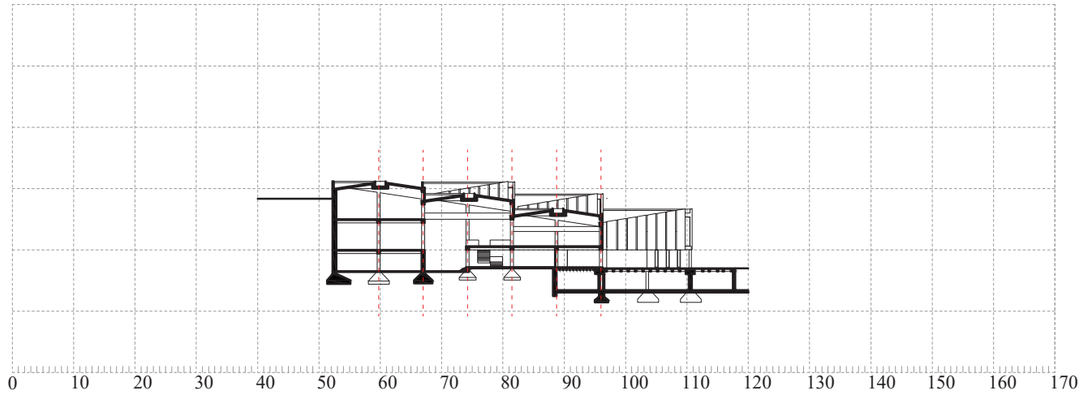
Museum of Macedonia
Mimoza Tomic, Kiril Muratovski

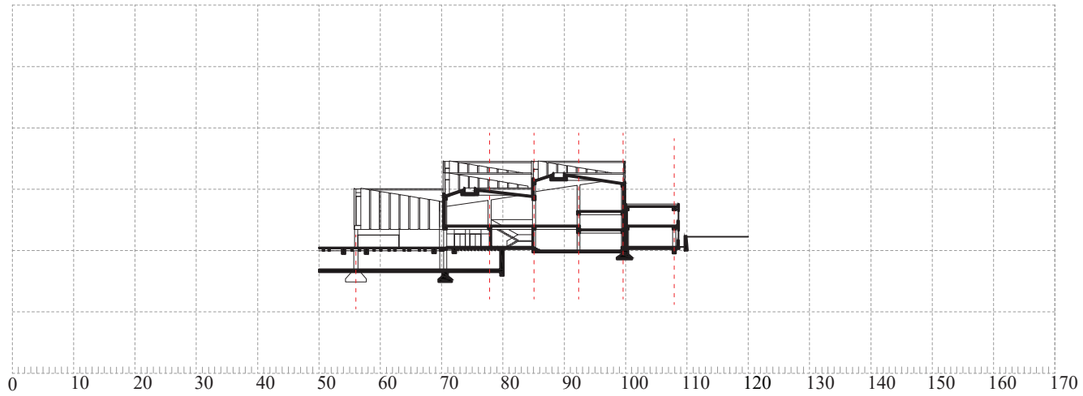


img. 04_Floor Plan
Museum of Macedonia

Museum of Macedonia
Mimoza Tomic, Kiril Muratovski

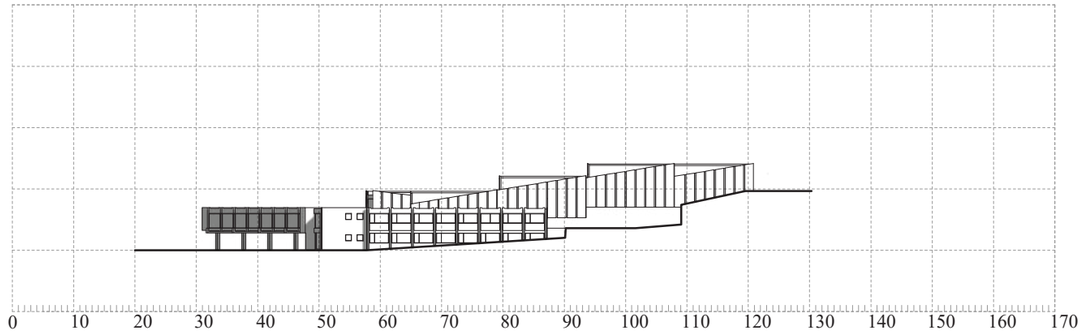


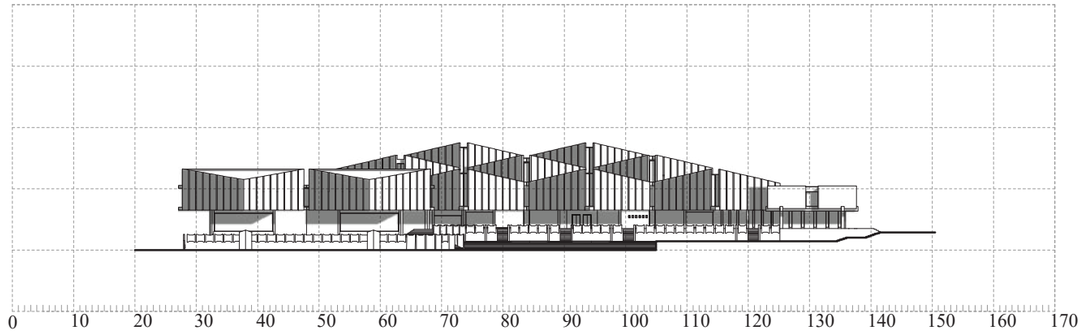


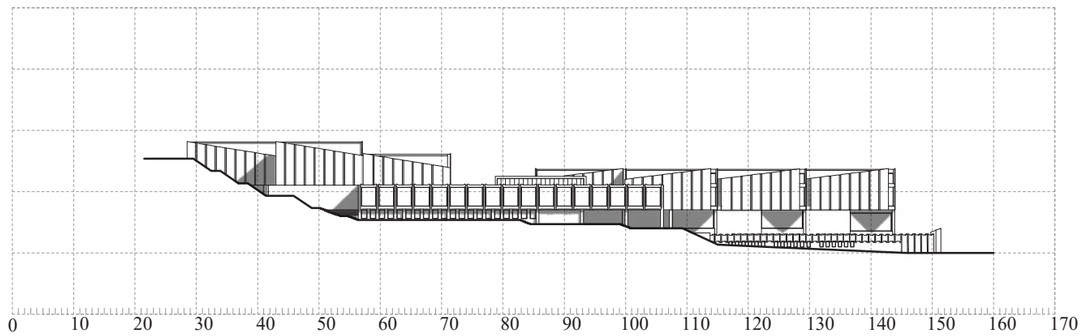


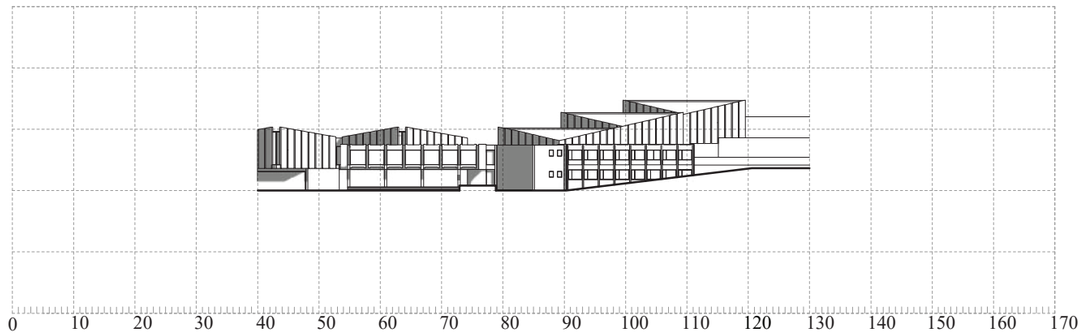
img. 05_Section
Museum of Macedonia

Museum of Macedonia
Mimoza Tomic, Kiril Muratovski



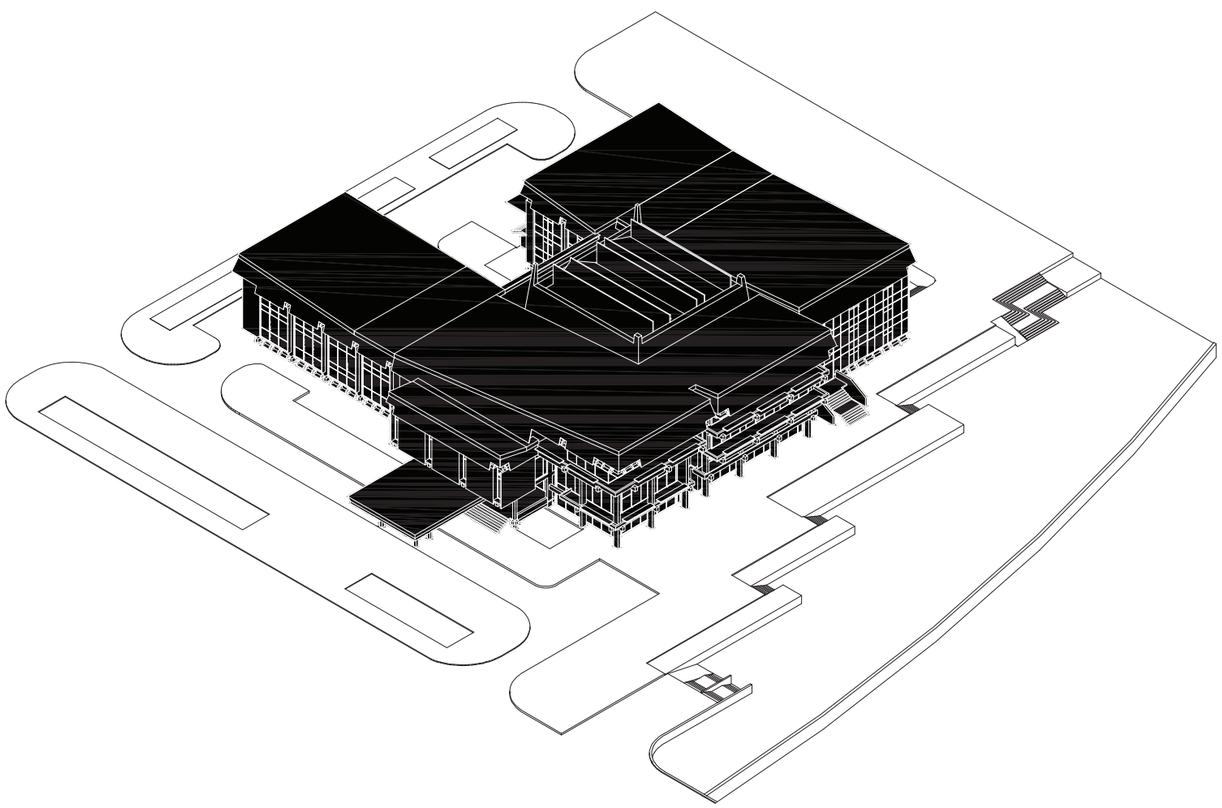




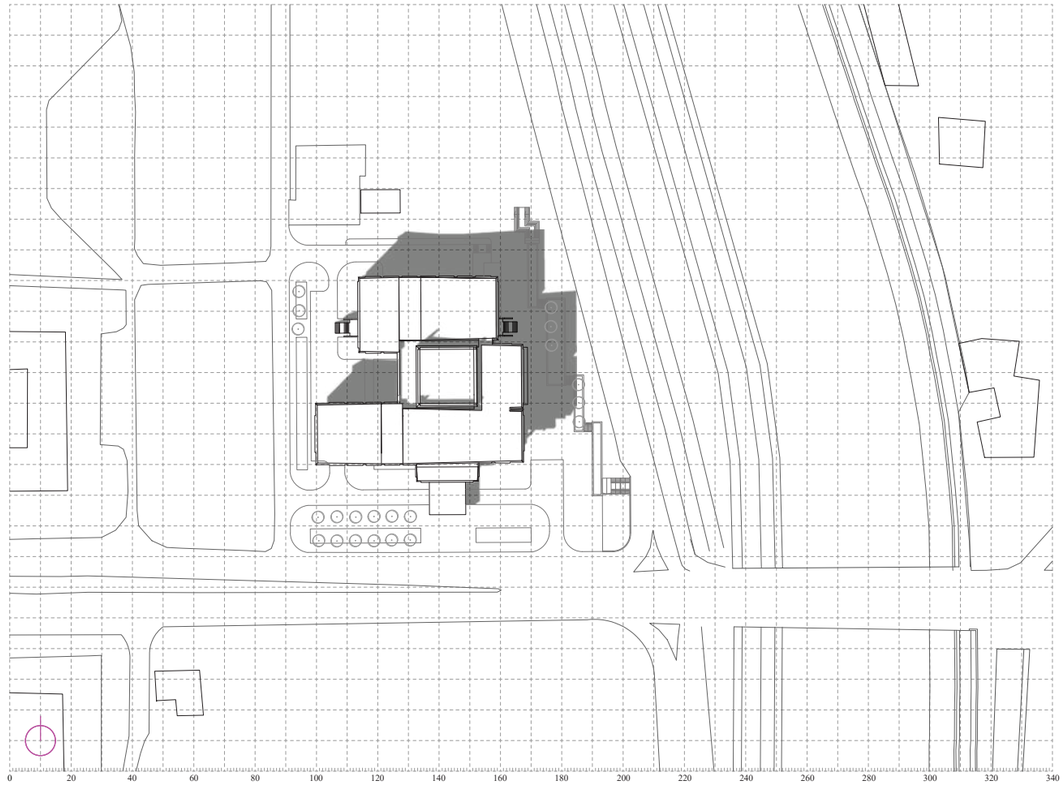


img. 06_Elevation
Museum of Macedonia

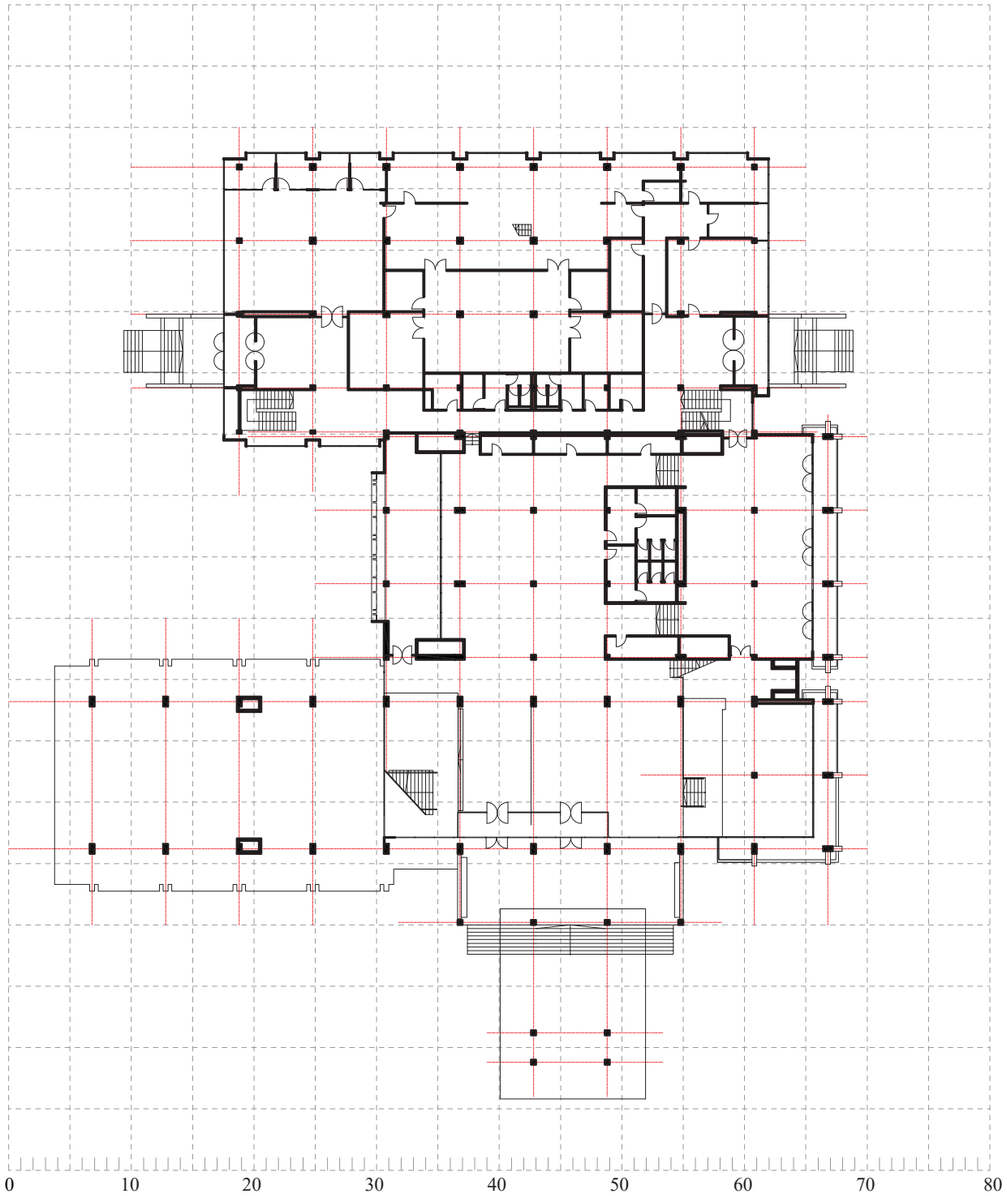
Macedonian Academy of Sciences and Art
Boris Cipan



Macedonian Academy of Sciences and Art
Boris Cipan

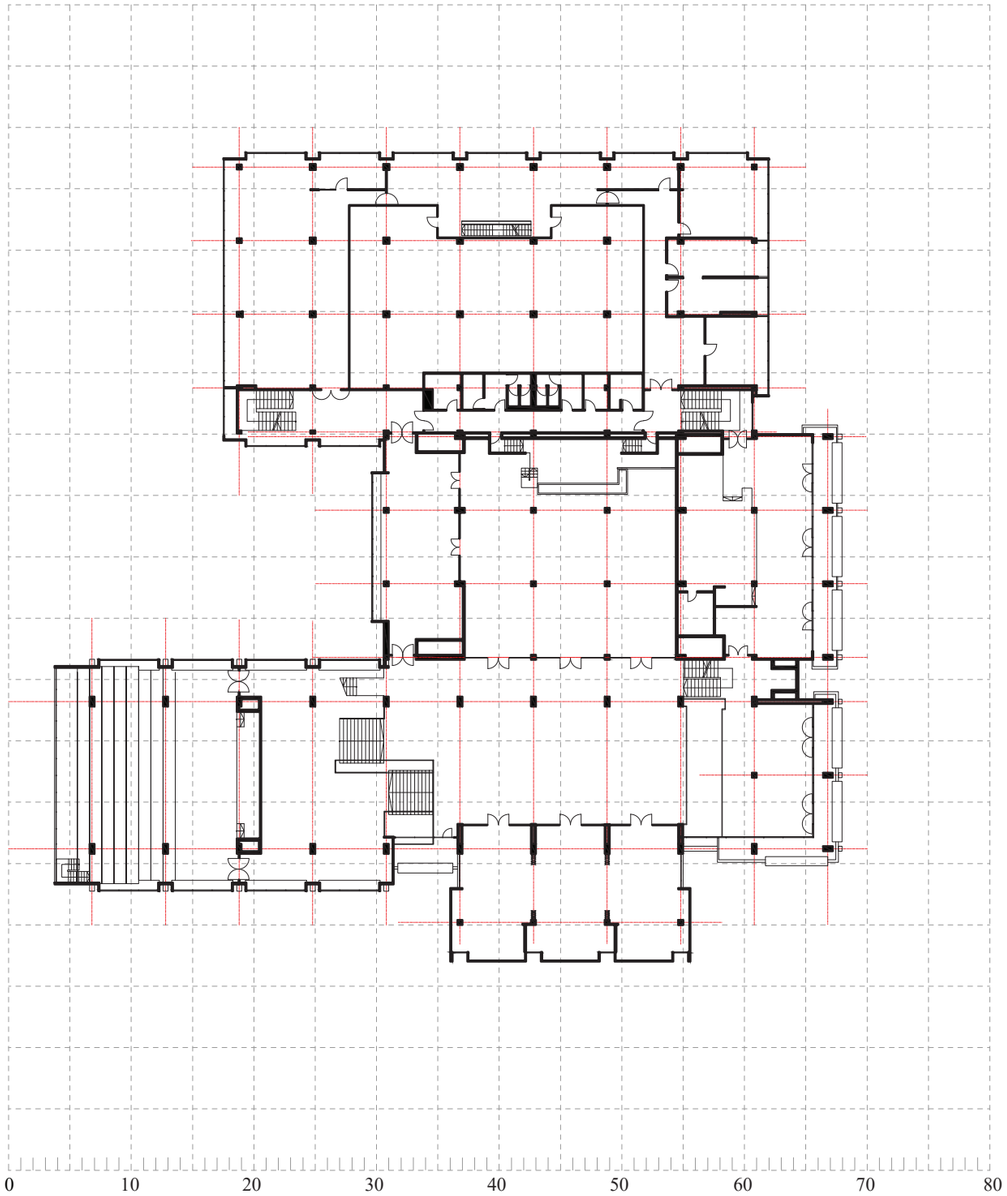


img. 01_Masterplan
Macedonian Academy of Sciences and Art

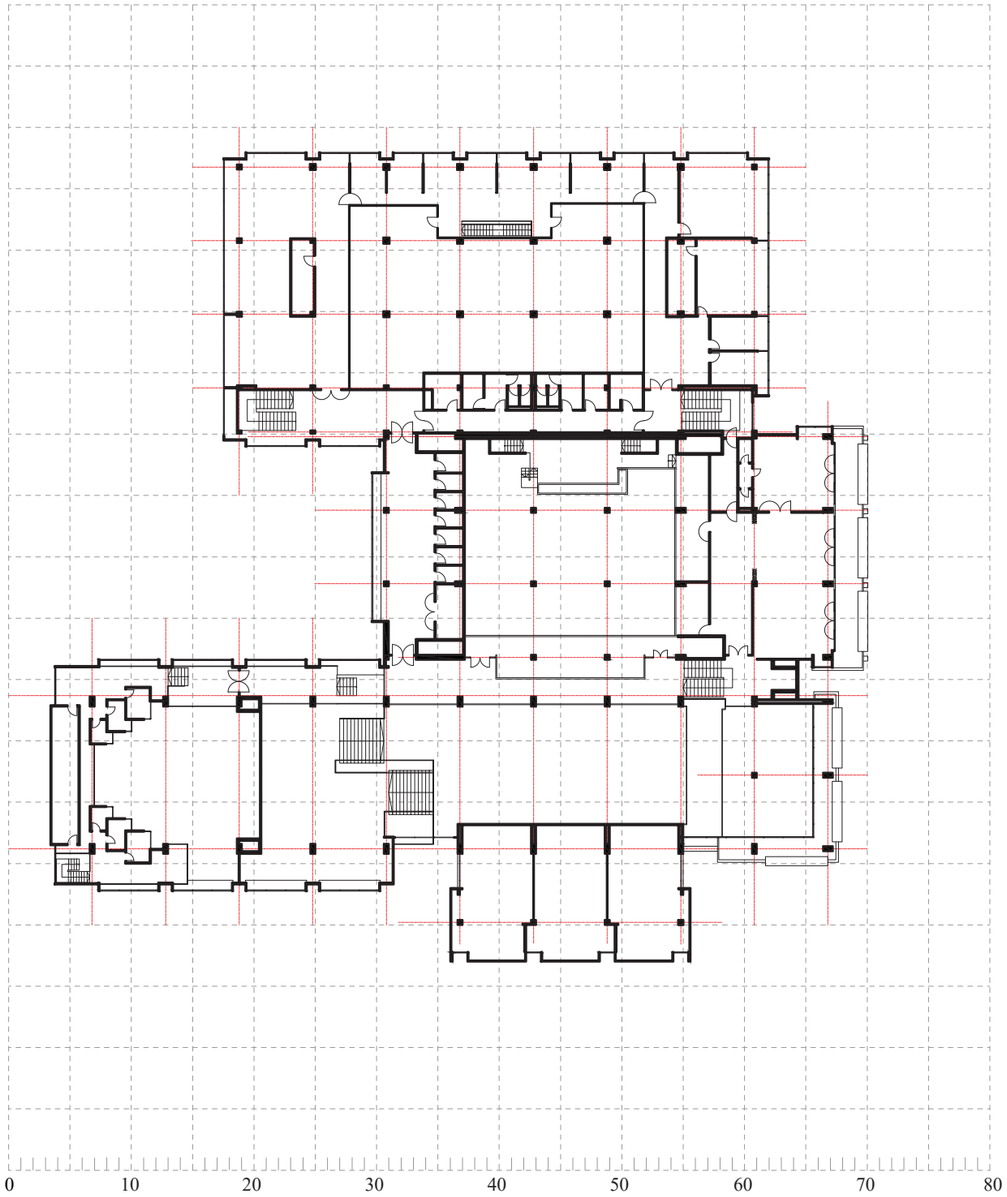


img. 02_Floor Plan
Macedonian Academy of Sciences and Art

Macedonian Academy of Sciences and Art
Boris Cipan

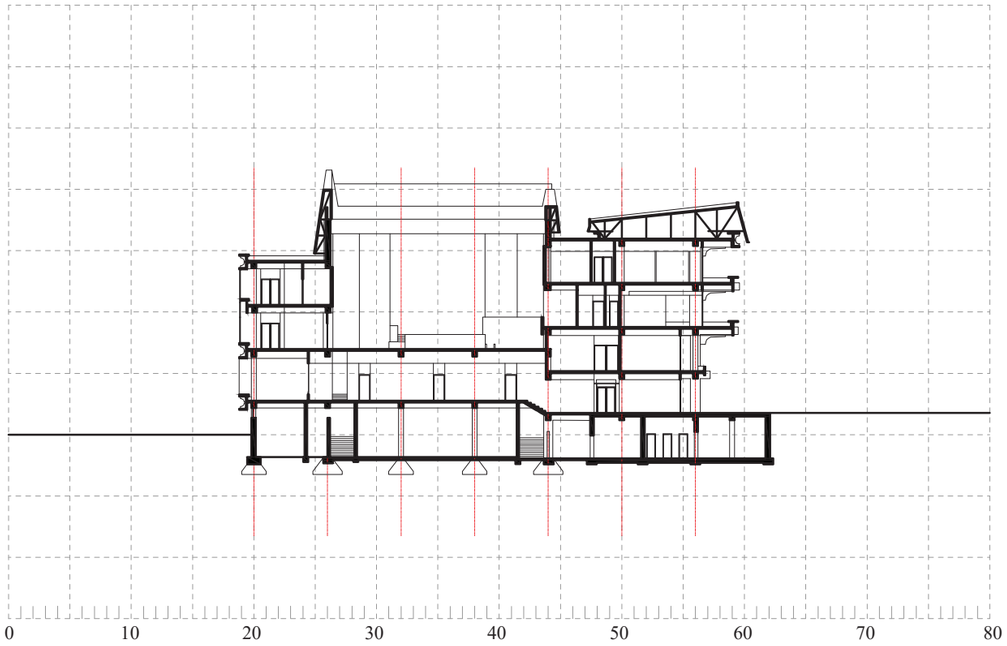


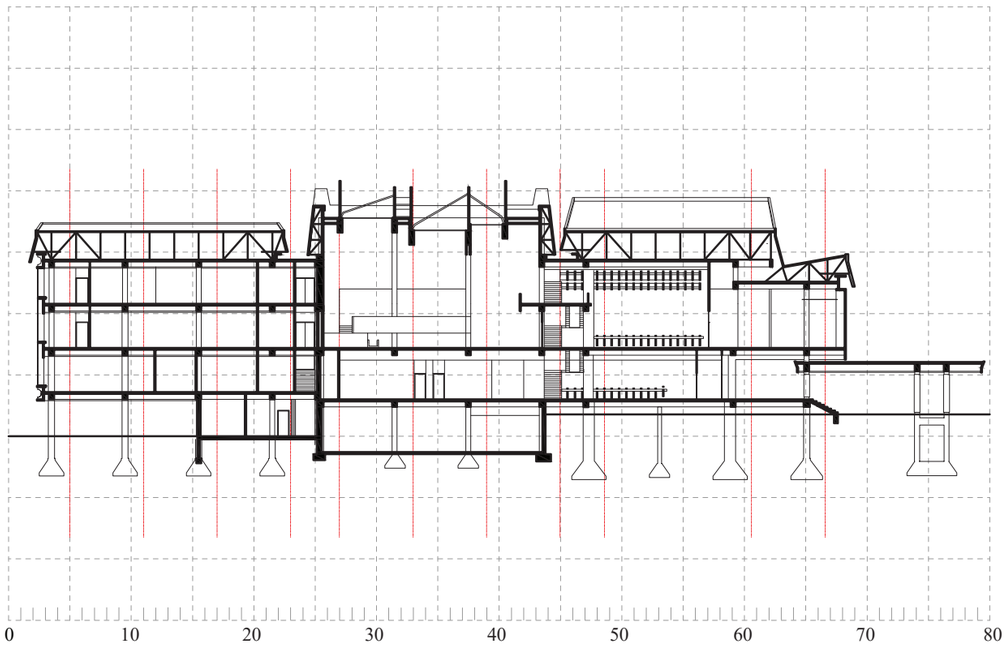
img. 03_Floor Plan
Macedonian Academy of Sciences and Art



img. 04_Floor Plan
Macedonian Academy of Sciences and Art

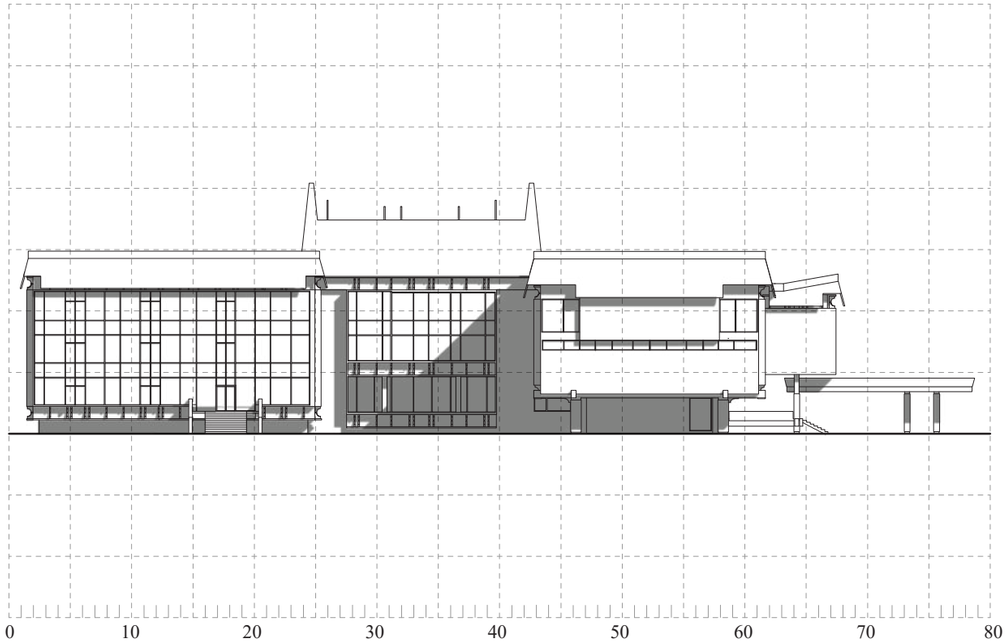
Macedonian Academy of Sciences and Art
Boris Cipan

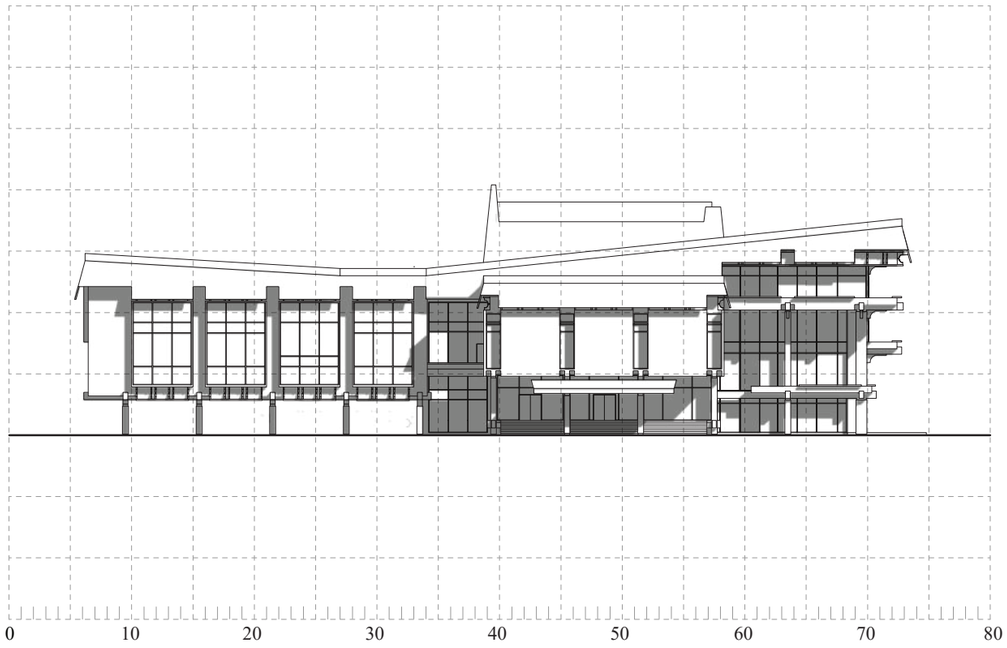




img. 05_Section
Macedonian Academy of Sciences and Art

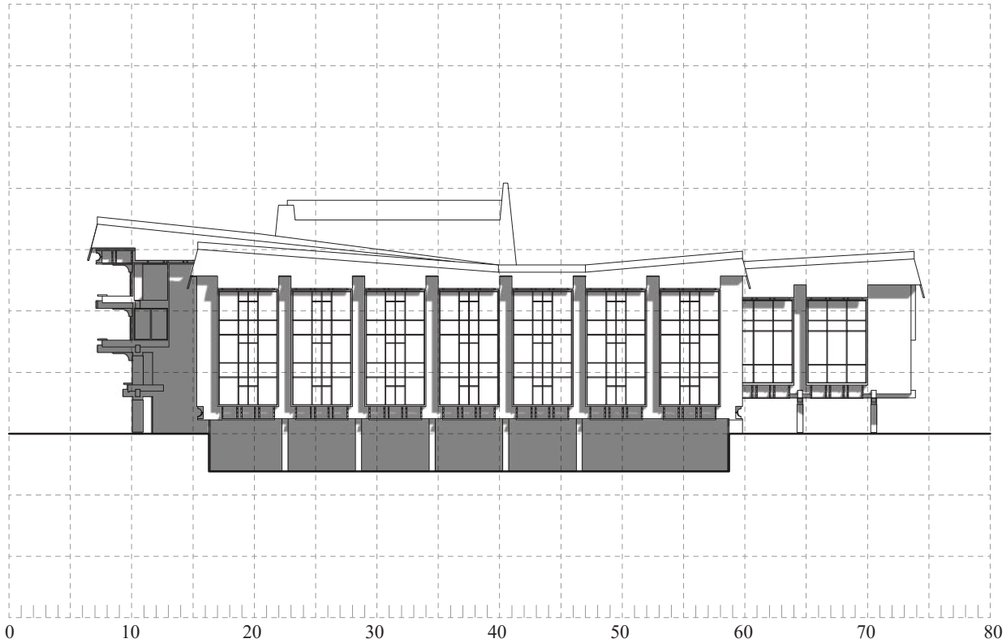
Macedonian Academy of Sciences and Art
Boris Cipan

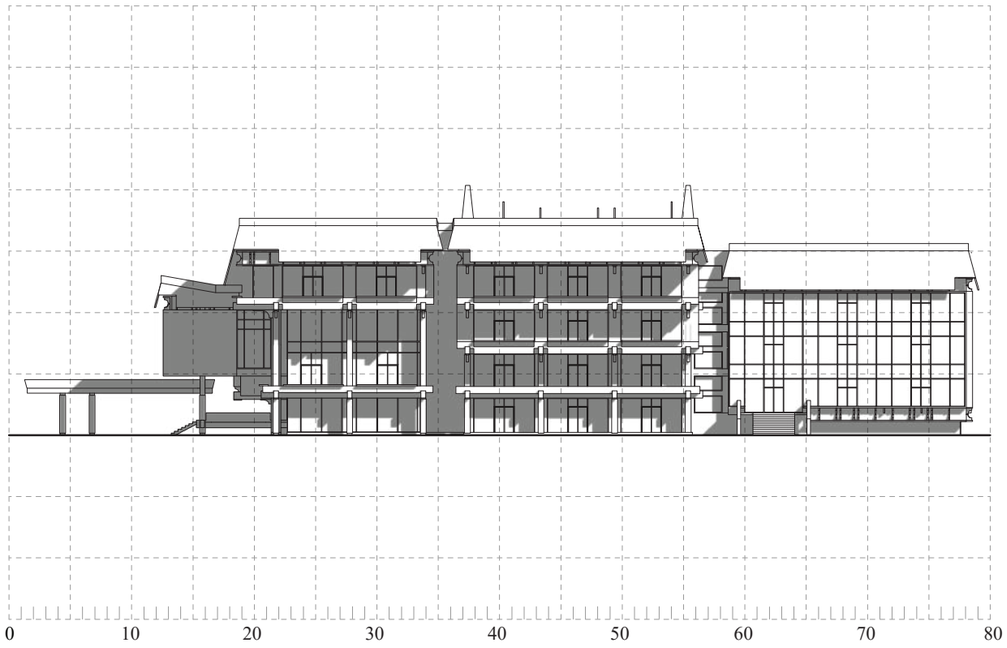




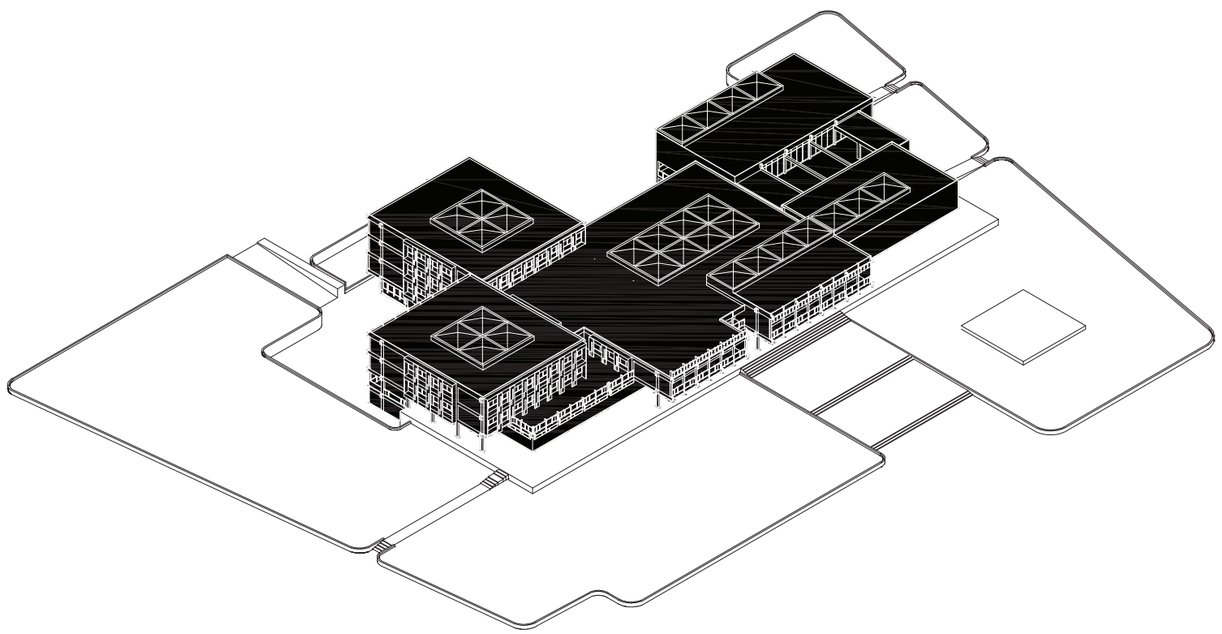
img. 06_Elevation
Macedonian Academy of Sciences and Art

Macedonian Academy of Sciences and Art
Boris Cipan

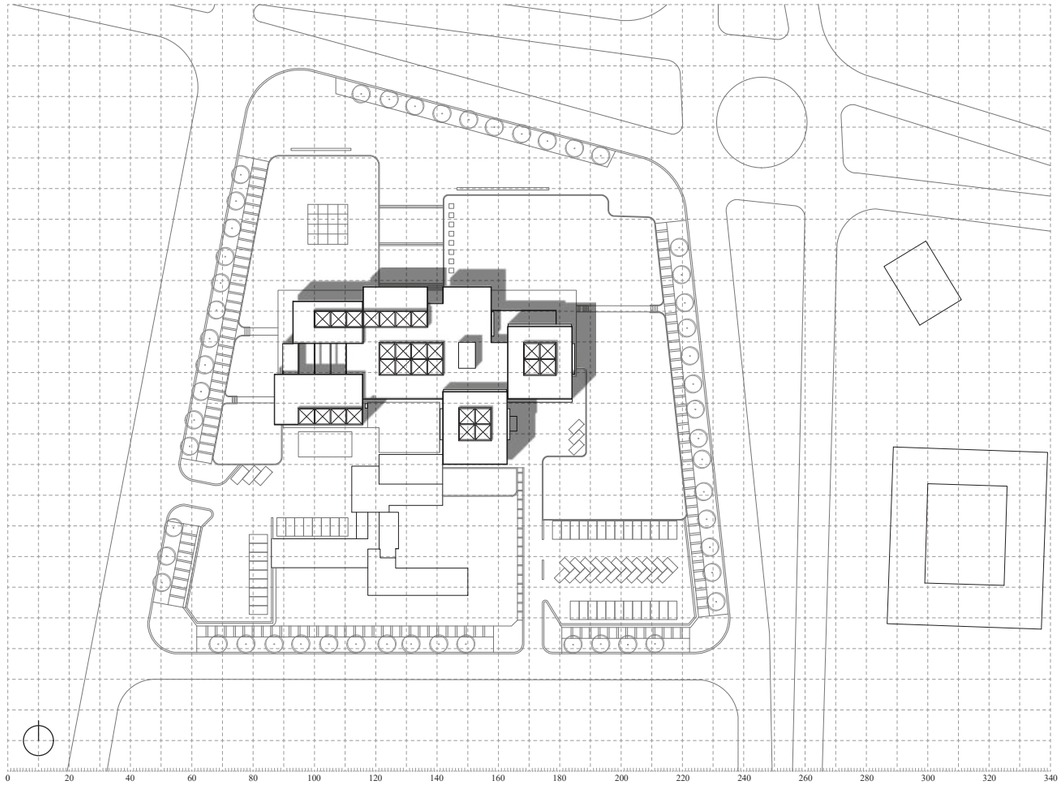




img. 07_Elevat
Macedonian Academy of Sciences and Art

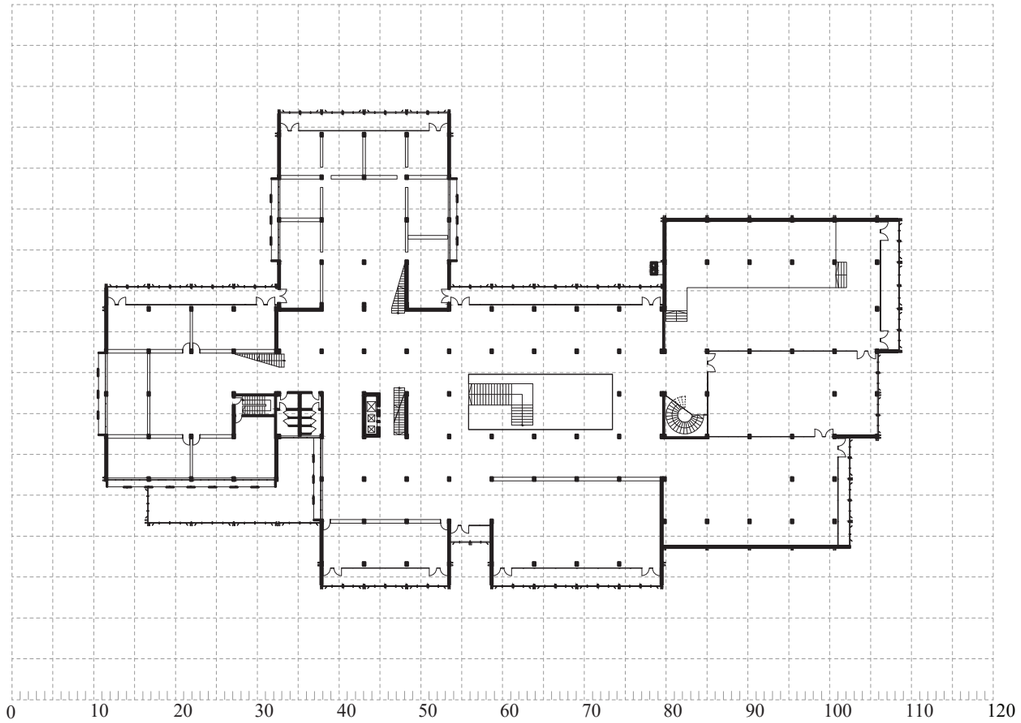


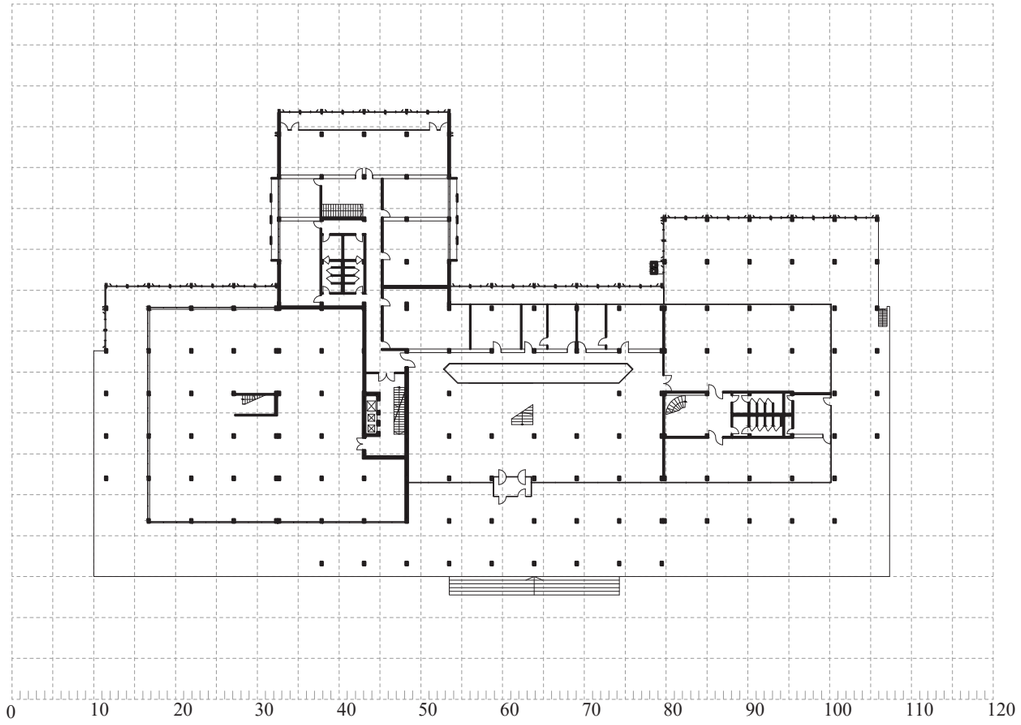
National and University Library
Petar Mulichkovski



img. 01_Masterplan
National and University Library

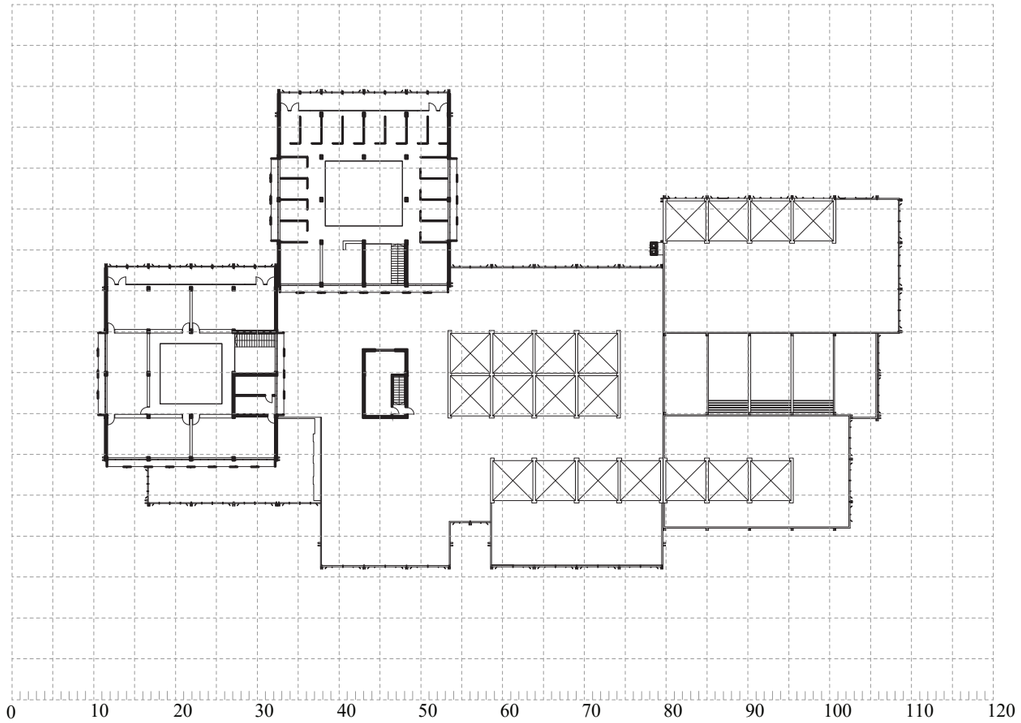
National and University Library
Petar Mulichkovski

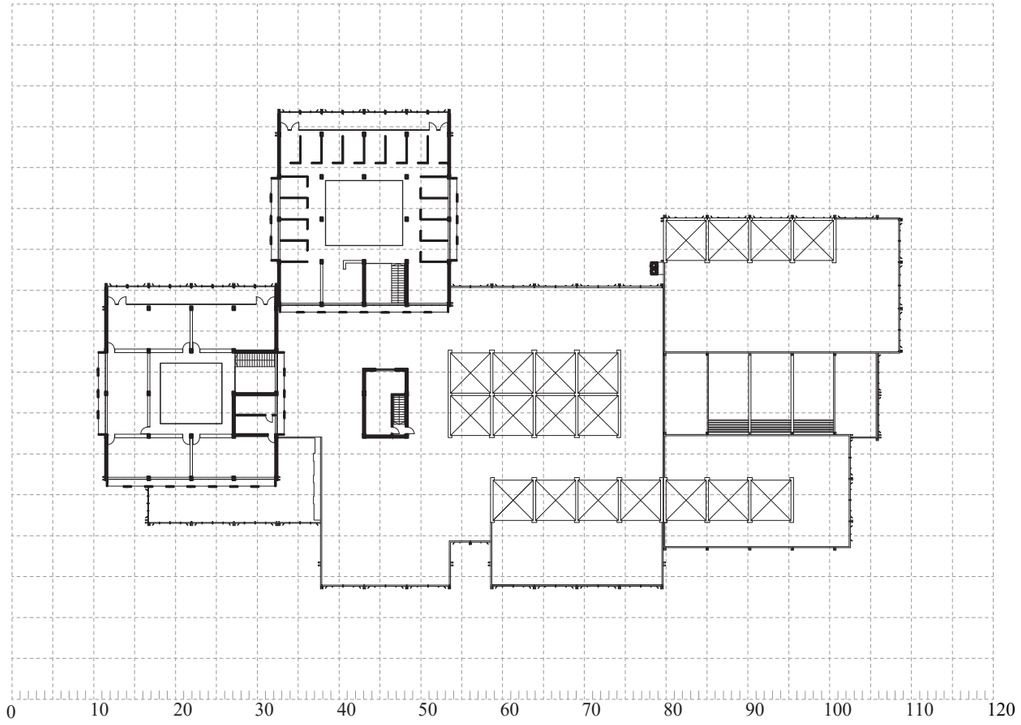




img. 02_Floor Plan
National and University Library

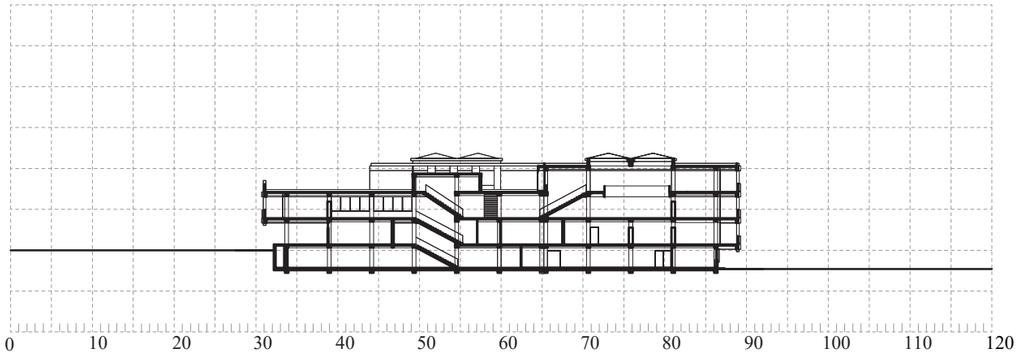
National and University Library
Petar Mulichkovski

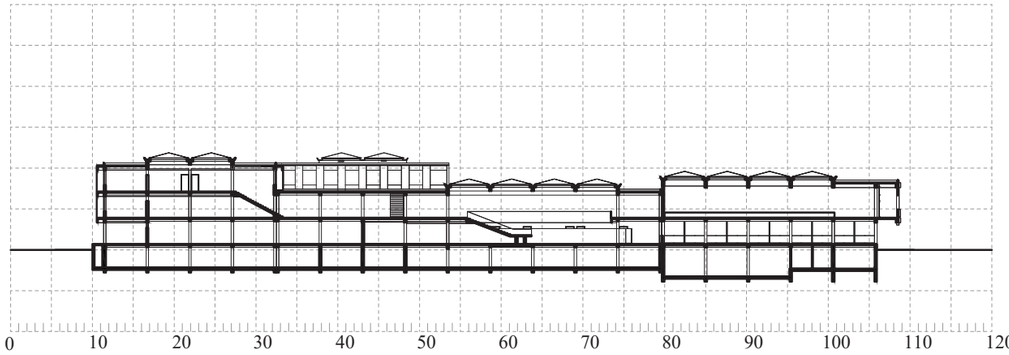


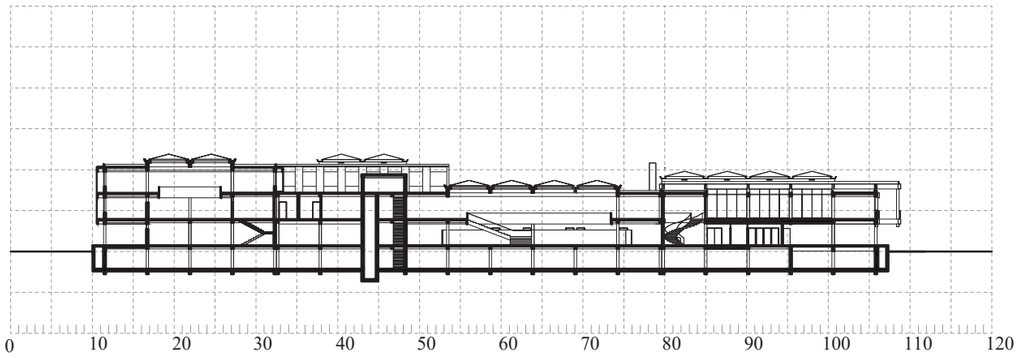


img. 03_Floor Plan
National and University Library

National and University Library
Petar Mulichkovski

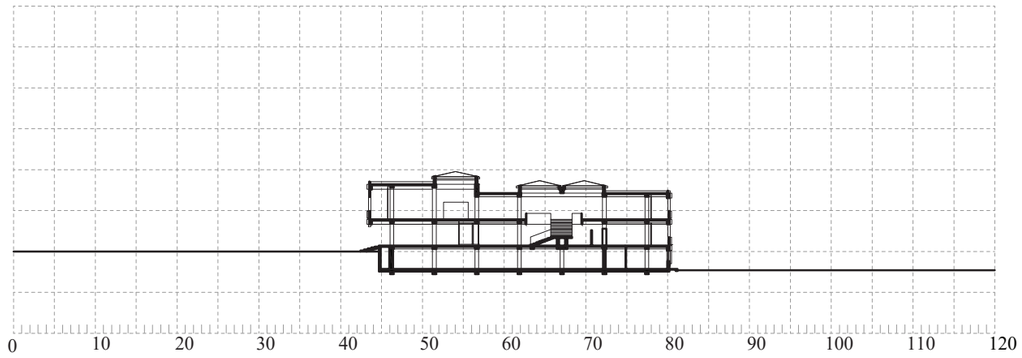






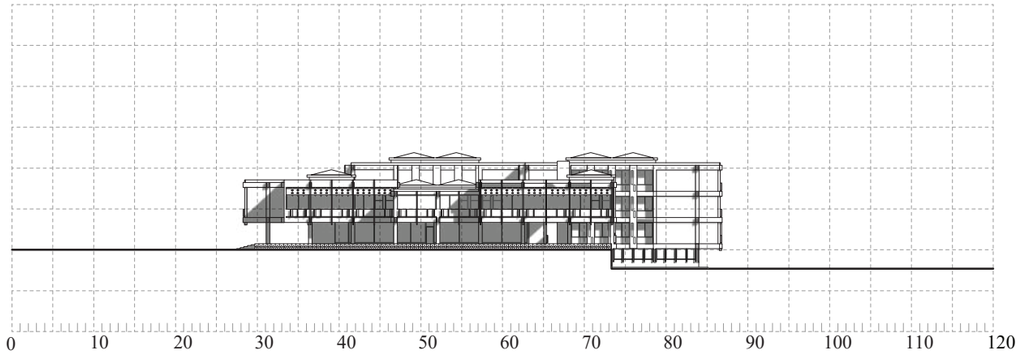
img. 04_Section
National and University Library

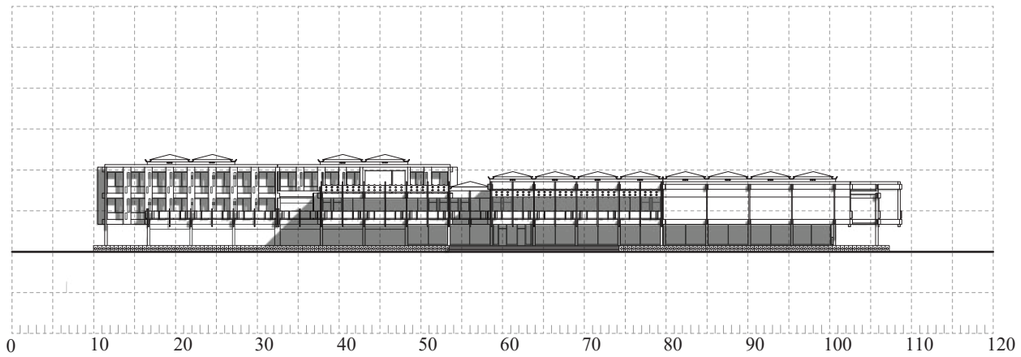
National and University Library
Petar Mulichkovski

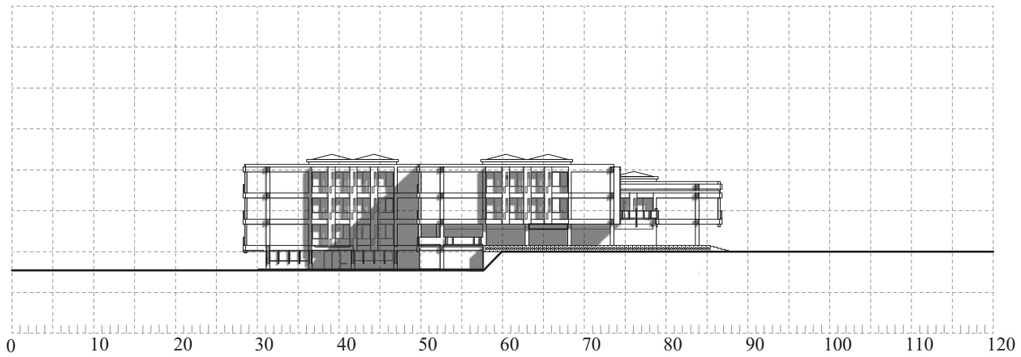


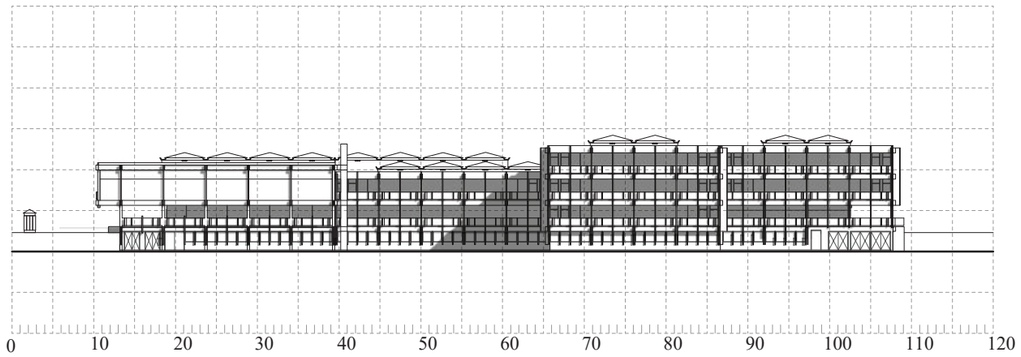
img. 05_Section
National and University Library

National and University Library
Petar Mulichkovski



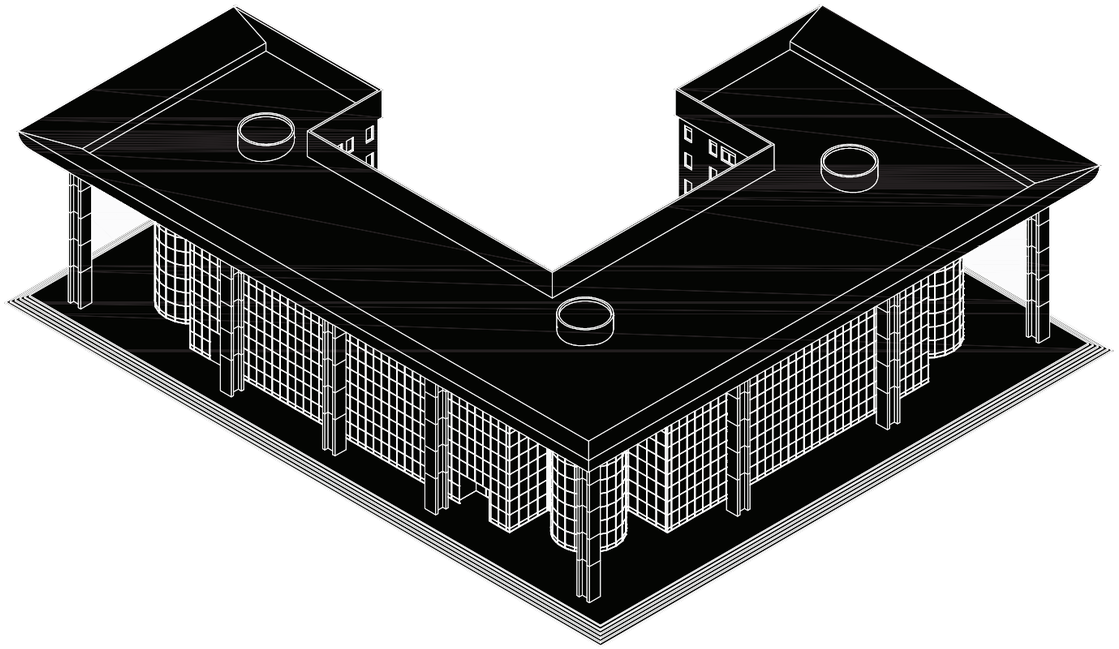


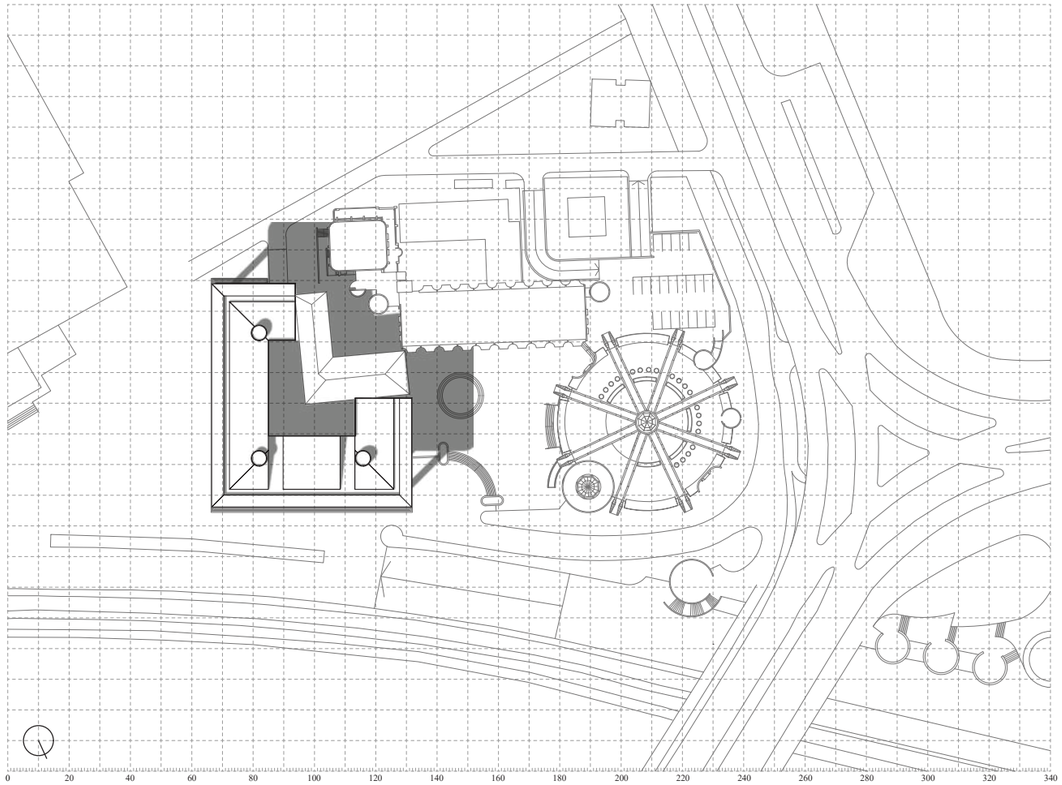




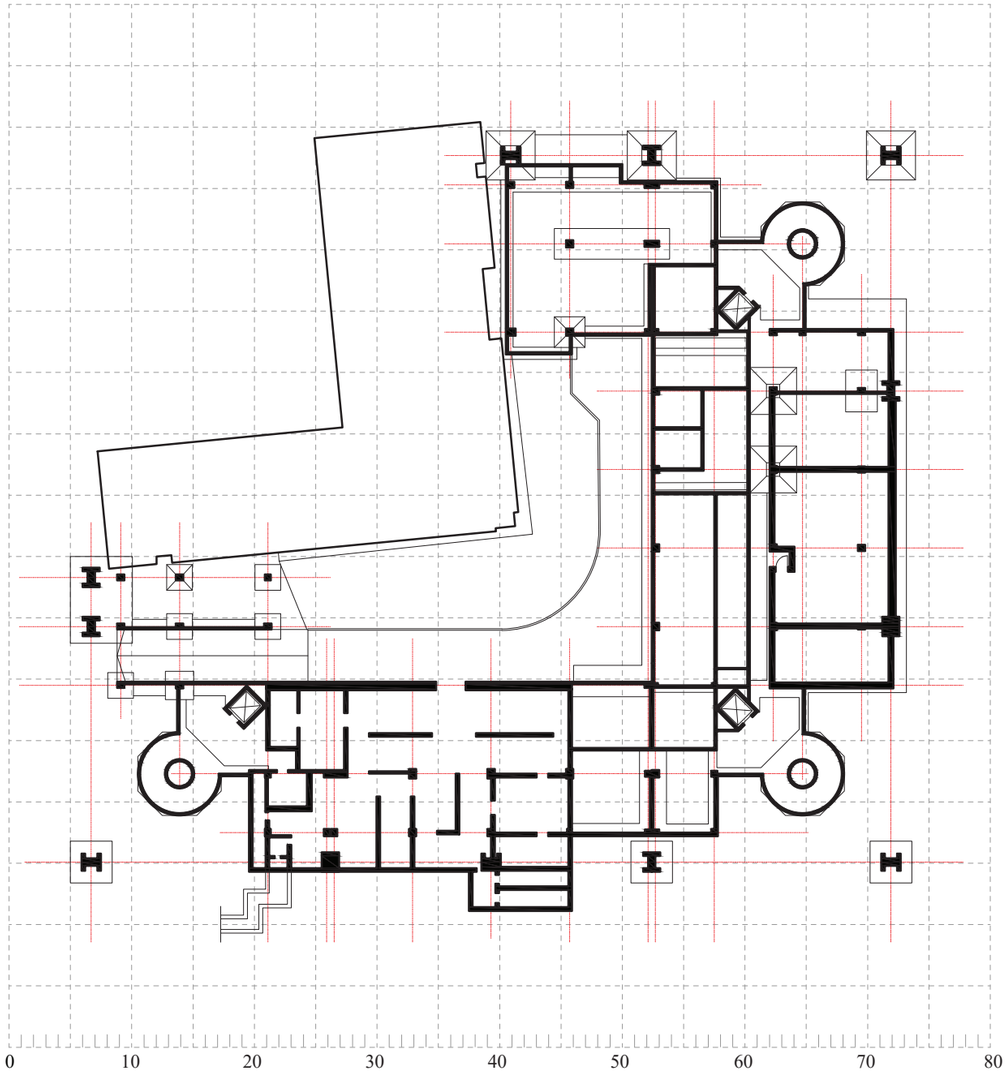
img. 06_Elevation
National and University Library

Republic Dispatch Center
Zoran Shtaklev



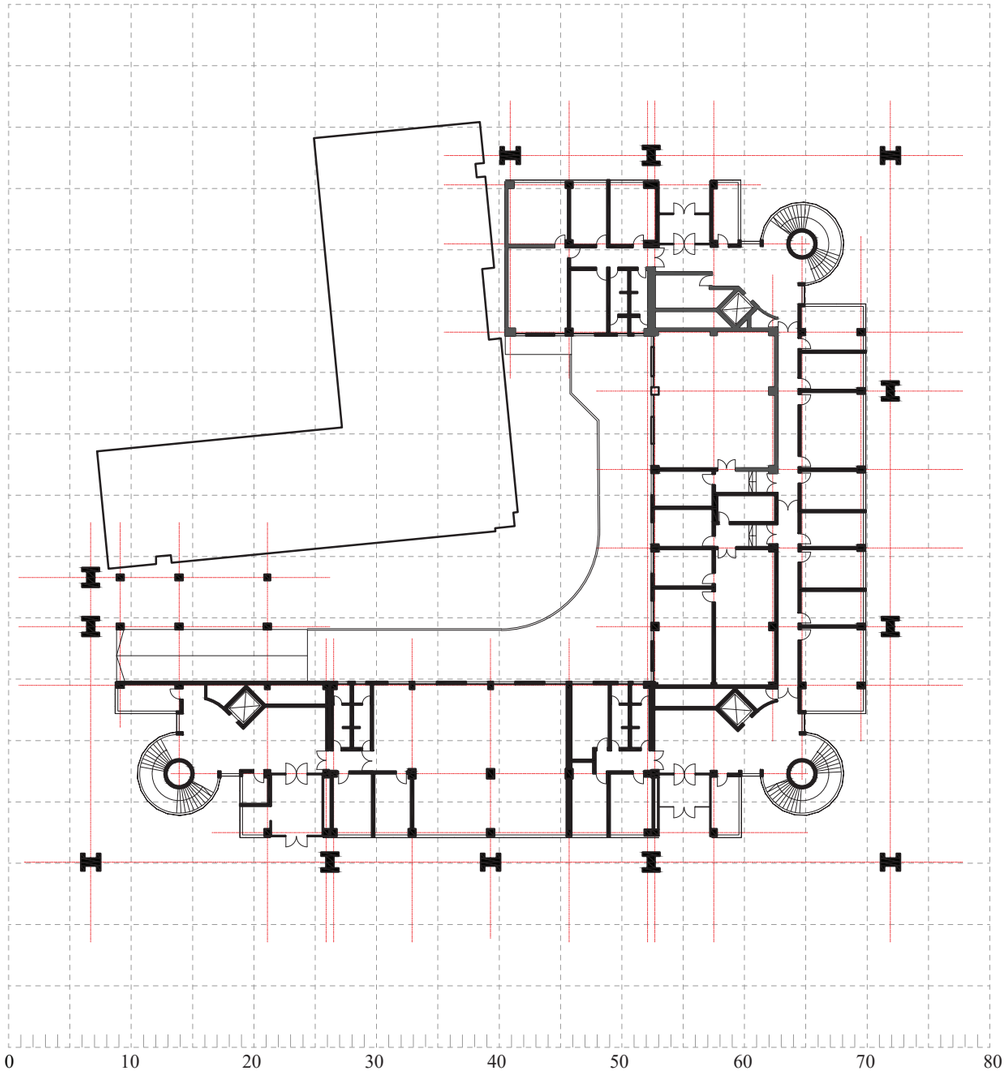


img. 01_Masterplan
Republic Dispatch Center

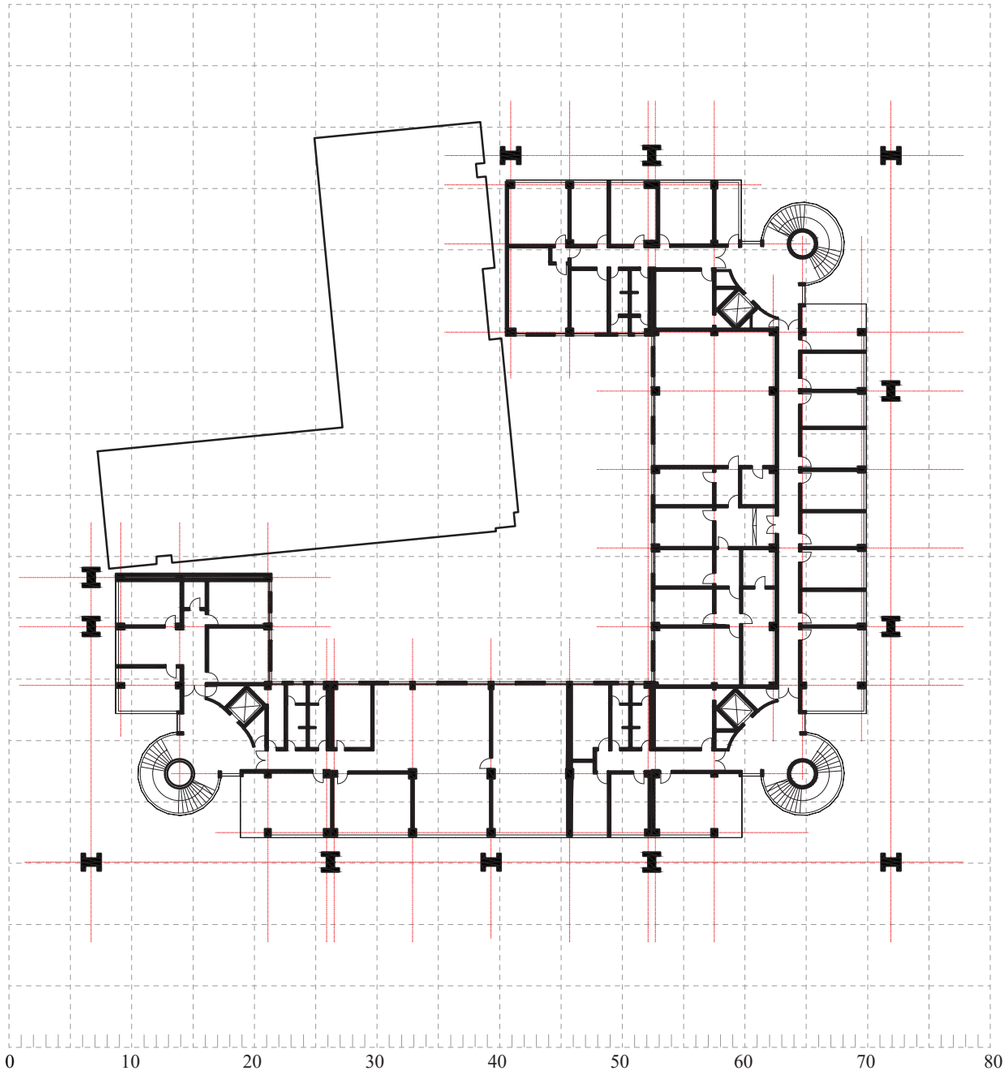


img. 02_Floor Plan
Republic Dispatch Center

Republic Dispatch Center
Zoran Shtaklev

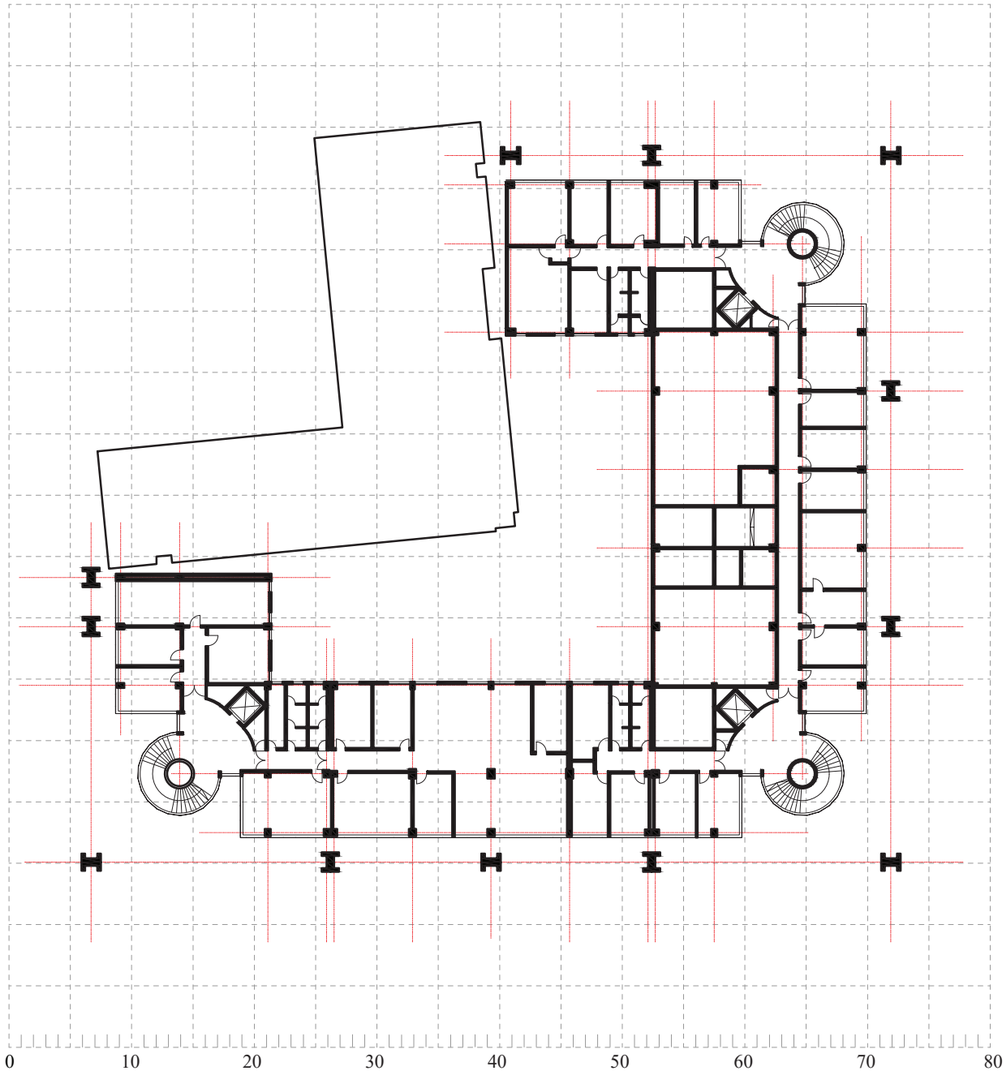


img. 03_Floor Plan
Republic Dispatch Center

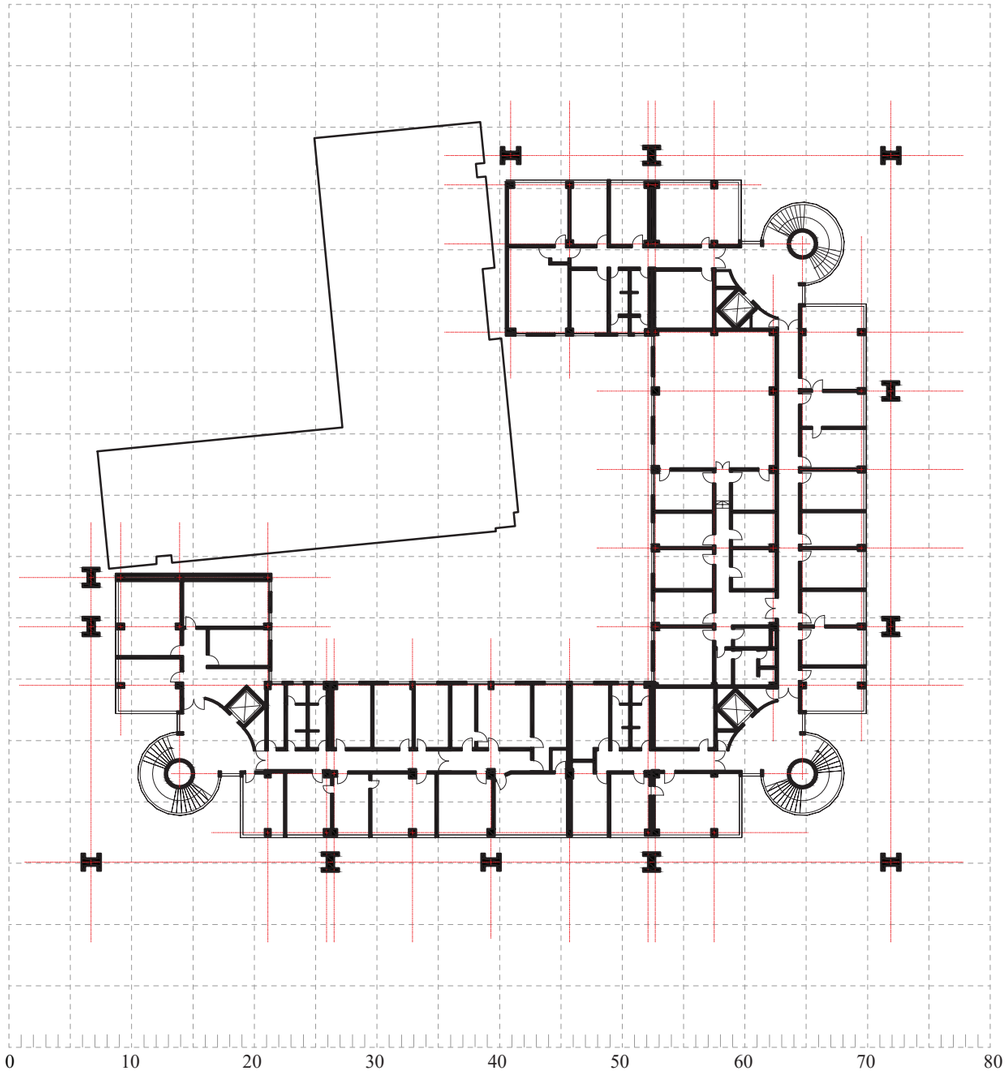


img. 04_Floor Plan
Republic Dispatch Center

Republic Dispatch Center
Zoran Shtaklev

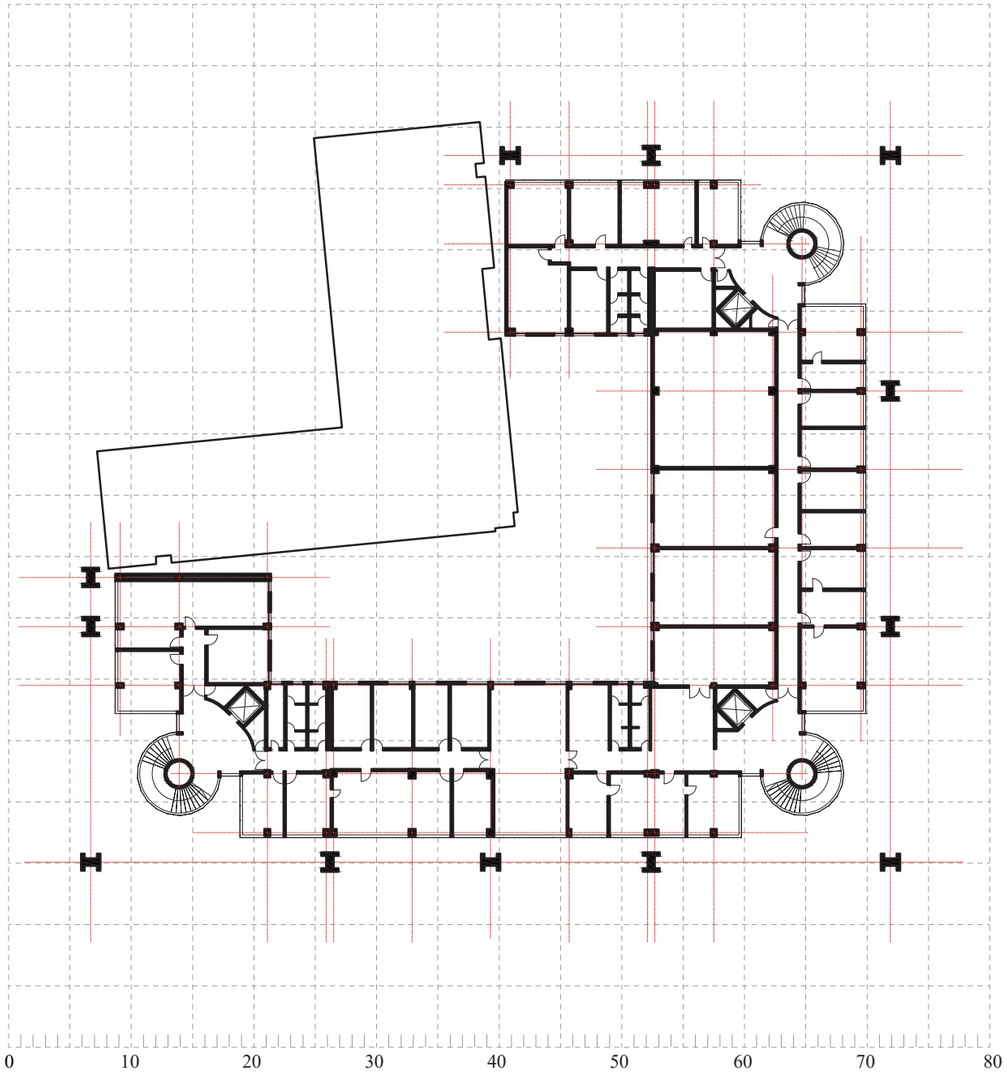


img. 05_Floor Plan
Republic Dispatch Center

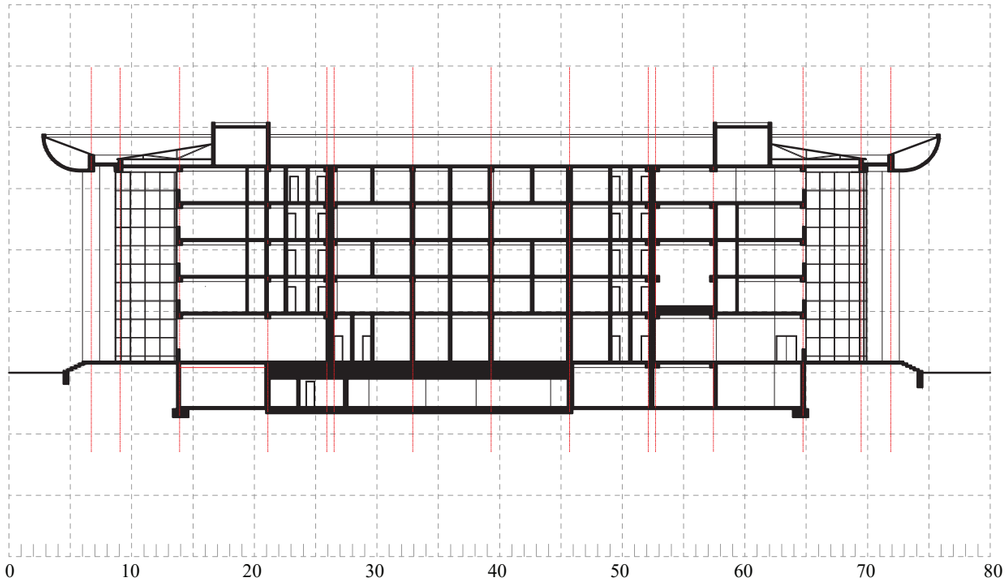


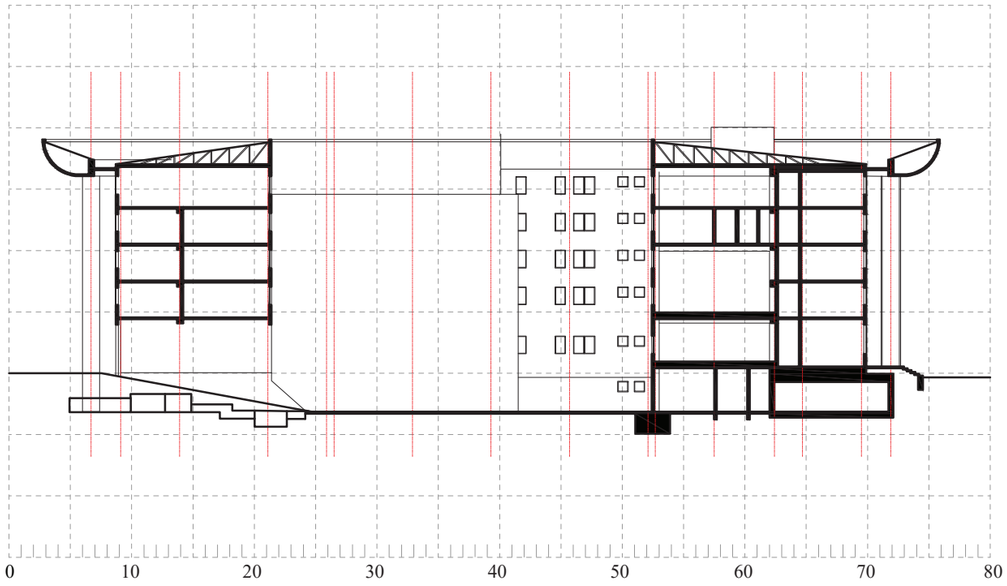
img. 06_Floor Plan
Republic Dispatch Center

Republic Dispatch Center
Zoran Shtaklev



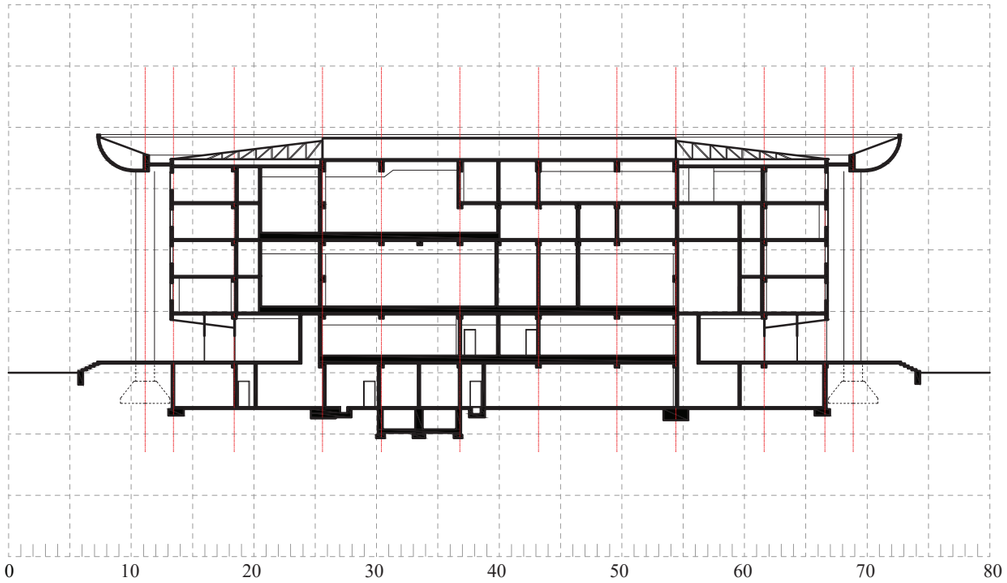
img. 07_Floor Plan
Republic Dispatch Center

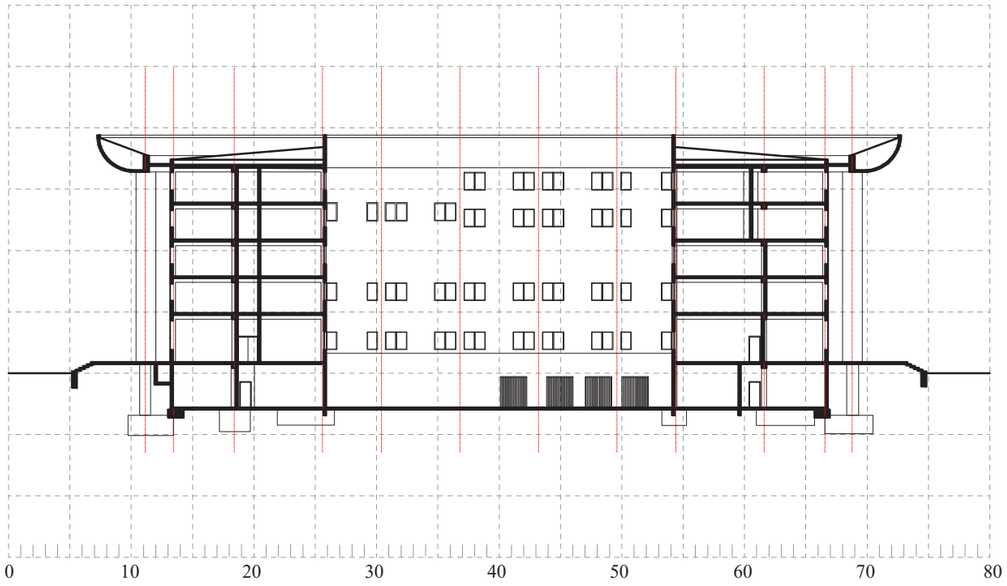




img. 08_Section
Republic Dispatch Center

Republic Dispatch Center
Zoran Shtaklev





img. 09_Section
Republic Dispatch Center