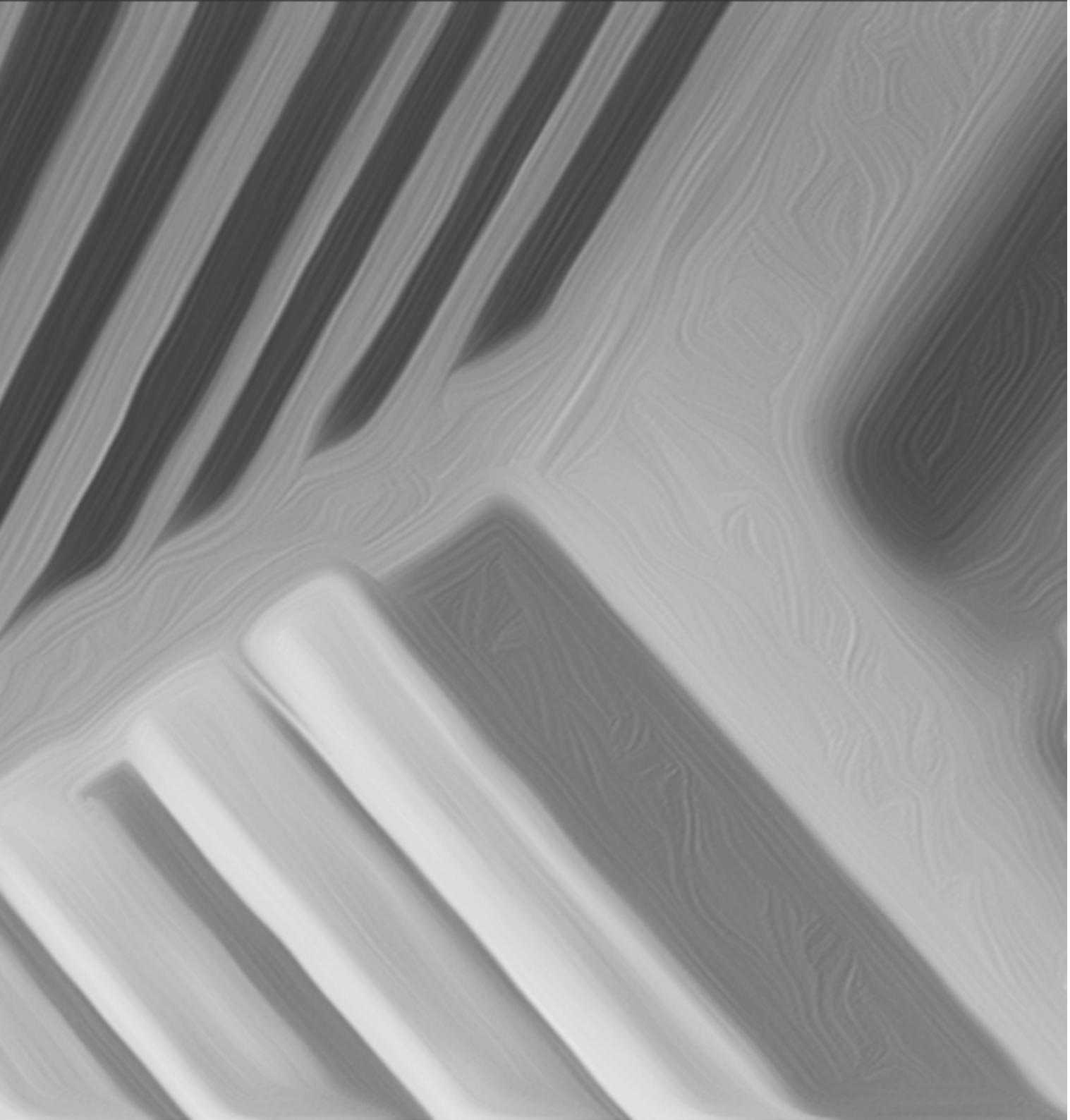


SENA KAYASÜ

ARCHITECTURAL PORTFOLIO

SENA KAYASÜ

Contact

senakayasu@gmail.com
+90 537 893 7820

Education

Cornell University || 2016 – 2018
M.A. in Historic Preservation and Planning
Bilkent University || 2011 – 2016
Bachelor of Architecture (B.Arch.)
*Highest GPA in the Class of 2016.

Honors

Pamela Mikus Graduate Fellowship || 2017
Bilkent University Merit Scholarship || 2014

Computer Skills

AutoCAD	●●●●●●	Revit	●●●●○○
Indesign	●●●●●●	ArcGIS	●●●●○○
Photoshop	●●●●●●	Illustrator	●●●○○○
Lumion	●●●●●○	3DS Max	●●○○○○
Sketchup	●●●●●○		

Languages

Bilingually proficient in Turkish and English
(TOEFL: 116 in November 2015)

Academic Conferences and Publications

Sustainable Development Goals and Heritage Conference || November 2019
Technische Universiteit Delft-LDE Conference
Paper: "*Implementing Global Sustainability Standards on the Local Scale: The Case of Tamirevi*" with S. Topaloğlu, published in the conference proceedings

Production of Climate Responsive Urban Built Environments || June 2019
Sabancı University Istanbul Policy Center Conference
Paper: "*Tamirevi: A Model Restoration Practice for Historic Houses in Mardin*" with S. Topaloğlu, published in the conference proceedings

Experience

Association for the Protection of Cultural Heritage (KMKD) || March 2019 – March 2020
Training Coordinator
TÜMAŞ || 2018 – February 2019
Conservation Architect
Cornell University Dpt. of City and Regional Planning || 2016 – 2018
Graduate Assistant
Cleveland Restoration Society || Summer 2017
Summer Intern
Bilkent University Department of Architecture || 2013 – 2016
Student Assistant

Projects, Awards & Exhibitions

Southern Marmara Islands Book Redaction (English) || 2020
Dolmabahçe Palace Crystal Room Report Translation || 2020
Digitization of "Syriac" Measured Field Drawings || 2019
TSMD Architectural Center Students' Projects Exhibition: "Steps" || 2015

TABLE OF CONTENTS

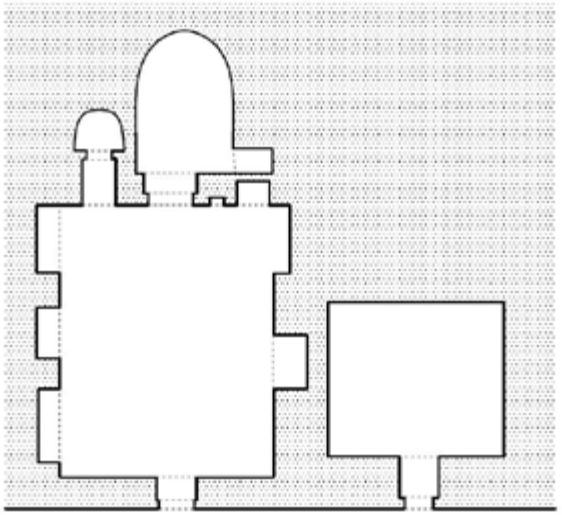
1

SYRIAC: ARCHITECTURAL HERITAGE UNDER RISK

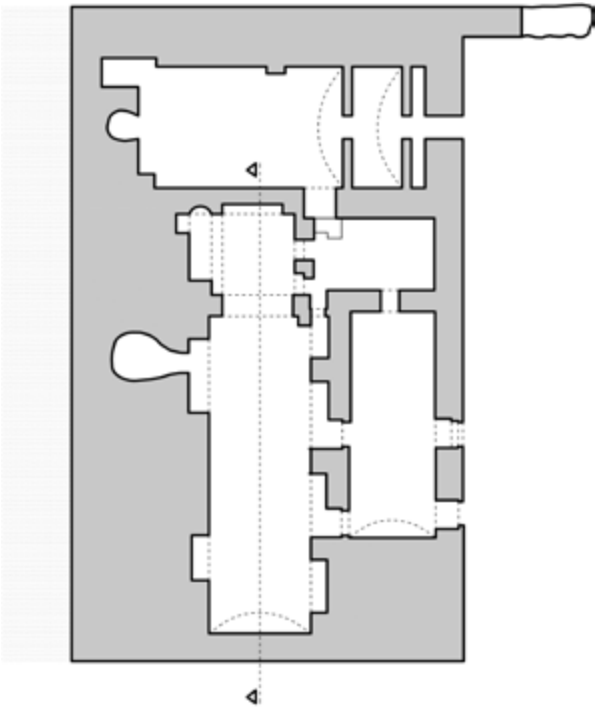
KMKD, 2019-2020
Publication
Tur ‘Abdin, Turkey

I completed 70 architectural drawings for the publication called “Syriac: Architectural Heritage Under Risk in Tur ‘Abdin." I primarily used AutoCAD and Adobe Photoshop to create the final documents (pending publication).

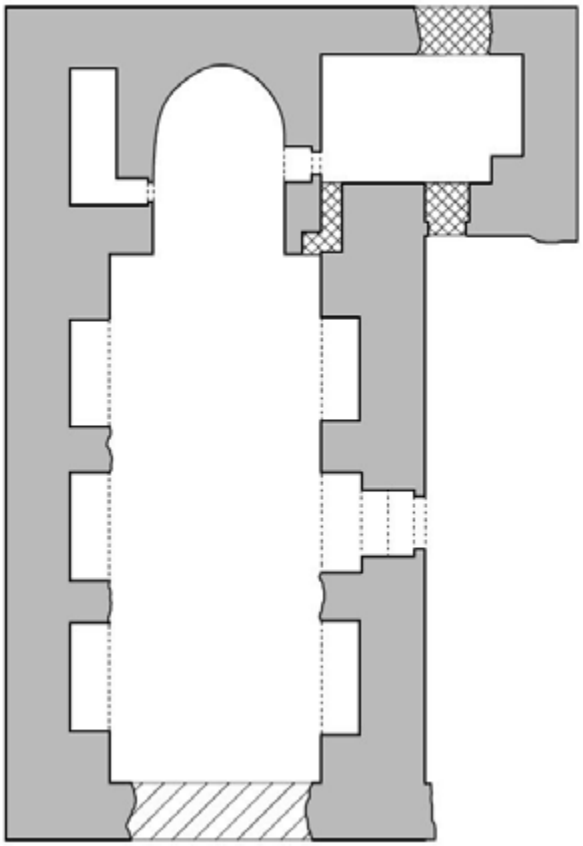
I also wrote 3 of the building-specific risk analysis reports in this book, after having participated in the field survey.



MOR DIMET CHURCH, MARDIN



ITO 40 SUHDE, MARDIN



MOR SHEMUNI CHURCH, MARDIN

2

TAMIREVI

KMKD, 2019
Adaptive Reuse/Enegy Efficiency
Mardin, Turkey

Tamirevi was an abandoned, designated stone house in the historic city of Mardin. It was chosen to host a permanent exhibition on energy-efficient conservation on the lower floor, with a rotating artist's residency on the upper floor. To lead by example, the restoration project was also designed to environmentally sustainable.

The restoration project began in mid-2018; Tamirevi opened in October 2020. While I joined the project in the later stages, I contributed to the project's final oversight and the design of the exhibition. I also coordinated multiple conservation trainings on site during construction, and was involved in obtaining the A-level energy identification certificate following completion.

INTERIOR - FOYER

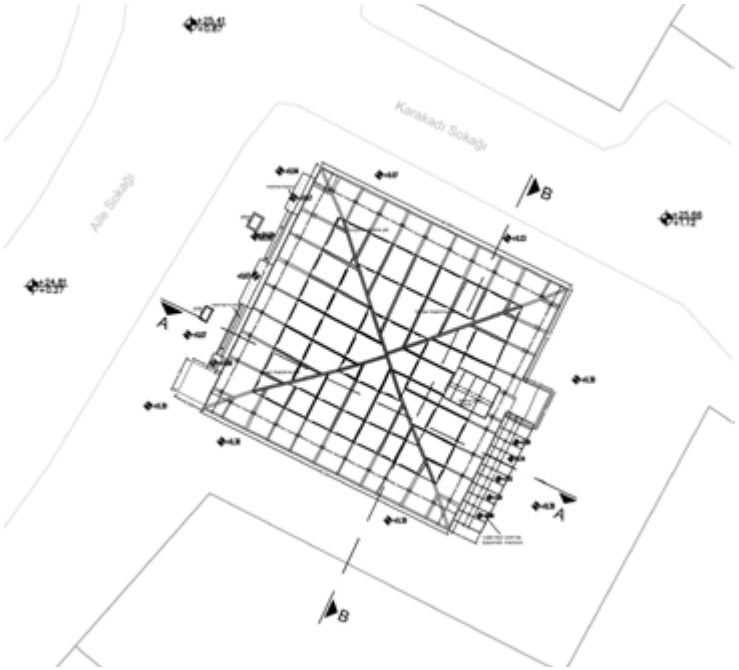
FRONT FACADE

3

NEVSEHIRLI DAMAT IBRAHIM CISTERN

TUMAS, 2018
Restoration Project
Eyup, İstanbul

ROOF VIEW

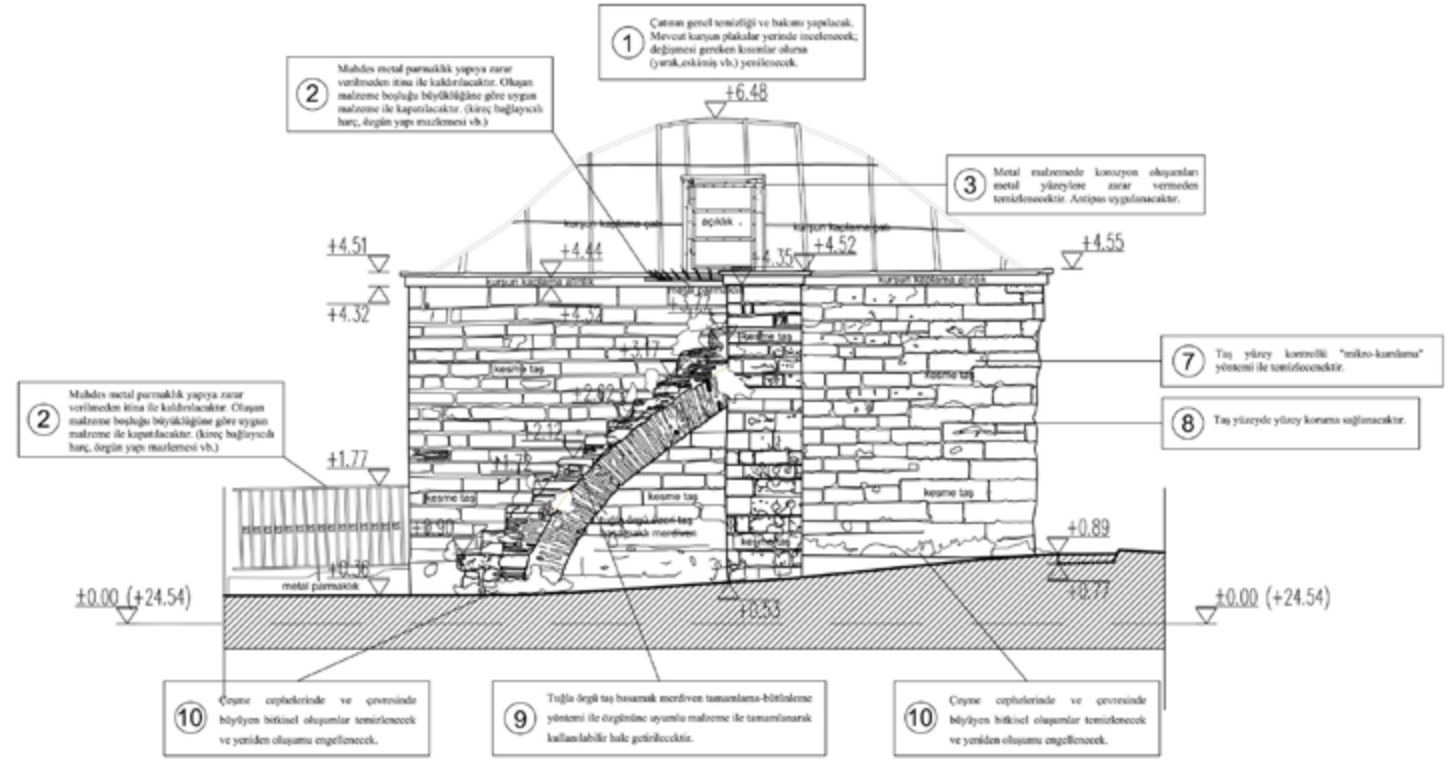


ROOF PLAN - RESTITUTION

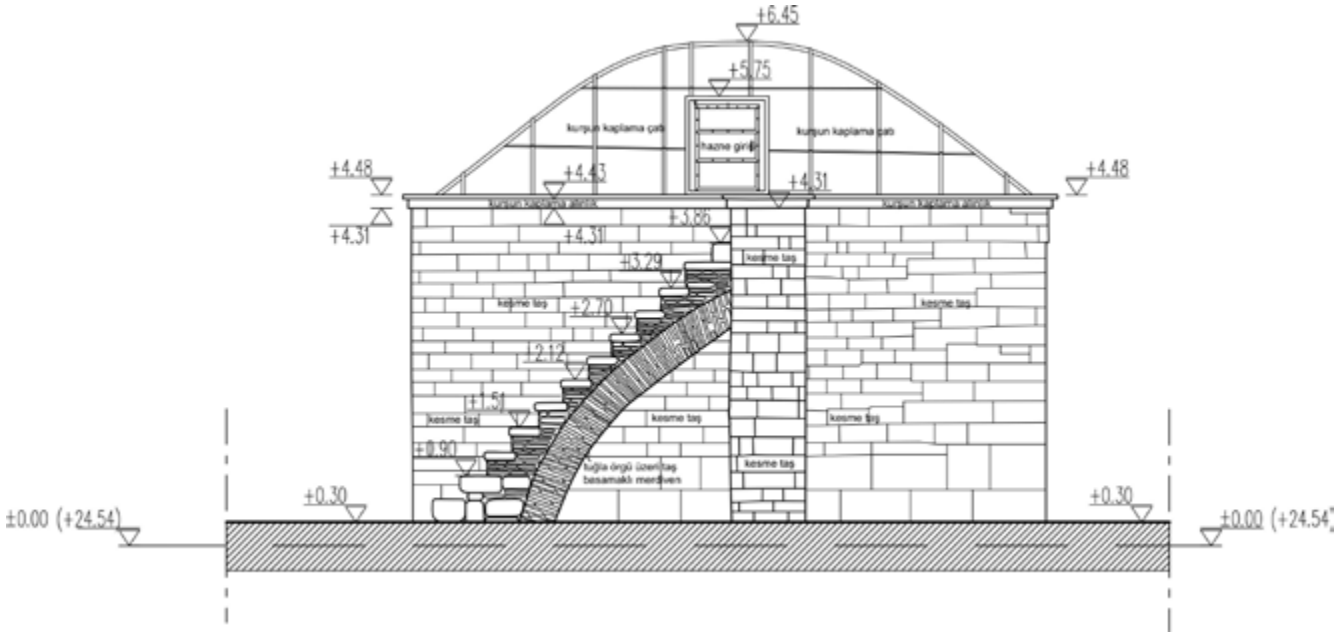
Smaller historical cisterns in İstanbul are generally in need of repair, since the modern water mains have left them out of use. We were commissioned to document this 19th century-structure's current condition, as well to provide restitution drawings and an appropriate set of interventions.

I created all working drawings for the back facade and roof plan using point cloud data obtained by laser scanning, and Autodesk AutoCAD.

FRONT VIEW



BACK FACADE-
SUGGESTIONS



BACK FACADE-
RESTITUTION

4

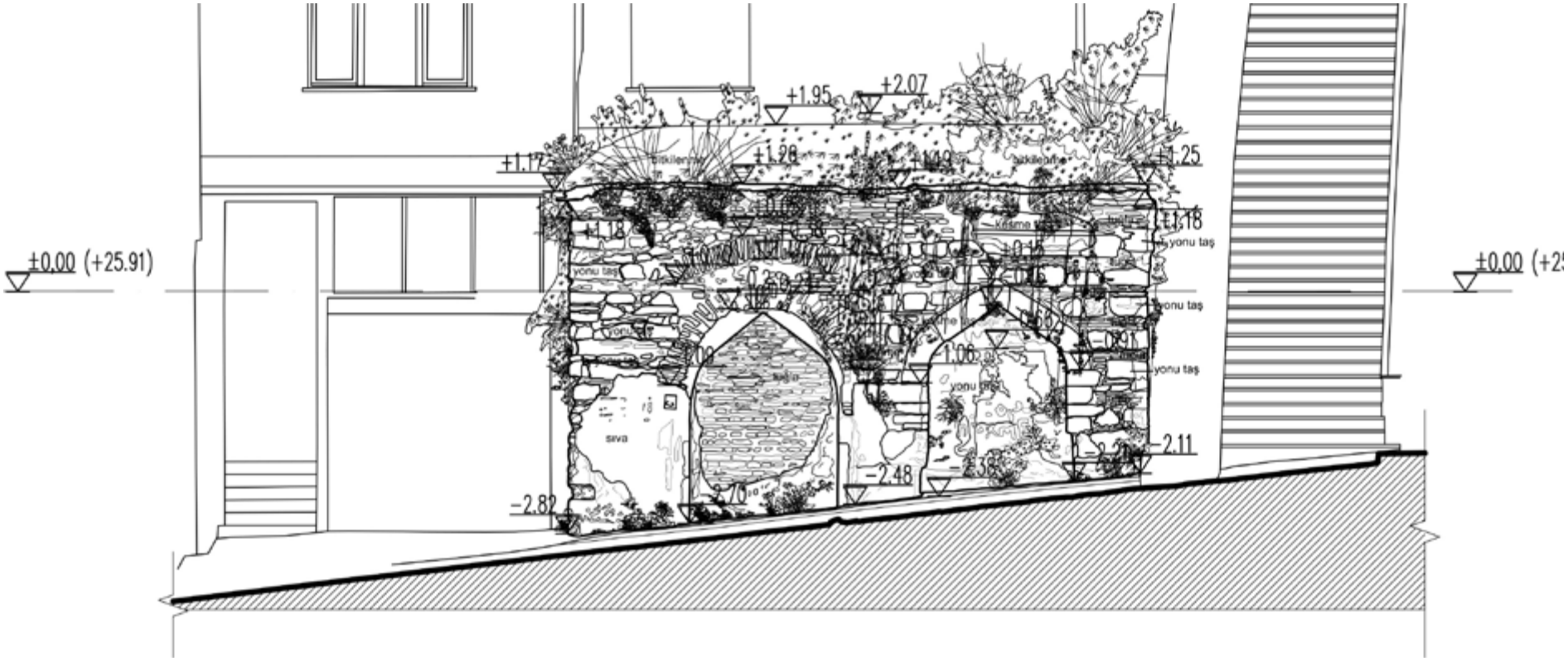
IKILULELI CISTERN

TUMAS, 2019
Restoration Project
Fatih, İstanbul

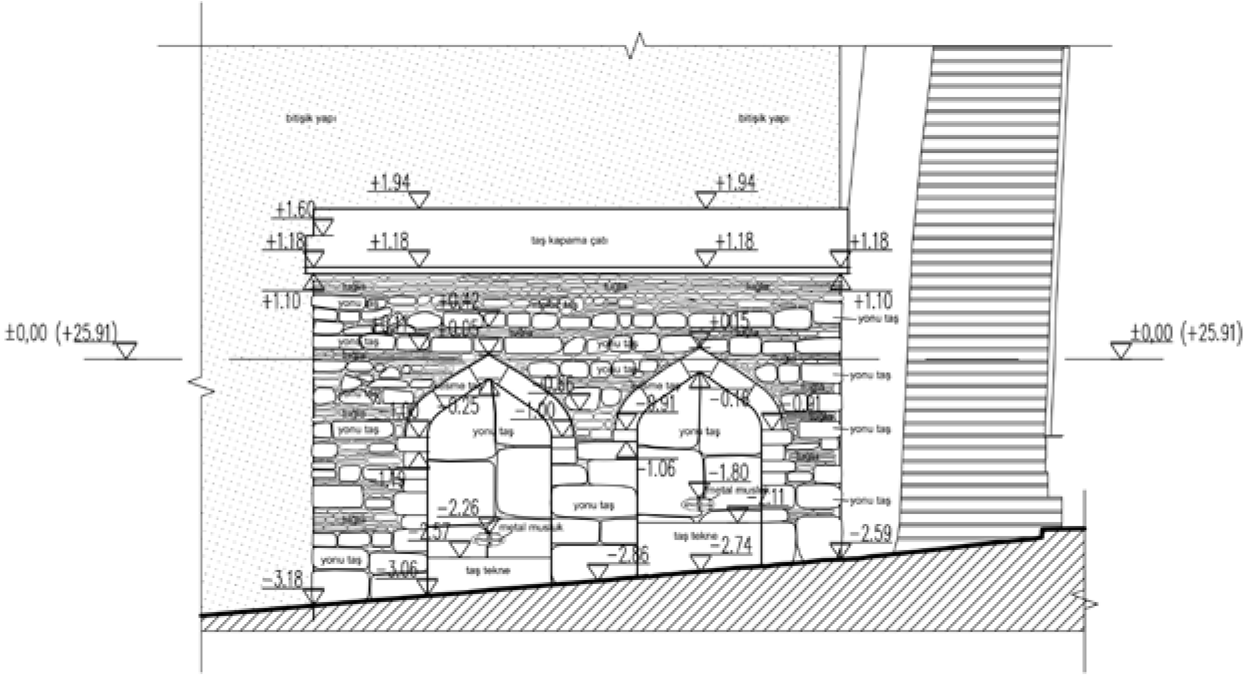
The project of this 18th-century cistern included documenting its current condition, preparing restitution drawings reflecting the original structure, and making suggestions for its restoration.

I created all working drawings for the front facade, the plan and top view, as well as structural details using point cloud data obtained by laser scanning. I also prepared the final layout for submission using AutoCAD.

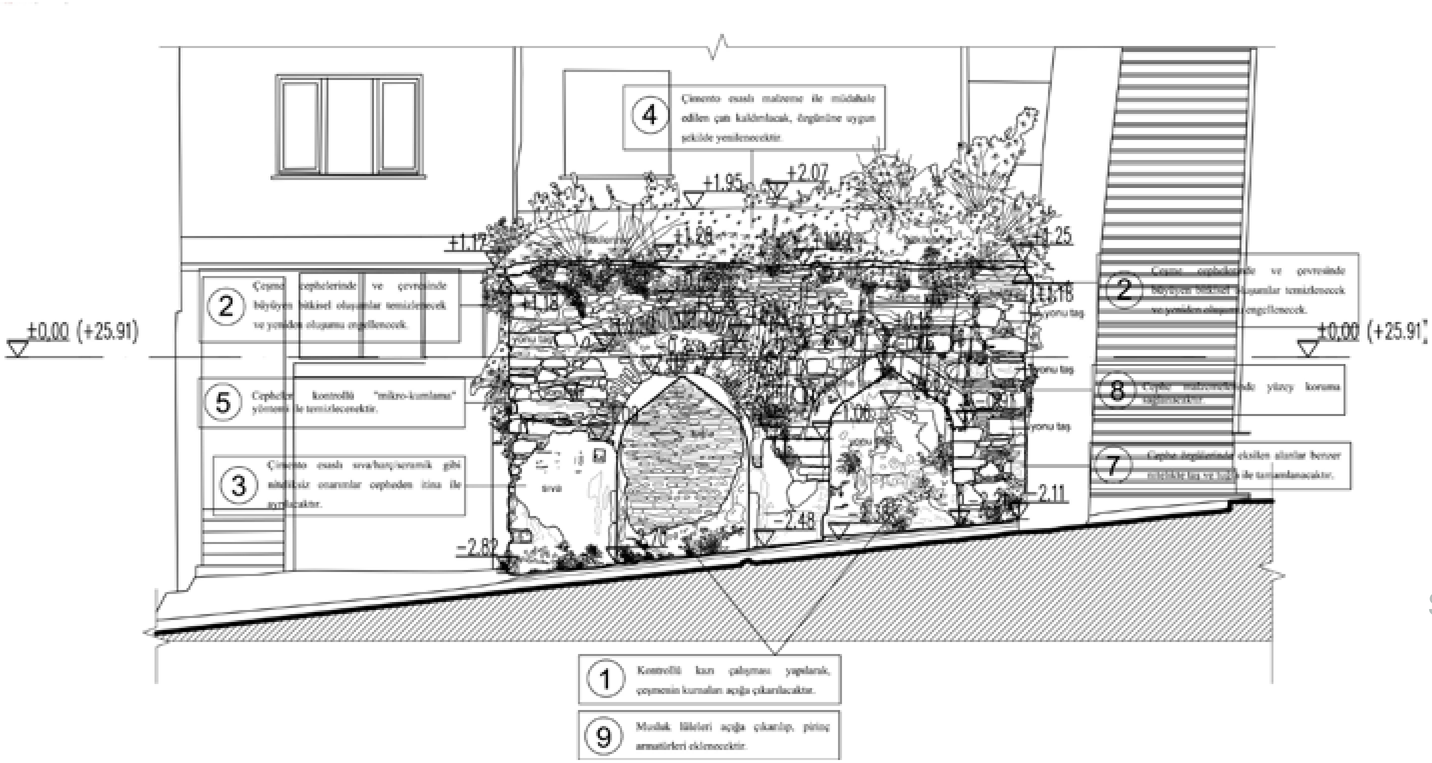
FRONT FACADE



INITIAL DRAWING



RESTITUTION DRAWING



SUGGESTED INTERVENTIONS

5

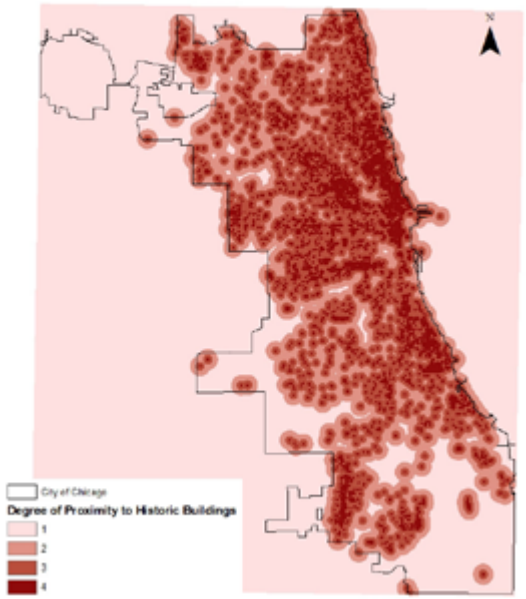
BROWNFIELD REVITALIZATION ANALYSIS

Cornell University, 2017
CRP 5080 Final Project
Chicago, Illinois

Sustainable brownfield redevelopment is critical for urban infill and profitable urban growth in Chicago. Using ArcGIS, I carried out a suitability study for the revitalization of brownfields as adaptive reuse projects in the City of Chicago, 2017.

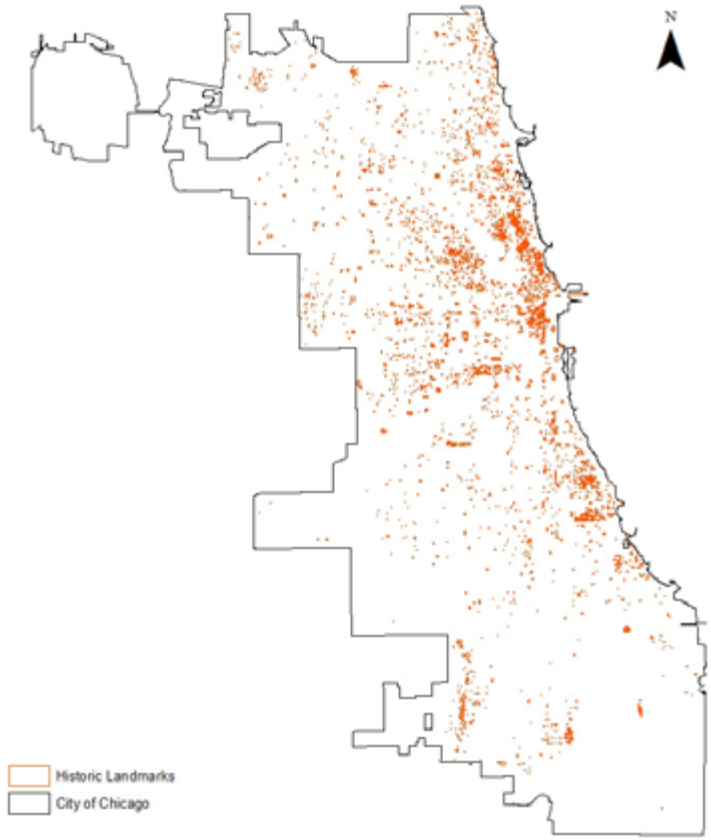
For the analysis, I used metrics such as the expiration dates of TIF (Tax Increment Financing) Districts that help to counter the upfront costs of brownfield revitalization, the proximity to historical sites identified in the CHRS (Chicago Historic Resources Survey), zoning, and proximity to bus stops. These factors were then weighed in order to find the optimal sites for revitalization.

Proximity to Red- and Orange-Level CHRS Buildings (Reclassed Euclidian Distance Analysis)

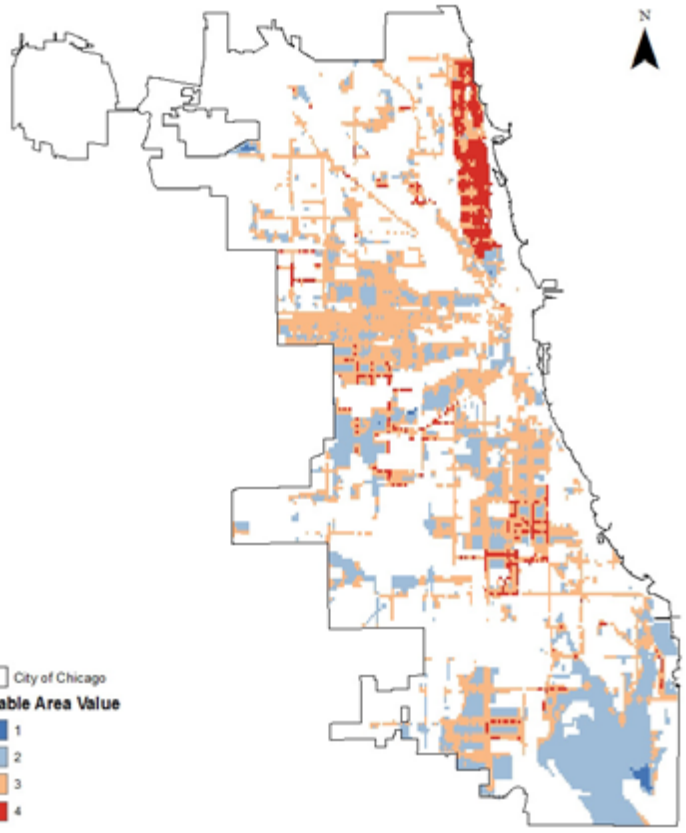


Proximity to CTA Bus Stops (Reclassed Euclidian Distance Analysis)

Historic Landmarks in the City of Chicago Red and Orange Properties



Suitability Value of Sites in Chicago



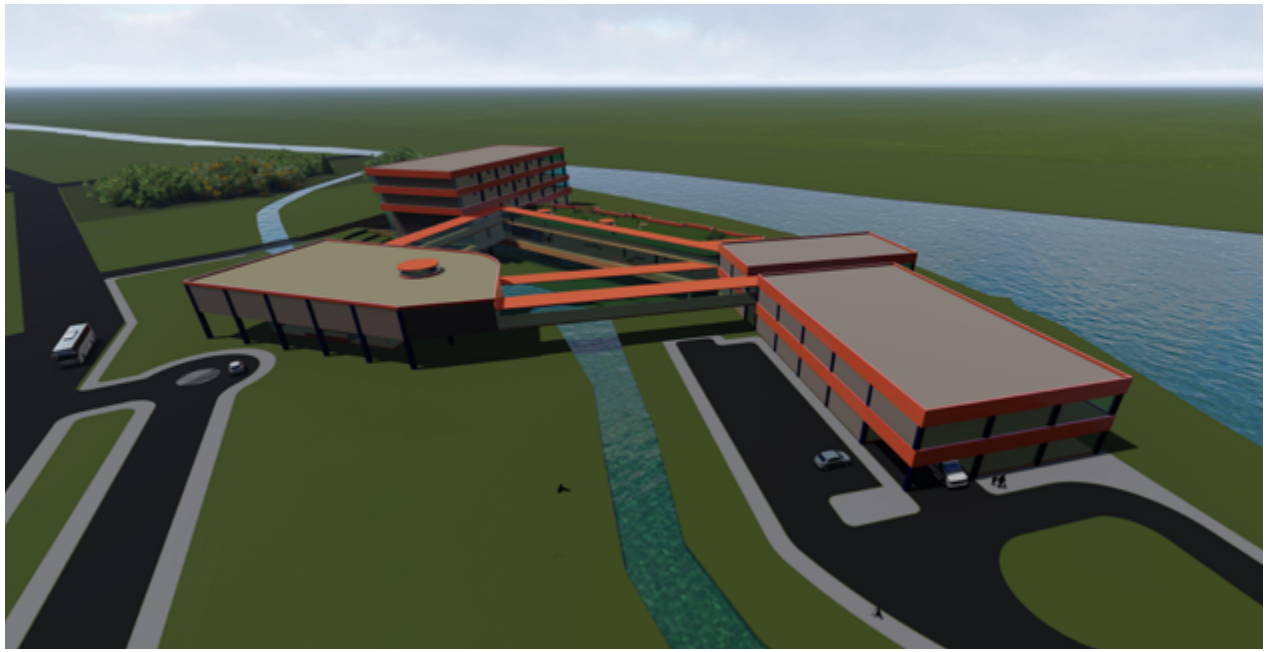
6

VARLIK CHILDREN'S HOSPITAL

Bilkent University, 2016
Architectural Design Studio 402
Ankara, Turkey

MASTERPLAN FOR VARLIK NEIGHBORHOOD

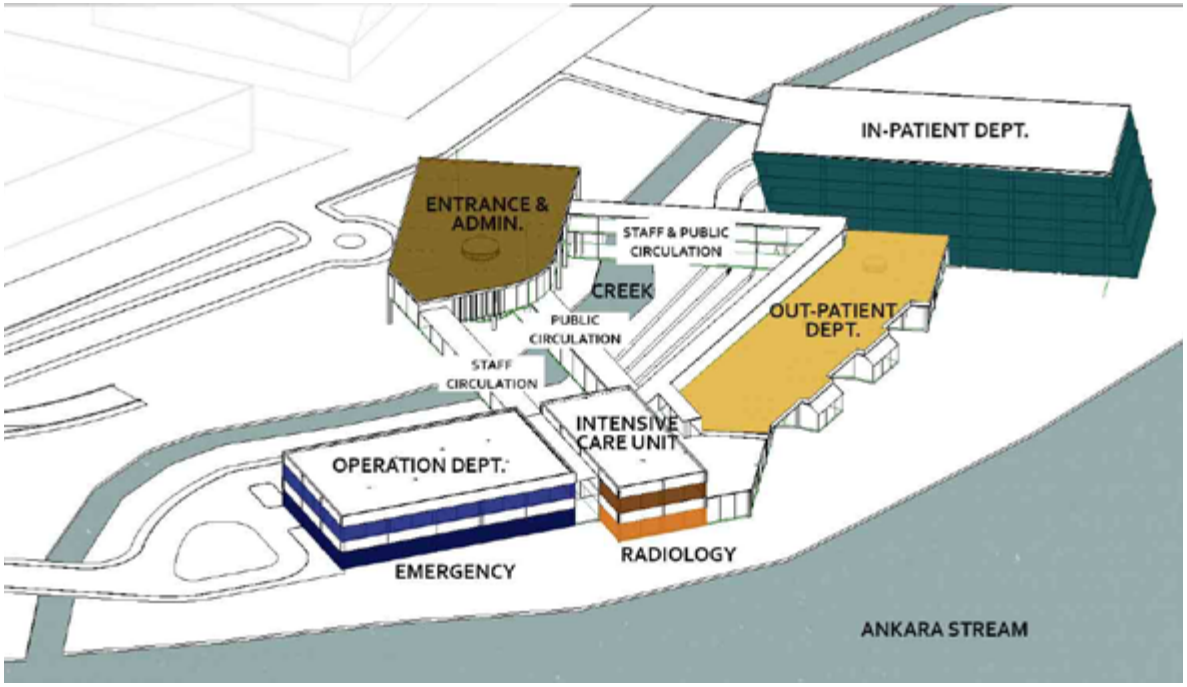
FOCUS ON THE ECO-VILLAGE



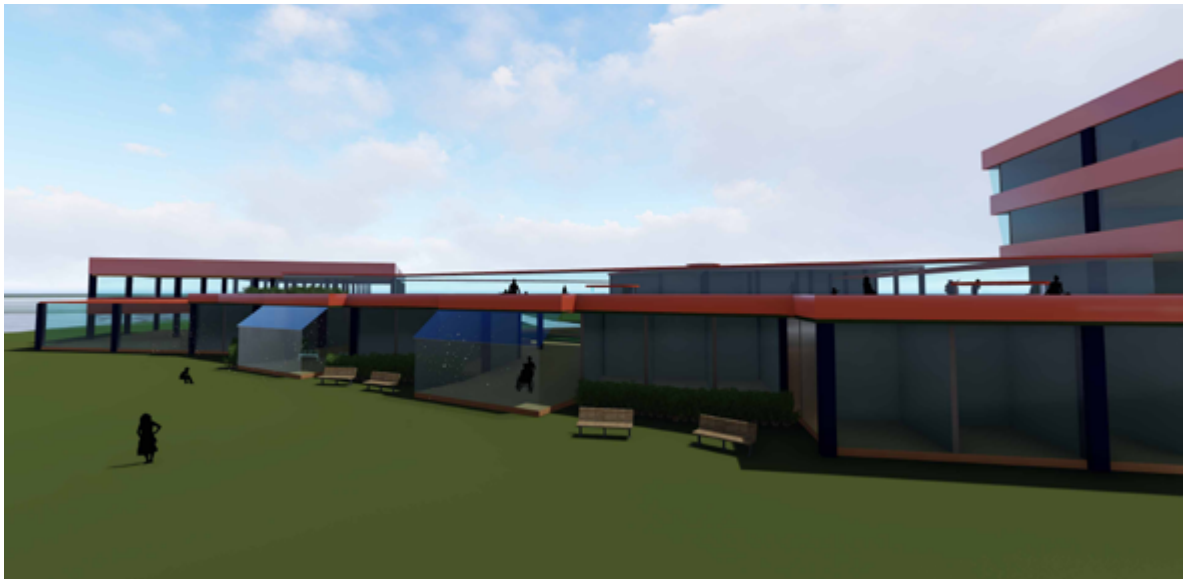
FUNCTIONAL DISTRIBUTION

The project began with the conception of a large-scale masterplan for the revitalization of the historical worker's district in Ankara's Vakıf Neighborhood by the whole studio group. After the analysis and masterplan, the neighborhood was divided into three parts. My project was located in the westernmost of these parts, the eco-village, designed with teammates Doruk Alpsar and Begüm Peker.

For the individual project, I chose a hospital because of the functional distribution of the rest of the neighborhood. The site was located on a hypothetical island in the Ankara Stream. The structure was separated into three masses for easy access and maximizing viewpoints.



MEDICAL FUNCTIONS

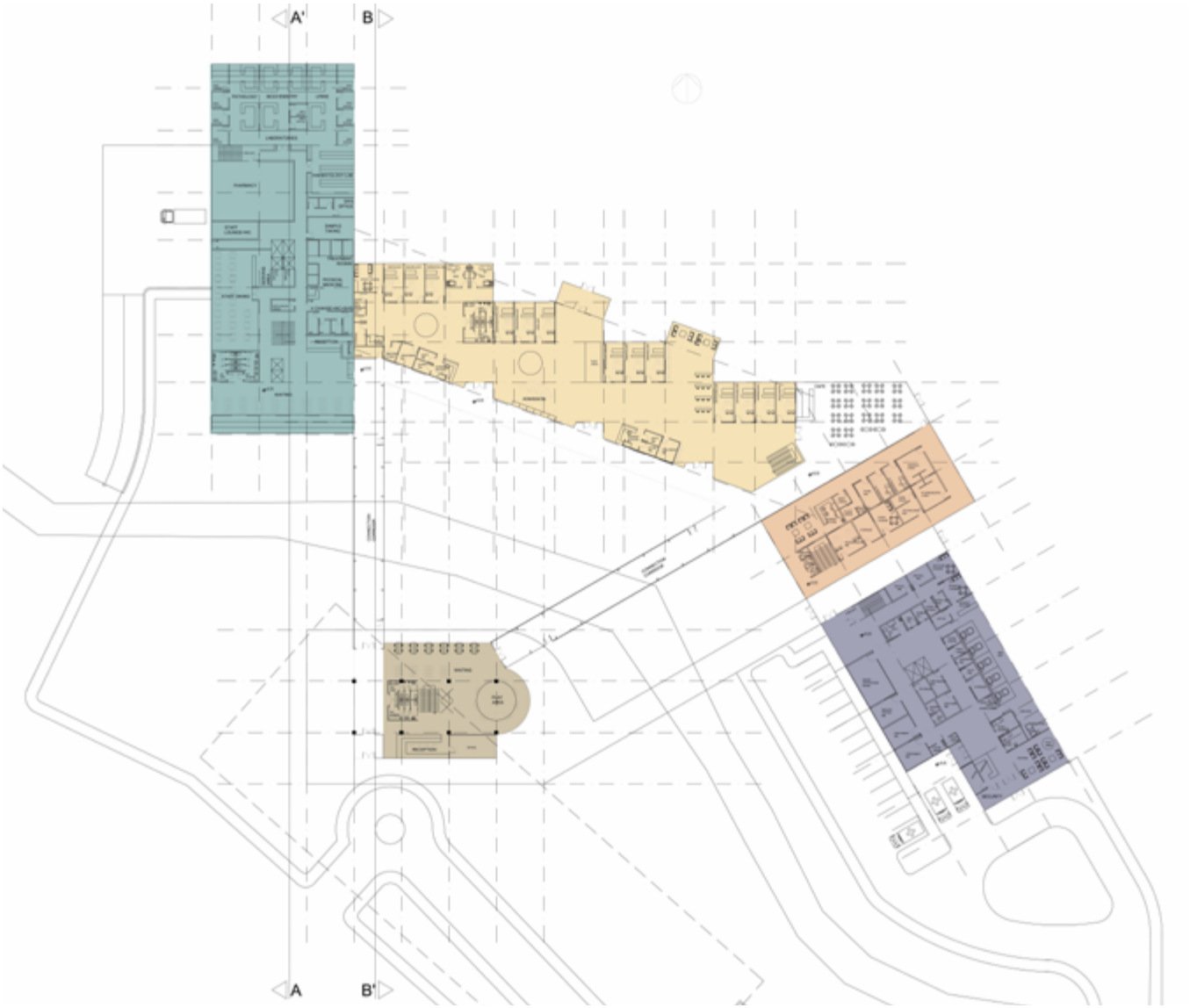


VIEW FROM THE STREAM

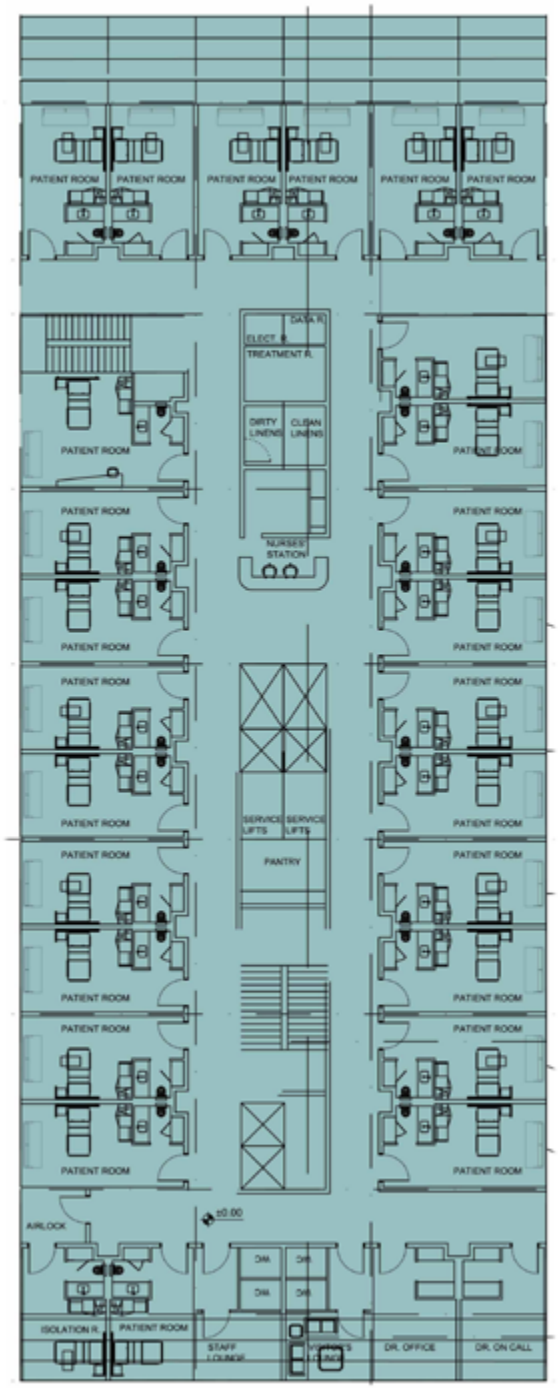
The masterplan defined the eco-village as mixed-use. With a new school, a bio Gas Plant, residentials and commercials, the region lacked a medical facility. I took on the design of this structure for my individual project. The building comprises eight functions that each act independently:

1. Emergency Department
2. Surgical Department (Operations)
3. Radiology Department
4. Intensive Care Unit
5. Out-Patient (Diagnostic) Department
6. In-Patient Department
7. Administration
8. Support Spaces

So, the concept began with each department breaking apart from the rest. Furthermore, the masses were split to create a safe courtyard for the children. A creek from the Ankara Stream defines this area and creates a site that is enjoyable instead of intimidating.



GROUND FLOOR PLAN



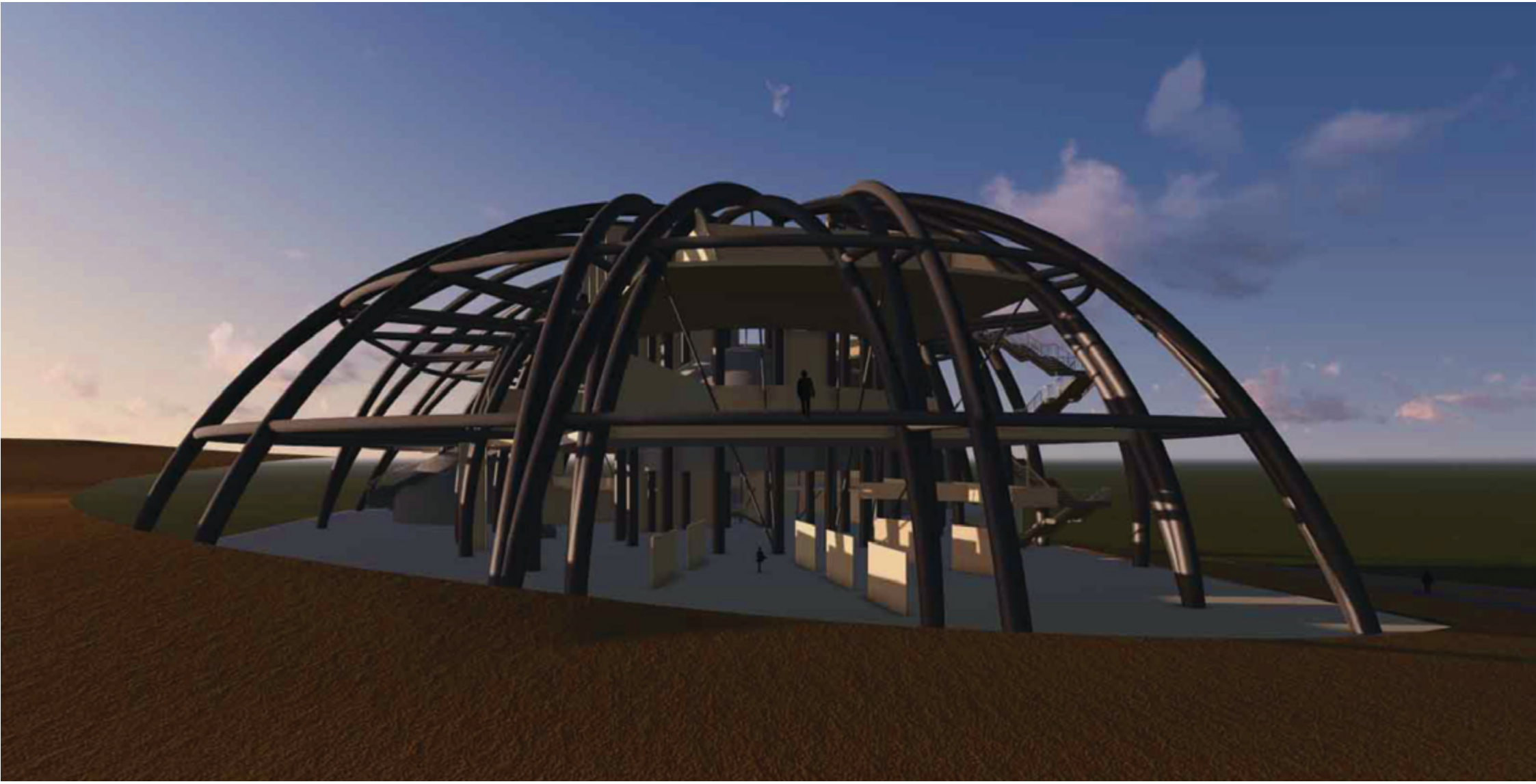
IN-PATIENT DEPARTMENT - FLOOR PLAN

The In-Patient Department's slanted form was inspired by solar angles. Since patient rooms are spaces that are occupied constantly, it was important to shield them from southern sun while receiving more daylight from the north.

7

SPACE, SCIENCE AND TECH CENTER

Bilkent University, 2015
Architectural Design Studio 401
Ankara, Turkey

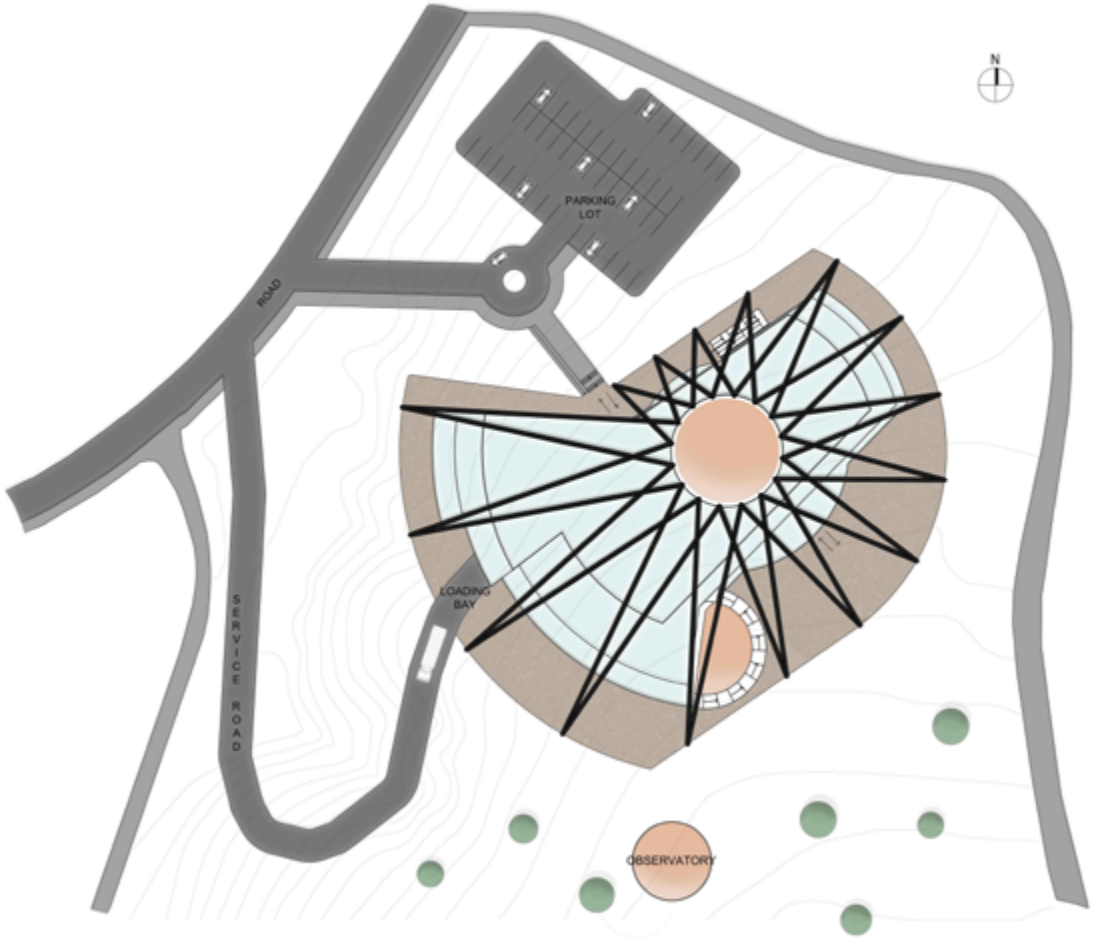


SOUTHWESTERN FACADE

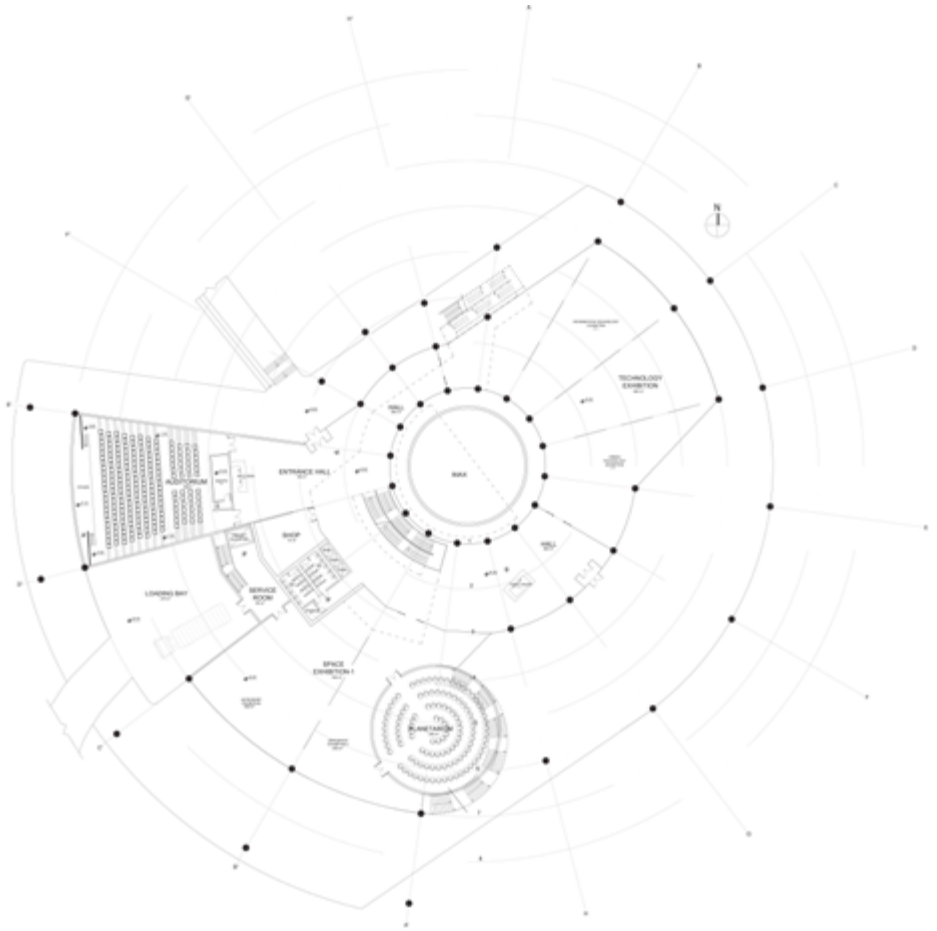
The program for the Bilkent Science, Space and Technology Center requires segregated functions for the “science,” “space,” and “science” with a common IMAX auditorium, so the design used a radial organization with the auditorium at the core. Depending on the program, each of the three sections extrudes from this nucleus with a different radius.

The main challenge for this project was the structural component. To reconcile the radial design with the floor plans, curved steel columns were used to envelope the building, supported by steel cables.

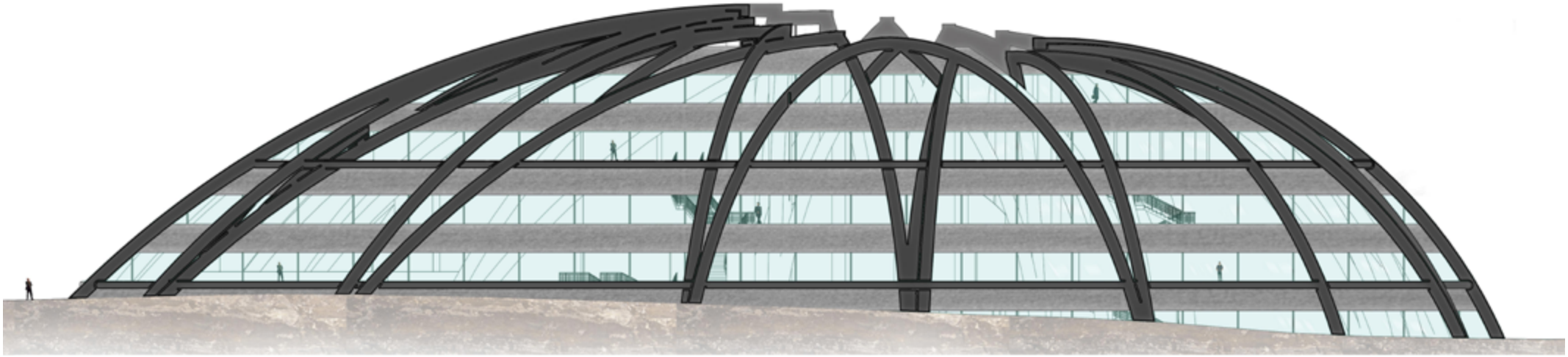
Autodesk Revit was used to build the digital model for this project, while Lumion was used for rendering and Adobe Photoshop for other images.



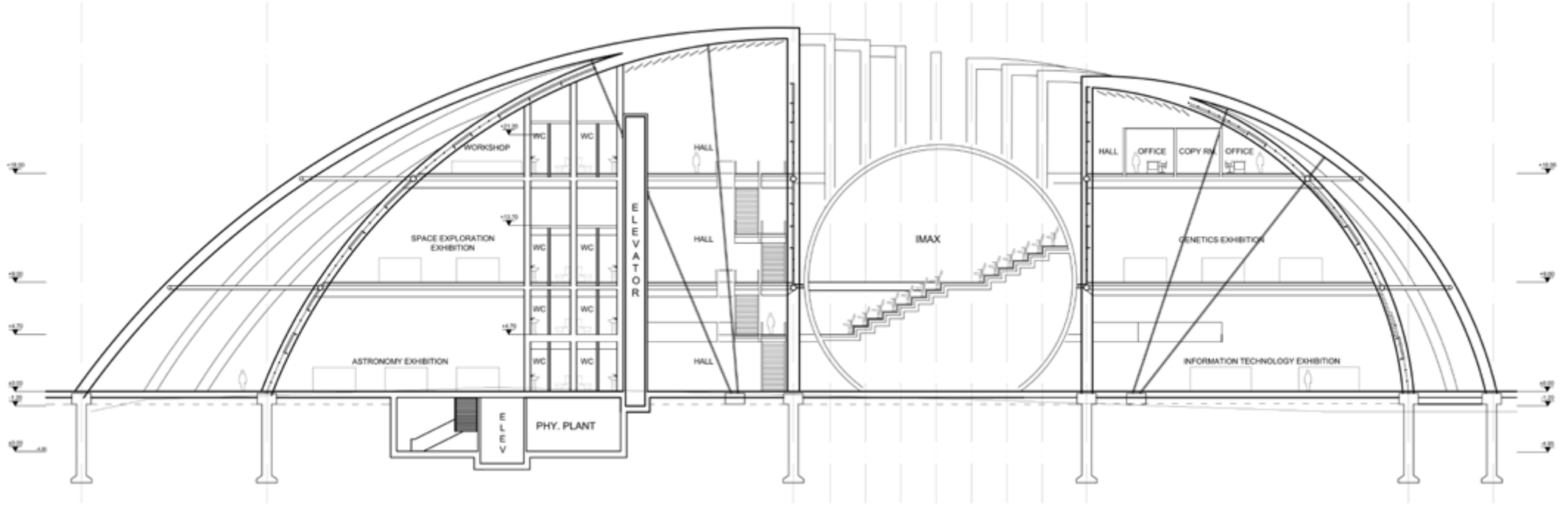
SITE PLAN



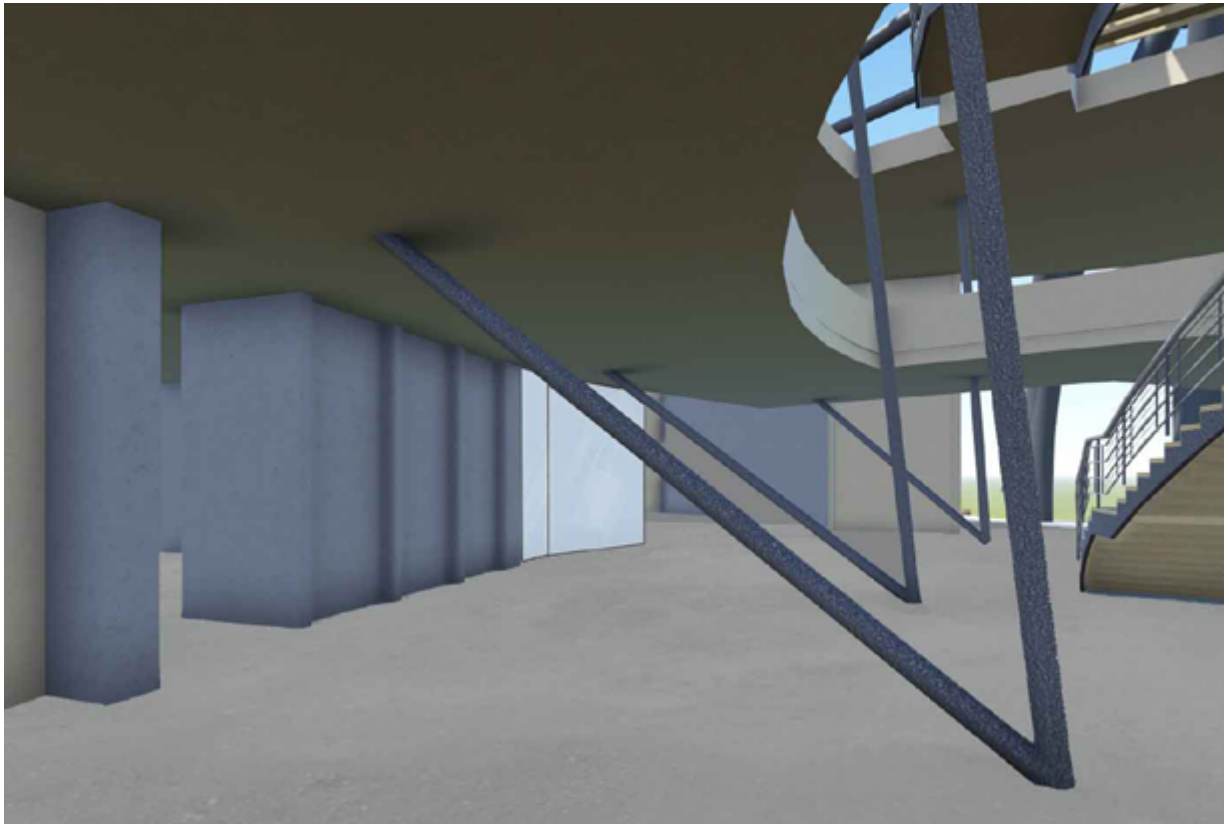
GROUND FLOOR PLAN



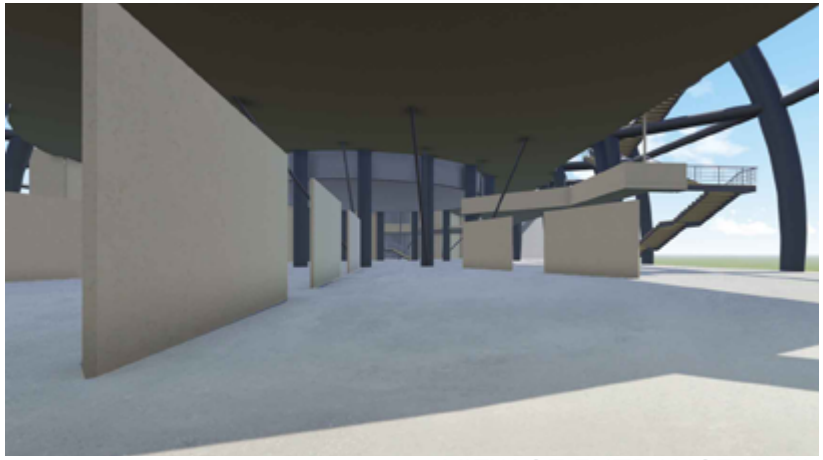
LONGITUDINAL ELEVATION



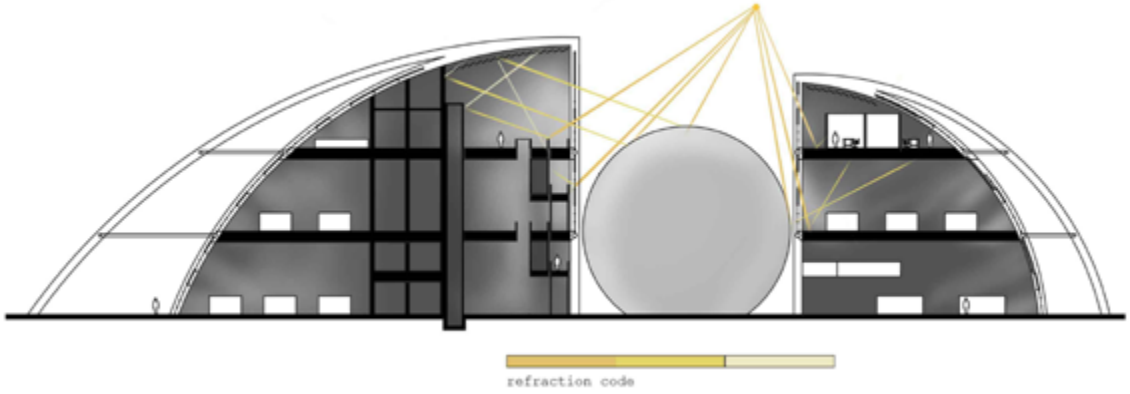
LONGITUDINAL SECTION



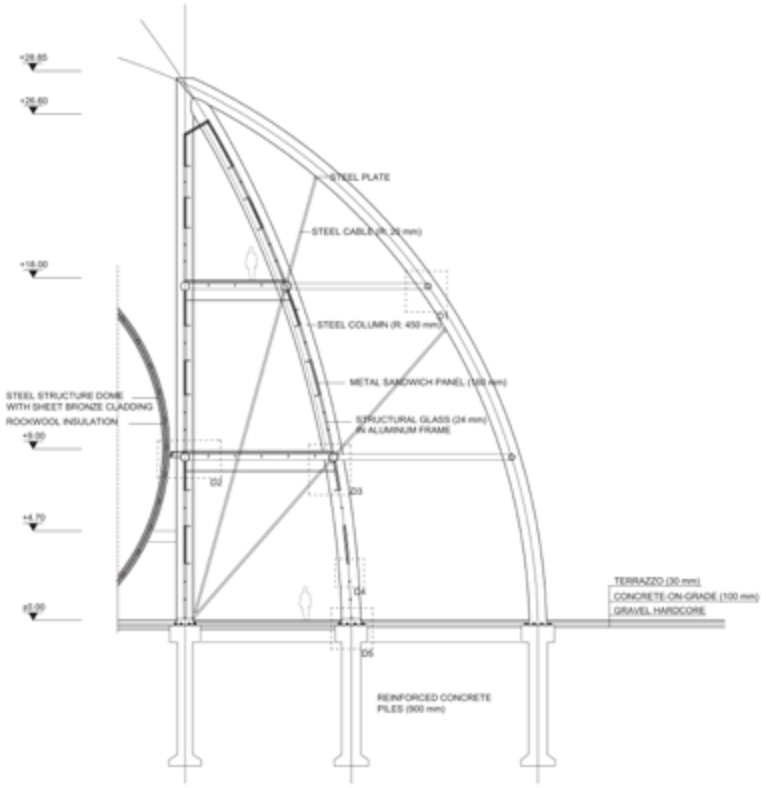
VIEW OF ENTRANCE HALL



VIEW OF ENTRANCE HALL



LIGHT ANALYSIS



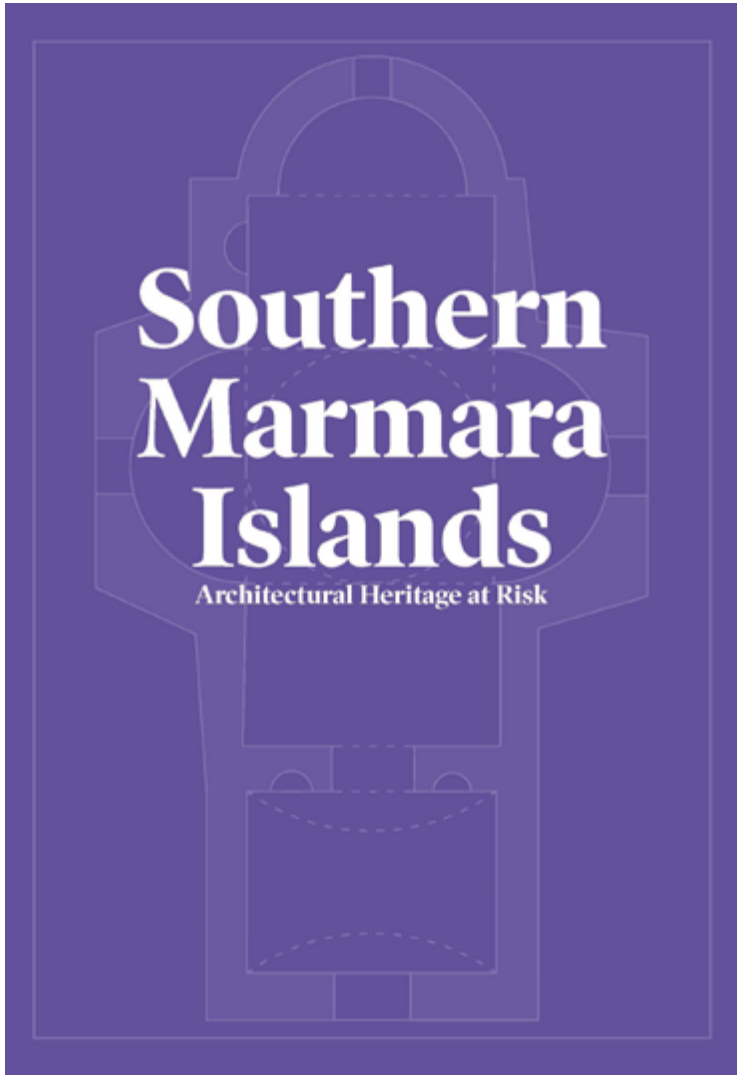
SYSTEM DETAIL

8

OTHER WORK

I translated and compiled 6 documents, including the final conservation report, in preparation for the upcoming restoration project in Dolmabahçe Sarayı. I worked with a group of conservation architects and art historians.

* Reference (Filiz Kuvvetli) provided upon request.



I undertook the final checks (redaction) for the English version of this publication, which summarizes “The Southern Islands of Marmara: Documentation and Risk Assessment of Architectural Heritage” Project by KMKD.

* Reference (Çağla Parlak) provided upon request.