



**RESSIGNIFICANDO A ORLA DO  
RIO TAQUARI EM ESTRELA**

*Universidade Federal do Rio Grande do Sul  
Faculdade de Arquitetura e Urbanismo  
Trabalho de Conclusão de Curso  
2020/2*

*KARINA GÜNTZEL TROJACK*

*Orientação Prof. Dr. Eugenia Aumond Kuhn  
Prof. Dr. Geisa Zanini Rorato*

**PARQUE URBANO REGIONAL**

**01** PARTIDO GERAL -----> DIRETRIZES  
ESTRATÉGIAS  
ZONEAMENTO

**02** ANTEPROJETO -----> AMPLIAÇÕES

# LOCALIZAÇÃO



**BRASIL**



**RIO GRANDE DO SUL**

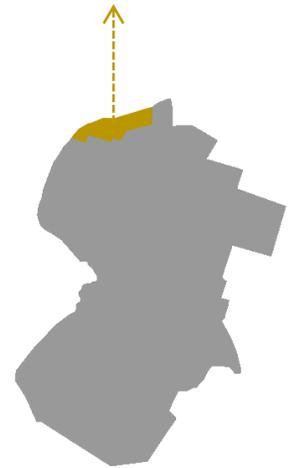


**MICRORREGIÃO  
LAJEADO - ESTRELA**



**ESTRELA**

**PORTO FLUVIAL**



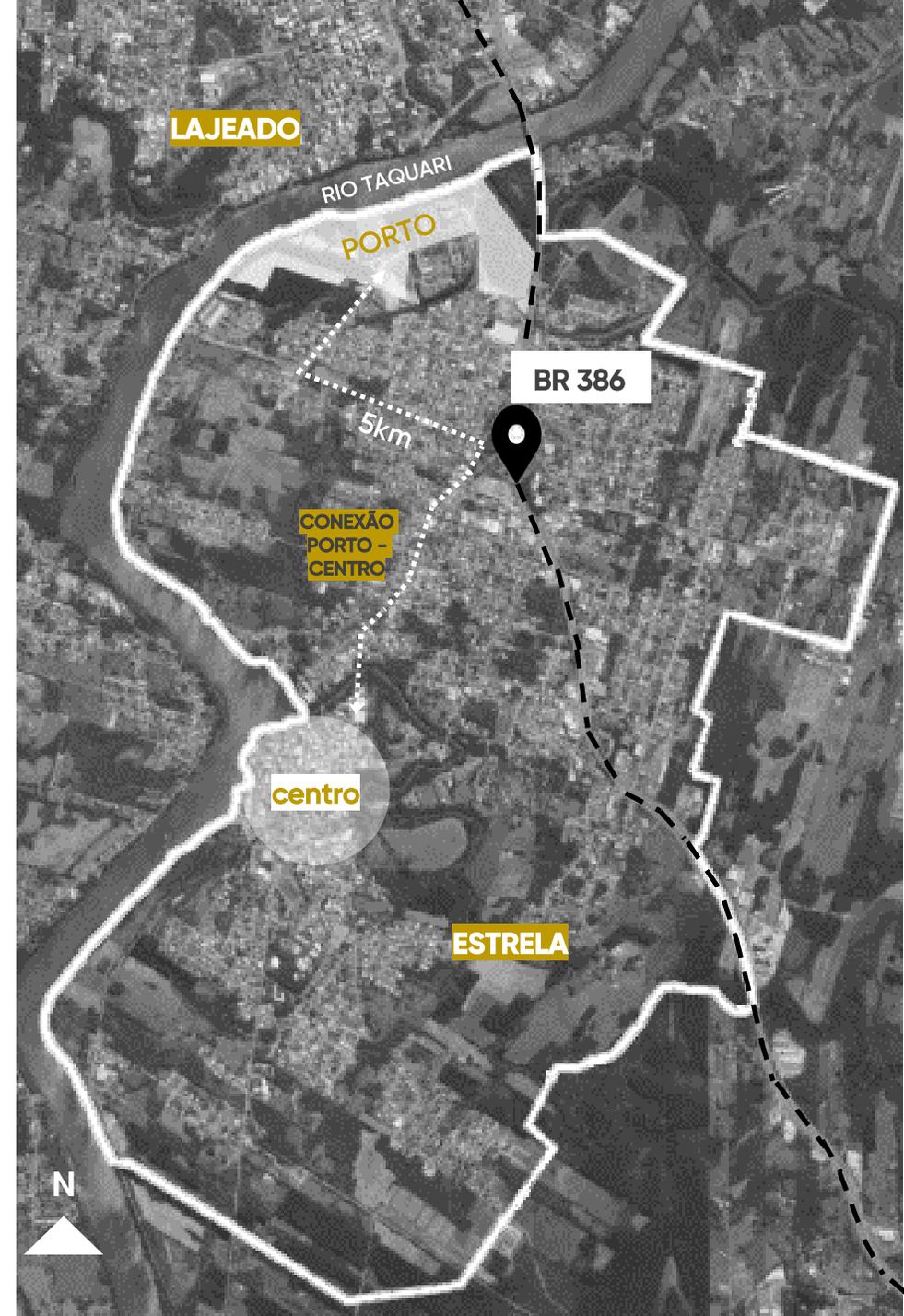
**PERÍMETRO URBANO  
ESTRELA**



  
**IMAGEM AEREARS**  
PRODUÇÕES

## INSERÇÃO URBANA

INTERFACE COM O RIO TAQUARI  
PRÓXIMO À BR-386  
5KM DO CENTRO DA CIDADE





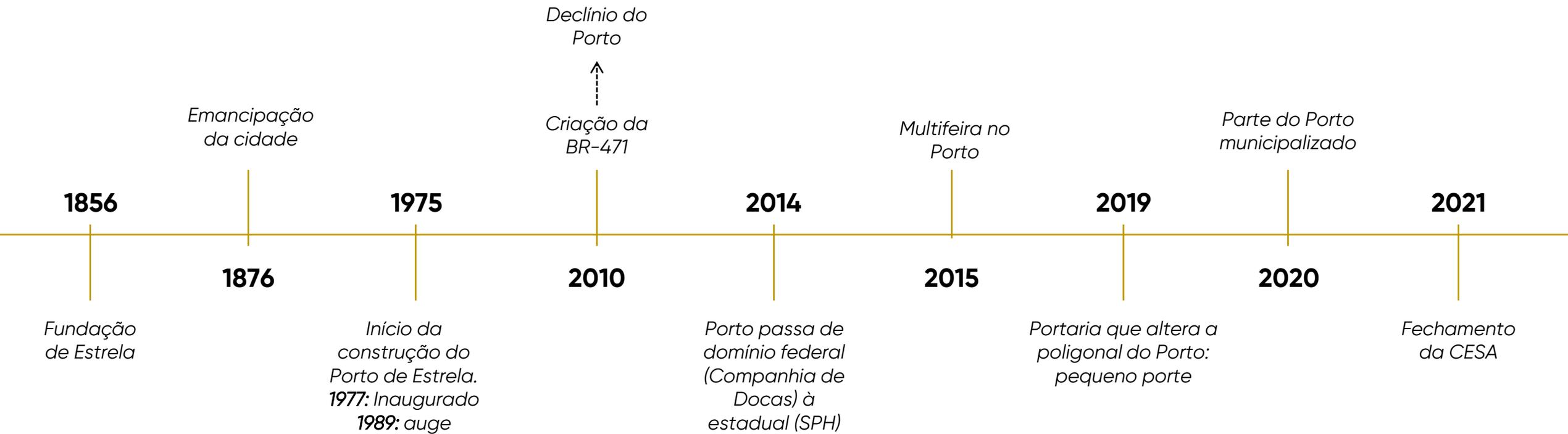
**RAMAL  
FERROVIÁRIO**

**RAMAL  
HIDROVIÁRIO**

**RAMAL  
RODOVIÁRIO**

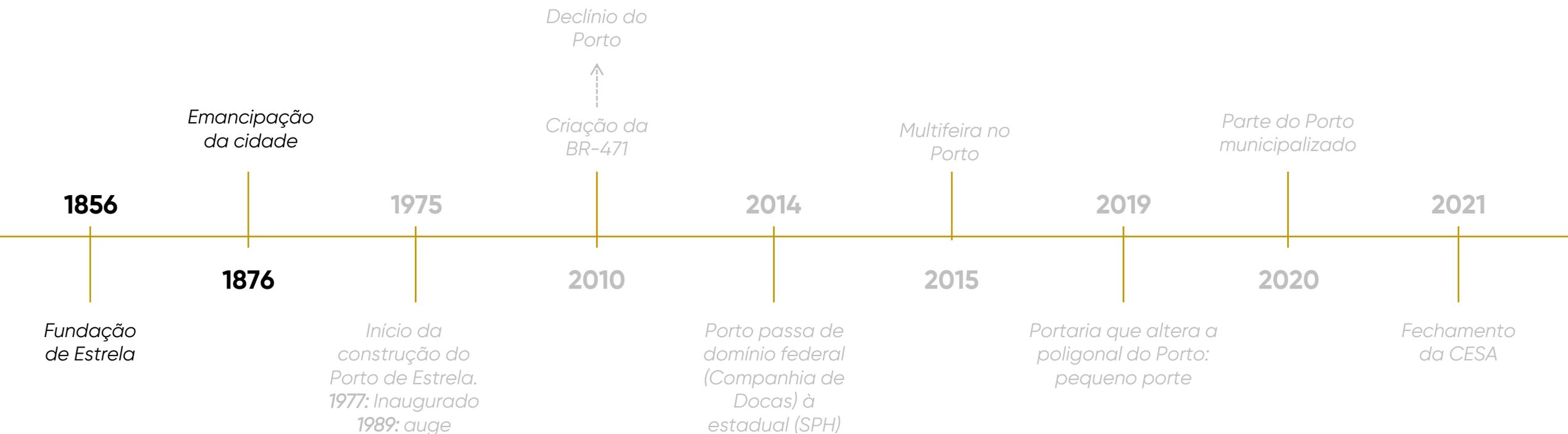


## ANTECEDENTES HISTÓRICOS



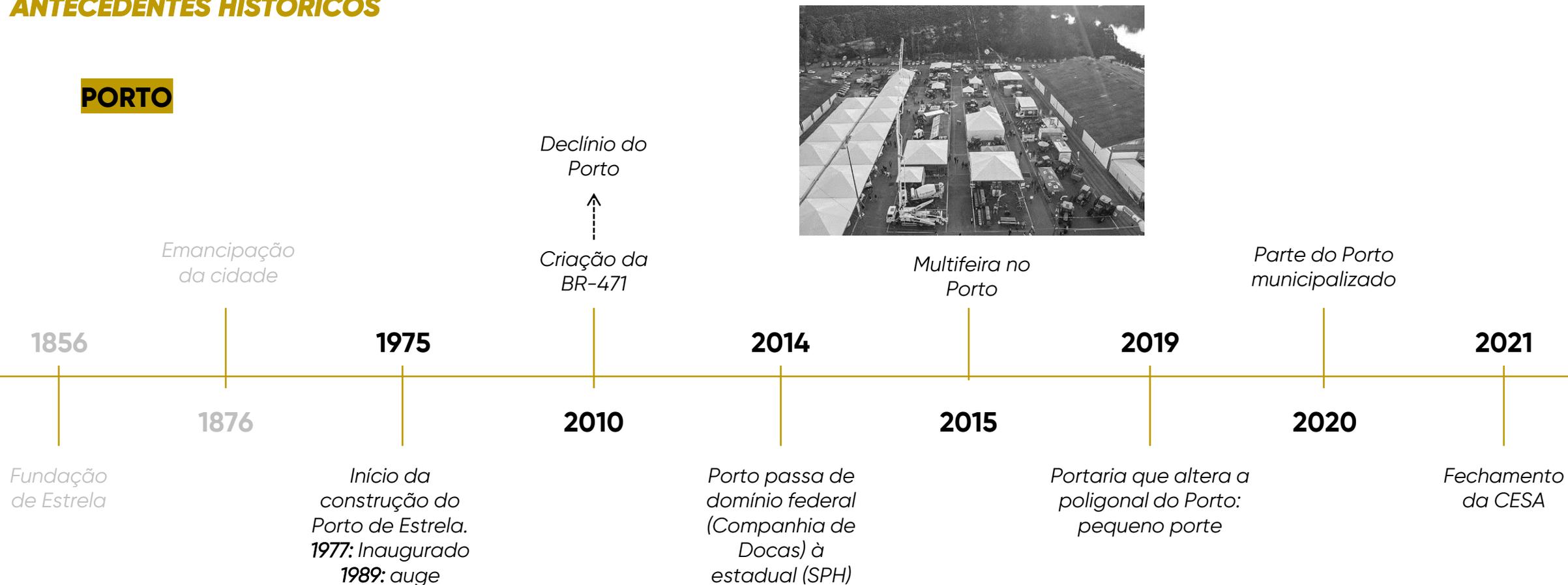
# ANTECEDENTES HISTÓRICOS

## ESTRELA



# ANTECEDENTES HISTÓRICOS

## PORTO

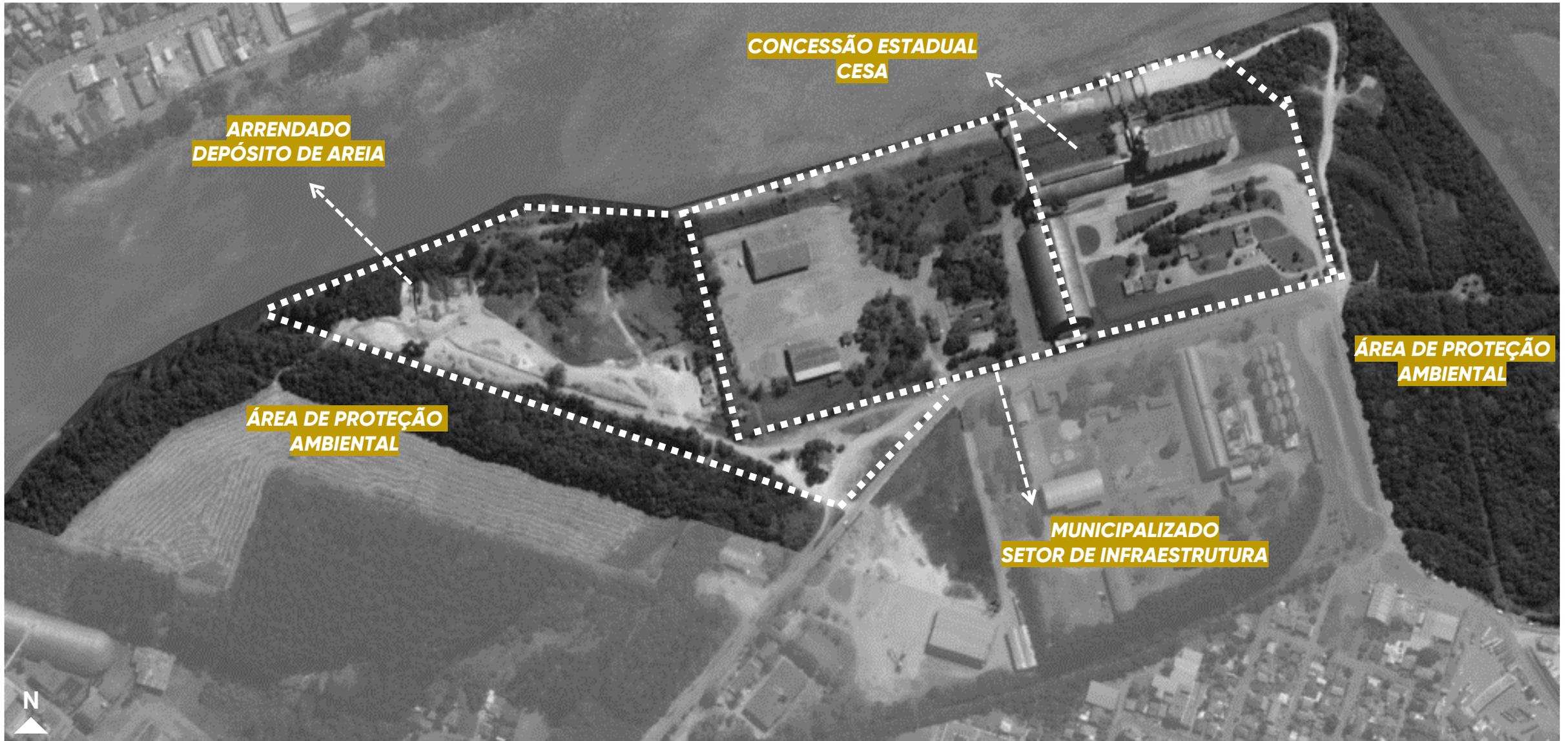


***O TERRENO***



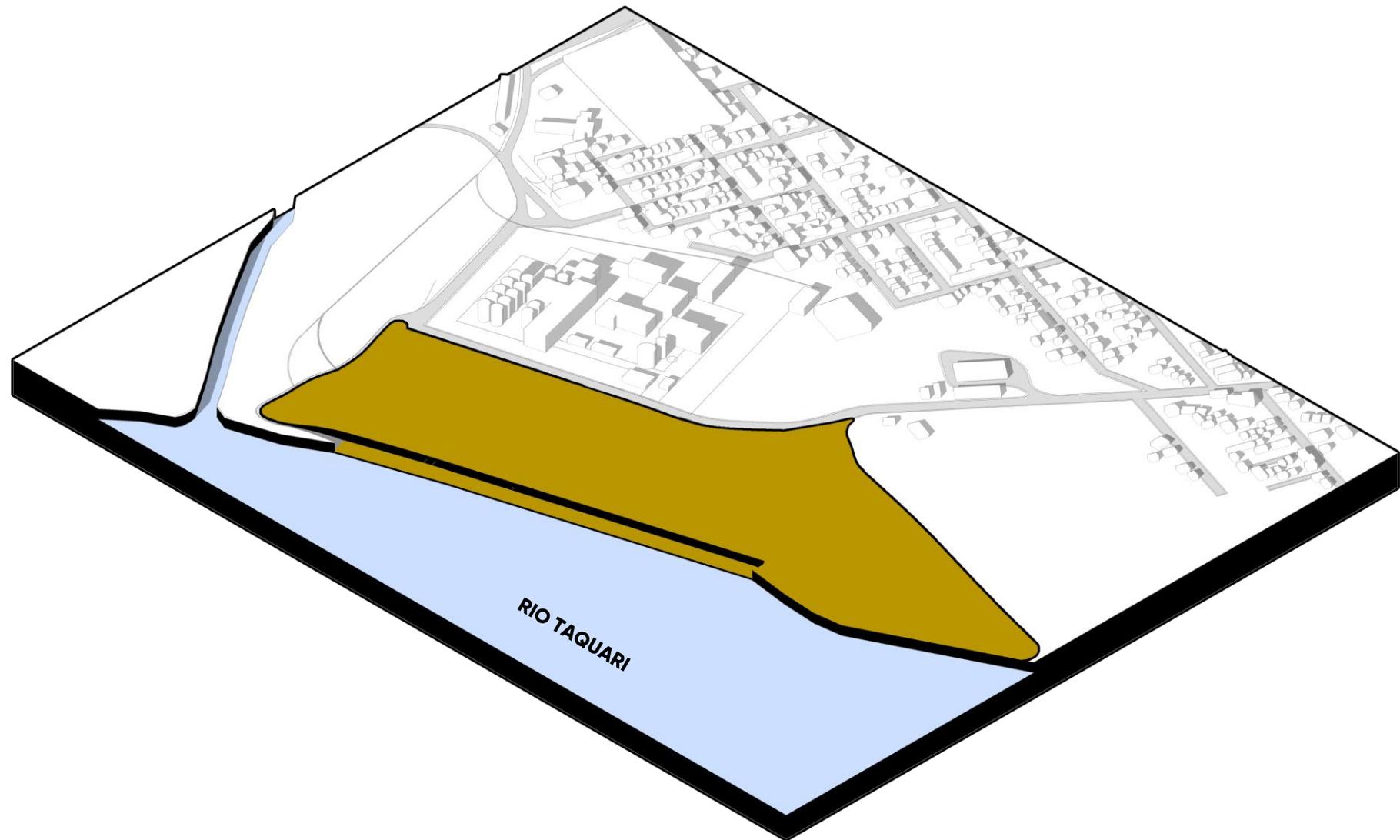
# O TERRENO

## ESTADO ATUAL



## O TERRENO

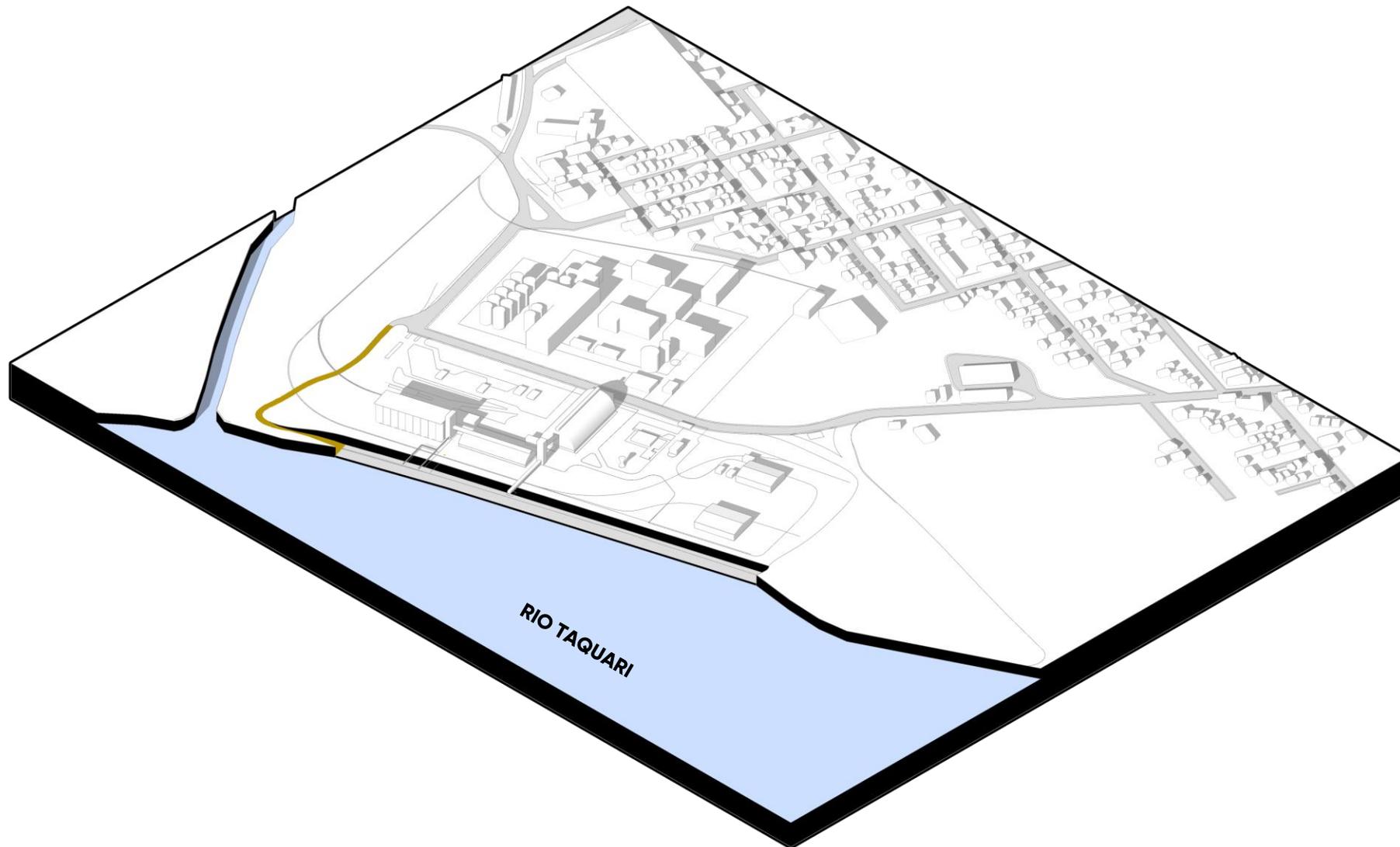
### ÁREA DE PROJETO



Área= 218000m<sup>2</sup>

## O TERRENO

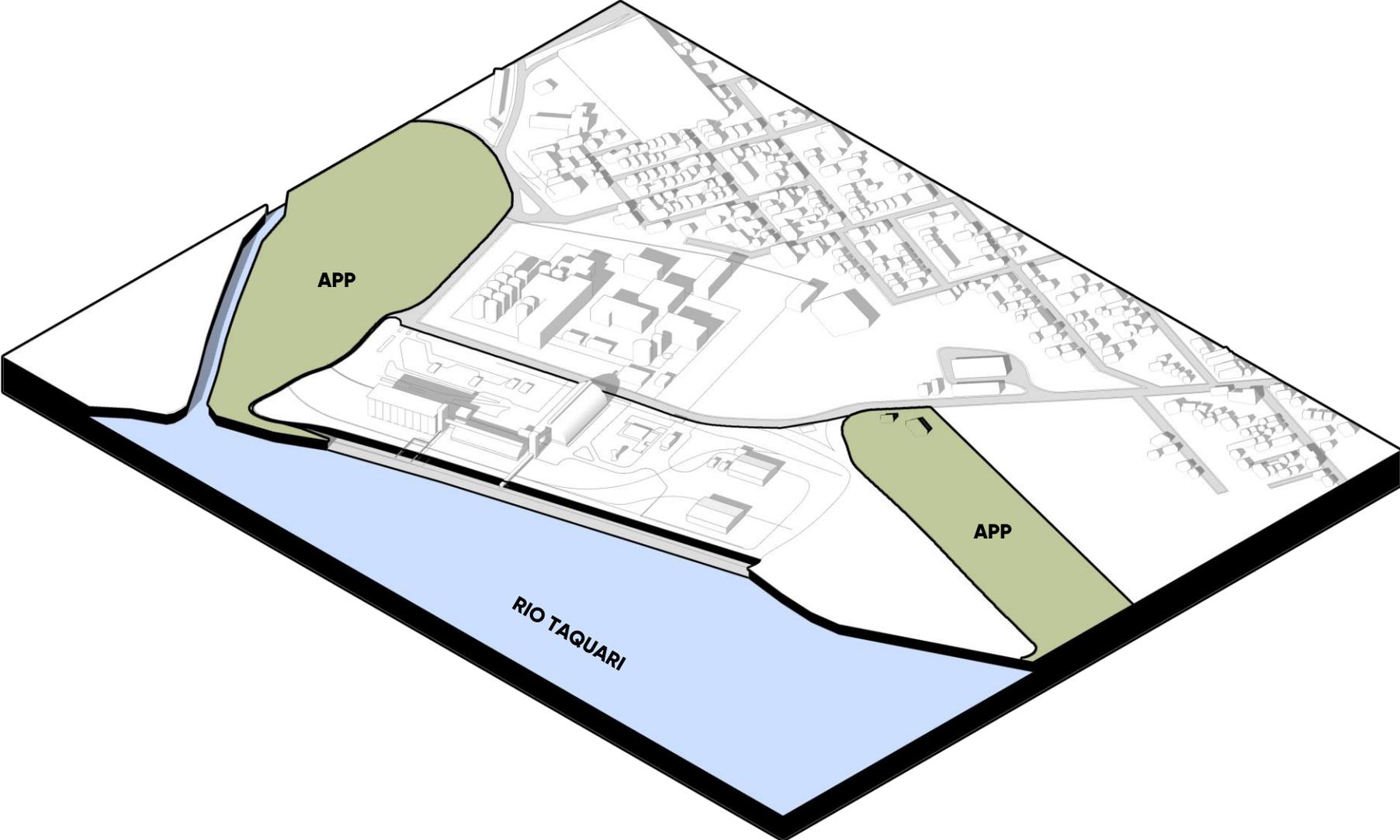
### ÁREA DE PROJETO



Desnível de 13m

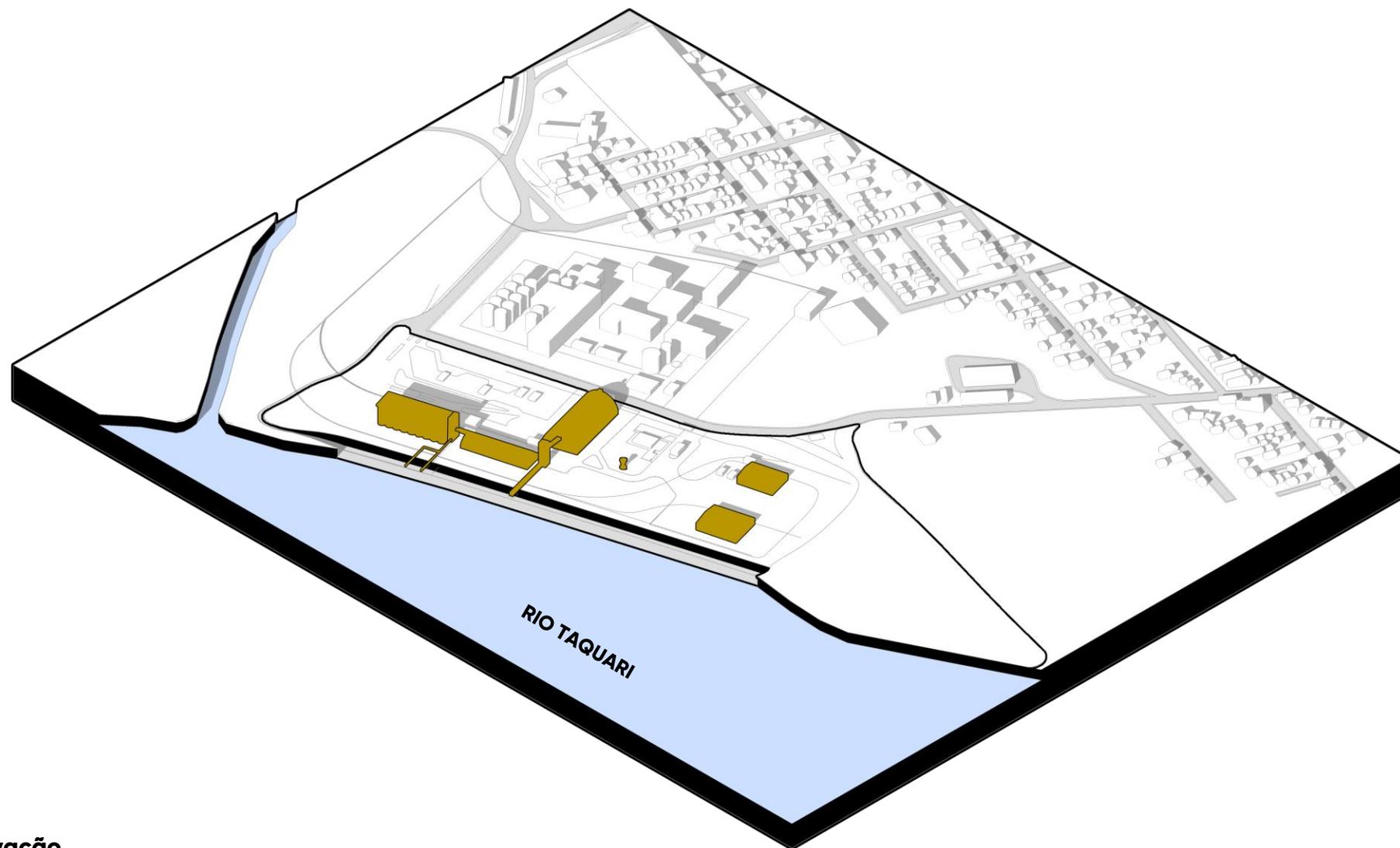
**O TERRENO**

**APP'S**



**O TERRENO**

**A MANTER**

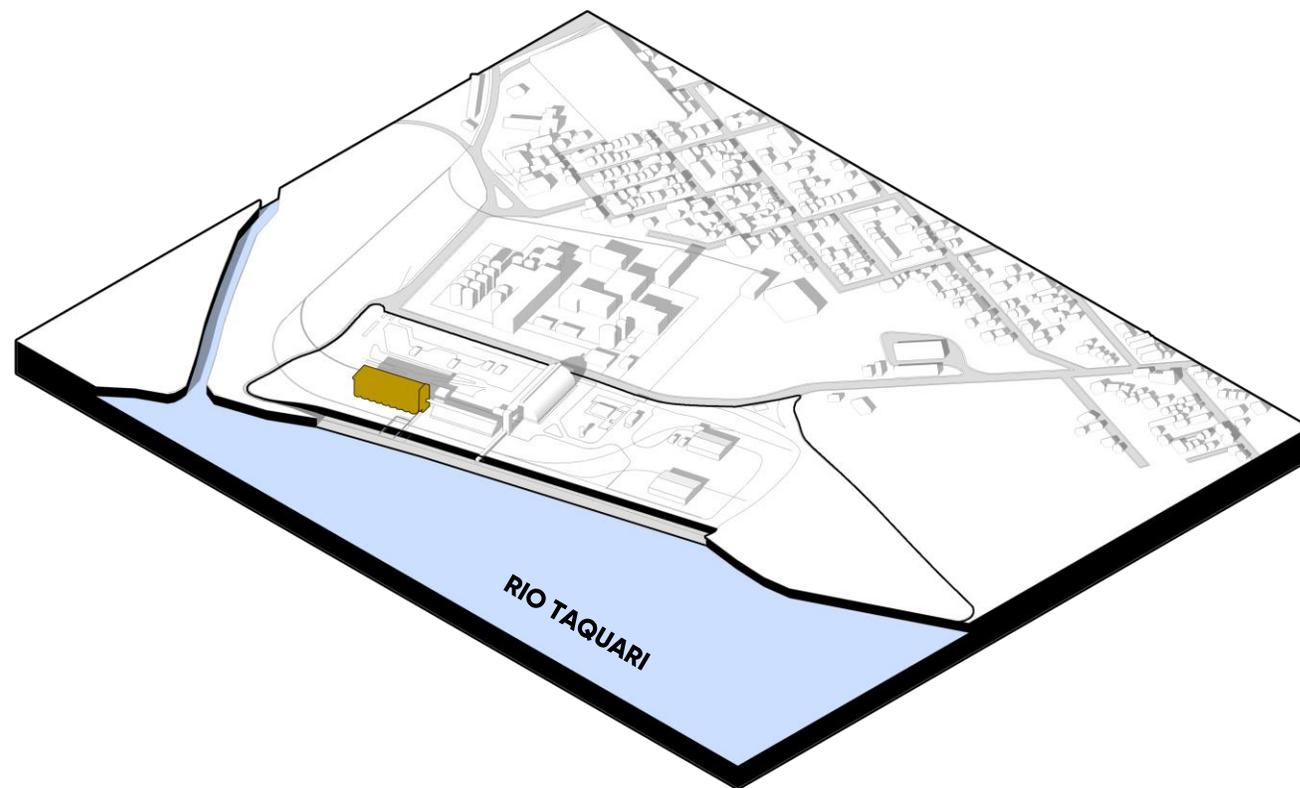


**Bom estado de conservação  
Subutilizadas**

**O TERRENO**

**A MANTER**

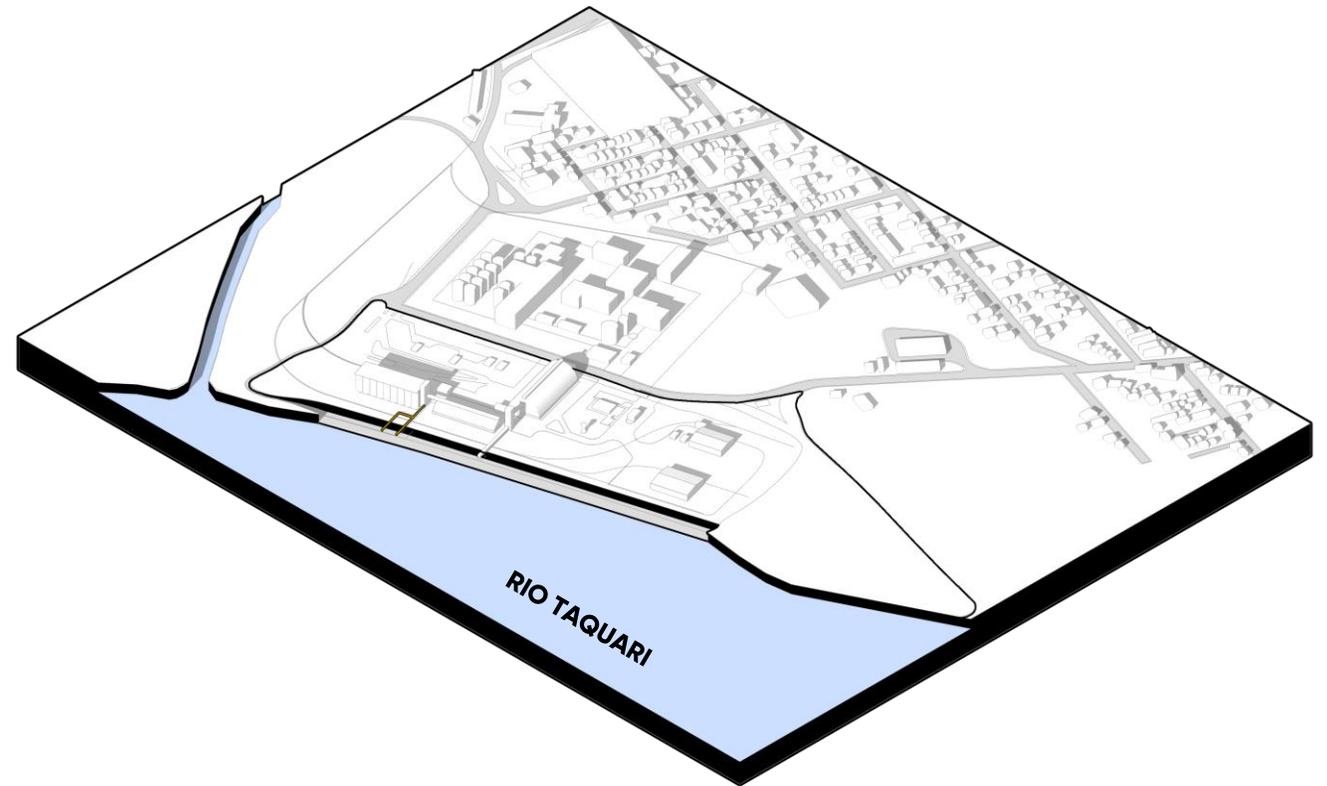
**01 SILOS**



**O TERRENO**

**A MANTER**

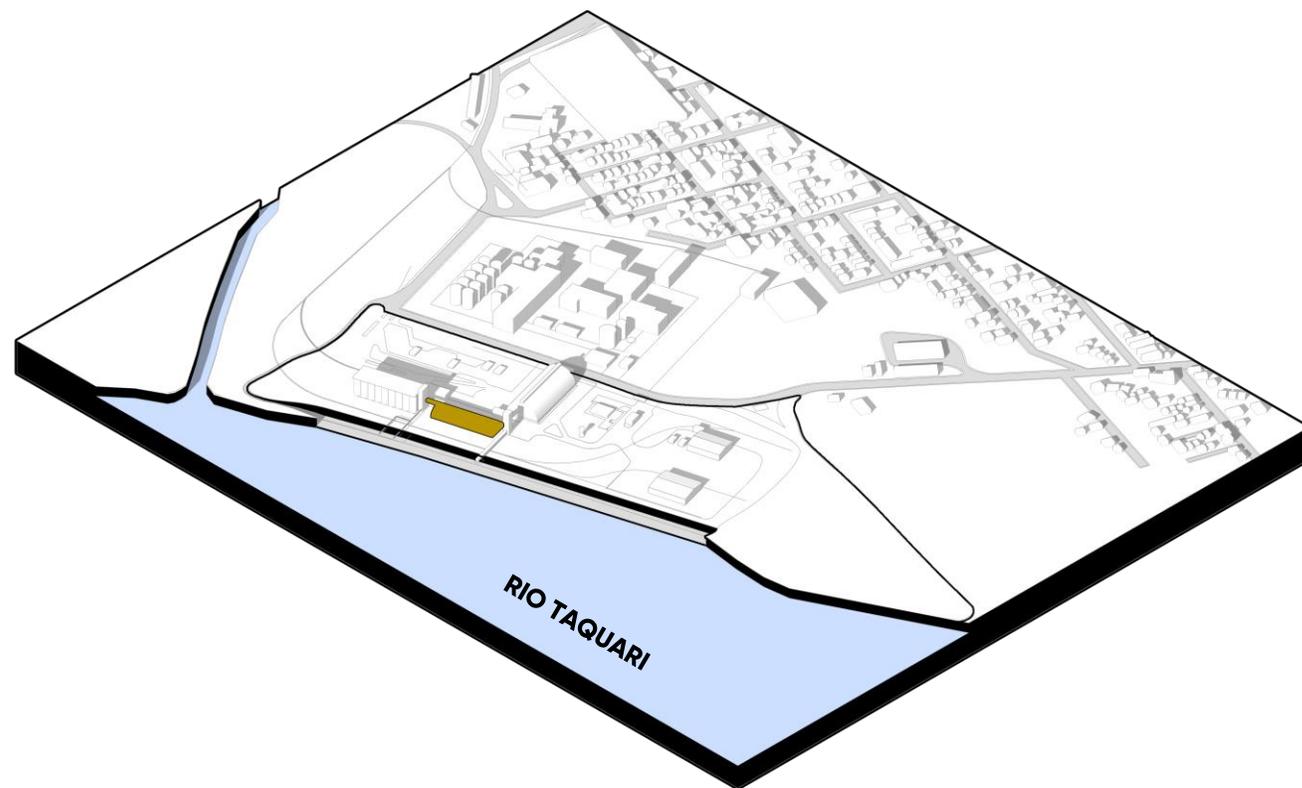
**02 CORREIAS TRANSPORTADORAS**



**O TERRENO**

**A MANTER**

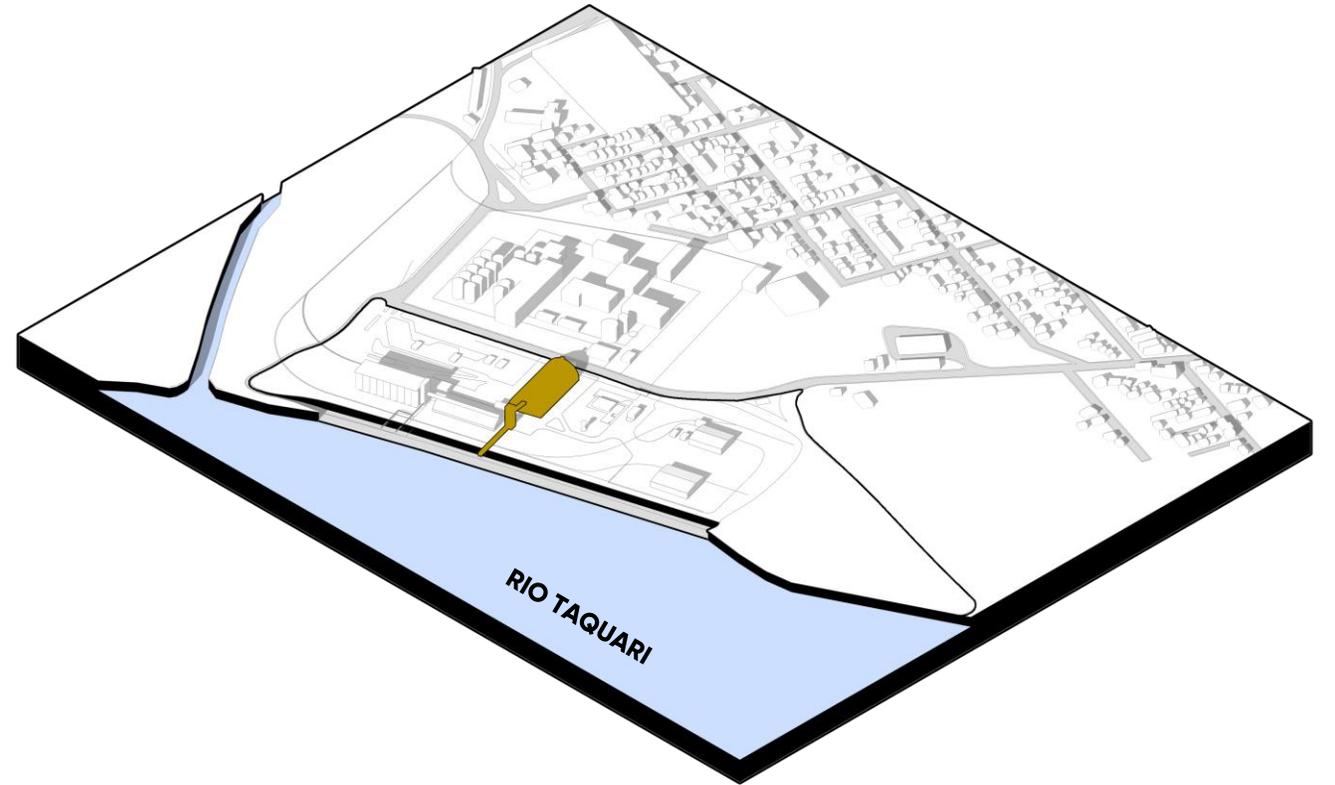
**03 GALPÃO GRANELEIRO 1**



**O TERRENO**

**A MANTER**

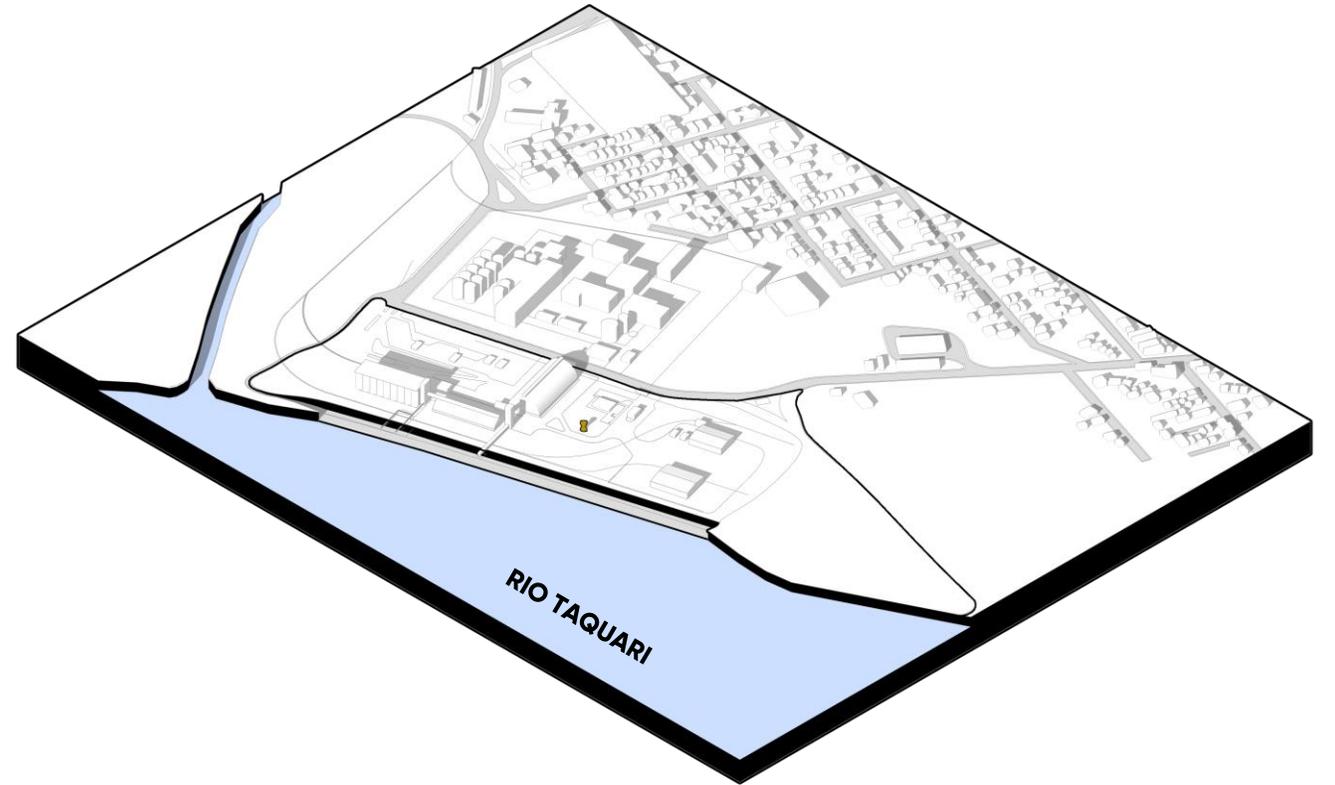
**04 GALPÃO GRANELEIRO 2**



**O TERRENO**

**A MANTER**

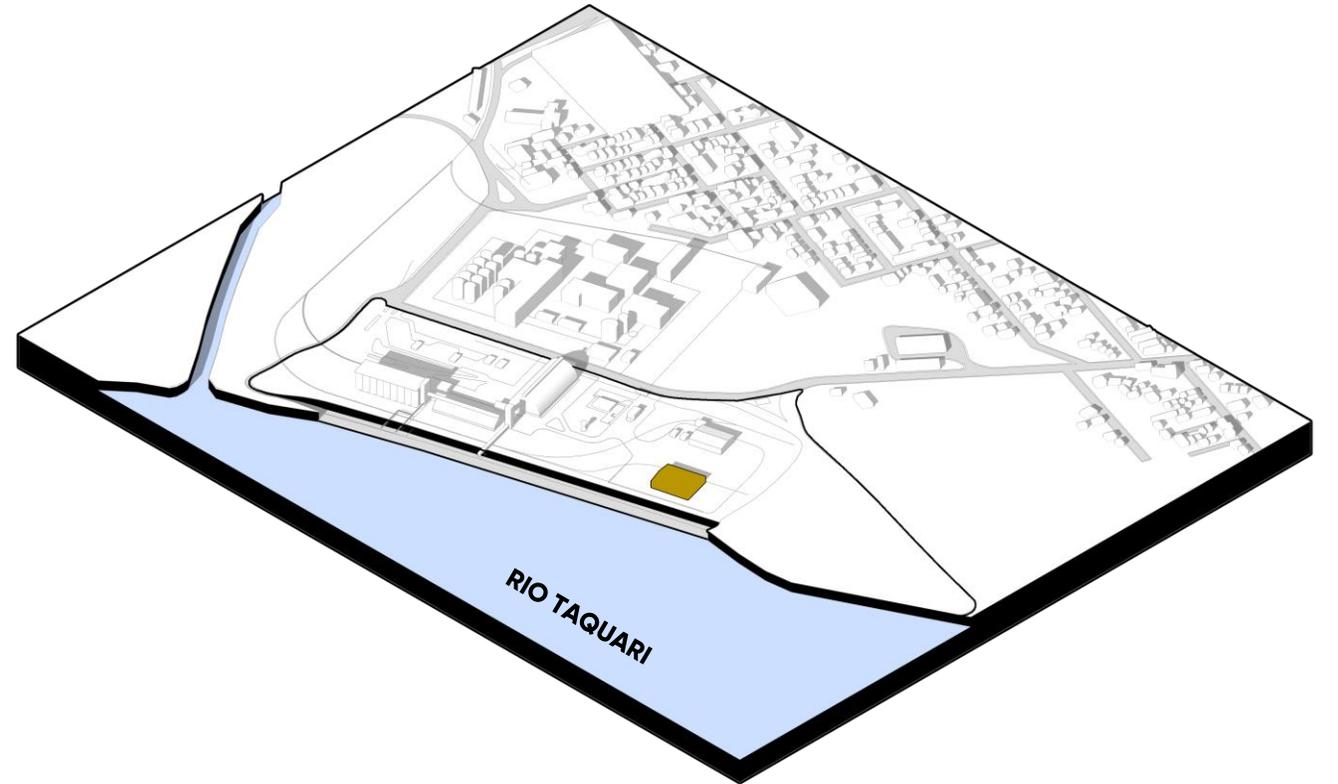
**05 CAIXA D'ÁGUA**



**O TERRENO**

**A MANTER**

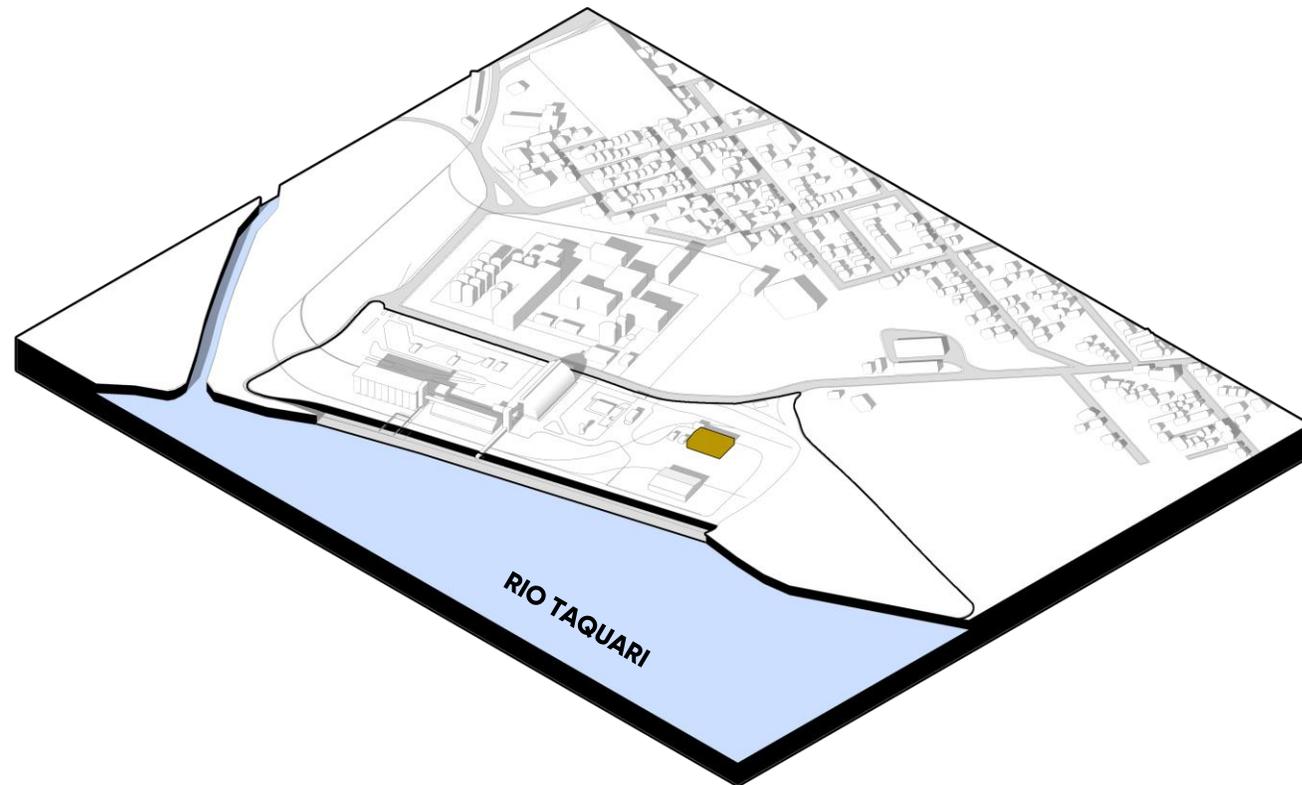
**06 GALPÃO DE ARMAZENAGEM 1**



**O TERRENO**

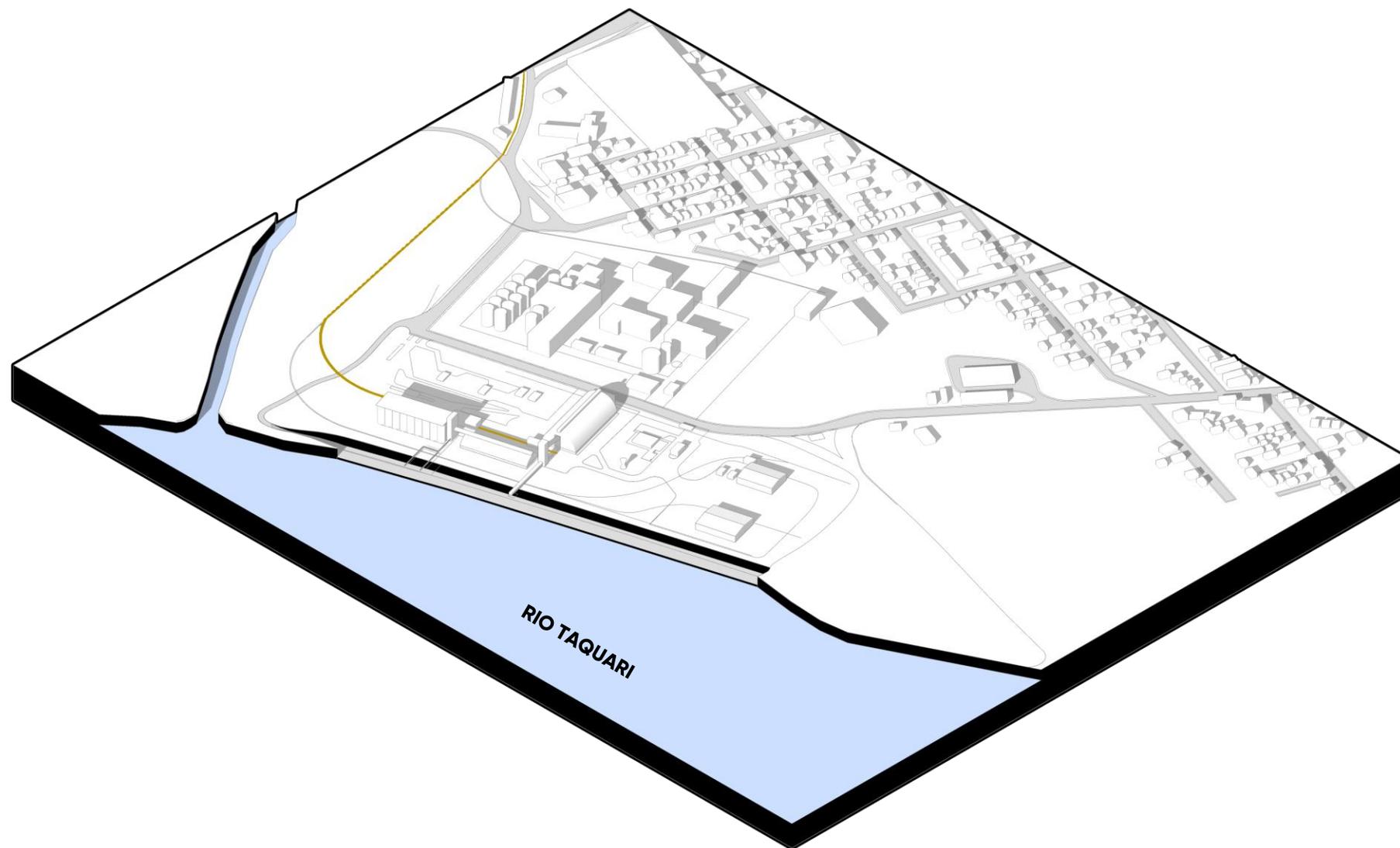
**A MANTER**

**07 GALPÃO DE ARMAZENAGEM 2**

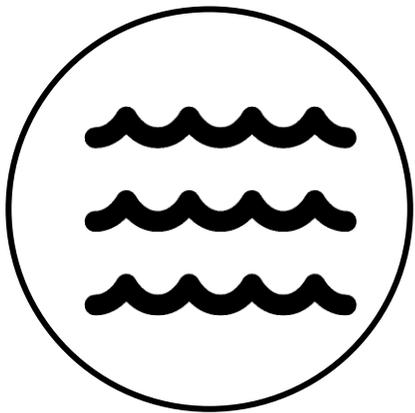


**O TERRENO**

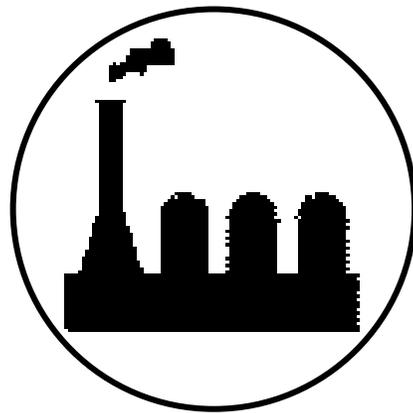
**TREM**



## **JUSTIFICATIVA**



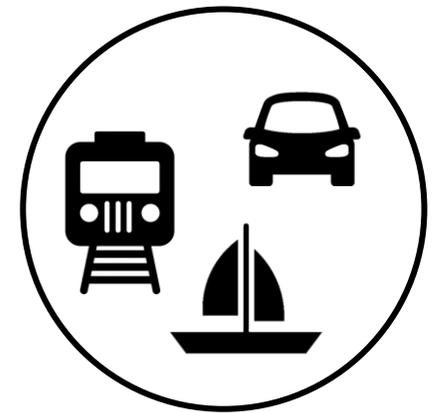
**RIO TAQUARI**



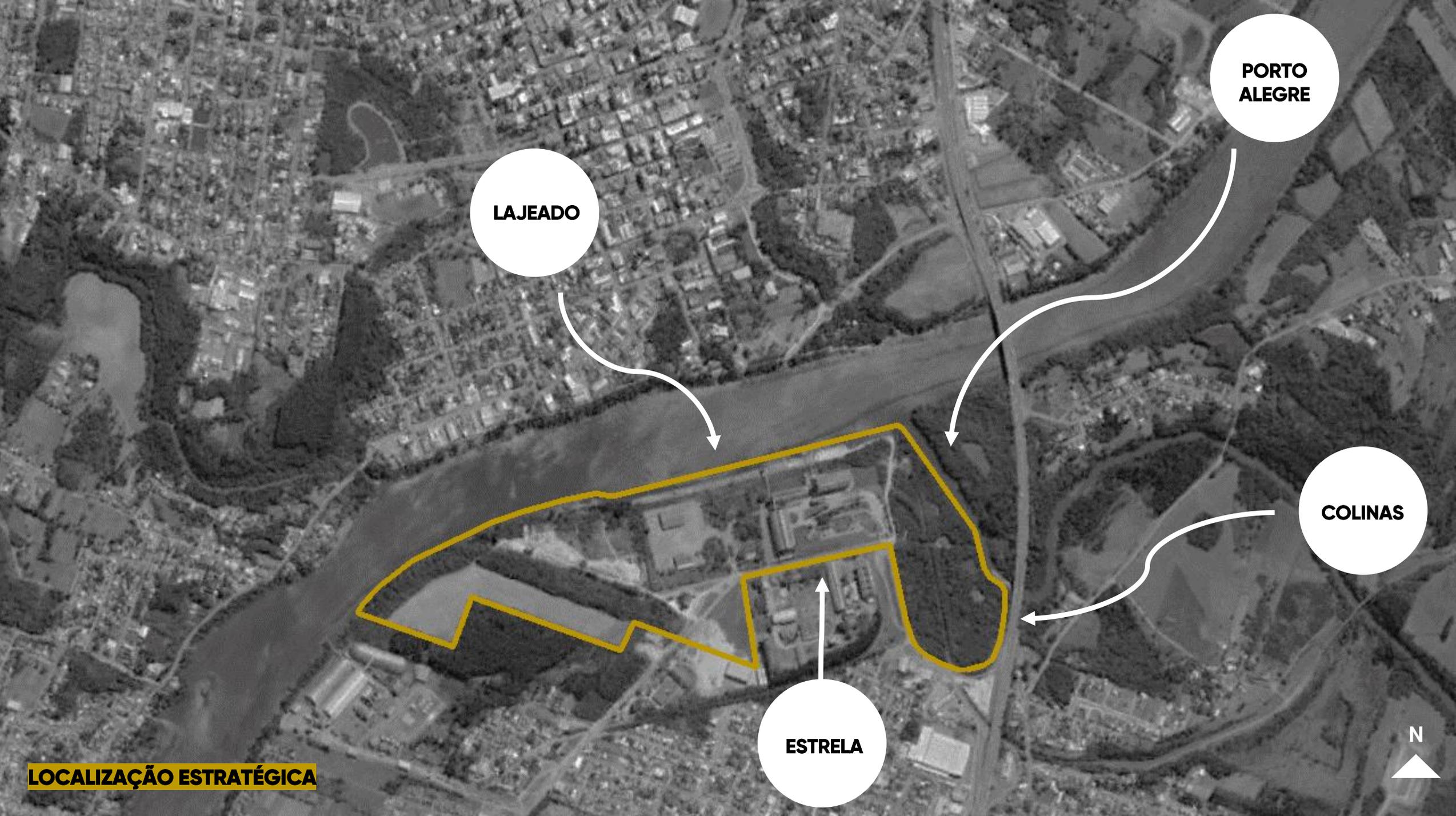
**PATRIMÔNIO INDUSTRIAL**



**OCIOSIDADE**



**CONEXÕES**



**LAJEADO**

**PORTO ALEGRE**

**COLINAS**

**ESTRELA**

**LOCALIZAÇÃO ESTRATÉGICA**



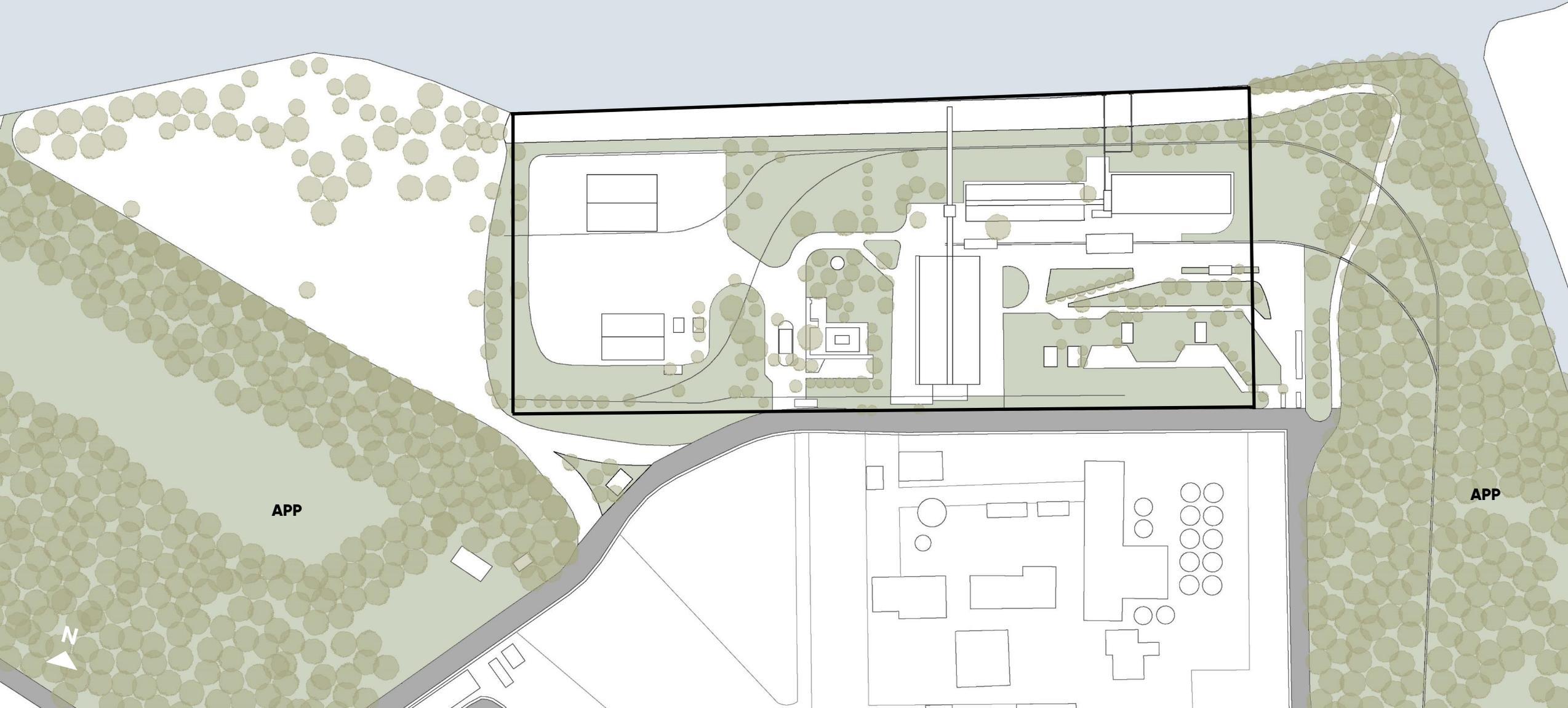


***ANÁLISES***

**ANÁLISES**

**GEOMETRIAS**

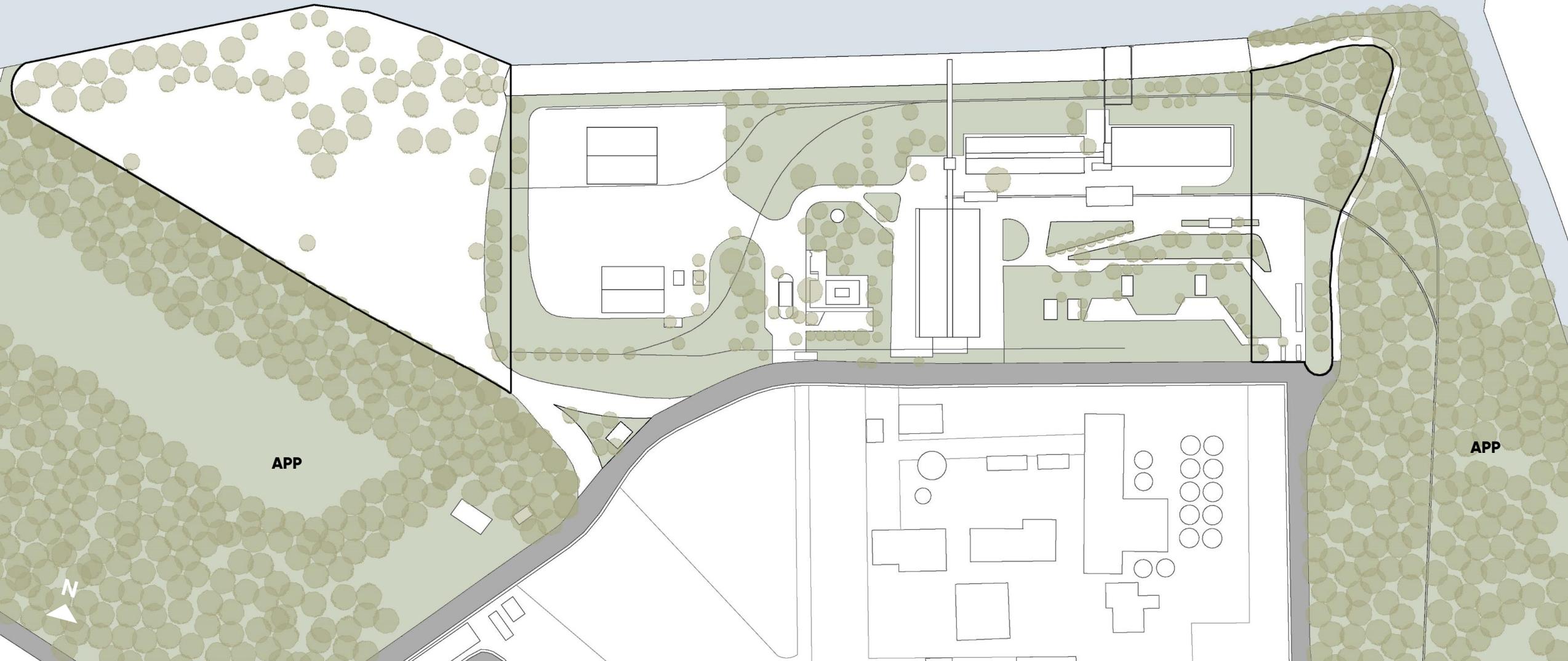
**RIO TAQUARI**



**ANÁLISES**

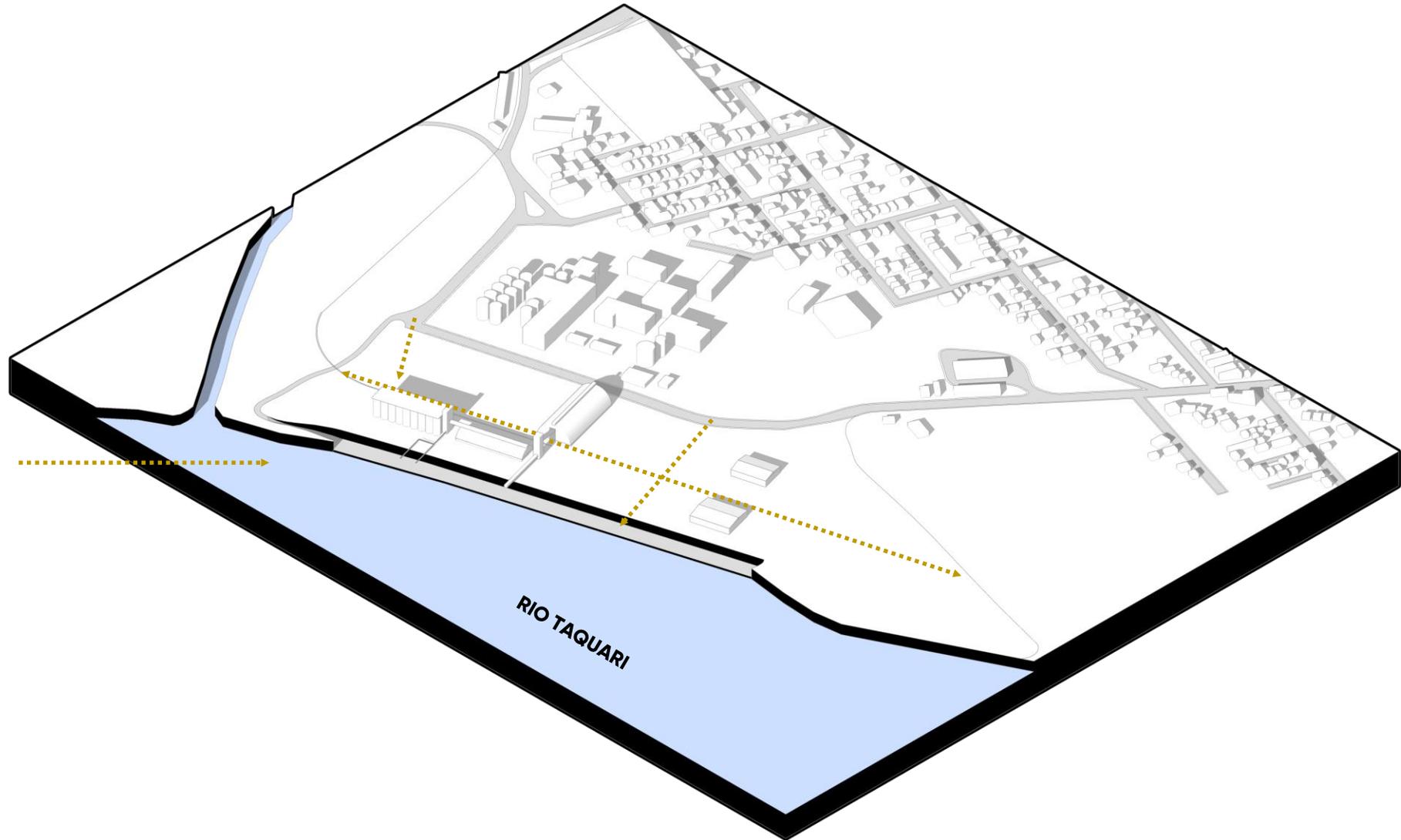
**GEOMETRIAS**

**RIO TAQUARI**



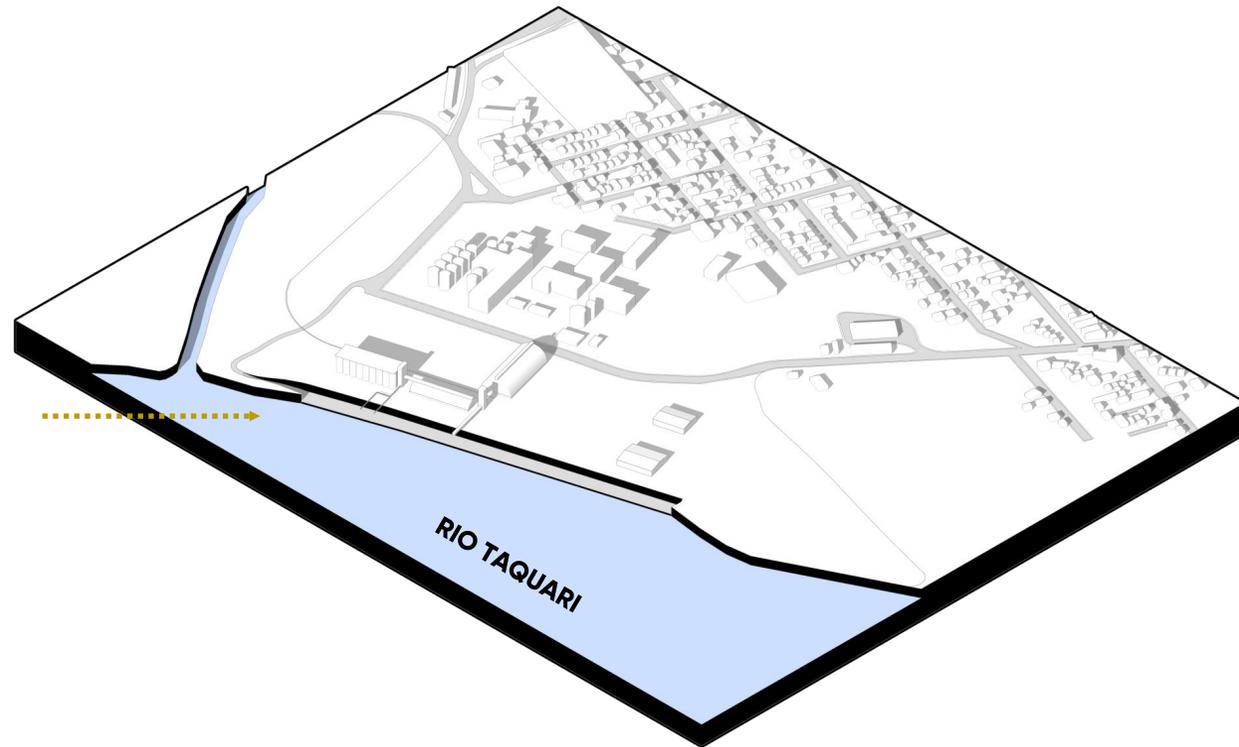
# ANÁLISES

## VISUAIS IMPORTANTES



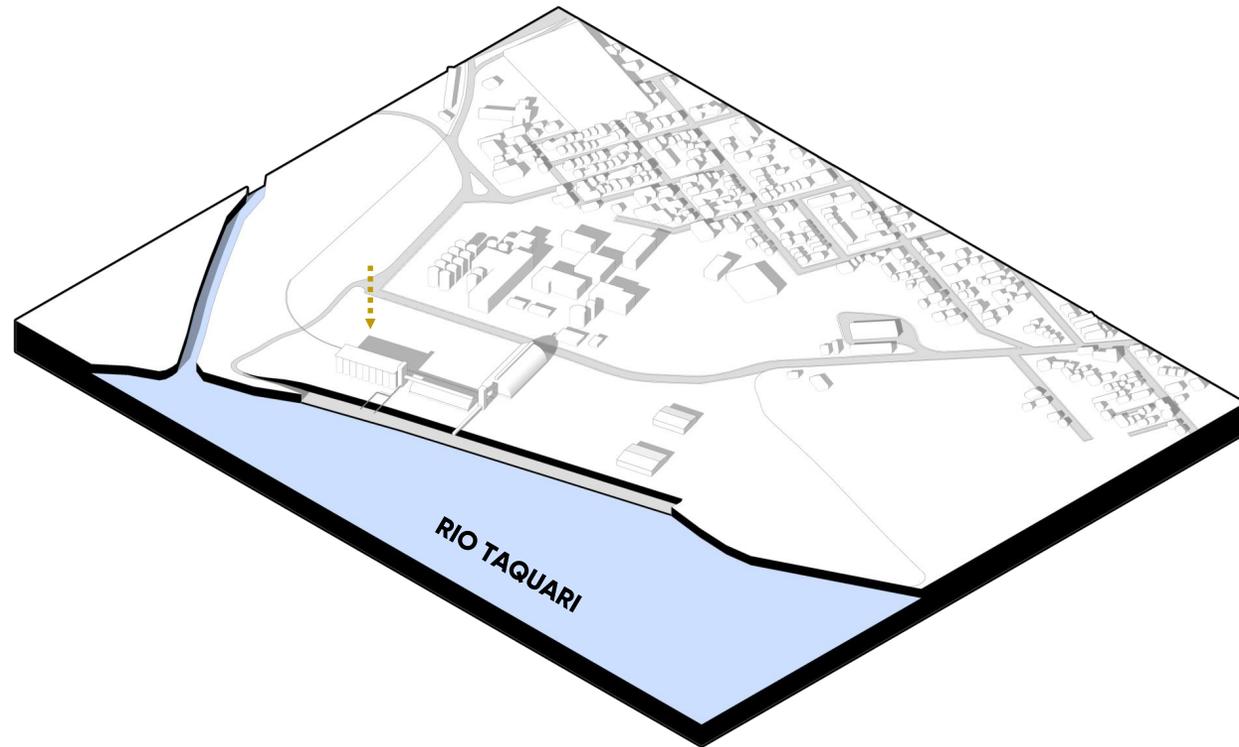
# ANÁLISES

## VISUAIS IMPORTANTES



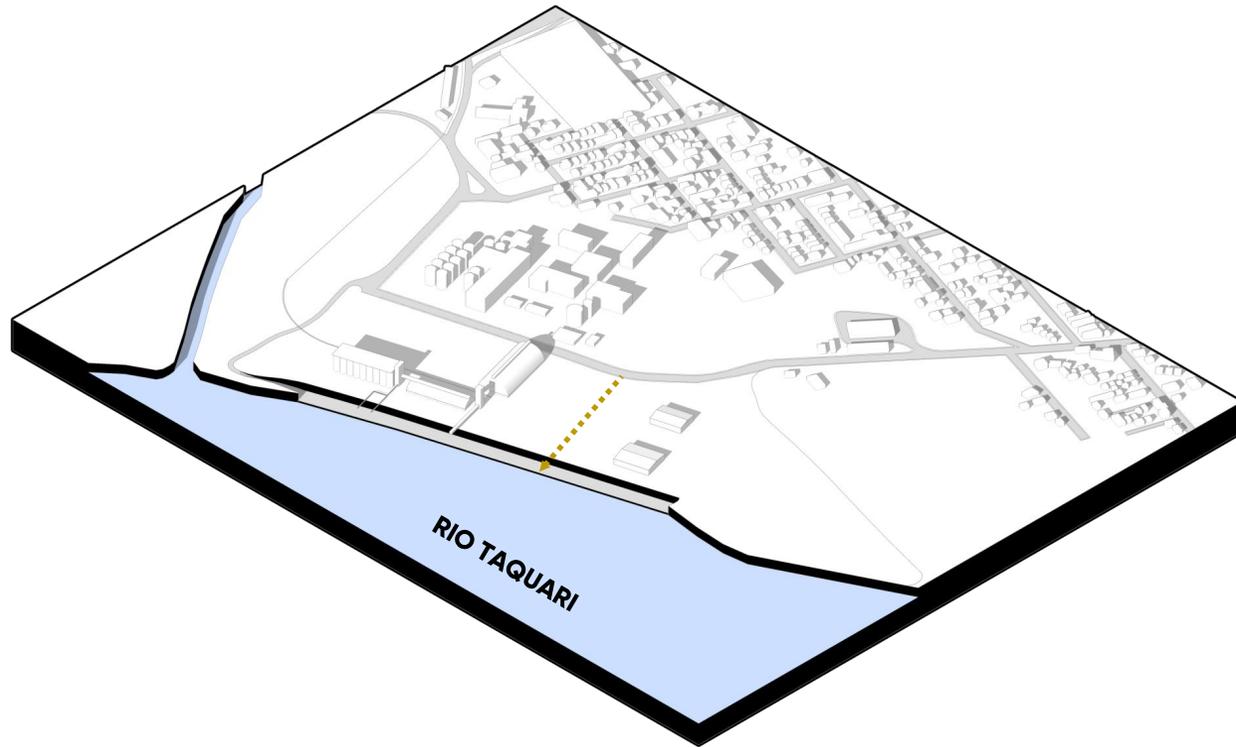
# ANÁLISES

## VISUAIS IMPORTANTES



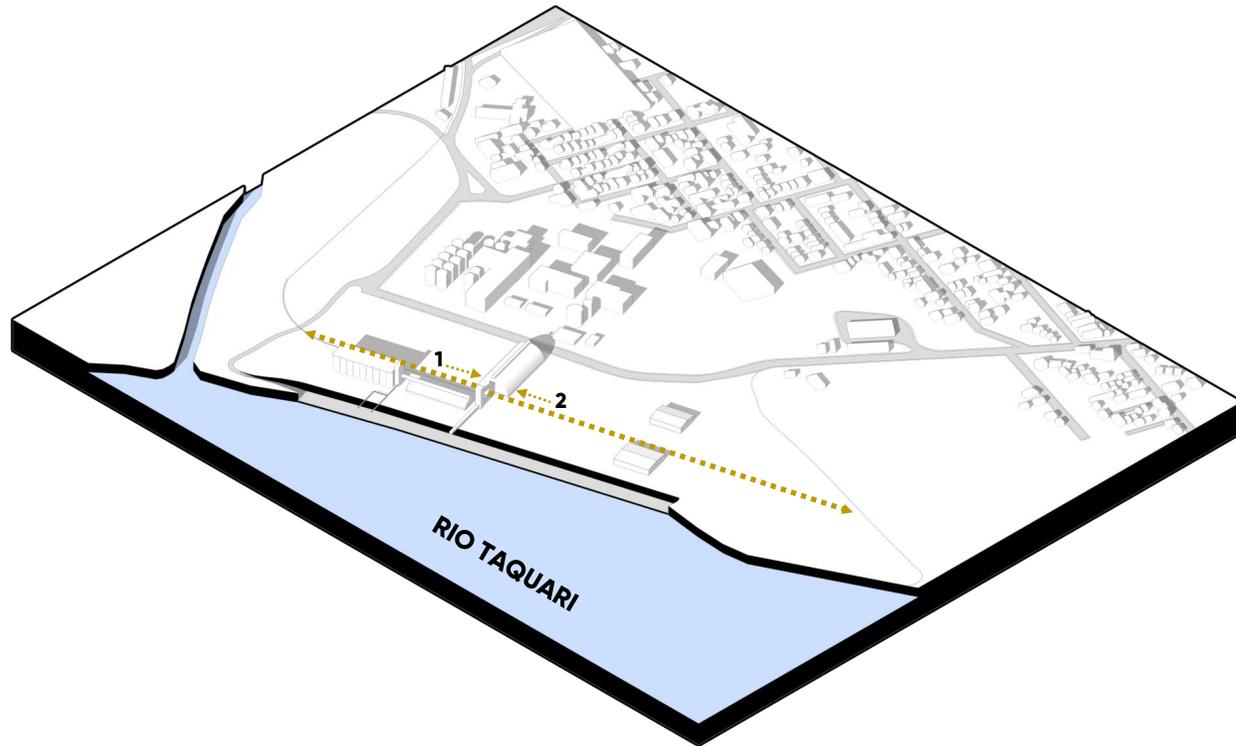
# ANÁLISES

## VISUAIS IMPORTANTES



# ANÁLISES

## VISUAIS IMPORTANTES



1



2

# DIAGNÓSTICO

## POTENCIALIDADES

MARCO HISTÓRICO  
LOCALIZAÇÃO ESTRATÉGICA  
INTERFACE RIO TAQUARI  
DIFERENTES MODAIS  
CONEXÃO OUTRAS CIDADES  
ÁREA PLANA  
ZONA DE PROJETOS ESPECIAIS  
APP'S  
COTA BAIXA DE INUNDAÇÃO

## FRAGILIDADES

CARÊNCIA DE ESPAÇOS  
PÚBLICOS DE QUALIDADE NA  
CIDADE  
FALTA DE OPORTUNIDADES DE  
INTERAÇÃO COM O RIO NA  
INTERFACE DE ESTRELA

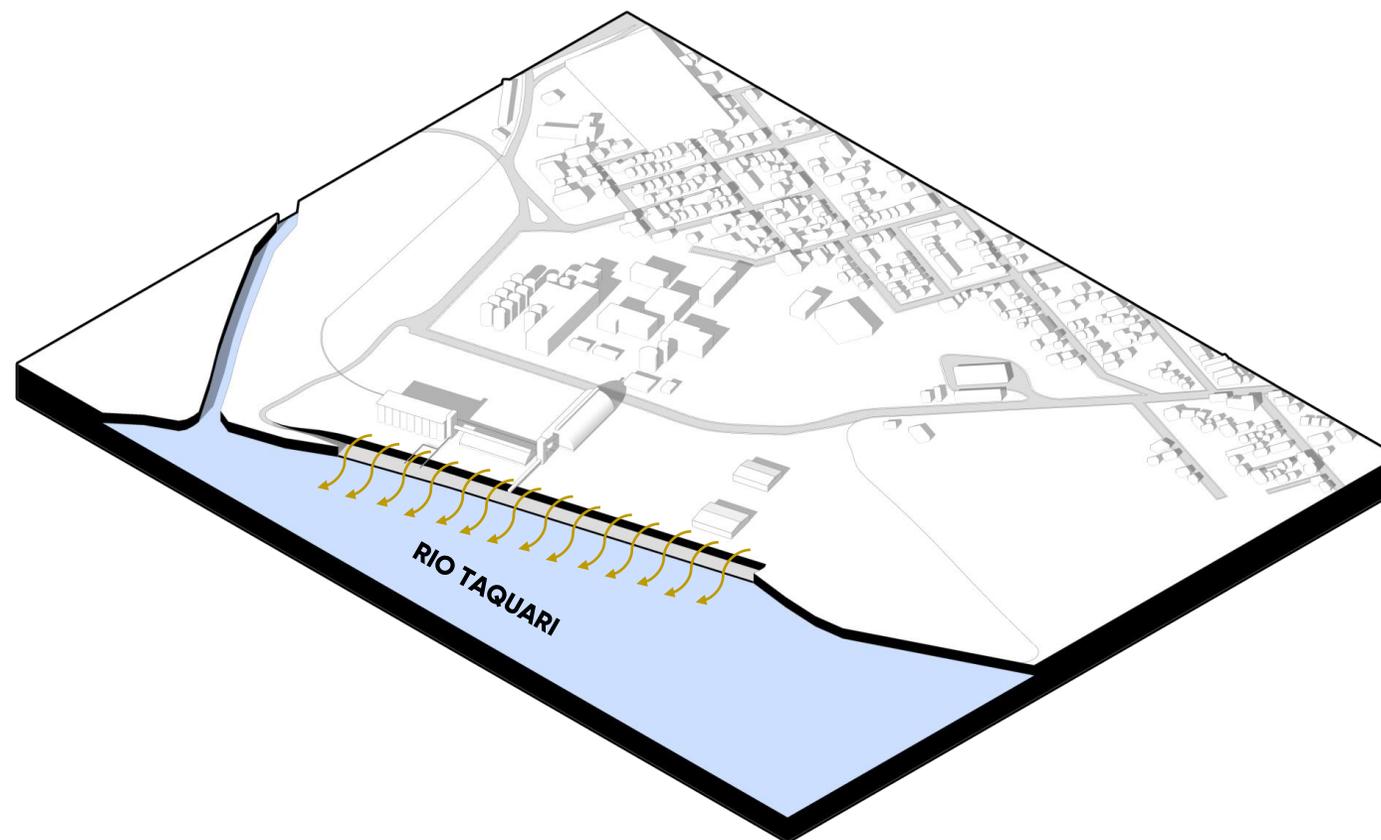
## OPORTUNIDADES

ATUAL OCIOSIDADE DA ÁREA  
EM PAUTA PARA  
INVESTIMENTOS  
PREVISÃO DE CONEXÃO  
CATAMARÃ  
PROJETO TREM DOS VALES  
EVENTOS ESPORÁDICOS  
POPULARIZAÇÃO ESPORTES  
NÁUTICOS NA REGIÃO  
PREVISÃO DE IMPLANTAÇÃO DE  
CICLOVIAS

***DIRETRIZES GERAIS***

## DIRETRIZES GERAIS

### 01 RETOMAR RELAÇÃO COM O RIO



## 02 CRIAR UM ESPAÇO PÚBLICO DE QUALIDADE

### O QUE COMPÕE UM ÓTIMO LUGAR

#### PROJECT FOR PUBLIC SPACES

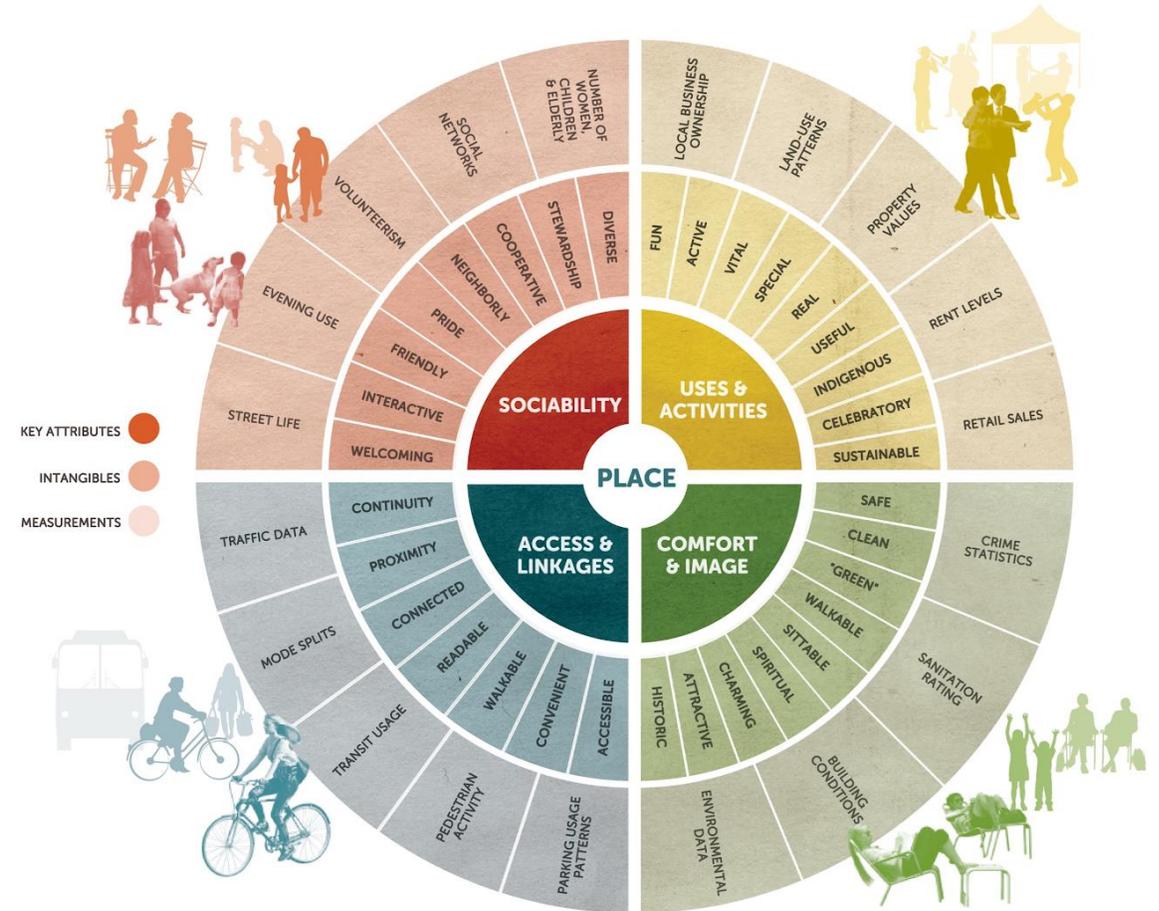
SOCIABILIDADE

USOS E ATIVIDADES

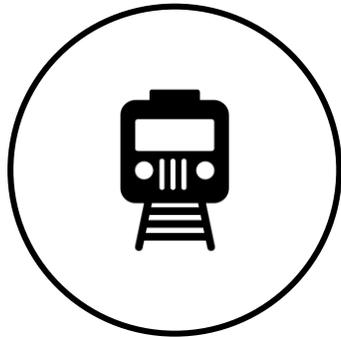
ACESSO E CONEXÕES

CONFORTO E IMAGEM

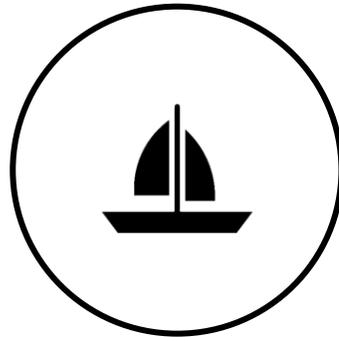
*“Espaços públicos vibrantes e inclusivos, com lazer, cultura e esporte configuram pontos nodais de uma política que pensa em devolver ao cidadão o direito à cidade.”*



**03** INCENTIVAR O TURISMO



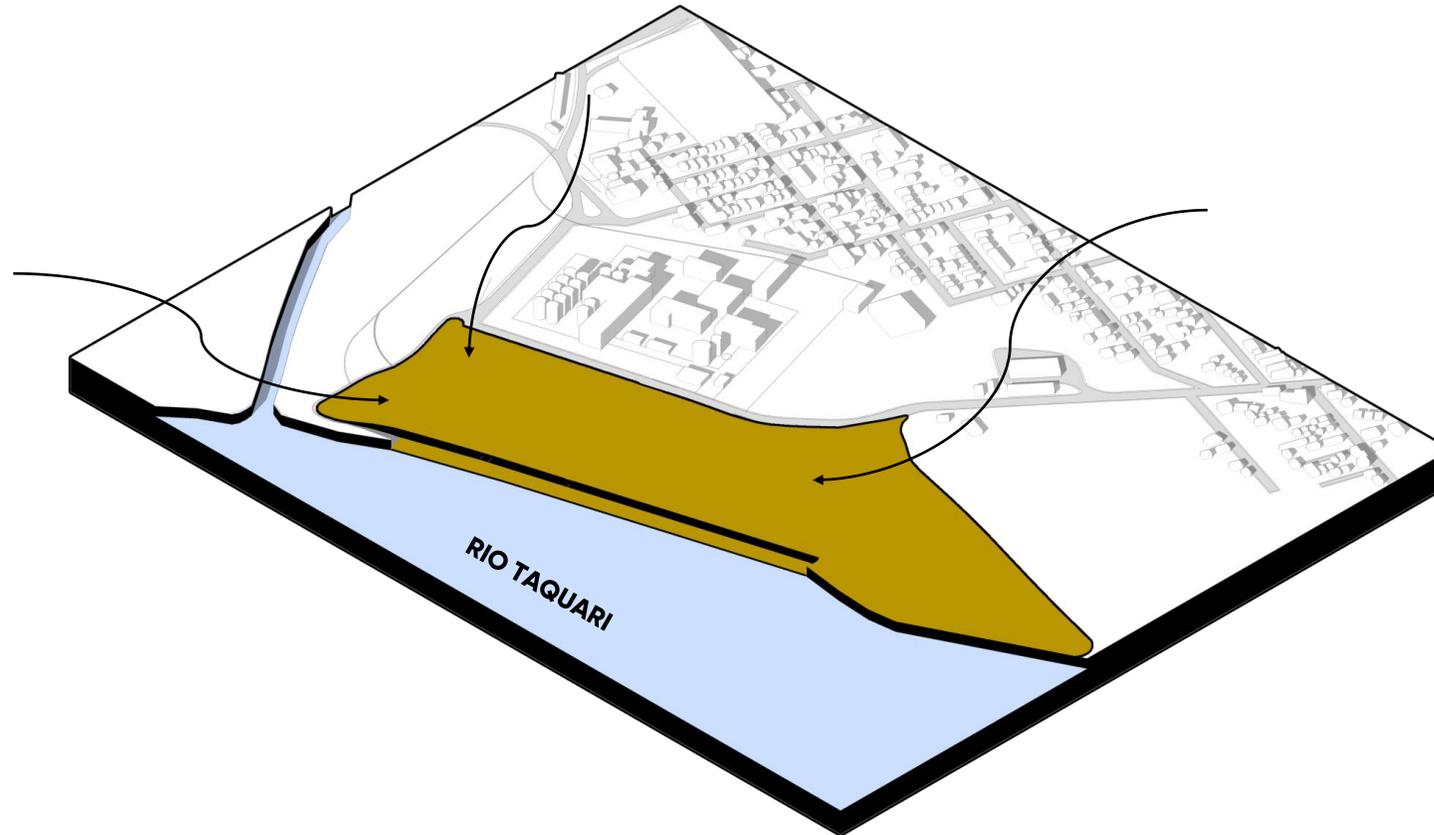
**TREM DOS VALES**



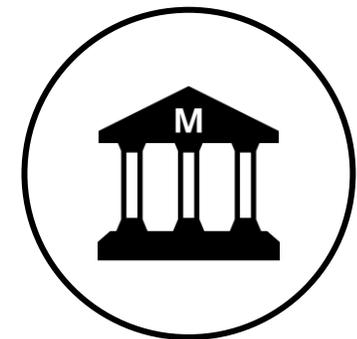
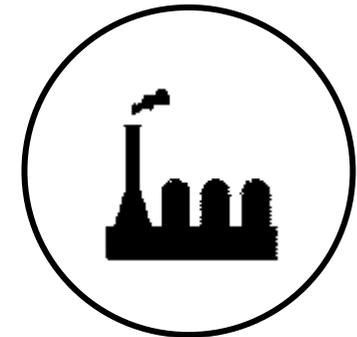
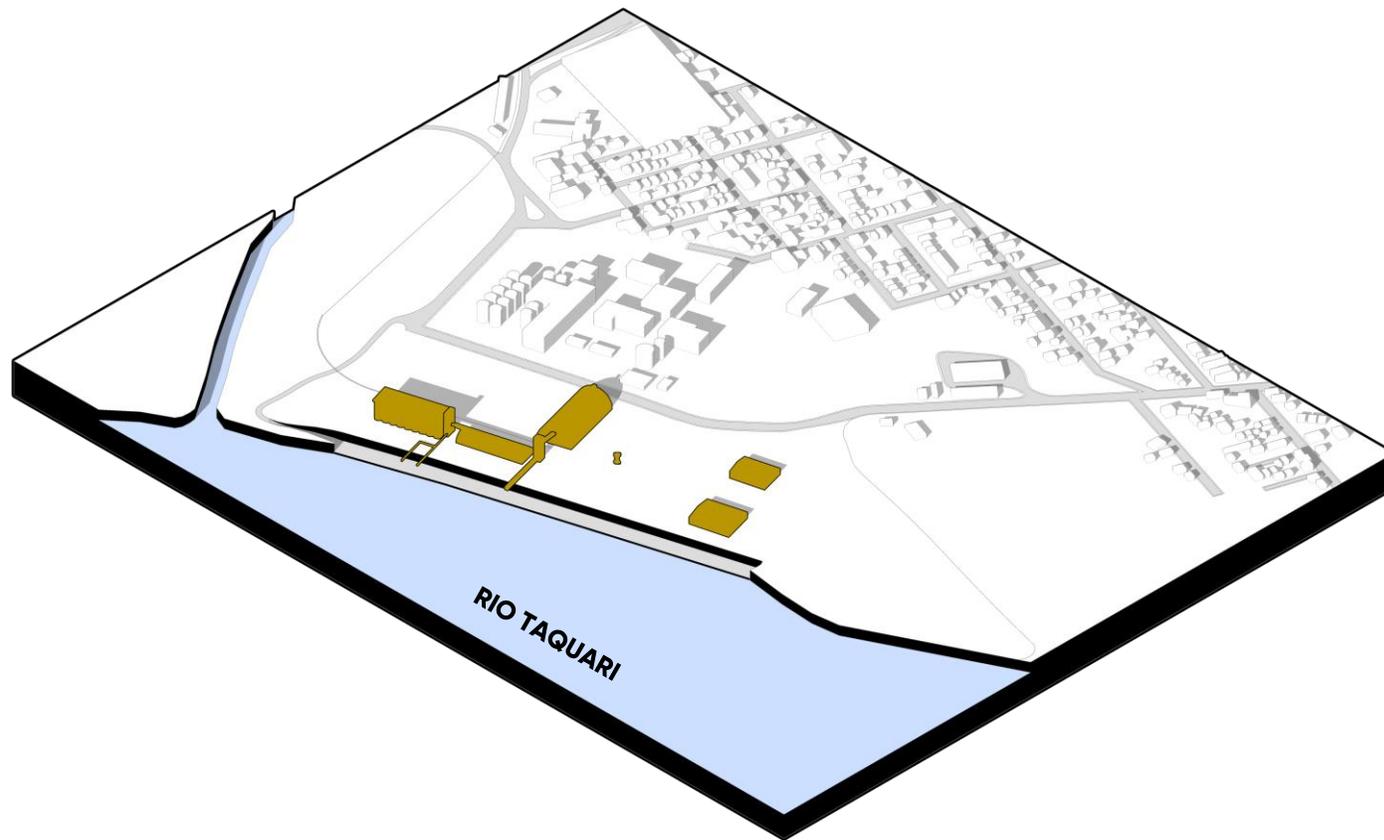
**CATAMARÃ**



**04** CRIAR UMA NOVA CENTRALIDADE



**05** RESGATAR A HISTÓRIA



**06** MINIMIZAR OS IMPACTOS DAS CHEIAS NO LOCAL

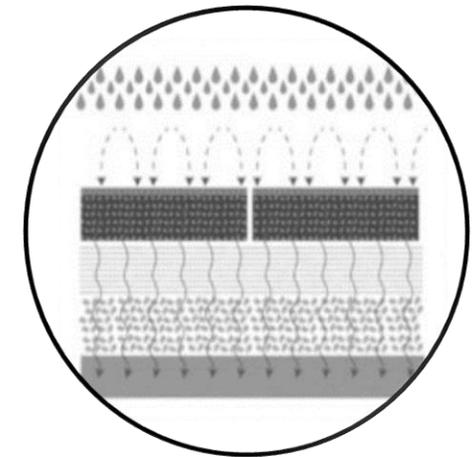
**ESTRATÉGIAS DE DRENAGEM**



**JARDINS DE CHUVA**



**BACIA DE DETENÇÃO**

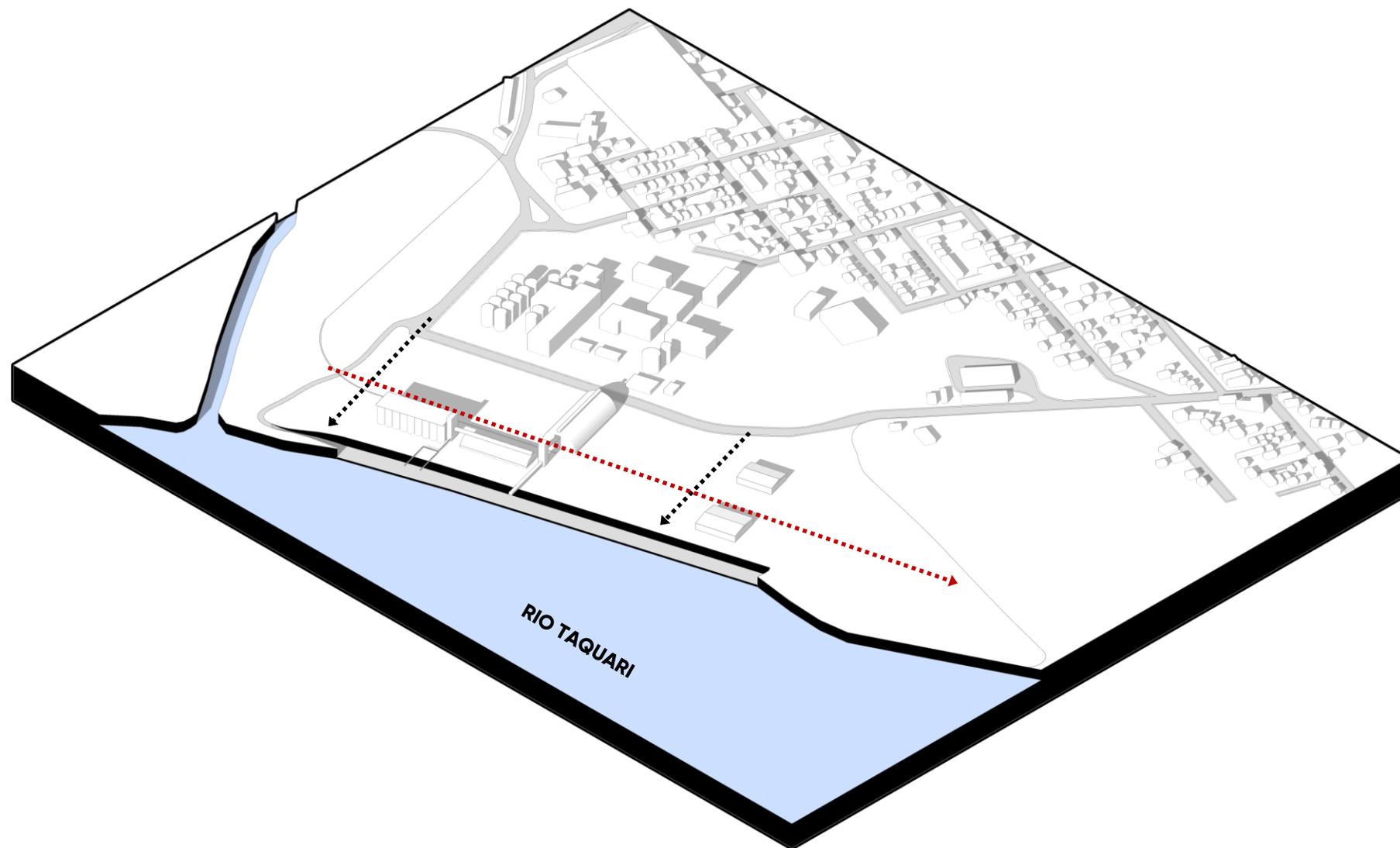


**PISOS DRENANTES**

# ***DEFINIÇÕES DE PROJETO***

## DEFINIÇÕES DE PROJETO

### FLUXOS PRINCIPAIS



# DEFINIÇÕES DE PROJETO

## GRELHA

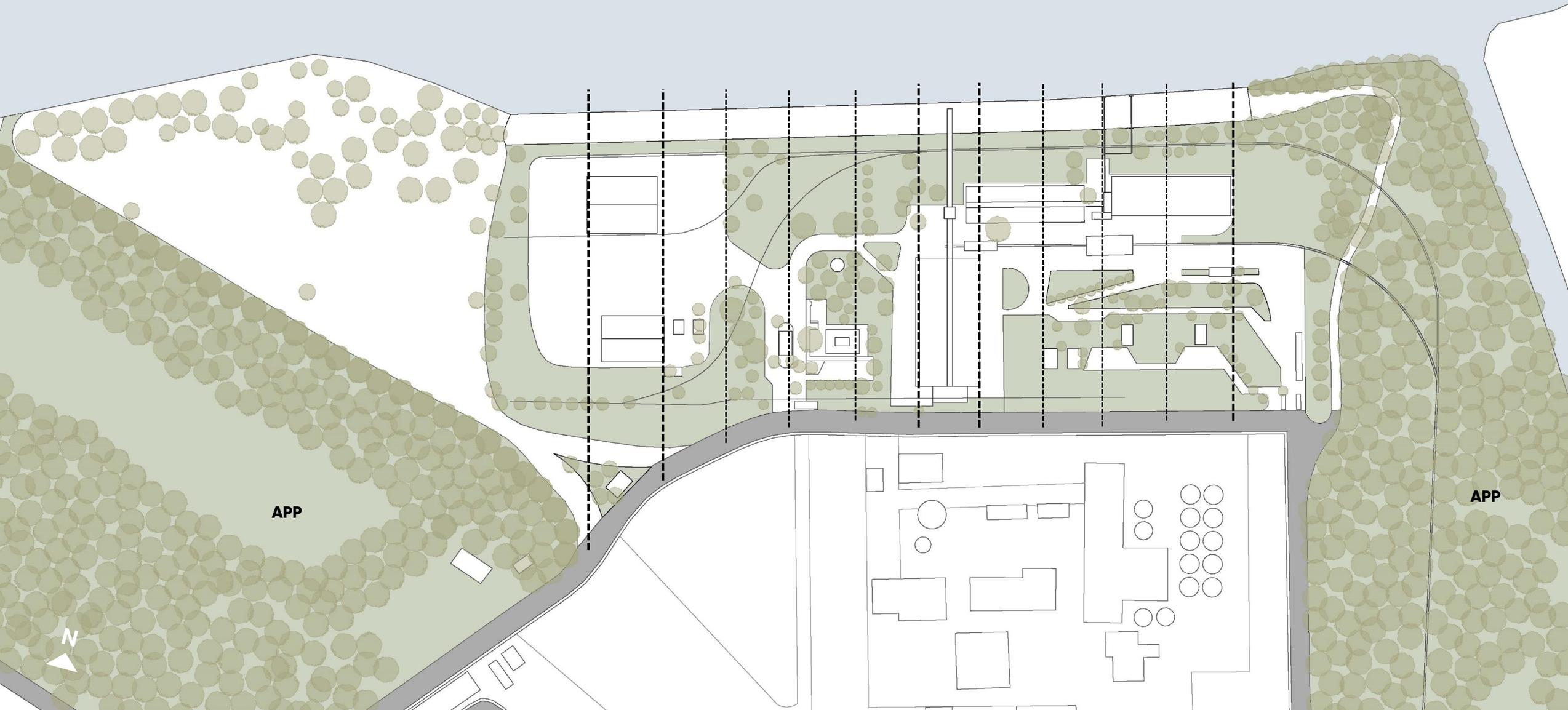
RIO TAQUARI



# DEFINIÇÕES DE PROJETO

## SUBGRELHA

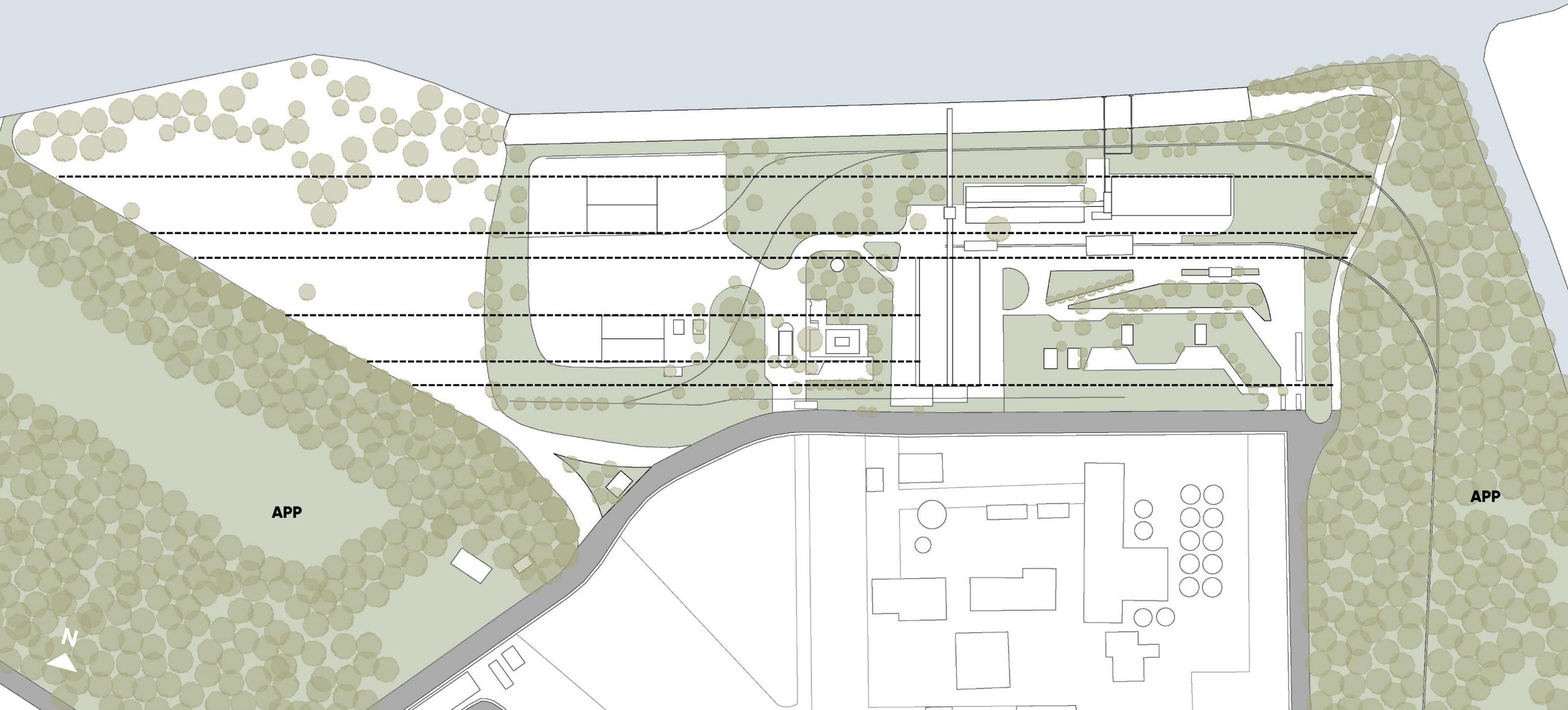
RIO TAQUARI



# DEFINIÇÕES DE PROJETO

## GRELHA

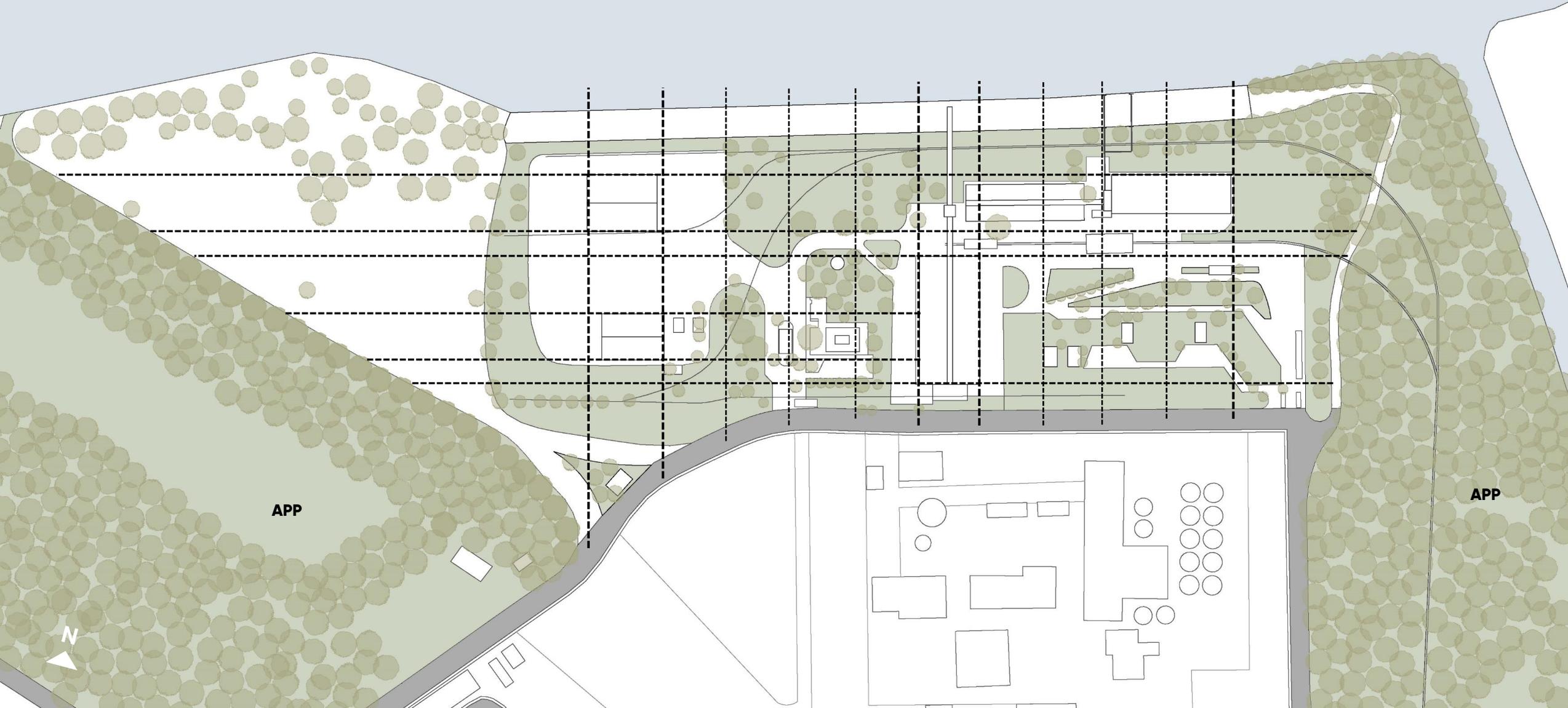
RIO TAQUARI



# DEFINIÇÕES DE PROJETO

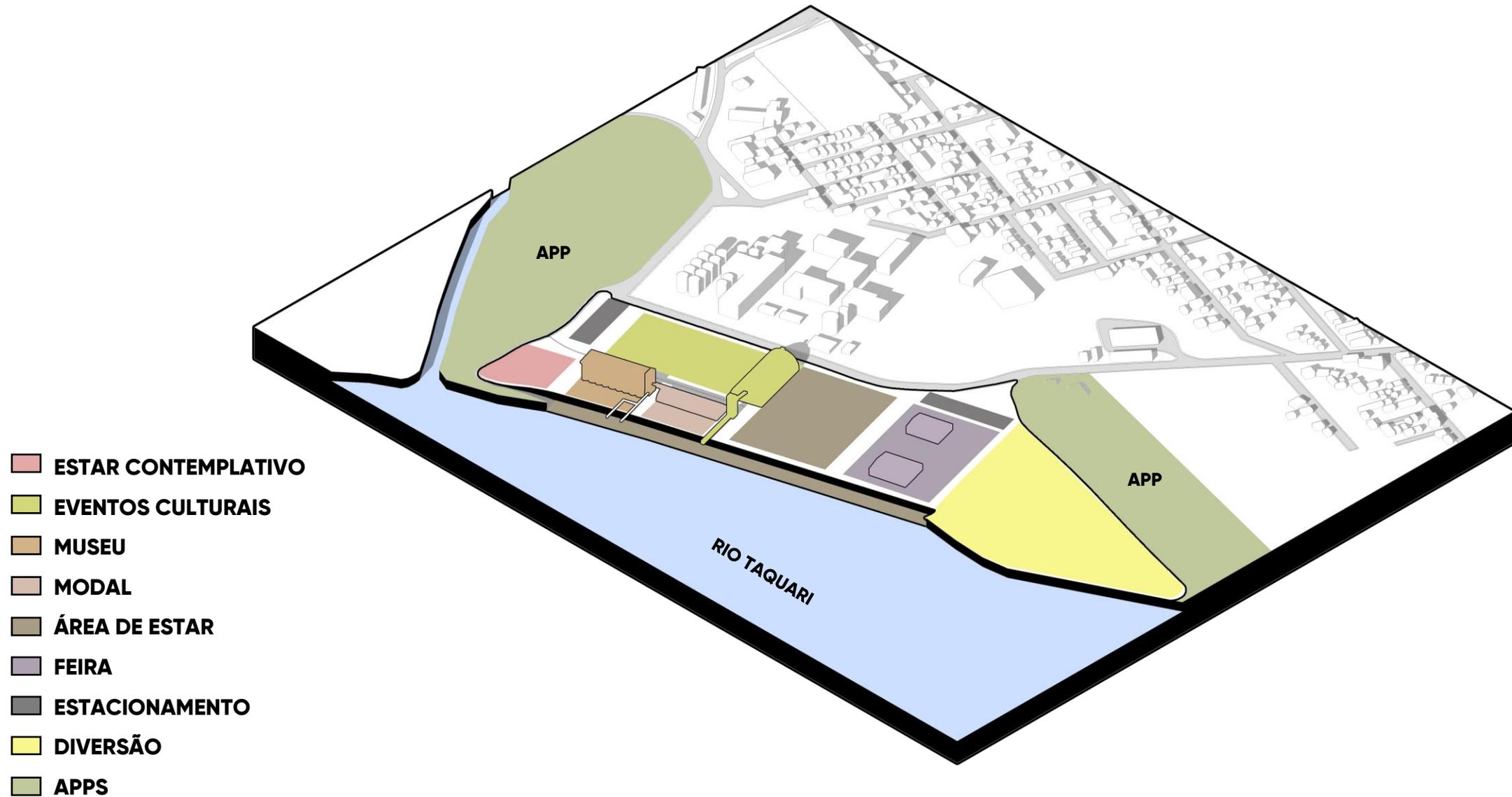
## GRELHA

RIO TAQUARI



# DEFINIÇÕES DE PROJETO

## ZONEAMENTO



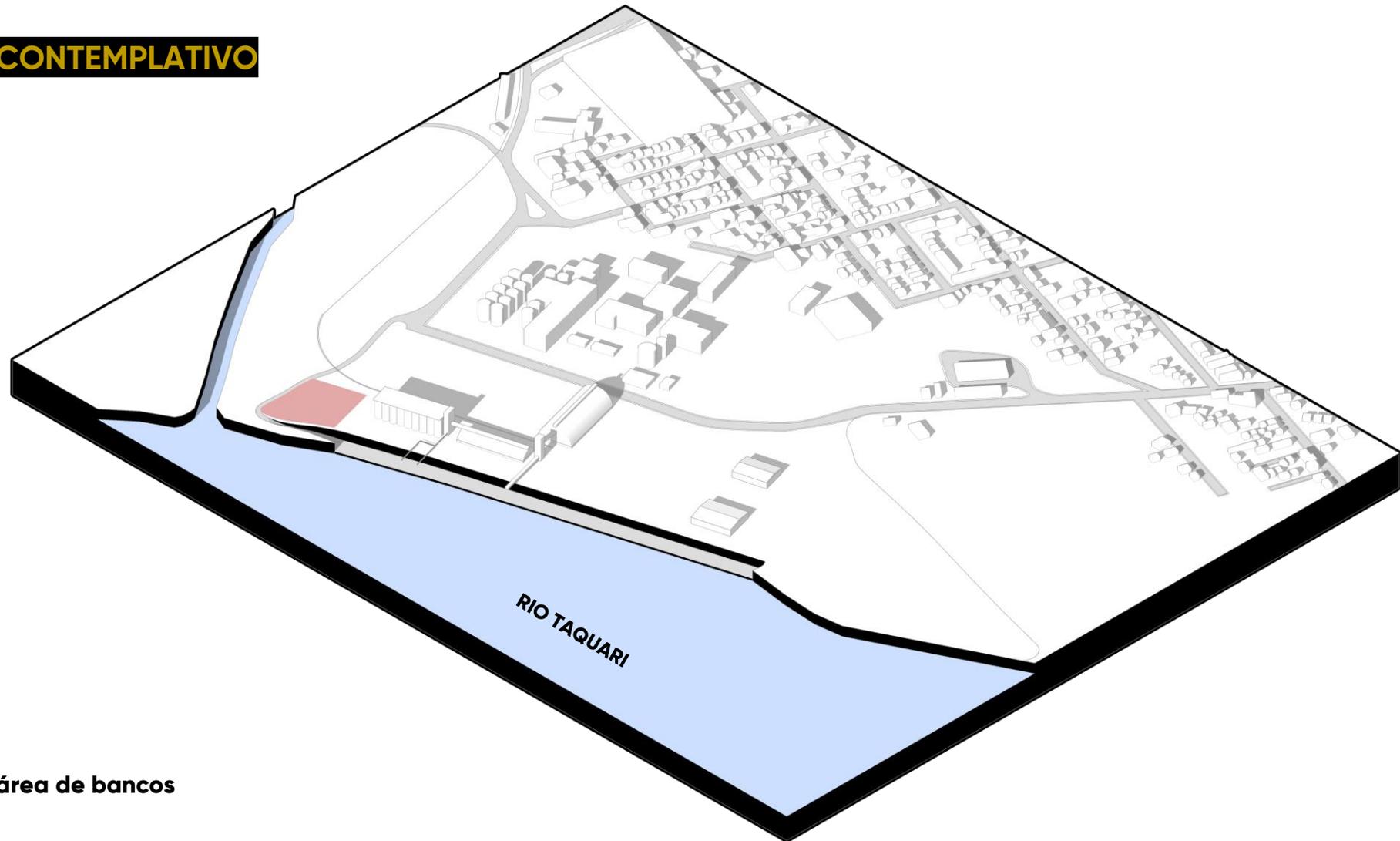
# DEFINIÇÕES DE PROJETO

## USOS



**ESTAR CONTEMPLATIVO**

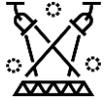
área= 5000m<sup>2</sup>



Espelho d'água, área de bancos

# DEFINIÇÕES DE PROJETO

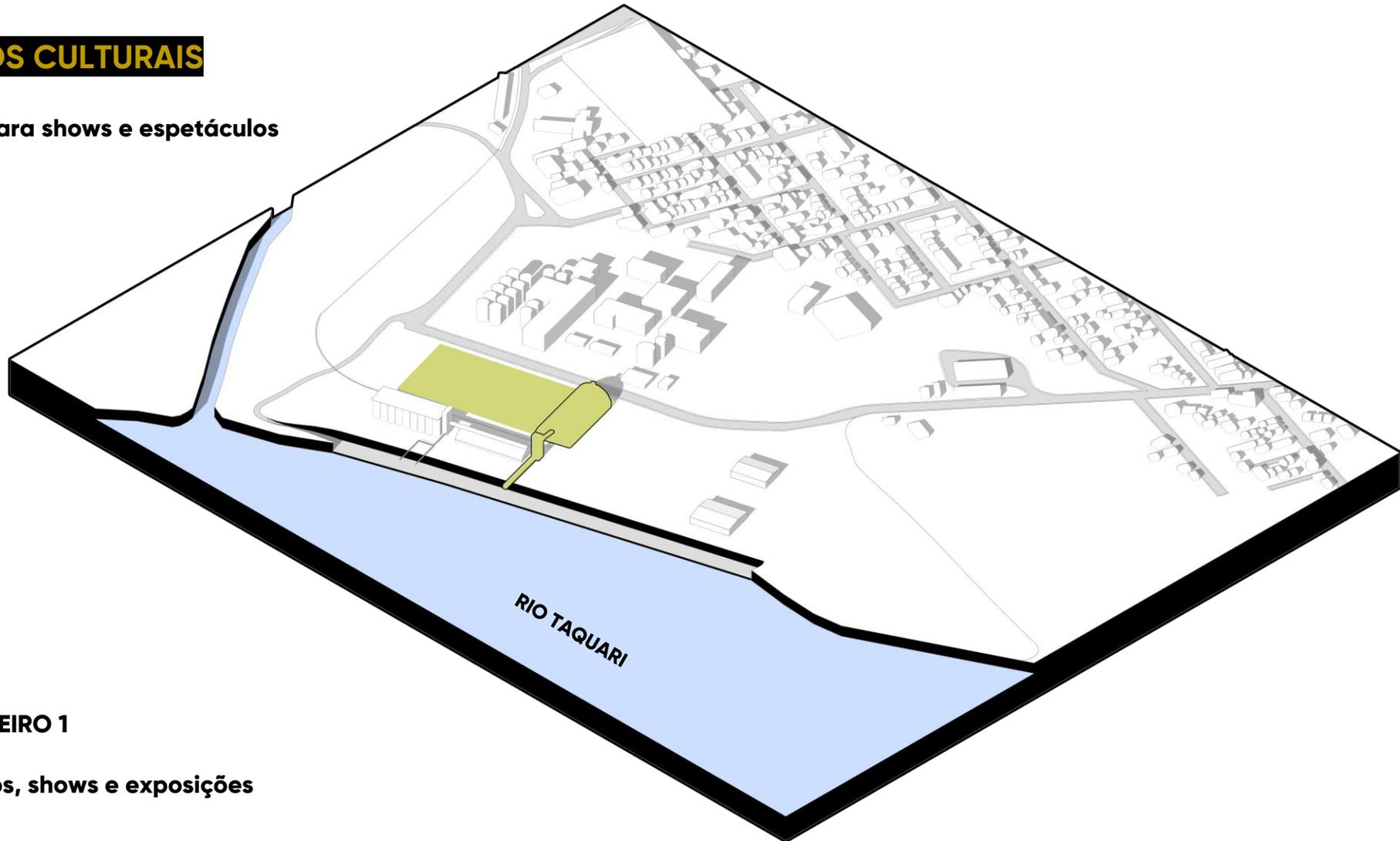
## USOS



### EVENTOS CULTURAIS

Espaço aberto para shows e espetáculos

área= 24700m<sup>2</sup>



### GALPÃO GRANELEIRO 1

Centro de eventos, shows e exposições

área= 5000m<sup>2</sup>

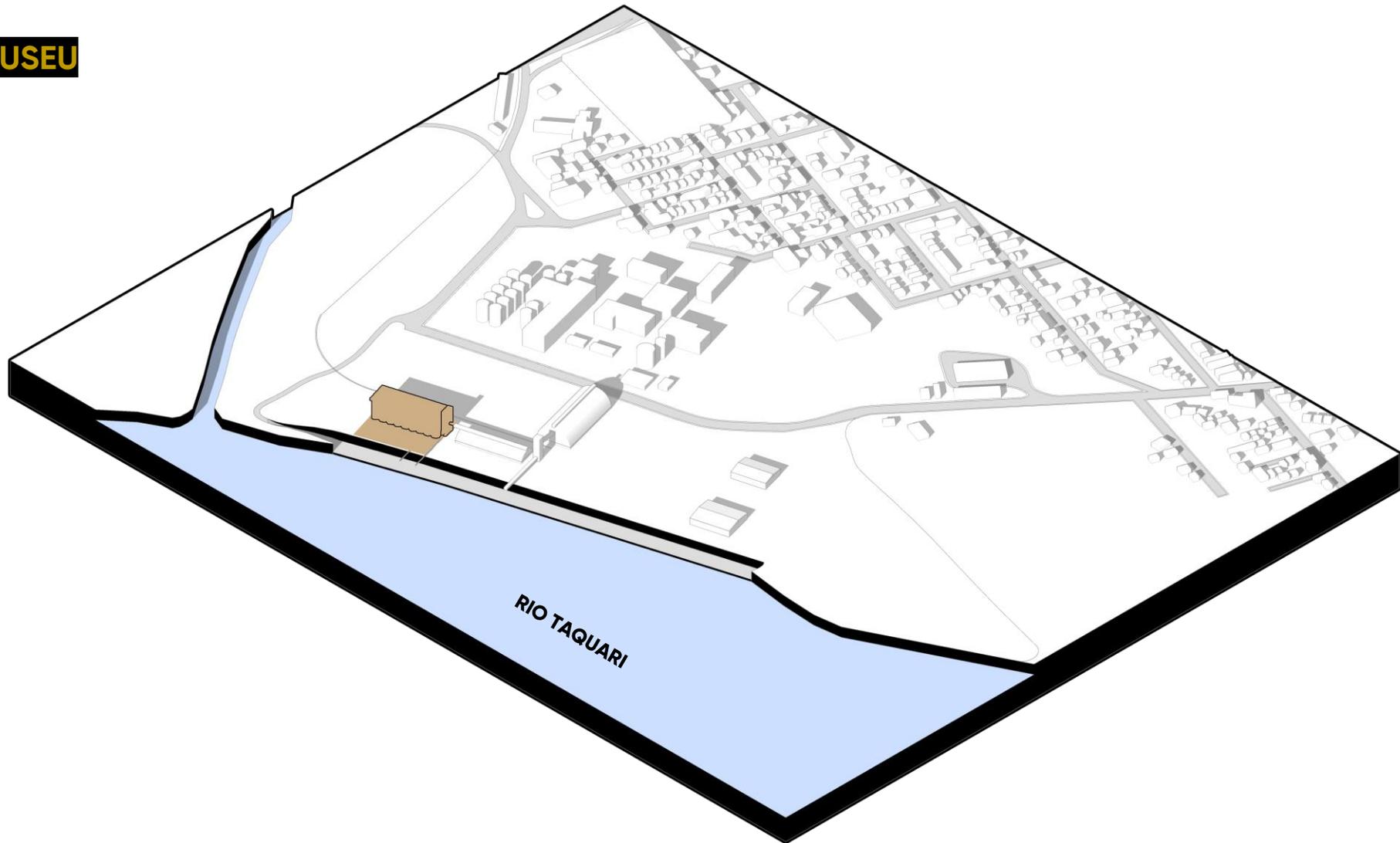
# DEFINIÇÕES DE PROJETO

## USOS



**MUSEU**

área= 6700m<sup>2</sup>



**SILOS**

Museu Regional

área= 2700m<sup>2</sup>

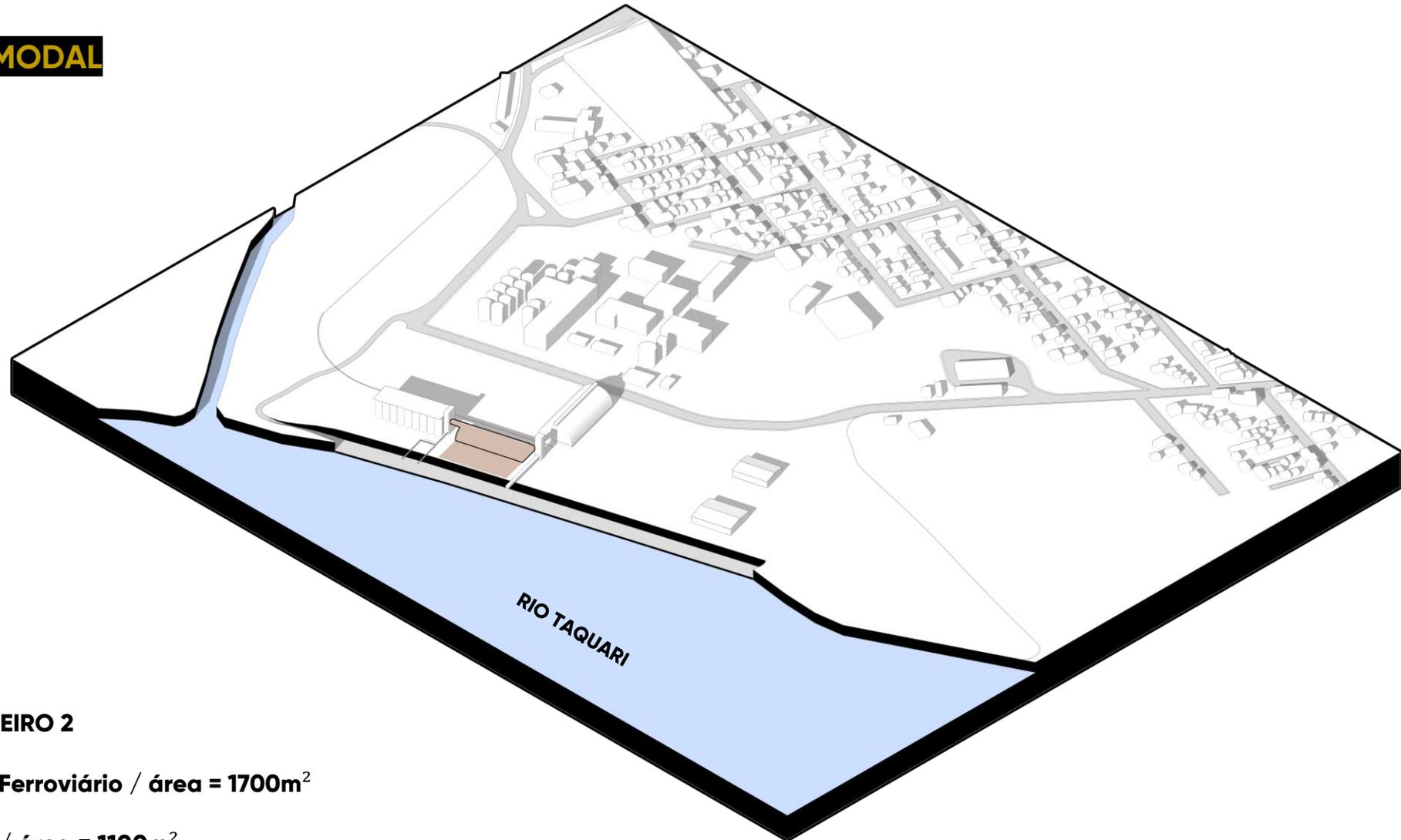
# DEFINIÇÕES DE PROJETO

## USOS



**MODAL**

área= 5400m<sup>2</sup>



**GALPÃO GRANELEIRO 2**

**Terminal Hidro e Ferroviário / área = 1700m<sup>2</sup>**

**Projeto Navegar / área = 1100m<sup>2</sup>**

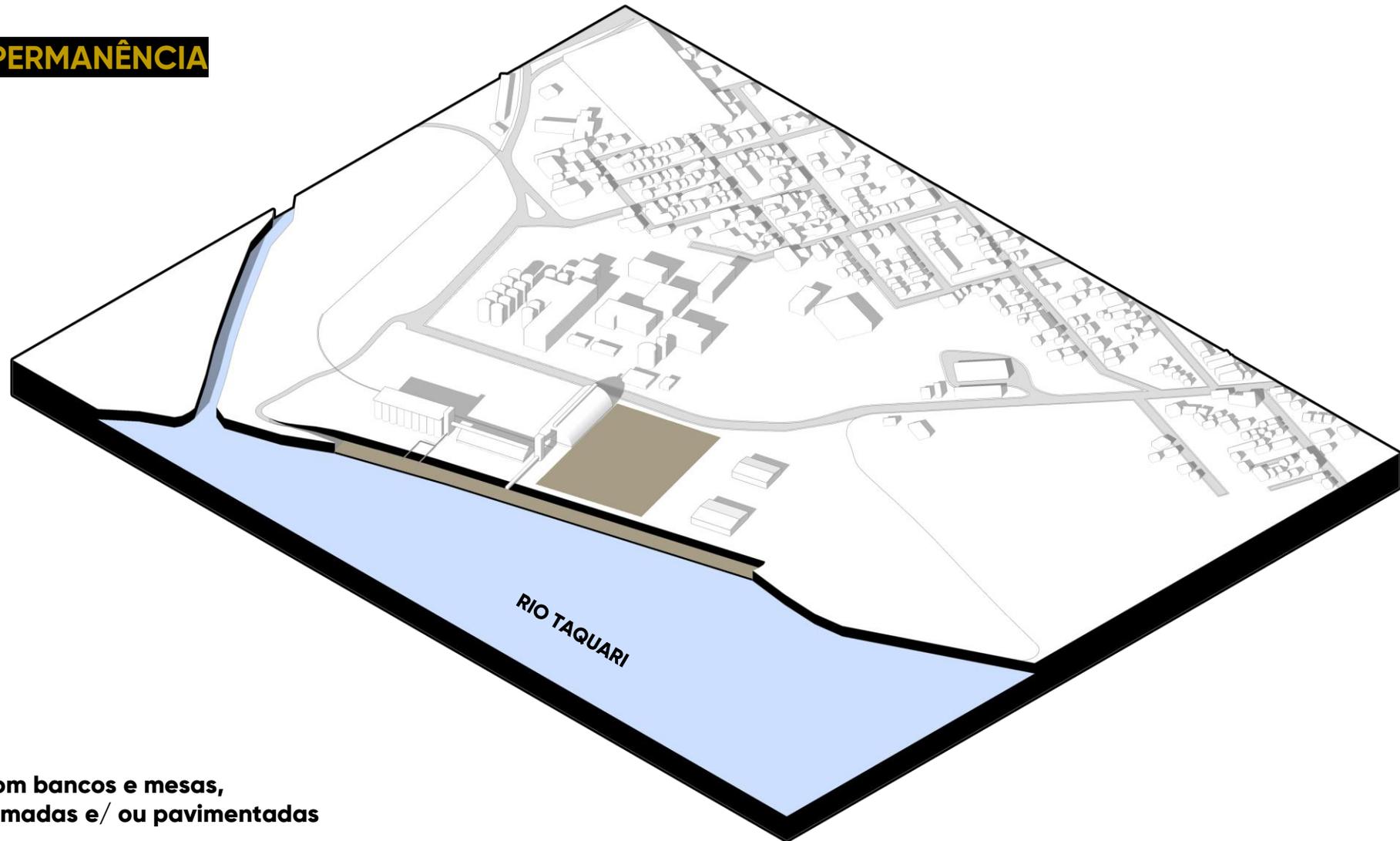
## DEFINIÇÕES DE PROJETO

### USOS



### ESTAR PERMANÊNCIA

área= 42000m<sup>2</sup>



Áreas de estar com bancos e mesas,  
sombreadas, gramadas e/ ou pavimentadas

## DEFINIÇÕES DE PROJETO

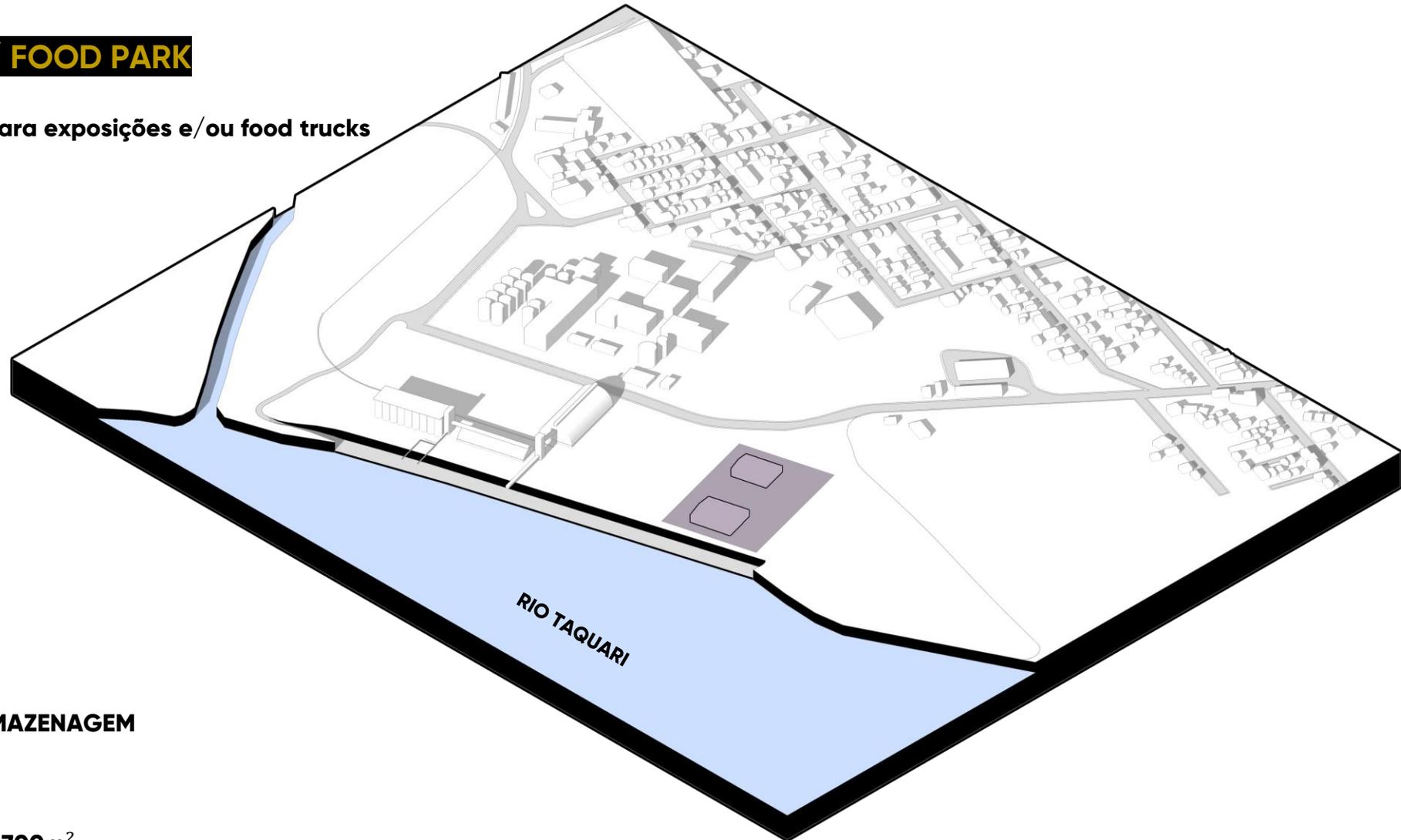
### USOS



#### FEIRA/ FOOD PARK

Espaço aberto para exposições e/ou food trucks

área= 24500m<sup>2</sup>



#### GALPÕES DE ARMAZENAGEM

Multifeira

área= 2300m<sup>2</sup> + 1700m<sup>2</sup>

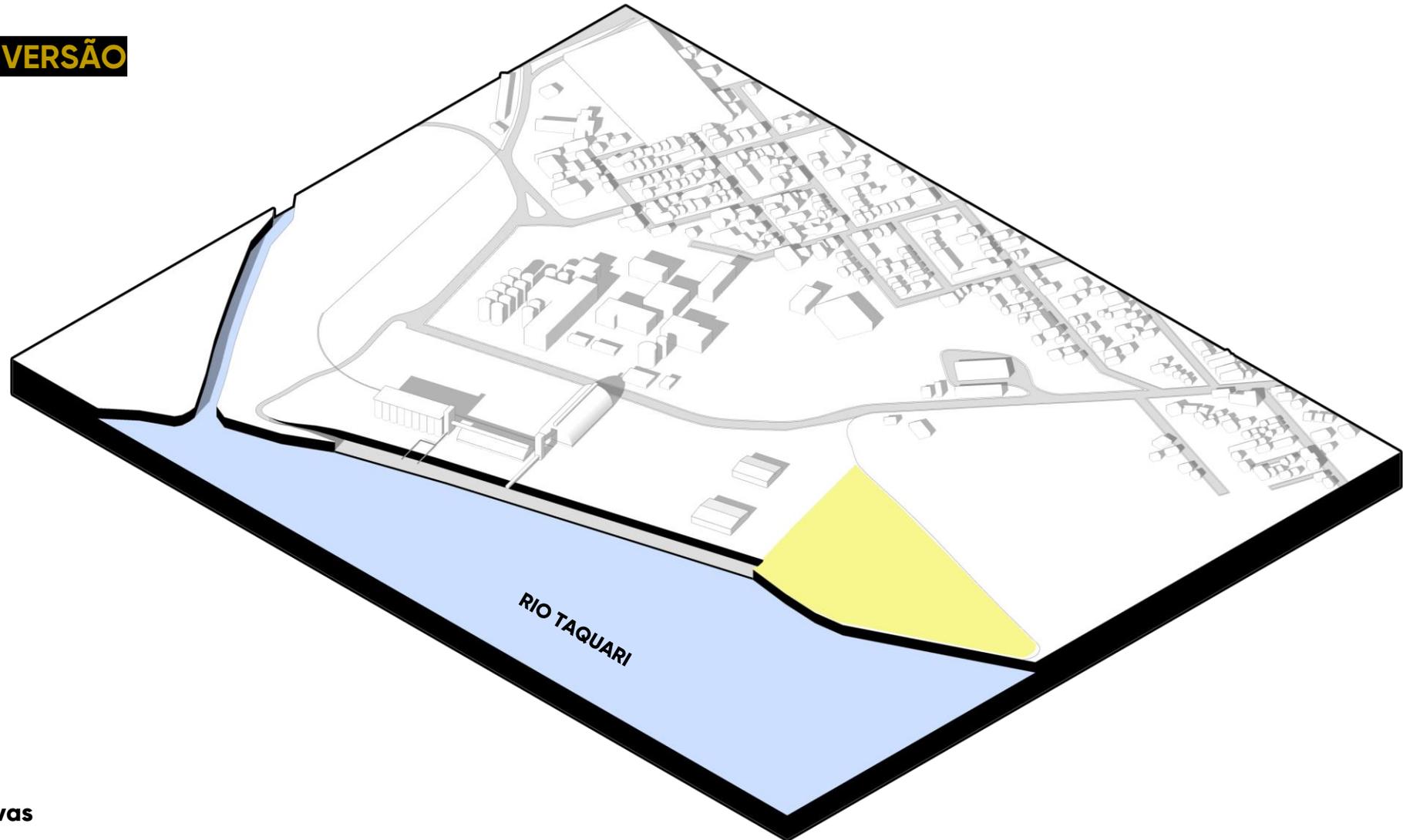
# DEFINIÇÕES DE PROJETO

## USOS



**DIVERSÃO**

área= 60000m<sup>2</sup>



**Playground**  
**Quadras esportivas**

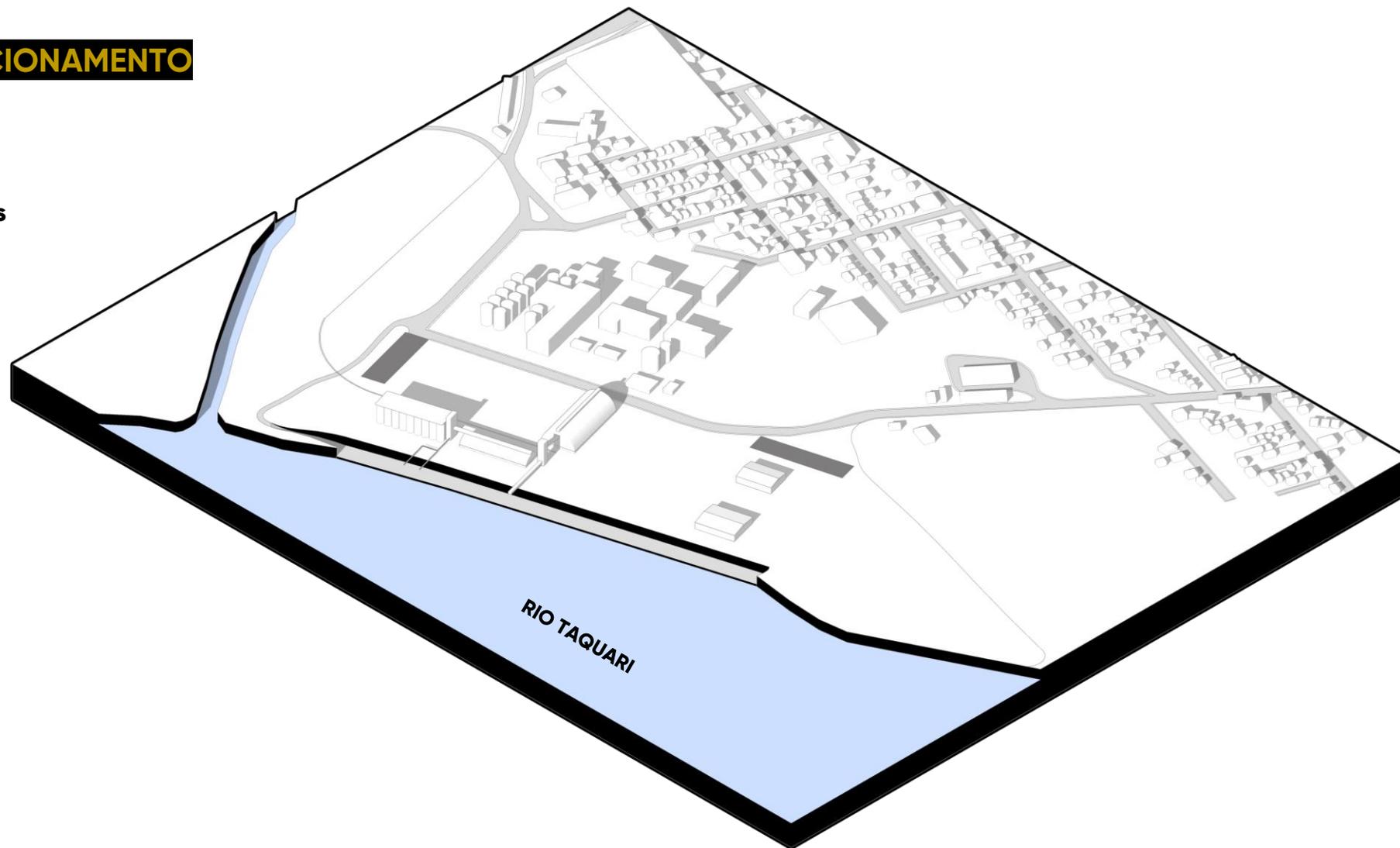
## DEFINIÇÕES DE PROJETO

### USOS



### ESTACIONAMENTO

área= 7000m<sup>2</sup>  
287 vagas carros  
160 bicicletas



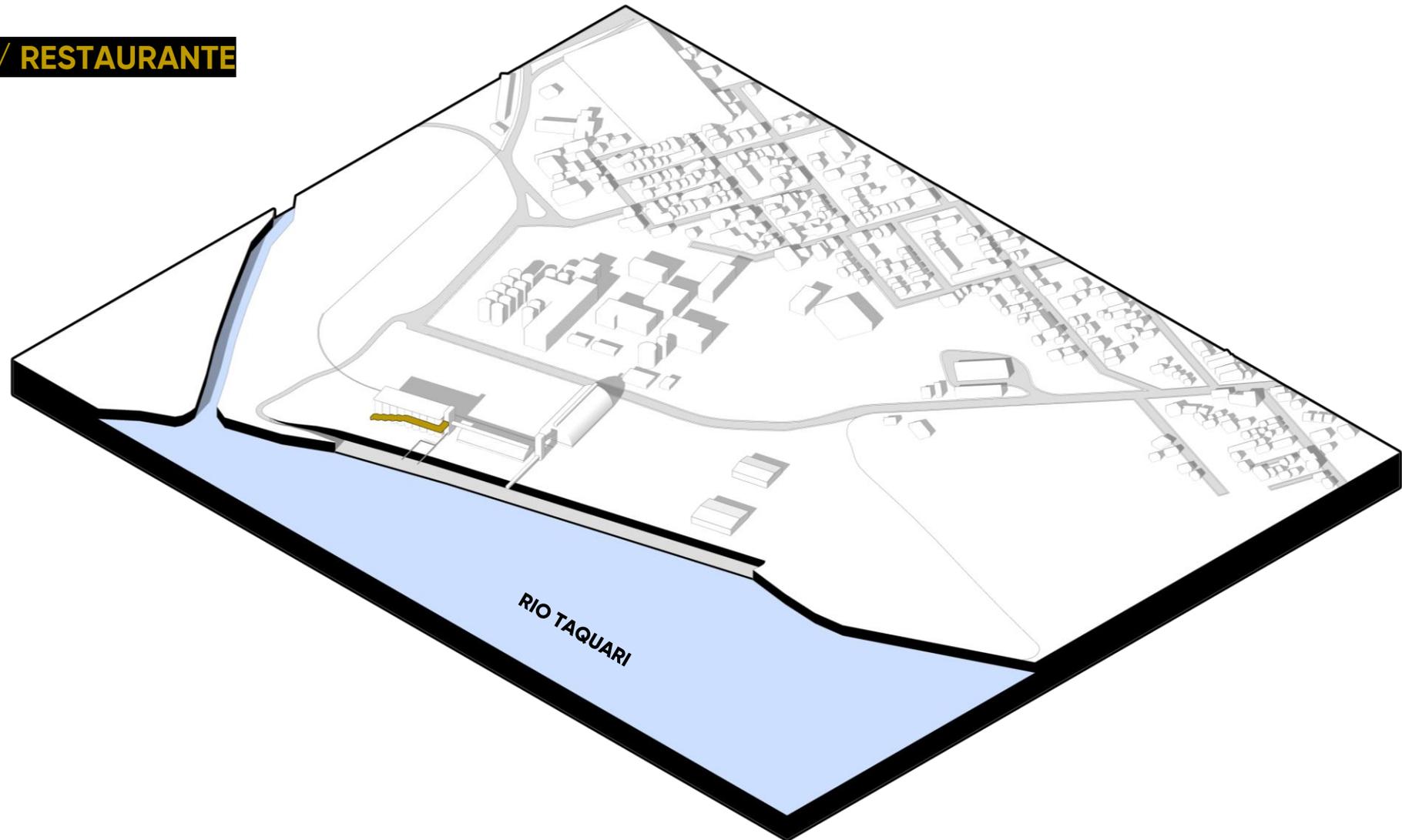
## PROPOSTA

## CONSTRUÇÕES



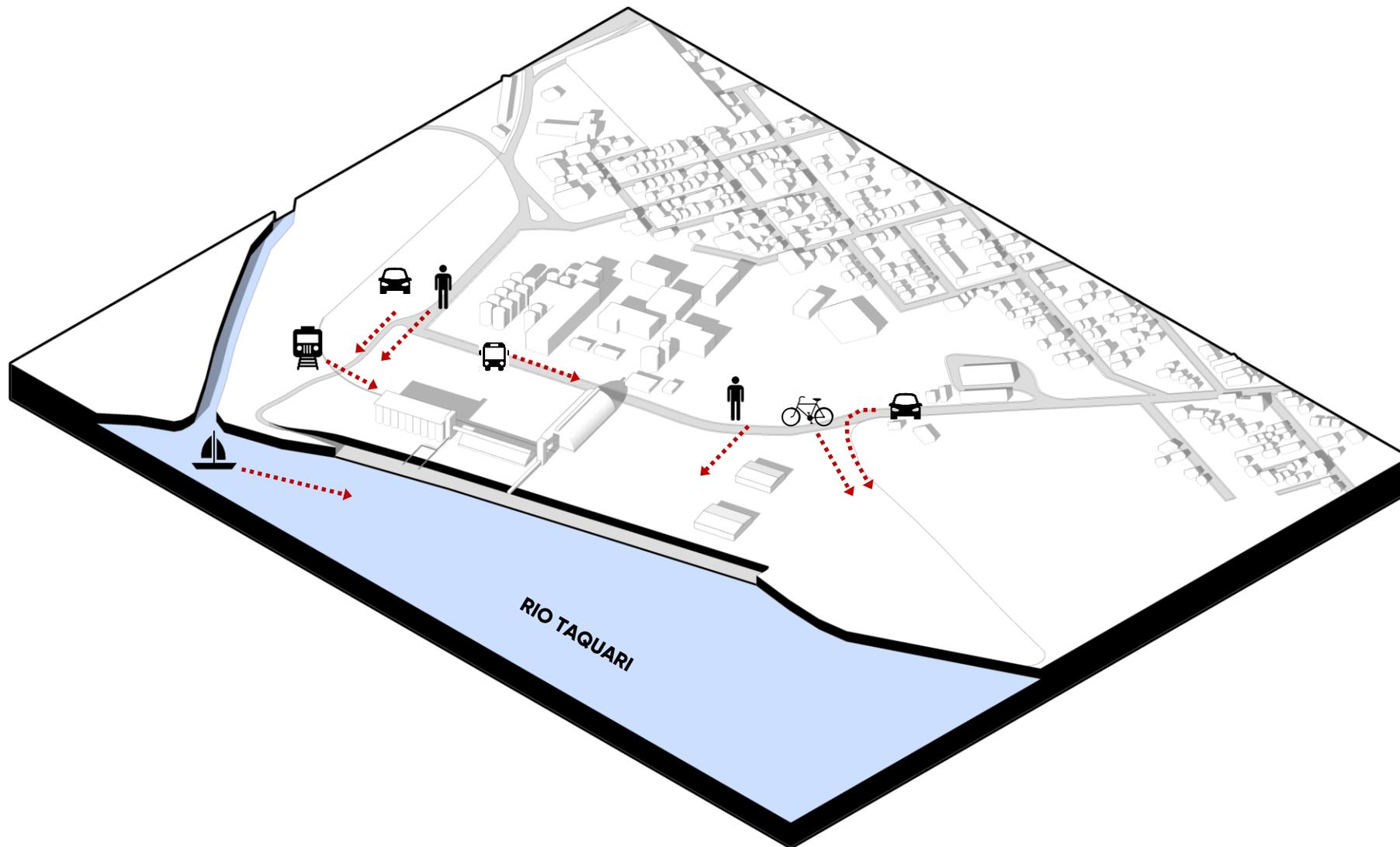
## MIRANTE / RESTAURANTE

área= 350m<sup>2</sup>



# DEFINIÇÕES DE PROJETO

## ACESSOS



***PROPOSTA***

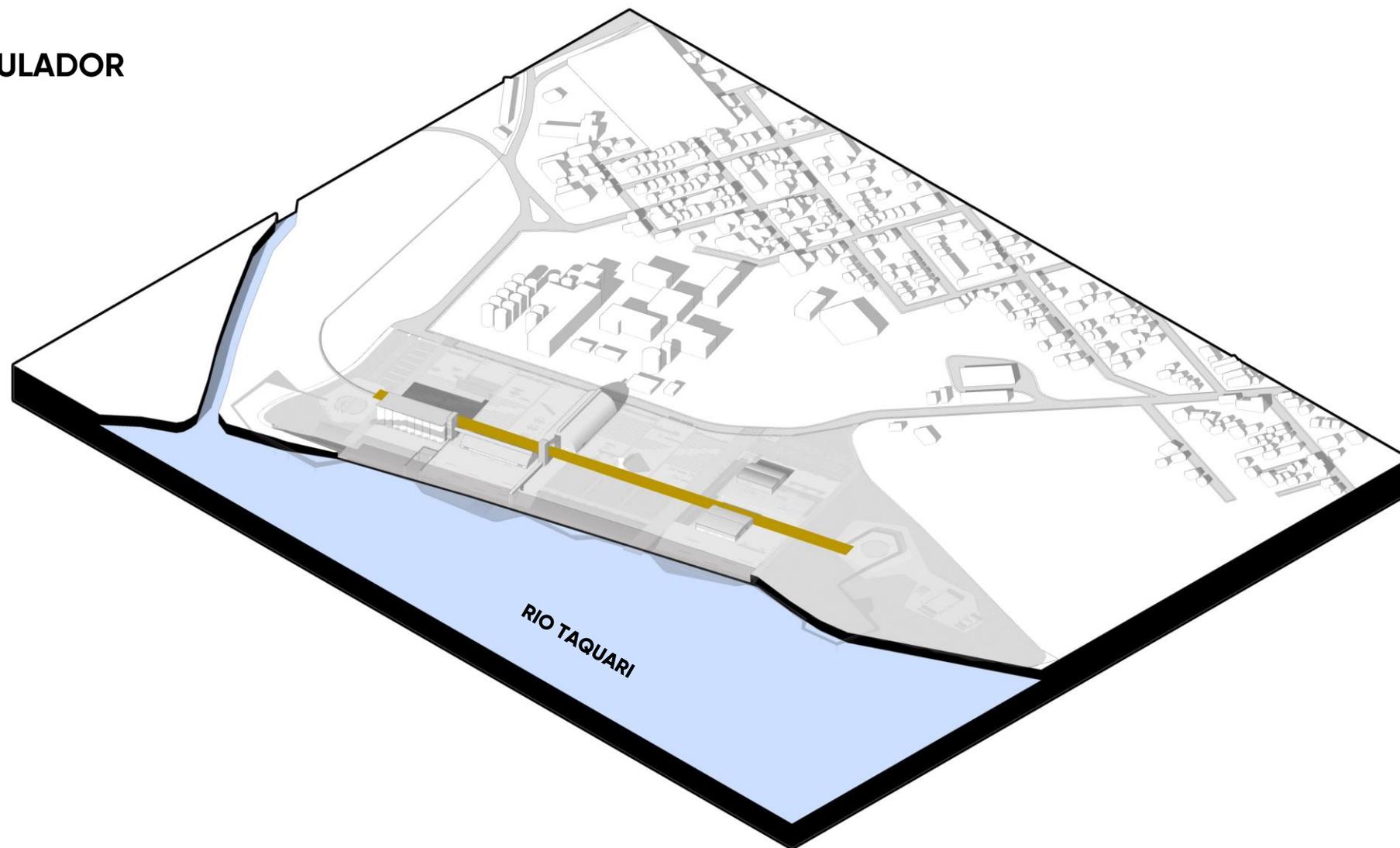
RIO TAQUARI



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

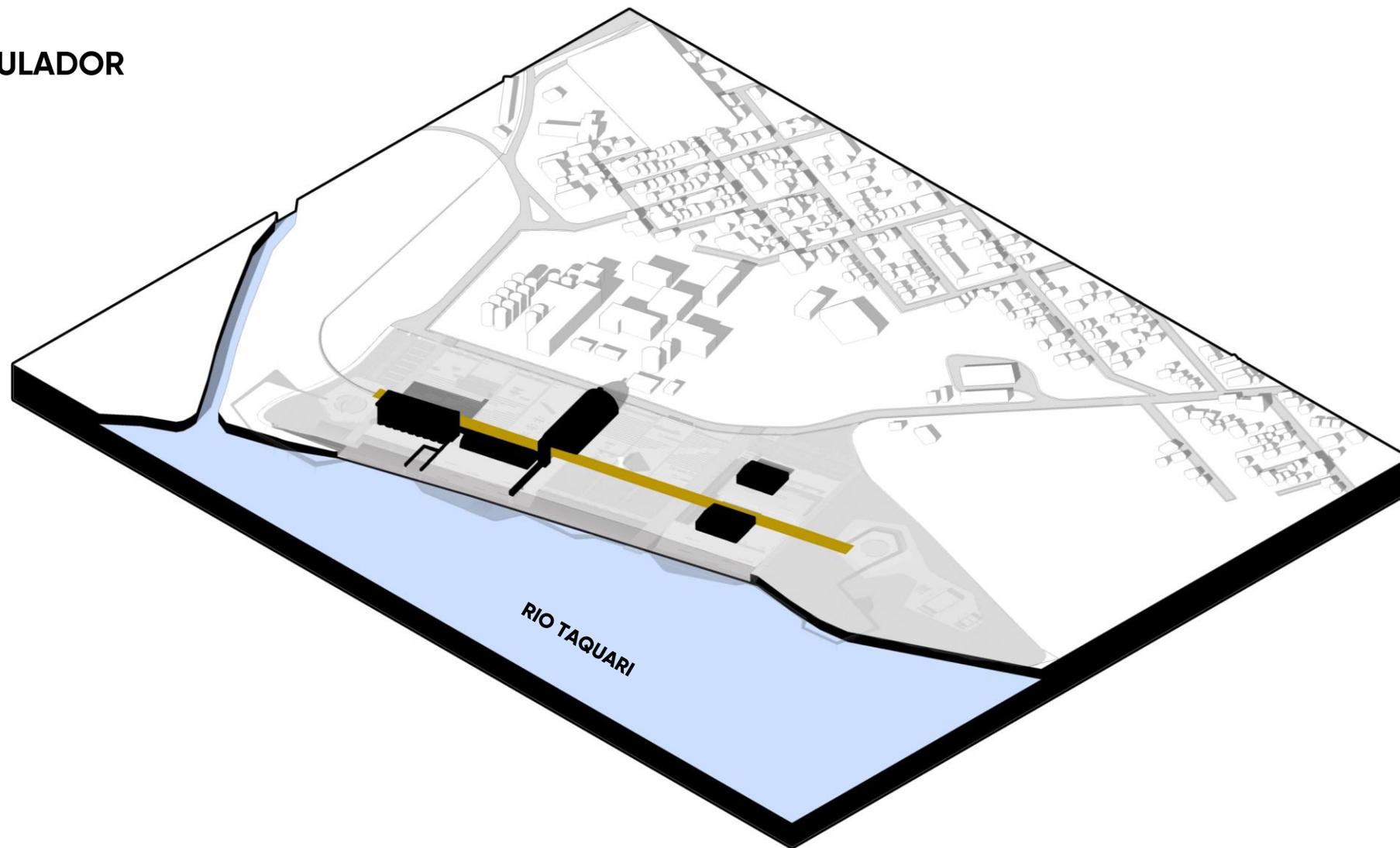
# 01 EIXO ARTICULADOR



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

# 01 EIXO ARTICULADOR

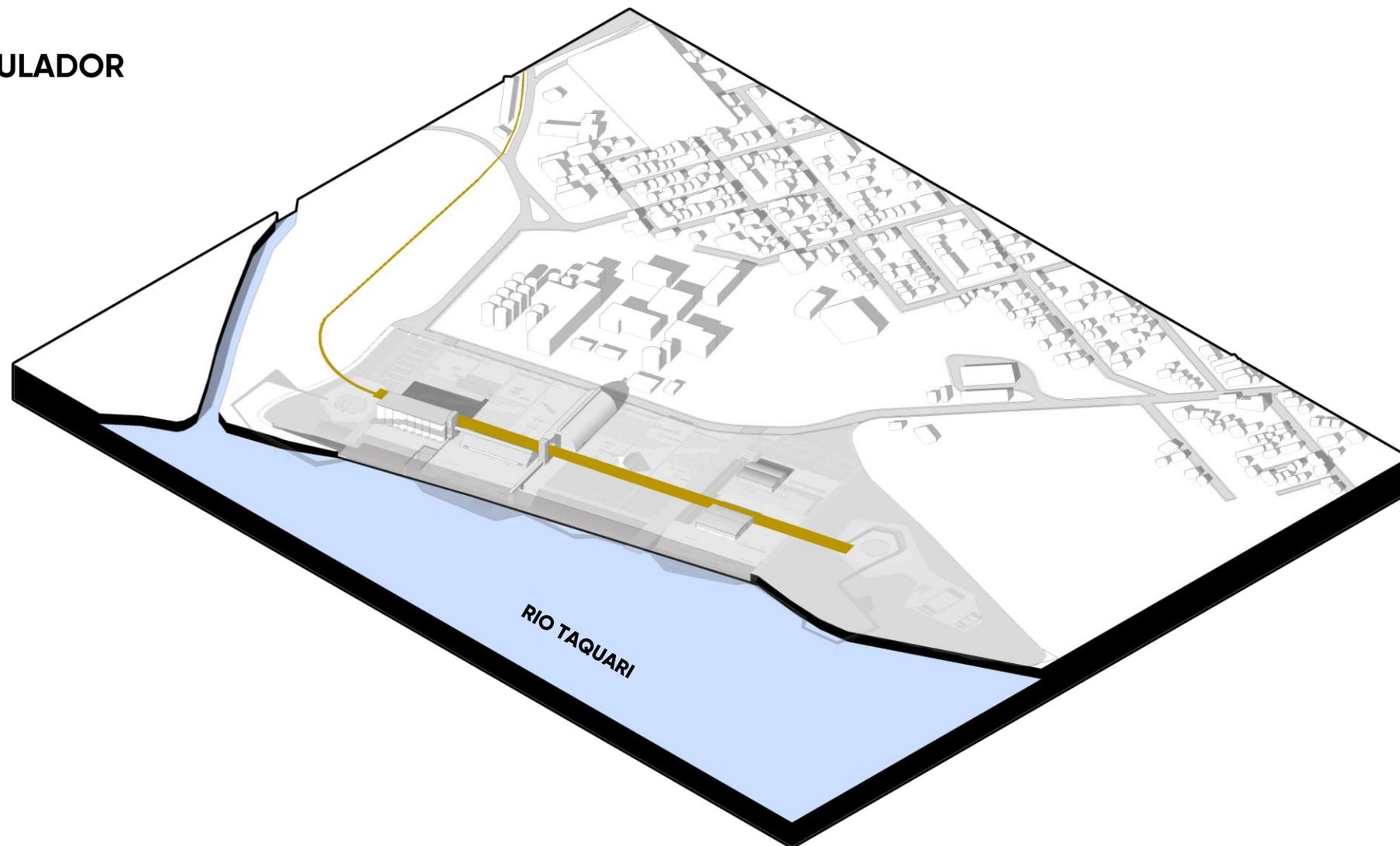




## PROPOSTA

### ESTRATÉGIAS DE DESENHO

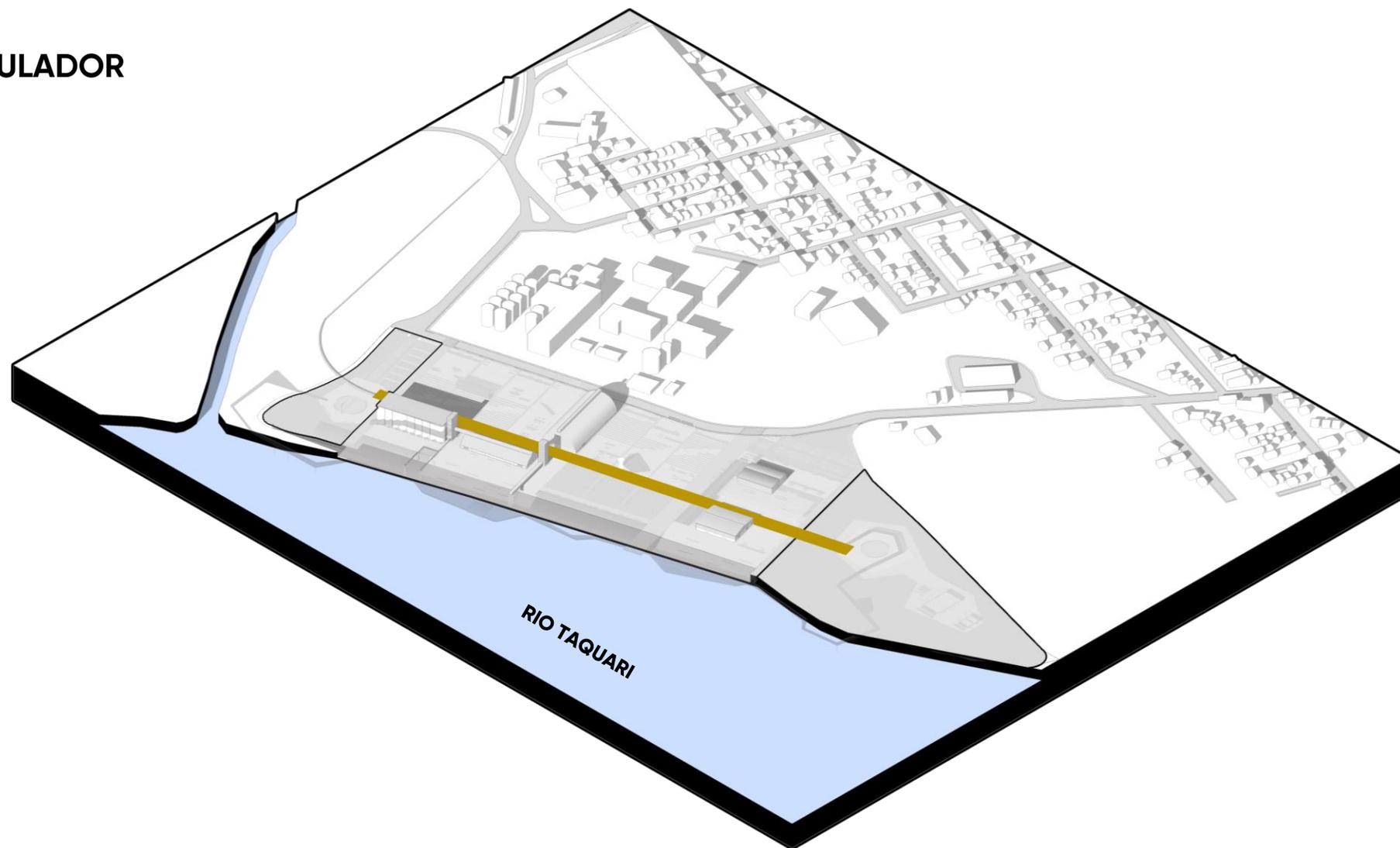
# 01 EIXO ARTICULADOR



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

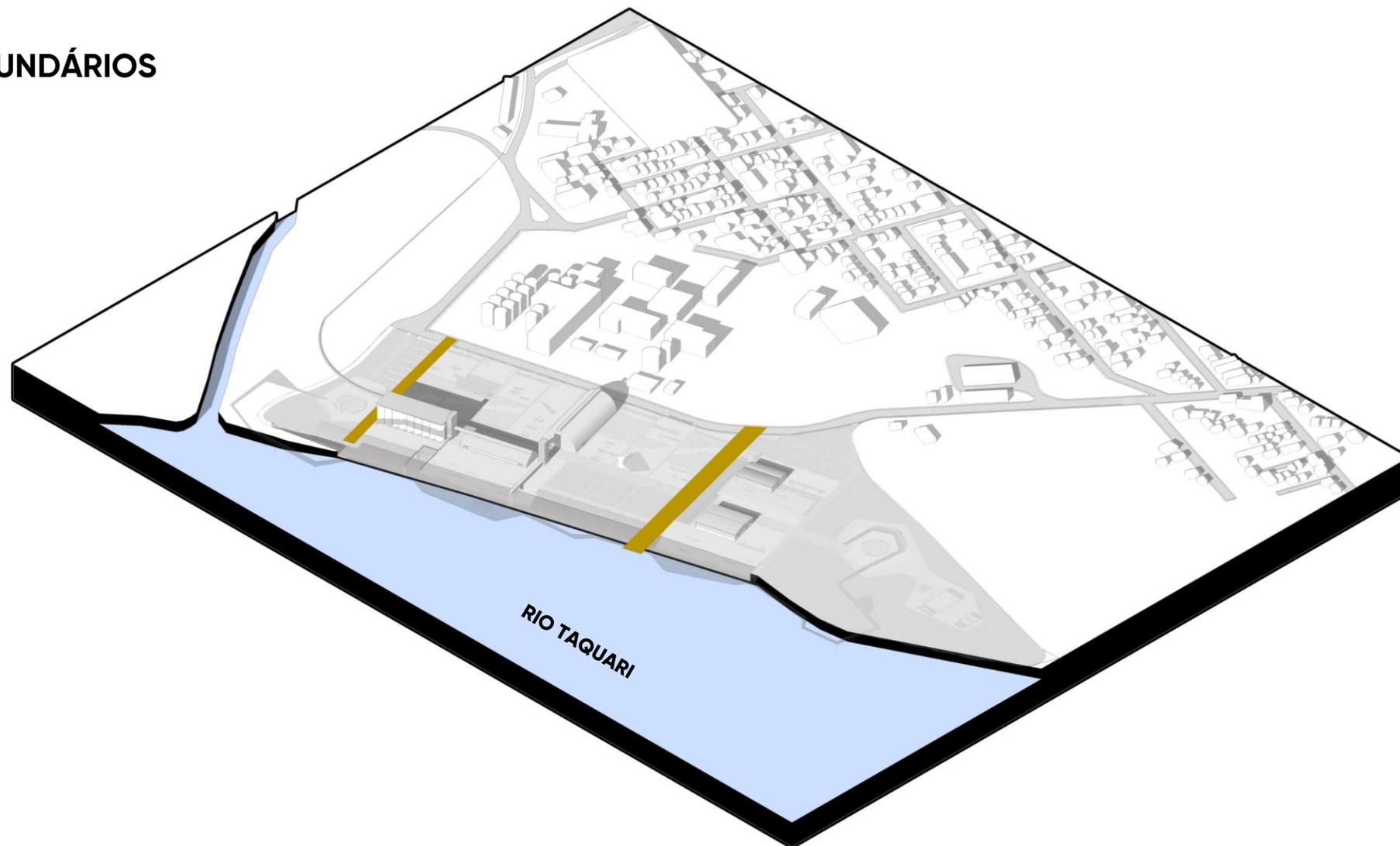
# 01 EIXO ARTICULADOR



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

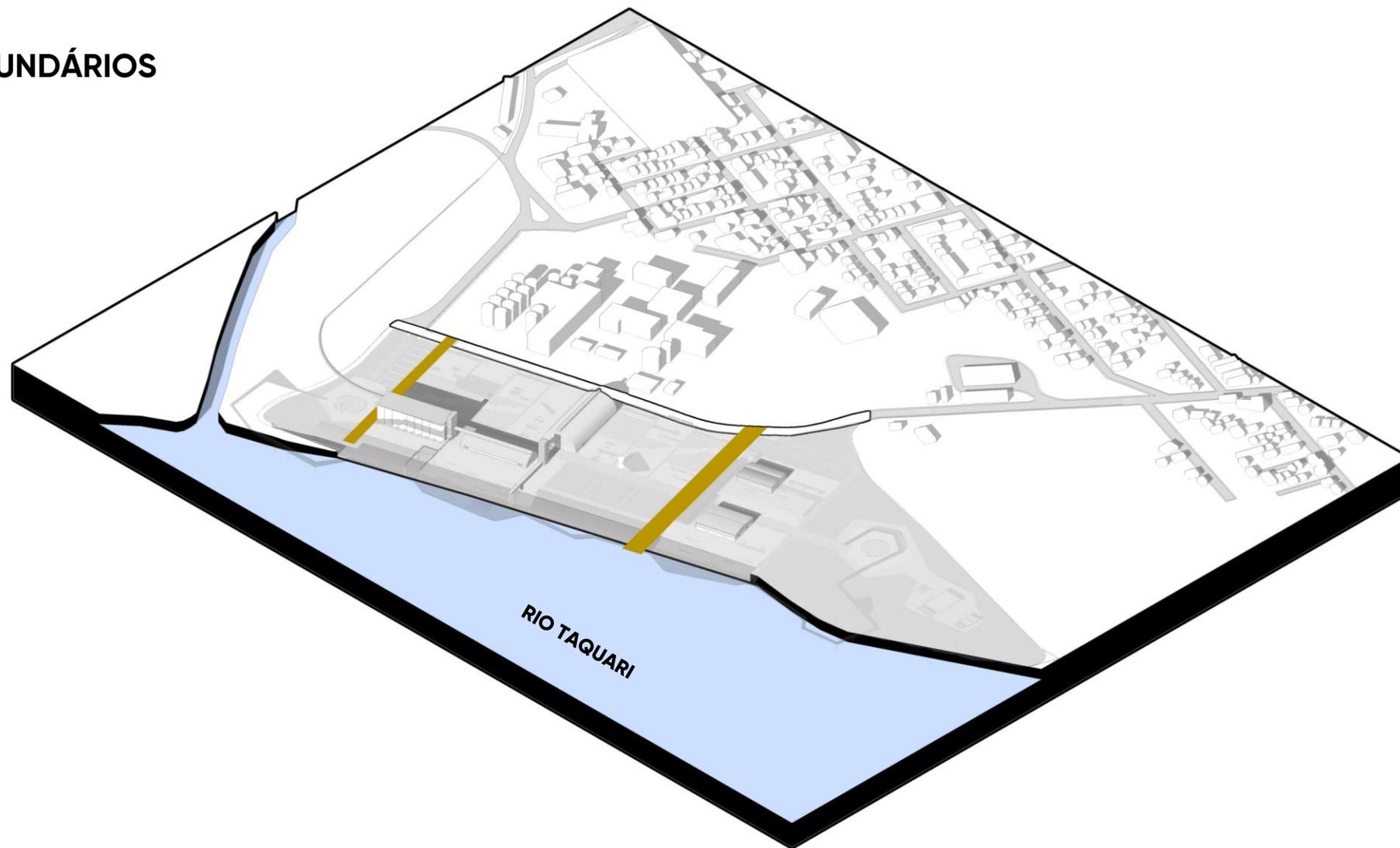
# 02 EIXOS SECUNDÁRIOS



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

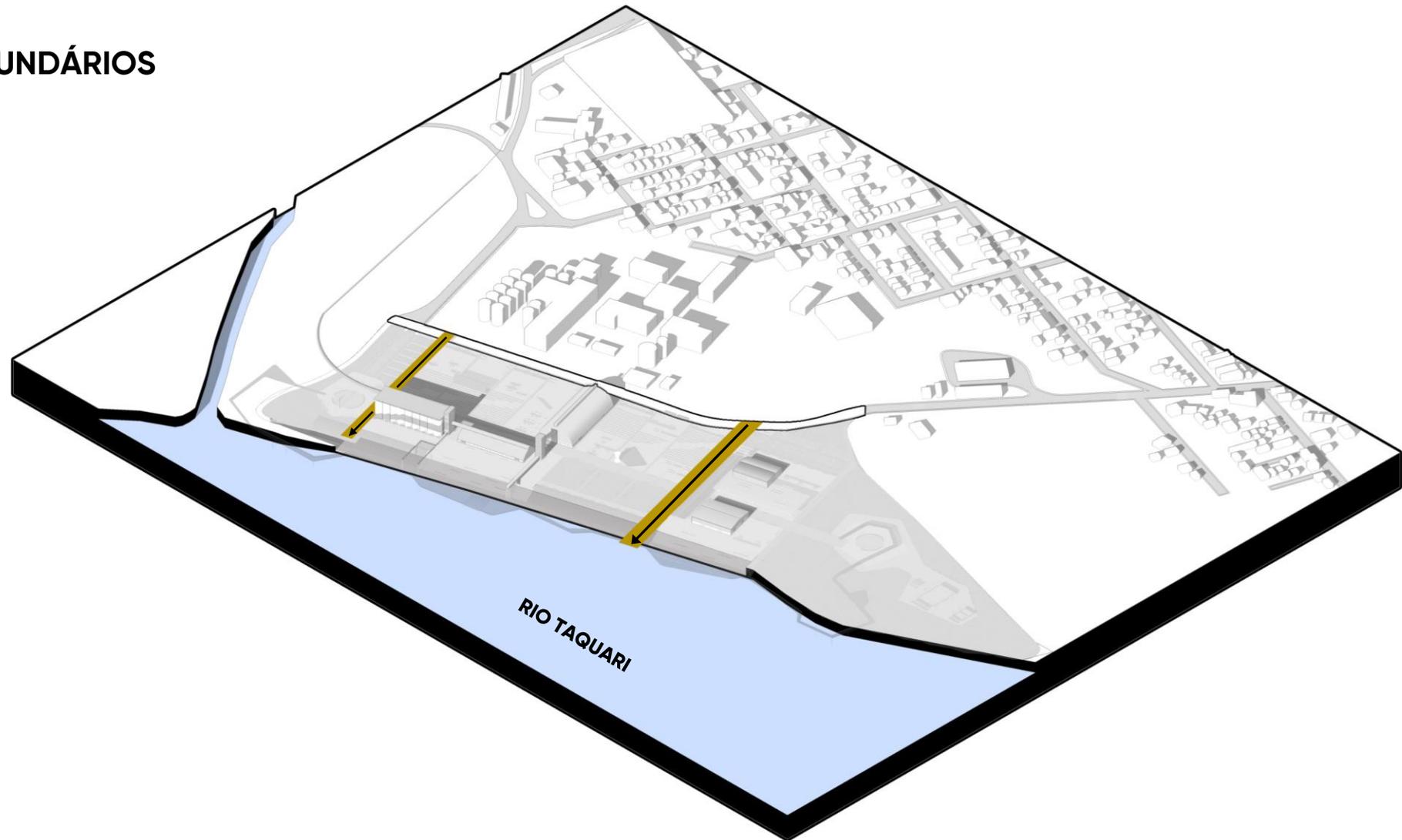
# 02 EIXOS SECUNDÁRIOS



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

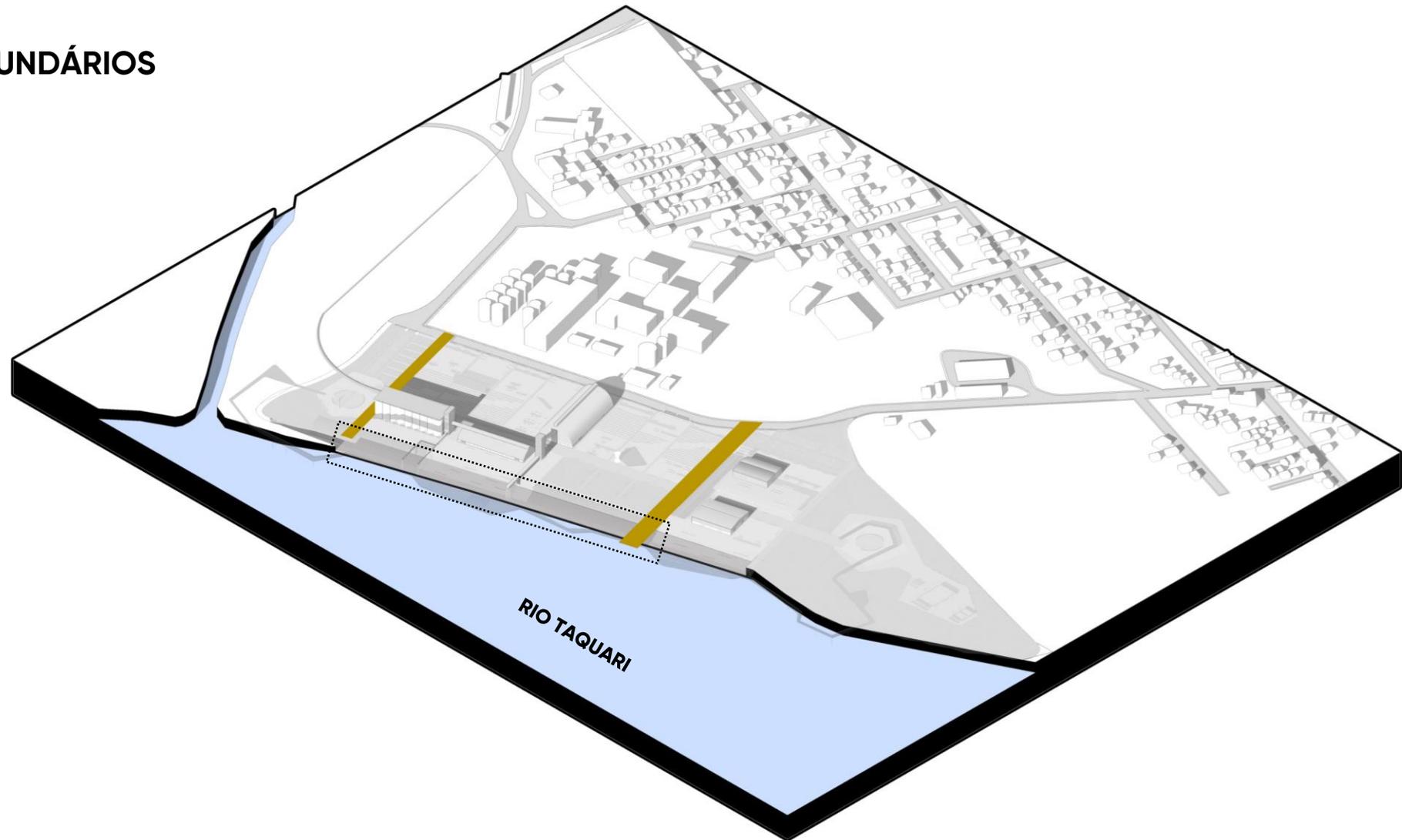
# 02 EIXOS SECUNDÁRIOS



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

# 02 EIXOS SECUNDÁRIOS

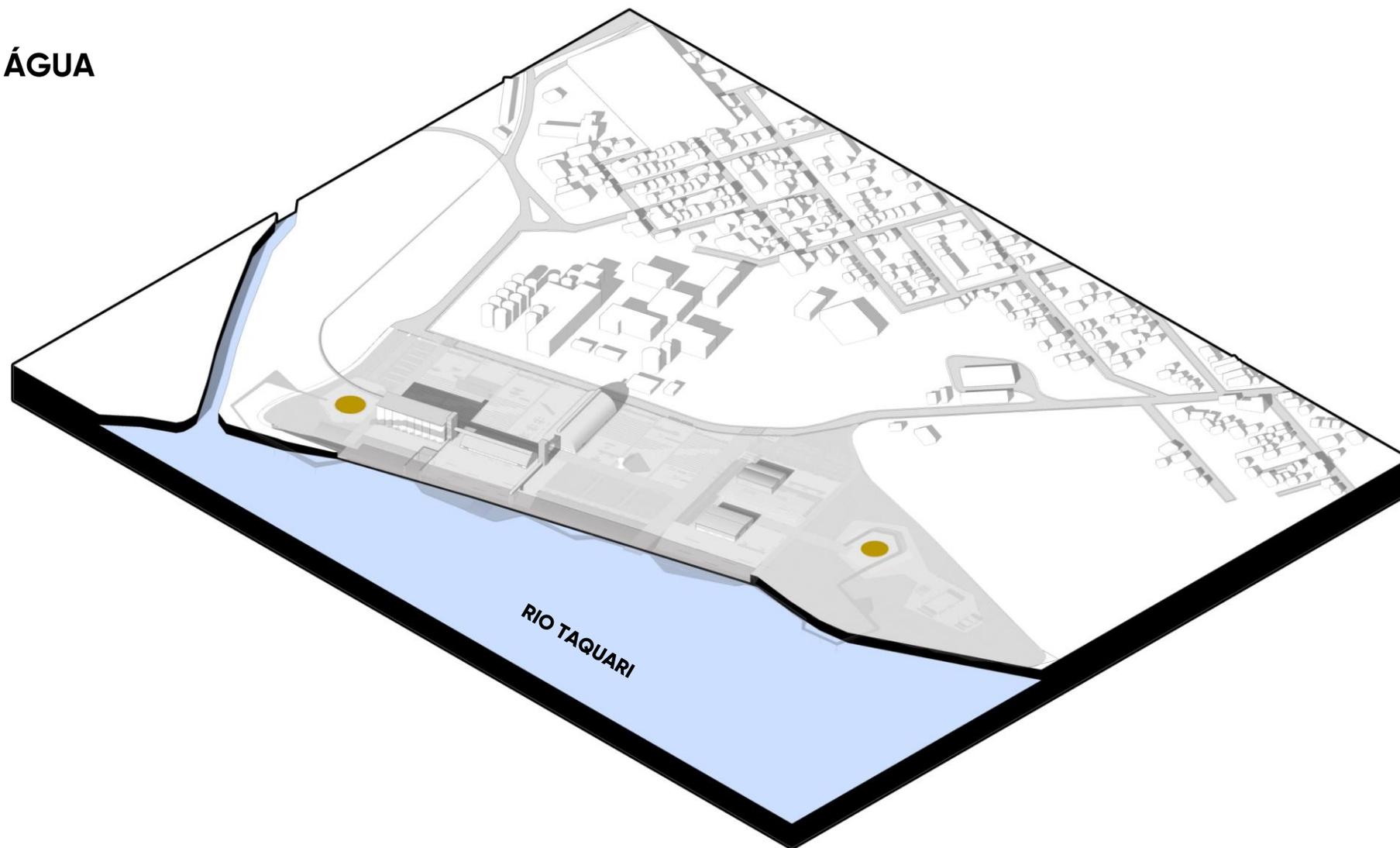




**PROPOSTA**

**ESTRATÉGIAS DE DESENHO**

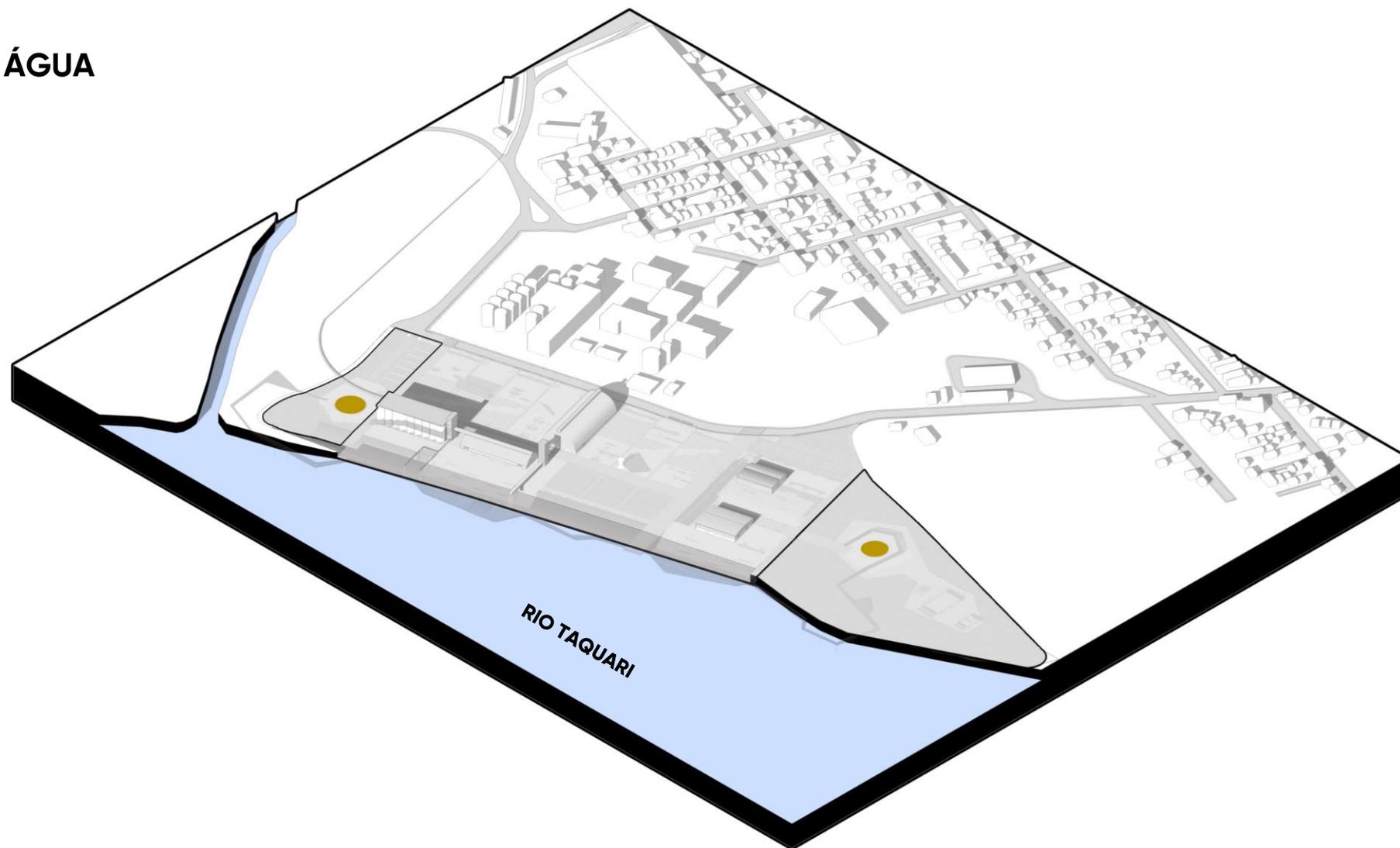
**03** ELEMENTO ÁGUA



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

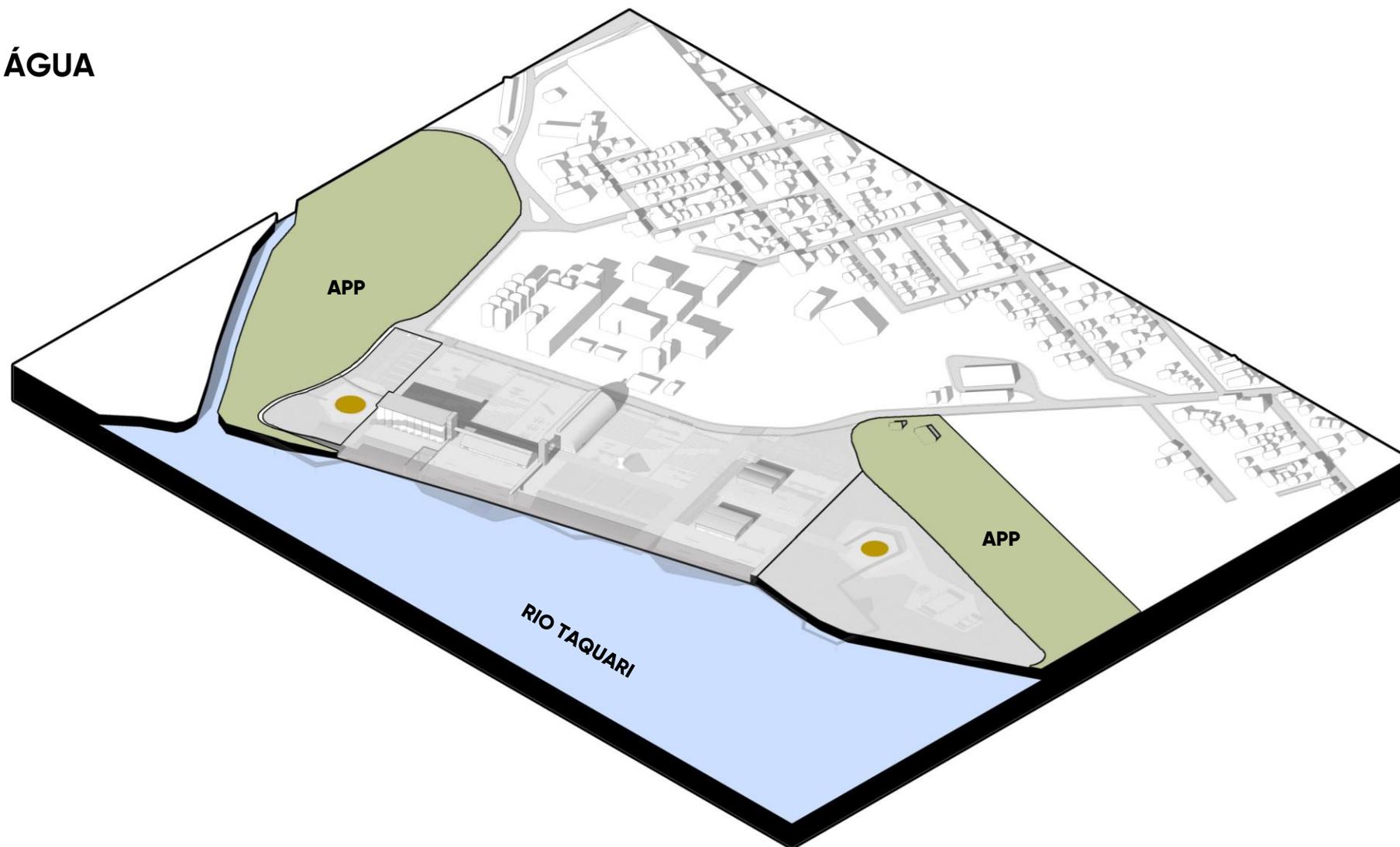
# 03 ELEMENTO ÁGUA



**PROPOSTA**

**ESTRATÉGIAS DE DESENHO**

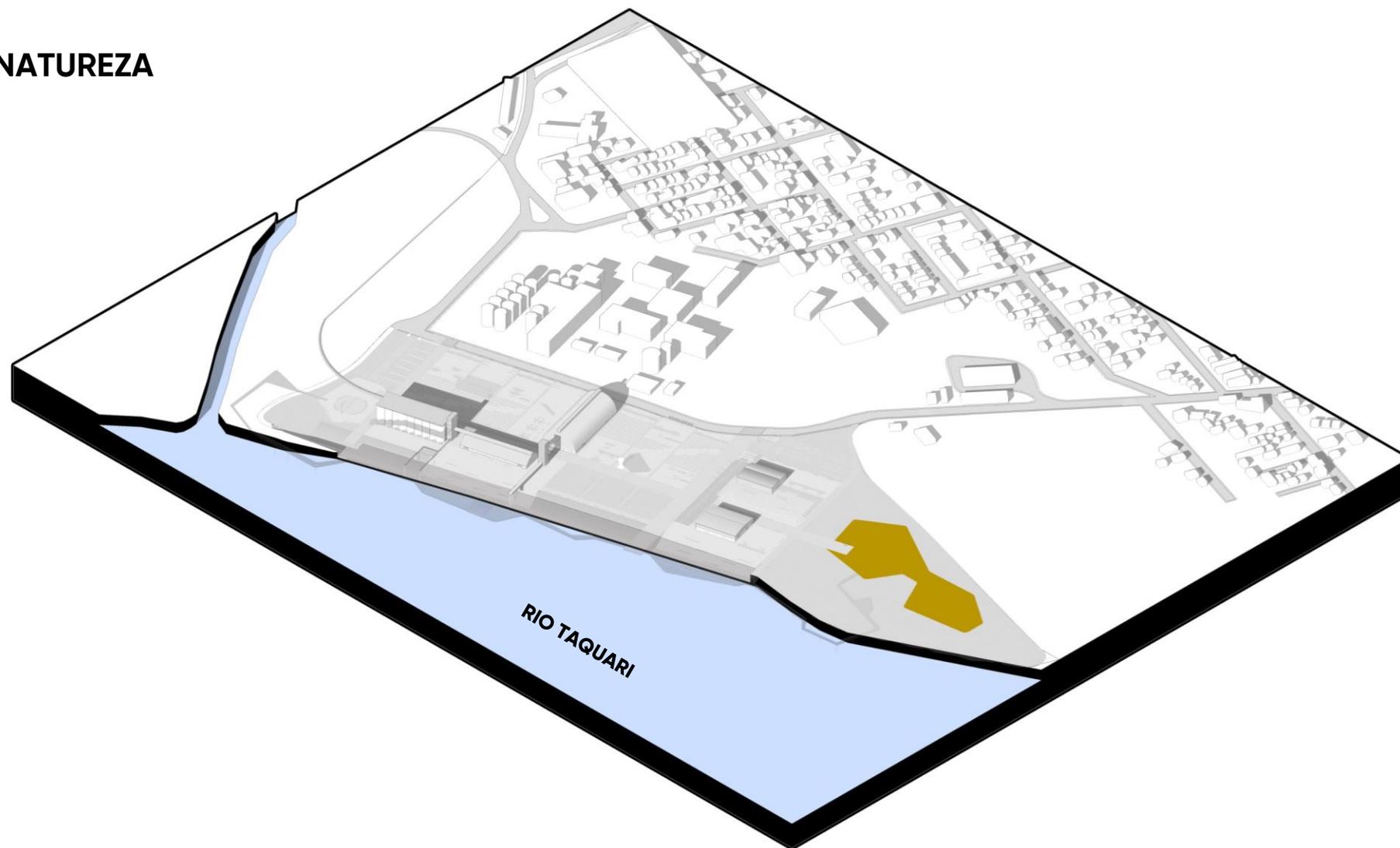
**03** ELEMENTO ÁGUA



**PROPOSTA**

**ESTRATÉGIAS DE DESENHO**

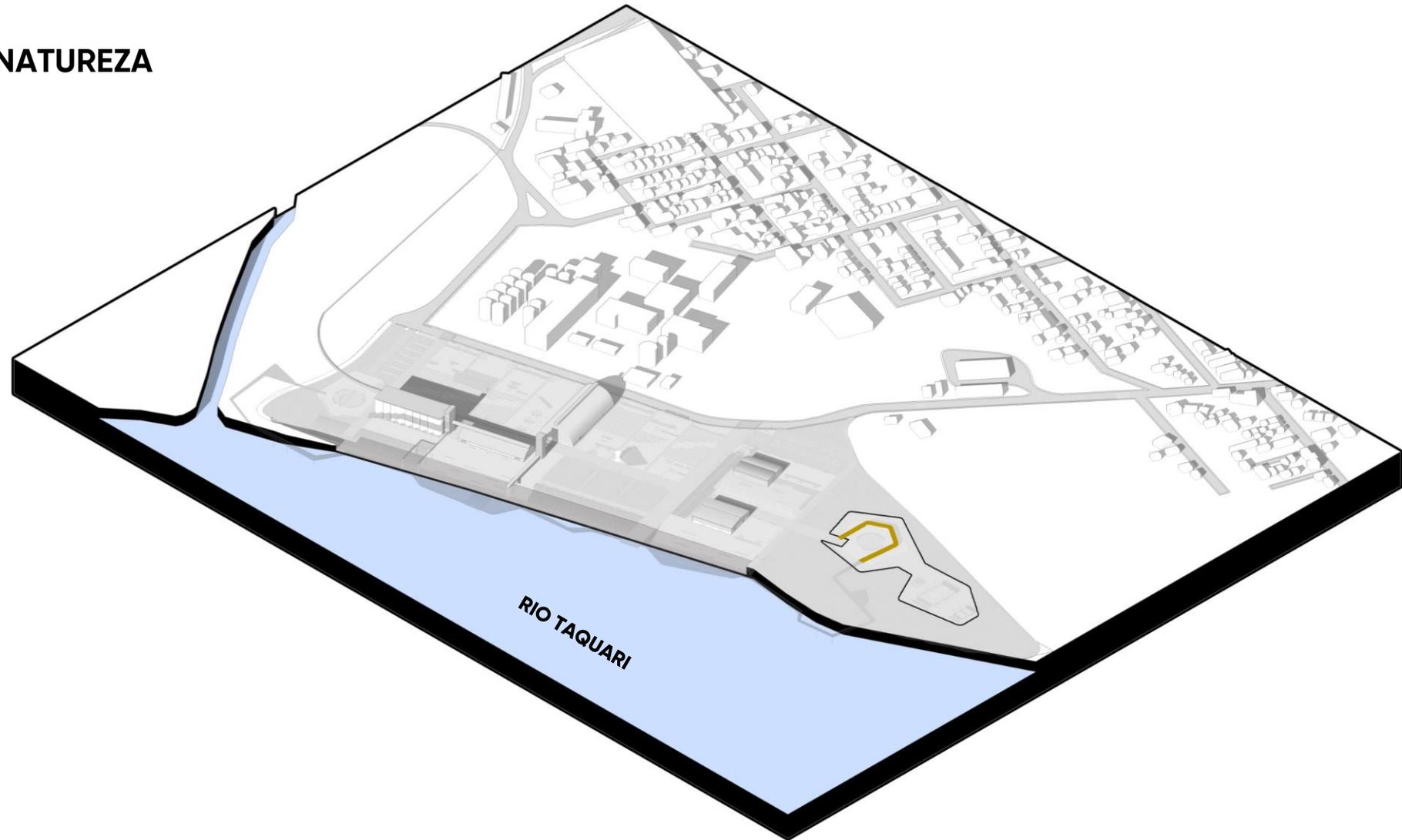
**04** RELAÇÃO NATUREZA



**PROPOSTA**

**ESTRATÉGIAS DE DESENHO**

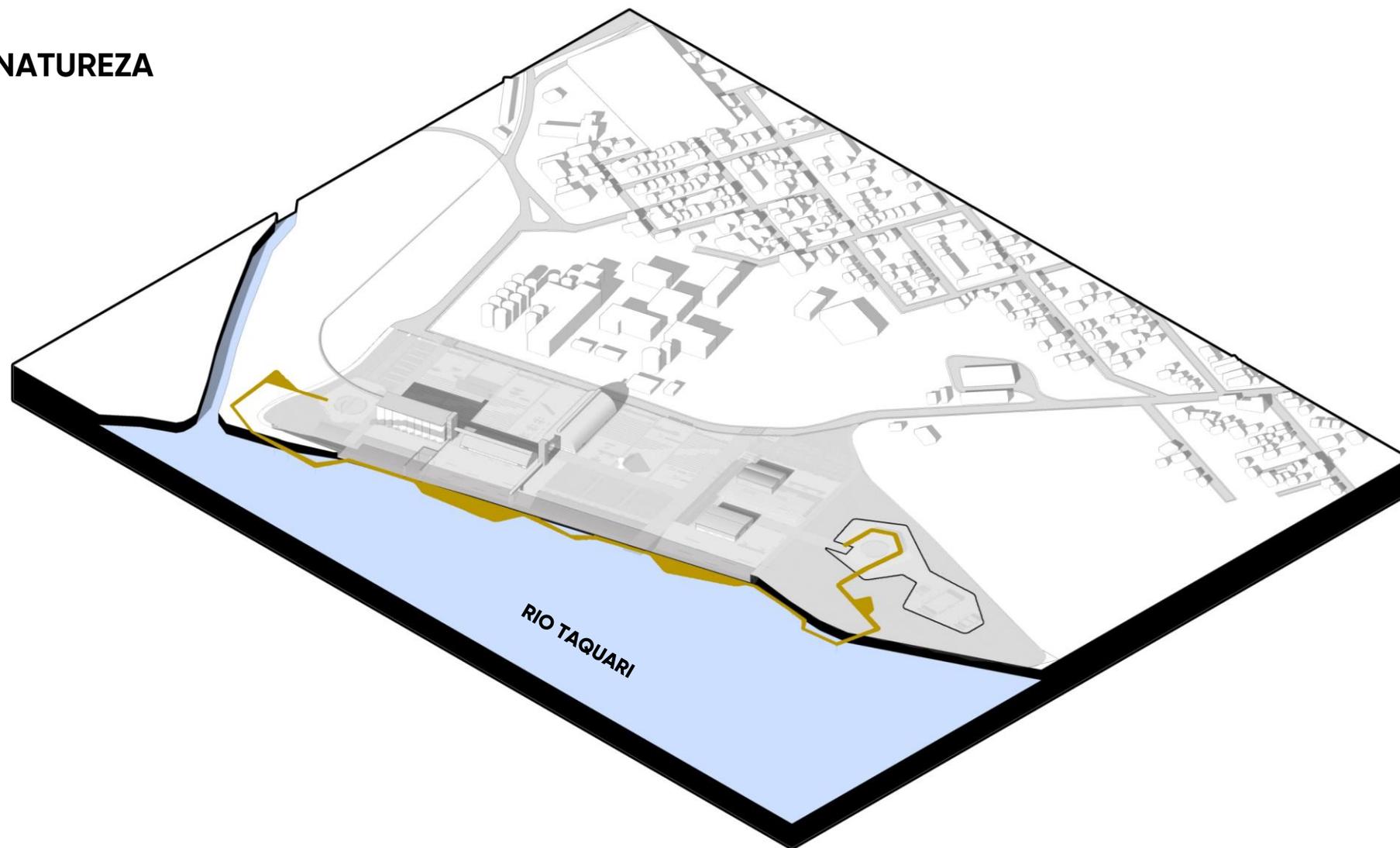
**04** RELAÇÃO NATUREZA



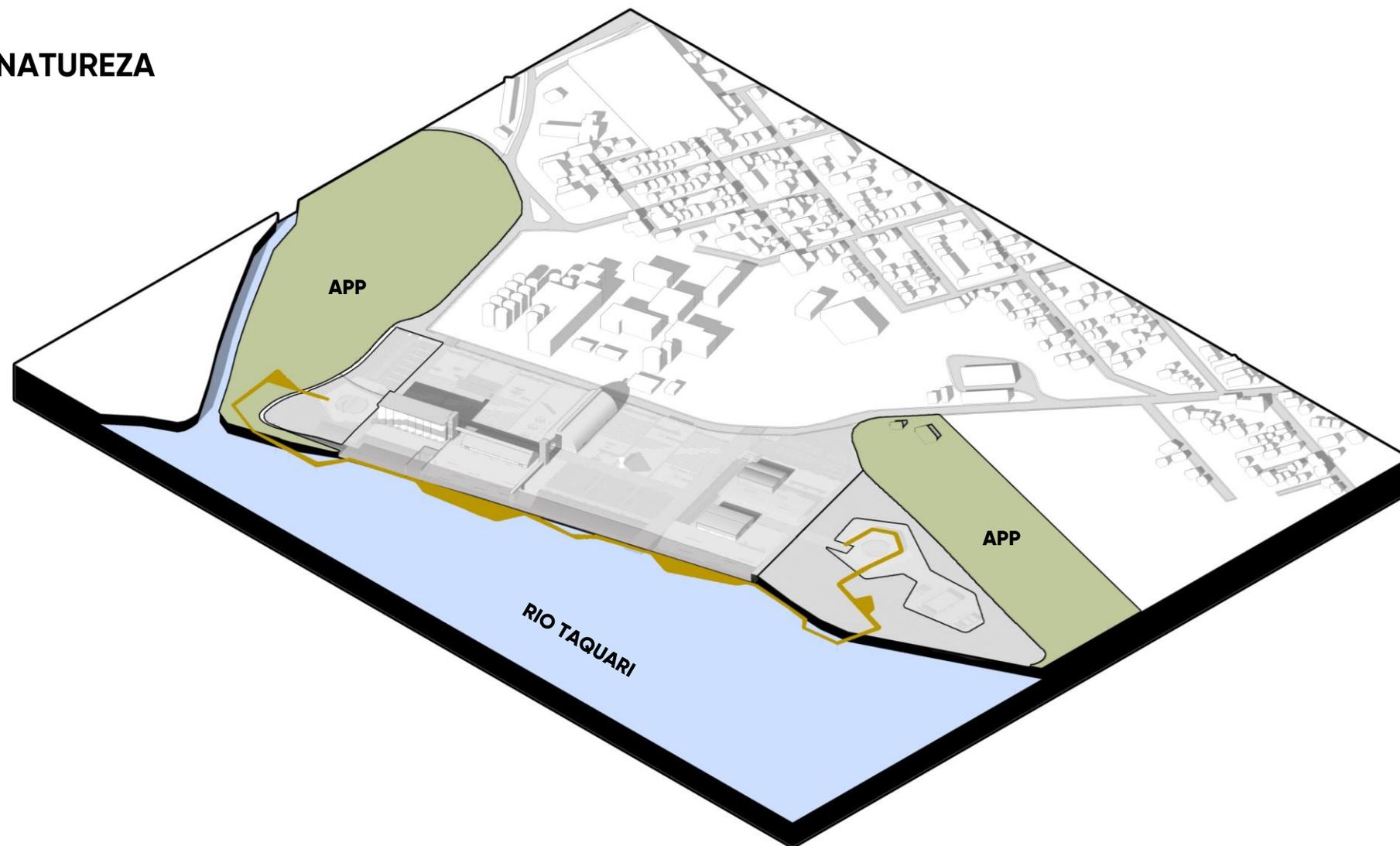
**PROPOSTA**

**ESTRATÉGIAS DE DESENHO**

**04** RELAÇÃO NATUREZA



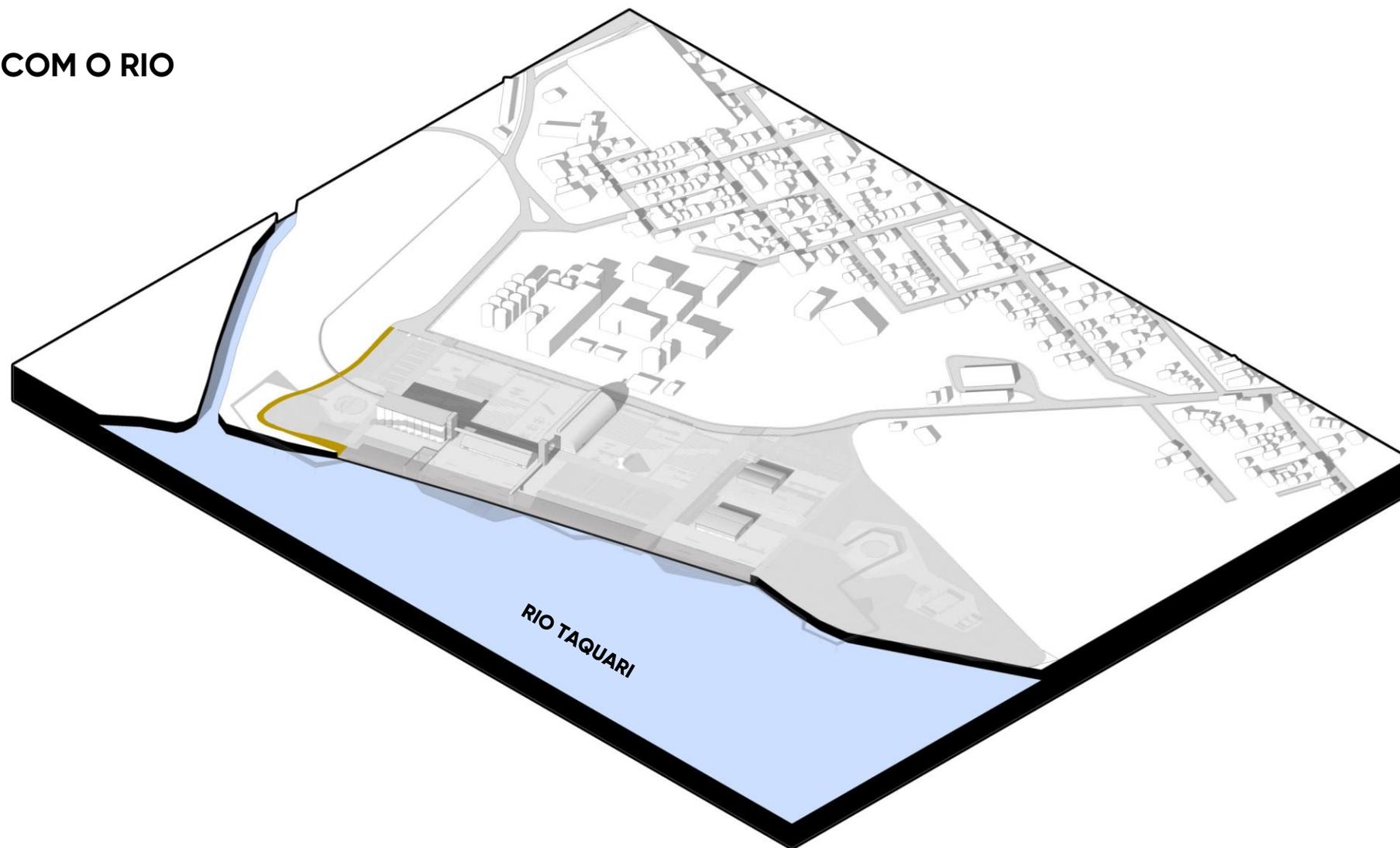
**04** RELAÇÃO NATUREZA



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

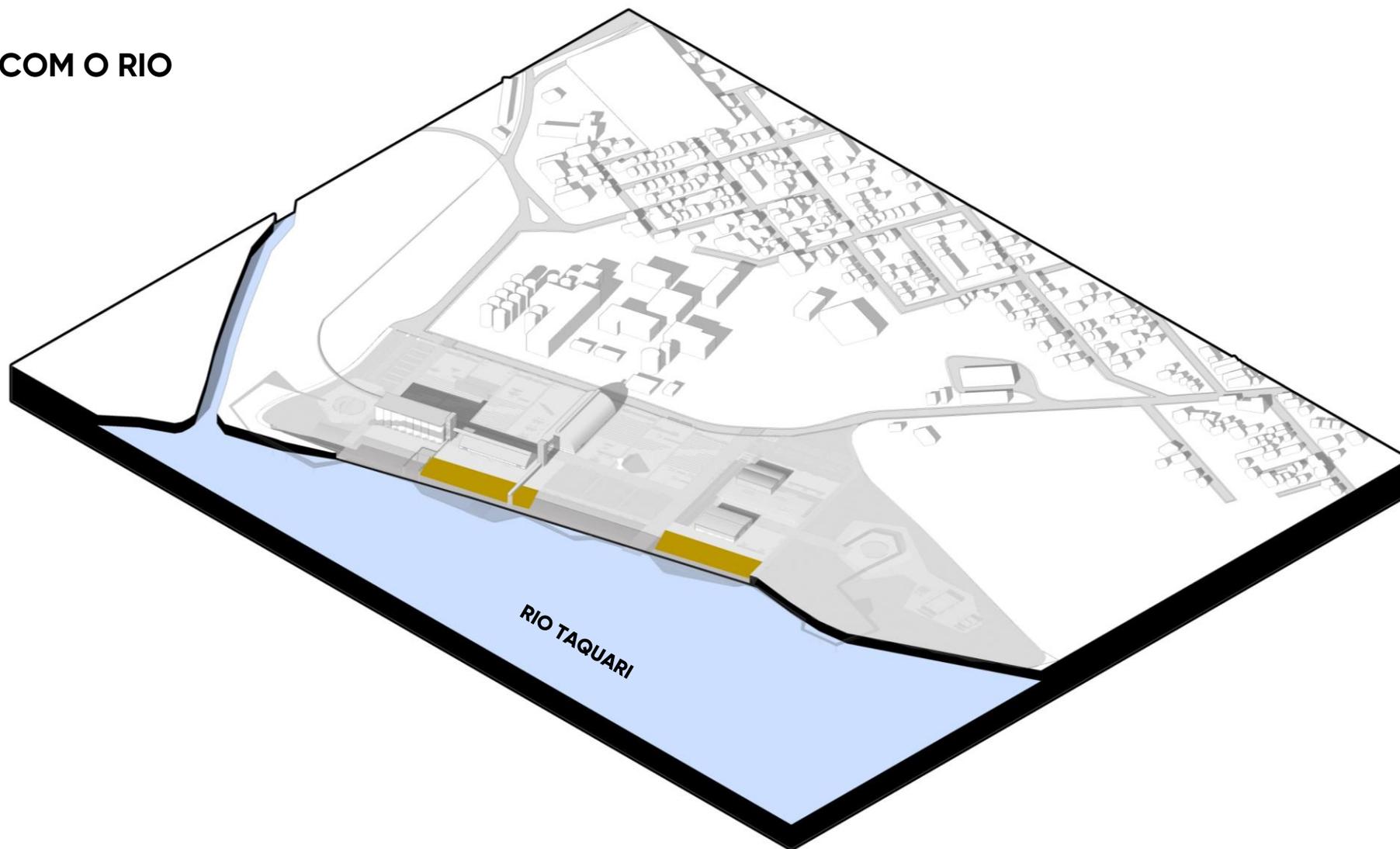
# 05 CONEXÃO COM O RIO



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

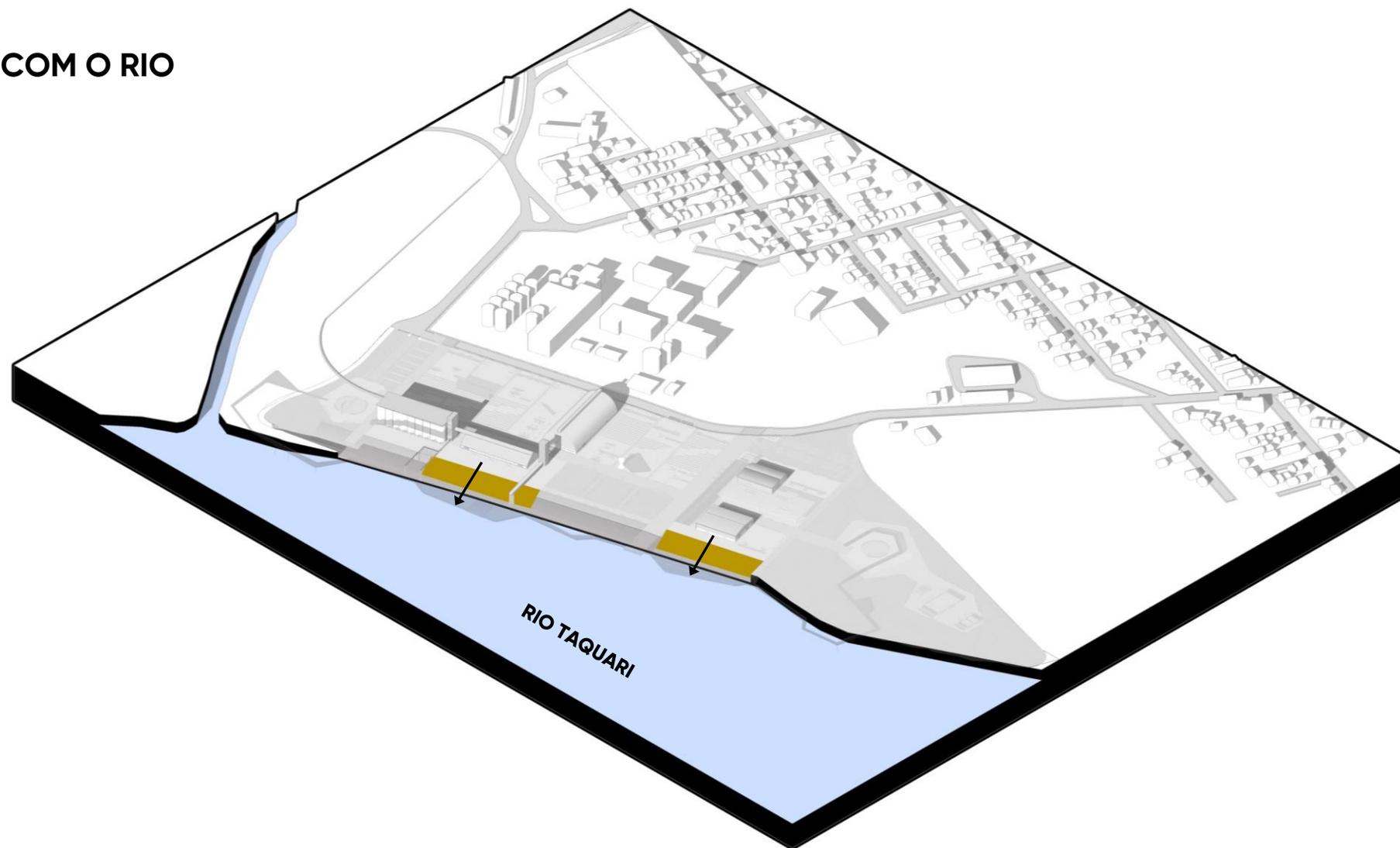
# 05 CONEXÃO COM O RIO



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

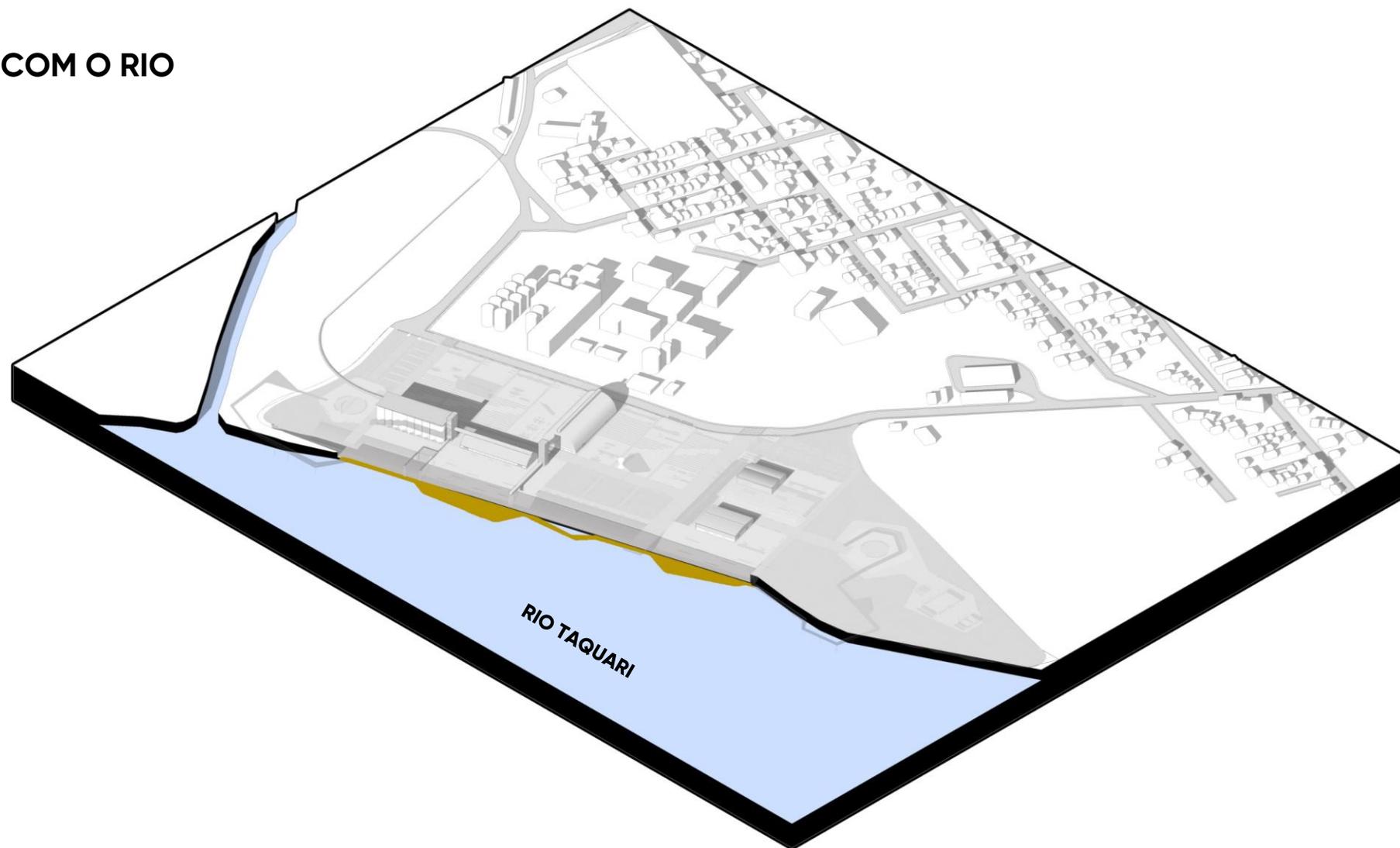
# 05 CONEXÃO COM O RIO



## PROPOSTA

### ESTRATÉGIAS DE DESENHO

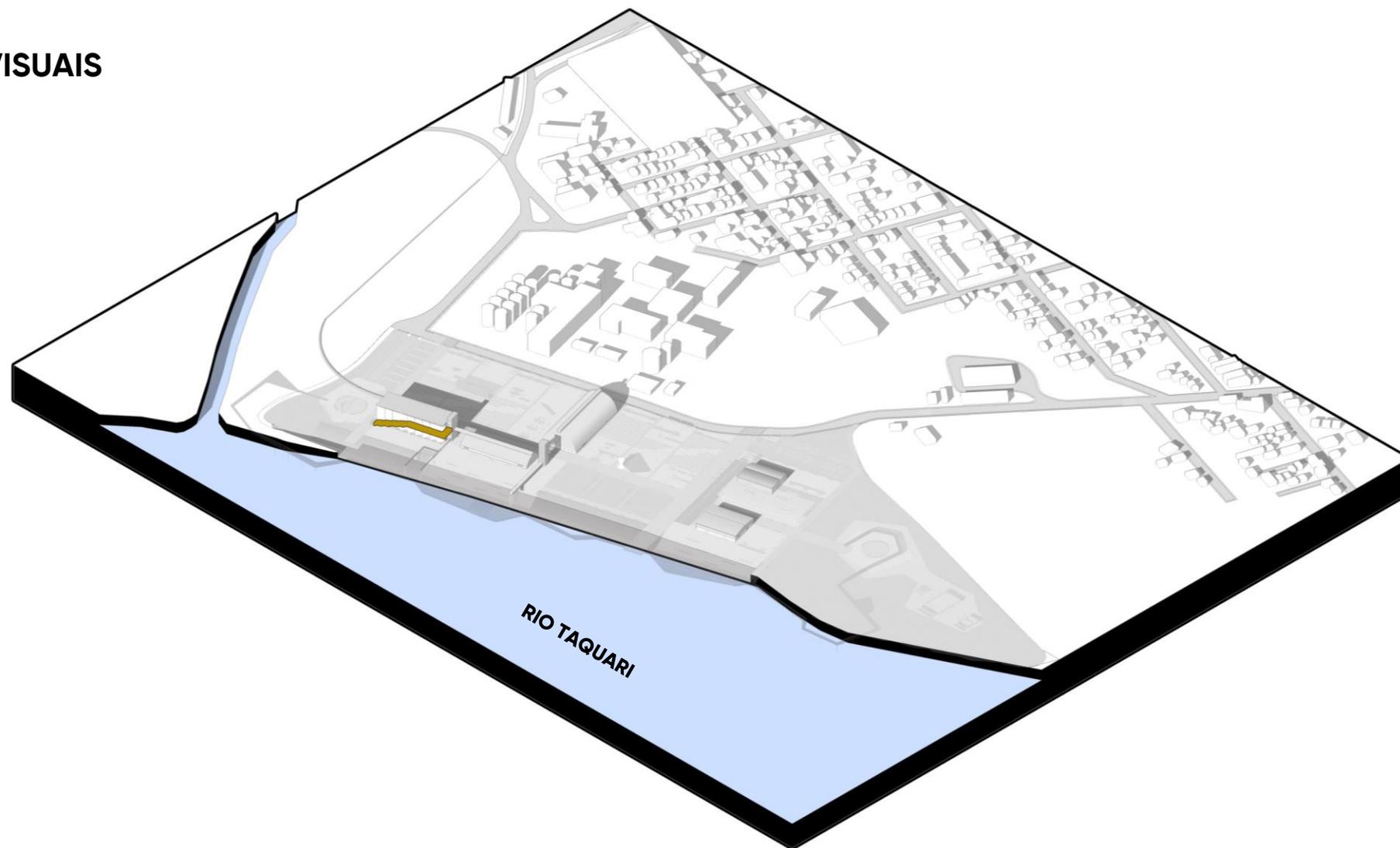
# 05 CONEXÃO COM O RIO



**PROPOSTA**

**ESTRATÉGIAS DE DESENHO**

**06** MARCOS VISUAIS

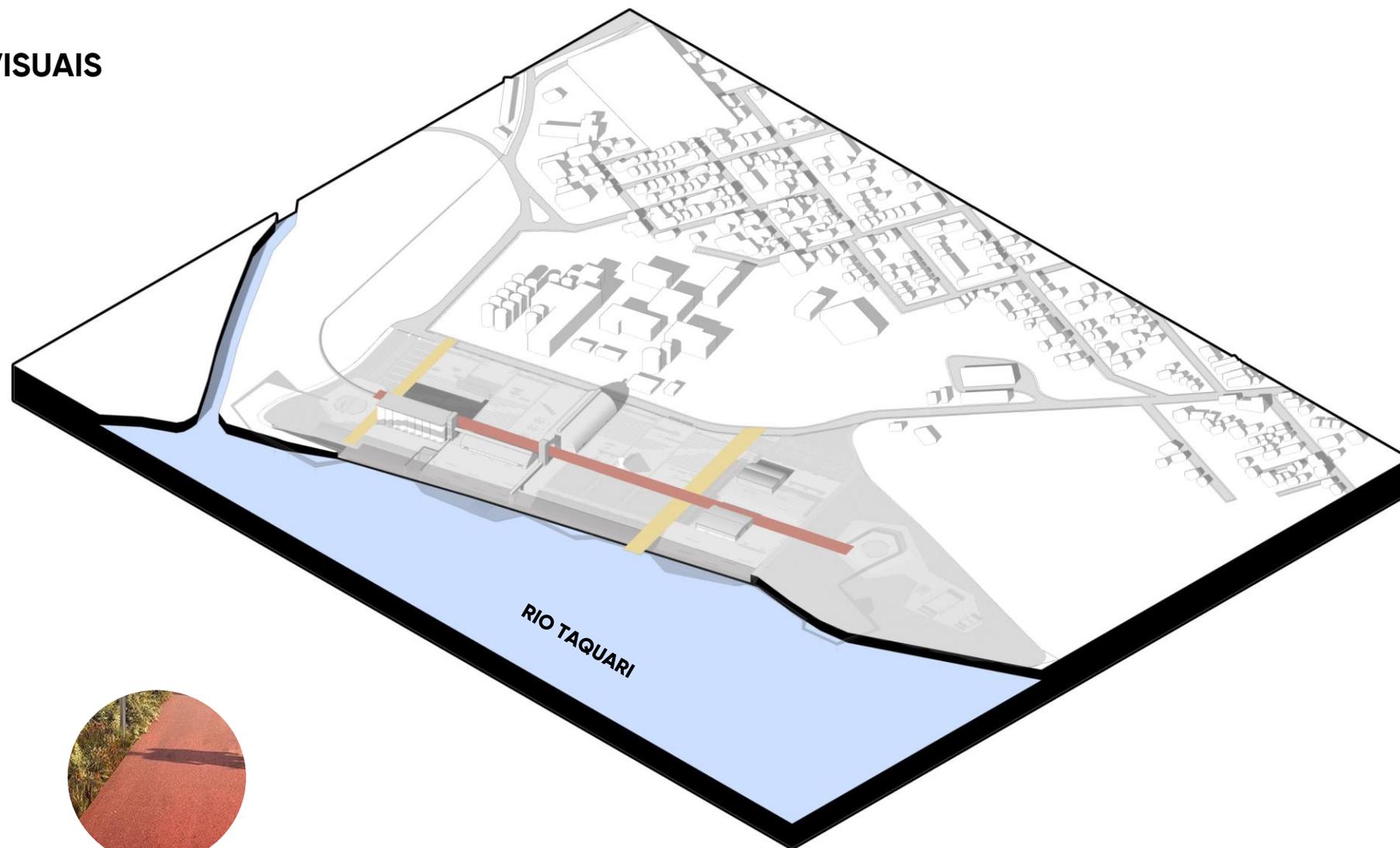


## PROPOSTA

### ESTRATÉGIAS DE DESENHO

# 06

## MARCOS VISUAIS



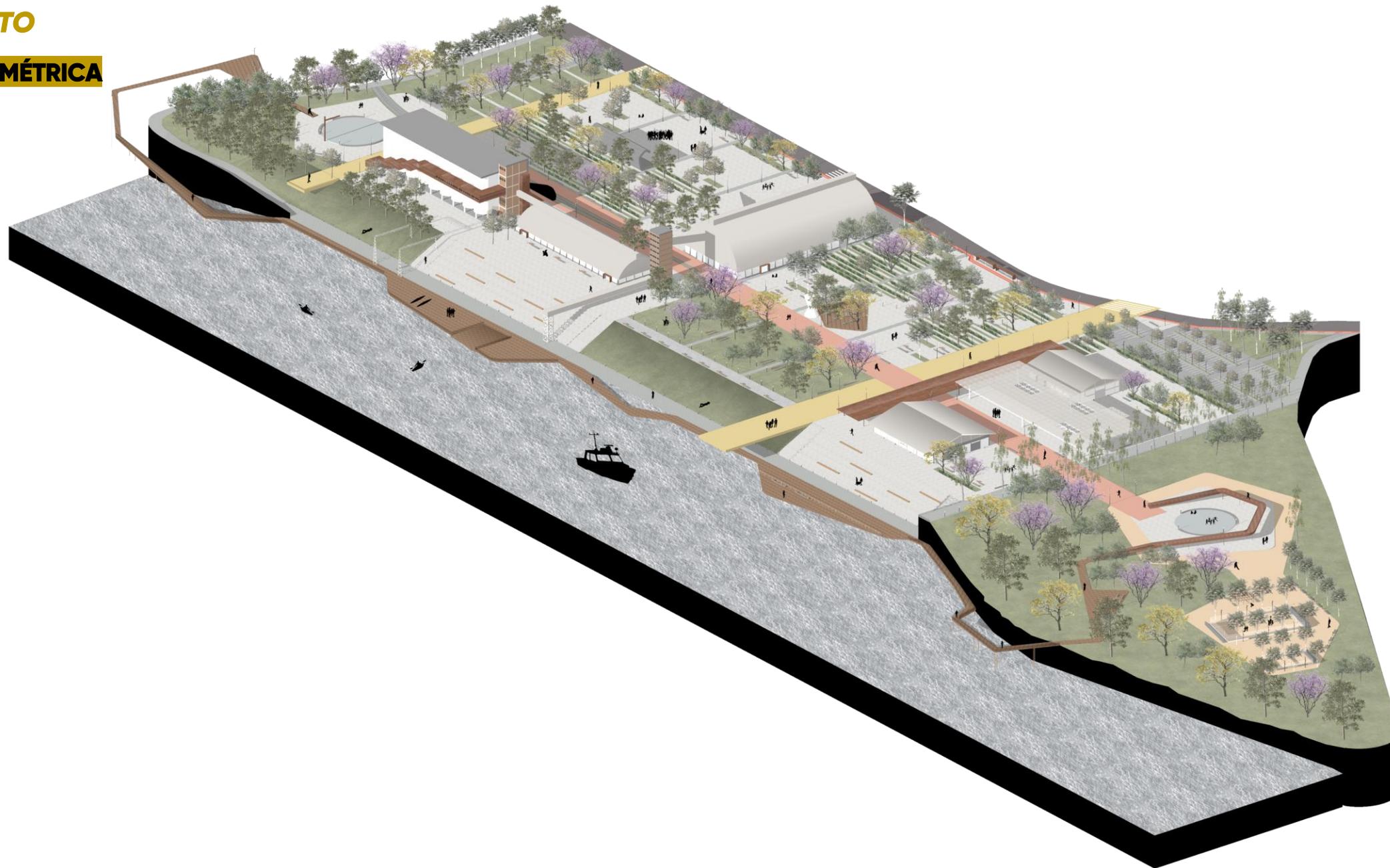
**PISO DRENANTE FULGET  
RESINADO AMARELO**



**PISO DRENANTE FULGET  
RESINADO VERMELHO**

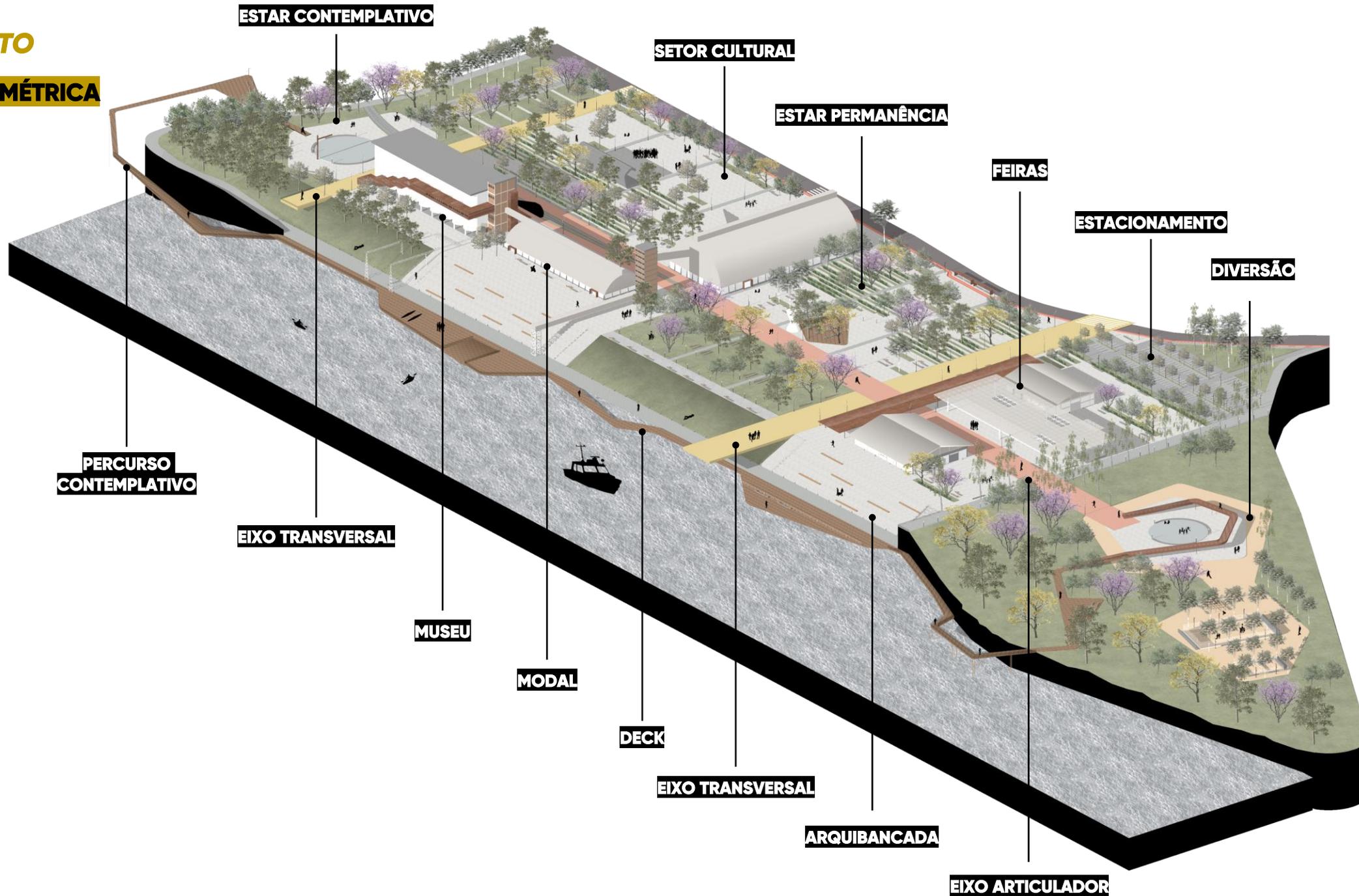
**PROJETO**

**AXONOMÉTRICA**



# PROJETO

## AXONOMÉTRICA



# IMPLANTAÇÃO

RIO TAQUARI



# IMPLANTAÇÃO

## VEGETAÇÃO EXISTENTE



# IMPLANTAÇÃO

## VEGETAÇÃO PROPOSTA

### GRANDE PORTE



PAU FERRO



JACARANDÁ



IPÊ AMARELO

### MÉDIO PORTE



IPÊ ROXO



QUARESMEIRA

### PEQUENO PORTE



JABUTICABEIRA



EXTREMOSA

### FORRAÇÕES



CAPIM CHORÃO



GRAMA



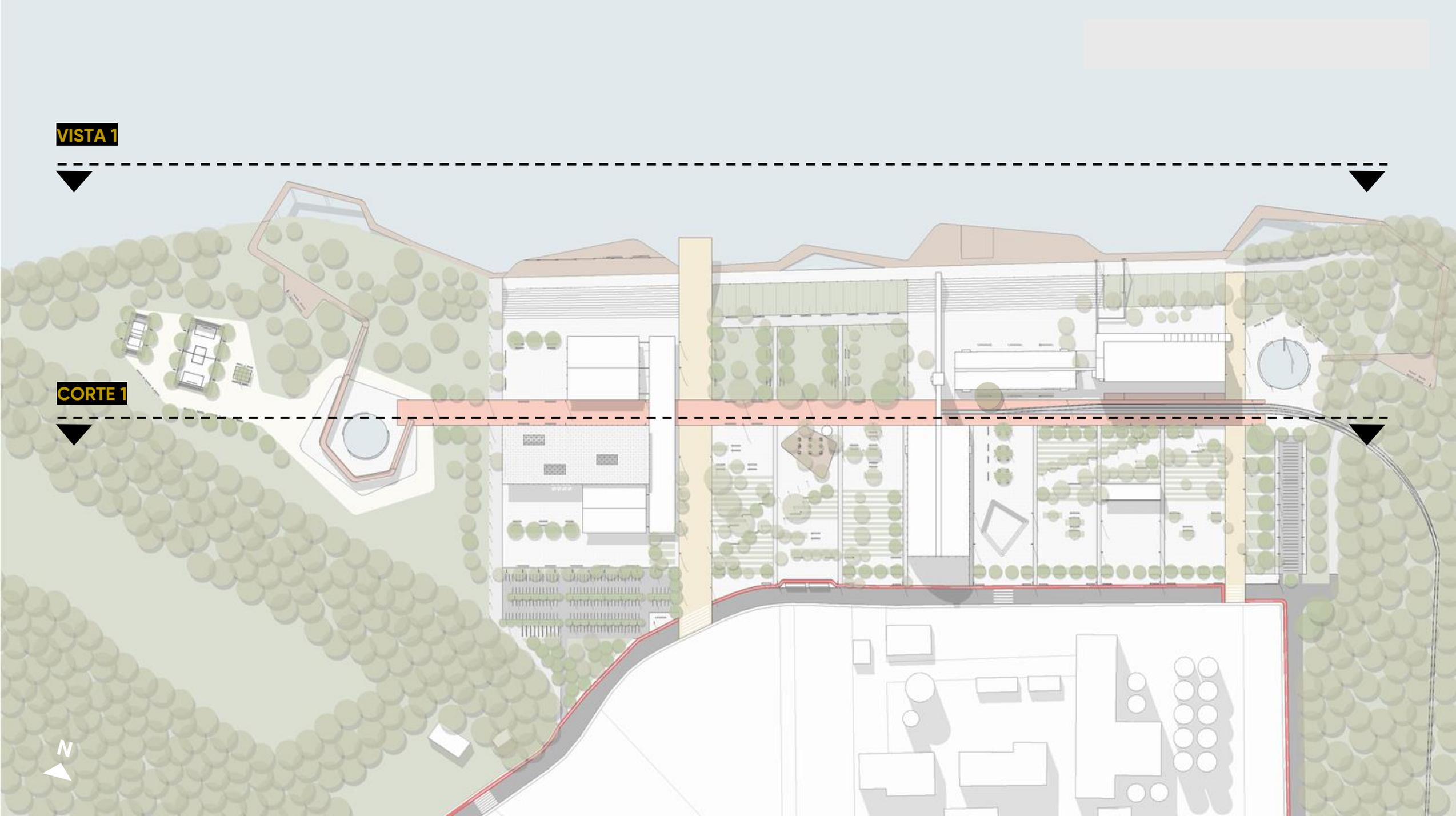
VISTA 1



CORTE 1

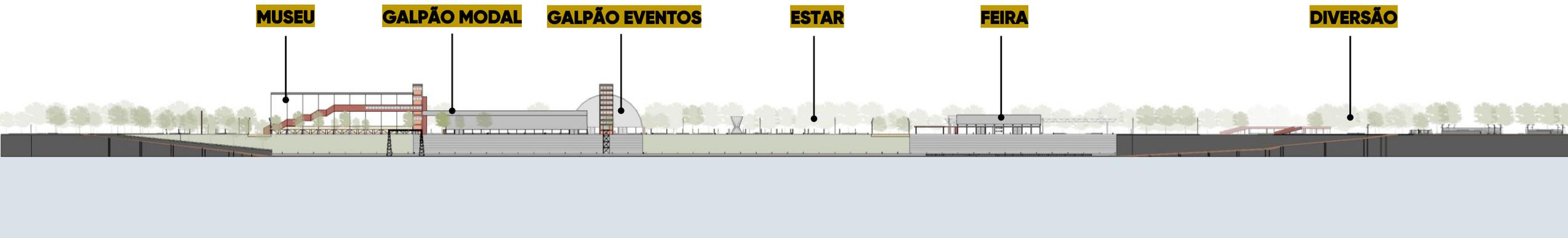


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# CORTES GERAIS

## VISTA 1



## CORTE 1





***APROXIMAÇÕES***



SETOR 1

N

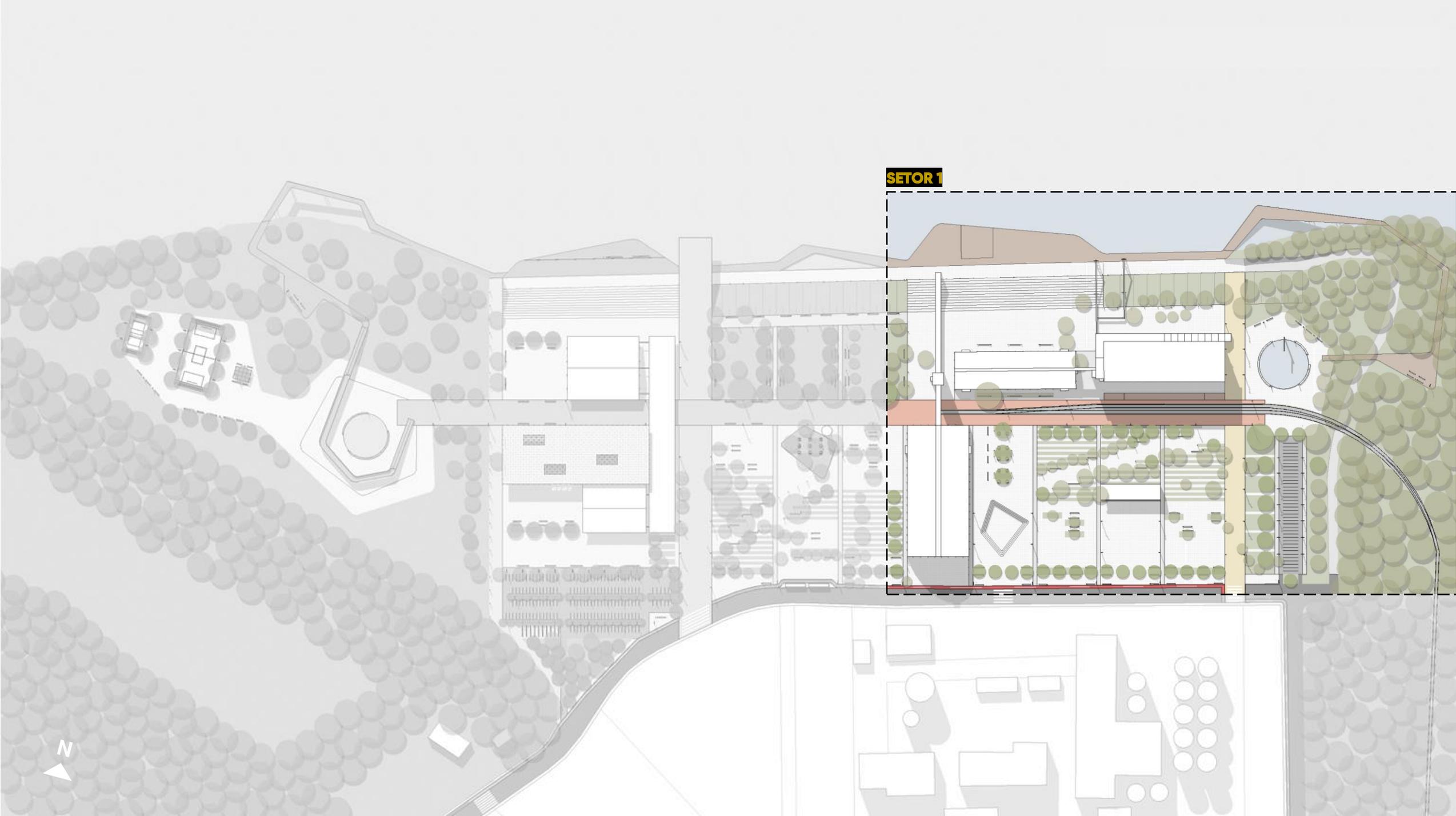
**SETOR 2**



N

SETOR 3





SETOR 1

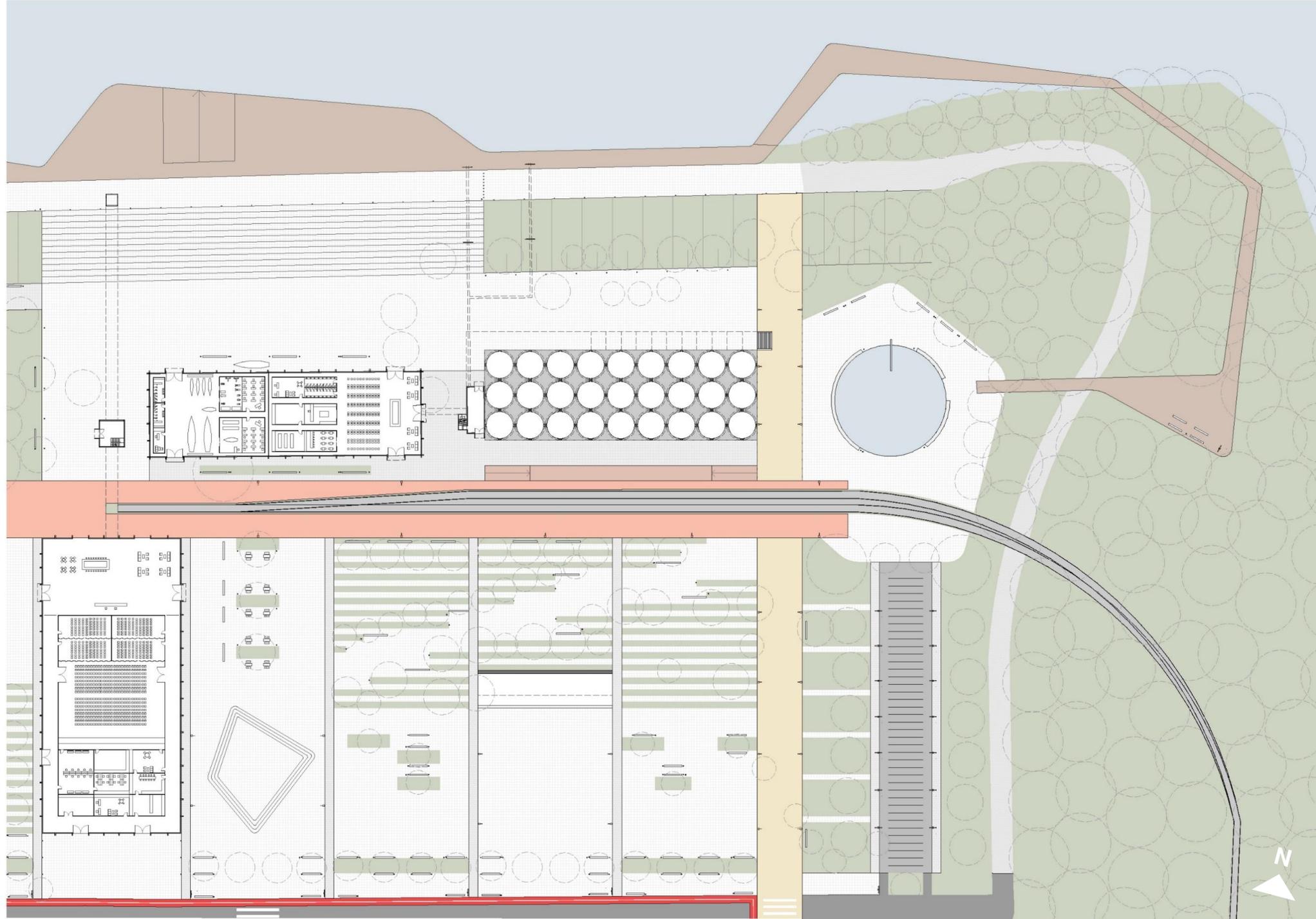
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# PROJETO

## APROXIMAÇÃO

### SETOR 1

Contemplativo  
Modal  
Cultural



0 10 20 50

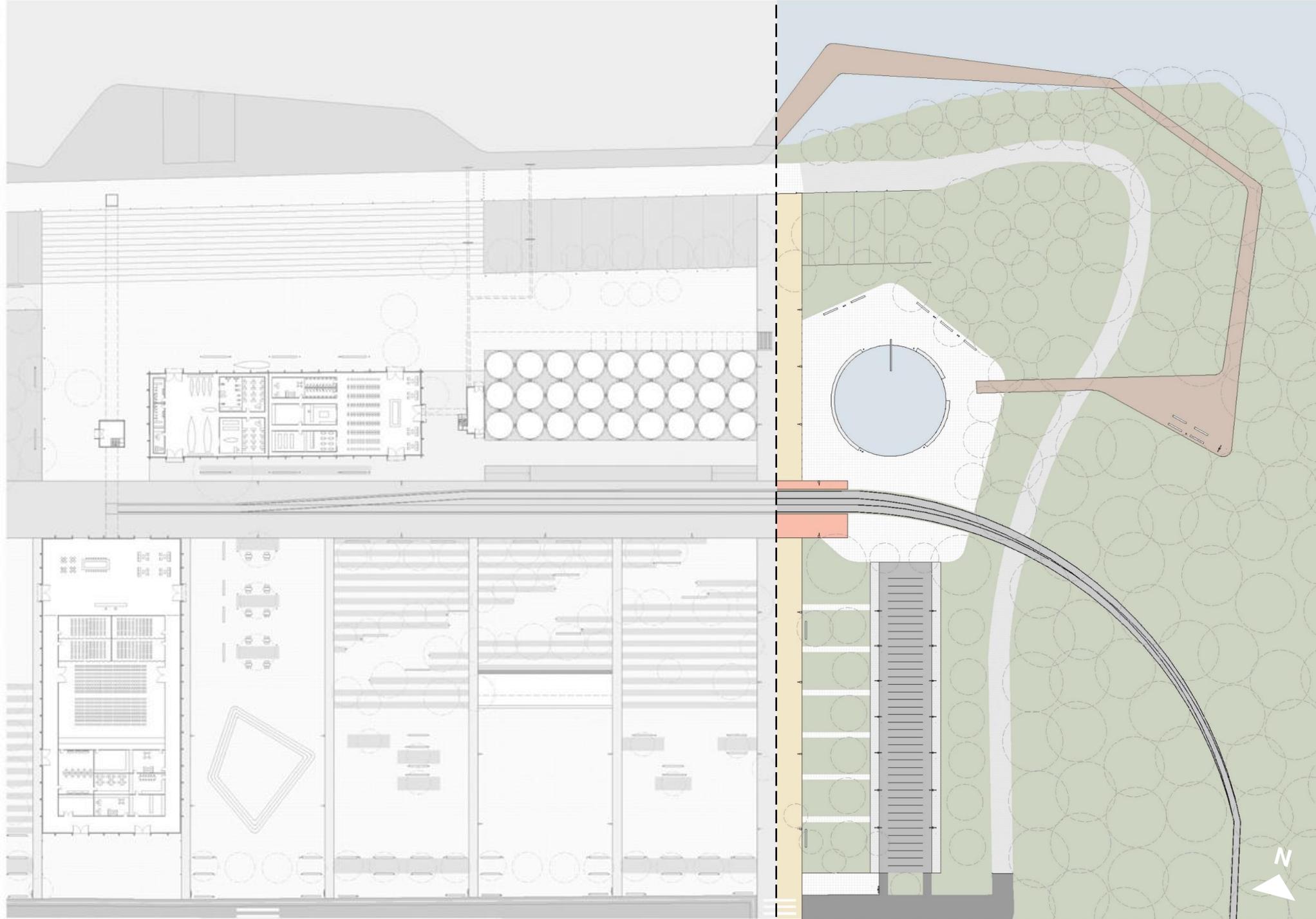


# PROJETO

## APROXIMAÇÃO

### SETOR 1

#### Contemplativo

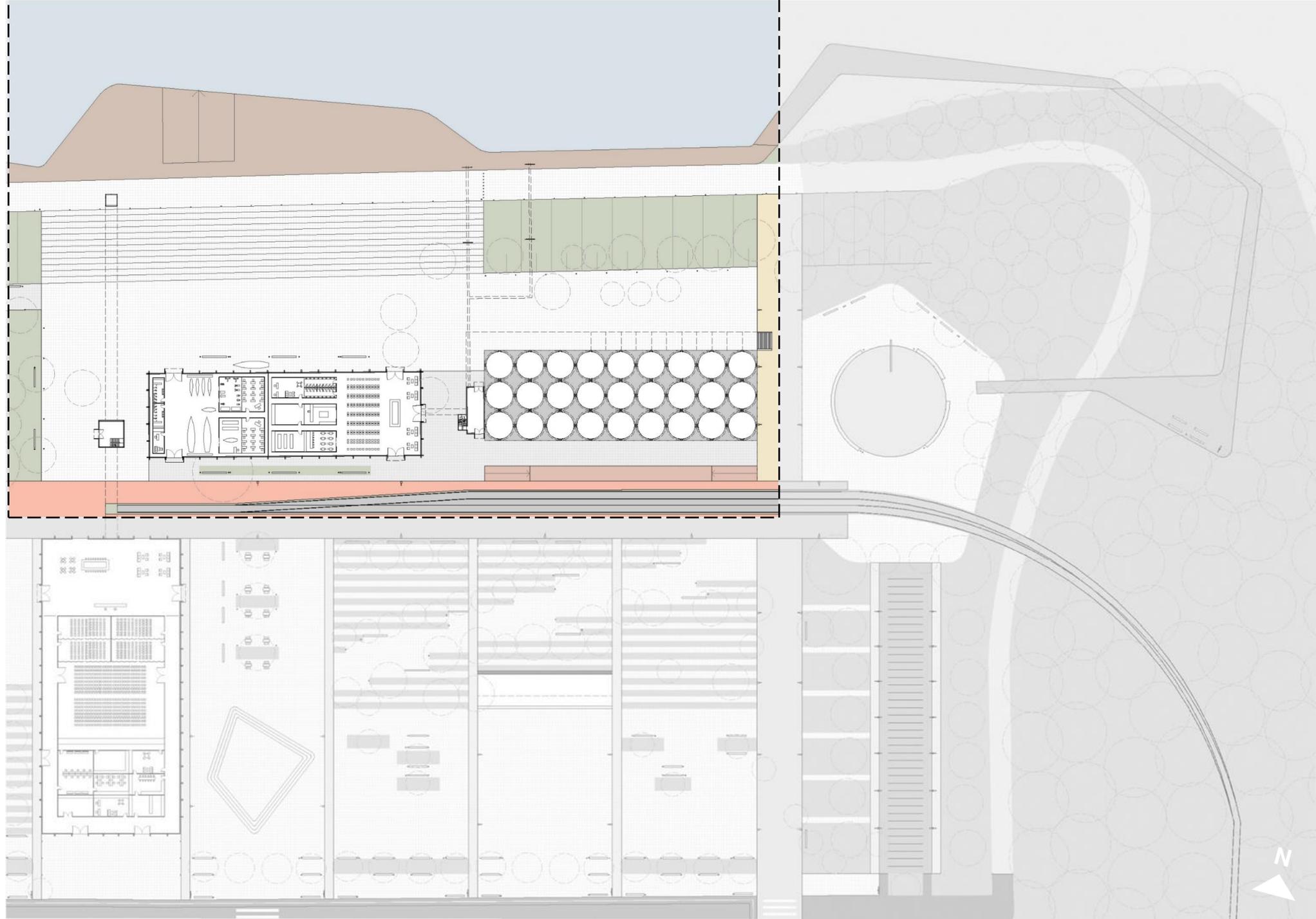


# PROJETO

## APROXIMAÇÃO

### SETOR 1

### Modal



0 10 20 50



# PROJETO

## APROXIMAÇÃO

### SETOR 1

### Cultural



0 10 20 50

**PROJETO**

**APROXIMAÇÃO**

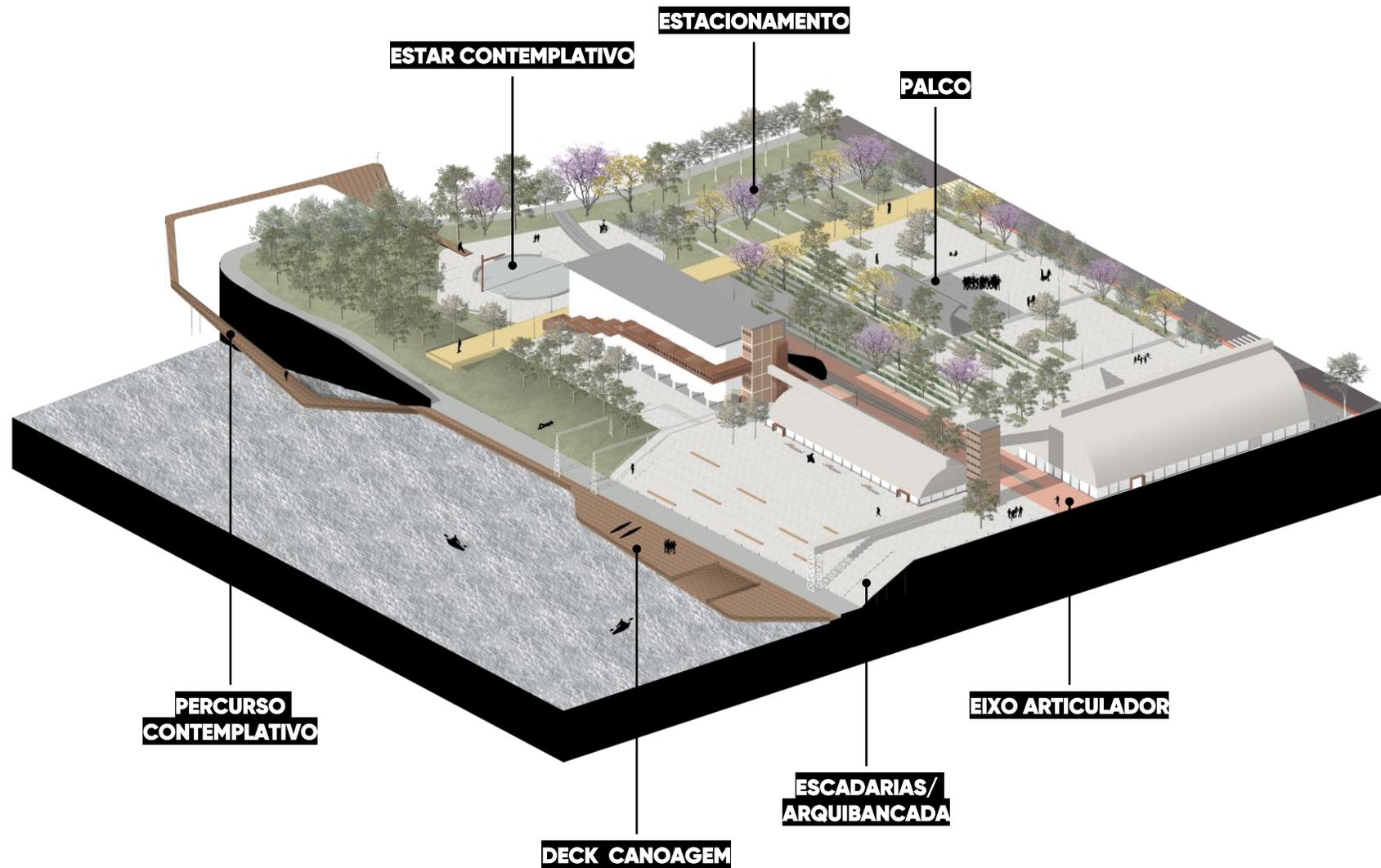
**SETOR 1**



# PROJETO

## APROXIMAÇÃO

### SETOR 1



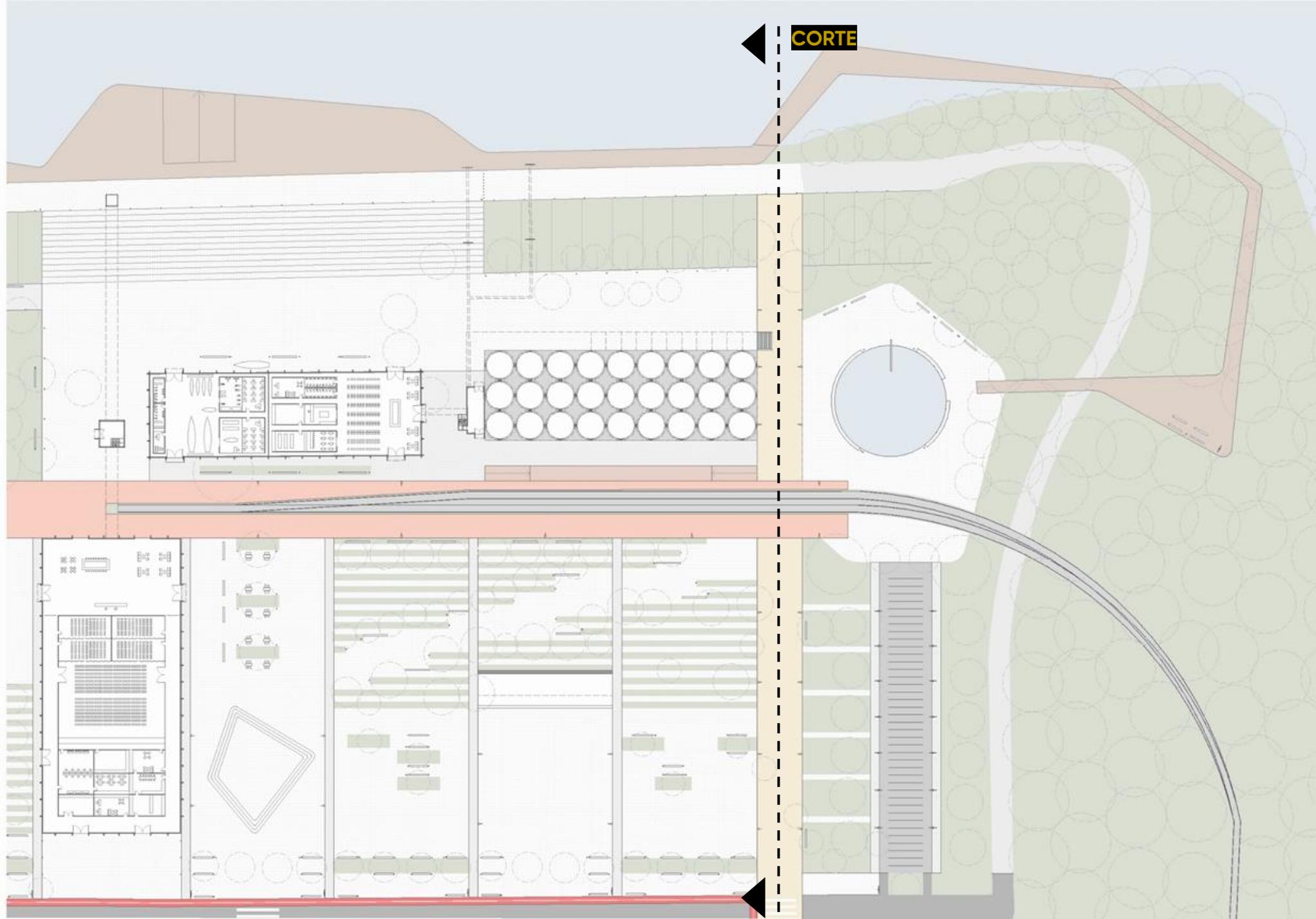


PORTO DE ESTRELA

**PROJETO**

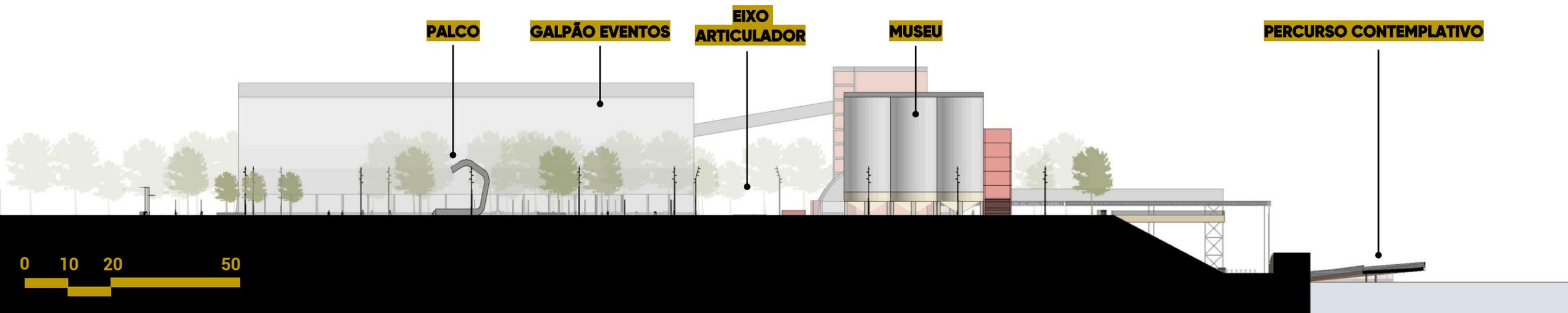
**APROXIMAÇÃO**

**SETOR 1**



# CORTE SETOR 1

## CORTE EIXO TRANSVERSAL

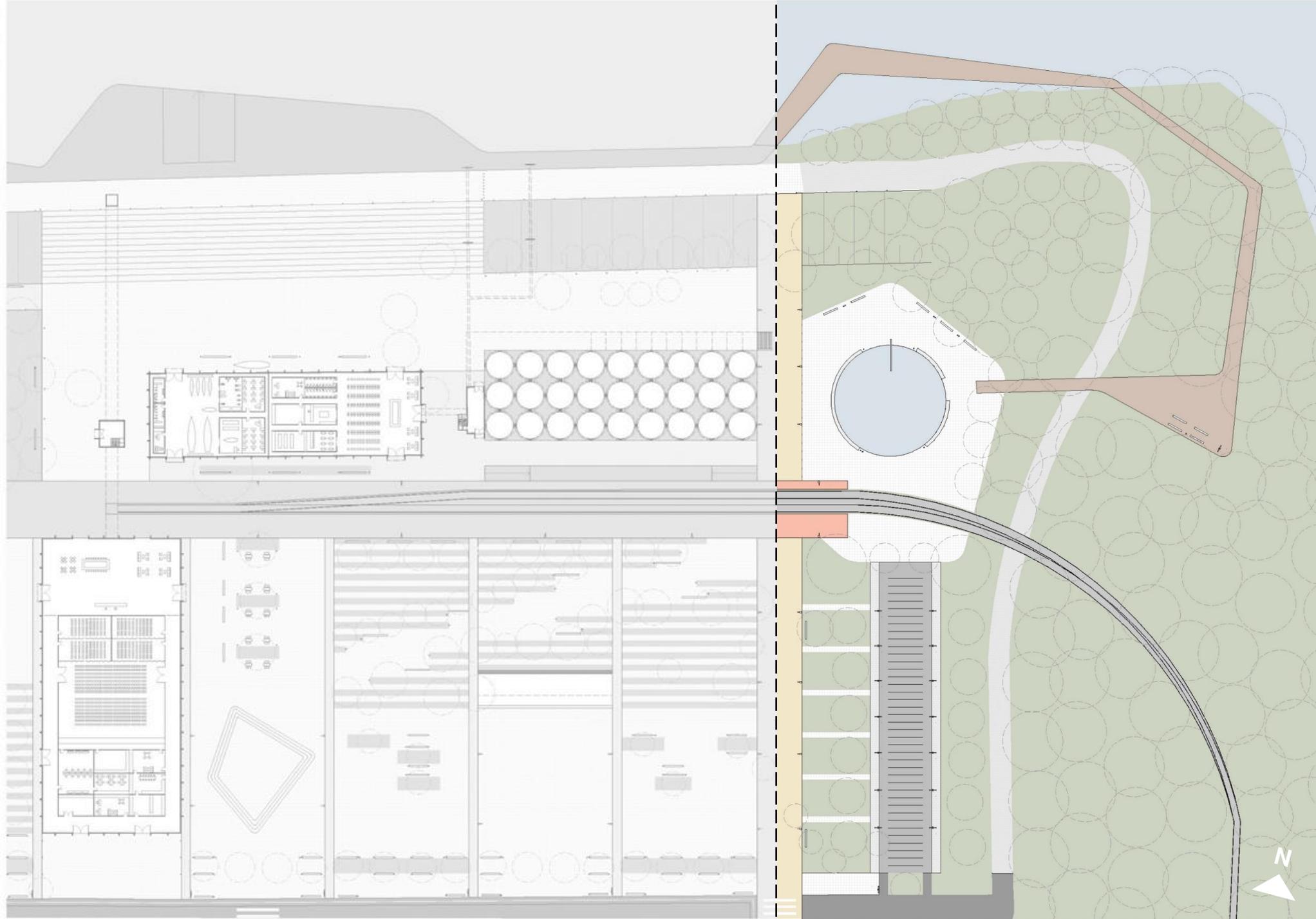


**PROJETO**

**APROXIMAÇÃO**

**SETOR 1**

**Contemplativo**





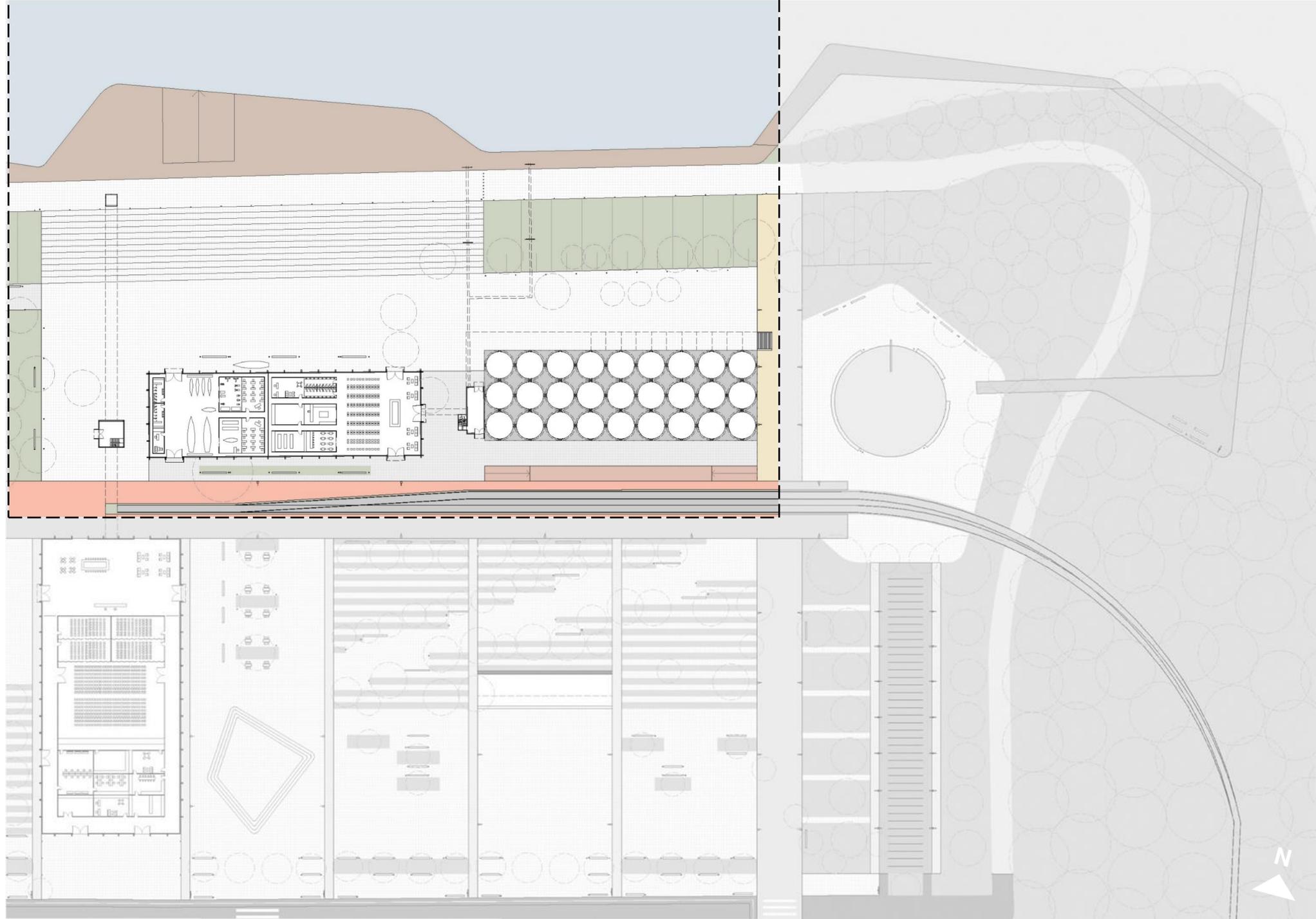
PORTO DE ESTRELA

# PROJETO

## APROXIMAÇÃO

### SETOR 1

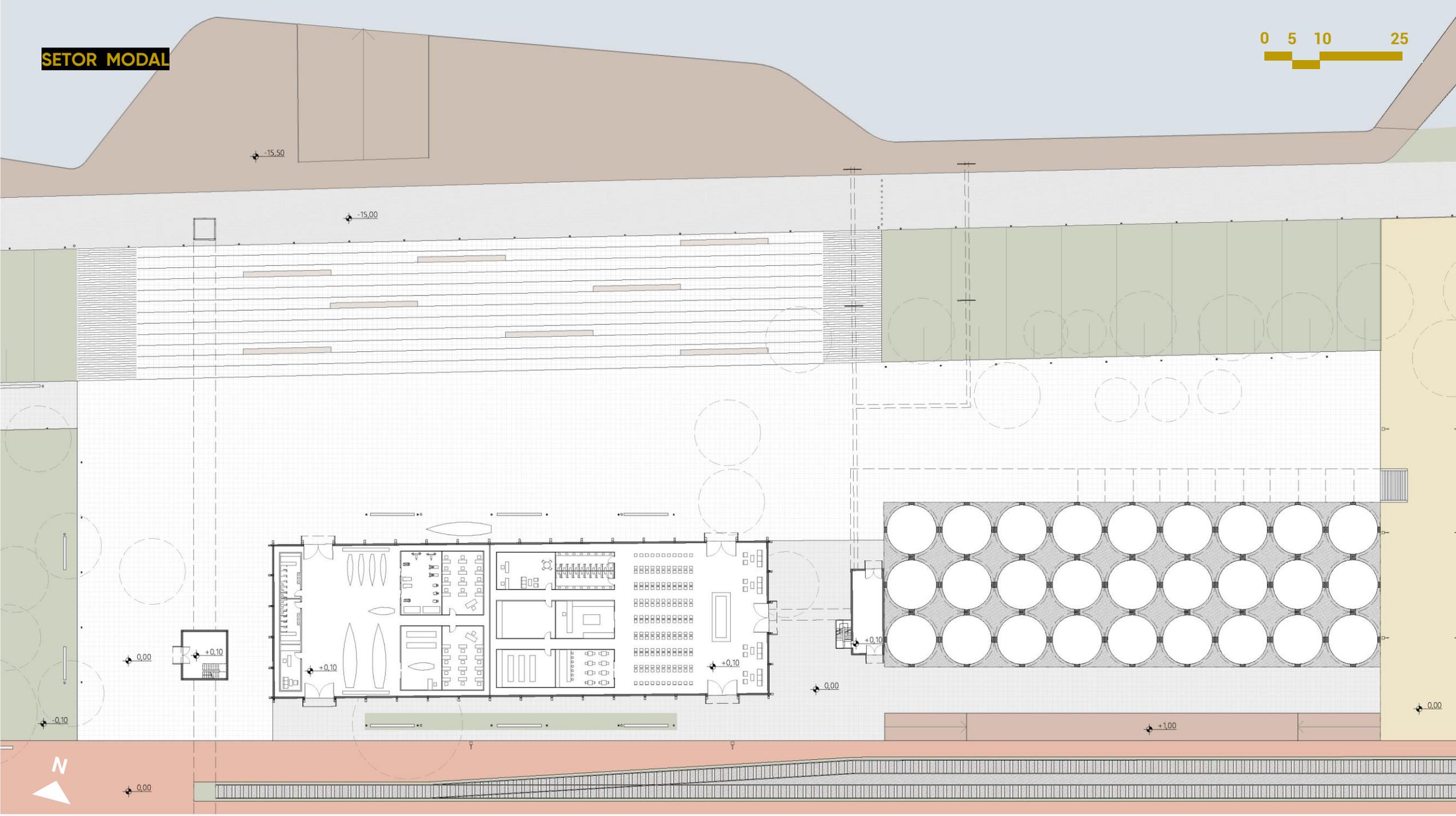
#### Modal



0 10 20 50



SETOR MODAL



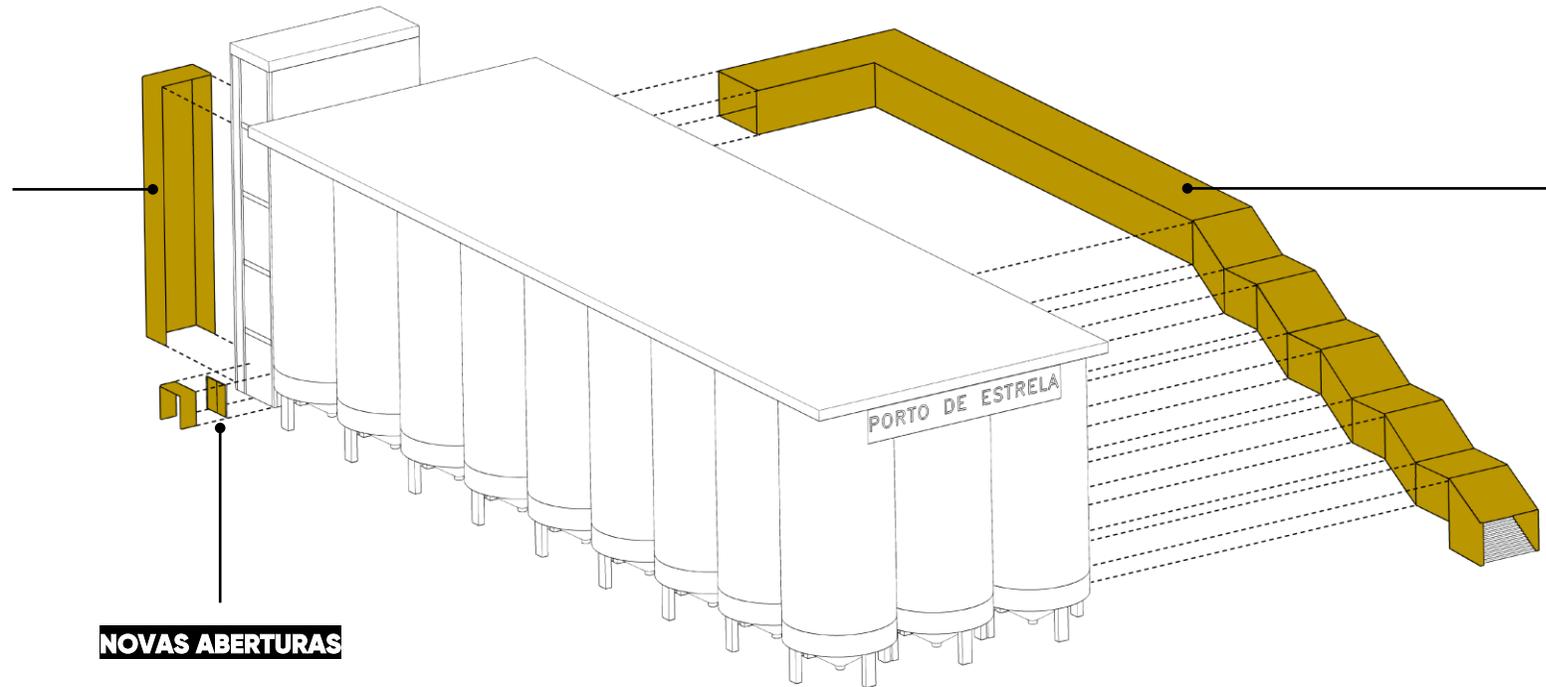
# PROJETO

## INTERVENÇÕES EDIFICAÇÕES

ADIÇÕES DE PLANOS PARA  
MARCAÇÃO DOS  
ACESSOS PRINCIPAIS



AÇO CORTEN



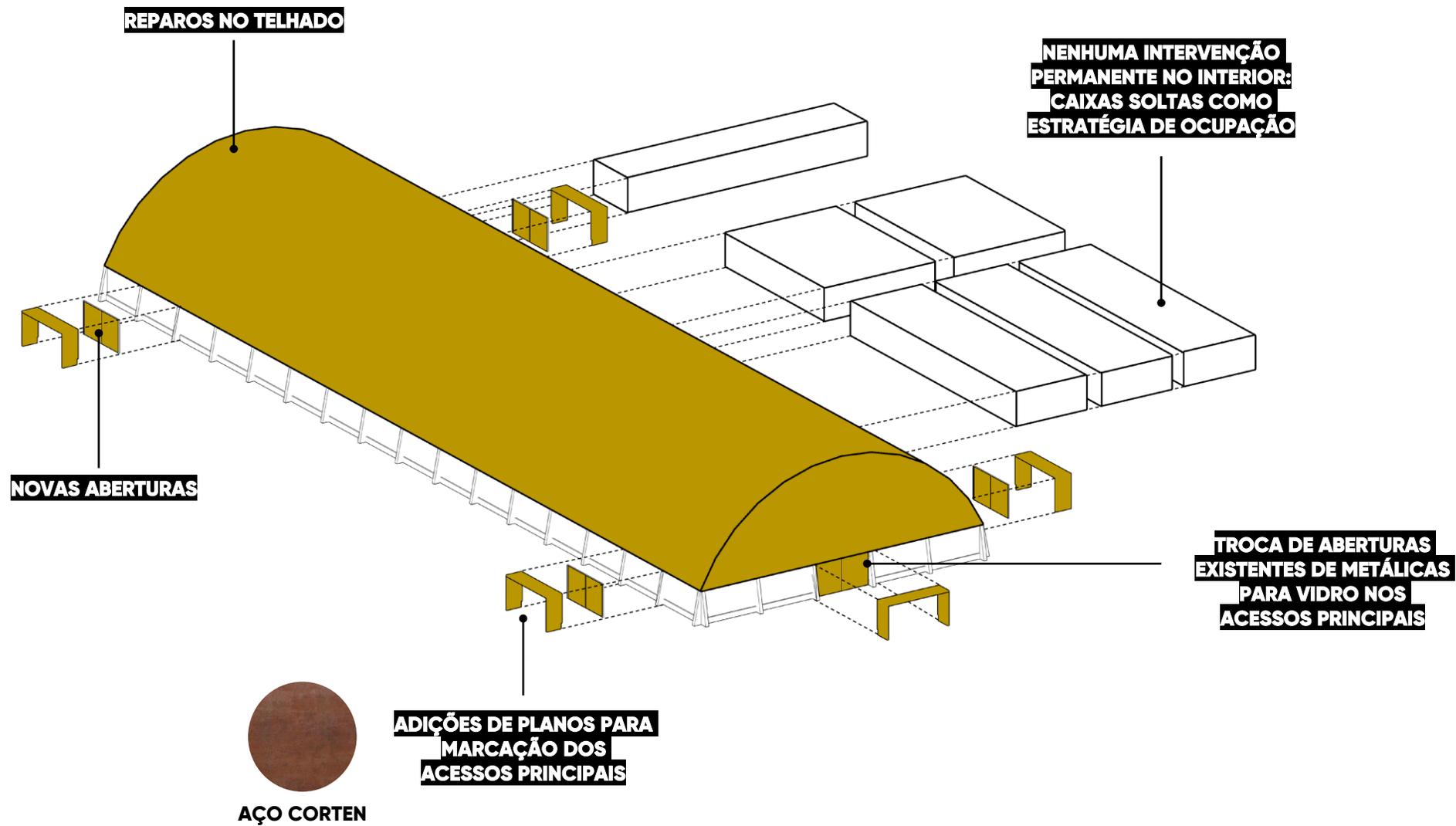
MIRANTE  
ENVOLVENDO OS  
SILOS



CHAPA PERFURADA

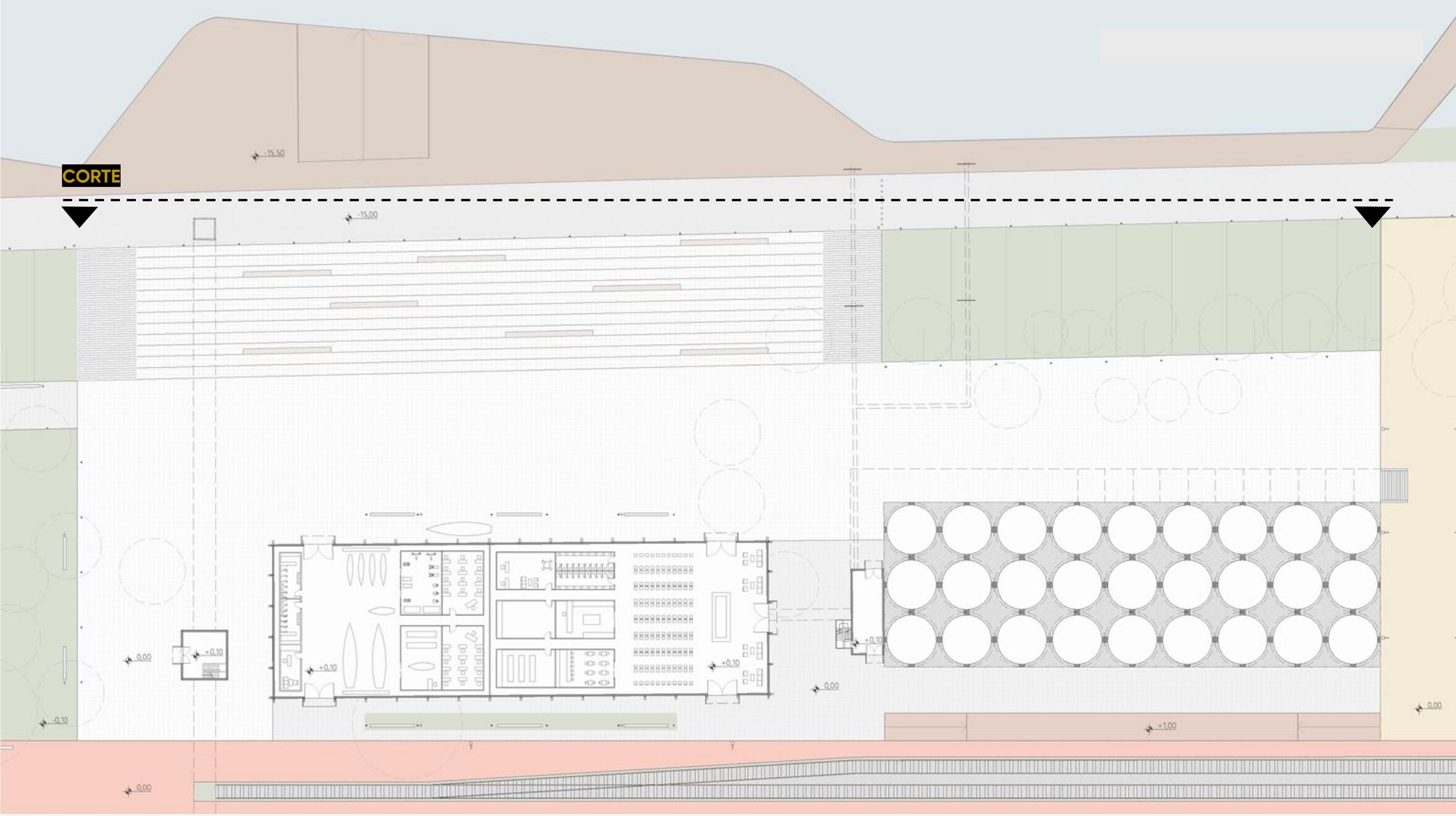
# PROJETO

## INTERVENÇÕES EDIFICAÇÕES





**CORTE**



# CORTE SETOR MODAL

**CORTE**



0 5 10 25



**1**  
PISO DRENANTE FULGET  
RESINADO VERMELHO



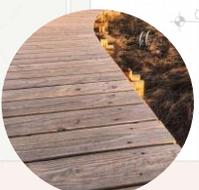
**2**  
PISO DRENANTE FULGET  
RESINADO AMARELO



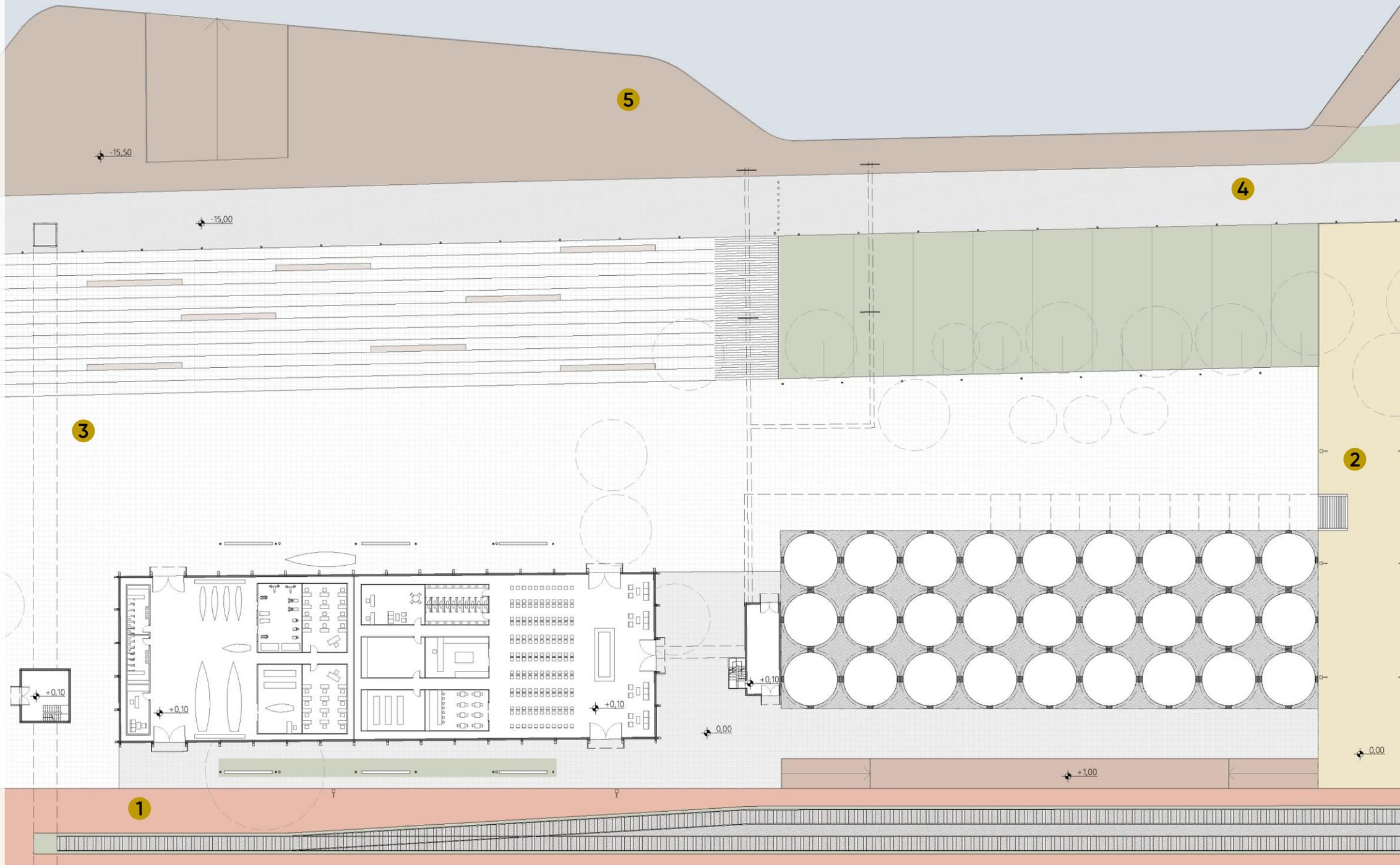
**3**  
PISO DRENANTE  
FULGET CIMENTÍCIO

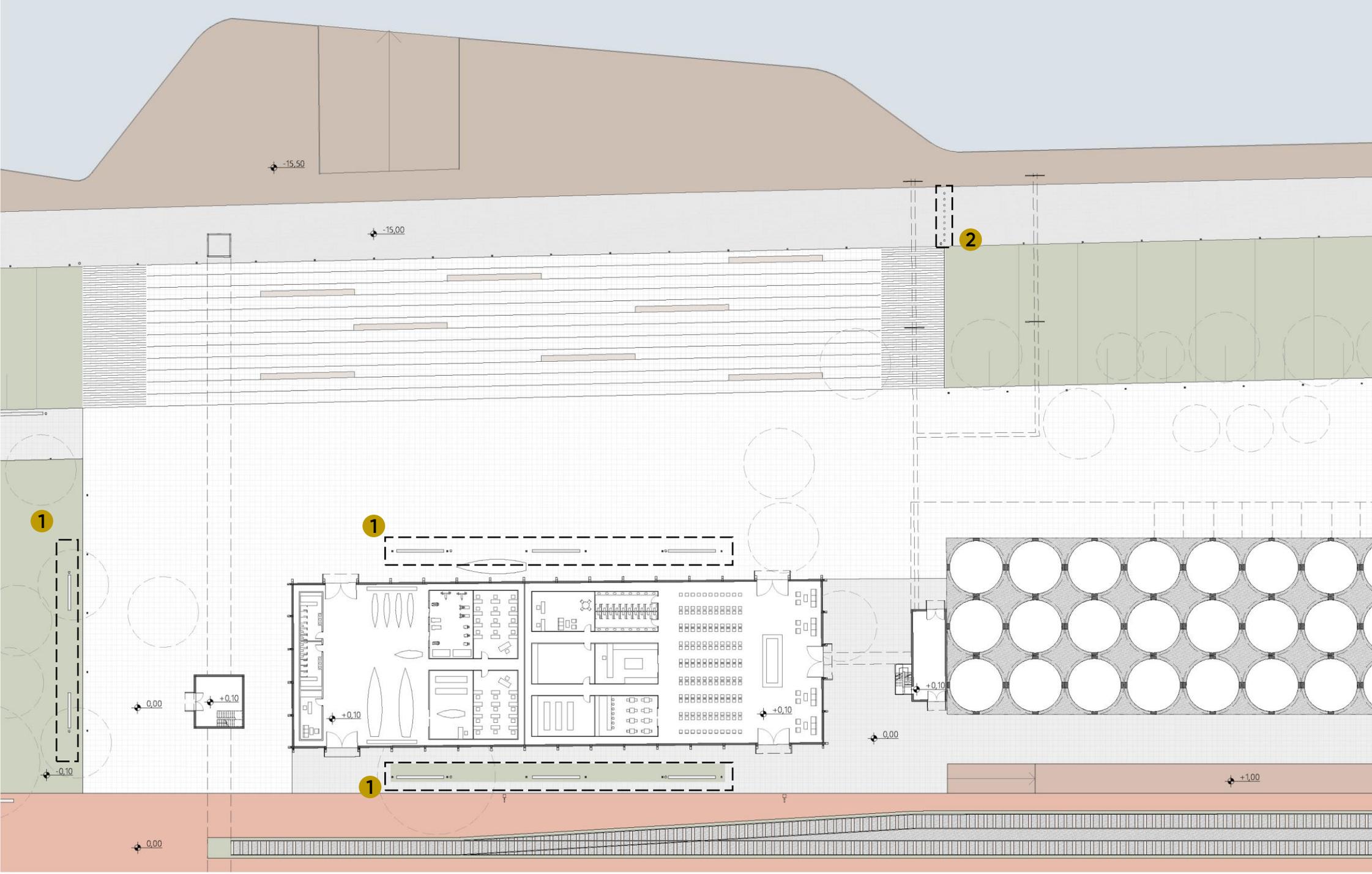


**4**  
BLOCO INTERTRAVIDO  
DE CONCRETO



**5**  
DECK MADEIRA





1

**BANCO EQUAL ESCOFET LAB**



1

**LIXEIRA LOG DE LAZZARI**



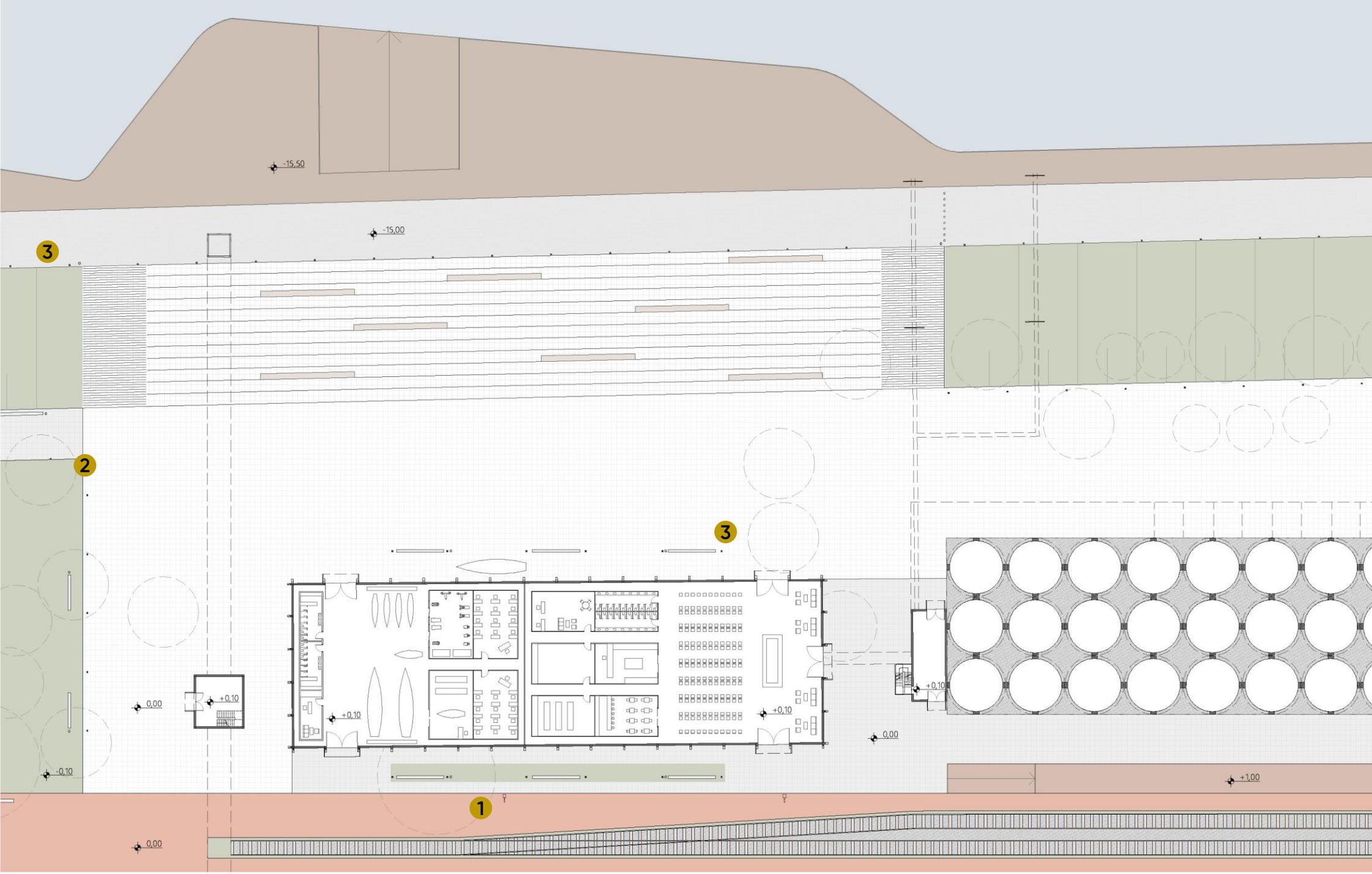
1

**BEBEDOURO TRAÇO A1 IETA DESIGN**



2

**FRADE CUBIC L1 IETA DESIGN**



1

LUMINÁRIA FULL ESCOFET LAB



2

POSTE MÉDIO PRISMA ESCOFET LAB



3

BALIZA PRISMA ESCOFET LAB

# PROJETO

## APROXIMAÇÃO

### SETOR 1

### Cultural

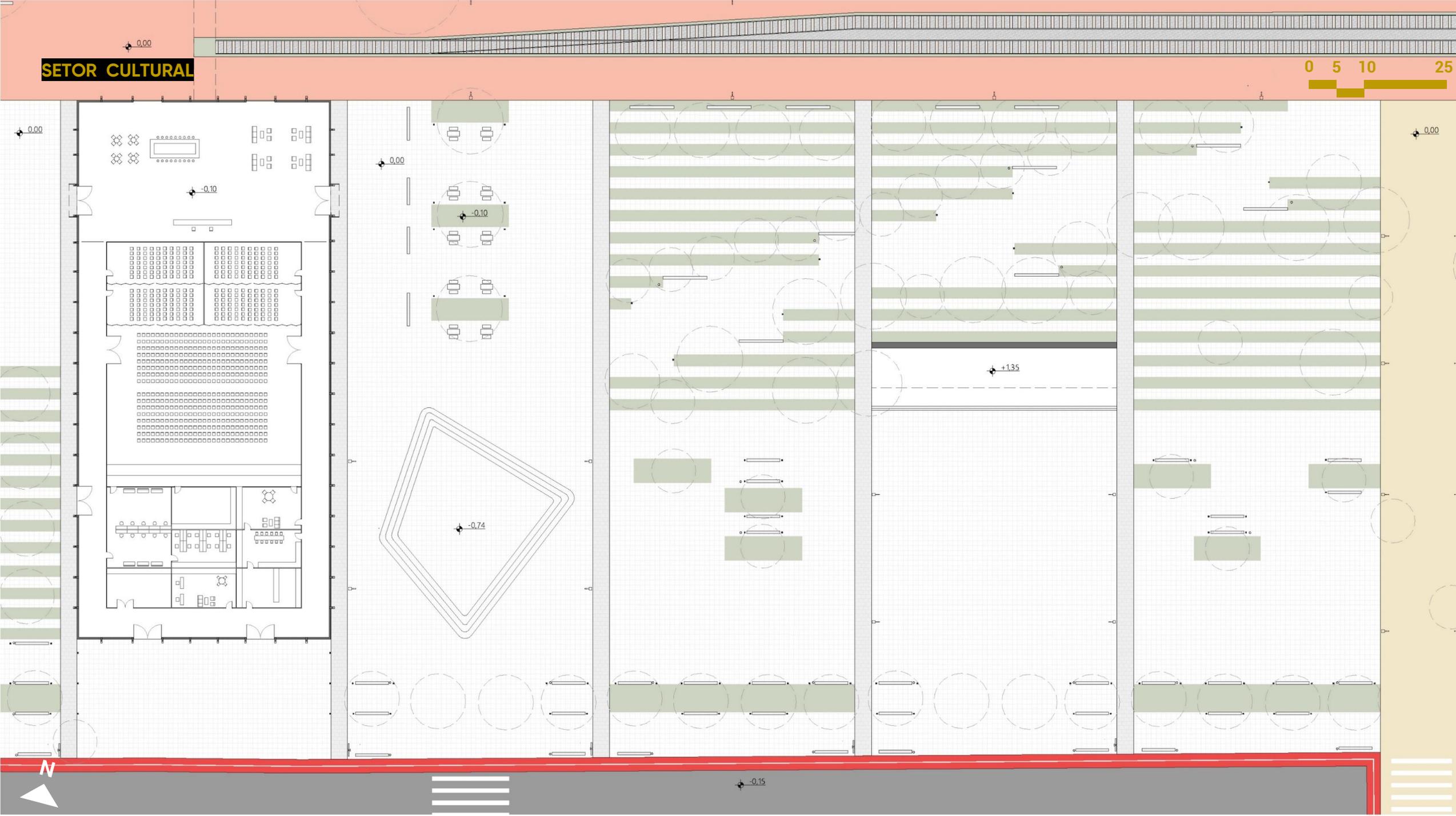


0 10 20 50



# SETOR CULTURAL

0 5 10 25



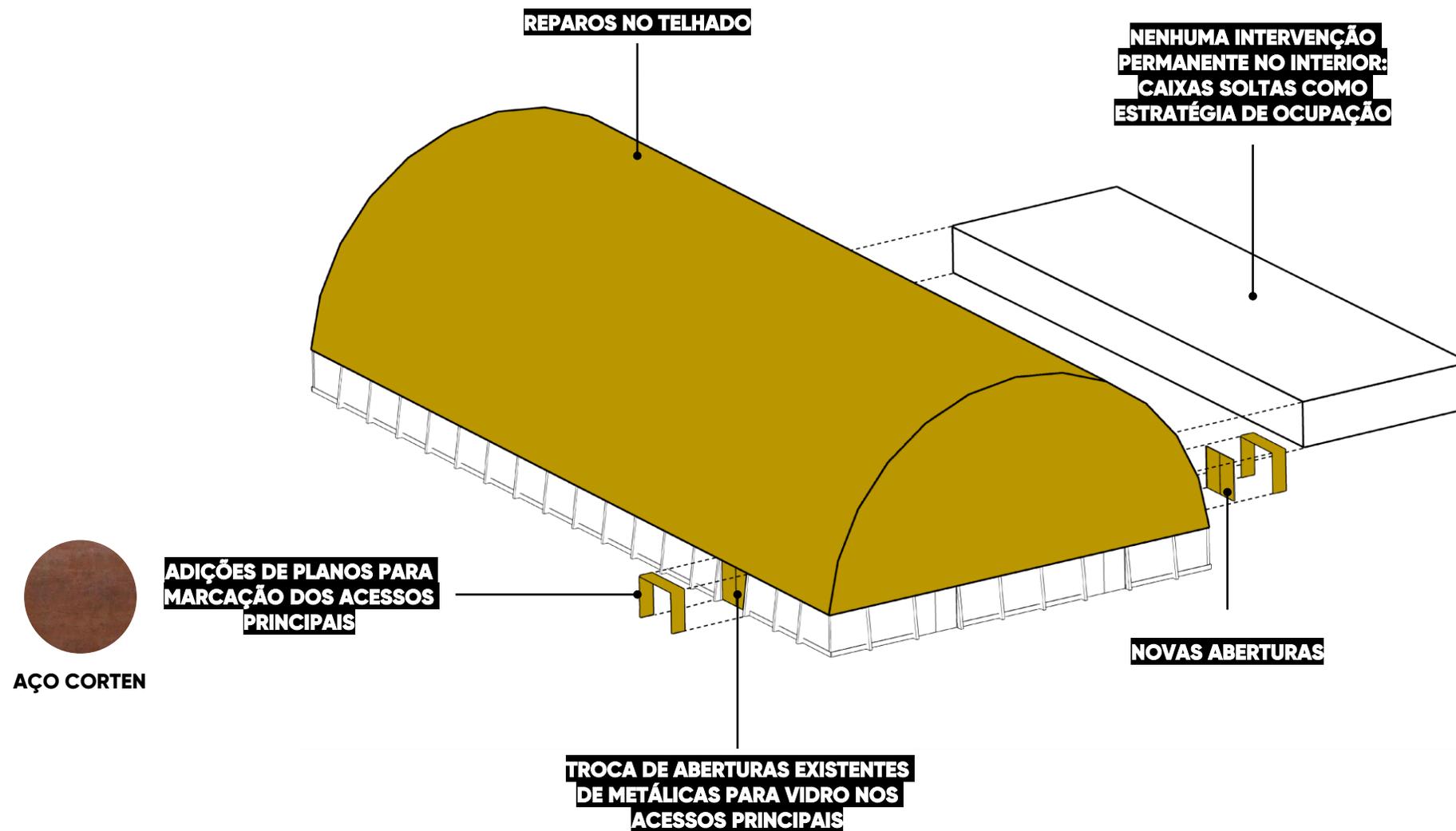


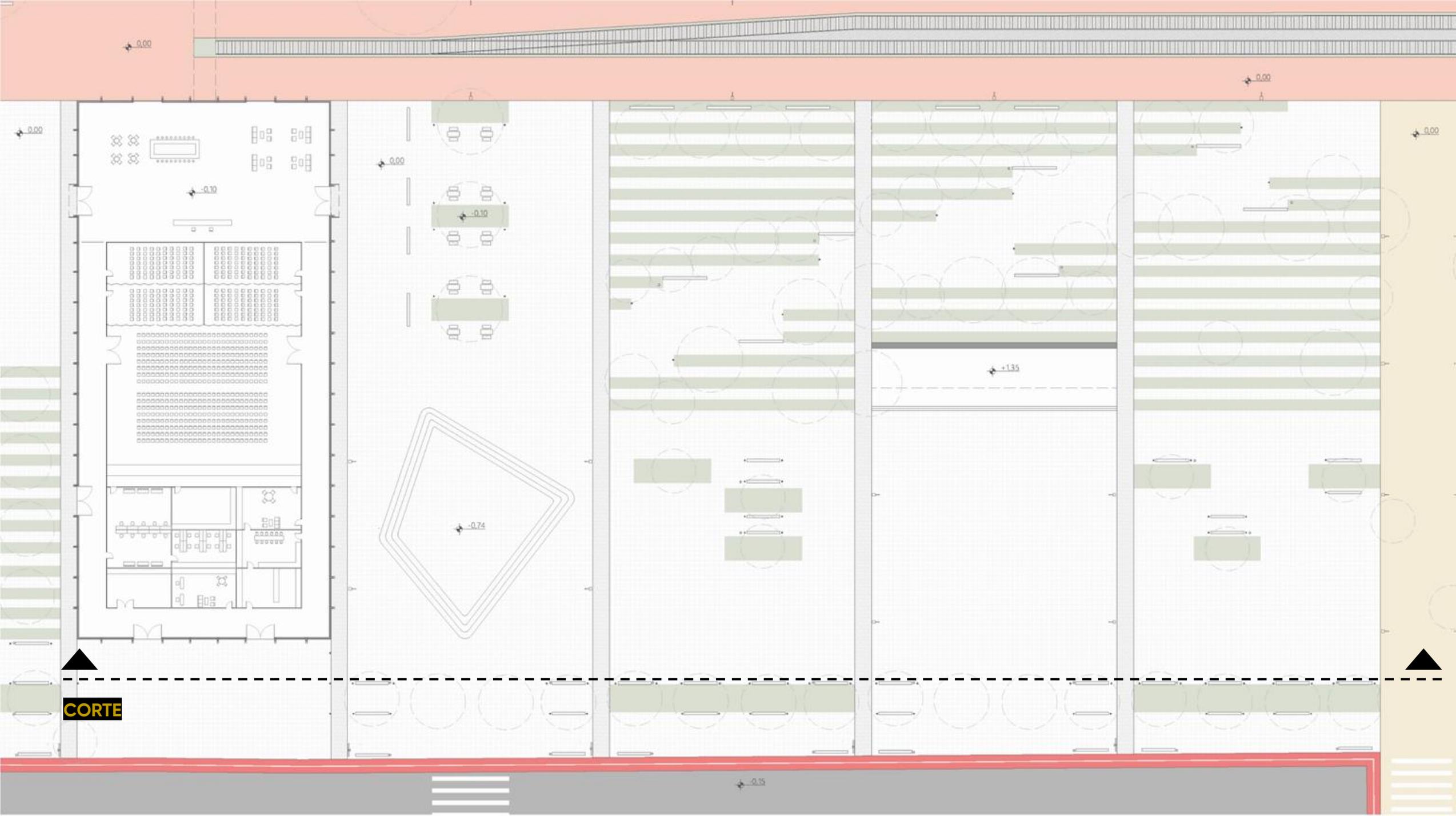


#VACINASIM

# PROJETO

## INTERVENÇÕES EDIFICAÇÕES





# CORTE SETOR MODAL

**CORTE**



**GALPÃO EVENTOS**

**GALPÃO MODAL**

**PALCO**

**MUSEU**

**EIXO  
TRANSVERSAL**



0 5 10 25





1

**PISO DRENANTE FULGET RESINADO VERMELHO**



2

**PISO DRENANTE FULGET RESINADO AMARELO**



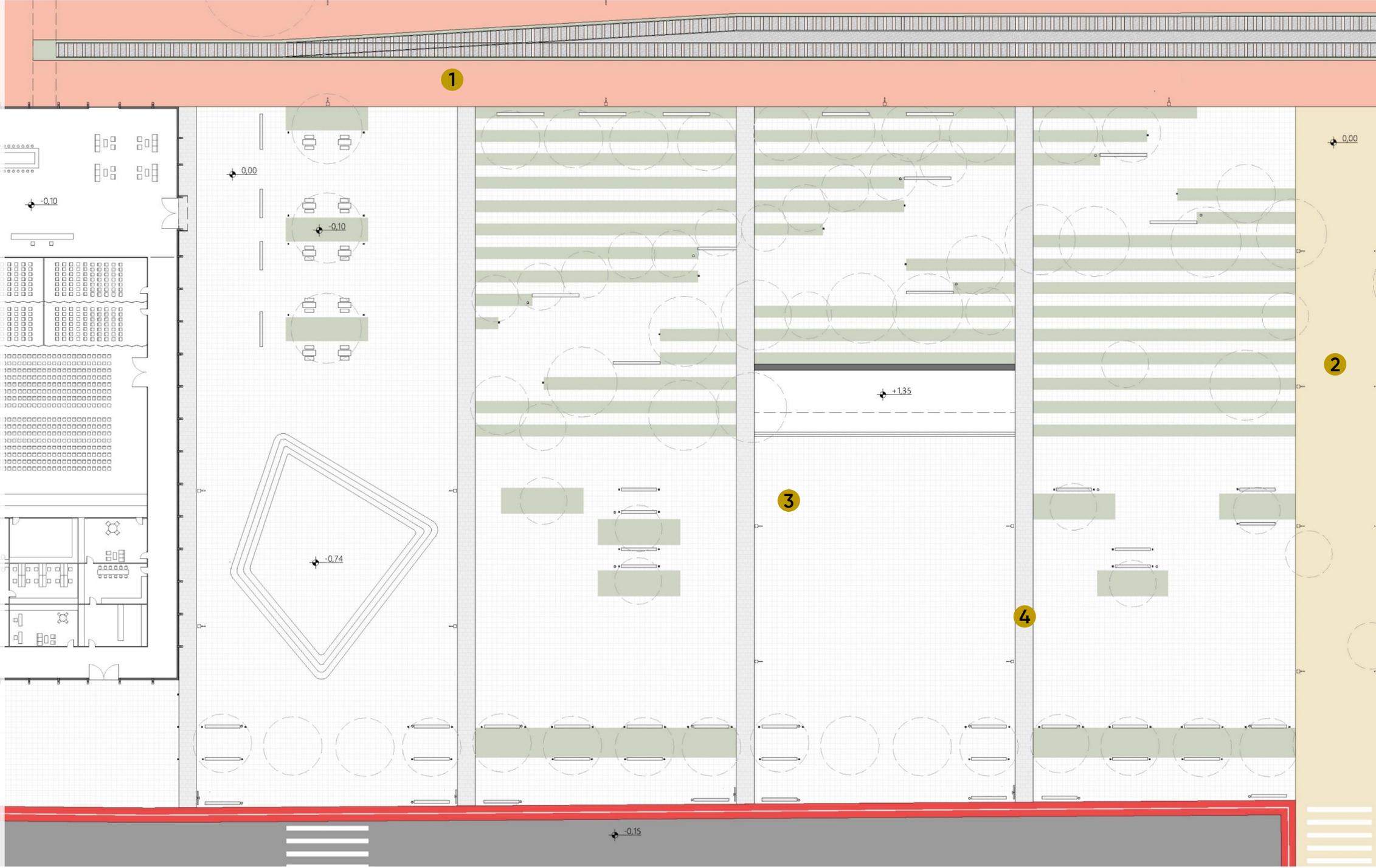
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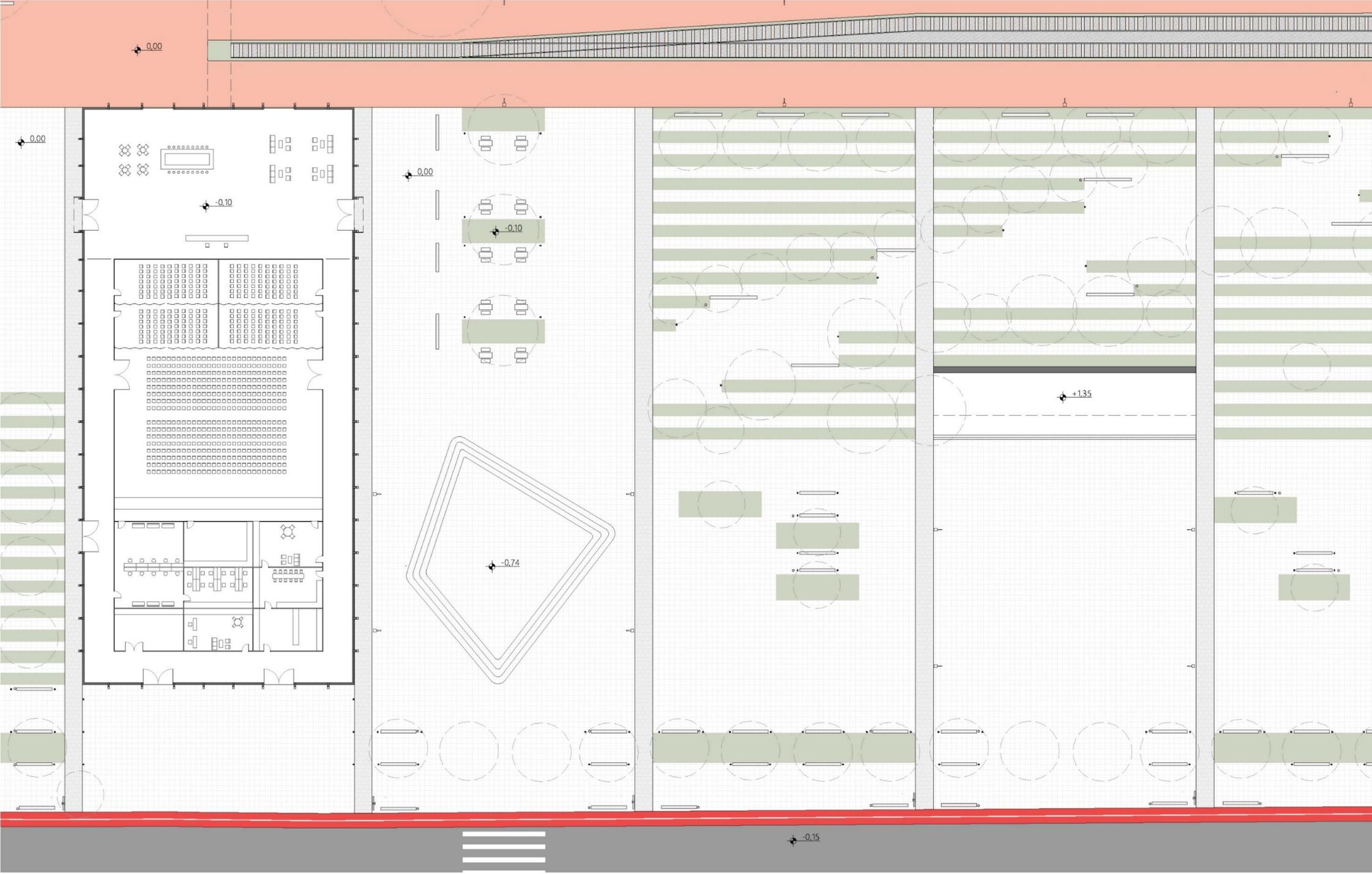
**PISO DRENANTE FULGET CIMENTÍCIO**



4

**BLOCO INTERTRAVIDO DE CONCRETO**





**BANCO EQUAL  
ESCOFET LAB**



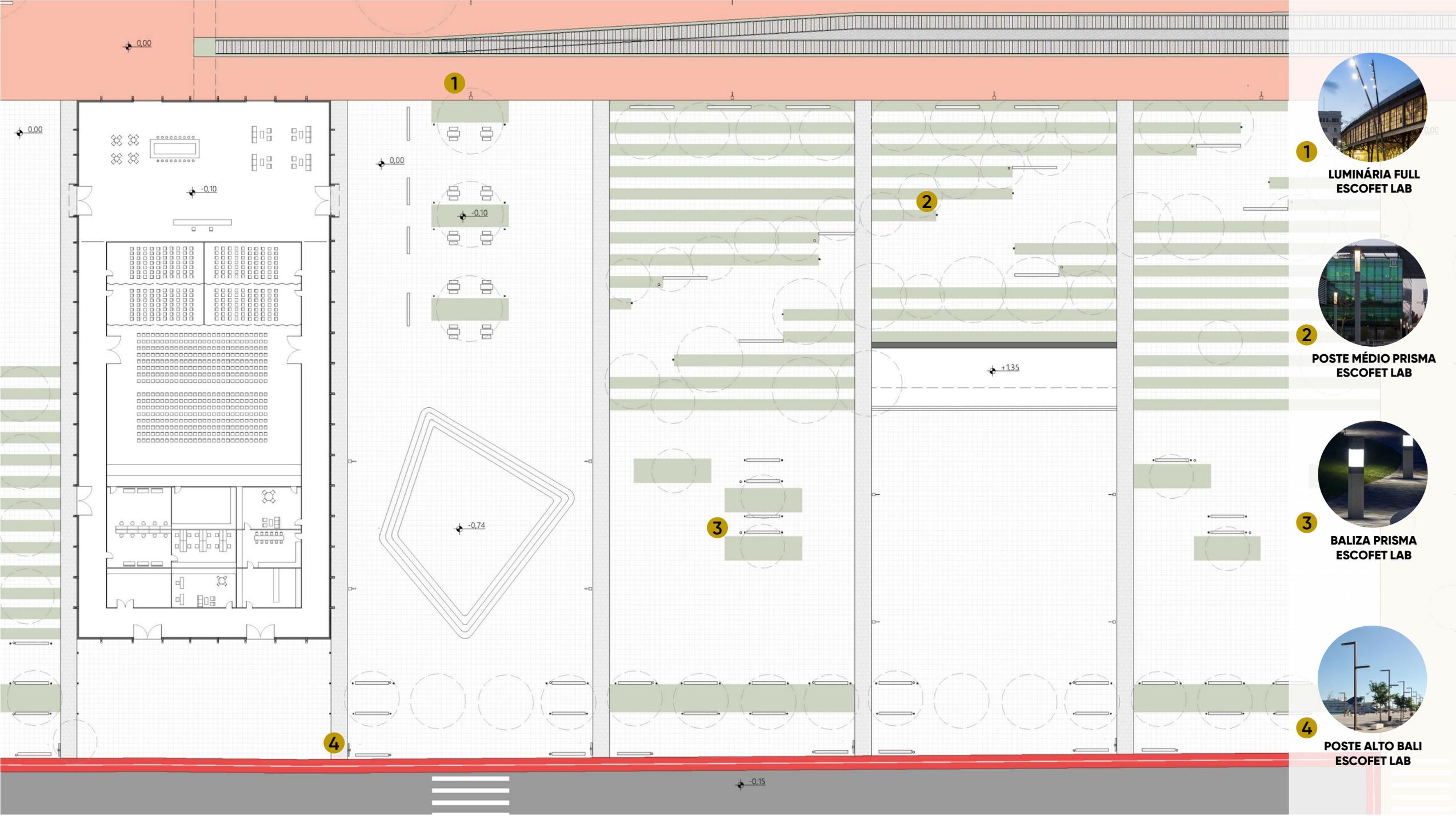
**LIXEIRA LOG  
DE LAZZARI**



**BEBEDOURO TRAÇO A1  
IETA DESIGN**



**BANCO E MESA PRIMA  
ESCOFET LAB**



1

**LUMINÁRIA FULL ESCOFET LAB**



2

**POSTE MÉDIO PRISMA ESCOFET LAB**



3

**BALIZA PRISMA ESCOFET LAB**



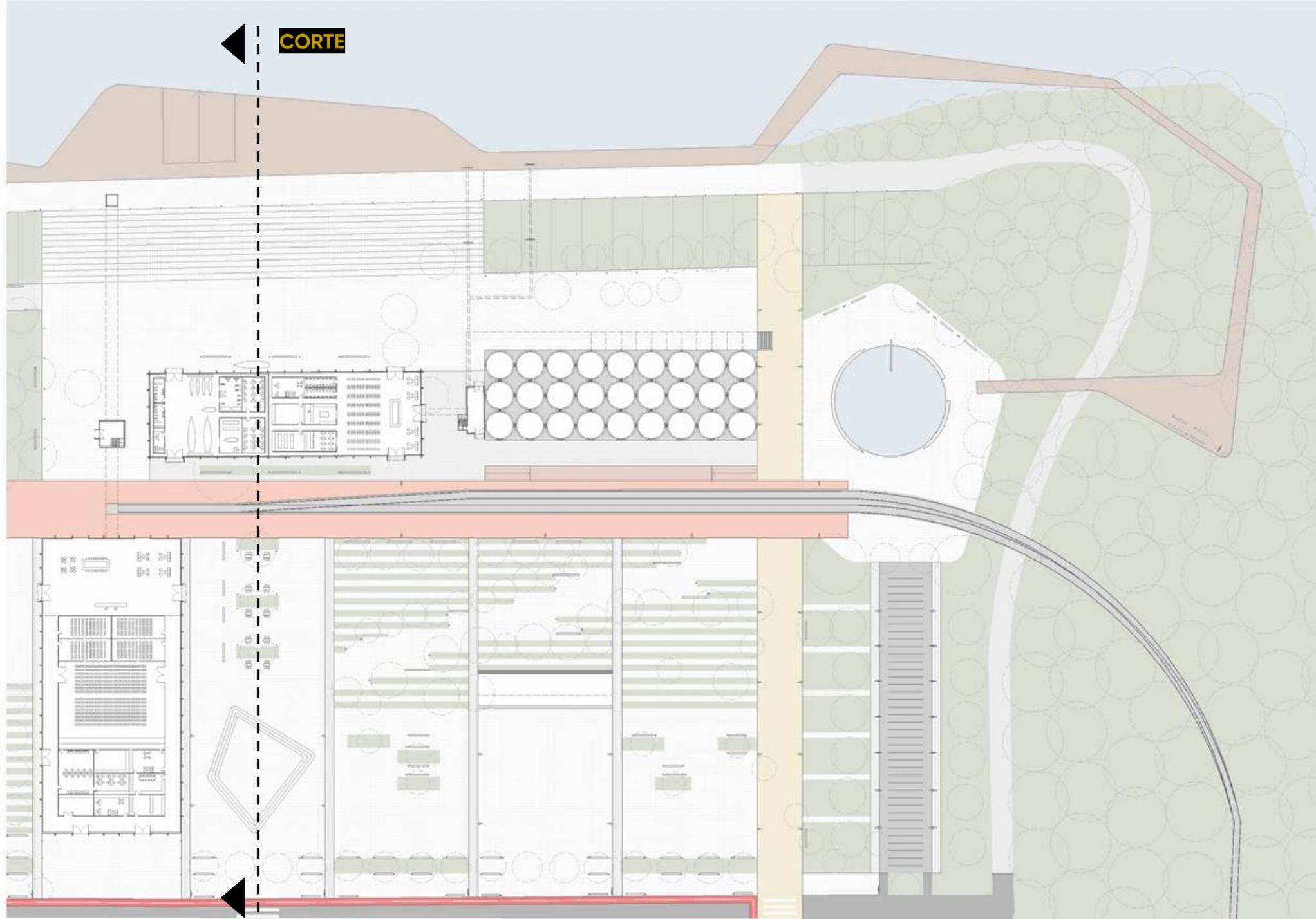
4

**POSTE ALTO BALI ESCOFET LAB**

**PROJETO**

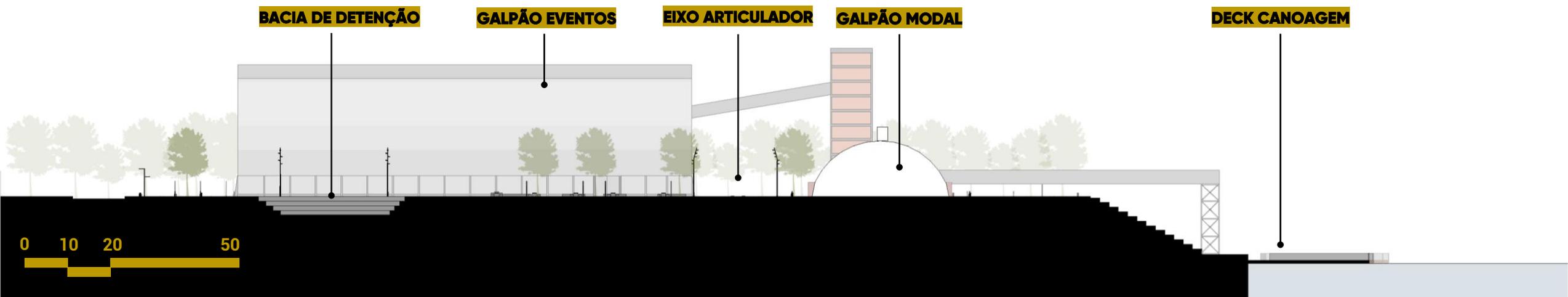
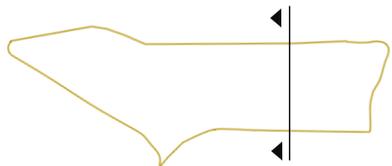
**APROXIMAÇÃO**

**SETOR 1**



# CORTE SETOR 1

## CORTE BACIA DE DETENÇÃO



**SETOR 2**



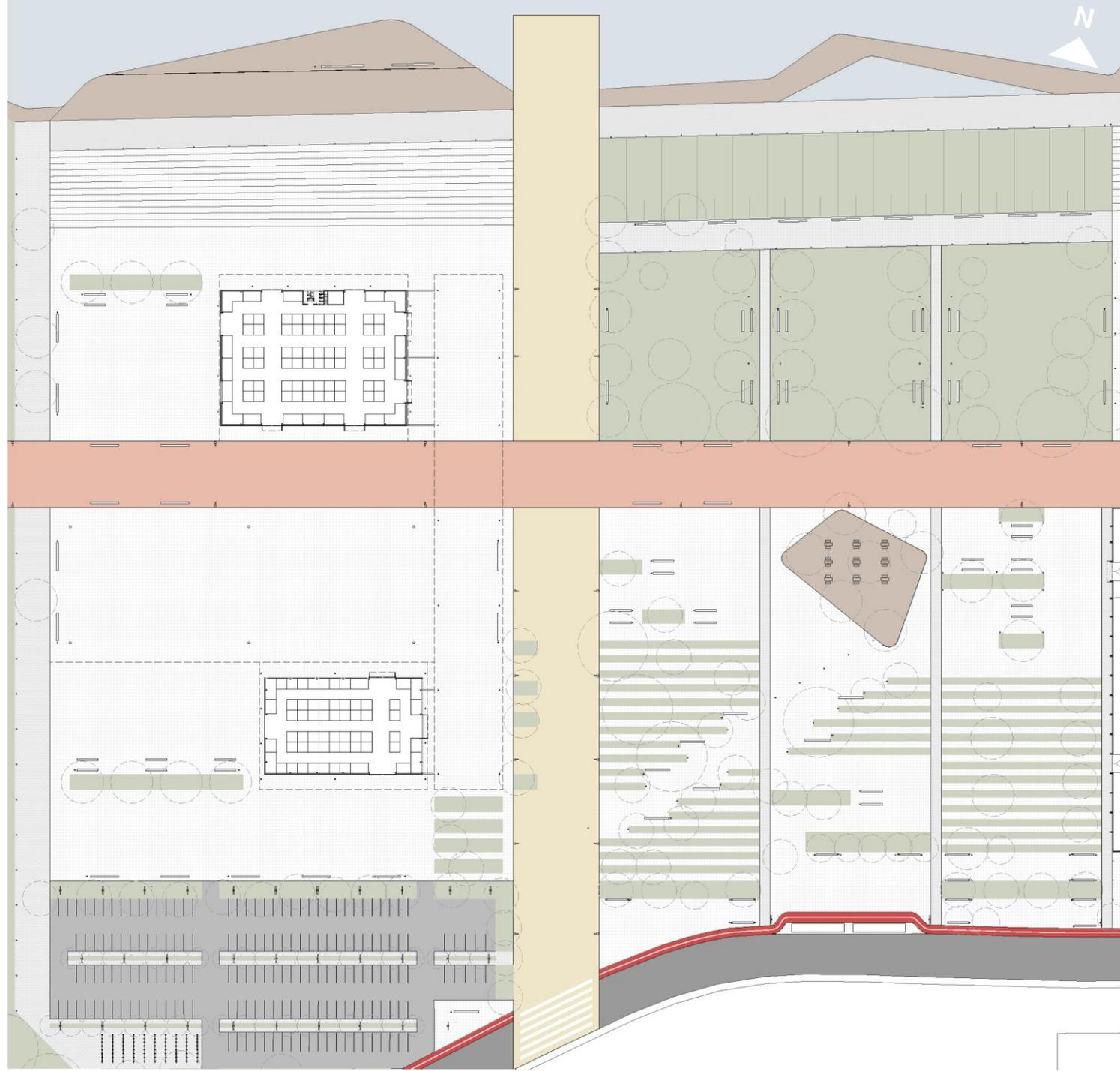
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# PROJETO

## APROXIMAÇÃO

### SETOR 2

#### Estar Feiras

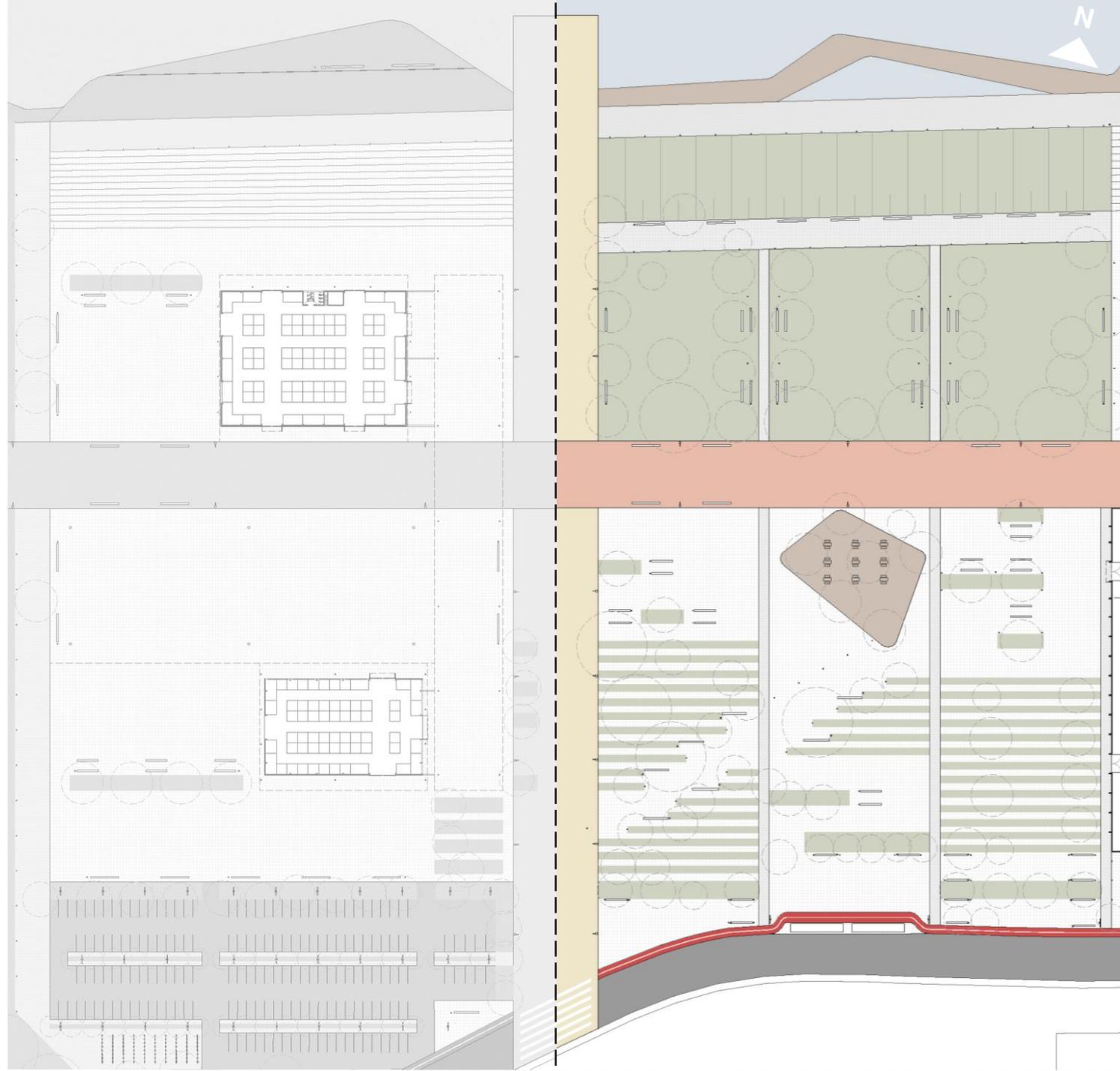


# PROJETO

## APROXIMAÇÃO

### SETOR 2

#### Estar

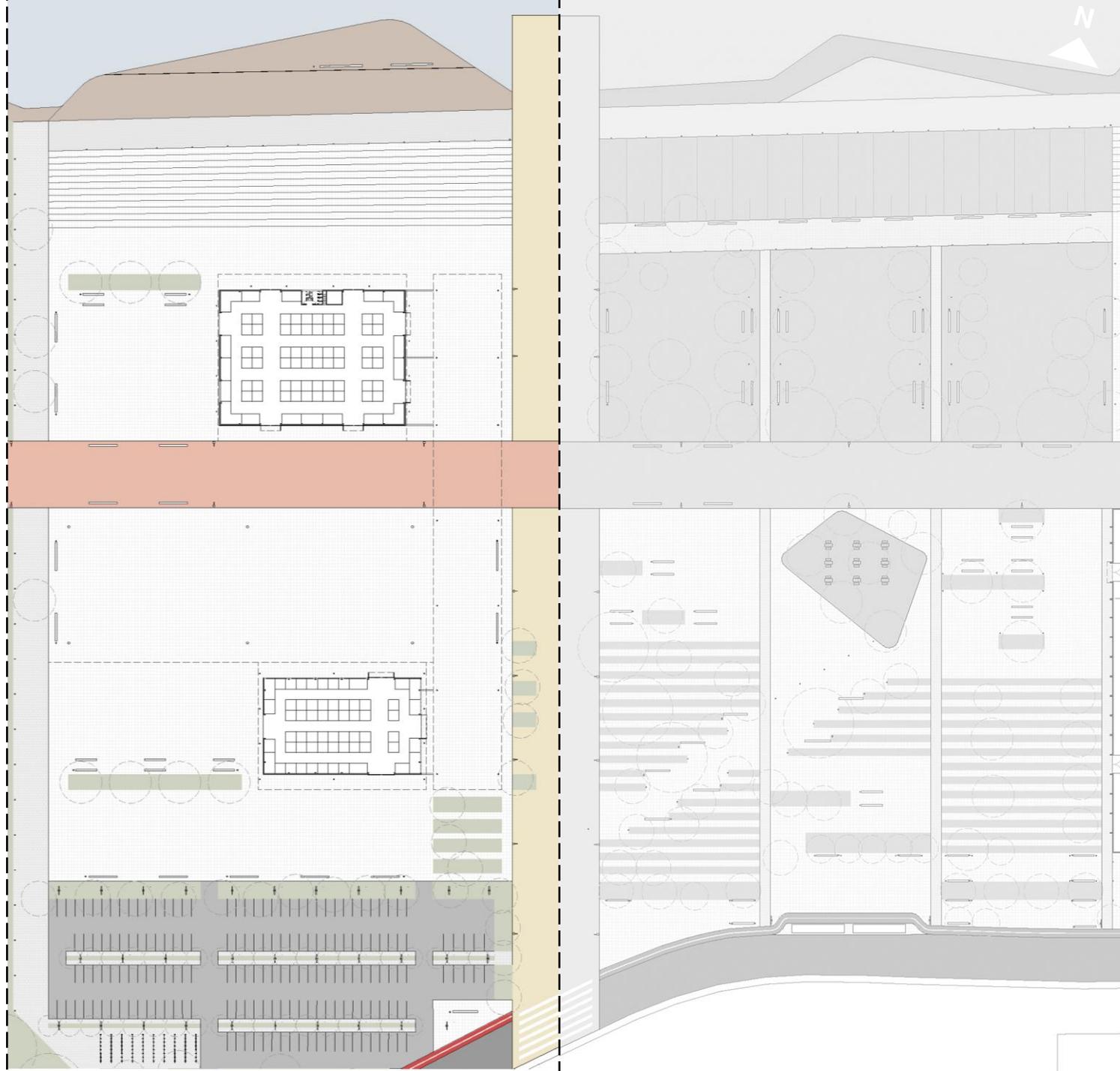


# PROJETO

## APROXIMAÇÃO

### SETOR 2

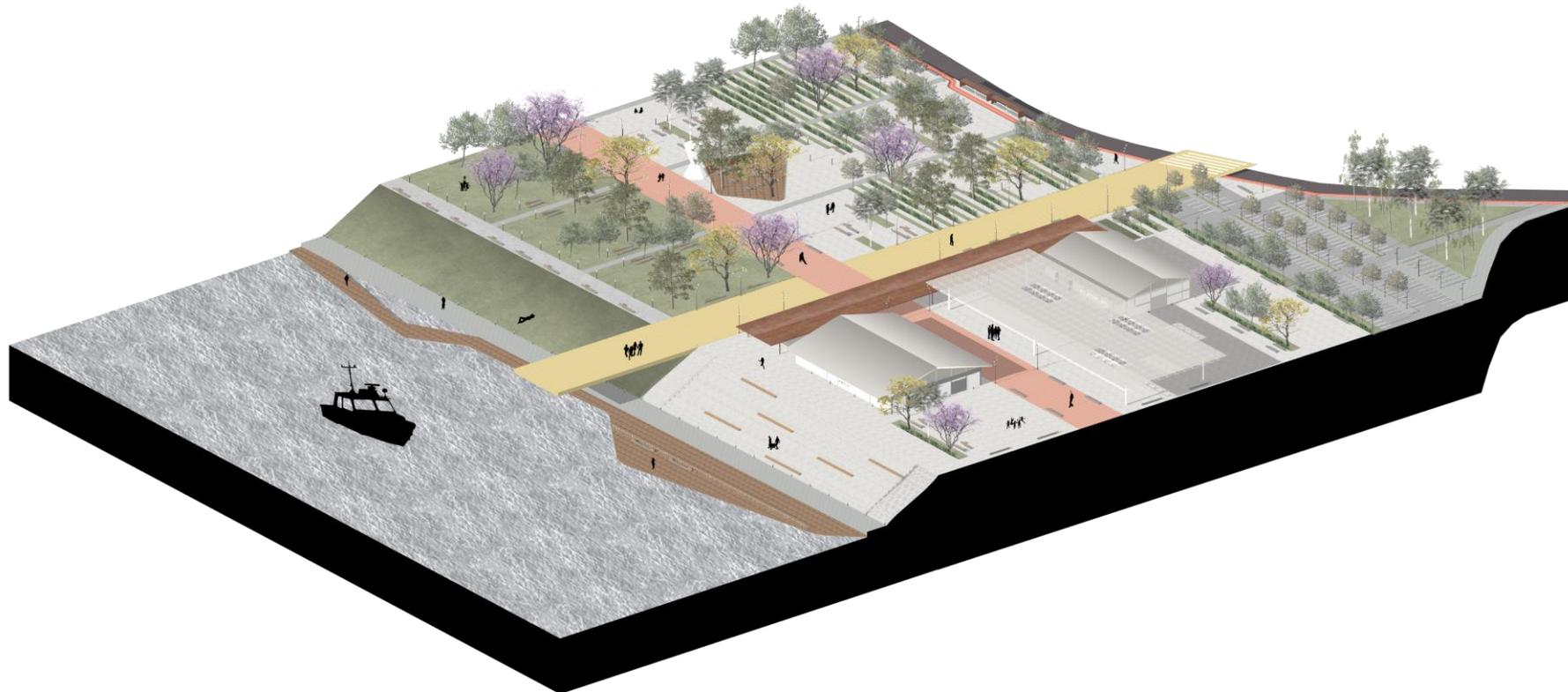
#### Feiras



**PROJETO**

**APROXIMAÇÃO**

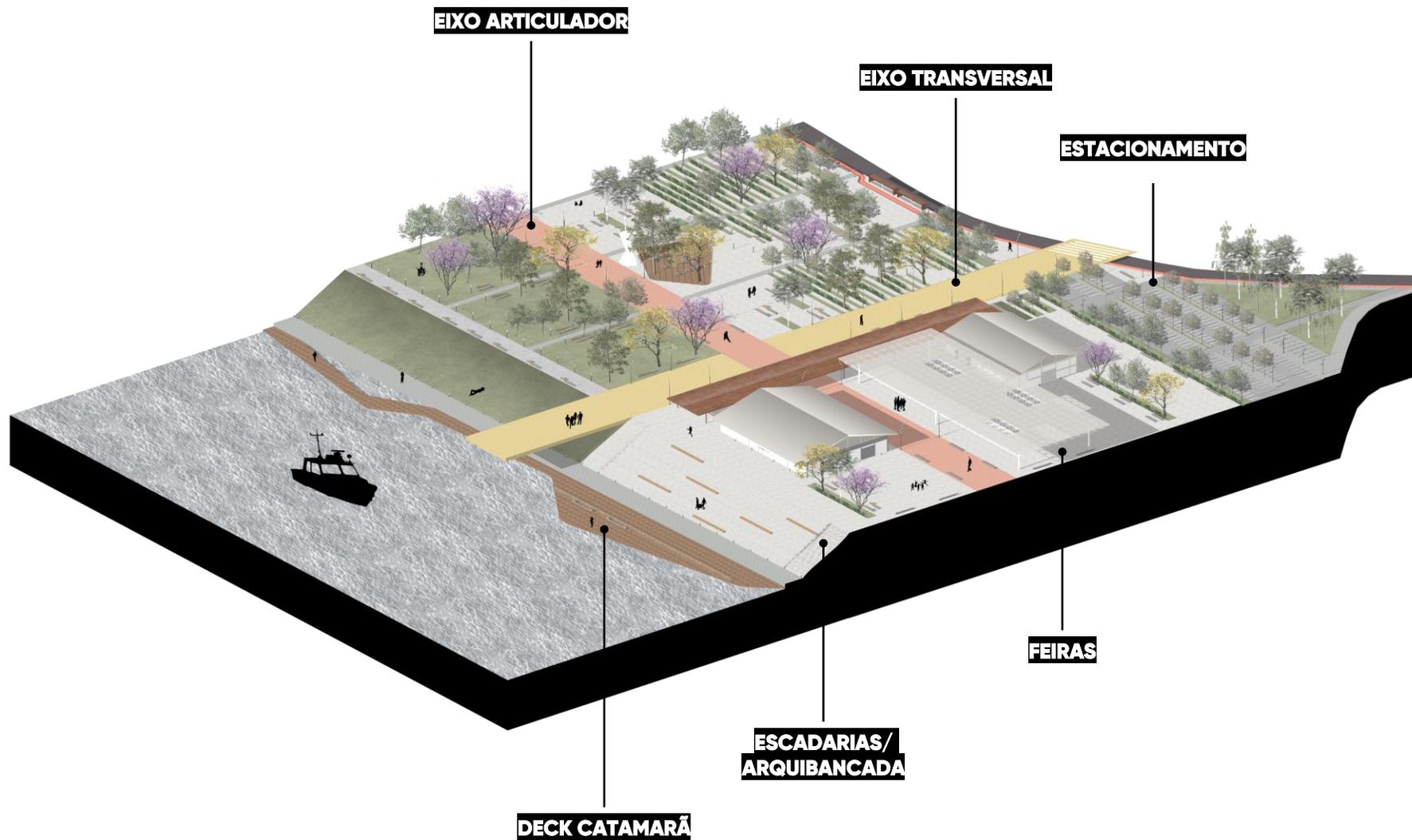
**SETOR 2**



# PROJETO

## APROXIMAÇÃO

### SETOR 2

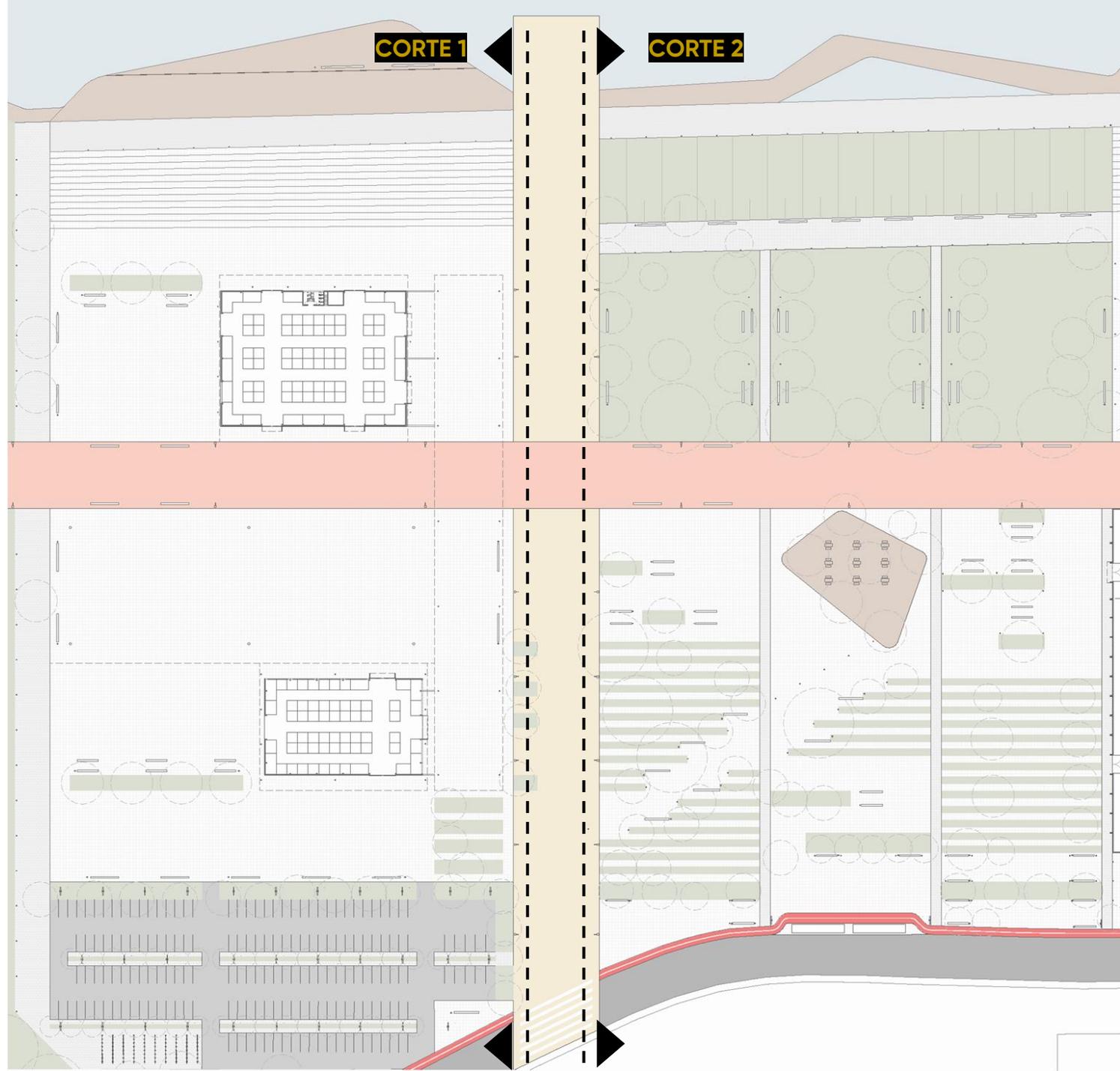




**PROJETO**

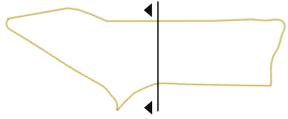
**APROXIMAÇÃO**

**SETOR 2**



# CORTES SETOR 2

## CORTE 1



**GALPÃO FEIRAS**

**COBERTURA FEIRAS**

**EIXO ARTICULADOR**

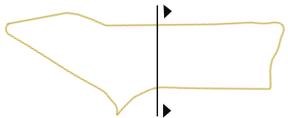
**GALPÃO FEIRAS**

**EIXO TRANSVERSAL**

**DECK CATAMARÃ**

0 10 20 50

## CORTE 2



**EIXO TRANSVERSAL**

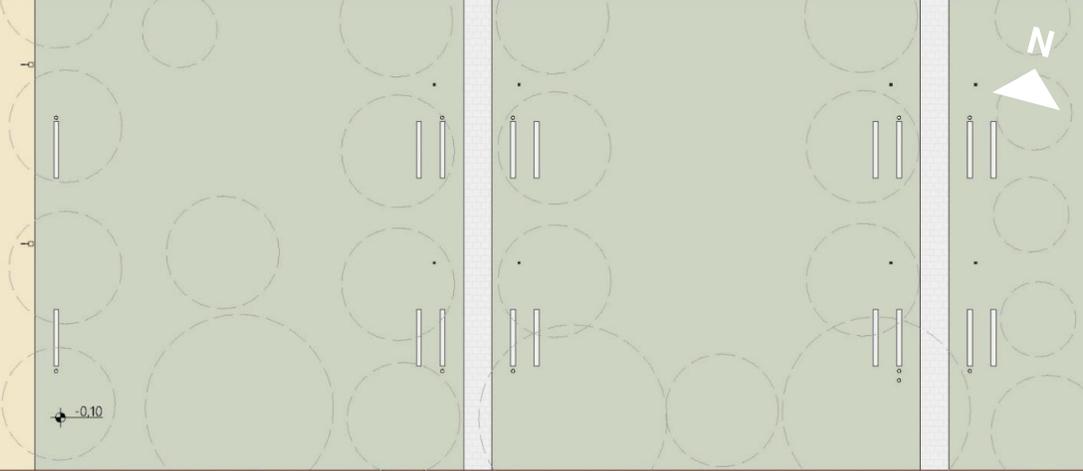
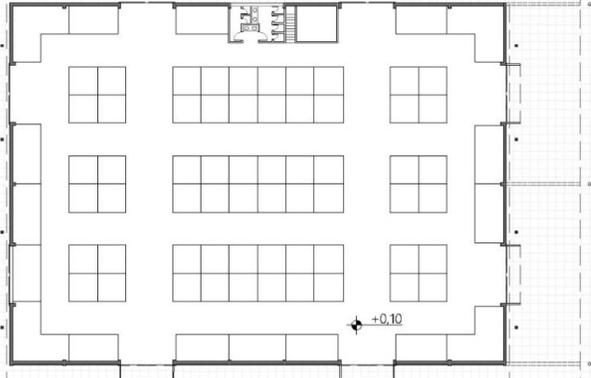
**EIXO ARTICULADOR**

**GALPÃO EVENTOS**

0 10 20 50



**SETOR FEIRAS**



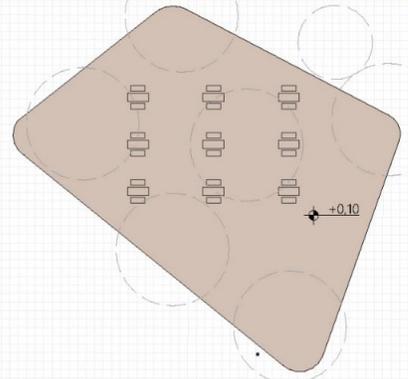
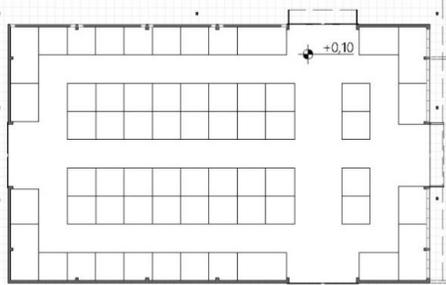
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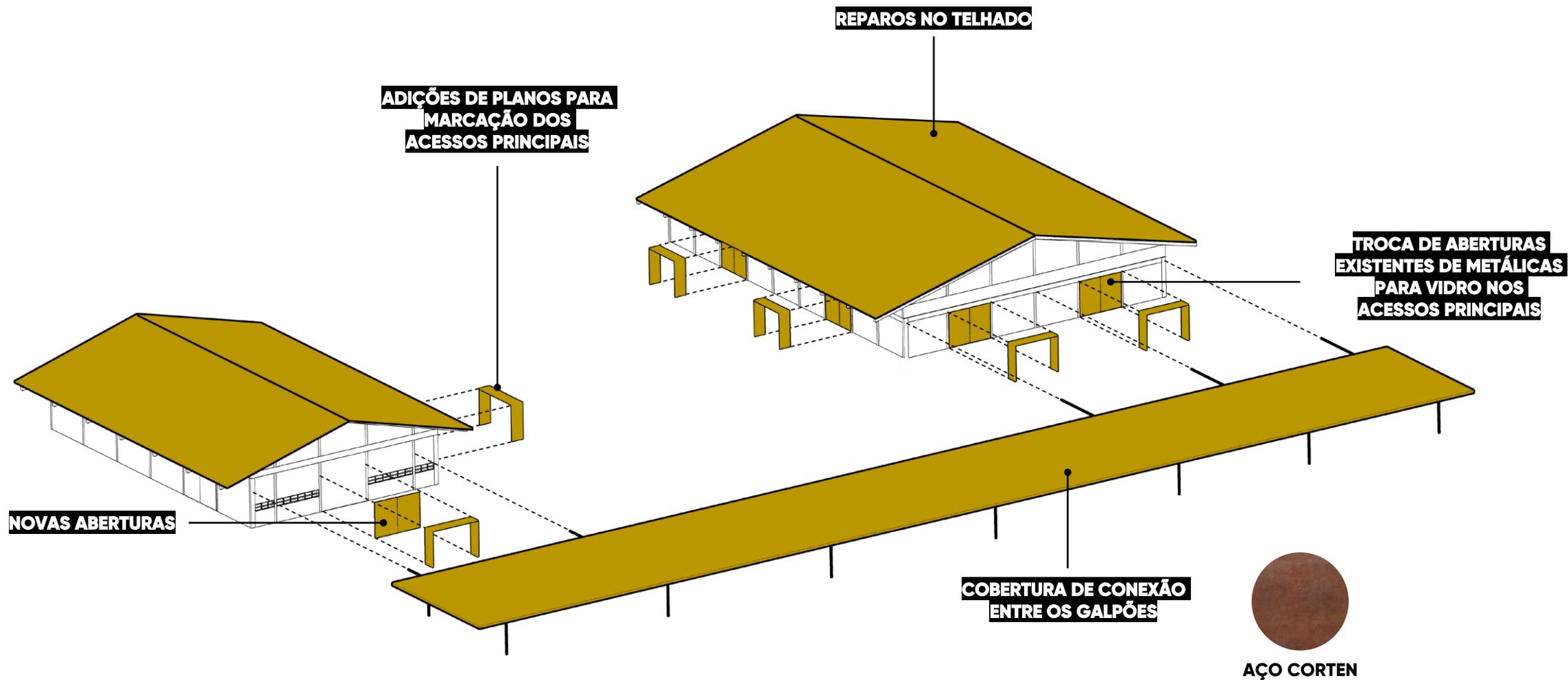
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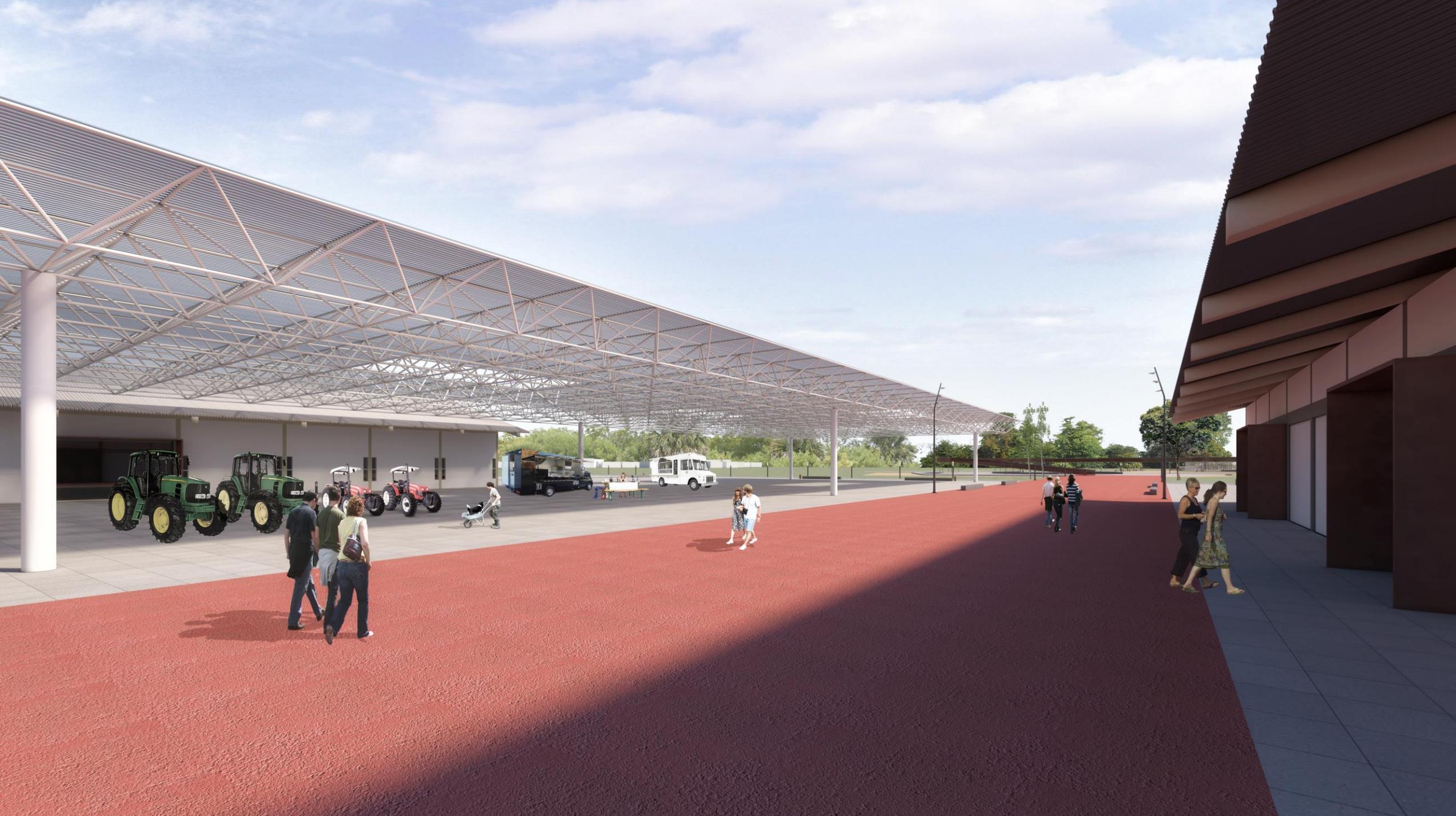




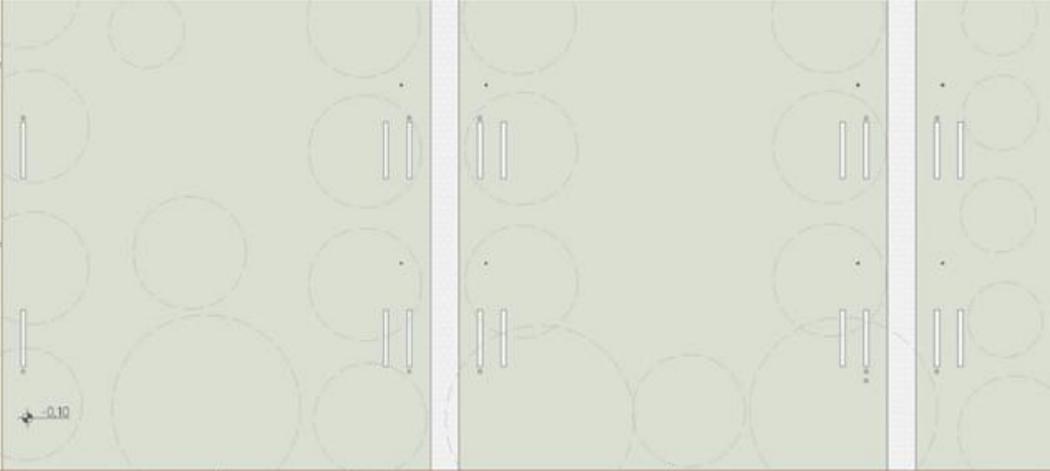
# PROJETO

## INTERVENÇÕES EDIFICAÇÕES

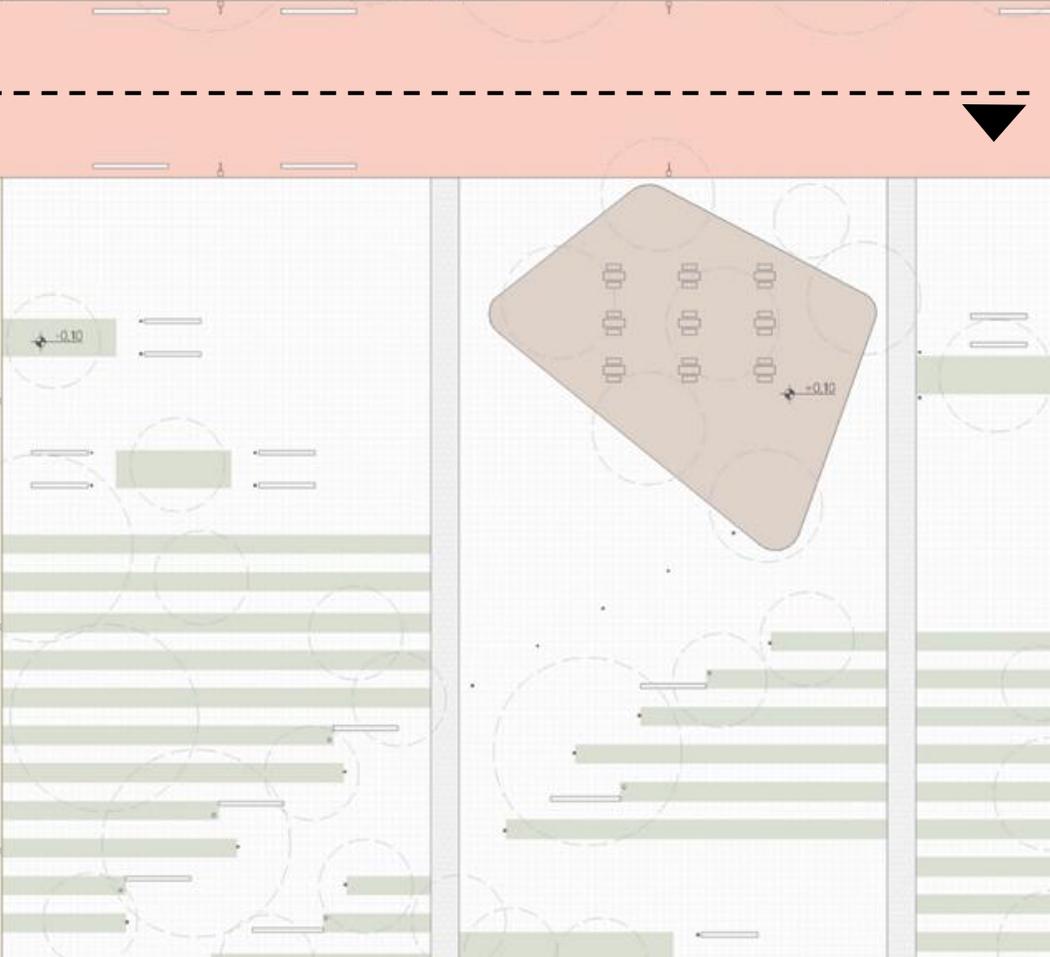
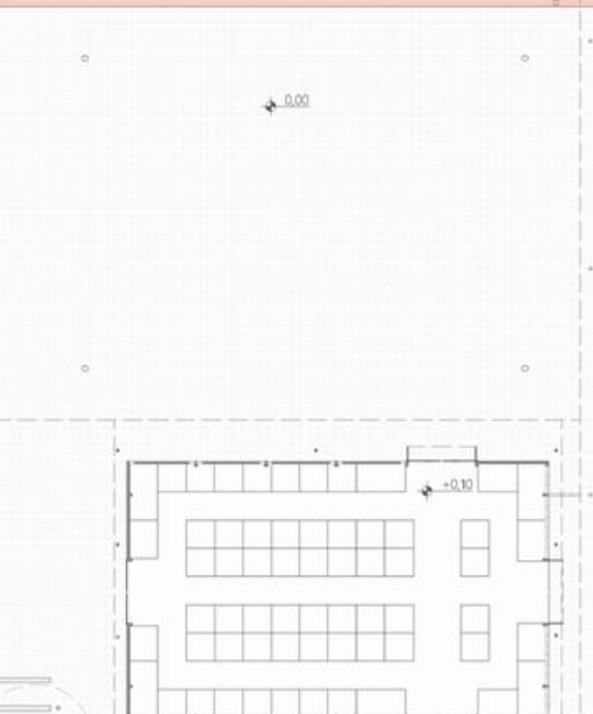
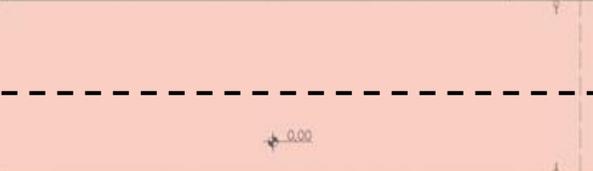




**CORTE 1**

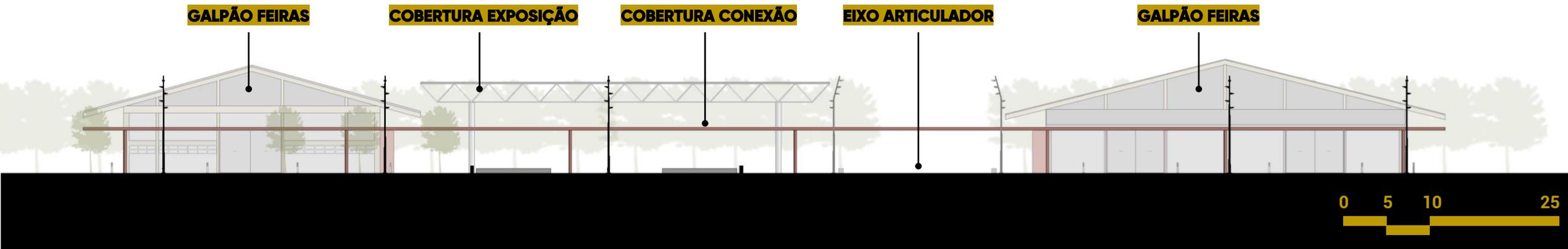
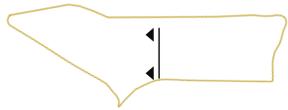


**CORTE 2**

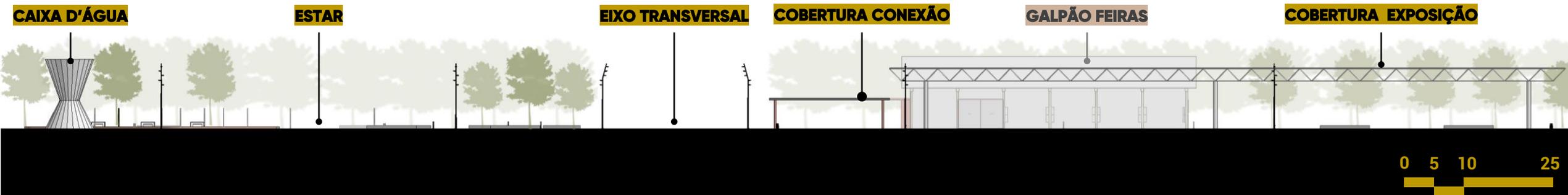


# CORTES SETOR FEIRAS

## CORTE 1



## CORTE 2





1

**PISO DRENANTE FULGET RESINADO VERMELHO**



2

**PISO DRENANTE FULGET RESINADO AMARELO**



3

**PISO DRENANTE FULGET CIMENTÍCIO**



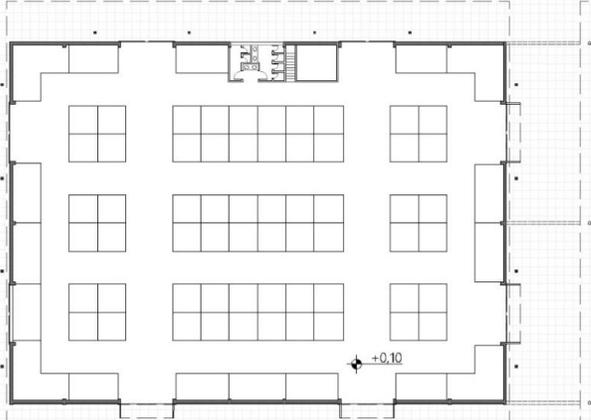
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**BLOCO INTERTRAVIDO DE CONCRETO**

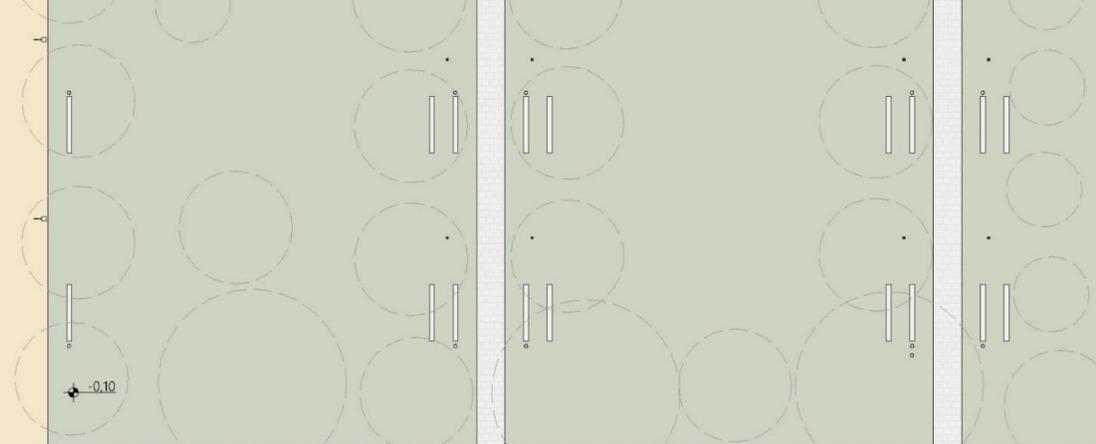


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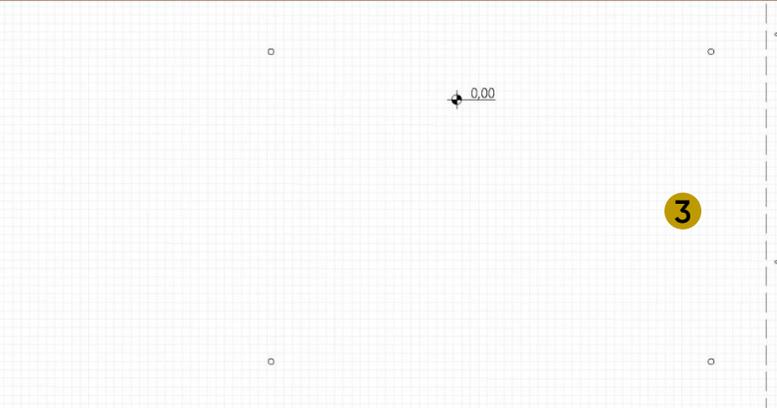
**DECK MADEIRA**



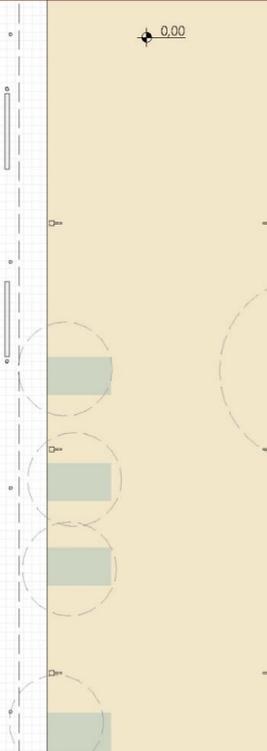
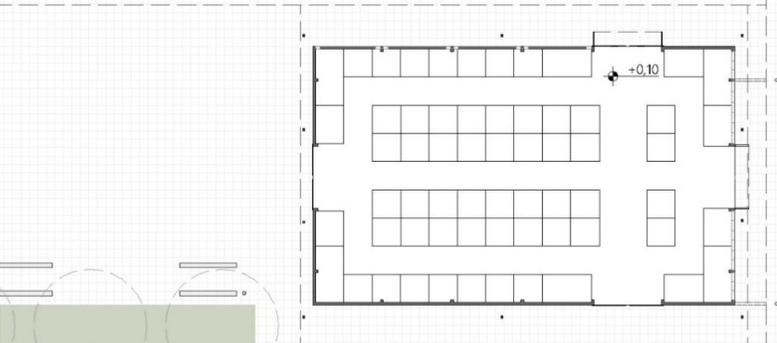
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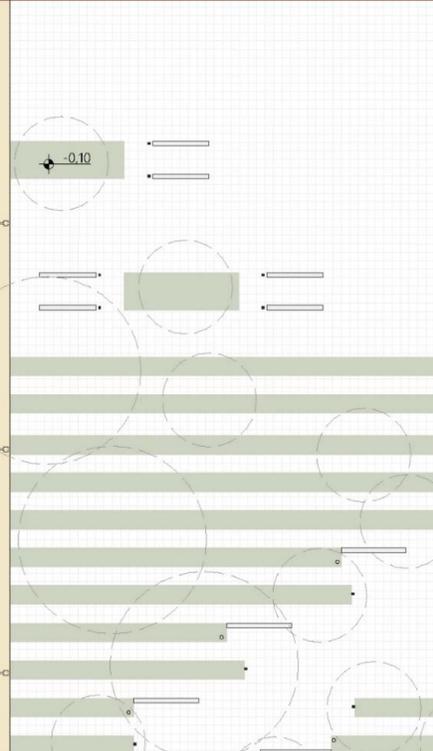
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3

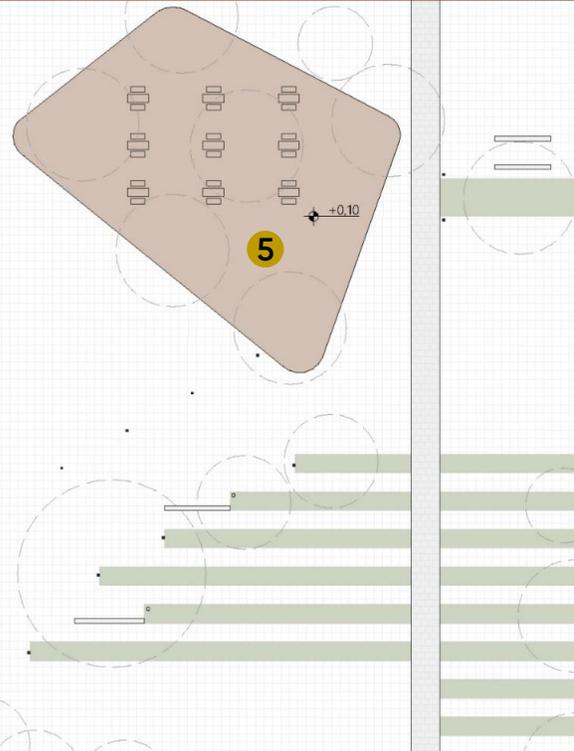


0.00



-0.10

4



5

+0.10



**BANCO IGUAL  
ESCOFET LAB**



**LIXEIRA LOG  
DE LAZZARI**



**BEBEDOURO TRAÇO A1  
IETA DESIGN**



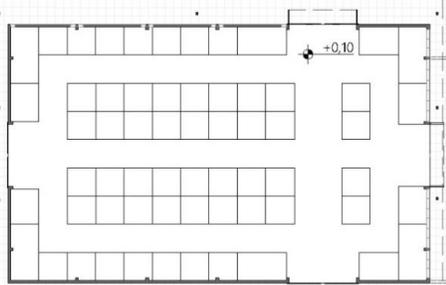
**BANCO E MESA PRIMA  
ESCOFET LAB**



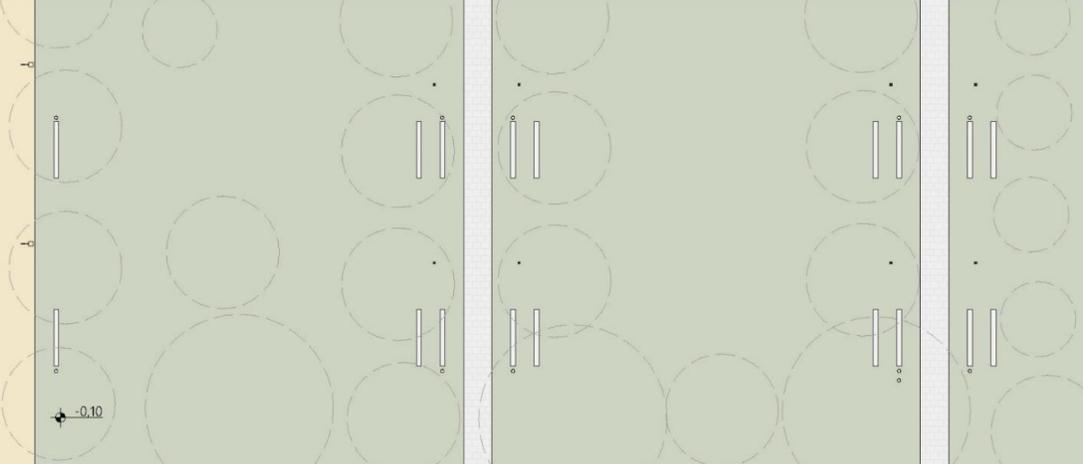
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0.00

0.00



+0.10

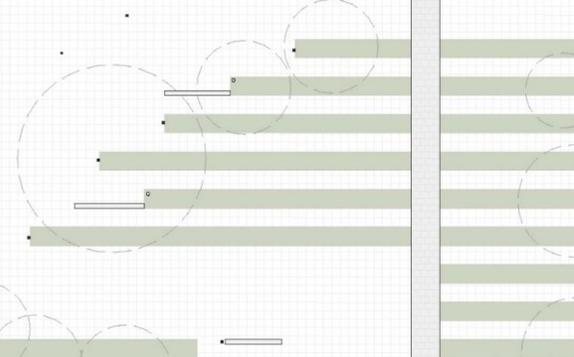
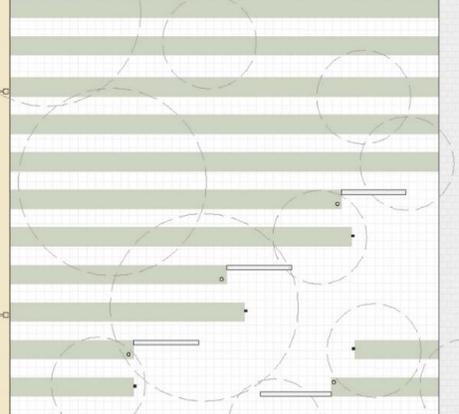
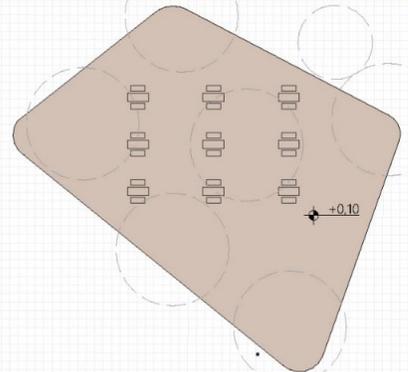


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0.00

-0.10

+0.10





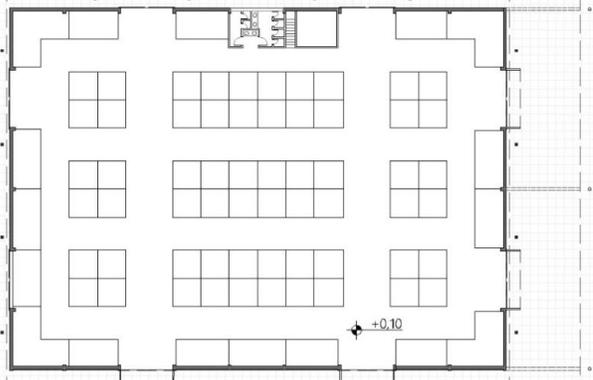
**1**  
LUMINÁRIA FULL  
ESCOFET LAB



**2**  
POSTE MÉDIO PRISMA  
ESCOFET LAB



**3**  
BALIZA PRISMA  
ESCOFET LAB



**1**

0.00

0.00

-0.10

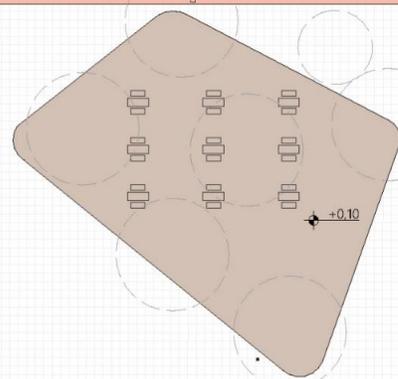
0.00

-0.10

**3**

+0.10

**2**



SETOR 3

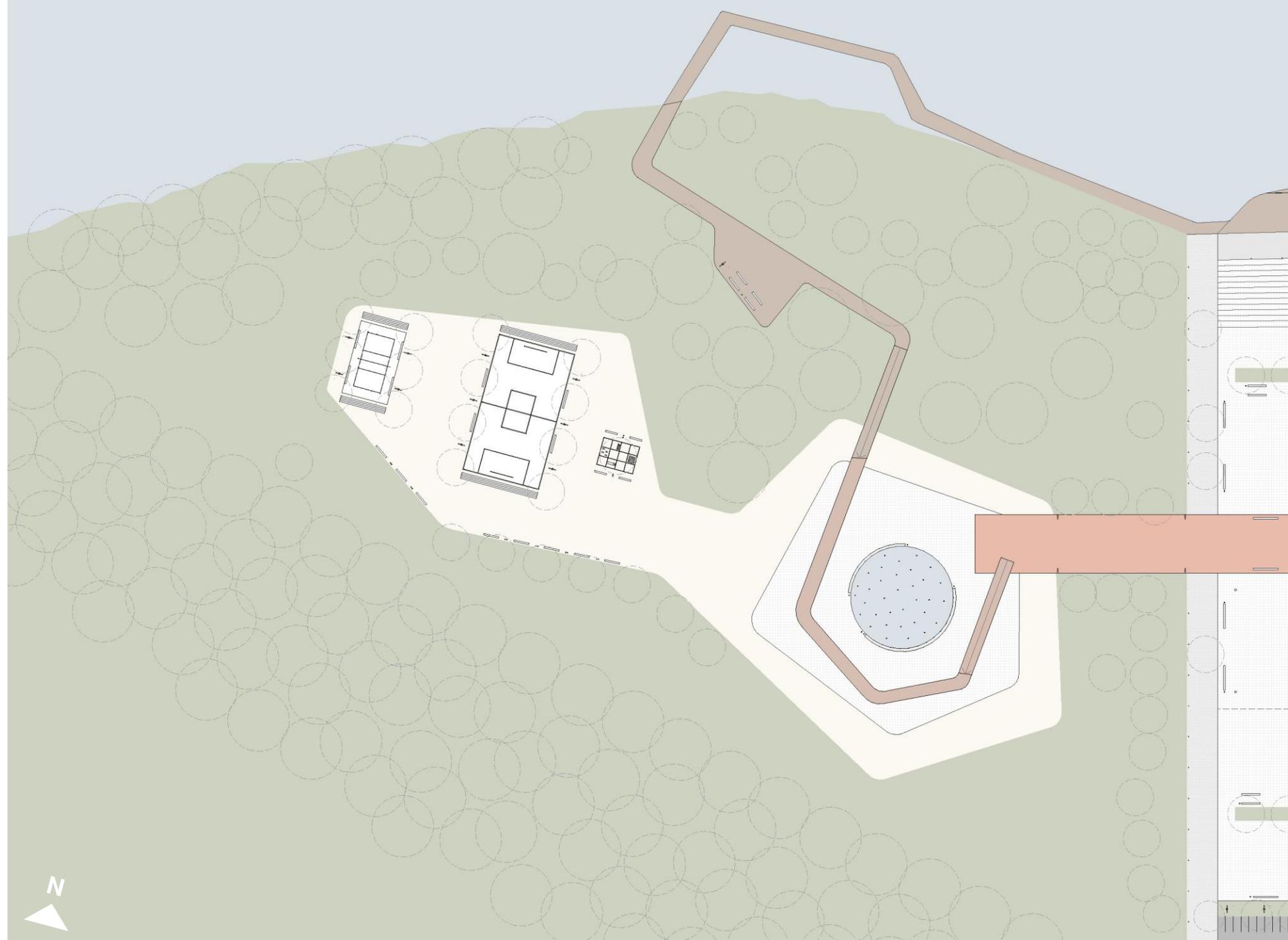


# PROJETO

## APROXIMAÇÃO

### SETOR 3

### Diversão

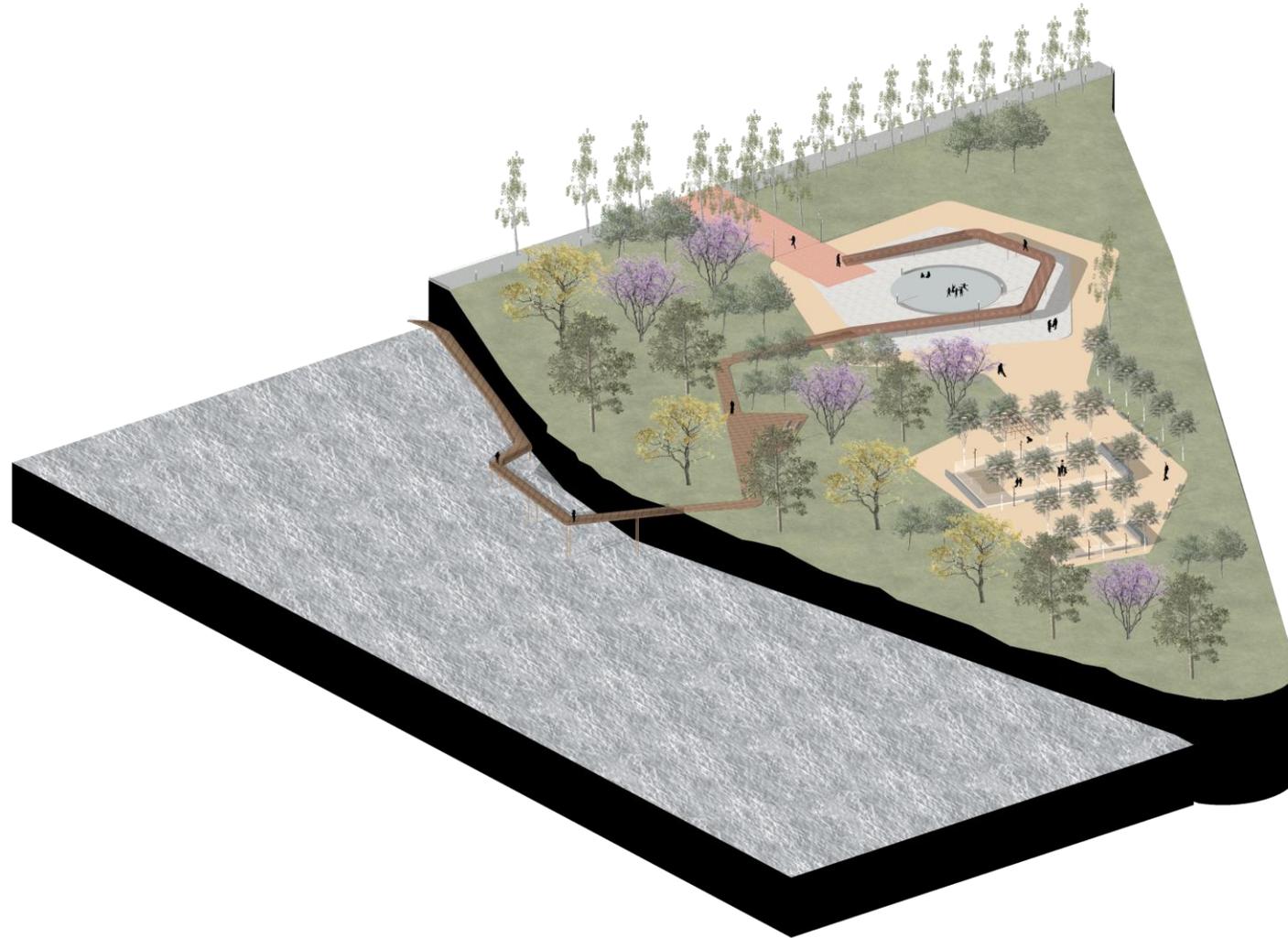


**PROJETO**

**APROXIMAÇÃO**

**SETOR 3**

**Diversão**

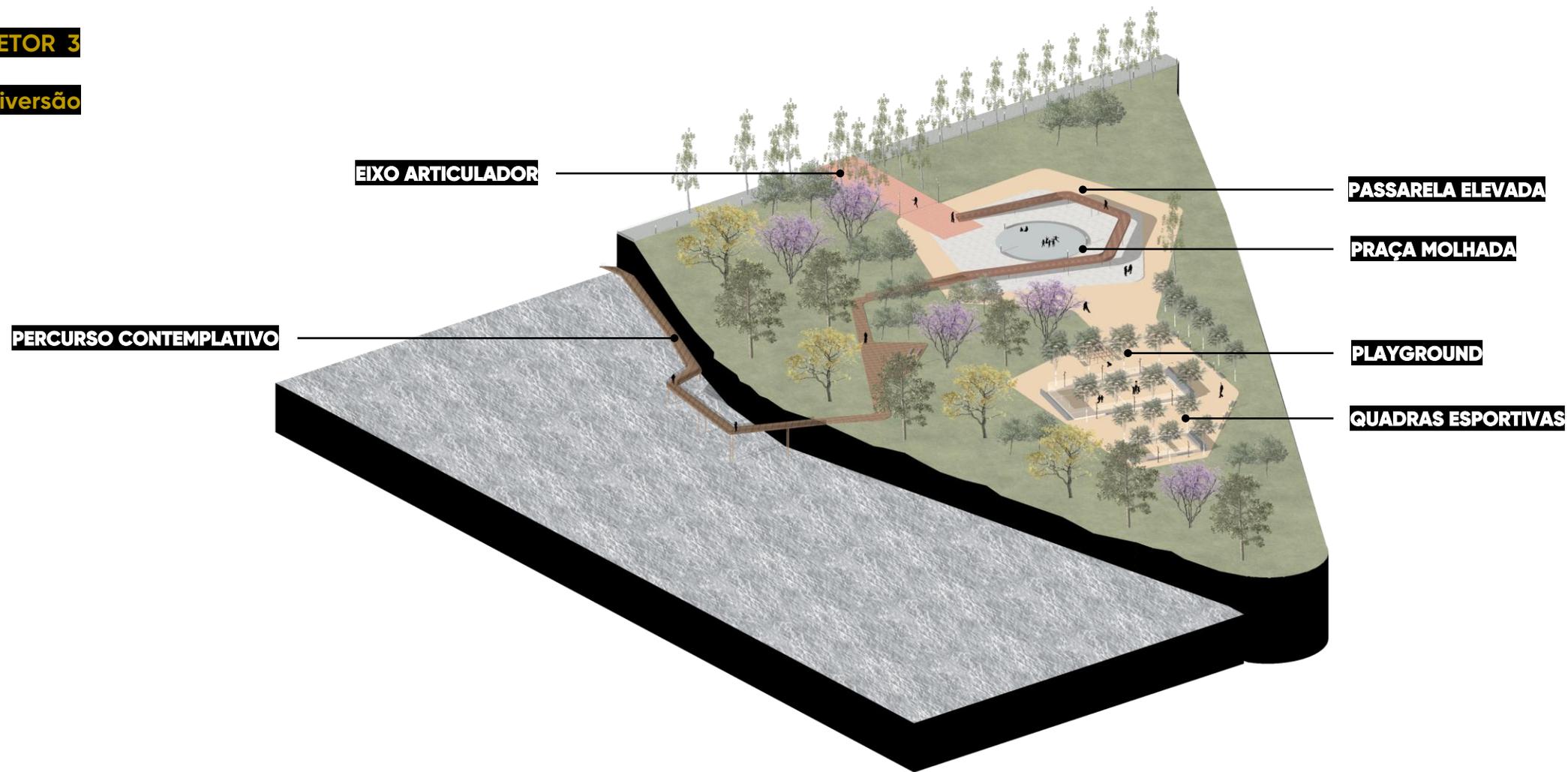


# PROJETO

## APROXIMAÇÃO

SETOR 3

Diversão

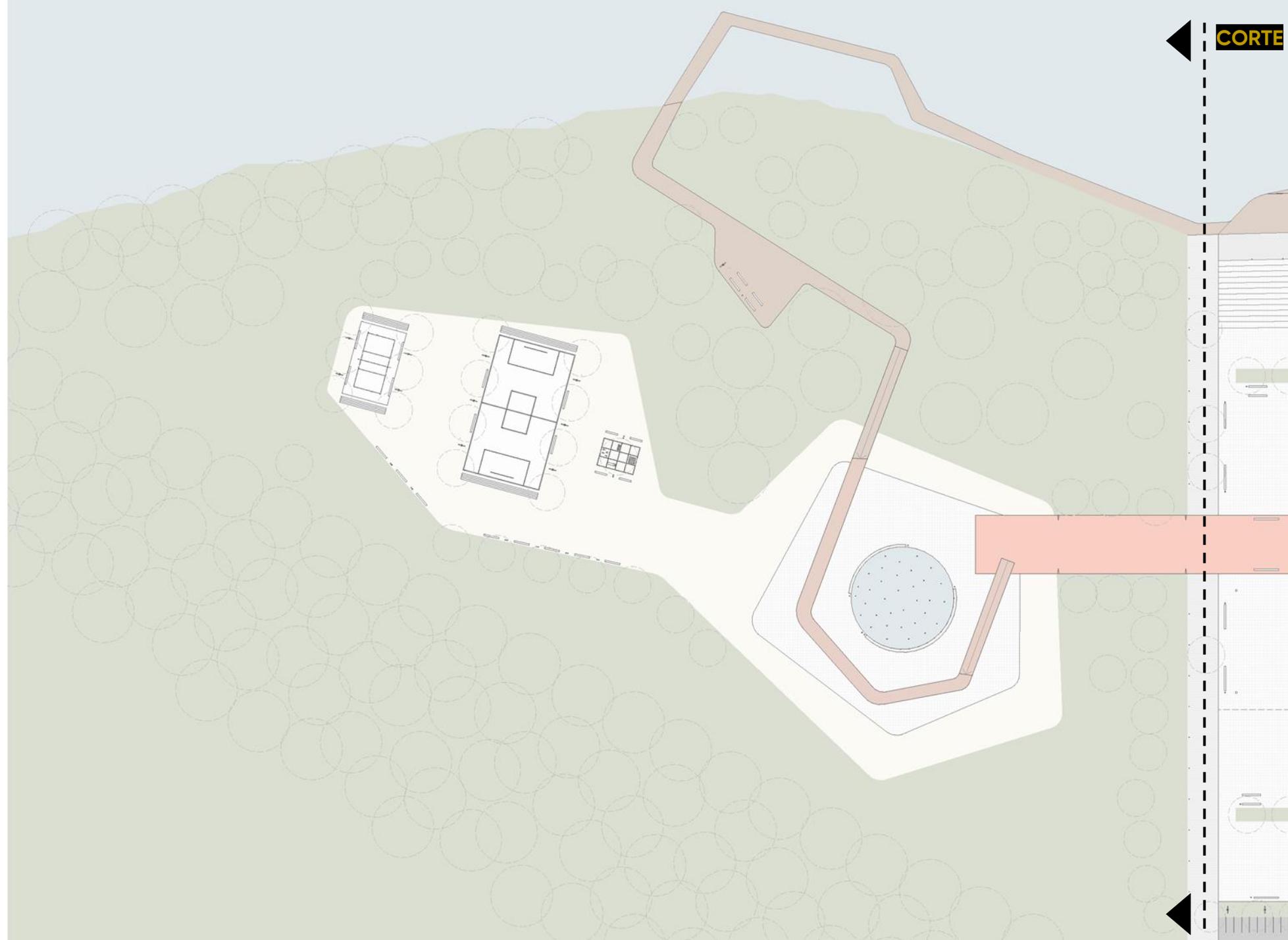


**PROJETO**

**APROXIMAÇÃO**

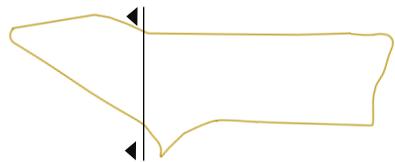
**SETOR 3**

**Diversão**



# CORTE SETOR 3

## CORTE TRANSVERSAL







**RUA AUGUSTO FREDERICO MARKUS**

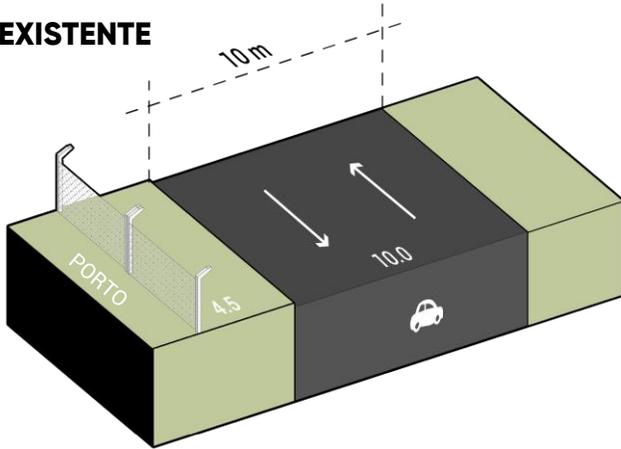
# PROJETO

## REQUALIFICAÇÃO VIÁRIA

### RUA AUGUSTO FREDERICO MARKUS



EXISTENTE



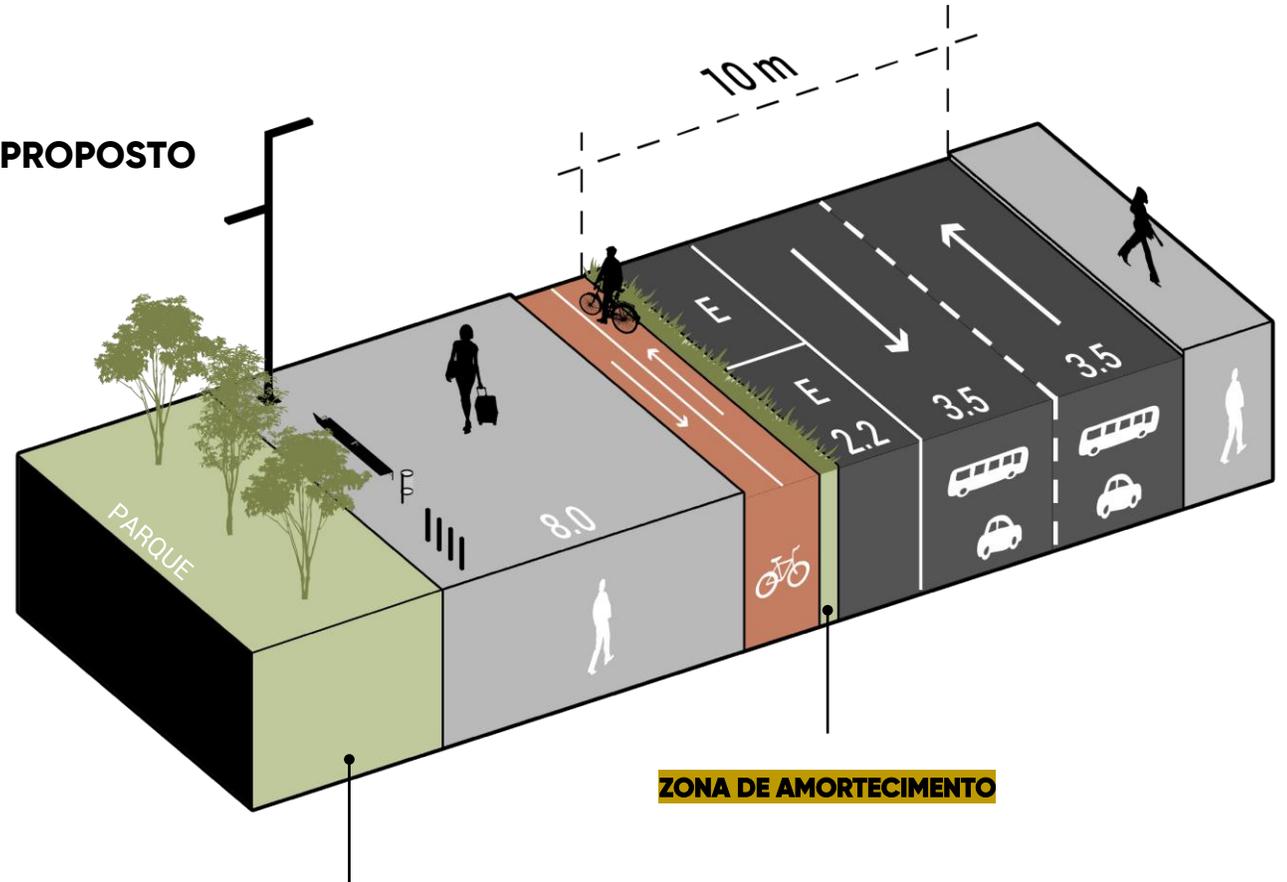
**01** REMODELAÇÃO DO PERFIL VIÁRIO COM FAIXA DE ESTACIONAMENTO JUNTO AO PARQUE

**02** IMPLANTAÇÃO DE CICLOFAIXAS BIDIRECIONAIS JUNTO AO MEIO FIO COM ZONA DE AMORTECIMENTO

**03** PAVIMENTAÇÃO DAS CALÇADAS

**04** AMPLIAÇÃO DA CALÇADA JUNTO AO PARQUE COM JARDINS DE CHUVA E ZONA DE EQUIPAMENTOS

PROPOSTO



JARDIM DE CHUVA

ZONA DE AMORTECIMENTO