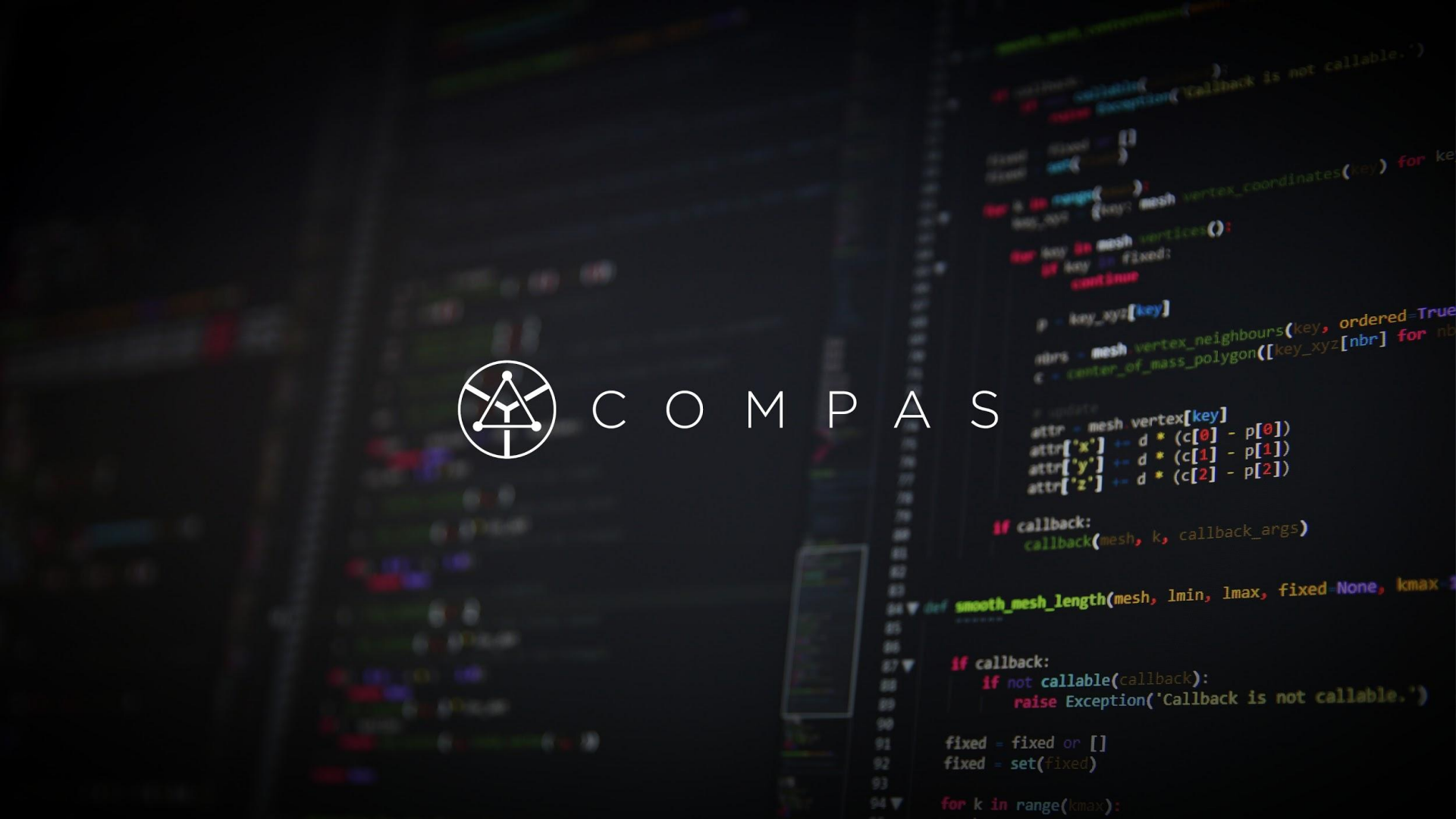
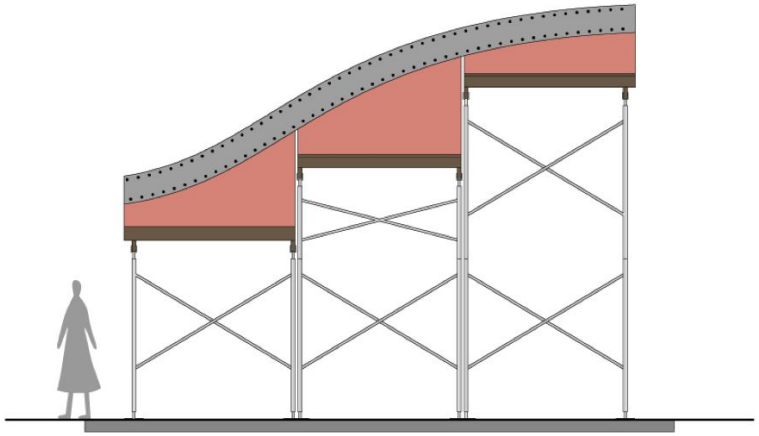
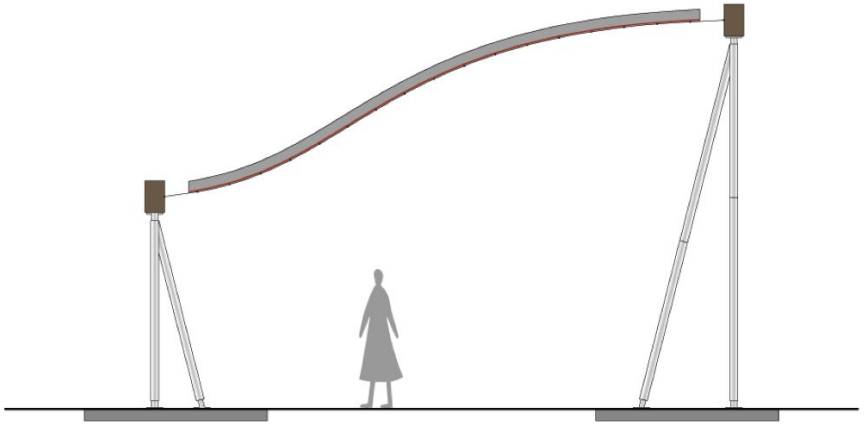

COMPAS

# Flexible Formworks

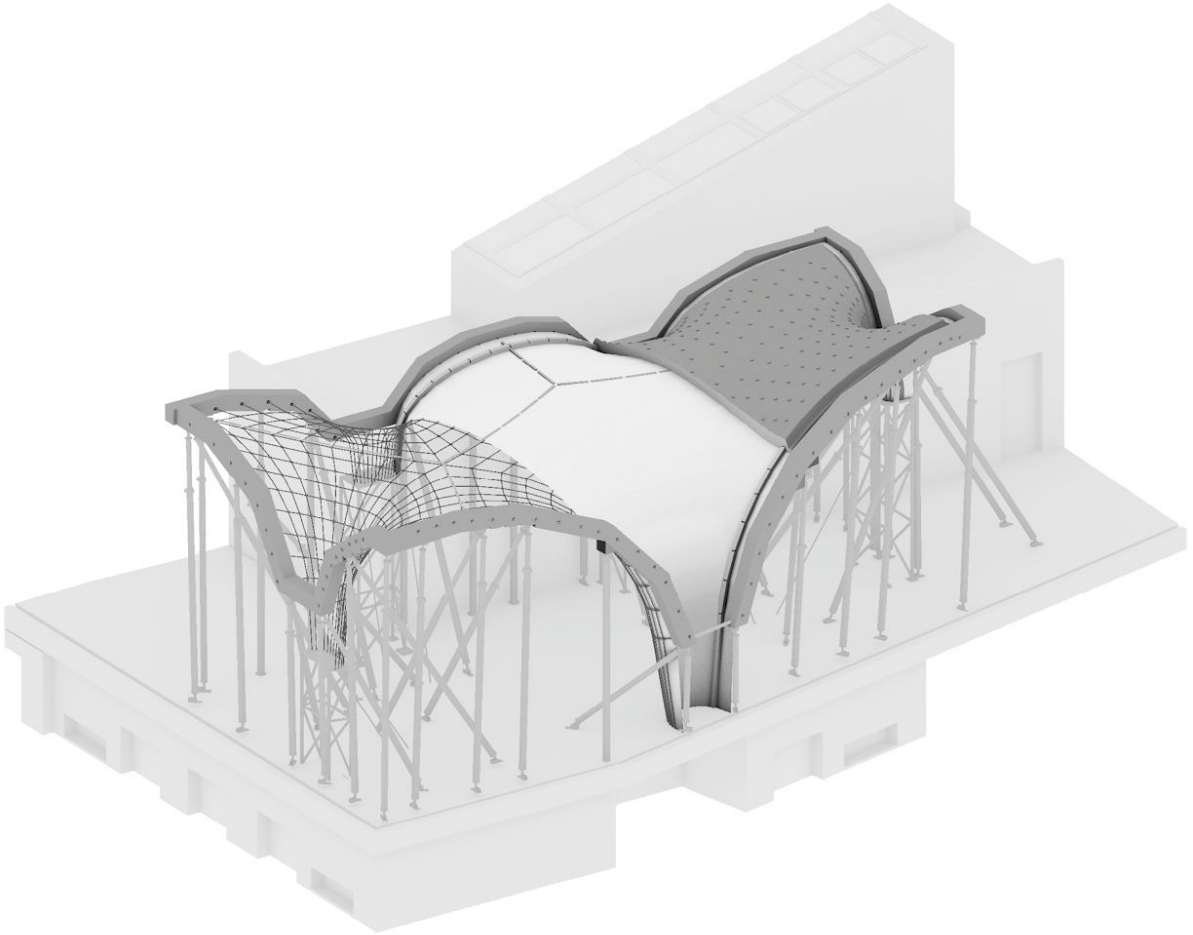


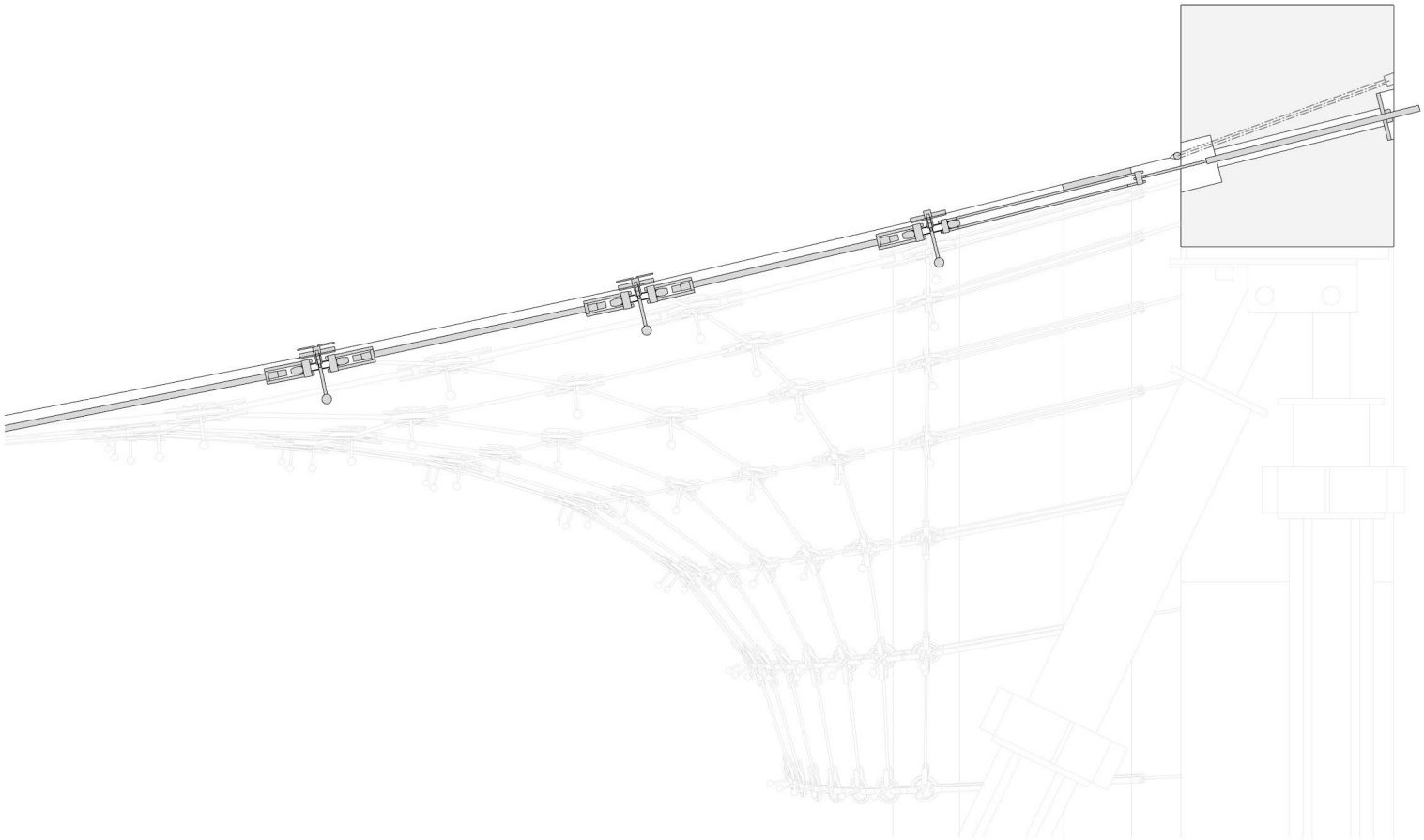
Traditional Formworks



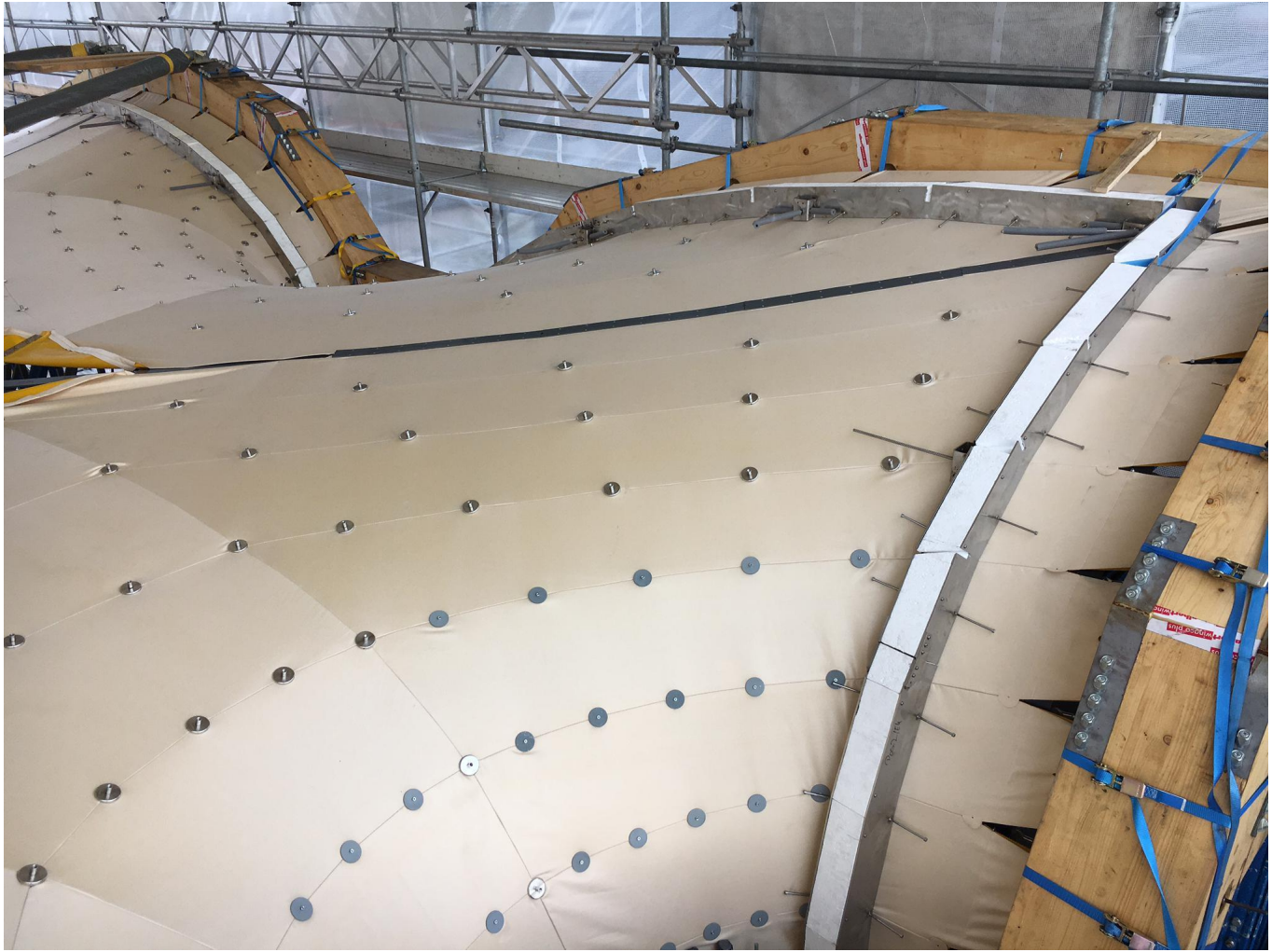
Flexible Formworks

HiLo

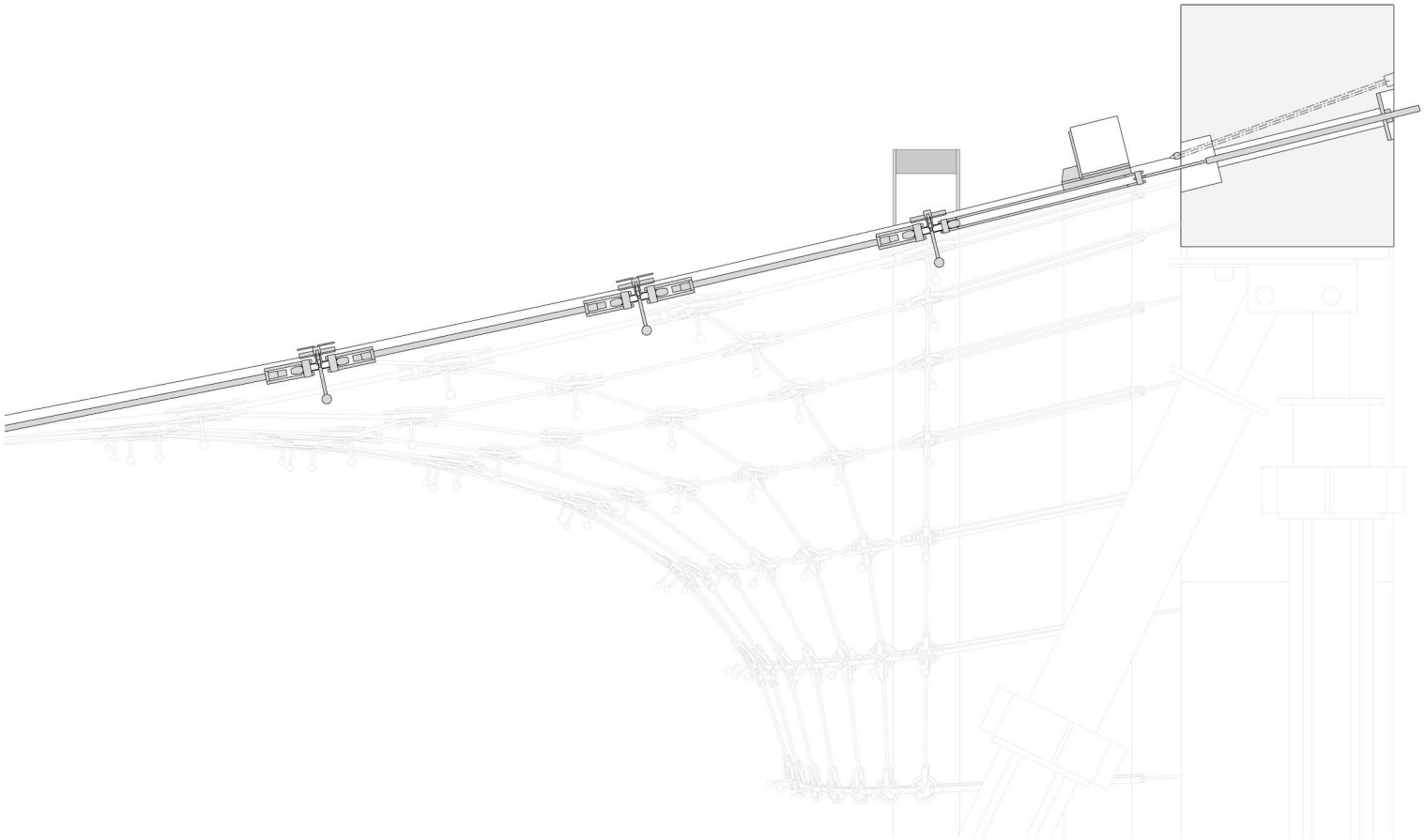


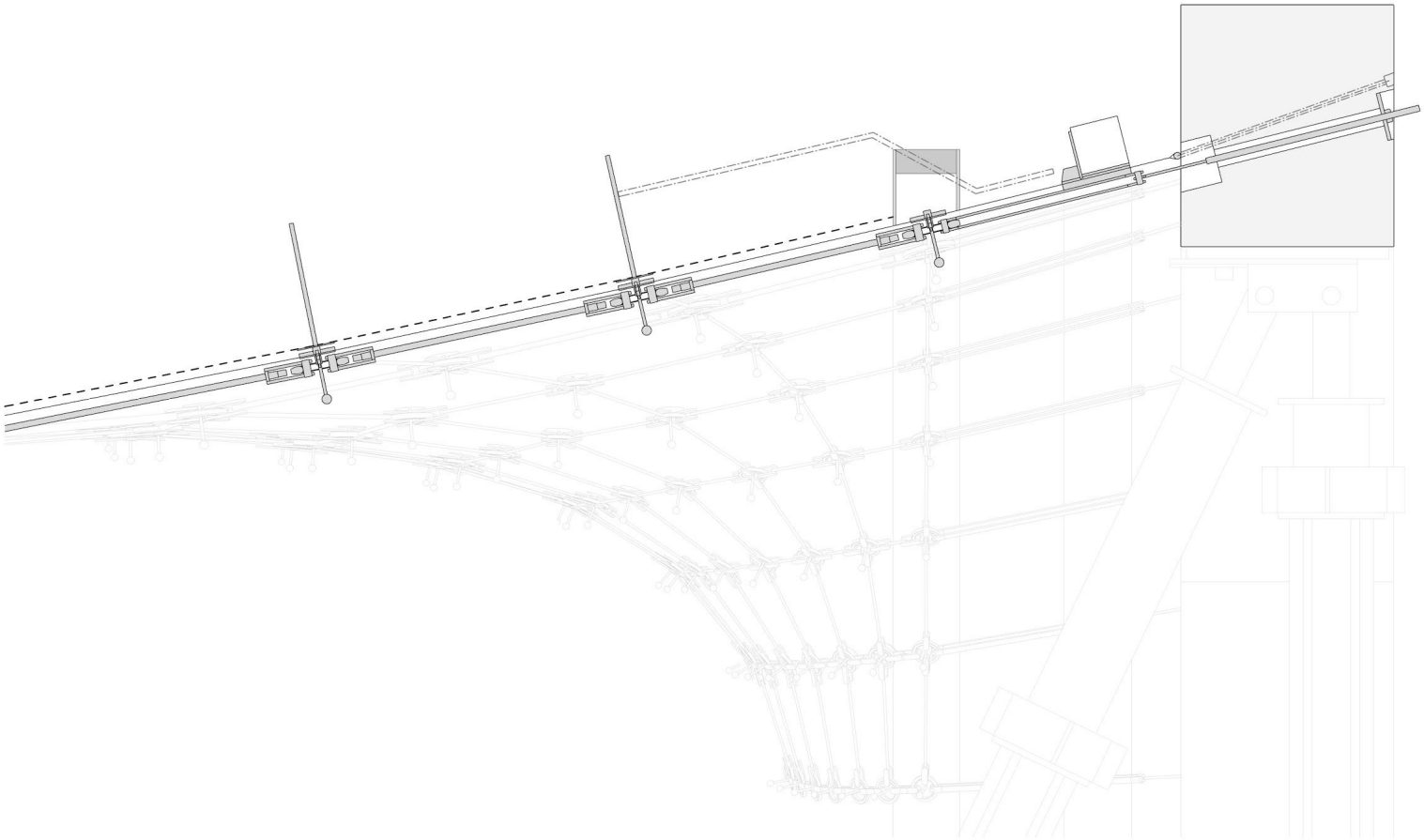


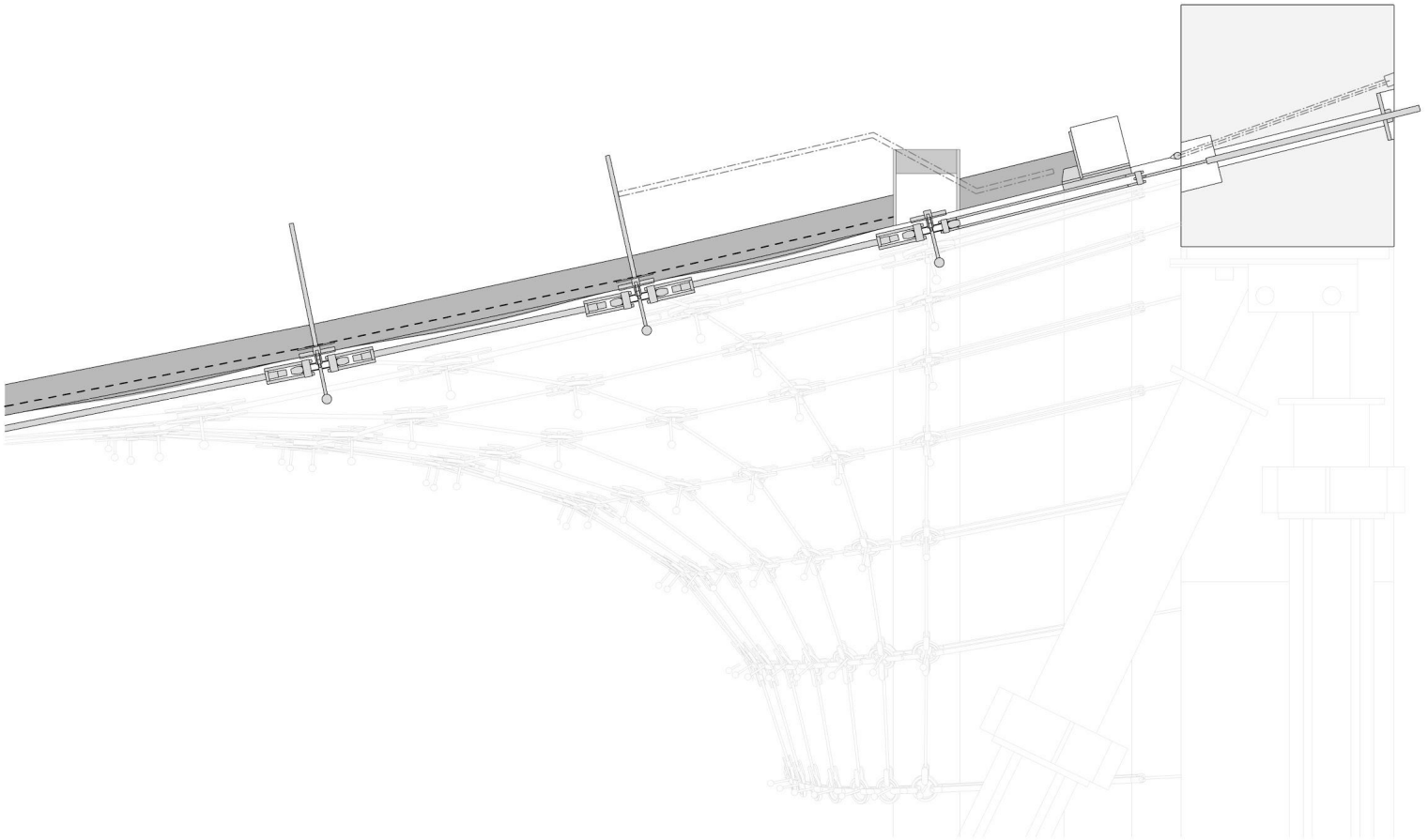

044 801 80 40
AWD

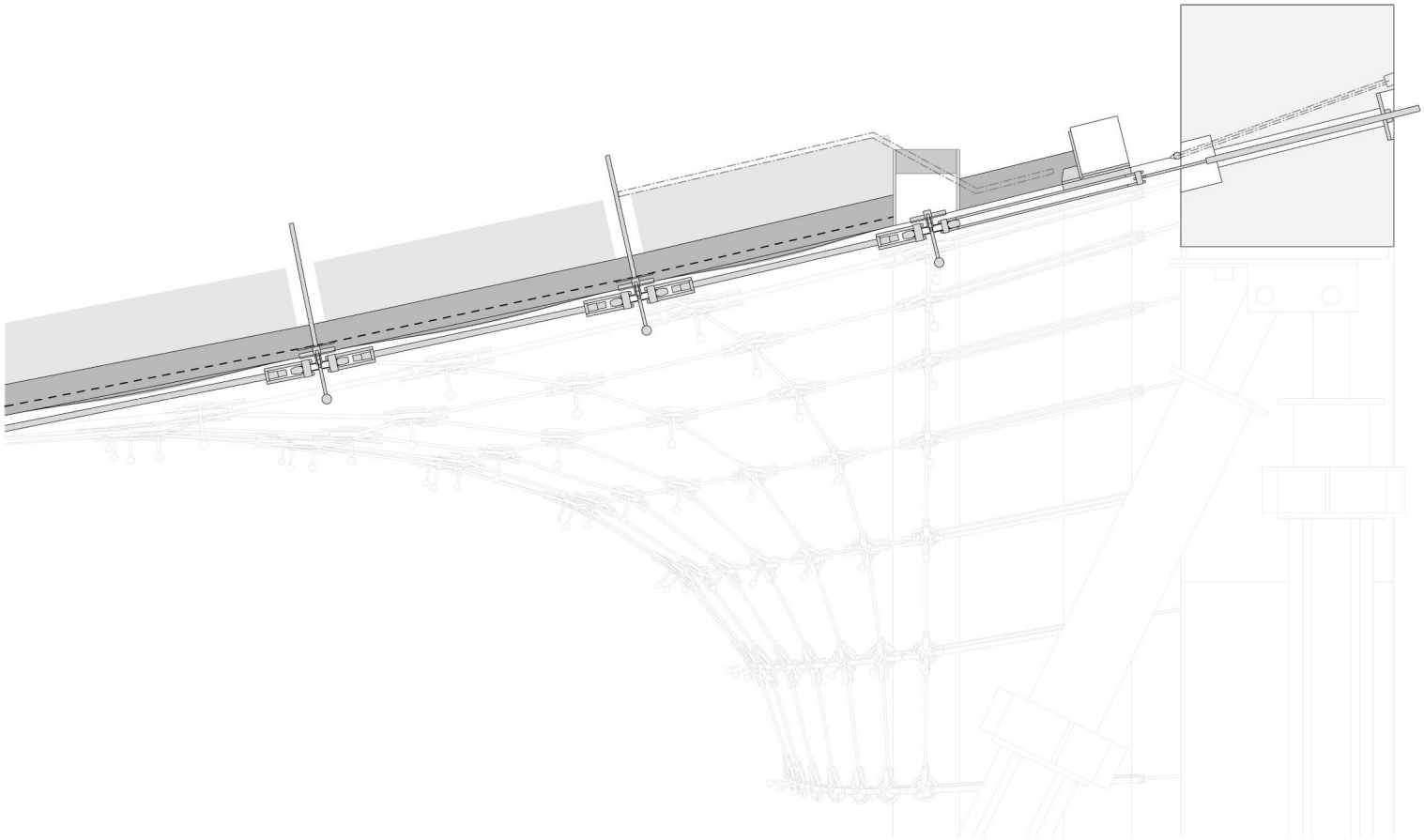


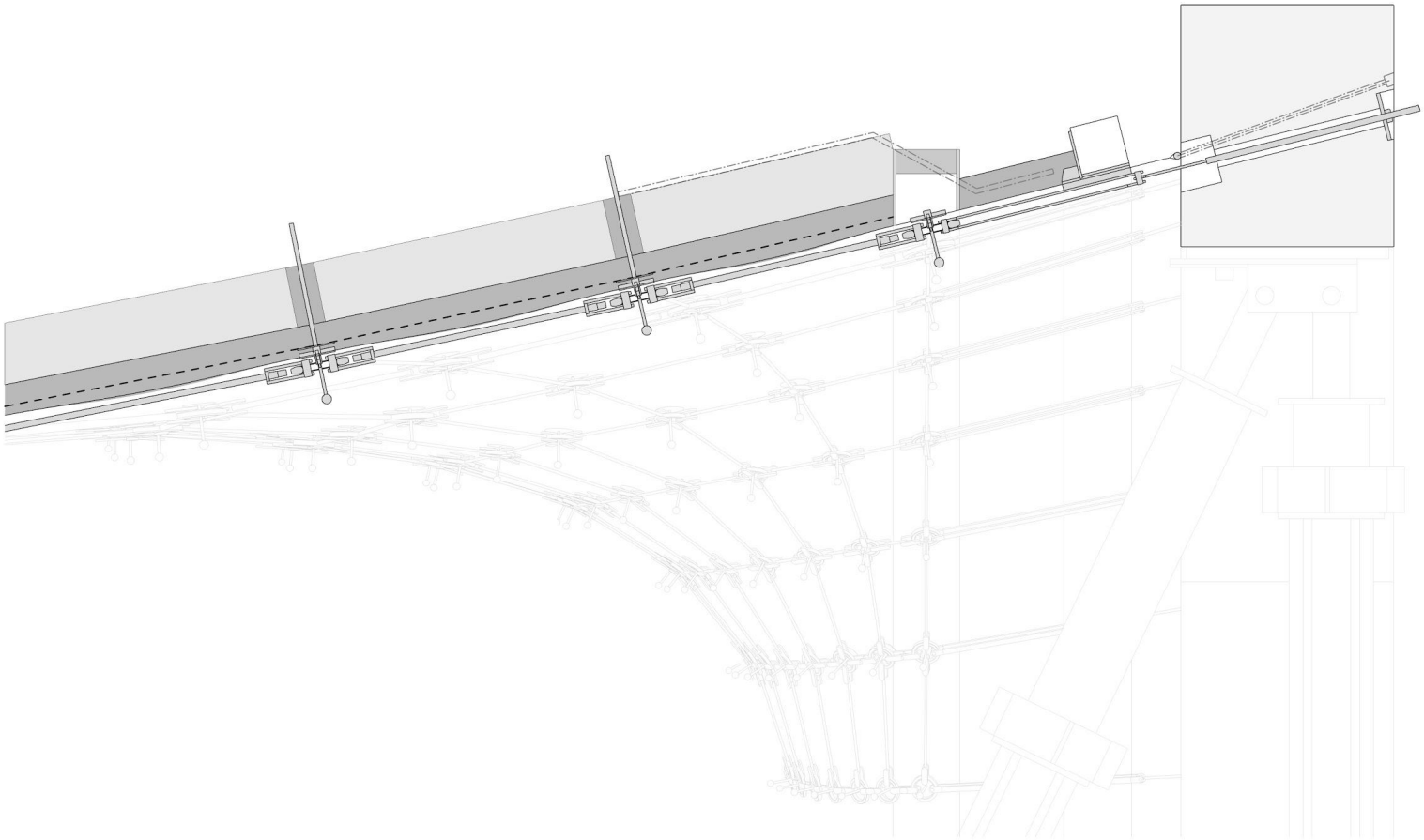

Lift-Ex

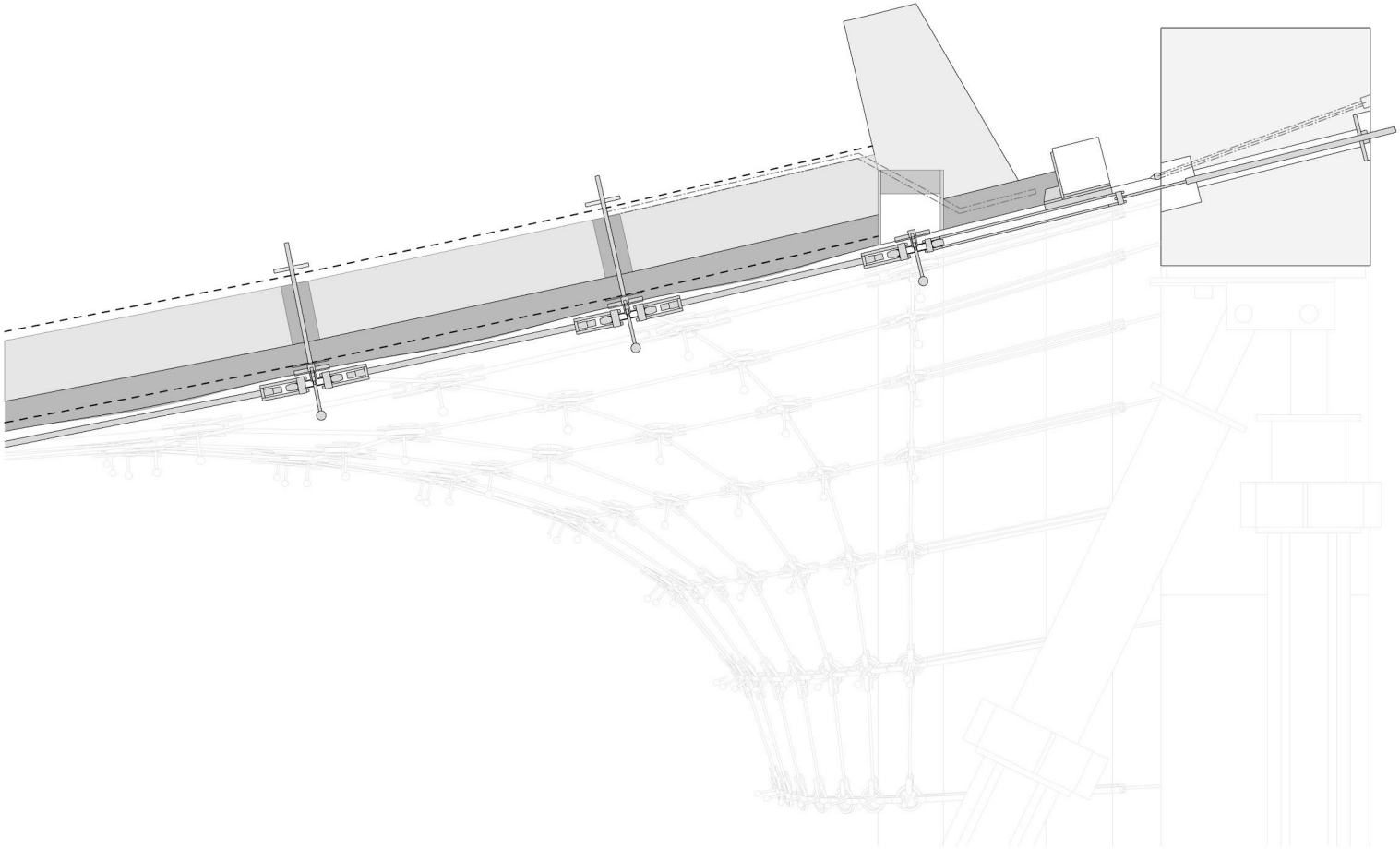


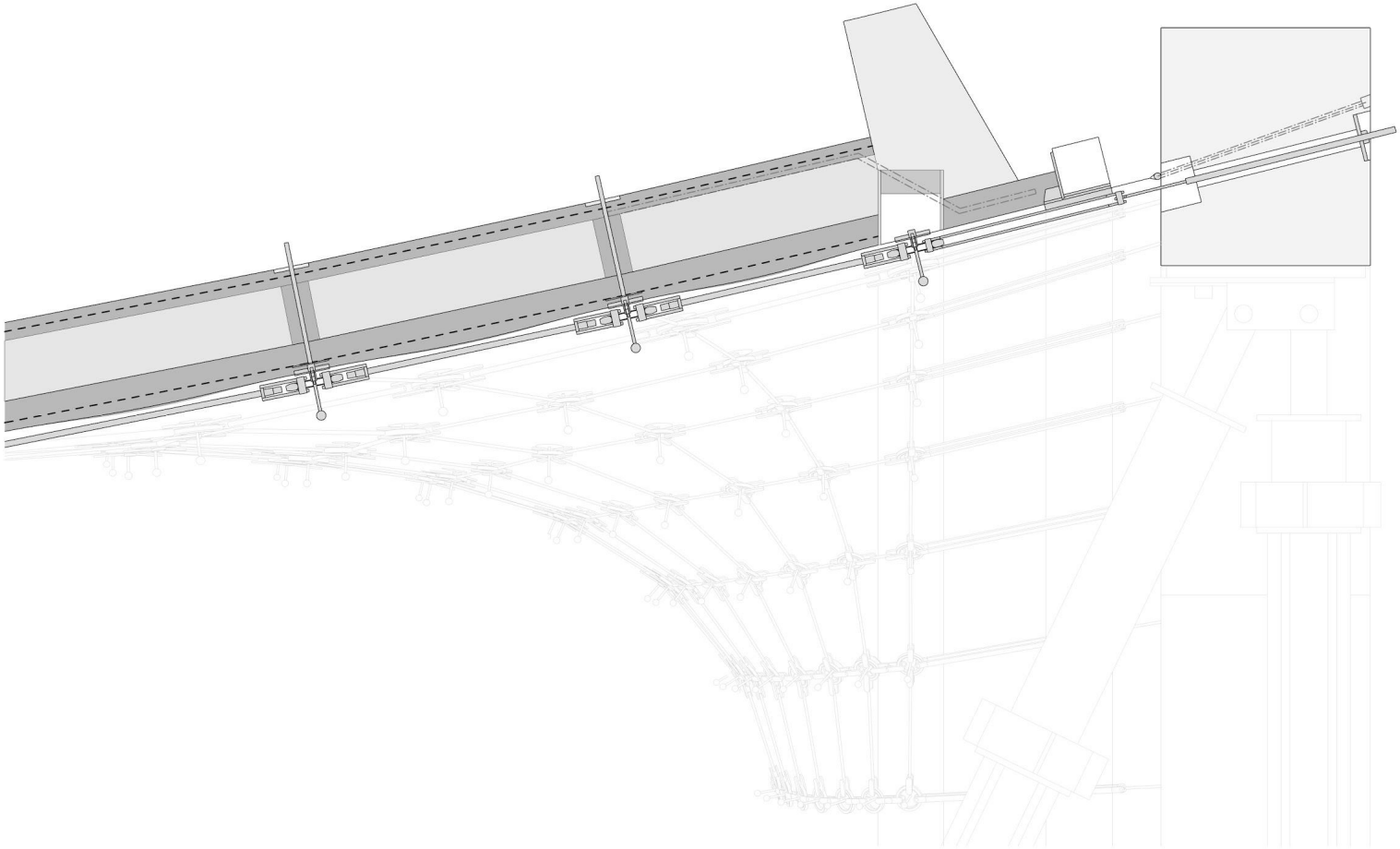


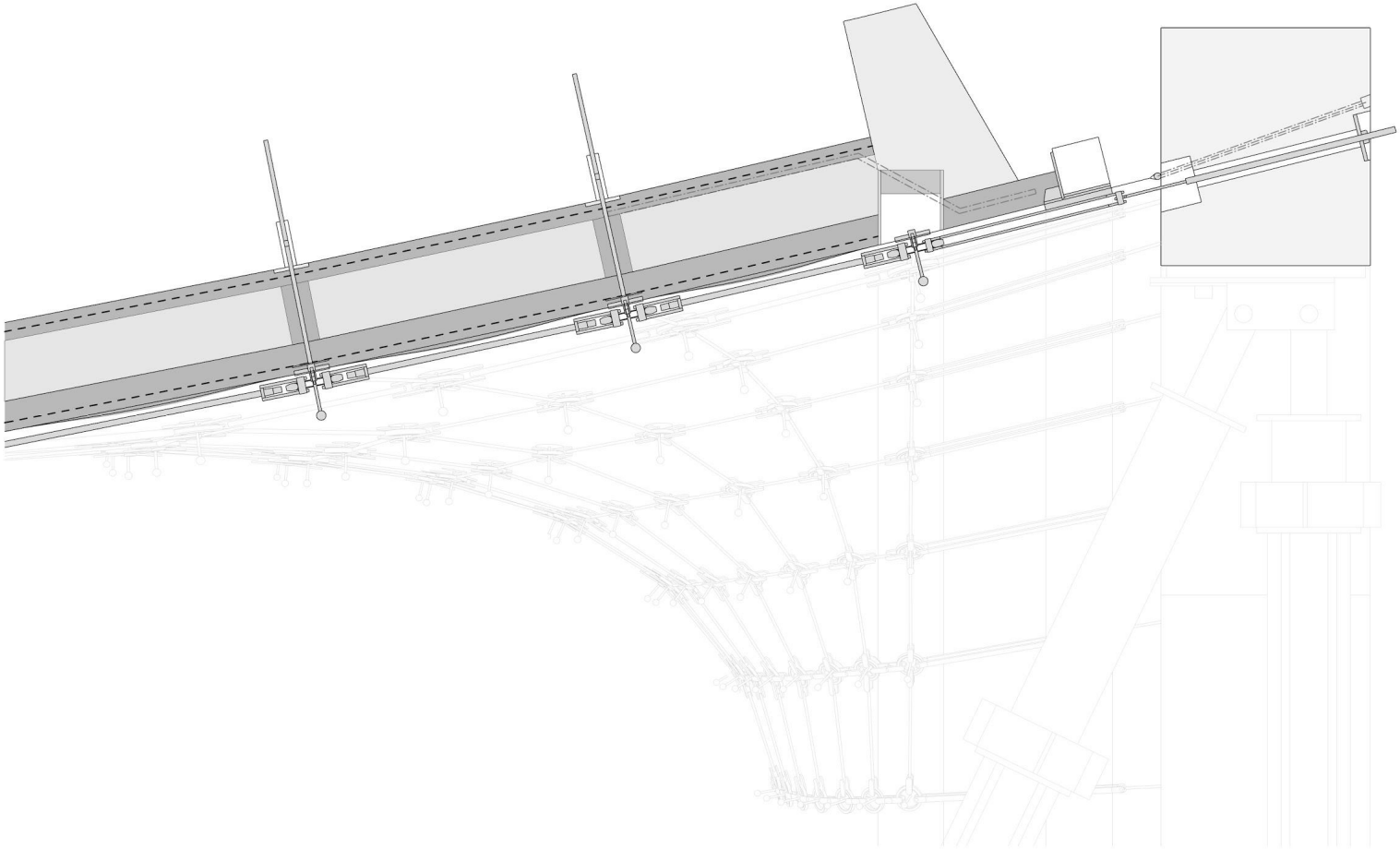


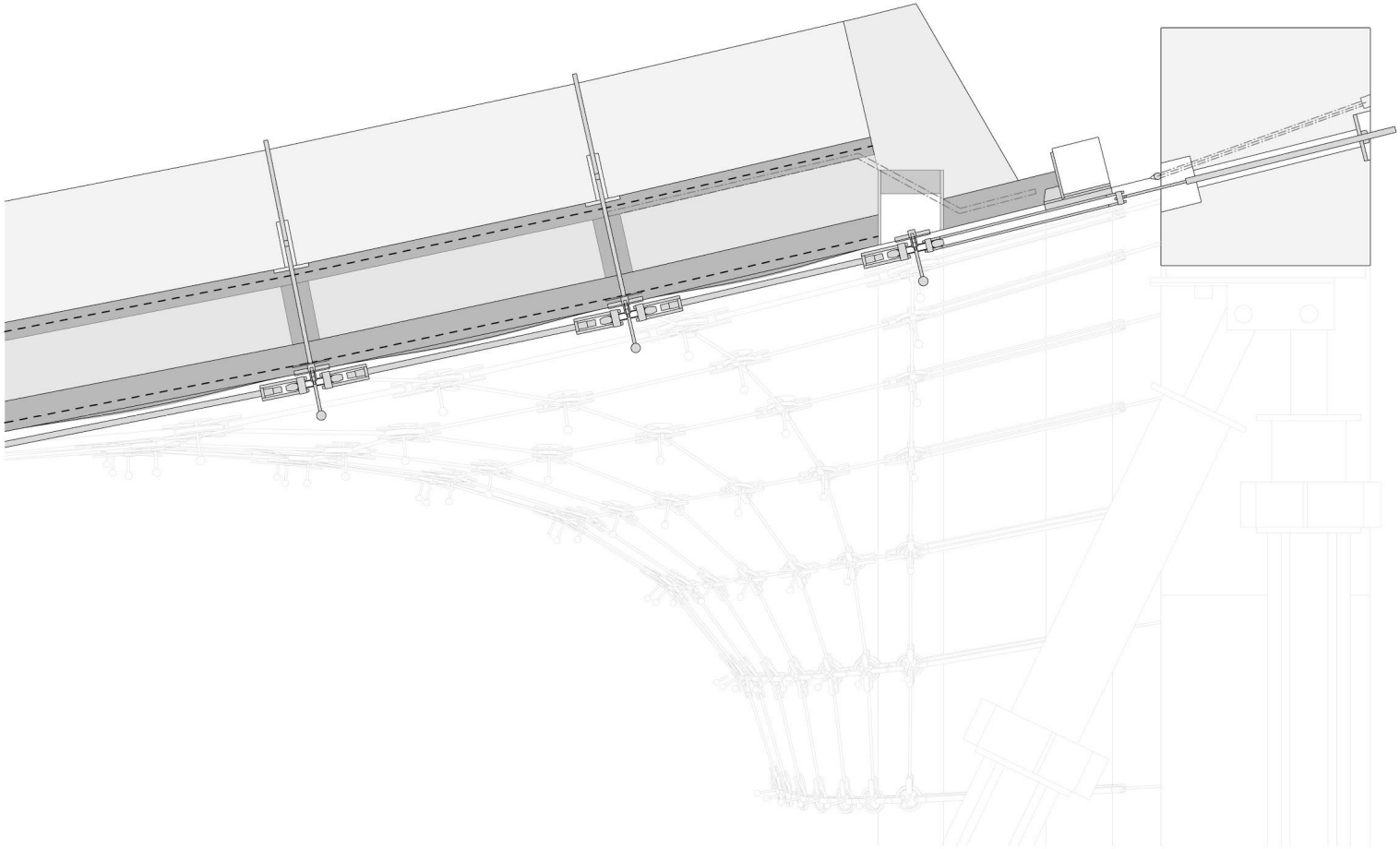


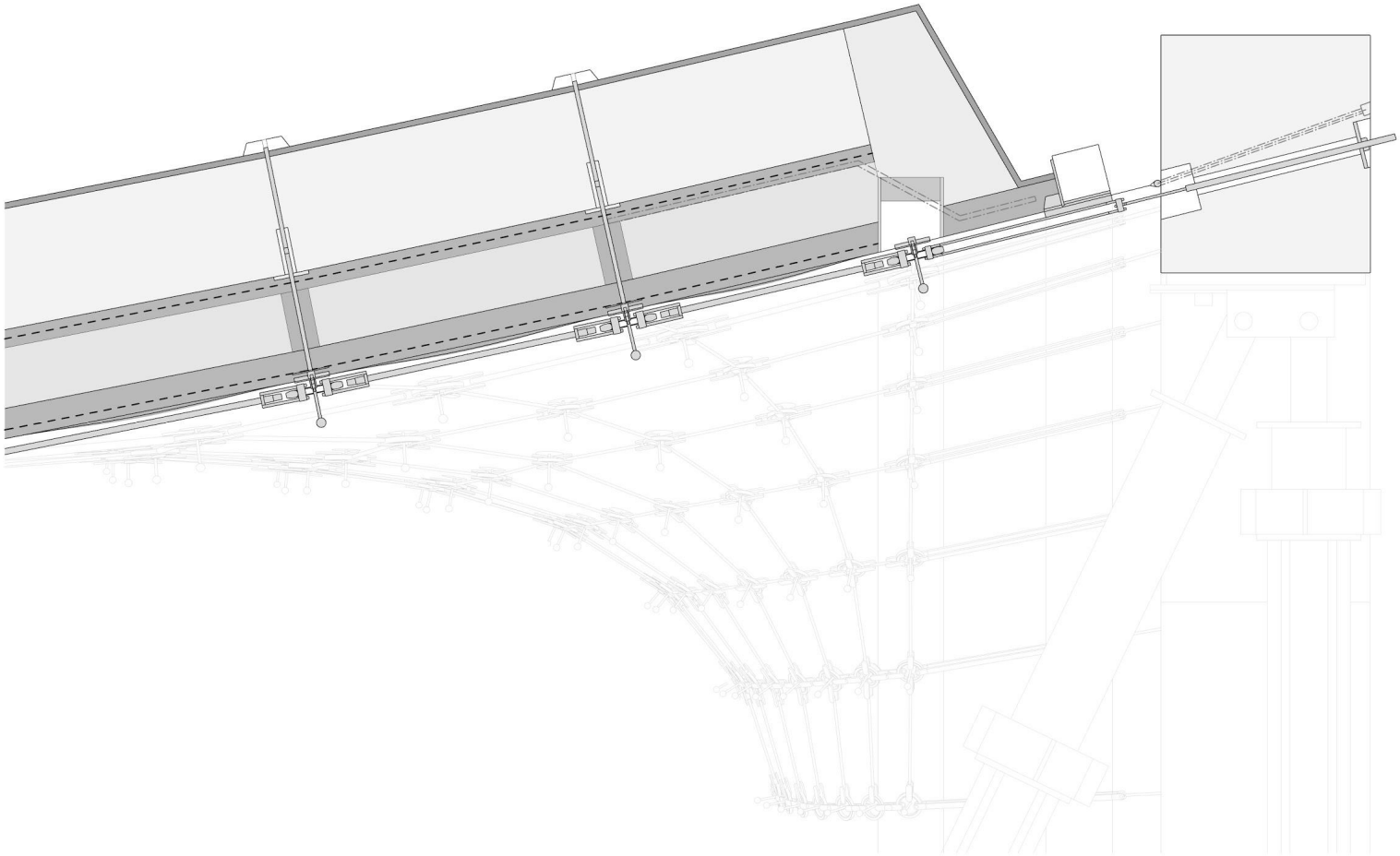


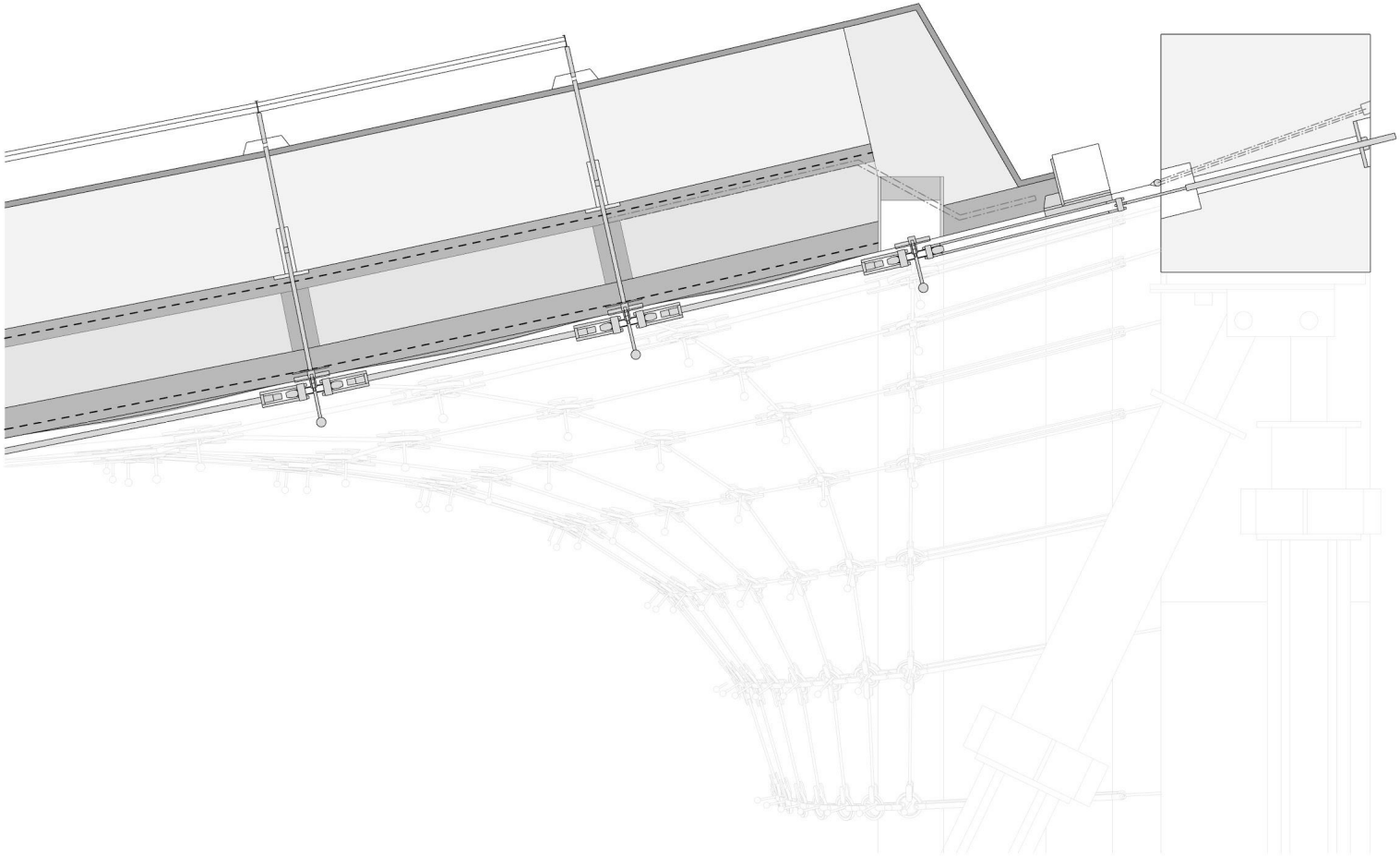


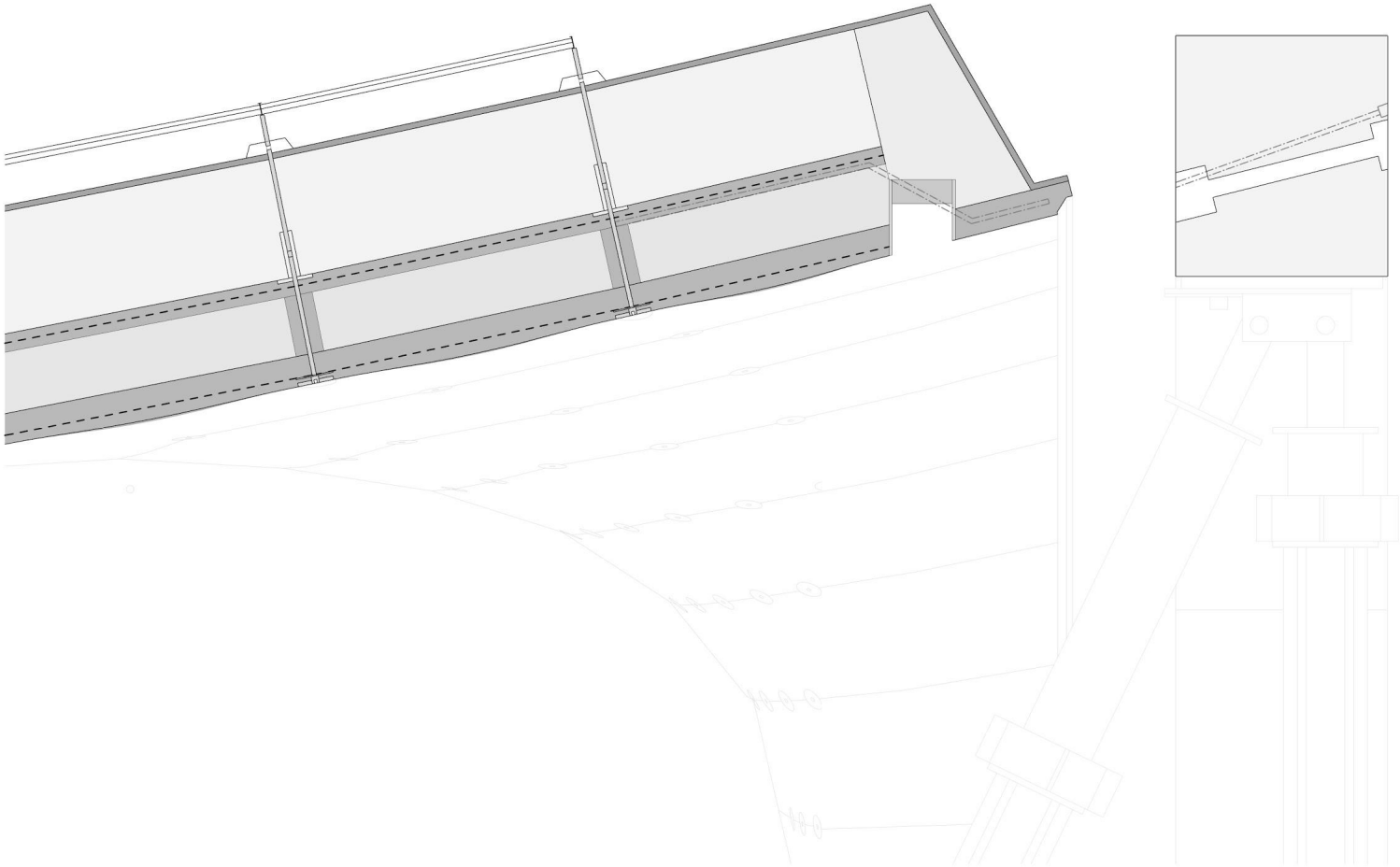


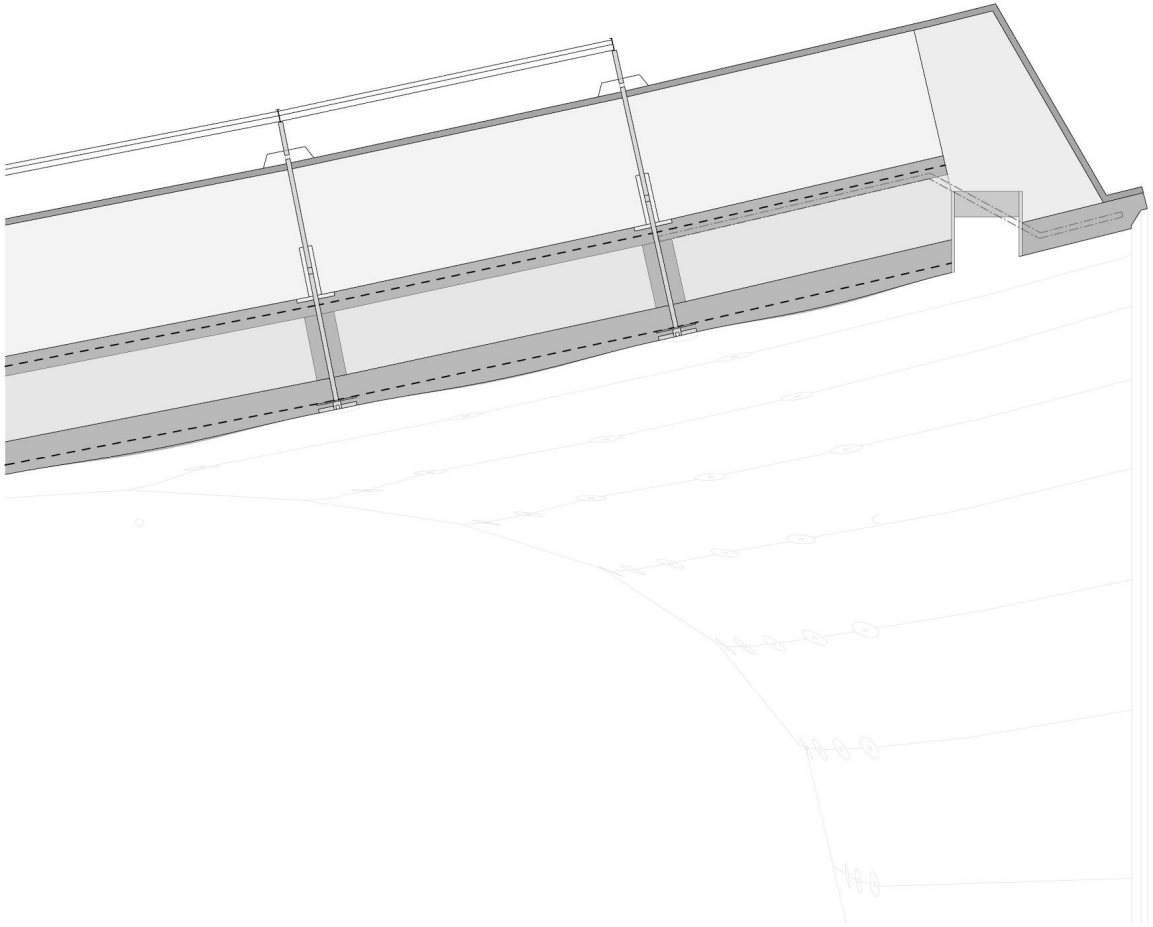


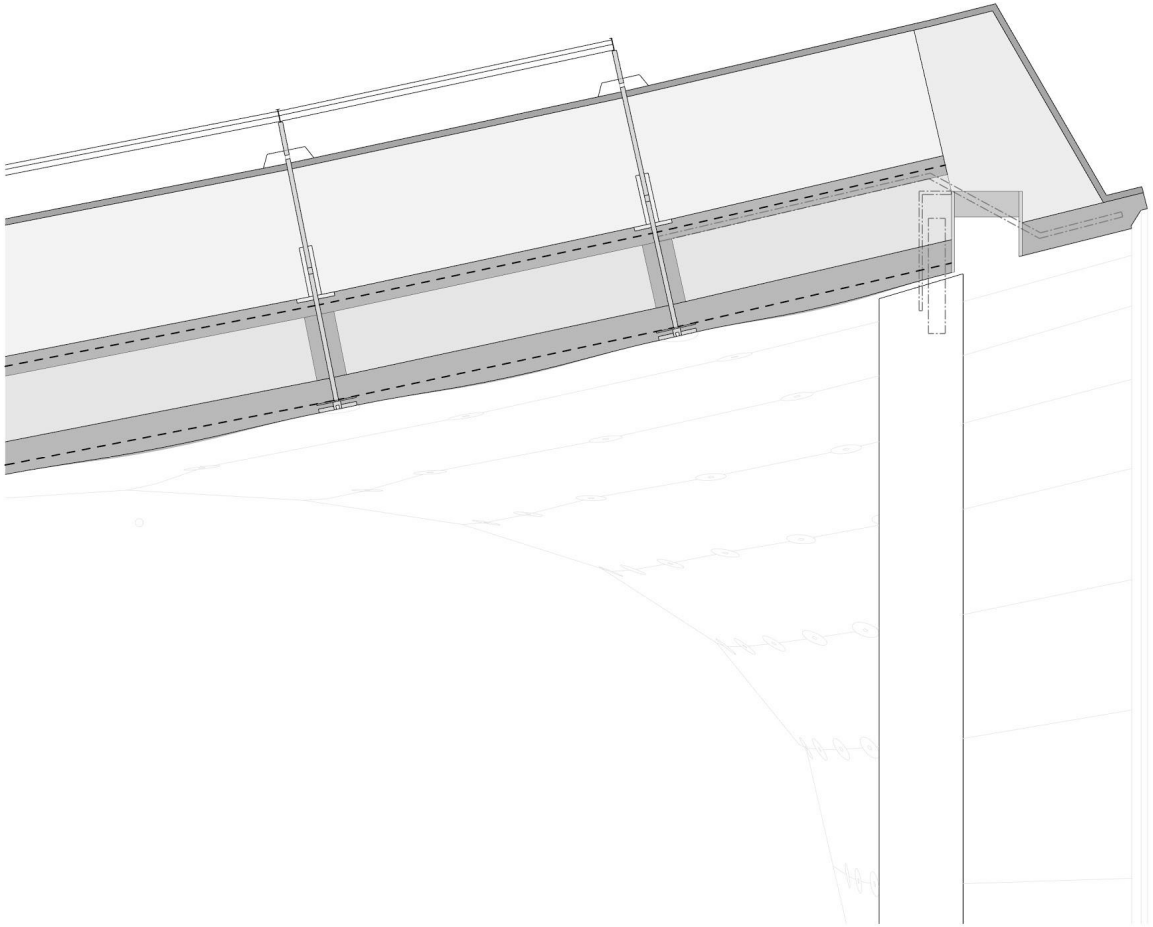


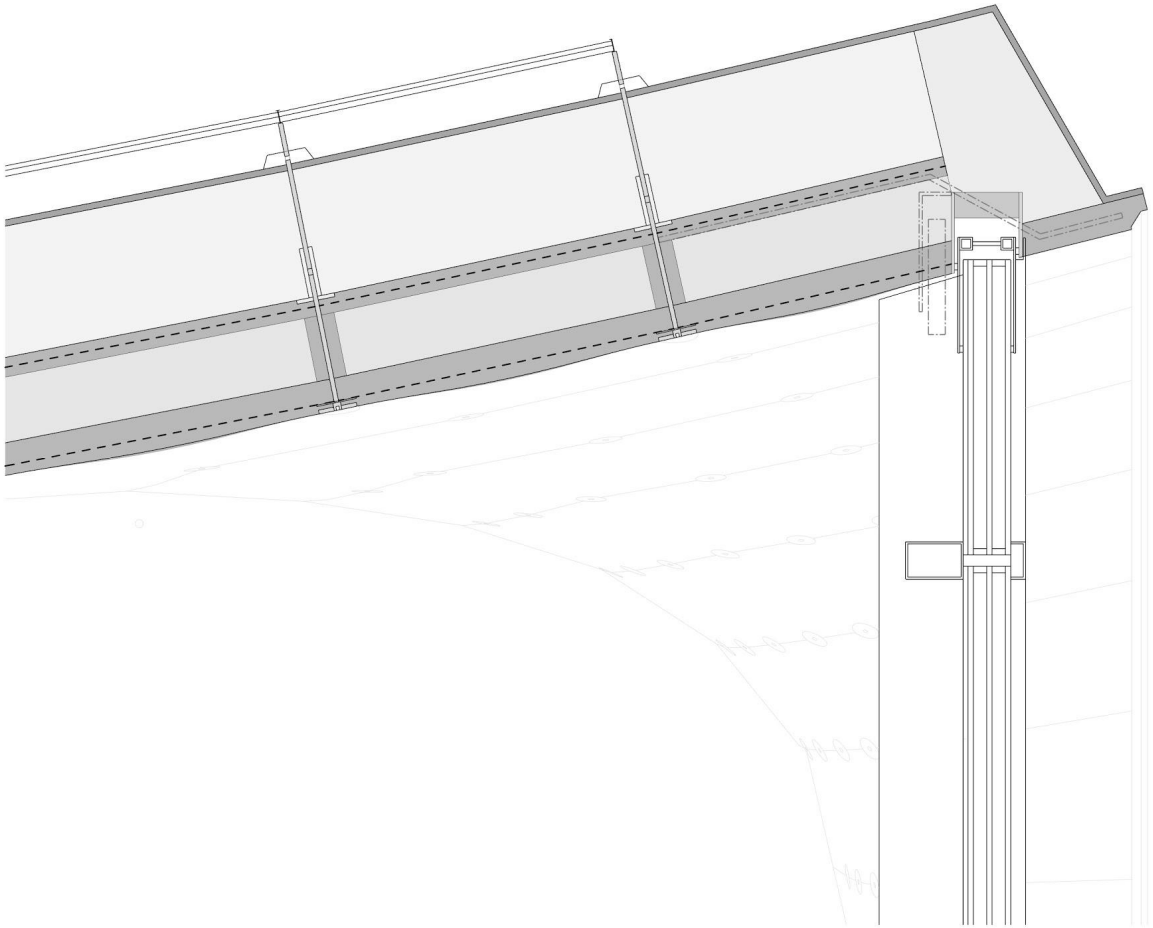






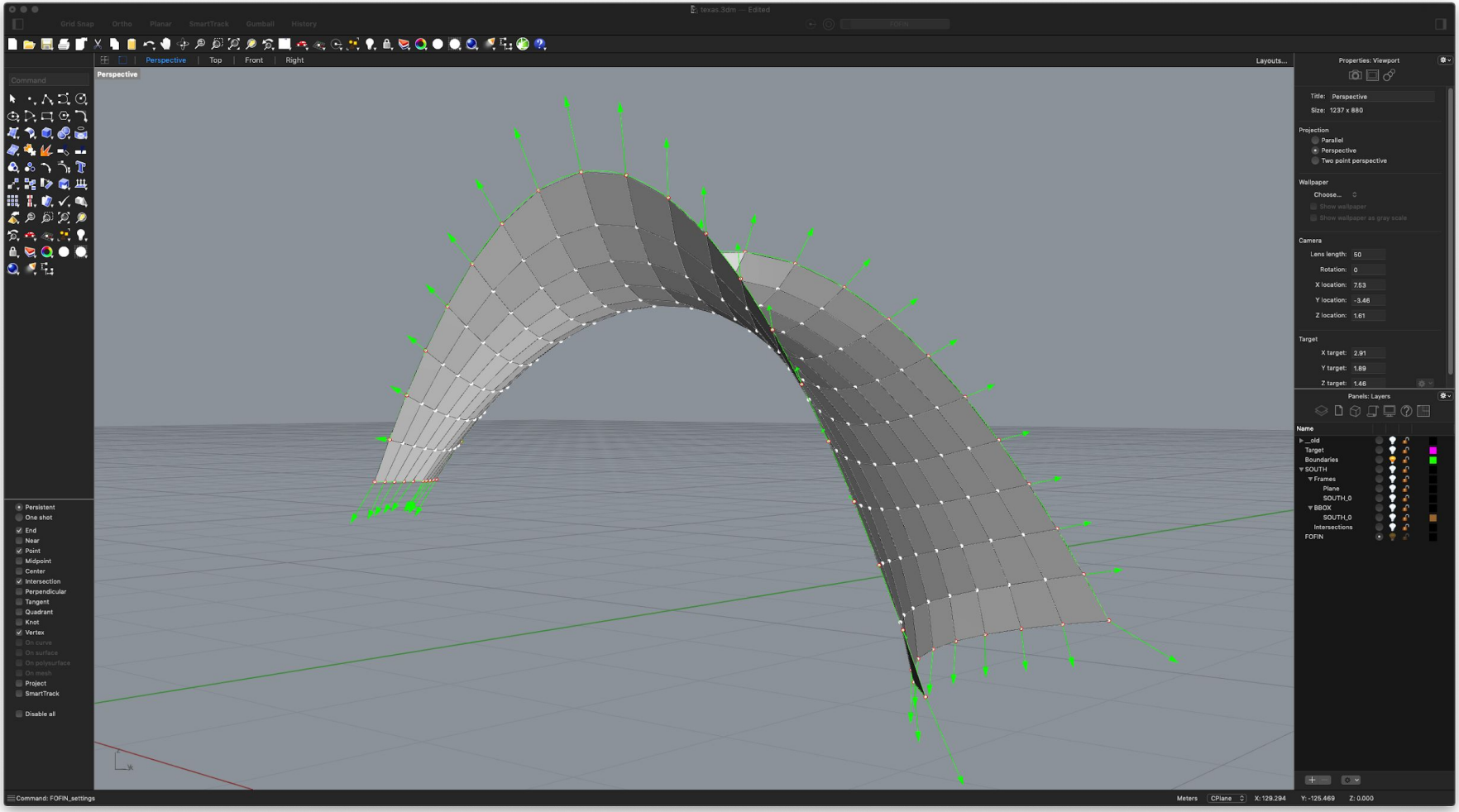


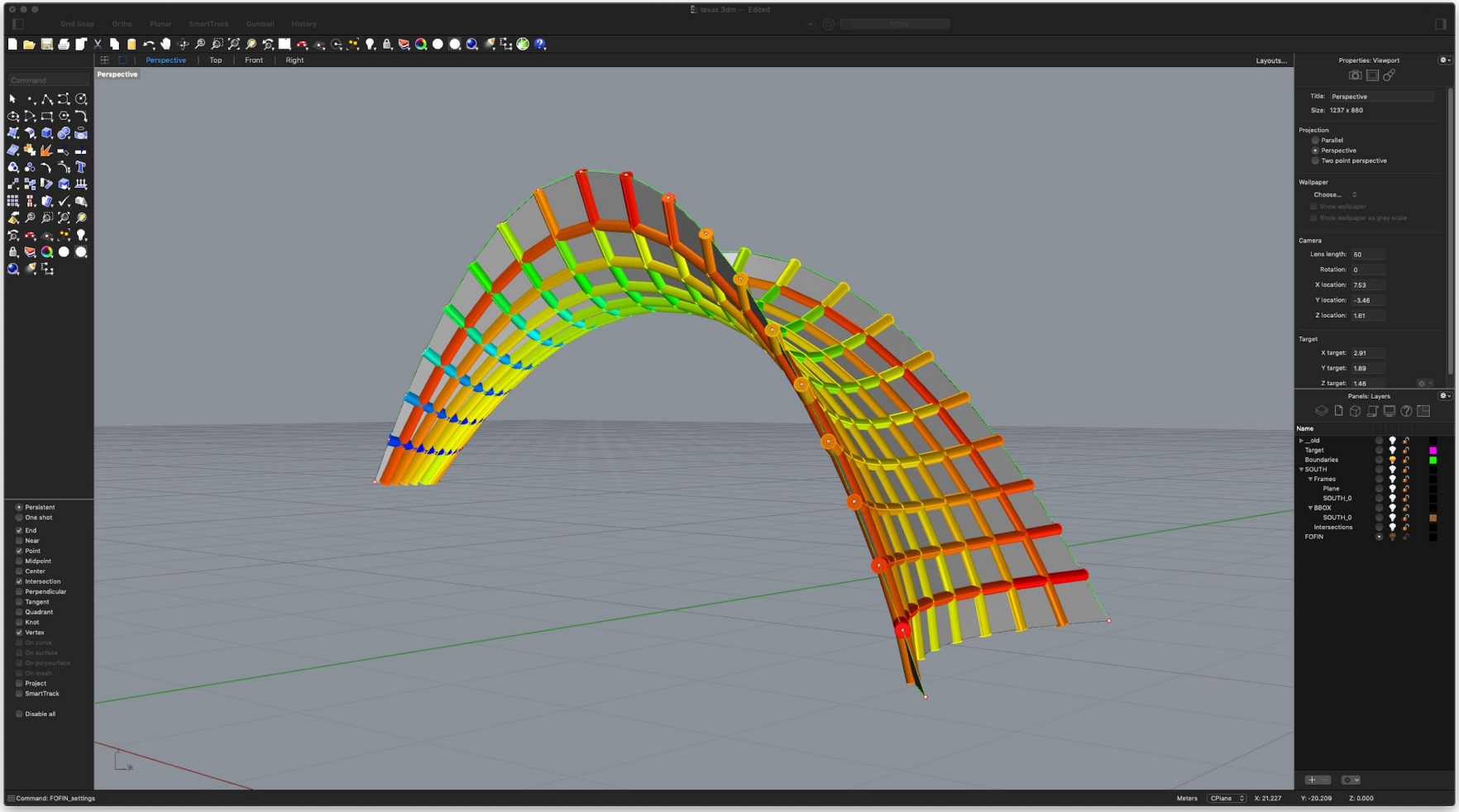


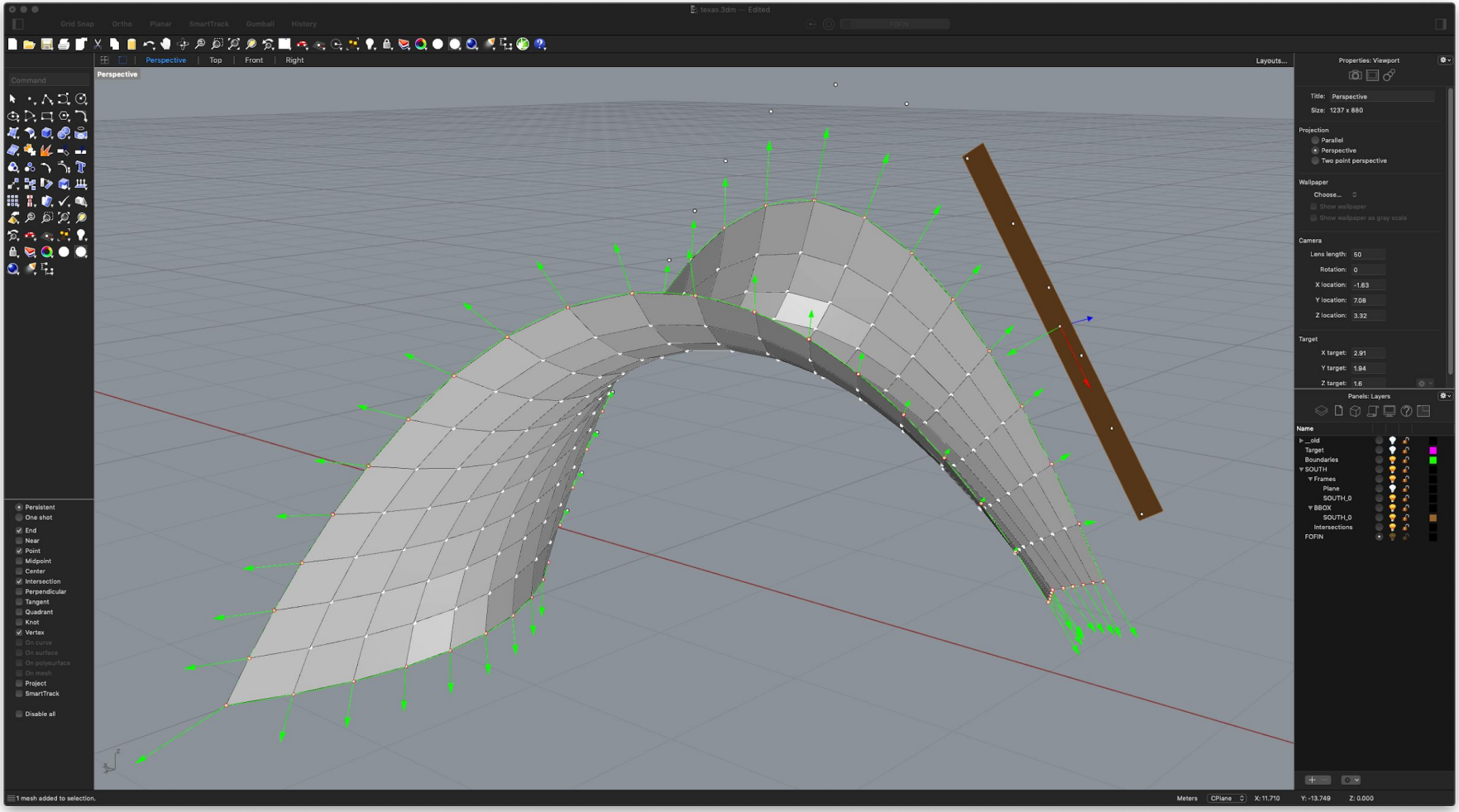


Texas

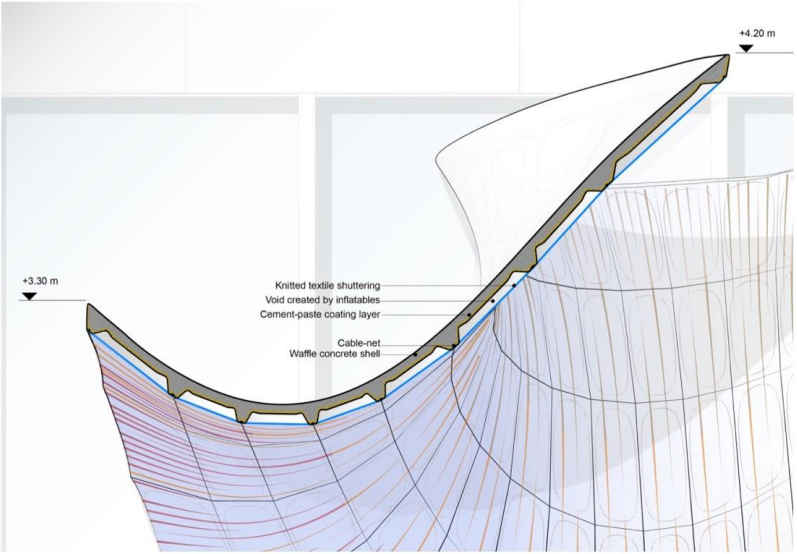

KNAACK

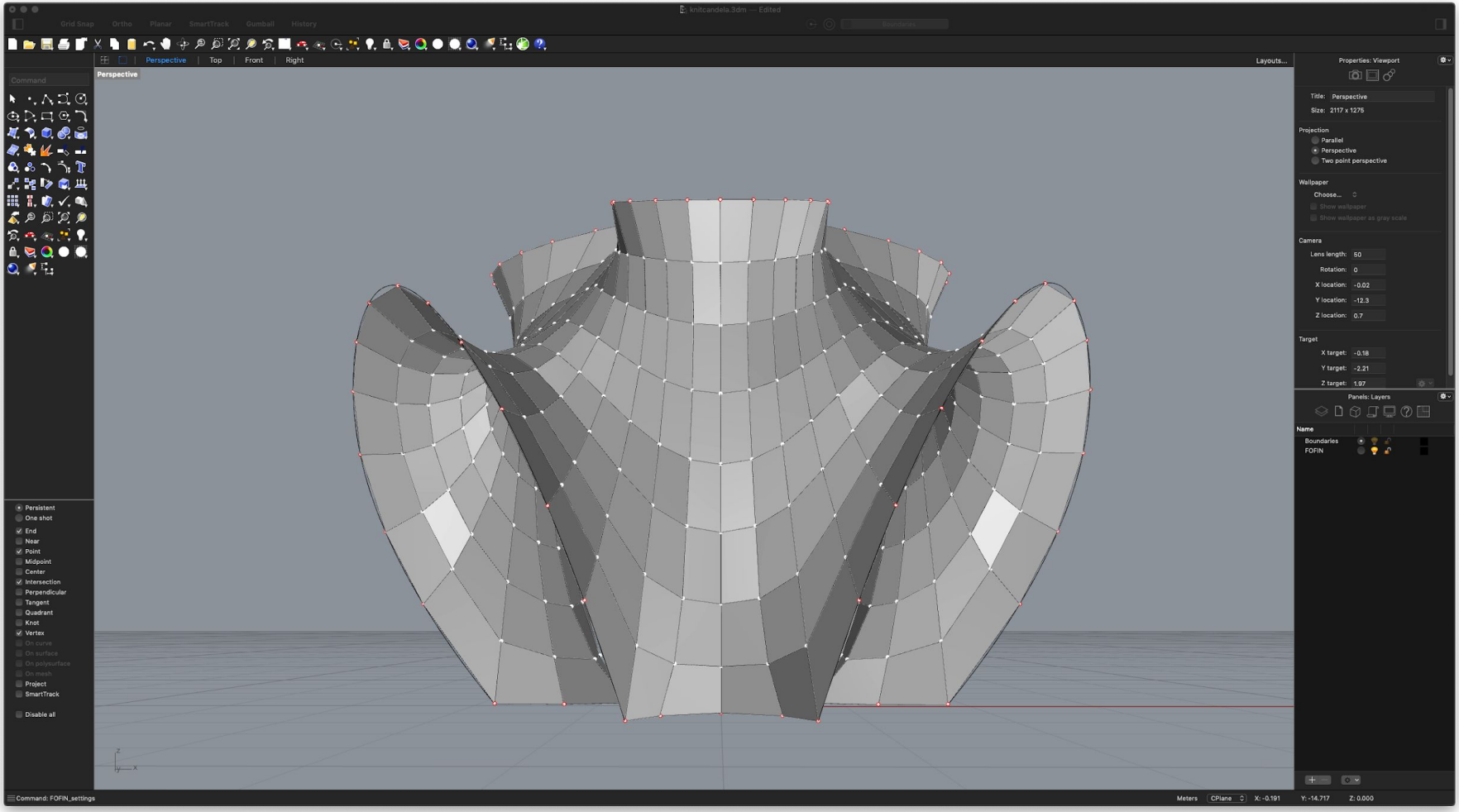

texas.3dm — Edited
Grid Snap
Ortho
Planar
SmartTrack
Gumball
History
Perspective
Top
Front
Right
Layouts...
Properties: Viewport
Title: Perspective
Size: 1237 x 880
Projection
Parallel
Perspective
Two point perspective
Wallpaper
Choose...
Show wallpaper
Show wallpaper as gray scale
Camera
Lens length: 50
Rotation: 0
X location: 7.53
Y location: -3.46
Z location: 1.61
Target
X target: 2.91
Y target: 1.89
Z target: 1.46
Panels: Layers
Name
__old
Target
Boundaries
SOUTH
Frames
Plane
SOUTH_0
BBOX
SOUTH_0
Intersections
FOFIN
Persistent
One shot
End
Near
Point
Midpoint
Center
Intersection
Perpendicular
Tangent
Quadrant
Knot
Vertex
On curve
On surface
On polysurface
On mesh
Project
SmartTrack
Disable all
Command: FOFIN_settings
Meters
CPlane
X: 129.294
Y: -125.469
Z: 0.000

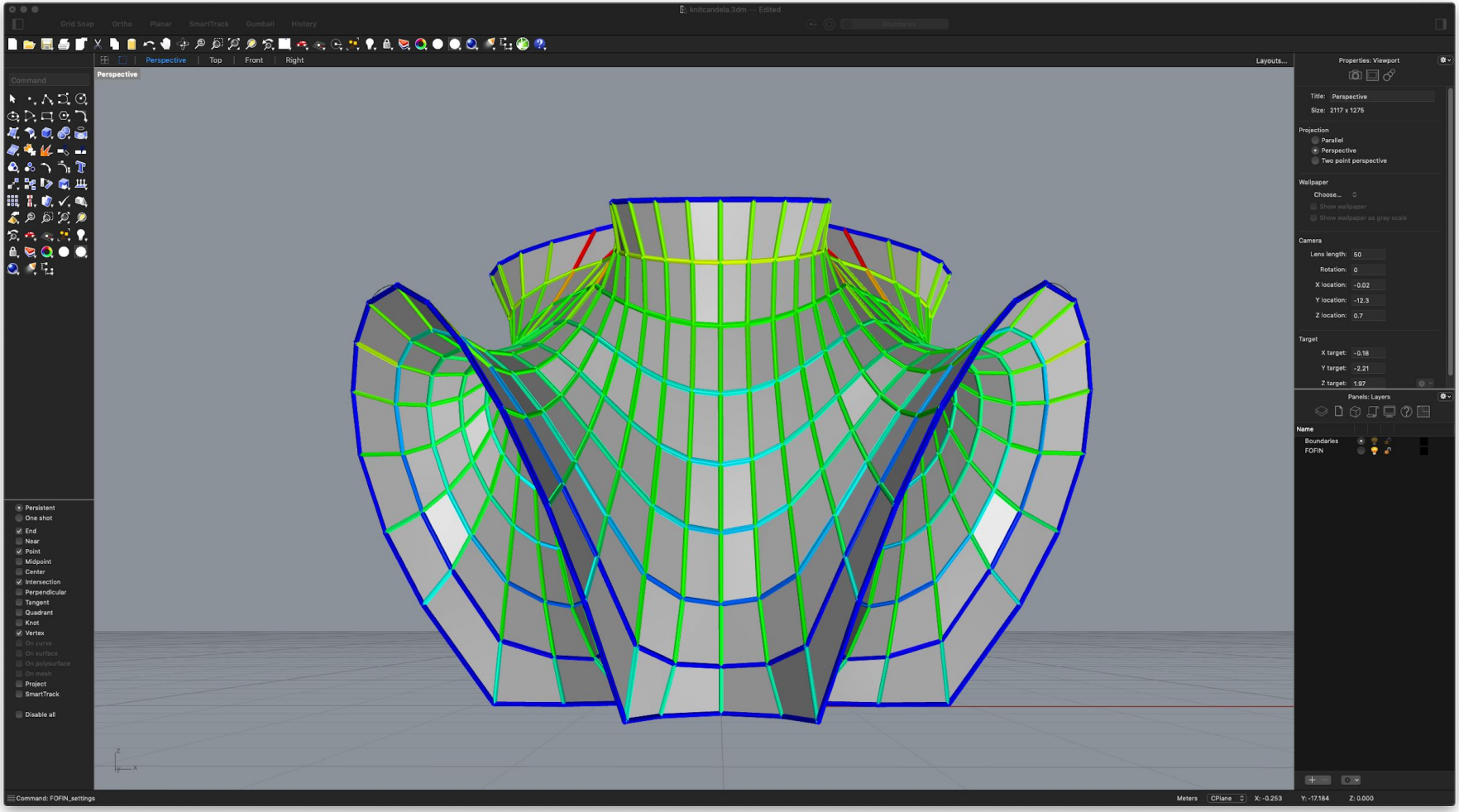

texas.3dm — Edited
Grid Snap
Ortho
Planar
SmartTrack
Gumball
History
Perspective
Top
Front
Right
Layouts...
Command
Properties: Viewport
Title: Perspective
Size: 1237 x 880
Projection
Parallel
Perspective
Two point perspective
Wallpaper
Choose...
Show wallpaper
Show wallpaper as gray scale
Camera
Lens length: 50
Rotation: 0
X location: 7.53
Y location: -3.46
Z location: 1.61
Target
X target: 2.91
Y target: 1.89
Z target: 1.46
Panels: Layers
Name
_old
Target
Boundaries
SOUTH
Frames
Plane
SOUTH_0
BBOX
SOUTH_0
Intersections
FOFIN
Persistent
One shot
End
Near
Point
Midpoint
Center
Intersection
Perpendicular
Tangent
Quadrant
Knot
Vertex
On curve
On surface
On polysurface
On mesh
Project
SmartTrack
Disable all
Command: FOFIN_settings
Meters
CPlane
X: 21.227
Y: -20.209
Z: 0.000

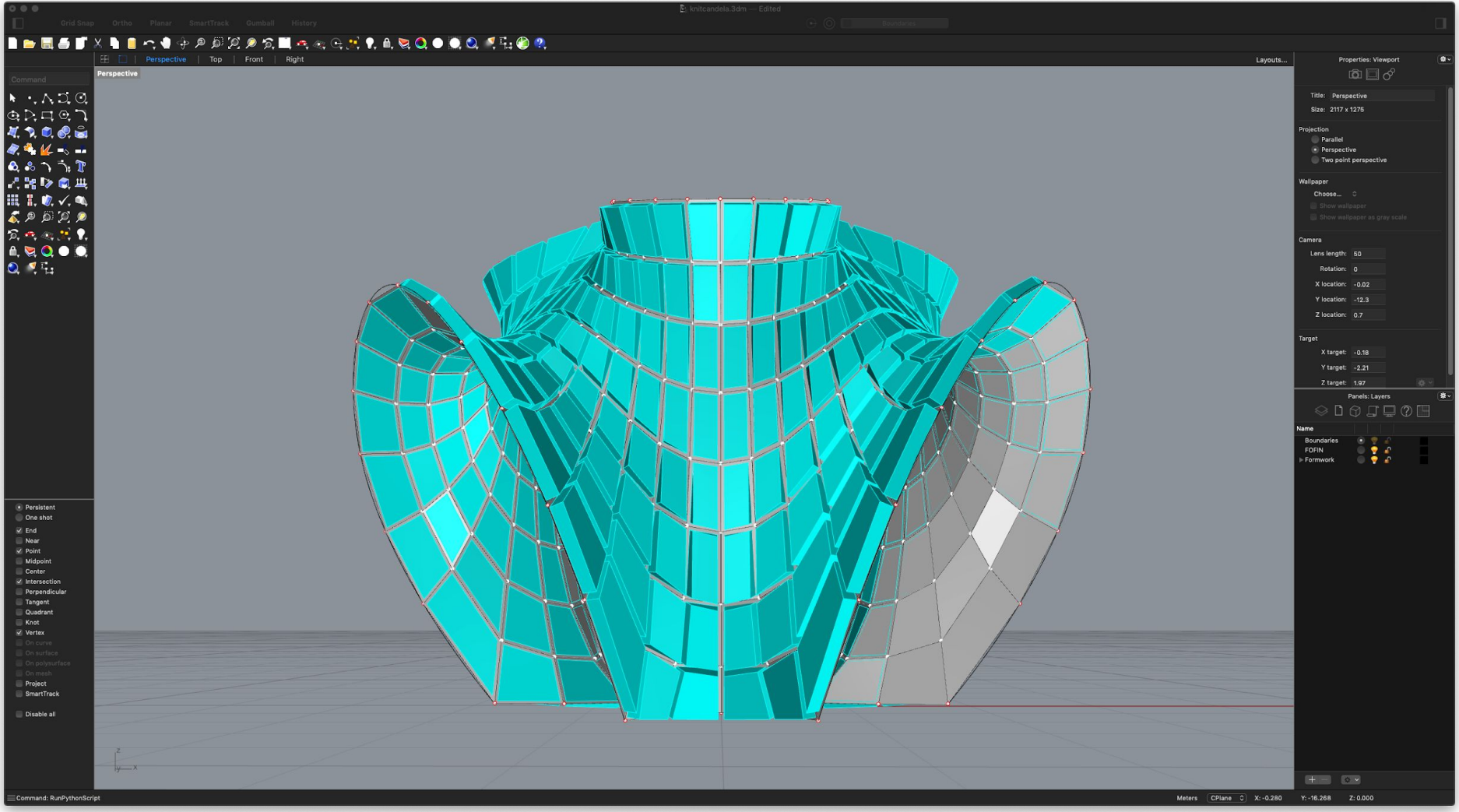

texas.3dm — Edited
Grid Snap
Ortho
Planar
SmartTrack
Gumball
History
Perspective
Top
Front
Right
Layouts...
Command
Properties: Viewport
Title: Perspective
Size: 1237 x 880
Projection
Parallel
Perspective
Two point perspective
Wallpaper
Choose...
Show wallpaper
Show wallpaper as gray scale
Camera
Lens length: 50
Rotation: 0
X location: -1.63
Y location: 7.08
Z location: 3.32
Target
X target: 2.91
Y target: 1.94
Z target: 1.6
Panels: Layers
Name
__old
Target
Boundaries
SOUTH
Frames
Plane
SOUTH_0
BBOX
SOUTH_0
Intersections
FOFIN
Persistent
One shot
End
Near
Point
Midpoint
Center
Intersection
Perpendicular
Tangent
Quadrant
Knot
Vertex
On curve
On surface
On polysurface
On mesh
Project
SmartTrack
Disable all
1 mesh added to selection.
Meters
CPlane
X: 11.710
Y: -13.749
Z: 0.000

KnitCandela


+4.20 m
+3.30 m
Knitted textile shuttering
Void created by inflatables
Cement-paste coating layer
Cable-net
Waffle concrete shell


knitcandela.3dm — Edited
Grid Snap
Ortho
Planar
SmartTrack
Gumball
History
Perspective
Top
Front
Right
Layouts...
Command
Properties: Viewport
Title: Perspective
Size: 2117 x 1275
Projection
Parallel
Perspective
Two point perspective
Wallpaper
Choose...
Show wallpaper
Show wallpaper as gray scale
Camera
Lens length: 50
Rotation: 0
X location: -0.02
Y location: -12.3
Z location: 0.7
Target
X target: -0.18
Y target: -2.21
Z target: 1.97
Panels: Layers
Name
Boundaries
FOFIN
Persistent
One shot
End
Near
Point
Midpoint
Center
Intersection
Perpendicular
Tangent
Quadrant
Knot
Vertex
On curve
On surface
On polysurface
On mesh
Project
SmartTrack
Disable all
Command: FOFIN_settings
Meters
CPlane
X: -0.191
Y: -14.717
Z: 0.000


knitcandela.3dm — Edited
Grid Snap
Ortho
Planar
SmartTrack
Gumball
History
Perspective
Top
Front
Right
Layouts...
Command
Properties: Viewport
Title: Perspective
Size: 2117 x 1275
Projection
Parallel
Perspective
Two point perspective
Wallpaper
Choose...
Show wallpaper
Show wallpaper as gray scale
Camera
Lens length: 50
Rotation: 0
X location: -0.02
Y location: -12.3
Z location: 0.7
Target
X target: -0.18
Y target: -2.21
Z target: 1.97
Panels: Layers
Name
Boundaries
FOFIN
Persistent
One shot
End
Near
Point
Midpoint
Center
Intersection
Perpendicular
Tangent
Quadrant
Knot
Vertex
On curve
On surface
On polysurface
On mesh
Project
SmartTrack
Disable all
Command: FOFIN_settings
Meters
CPlane
X: -0.253
Y: -17.184
Z: 0.000

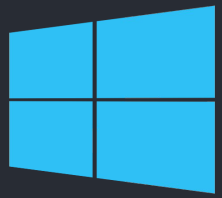

knitcandela.3dm — Edited
Grid Snap
Ortho
Planar
SmartTrack
Gumball
History
Perspective
Top
Front
Right
Layouts...
Properties: Viewport
Title: Perspective
Size: 2117 x 1275
Projection
Parallel
Perspective
Two point perspective
Wallpaper
Choose...
Show wallpaper
Show wallpaper as gray scale
Camera
Lens length: 50
Rotation: 0
X location: -0.02
Y location: -12.3
Z location: 0.7
Target
X target: -0.18
Y target: -2.21
Z target: 1.97
Panels: Layers
Name
Boundaries
FOFIN
Formwork
Persistent
One shot
End
Near
Point
Midpoint
Center
Intersection
Perpendicular
Tangent
Quadrant
Knot
Vertex
On curve
On surface
On polysurface
On mesh
Project
SmartTrack
Disable all
Command: RunPythonScript
Meters
CPlane
X: -0.280
Y: -16.268
Z: 0.000

update compas

update compas_fofin

update compas_fofin-UI

update ITA19



Terminal

Anaconda Prompt

install compas_fofin

```
conda activate ita19-dev
```

```
cd path/to/compas_fofin
```

```
pip install -e .
```

```
python
```

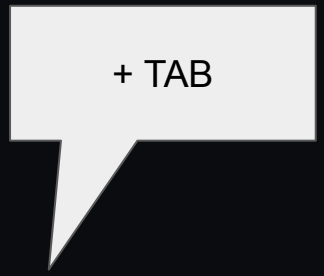
```
>>> import compas
>>> import compas_fofin
>>> exit()
```

```
python -m compas_rhino.install -v 6.0 -p compas_fofin
```

install compas_fofin-UI

```
cd path/to/compas_fofin-UI
```

```
python -m compas_rhino.install_plugin -v 6.0 FOFIN{7ea0207d-965a-...}
```




```
python -m compas_rhino.install_plugin -v 6.0 FOFIN
```

```
python -m compas_rhino.install_plugin -v 6.0 FOFIN\{   ...   \}/
```

```
python -m compas_rhino.install_plugin -v 6.0 FOFIN{   ...   }
```

# Assignments

# KnitCandela

Generate formwork for ribs

1. Offset each face polygon inward by 25mm
2. Make foam block per offset face polygon that creates space for 50mm-thick ribs

# Texas Shell

Generate boundary frame

1. Compute frame of boundary points
2. Offset frame
3. Intersect reaction forces with boundary plane
4. Compute bounding boxes of consecutive nodes
5. Compare to max dimensions beams
6. Find intersection lines between consecutive segments
7. Generate offset to create beam volume