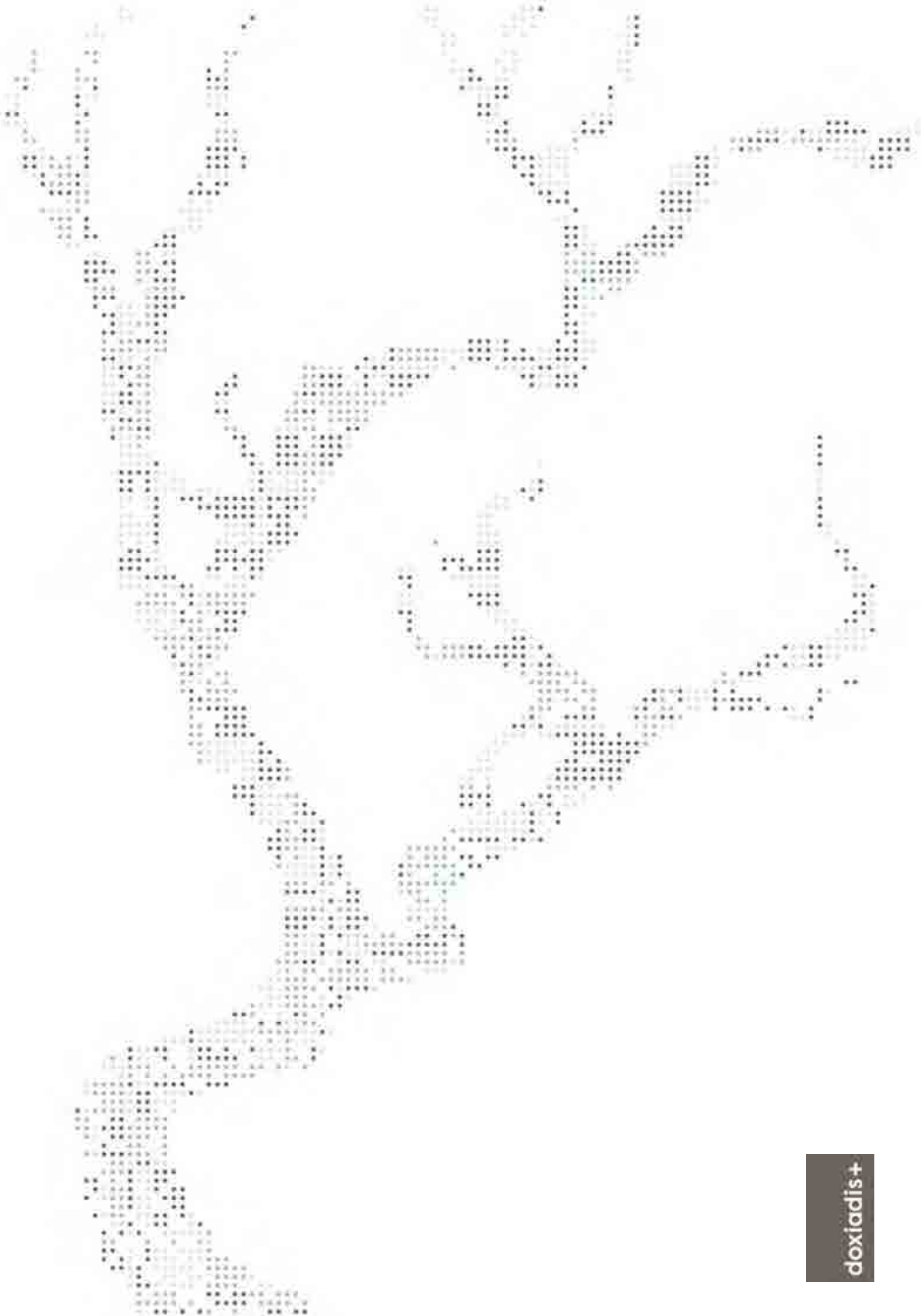


doxiadis+

BIM in Landscape Architecture

Dimitris Christidis
BIM Manager doxiadis+

Riviera Tower

The Hellinikon

doxiadis+

doxiadis+

Riviera Tower

The Hellinikon


7. The Office Tower in Vouliagmenis Ave.
6. The Mall in Vouliagmenis Ave.
10. Sea Front Town
1. Aquarium
9. Promenade Residential Tower
11. Art Center Tower
2. Marina Residential Tower
3. Marina Exclusive Hotel

The Hellinikon Riviera Tower

Certified by the global standards WELL & LEED rating systems

Sustainable strategy principles

Riviera Tower

The Hellinikon

doxiadis+

Forming Symbiosis

Ellinikon Experience Park

Elliniko

Architecture and Landscape Architecture

Amanzoe Resort

Porto Heli

Landscape Architecture

Amanzoe Resort

Porto Heli

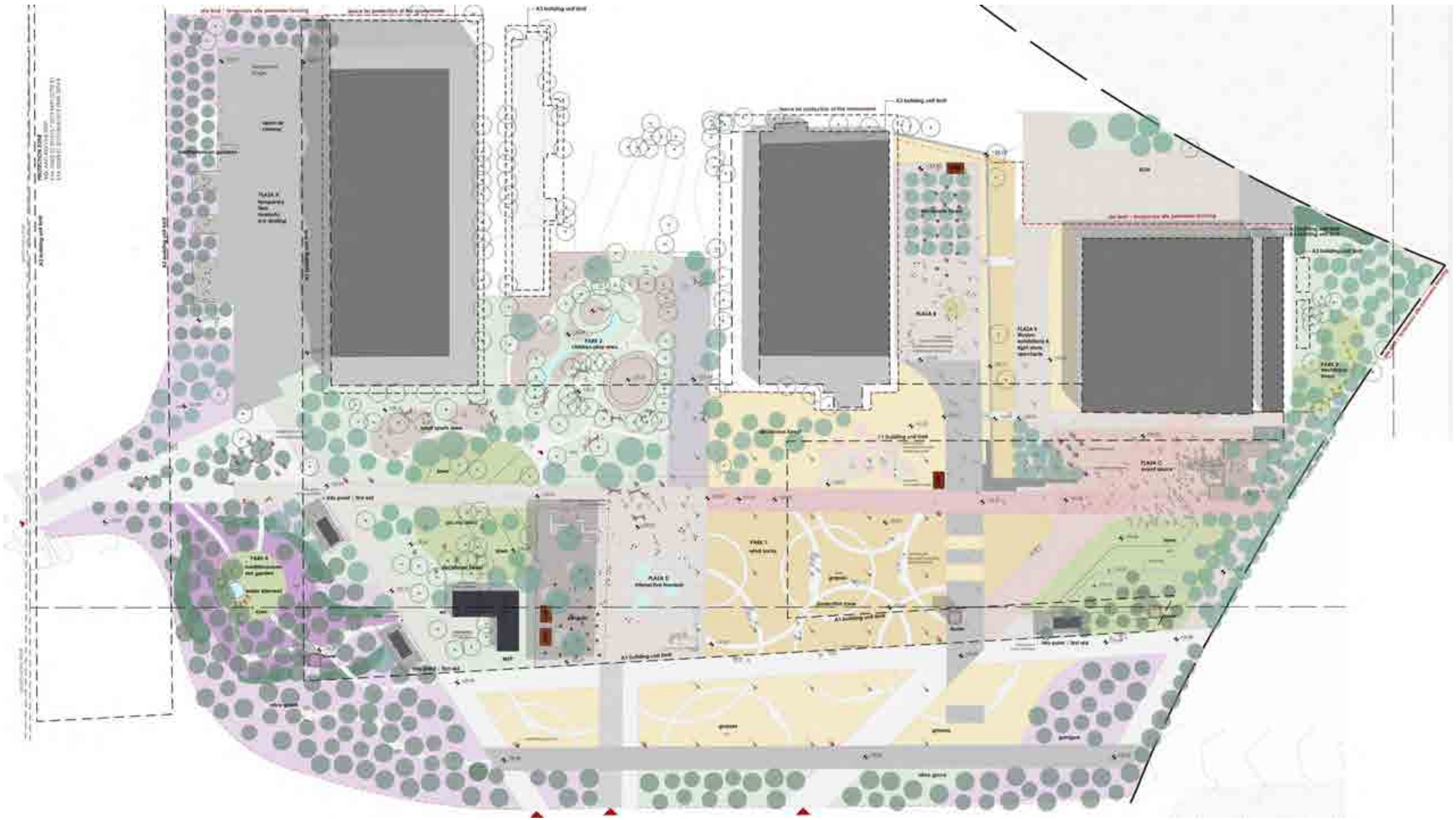
Landscape Architecture

Ellinikon Experience Park

Elliniko

Architecture and Landscape Architecture

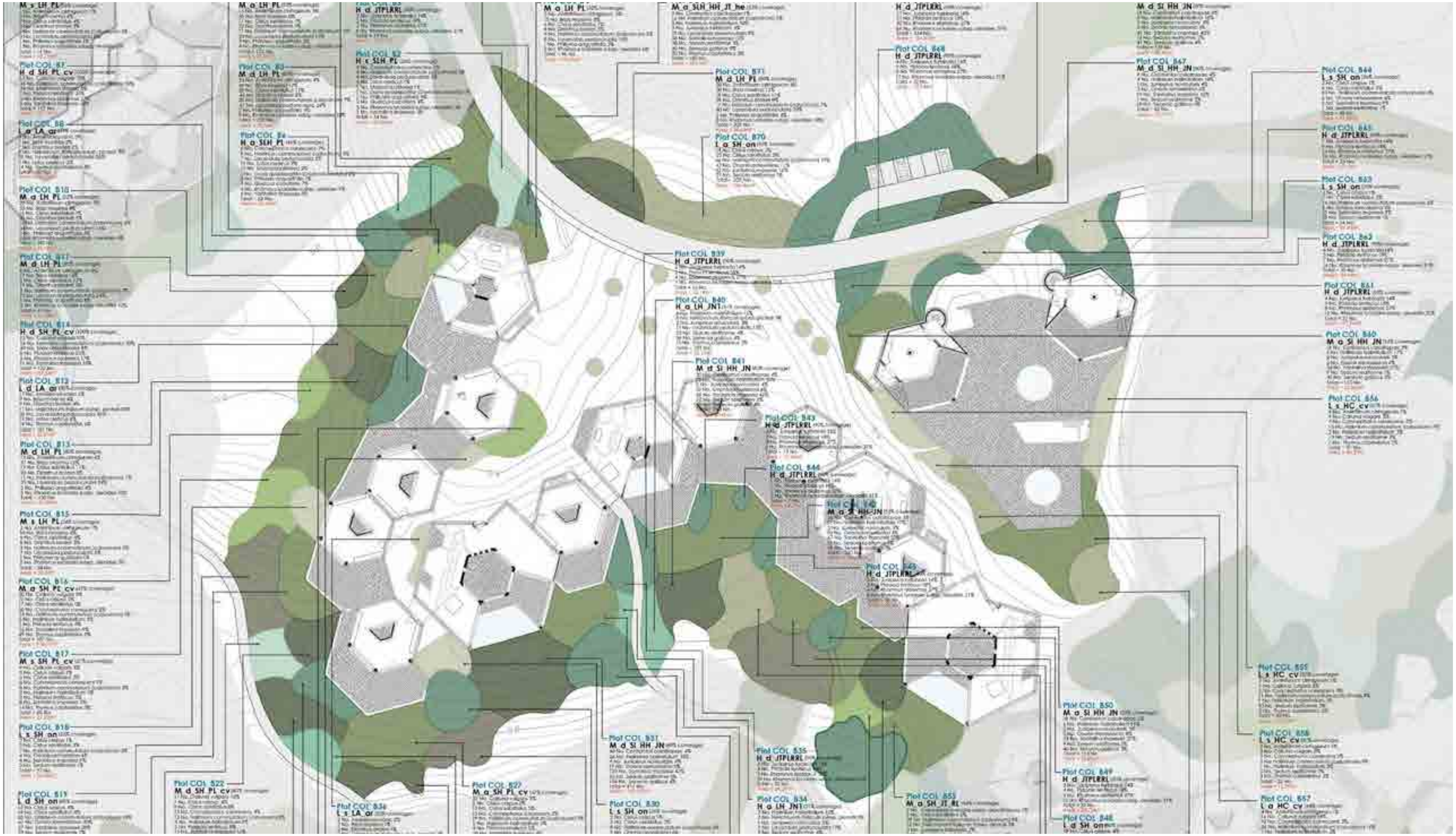
Design Products



TREE PLANITNG DRAWING

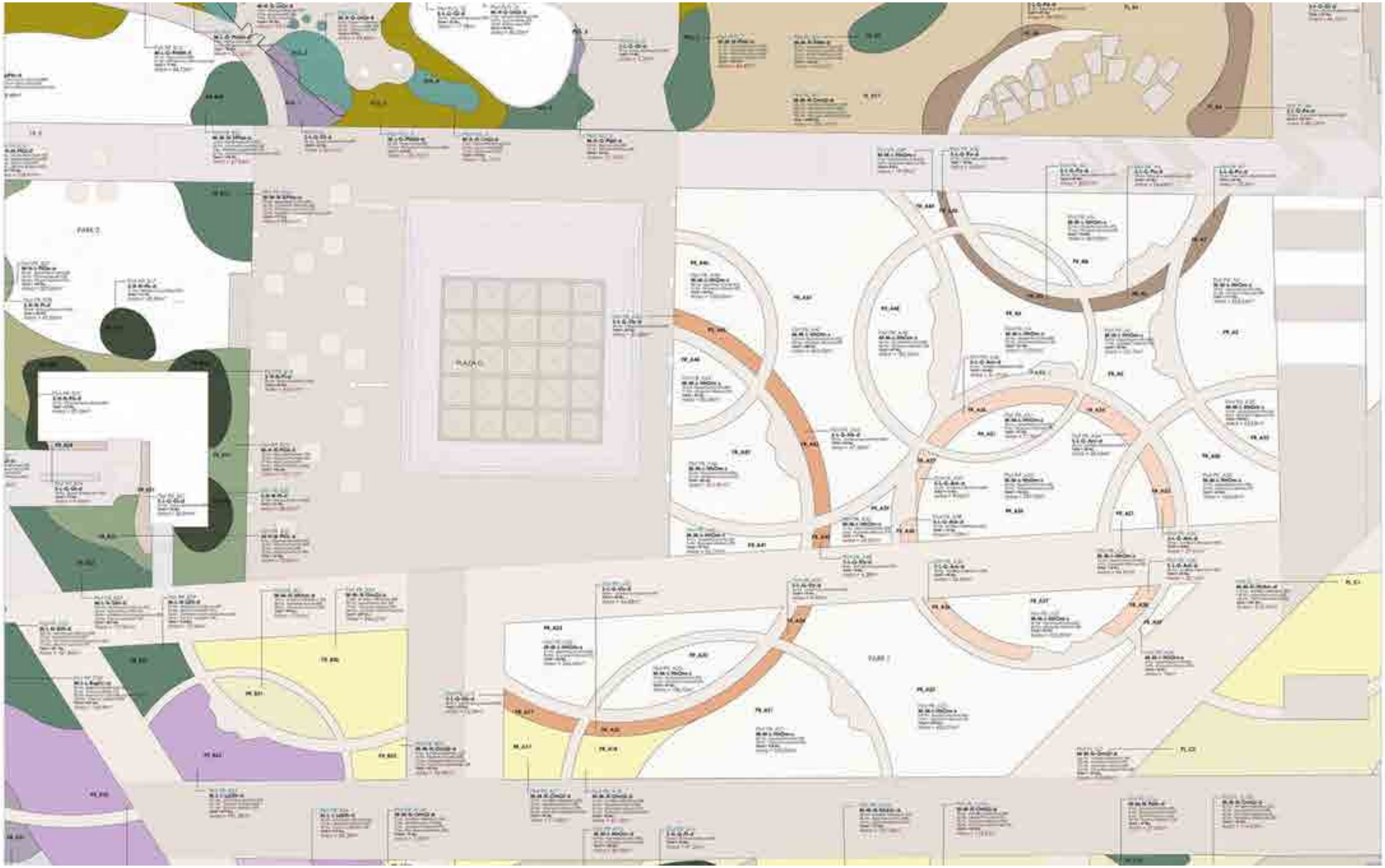
BIM IN LANDSCAPE ARCHITECTURE

doxiadis+



UNDERSTORY DRAWING

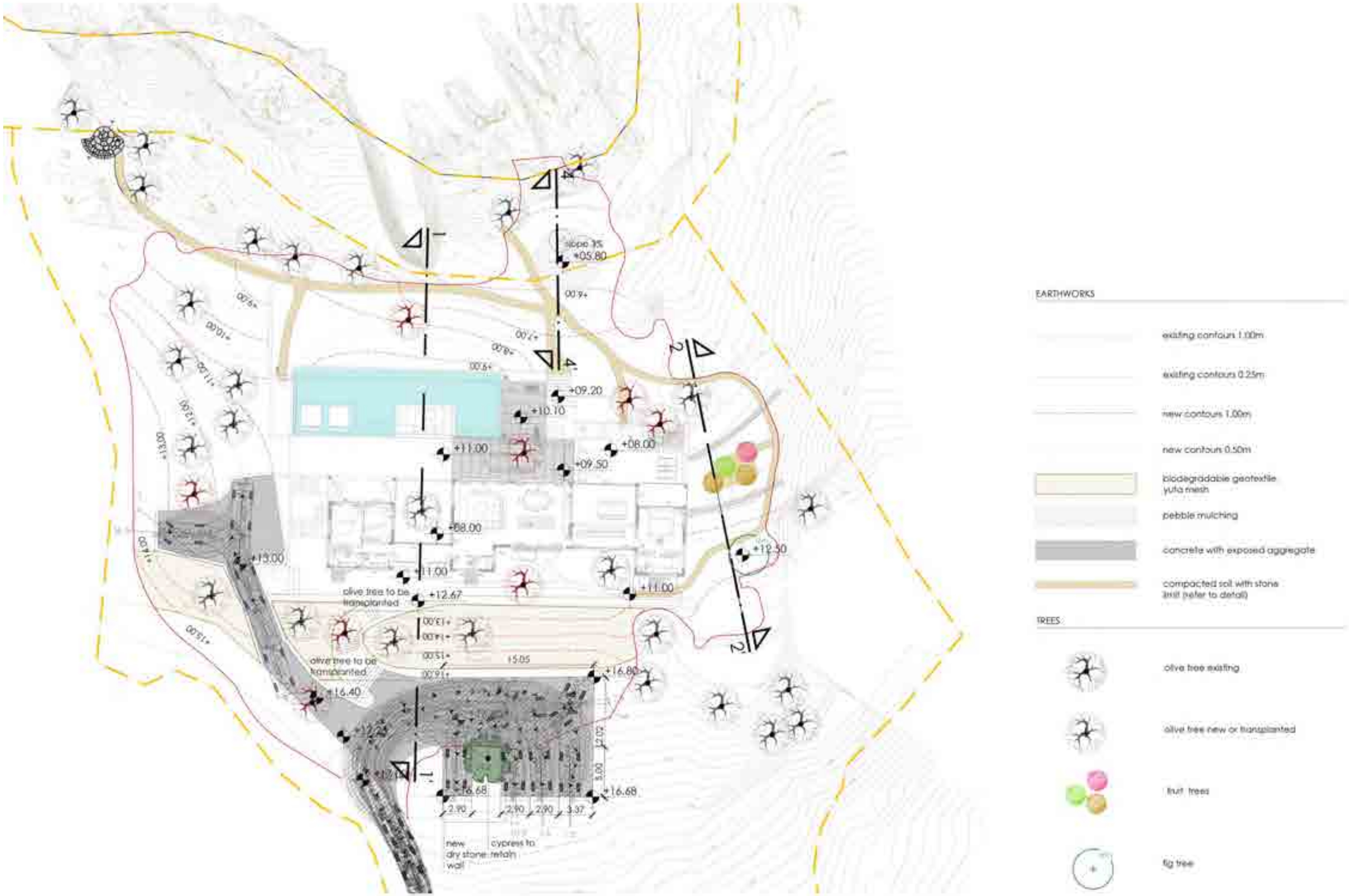
BIM IN LANDSCAPE ARCHITECTURE



HARDSCAPE DRAWING

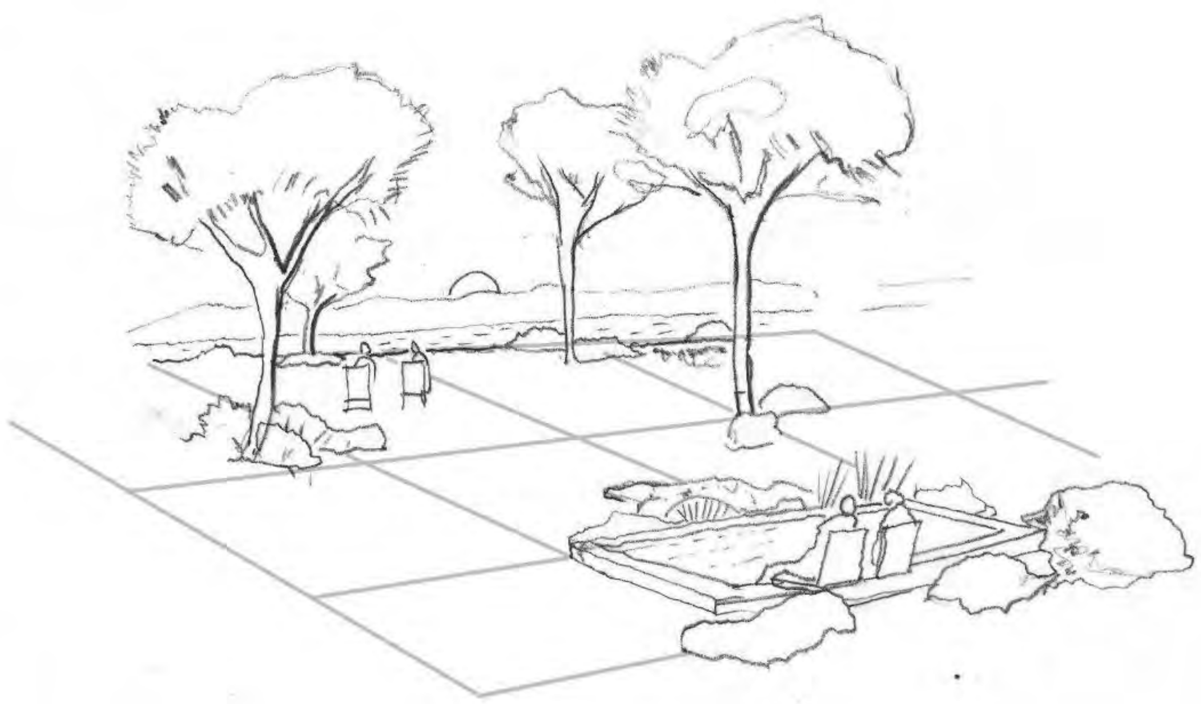
BIM IN LANDSCAPE ARCHITECTURE

doxiadis+


slope 3%
+05.80
+09.20
+10.10
+11.00
+08.00
+09.50
+08.00
+12.50
+13.00
+11.00
+11.00
olive tree to be transplanted
+12.67
+15.05
+16.80
olive tree to be transplanted
+16.40
+16.68
+16.68
2.90
2.90
2.90
3.37
new dry stone wall
cypress to retain
EARTHWORKS
existing contours 1.00m
existing contours 0.25m
new contours 1.00m
new contours 0.50m
biodegradable geotextile yuta mesh
pebble mulching
concrete with exposed aggregate
compacted soil with stone limit (refer to detail)
TREES
olive tree existing
olive tree new or transplanted
fruit trees
fig tree

Tools of Synthesis
Then and Now

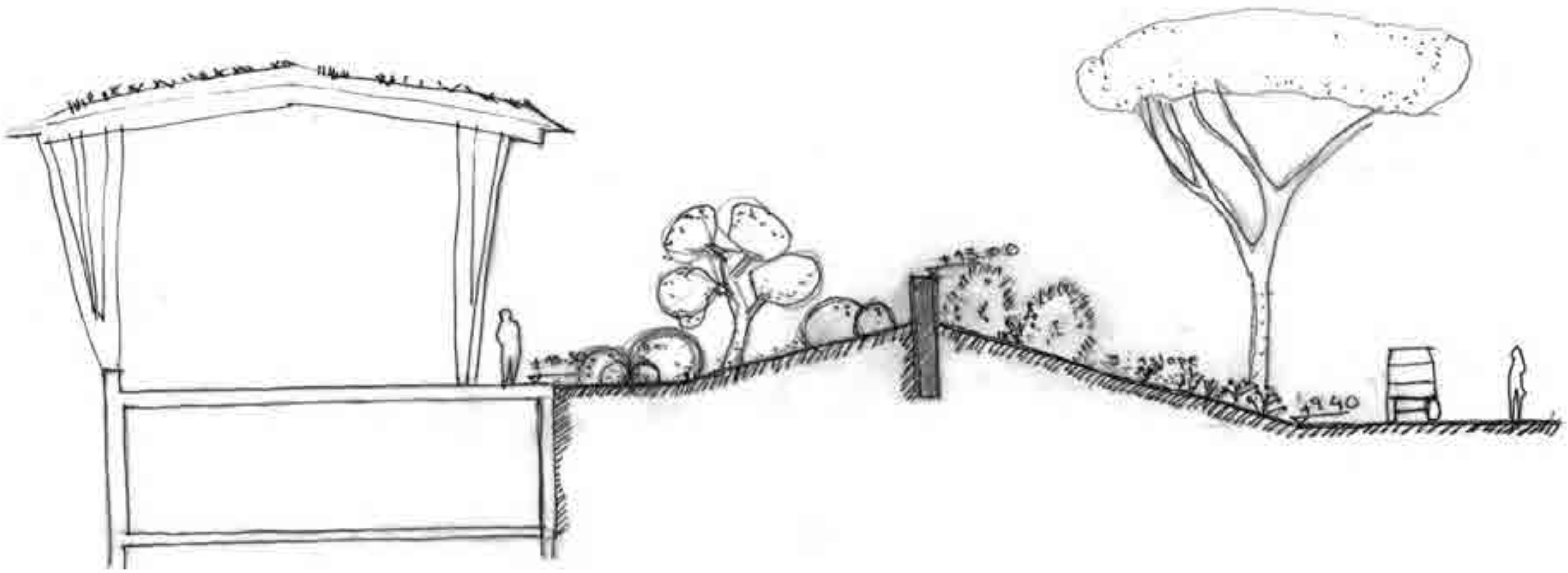
HANDS ON



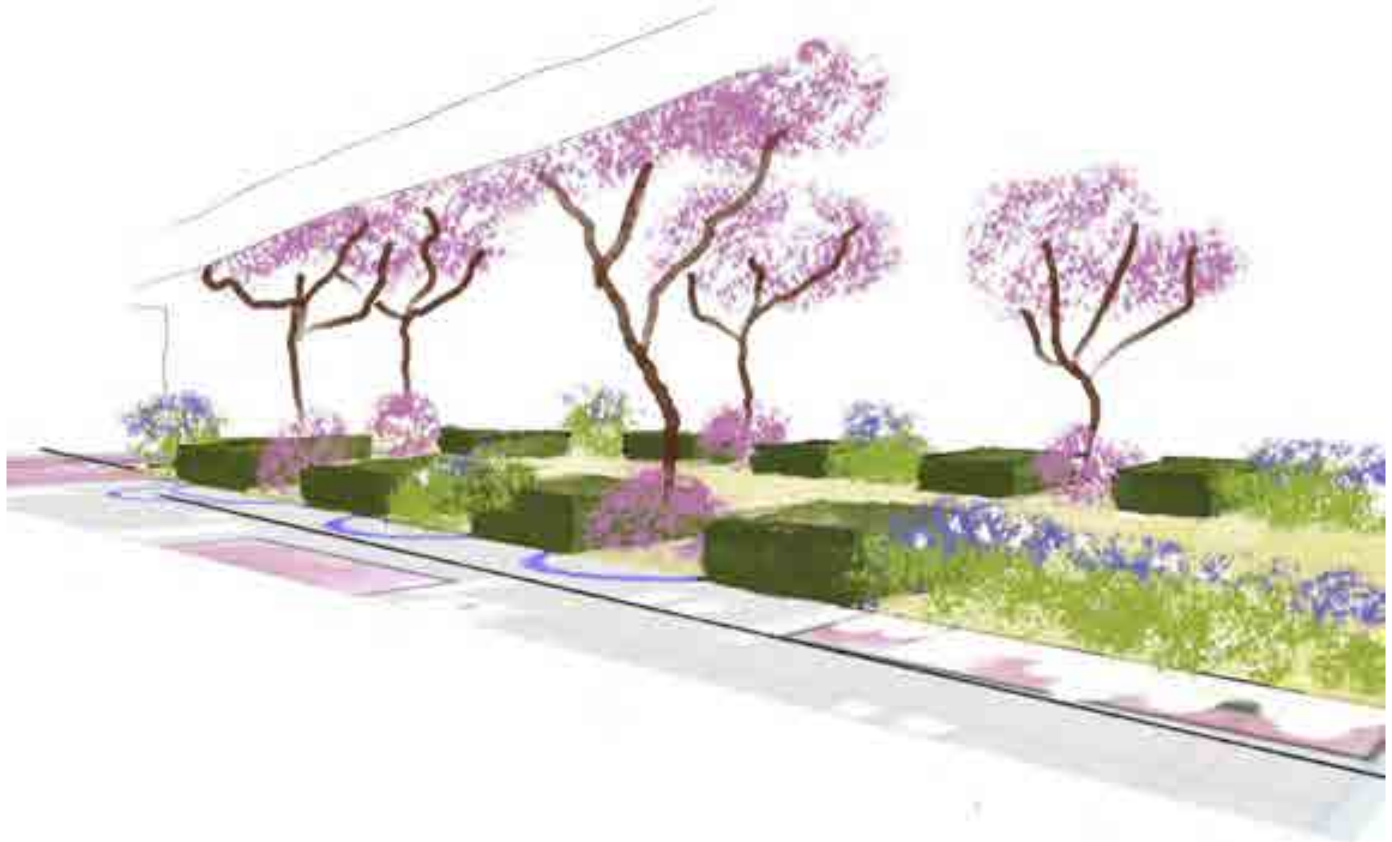
DRAWINGS AESTHETICS

DRAWINGS AESTHETICS

DRAWINGS AESTHETICS



Tools of Representation
Then and Now

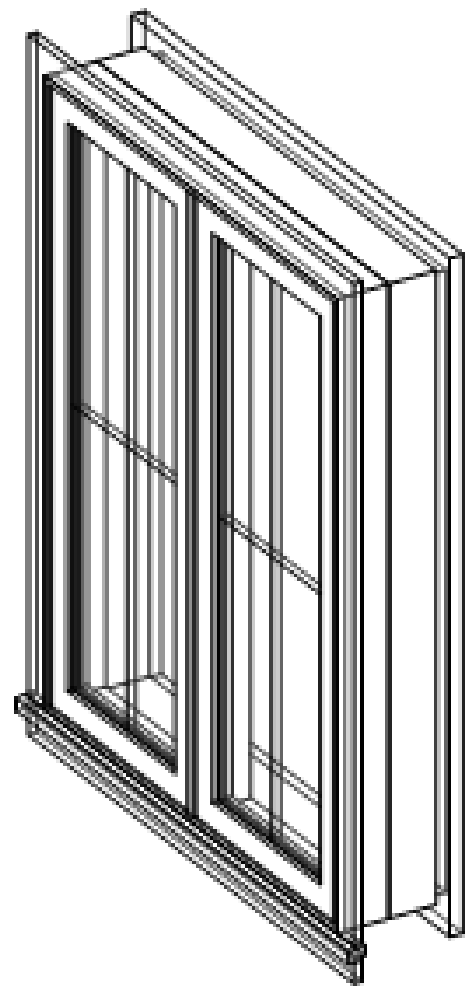


BIM Challenges in Landscape Architecture

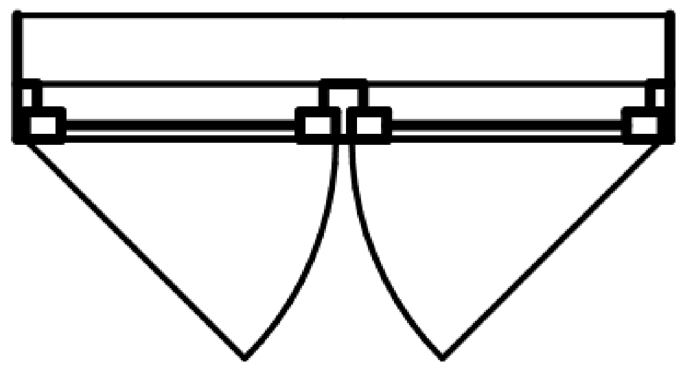
BIM OBJECT PROPERTIES

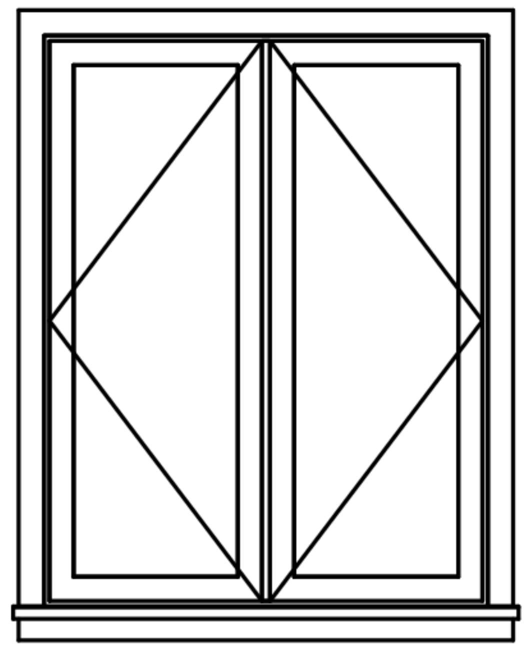
- 3d geometry
- 2d representation
- data
- relations between objects
- visualisations

3D GEOMETRY

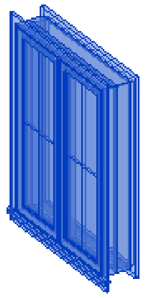


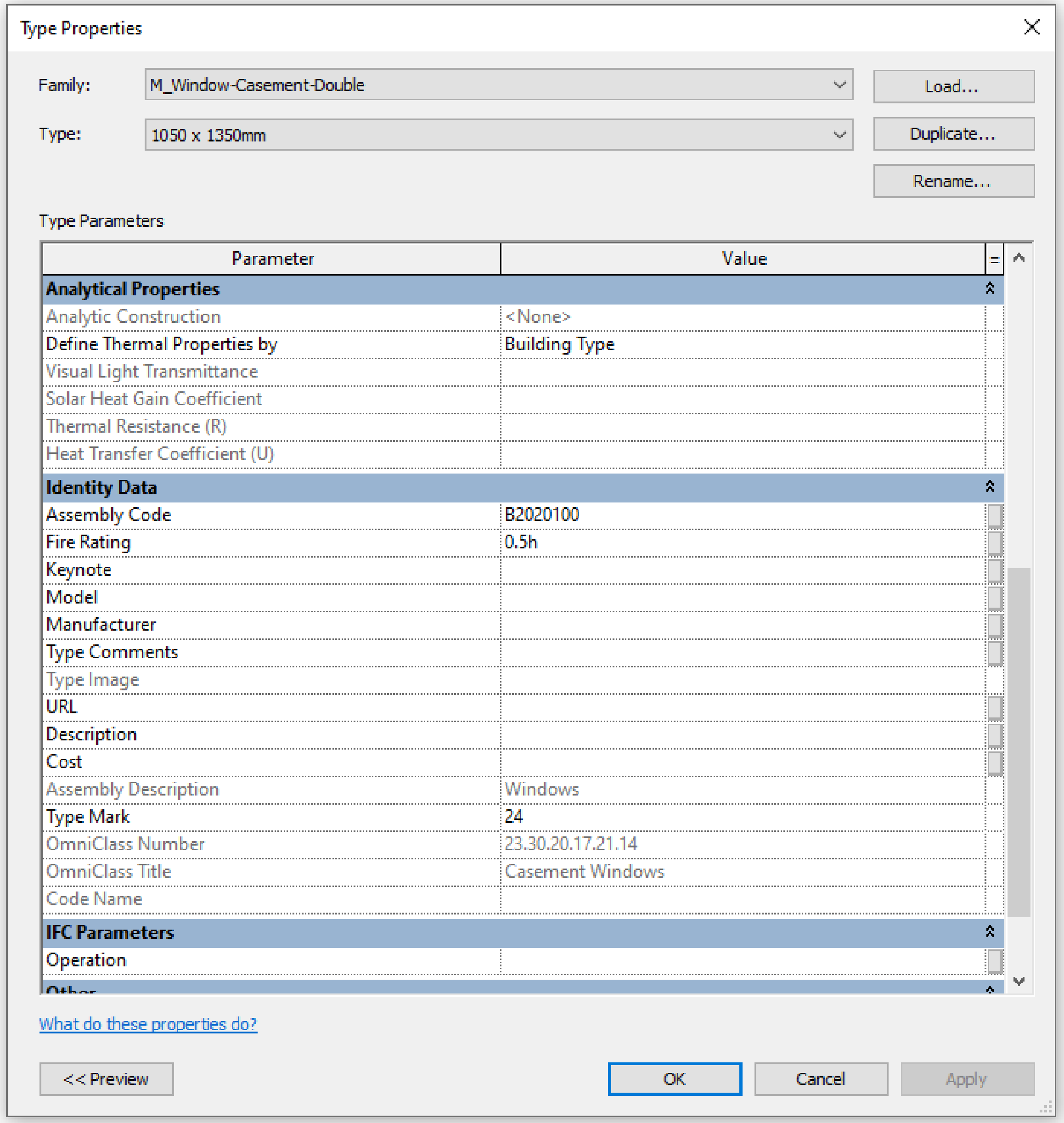
2D REPRESENTATIONS





DATA





Type Properties

Family: M_Window-Casement-Double

Type: 1050 x 1350mm

Load... Duplicate... Rename...

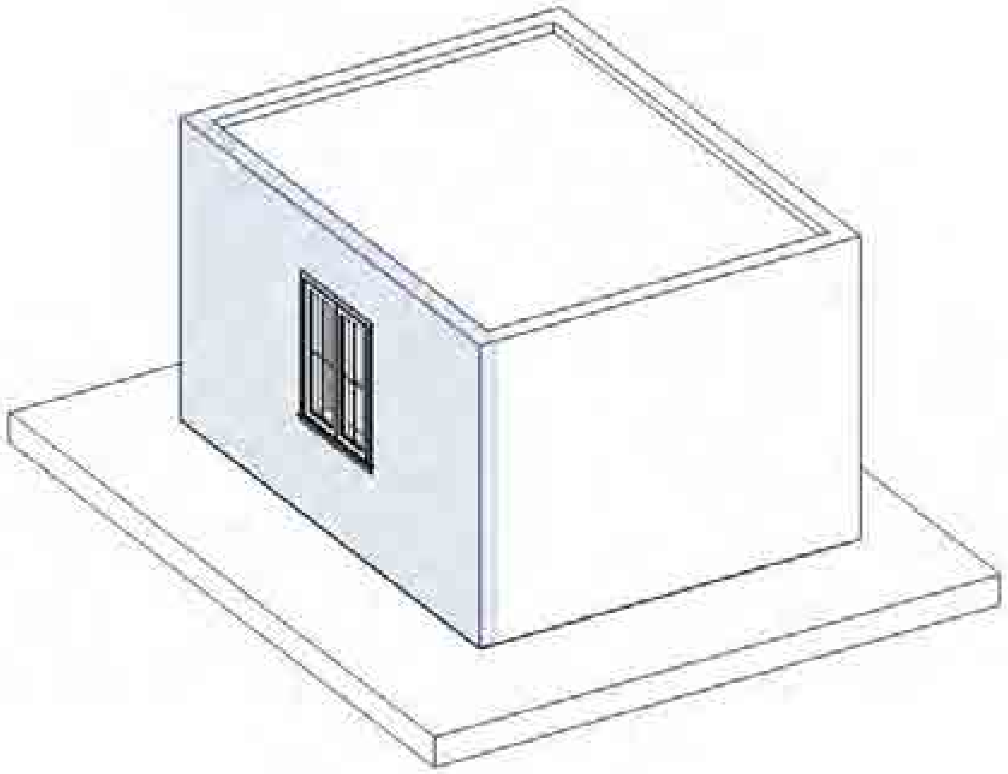
Type Parameters

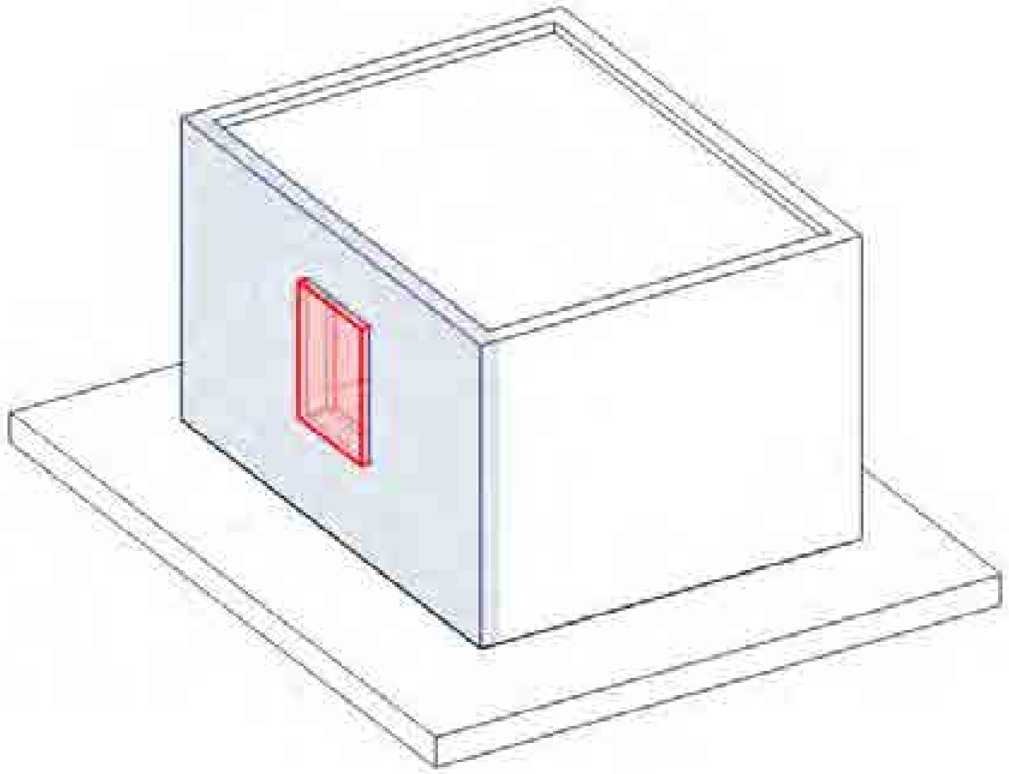
Parameter	Value
Analytical Properties	
Analytic Construction	<None>
Define Thermal Properties by	Building Type
Visual Light Transmittance	
Solar Heat Gain Coefficient	
Thermal Resistance (R)	
Heat Transfer Coefficient (U)	
Identity Data	
Assembly Code	B2020100
Fire Rating	0.5h
Keynote	
Model	
Manufacturer	
Type Comments	
Type Image	
URL	
Description	
Cost	
Assembly Description	Windows
Type Mark	24
OmniClass Number	23.30.20.17.21.14
OmniClass Title	Casement Windows
Code Name	
IFC Parameters	
Operation	

What do these properties do?

<< Preview OK Cancel Apply

RELATIONS BETWEEN OBJECTS





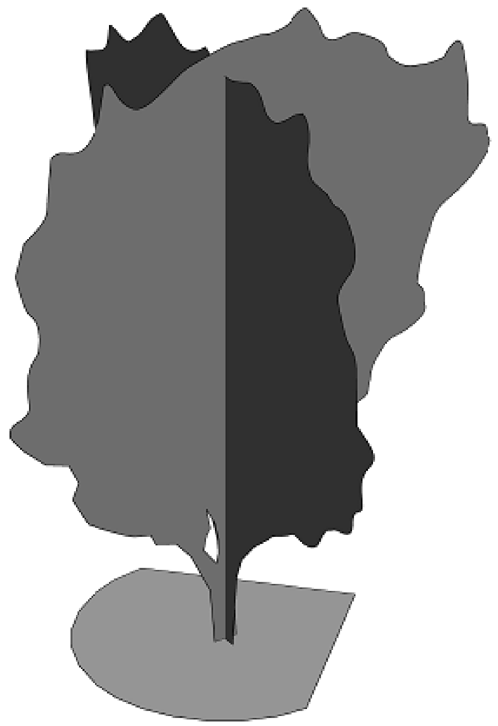
VISUALISATIONS

BIM Landscape Object Development

Tree & Shrub Planting

doxiadis+

DEFAULT PLANTING OBJECT

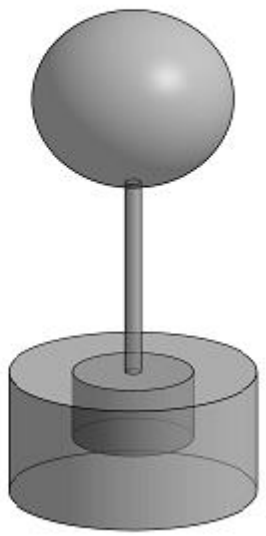


DEVELOPED PLANTING OBJECT

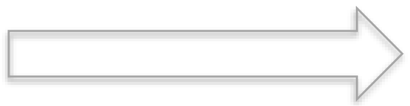
3D GEOMETRY

3D GEOMETRY

SIZE DEVELOPMENT AGEWISE



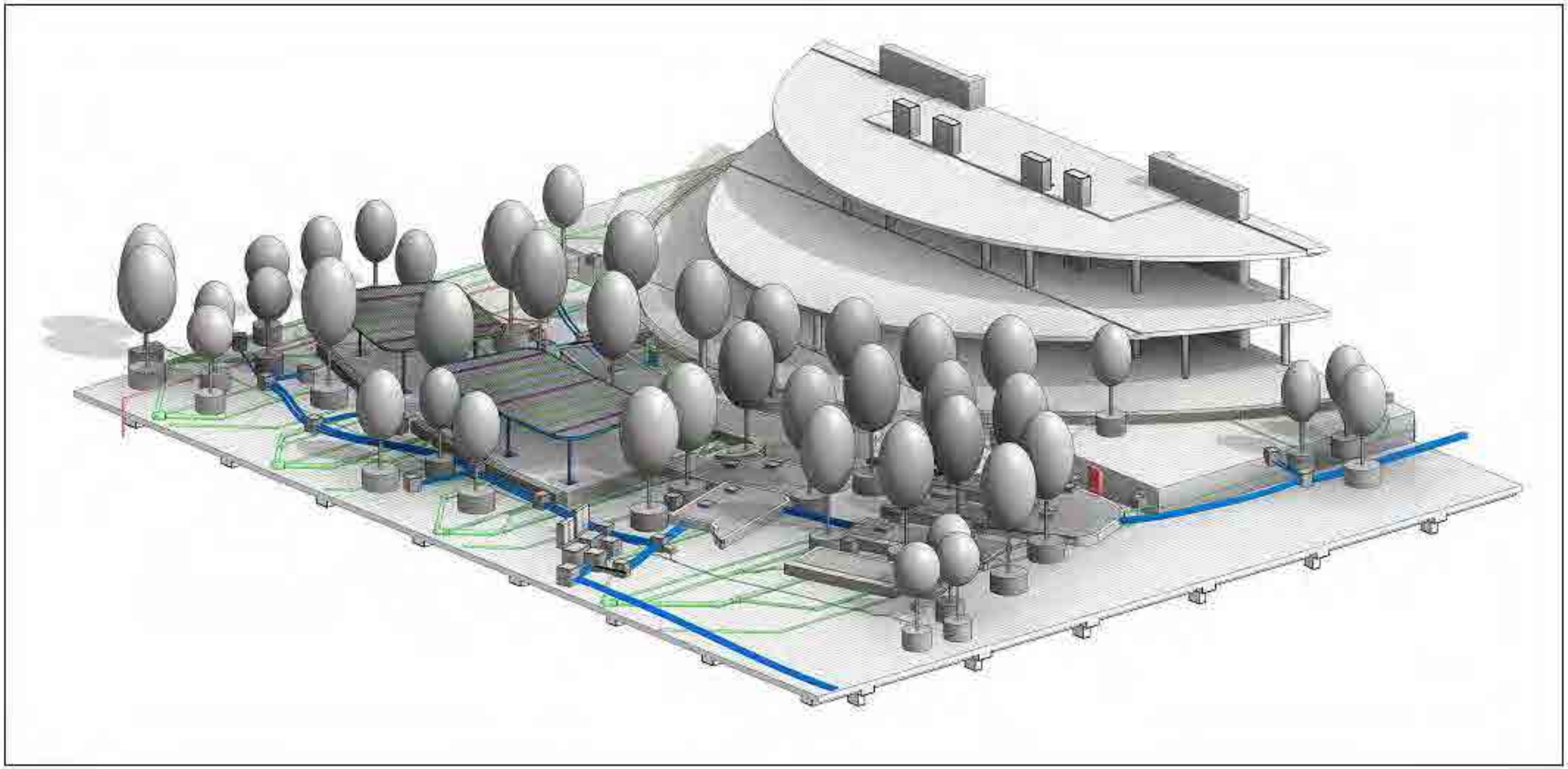
Size at order



Size at 5 years time

3D GEOMETRY

CLASH DETECTION

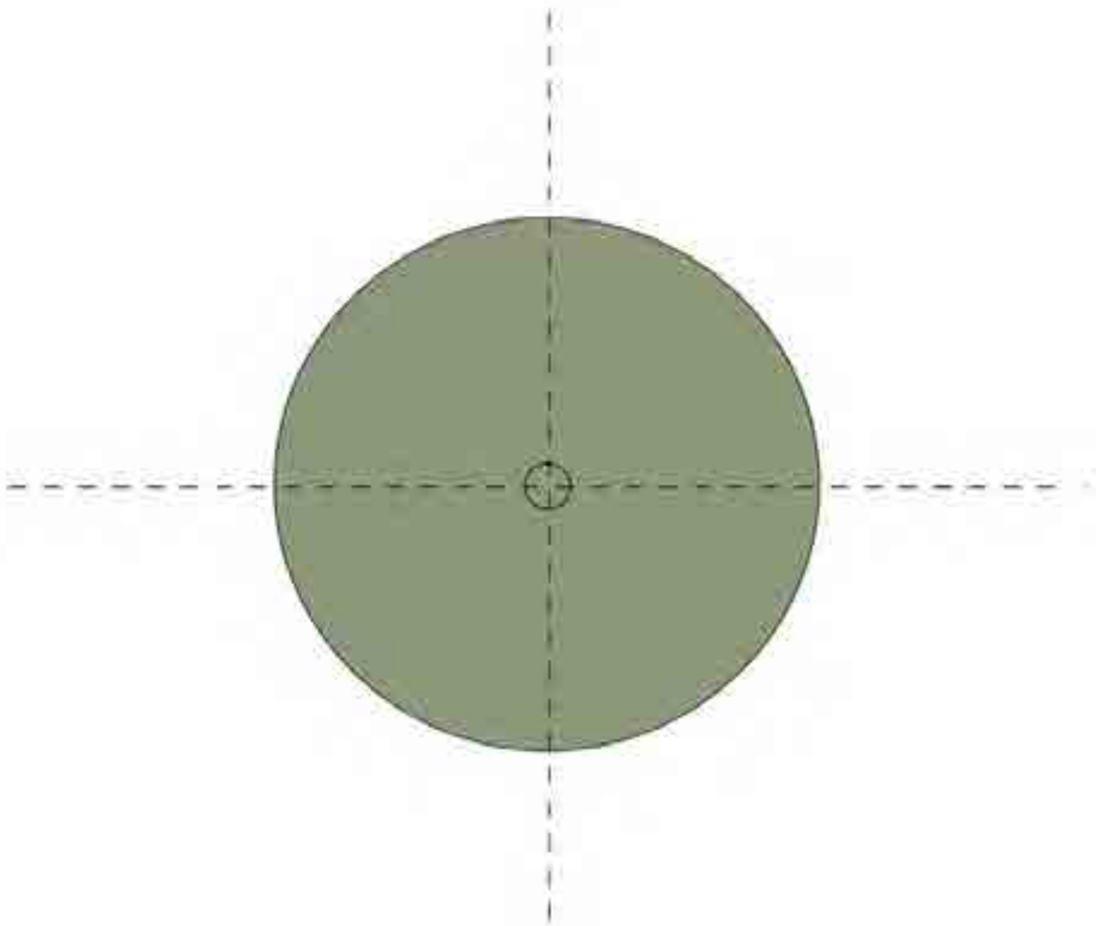


DATA

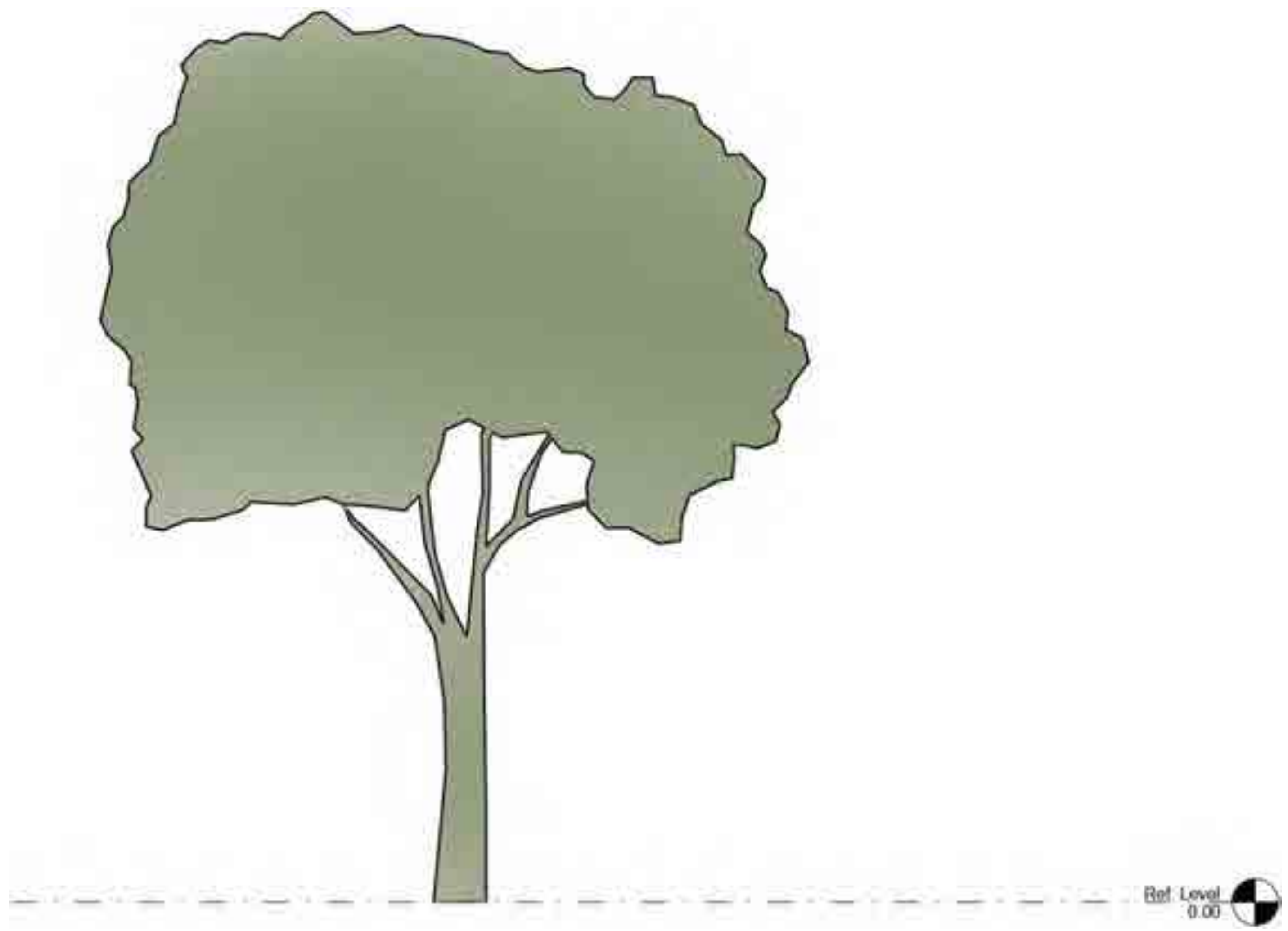
<Tree Schedule>

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Species Name	Tree Ball_ Can	Tree Ball_ Fut	Tree Ball_	Tree Ball_ Futur	Tree Ball_ Clear Tr	Tree Ball_ Can	Tree Ball_ Ba	Tree Ba	Tree Ball_ Futu	Tree Ball	Tree Ball_ Pot	Tree Ba	Origin	Suitability
Olea europaea	2.00	4.50	1.00	3.00	1.80	1.40	1.20	1.25	2.00	0.96	0.73	530	Mediterranean region	Mediterranean region
Big: 27														
Lagestroemia indica	1.70	4.00	1.00	2.80	2.20	1.70	1.20	0.50	2.00	0.96	0.73	530	China	Mediterranean region
Big: 9														
Cupressus sempervirens	5.00	7.00	0.50	1.40	0.00	0.80	1.20	0.40	0.00	0.96	0.55	400	Mediterranean region	Mediterranean region
Big: 84														
Olea europaea	2.00	3.50	1.00	2.30	1.60	1.20	1.20	1.20	1.50	0.96	0.55	400	Mediterranean region	Mediterranean region
Bonsai: 2														
Pinus pinea	1.80	6.00	1.00	5.00	2.00	1.80	1.20	0.50	2.20	0.96	0.73	530	Mediterranean region	Mediterranean region
Medium: 52														
Ceratonia siliqua	1.40	4.50	1.00	2.80	2.00	1.60	1.20	0.50	2.00	0.96	0.55	400	Mediterranean region	Mediterranean region
Medium: 18														
Schinus terebinthifolius	1.60	4.00	1.00	2.80	2.00	1.40	1.20	0.50	2.00	0.96	0.73	530	South America	Subtropical climate
Medium: 15														
Cercis siliquastrum	1.90	5.00	1.00	3.00	2.30	1.60	1.20	0.50	2.40	0.96	0.55	400	Southern Europe, Western Asia	Southern Europe, Western Asia
Medium: 38														
Jacaranda mimosifolia	1.70	5.00	1.00	3.20	2.00	1.70	1.20	0.50	2.00	0.96	0.55	400	Central and eastern South America	Mediterranean region
Medium: 38														
Plumeria sp			0.50				0.80			0.55	0.44	100	Central to South America, Caribbean	Mediterranean region
Medium: 173														
Grevillea robusta	1.40	2.00	1.00	2.80	2.00	1.30	1.20	0.60	2.00	0.96	0.55	400	Australia	Mediterranean region
Medium: 38														
Plumeria sp	1.80	2.00	0.80	2.50	2.00	1.50	1.00	0.50	1.70	0.70	0.51	200	Central to South America, Caribbean	Mediterranean region
Medium: 7														
Prunus cerasifera var. pissardii	1.60	4.00	1.00	2.90	2.00	1.60	1.20	0.50	2.00	0.96	0.55	400	Southeast Europe and Western Asia	Mediterranean regions of Asia, Africa, and Europe
Medium: 18														
Punica granatum	1.80	3.50	0.80	2.20	1.50	1.50	1.00	0.60	1.70	0.70	0.51	200	Asia minor, Iran	Mediterranean regions of Asia, Africa, and Europe
Medium: 23														
Olea europaea	1.80	4.00	1.00	2.60	1.70	1.20	1.20	0.60	1.70	0.96	0.55	400	Mediterranean region	Mediterranean region
Medium: 18														
Lagestroemia indica	1.50	3.00	0.80	2.50	2.00	1.50	1.00	0.50	2.00	0.96	0.55	400	China	Mediterranean region
Medium: 12														
Nerium Oleander white blossom	1.50	1.50	0.80	2.30	1.80	1.10	1.00	0.40	1.50	0.55	0.44	100	Mediterranean region	Mediterranean region
Medium: 69														
Cupressus sempervirens	3.50	5.00	0.50	1.40	1.00	0.60	1.20	0.40	1.00	0.96	0.55	400	Mediterranean region	Mediterranean region
Medium: 26														
Schinus mole	1.60	4.50	1.00	3.20	2.00	1.50	1.20	0.50	1.80	0.80	0.65	330	Peru, Ardentina, Chile	Mediterranean region
Medium: 12														
Nerium Oleander Somon color blossom			0.80				1.00			0.55	0.44	100	Mediterranean region	Mediterranean region
Medium: 25														
Tamarix tree	2.50	5.50	1.00	3.00	2.50	1.60	1.20	0.50	2.00	0.96	0.55	400	the Mediterranean region, central Asia an	Mediterranean region
Medium: 35														

2D REPRESENTATIONS

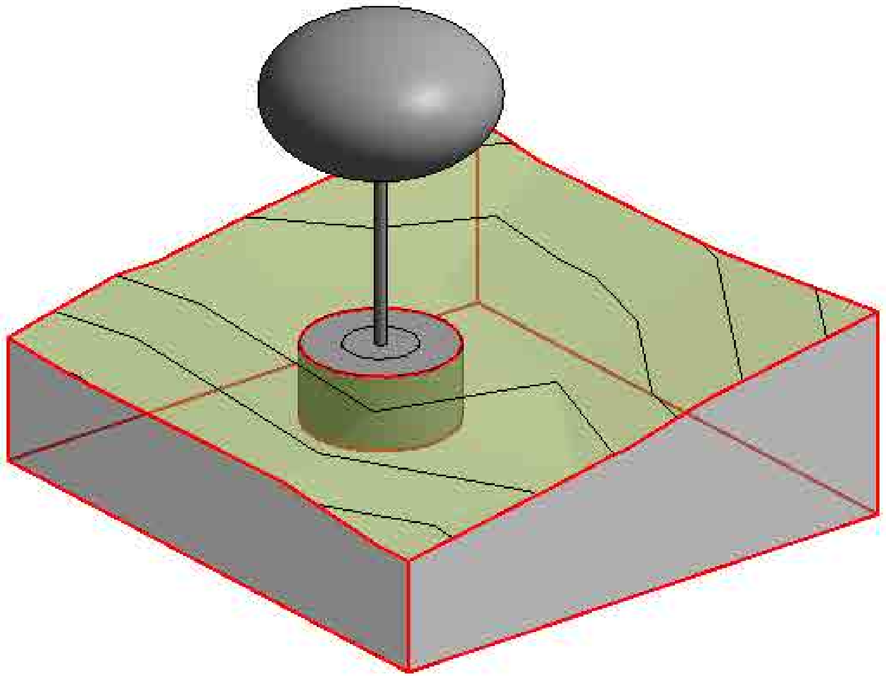


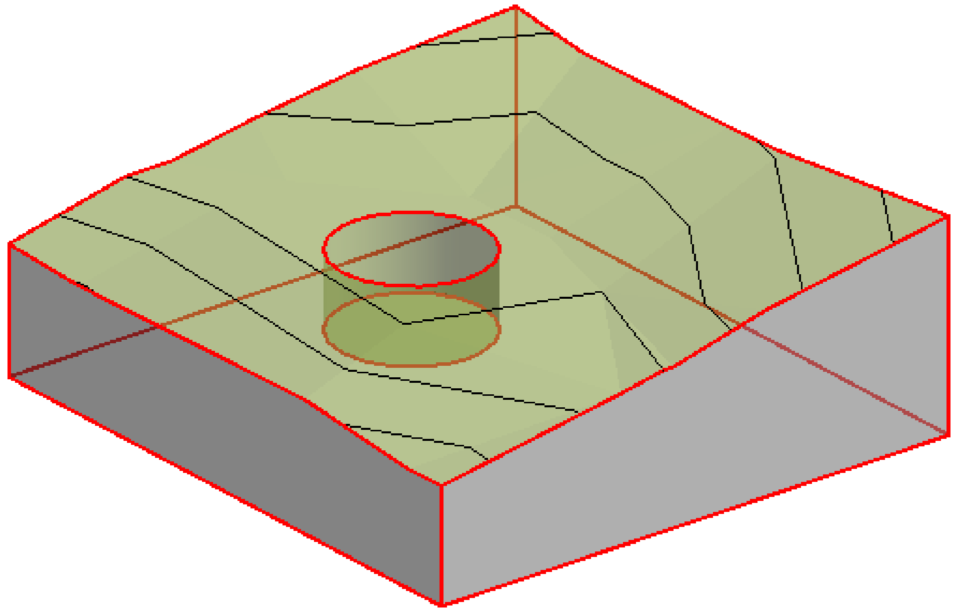
Plan



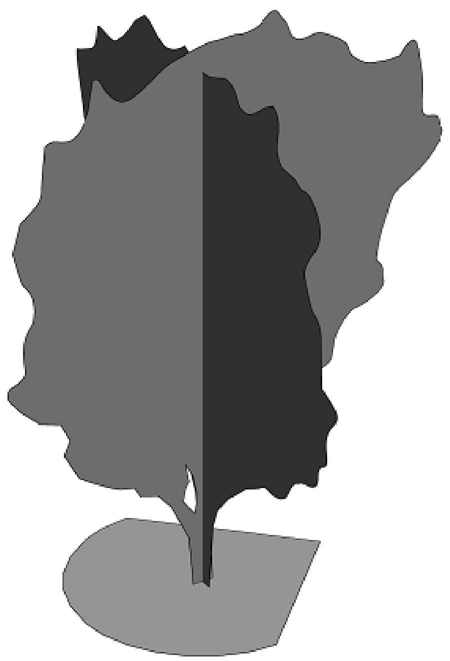
Elevation

RELATIONS BETWEEN OBJECTS

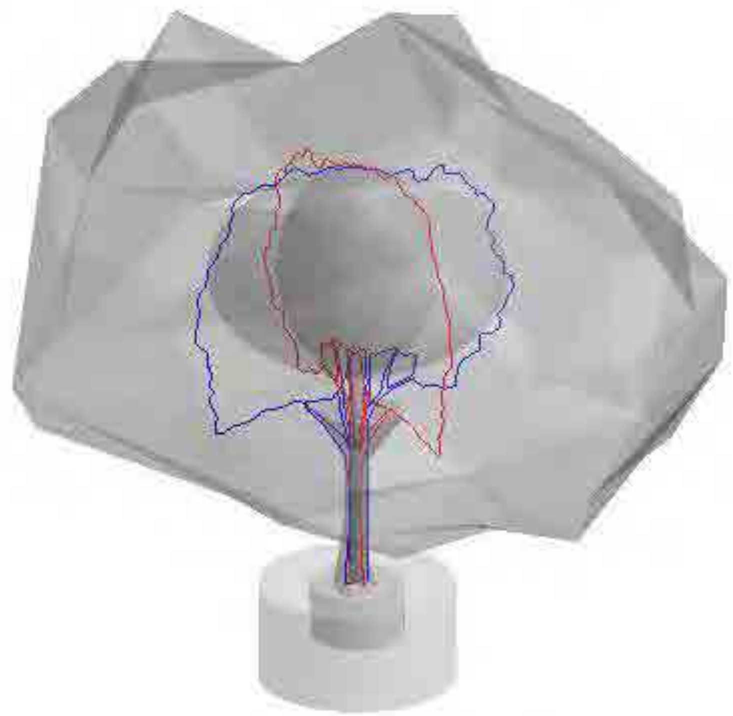




VISUALIZATIONS



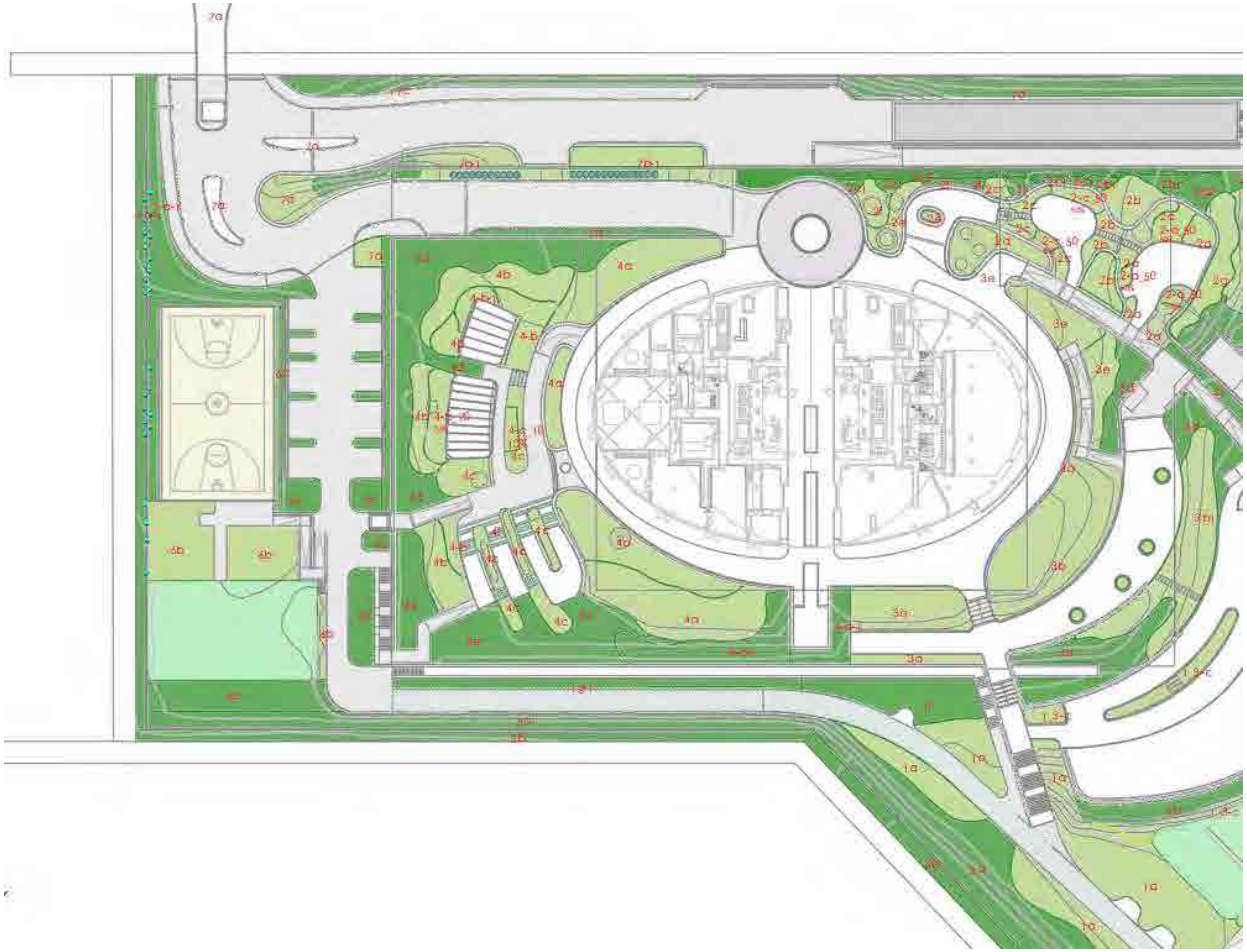
default



developed by doxiadis+

Understory Planting

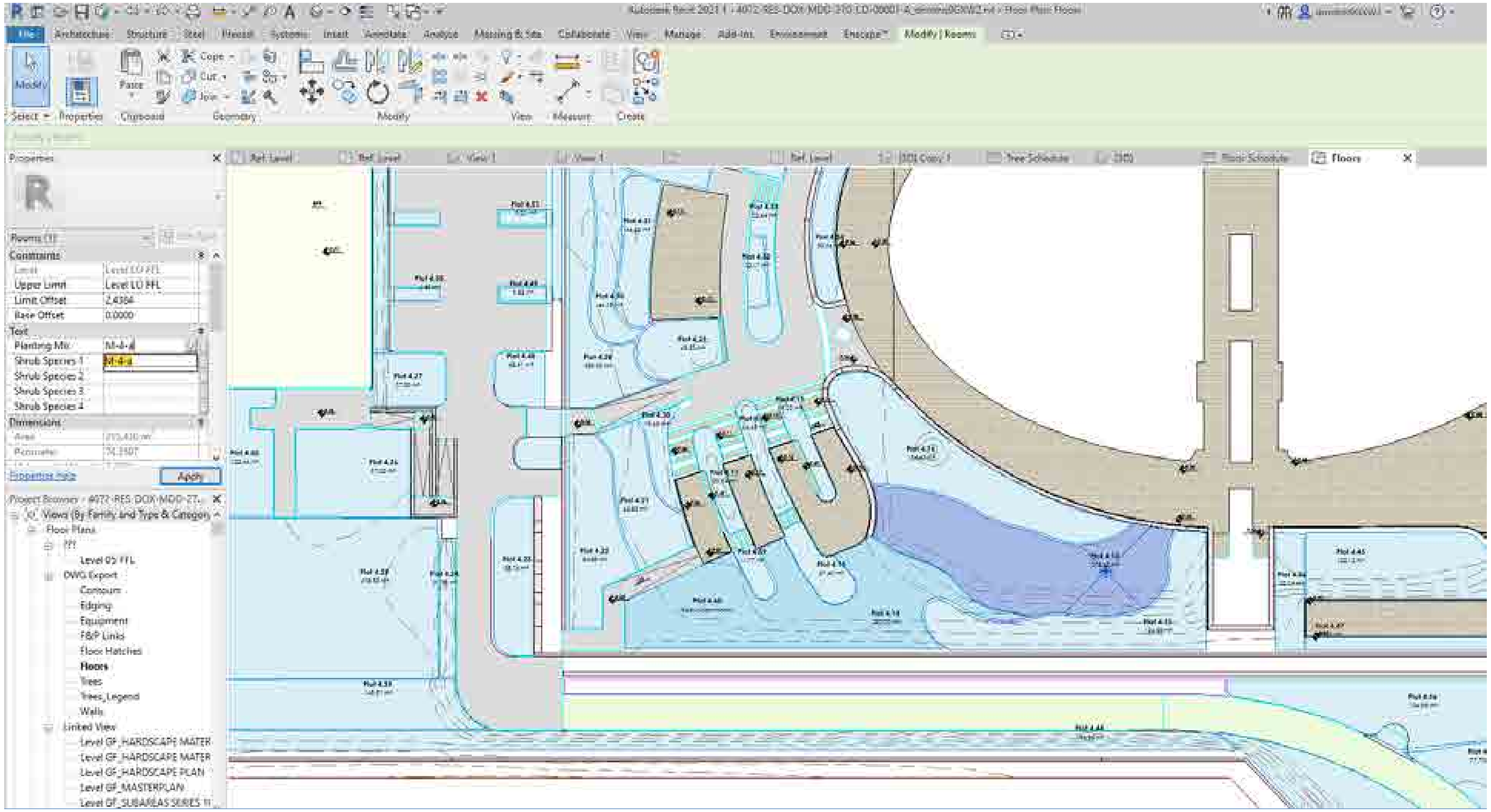
Understory Planting Plan



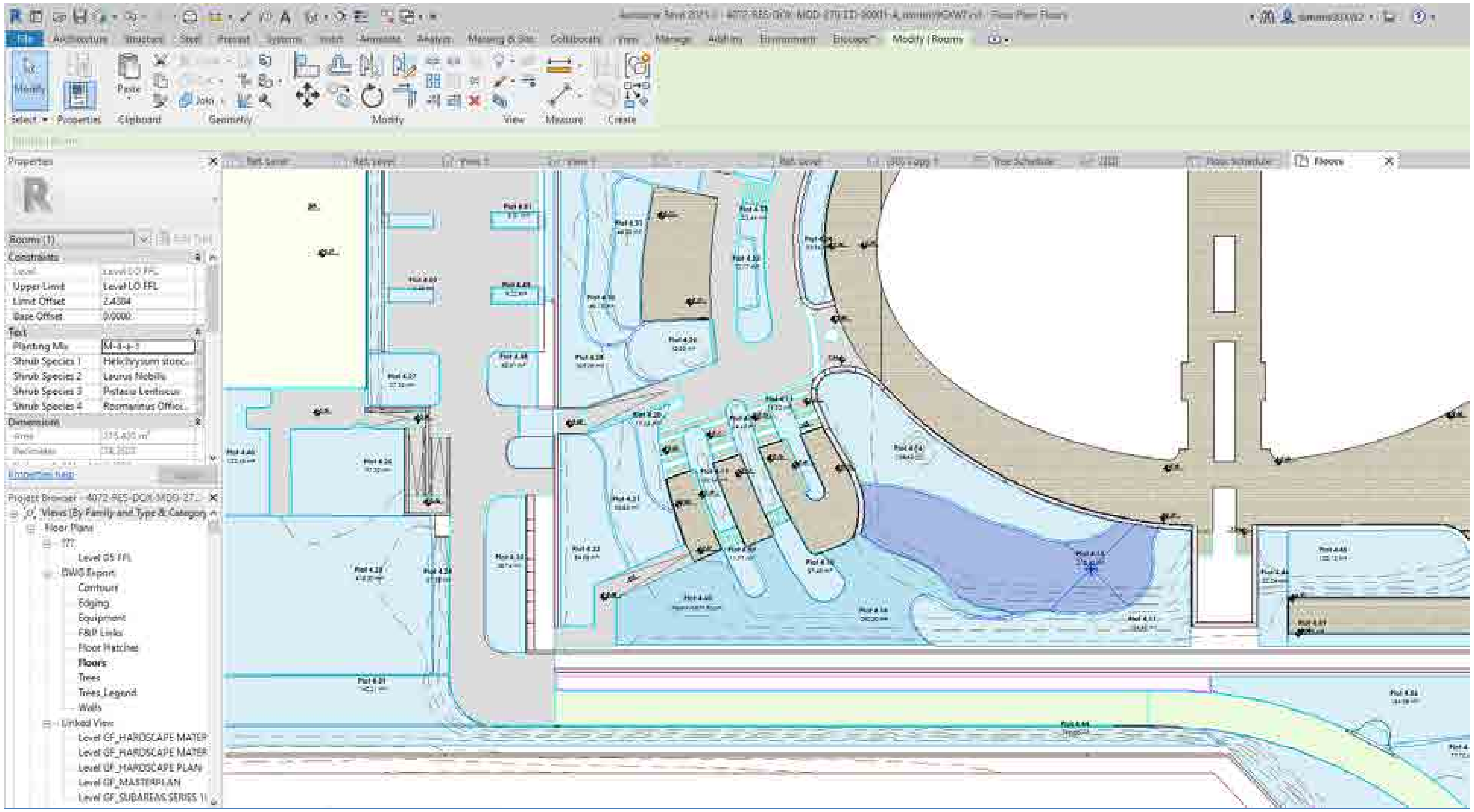
Understory Data

A	B	C	D	E	F	L	M	P	Q
KeySCAPE Multi Density Mix Group	**1**	**Mix Group**	**MRT_1**						
Name	**Common Name**	**Abbreviation**	**Species Group**	**Height**	**Spread**	**Percentage**	**Cost**	**Layout**	**Densit**
Mix Name	**M-1-a**	**Description**	**100%**	**objectType**	**1**				
Ammophila arenaria			Shrubs			30		3	0.6
Elymus farctus			Shrubs			25		3	0.6
Helichrysum stoechas			Shrubs			10		3	0.6
LImoniastrum monopetalum carnaval			Shrubs			5		3	0.8
Phlomis fruticosa			Shrubs			10		3	0.8
Rosmarinus officinalis			Shrubs			5		3	0.8
Scabiosa cretica			Shrubs			15		3	0.5
Mix Name	**M-1-b**	**Description**	**100%**	**objectType**	**1**				
Teucrium fruticans			Shrubs			75		3	0.8
LImoniastrum monopetalum carnaval			Shrubs			25		3	0.8
Mix Name	**M-1_3-c**	**Description**	**100%**	**objectType**	**1**				
Agave attenuata			Shrubs			15		3	0.4
Crithmum maritimum			Shrubs			15		3	0.4
Helichrysum italicum			Shrubs			20		3	0.6
Helichrysum petiolare			Shrubs			20		3	0.6
LImoniastrum monopetalum carnaval			Shrubs			30		3	0.8
Mix Name	**M-1_3-c-1**	**Description**	**100%**	**objectType**	**1**				
Helichrysum italicum			Shrubs			70		3	0.6
Crithmum maritimum			Shrubs			30		3	0.4
Mix Name	**M-1-e**	**Description**	**100%**	**objectType**	**1**				
Helichrysum stoechas			Shrubs			20		3	0.6
LImoniastrum monopetalum carnaval			Shrubs			10		3	0.8
Phlomis fruticosa			Shrubs			20		3	0.8
Pistacia lentiscus			Shrubs			10		3	1
Rosmarinus officinalis			Shrubs			15		3	0.8
Rosmarinus prostratus			Shrubs			10		3	0.6
Scabiosa cretica			Shrubs			15		3	0.5
Mix Name	**M-1-f**	**Description**	**100%**	**objectType**	**1**				
Laurus nobilis			Shrubs			25		3	1
Phlomis fruticosa			Shrubs			25		3	0.8
Pistacia lentiscus			Shrubs			25		3	1
Rosmarinus officinalis			Shrubs			25		3	0.8
~~**Mix Name**~~	~~**M-1-g**~~	~~**Description**~~	~~**100%**~~	~~**objectType**~~	~~**1**~~				
Laurus nobilis			Shrubs			100		3	1

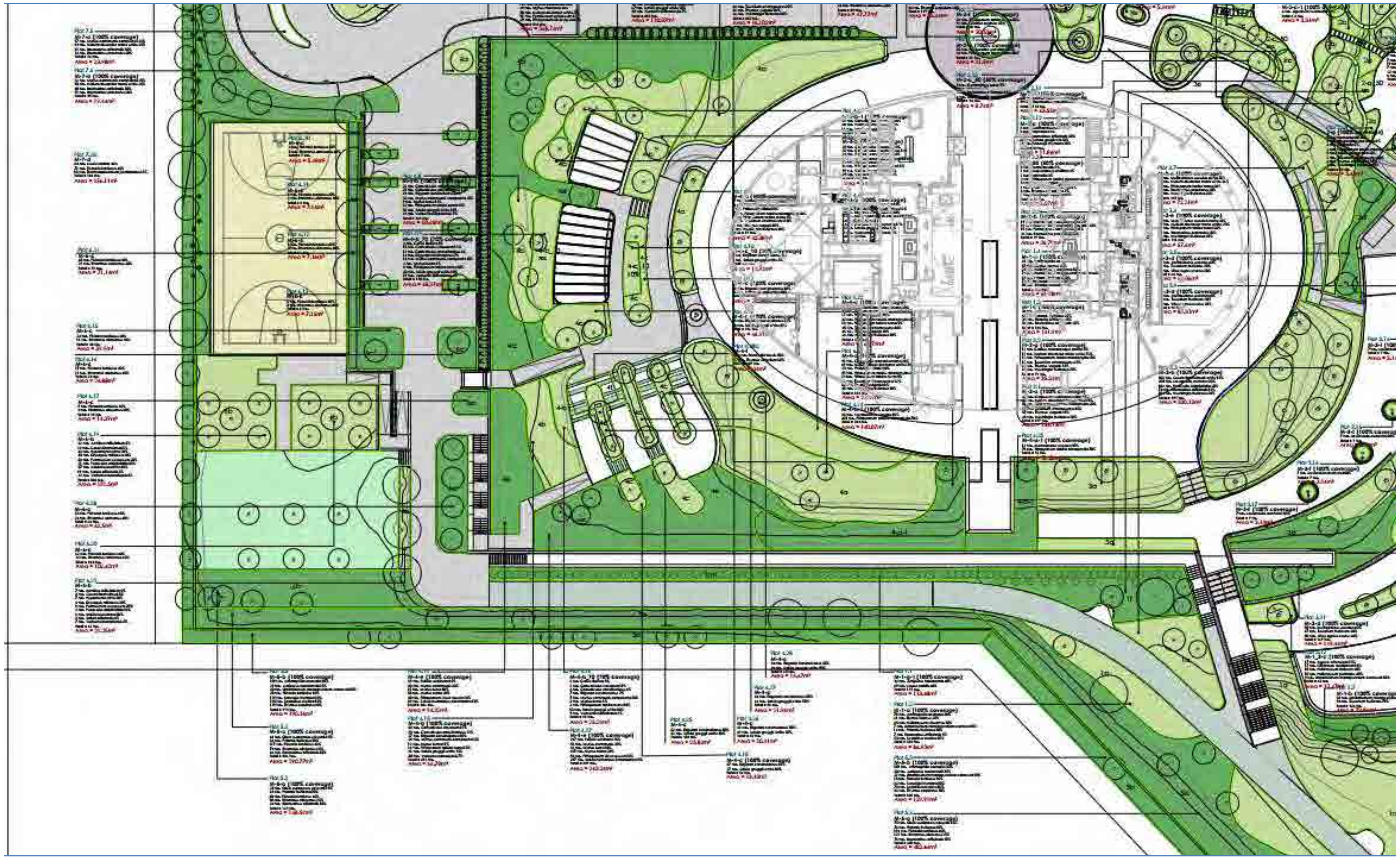
Understory Data



Understory Data



Understory Data



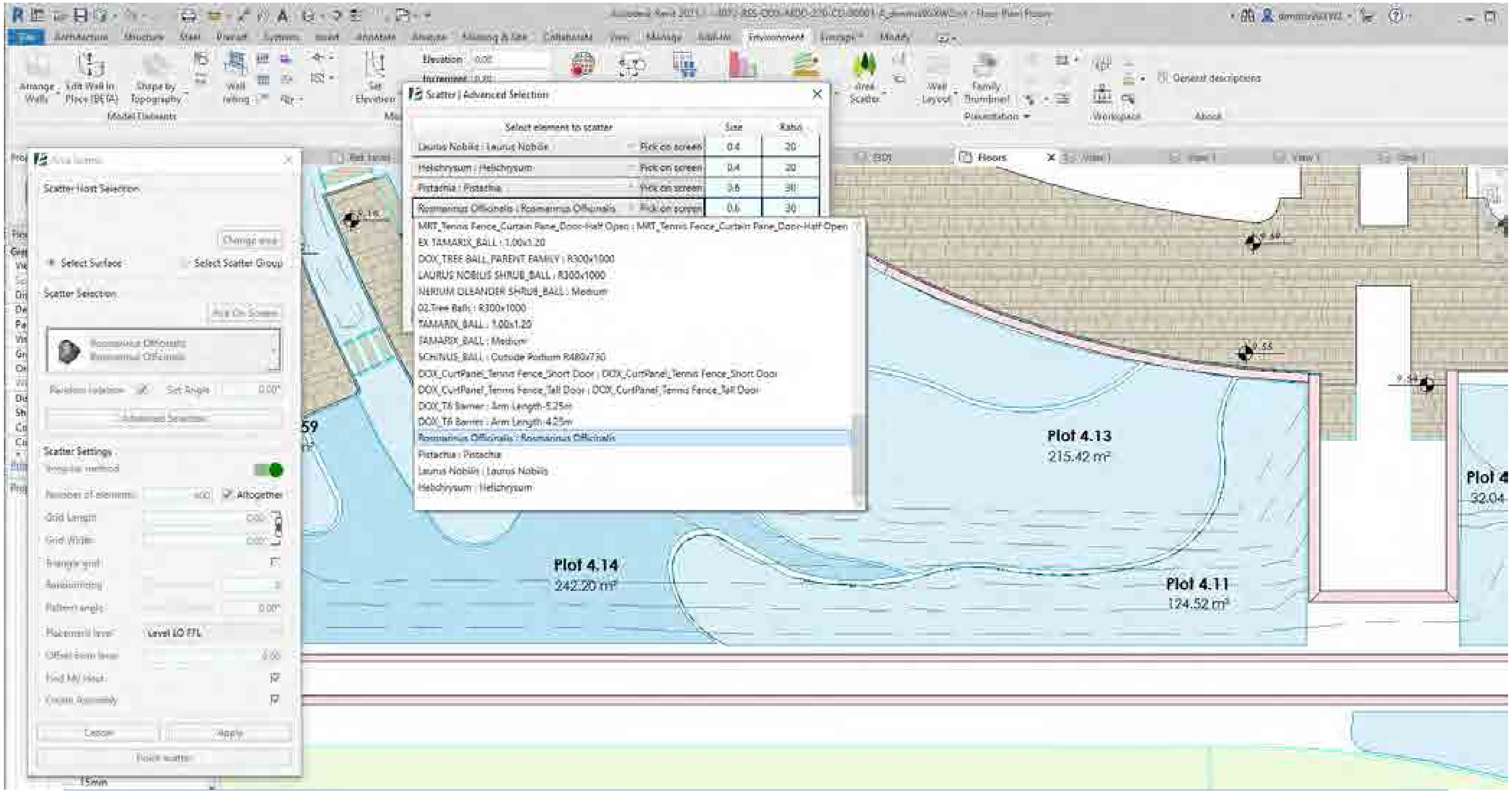
UNDERSTORY PLANTING

ΑΝΑΠΤΥΞΗ BIM ΑΝΤΙΚΕΙΜΕΝΩΝ

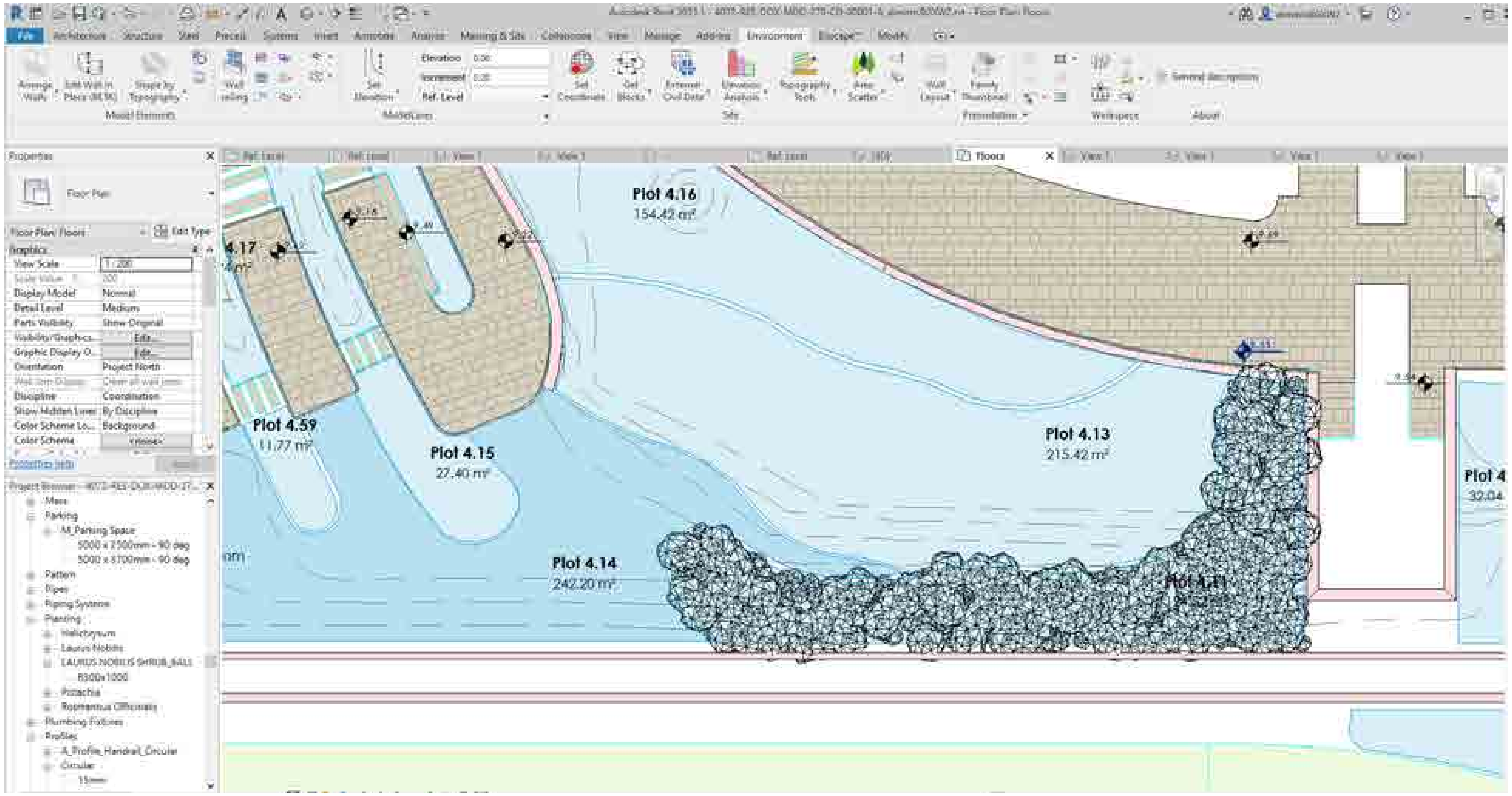
BIM IN LANDSCAPE ARCHITECTURE

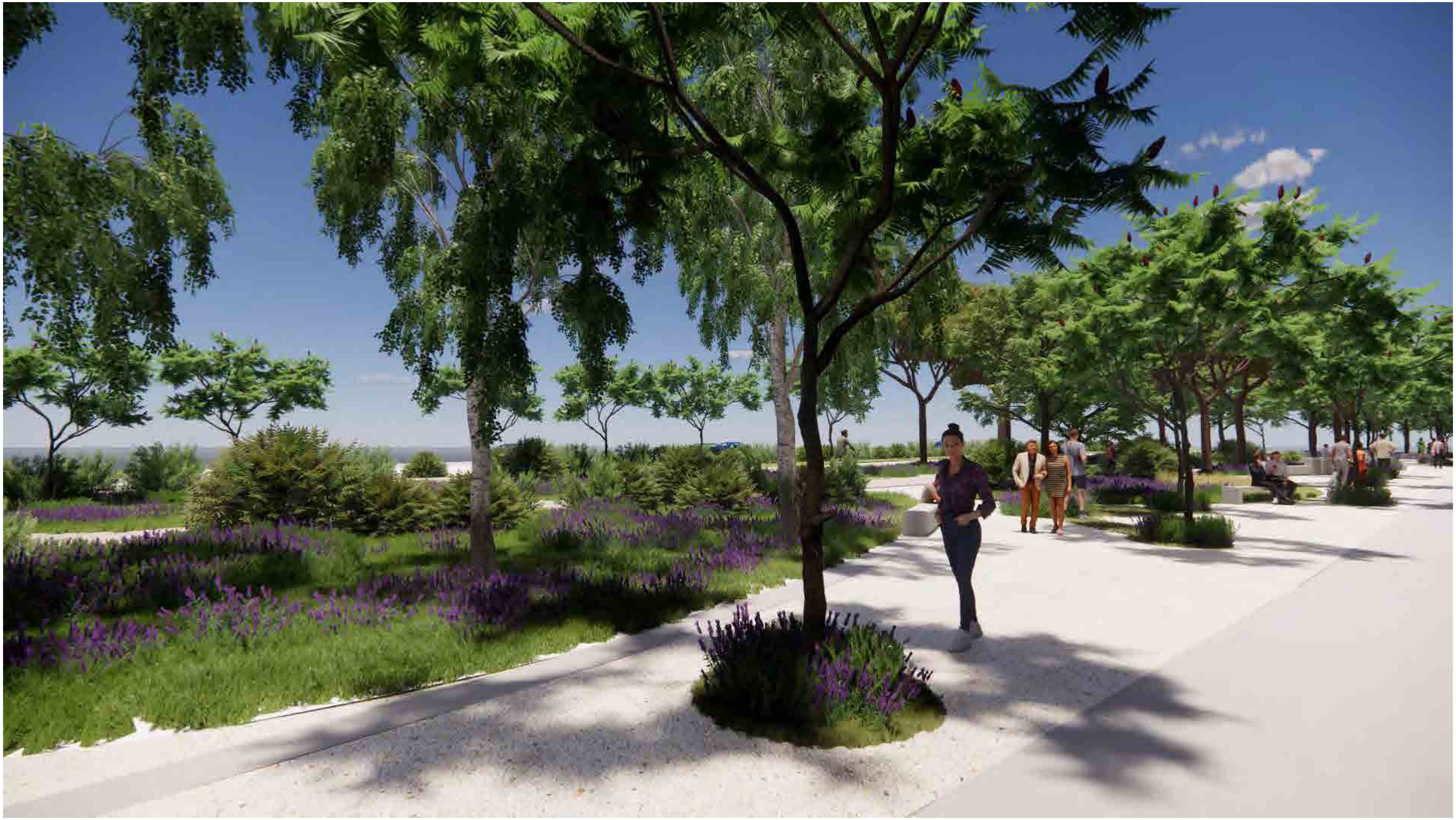
doxiadis+

Understory Geometry



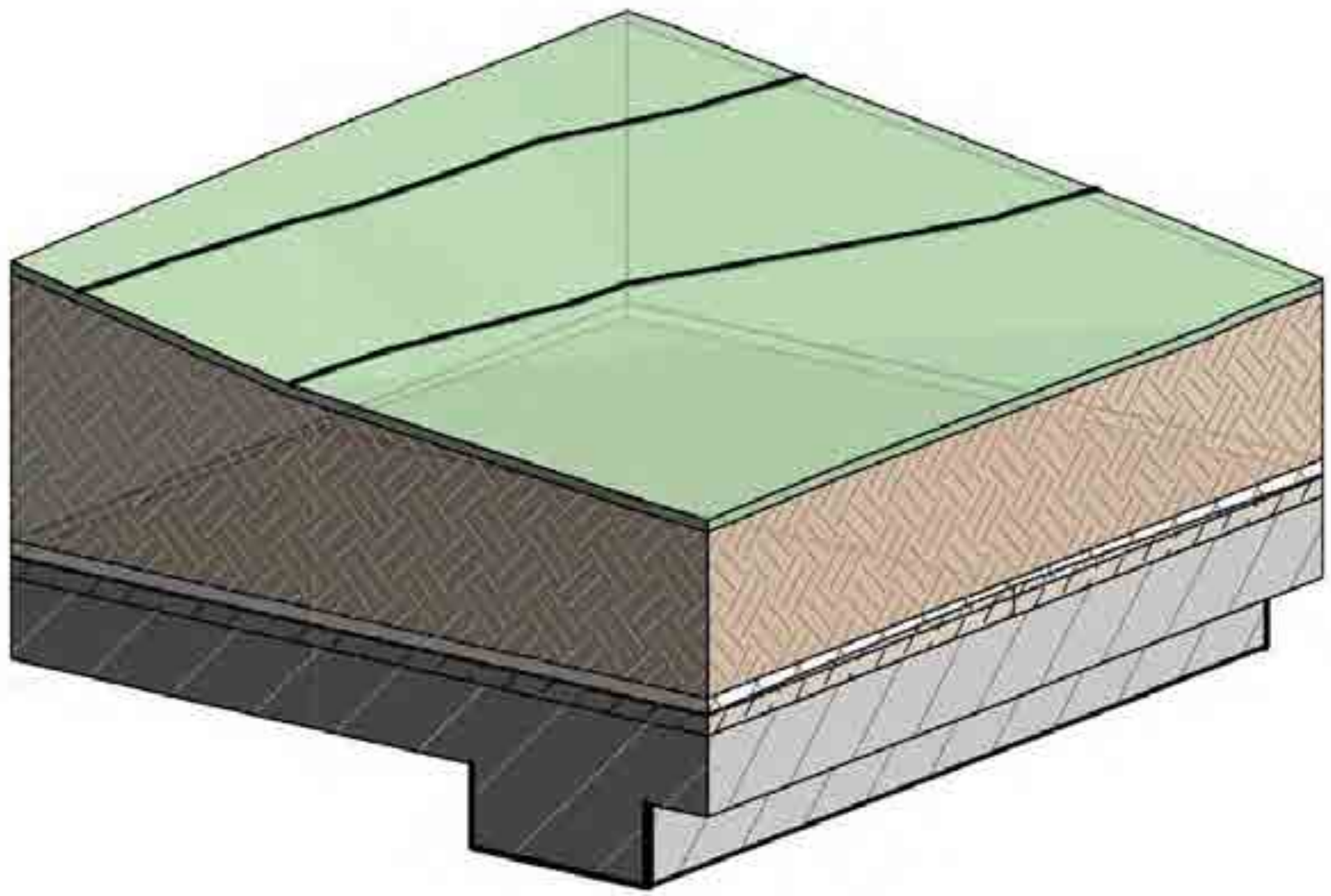
Understory Geometry

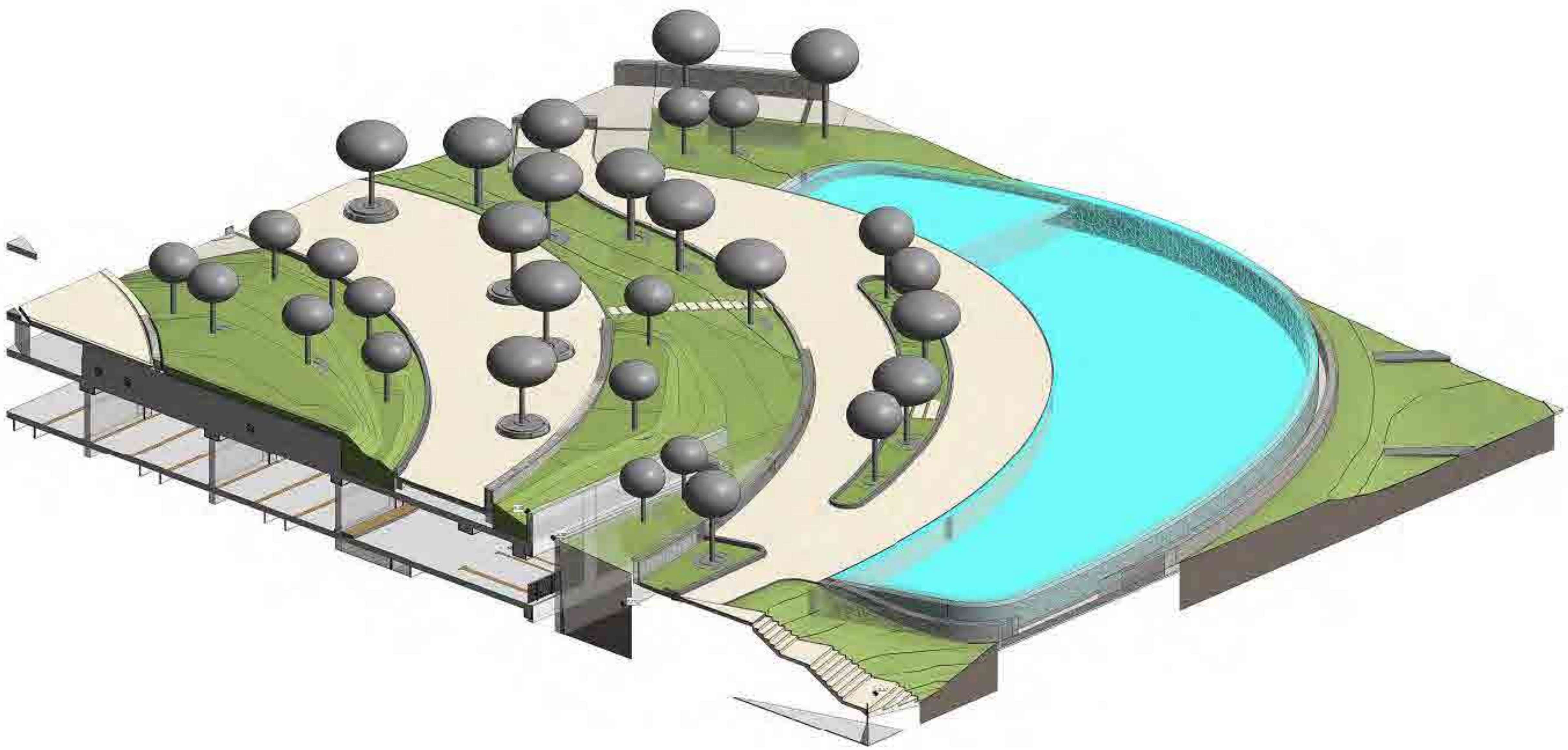


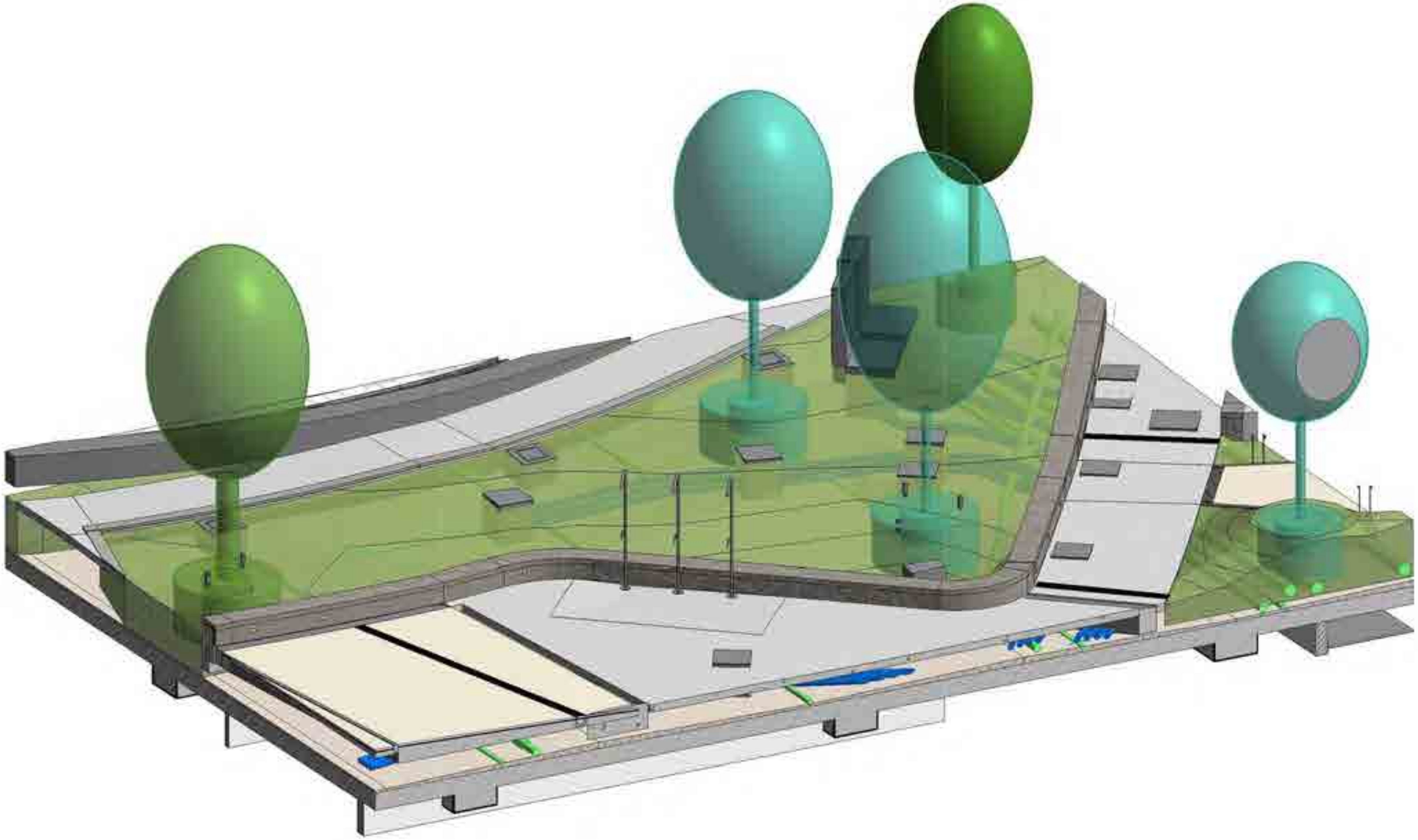


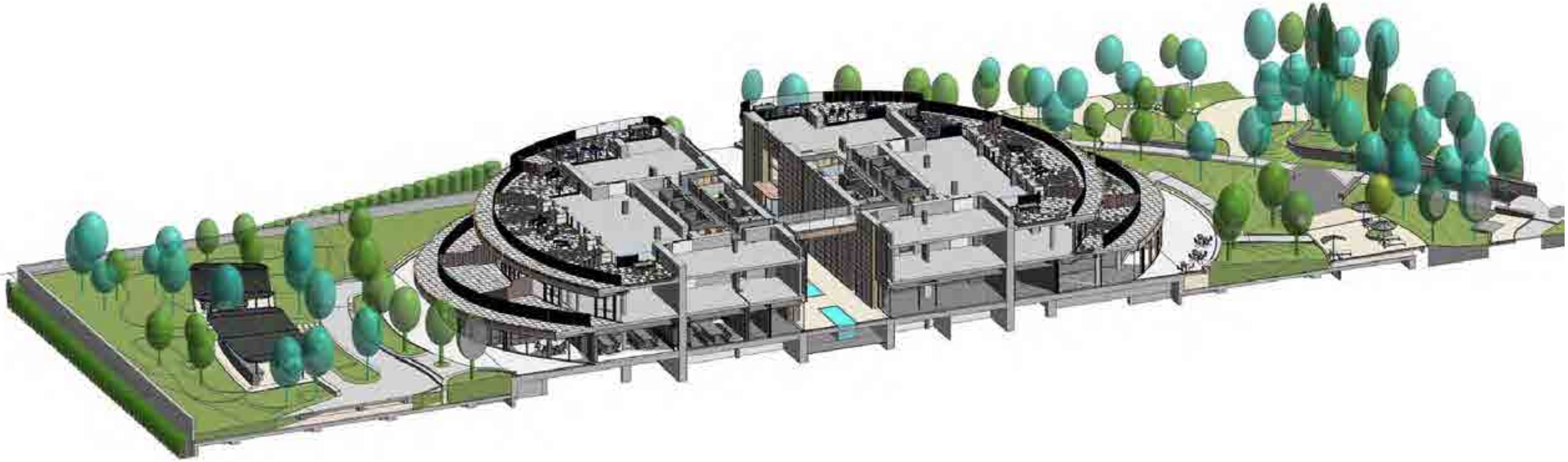
Earthworks

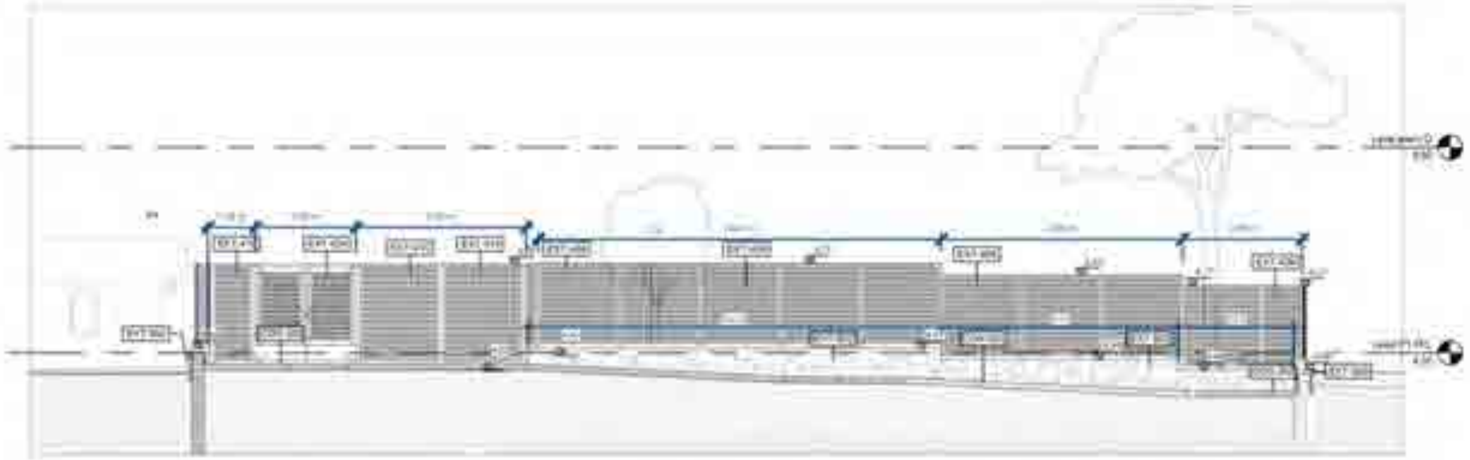
Earthworks Geometry





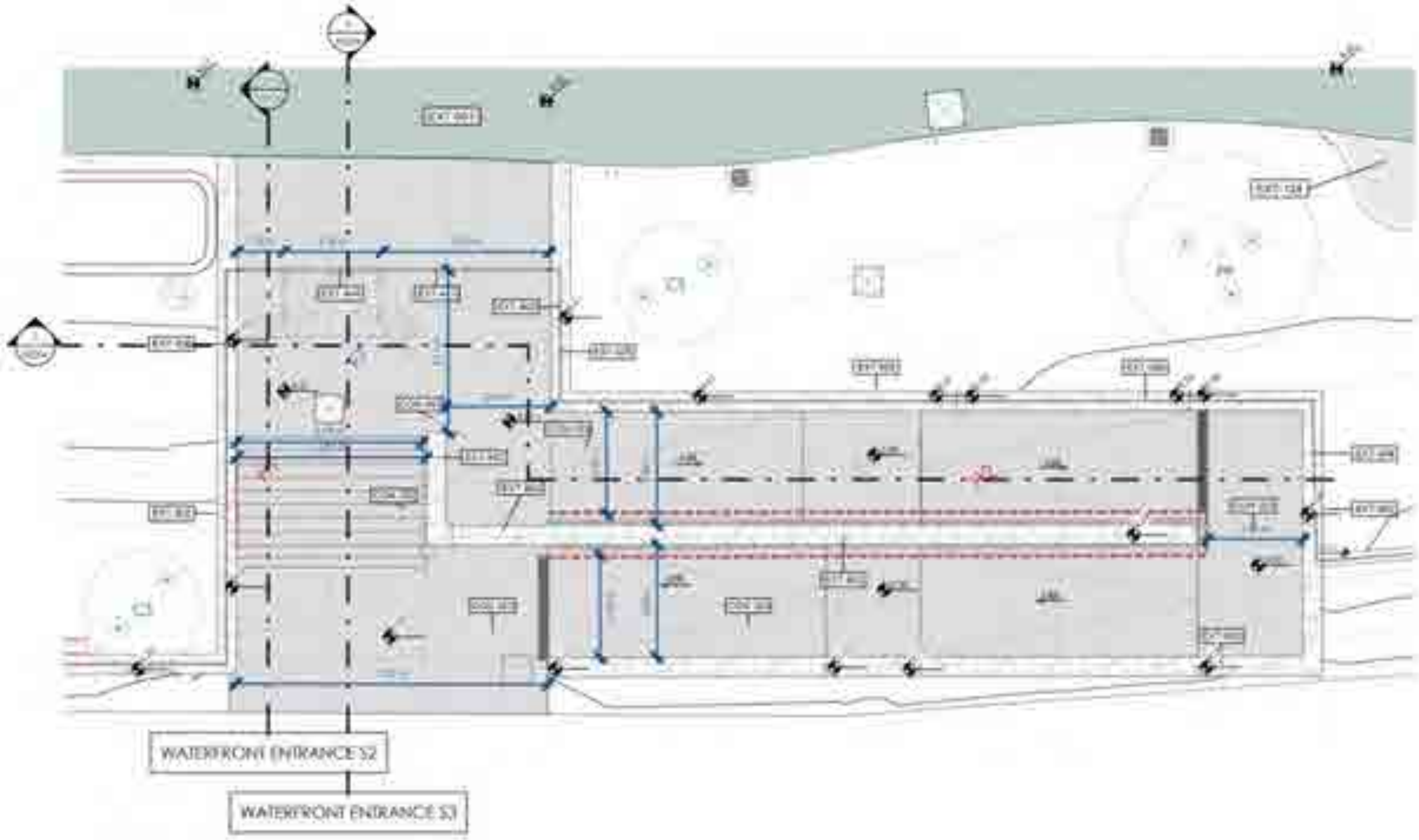




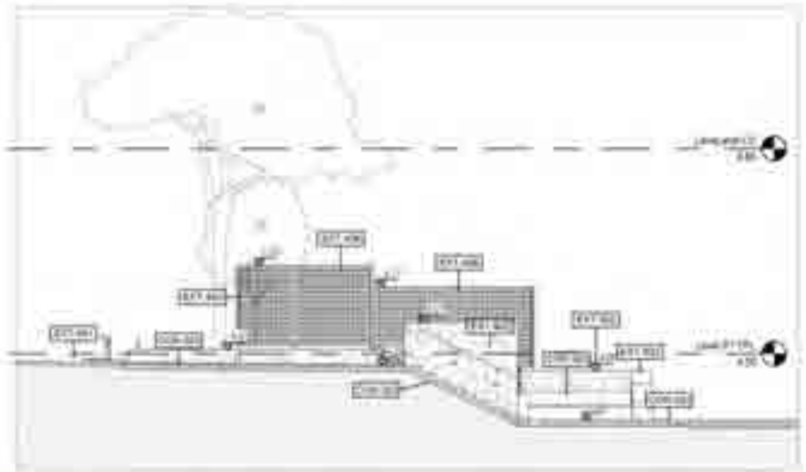


1 WATERFRONT ENTRANCE SECTION 1
1 : 100

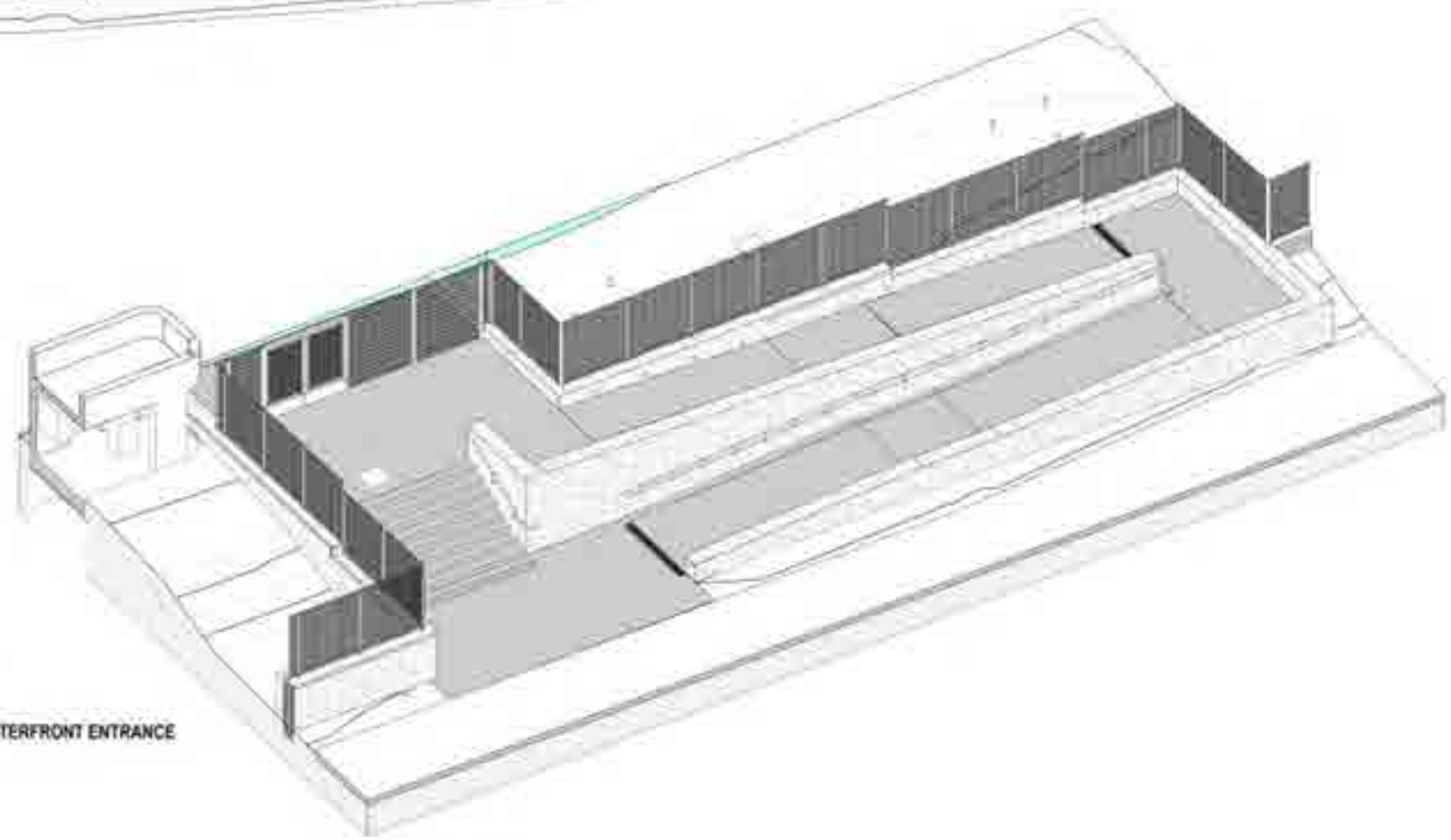
2 WATERFRONT ENTRANCE SECTION 2
1 : 100



4 WATERFRONT ENTRANCE PLAN
1 : 100



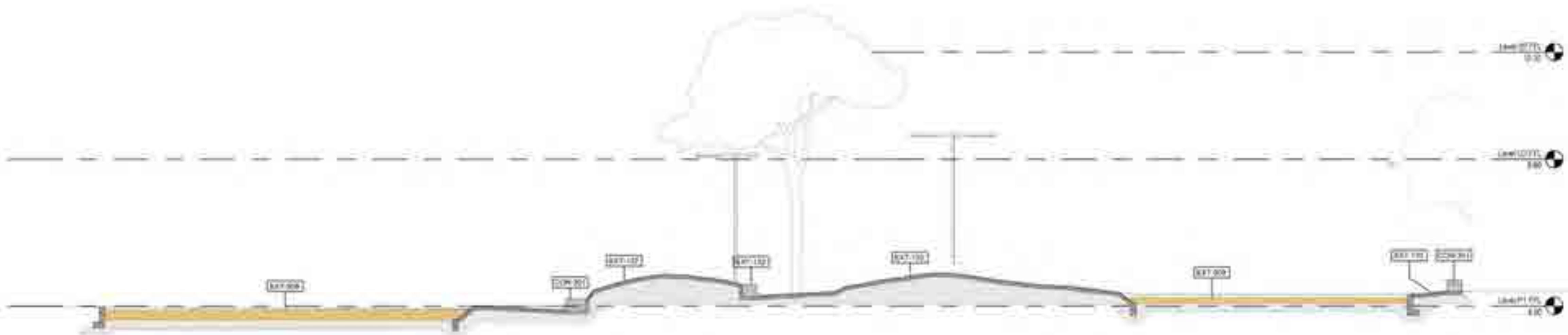
3 WATERFRONT ENTRANCE SECTION 3
1 : 100



5 3D - WATERFRONT ENTRANCE

doxiadis+

1 | 103_Playground Plan
1 : 100



2 | PLAYGROUND SECTION 1
1 : 100

doxiadis+

doxiadis+

doxiadis+

thank you