

BEZONNINGSSTUDIE

BIOSCOOP, AMSTELVEEN

07 september 2022





INHOUDSOPGAVE

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Matrix per beuk Meanderflat	29-33
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SCHADUWSTUDIE

Op de volgende pagina's zijn de resultaten van de schaduwstudie inzichtelijk gemaakt. Met een 3d-model wordt de bestaande situatie vergeleken met de toekomstige situatie.

De situatie is getoets cf. de TNO-norm / gemeentelijk beleid.

De eis is: ten minste 2 mogelijke bezonningsuren per dag in de periode van 19 februari – 21 oktober (gedurende 8 maanden) in midden vensterbank binnenkant raam.

Deze norm wordt alleen toegepast op gevels die zon kunnen ontvangen. Noordgevels ontvangen immers - hoogbouw of niet - nooit direct zonlicht.

De volgende data moeten cf. de norm bekeken worden:

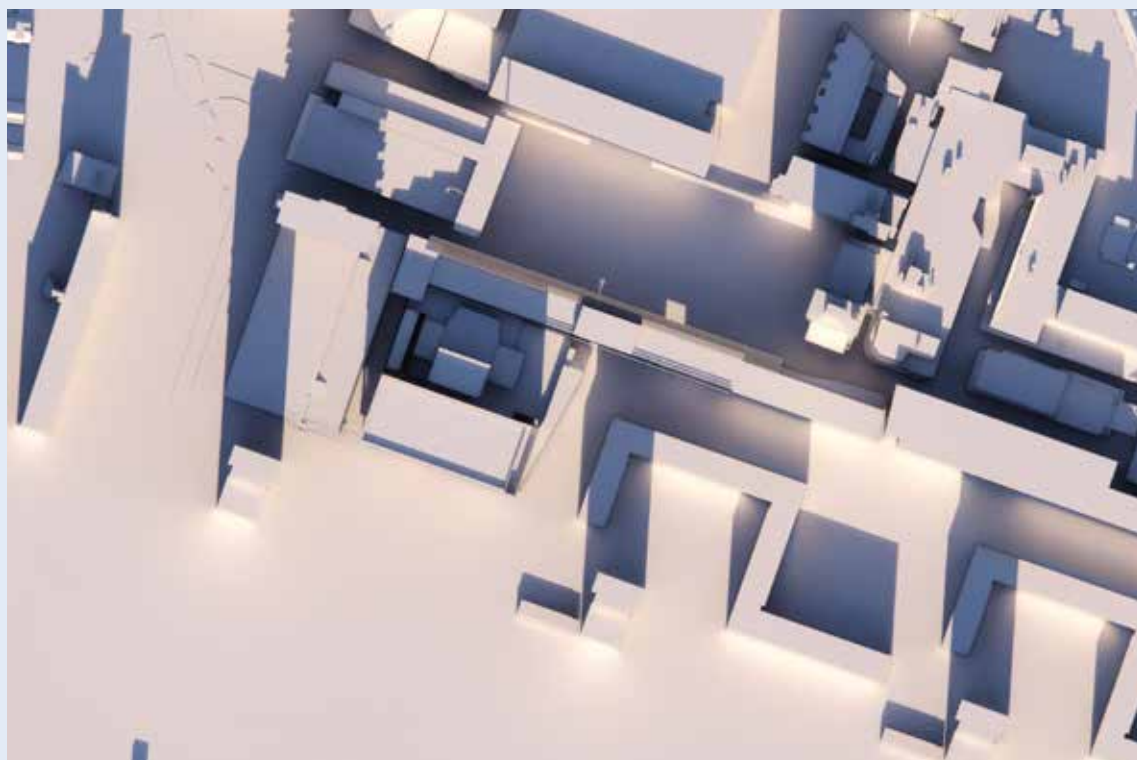
- 22 december: de dag dat de zon het laagst staat, de kortste dag;
- 19 februari; de startdatum voor de toetsing aan de norm;
- 21 maart: de dag dat de zon op 'half' staat, namelijk precies tussen de stand van 2 december en 21 juni in (zomertijd);
- 21 juni: de dag dat de zon het hoogst staat, de langste dag;
- 23 september: de dag dat de zon op 'half' staat, namelijk precies tussen de stand van 21 juni en 22 december in (wintertijd).
- 21 oktober: de einddatum voor de toetsing aan de norm.

Conform de norm dient de situatie op vaste tijdstippen in beeld te worden gebracht. Deze zijn; 09:00 h, 12:00 h, 15:00 h, 18:00h en 20:00 h. N.B in de winter is de zon al eerder onder.

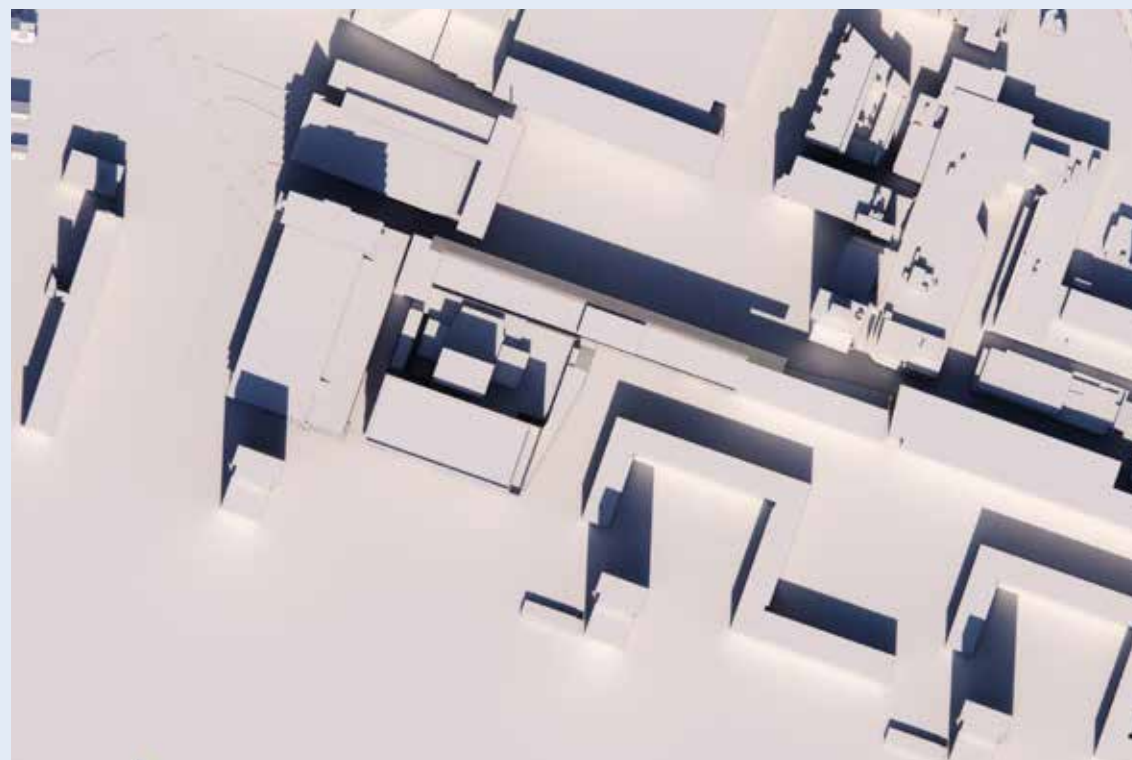
Voor de situatie aan de Meander zijn de tijdstippen na 14:00 maatgevend. De oriëntatie van het gebouw maakt dat er voor dat tijdstip geen zon op de westgevel valt. Om de bezonning voor deze appartementen goed in beeld te brengen zijn ook de tijdstippen 14:00h, 16:00h en 17:00 h onderzocht.

Op pag. 29-33 zijn in een matrix per appartement aan westzijde van de Meander het aantal zonuren per tijdstip inzichtelijk gemaakt.

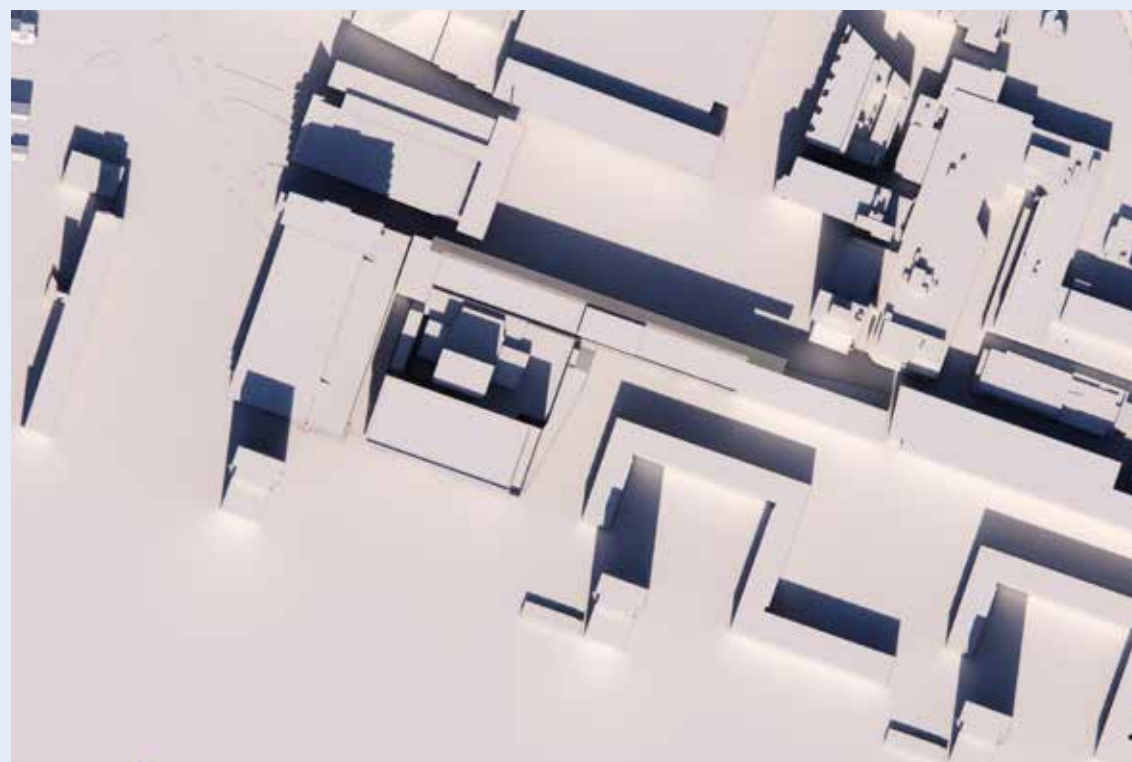
22 DECEMBER 12:00



21 MAART 12:00

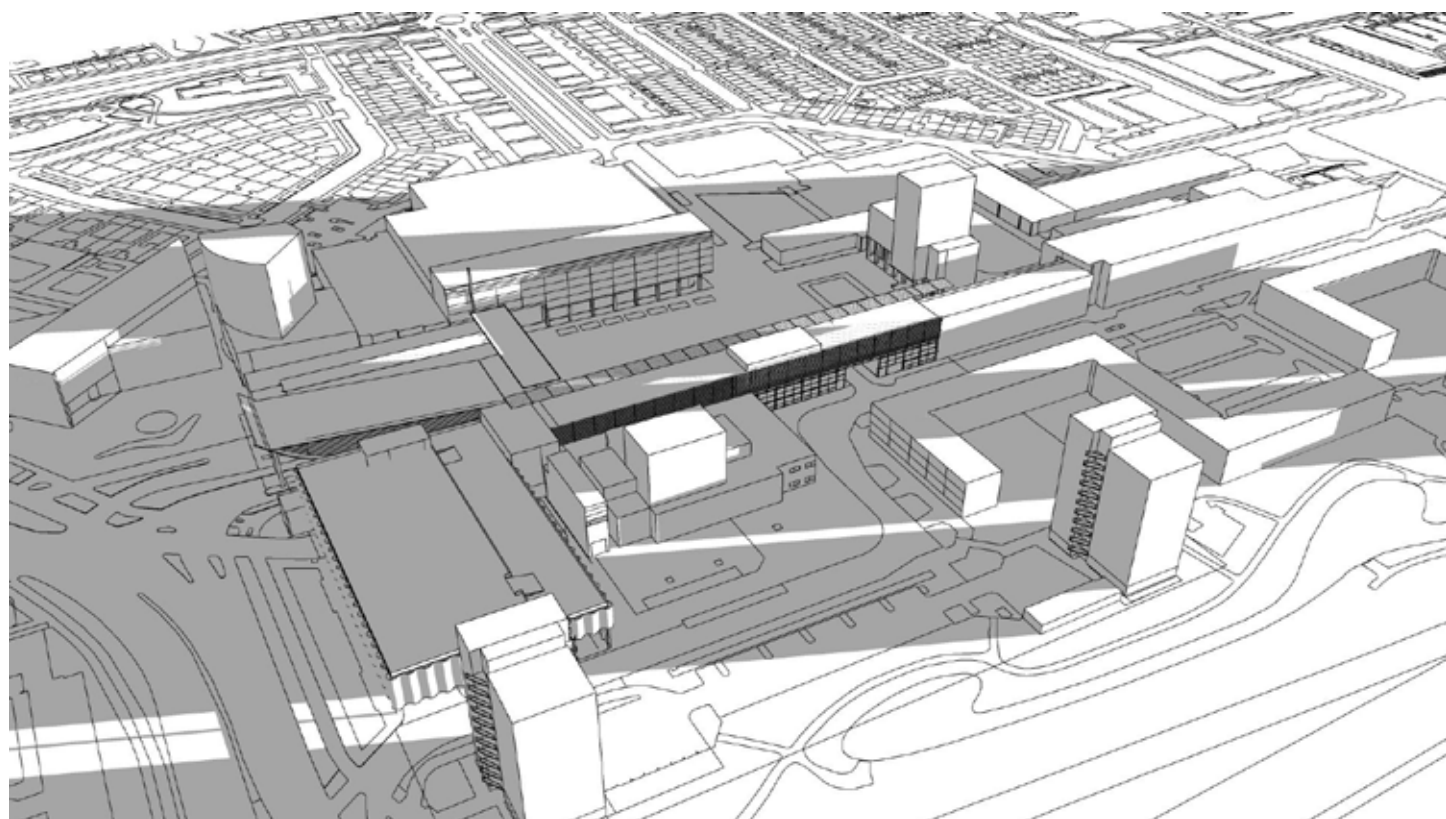


21 JUNI 12:00

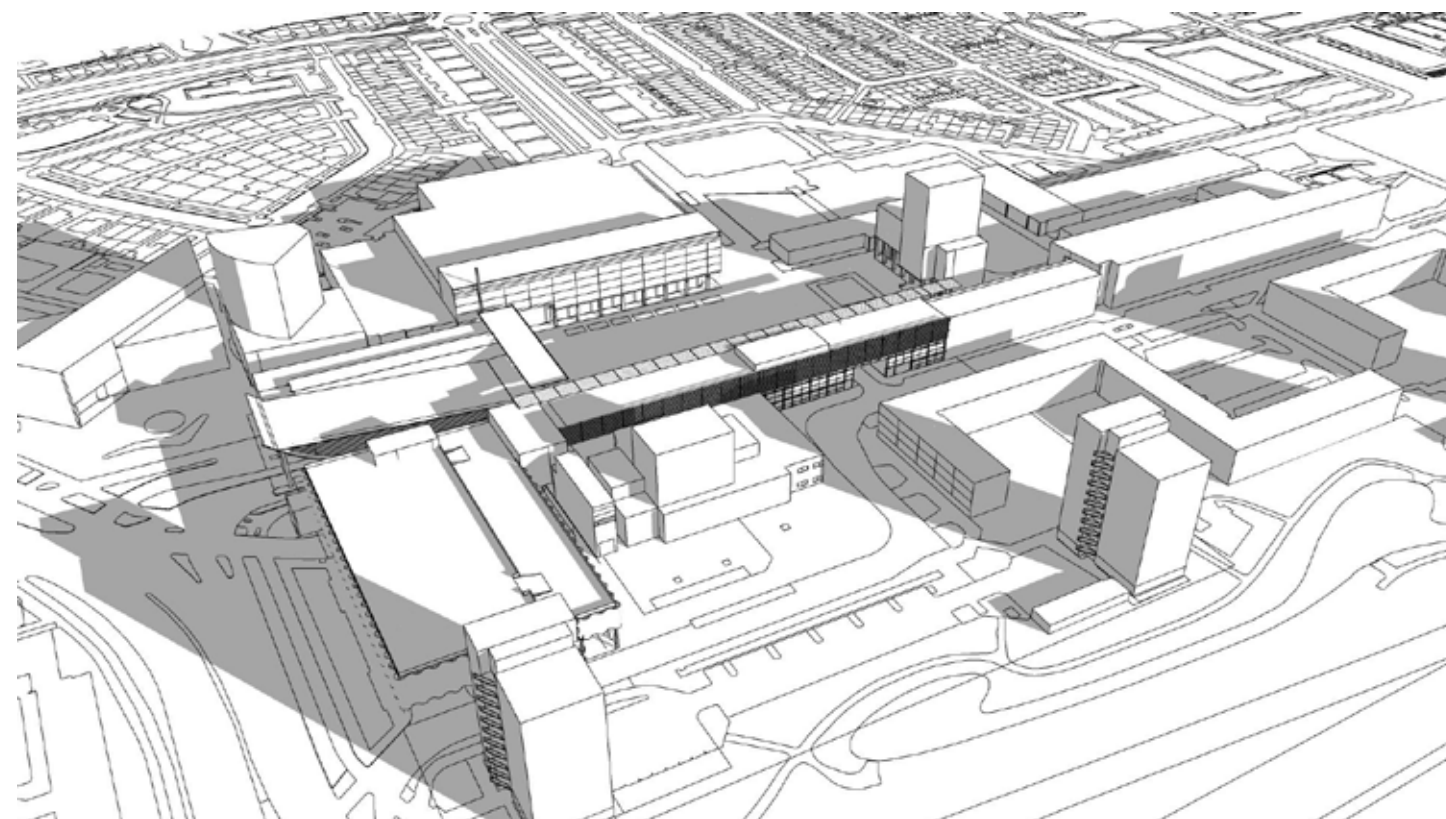


23 SEPTEMBER 12:00

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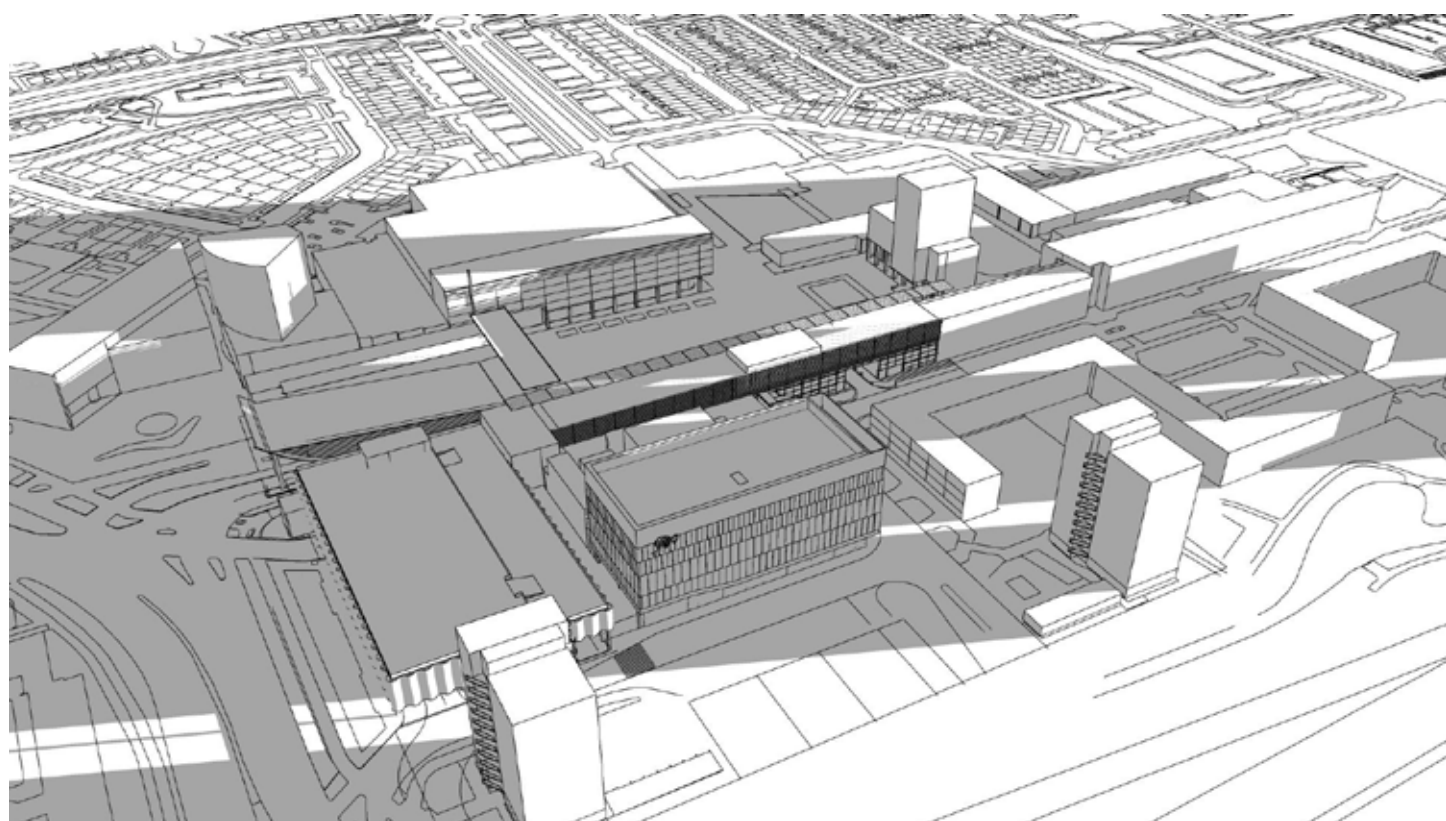


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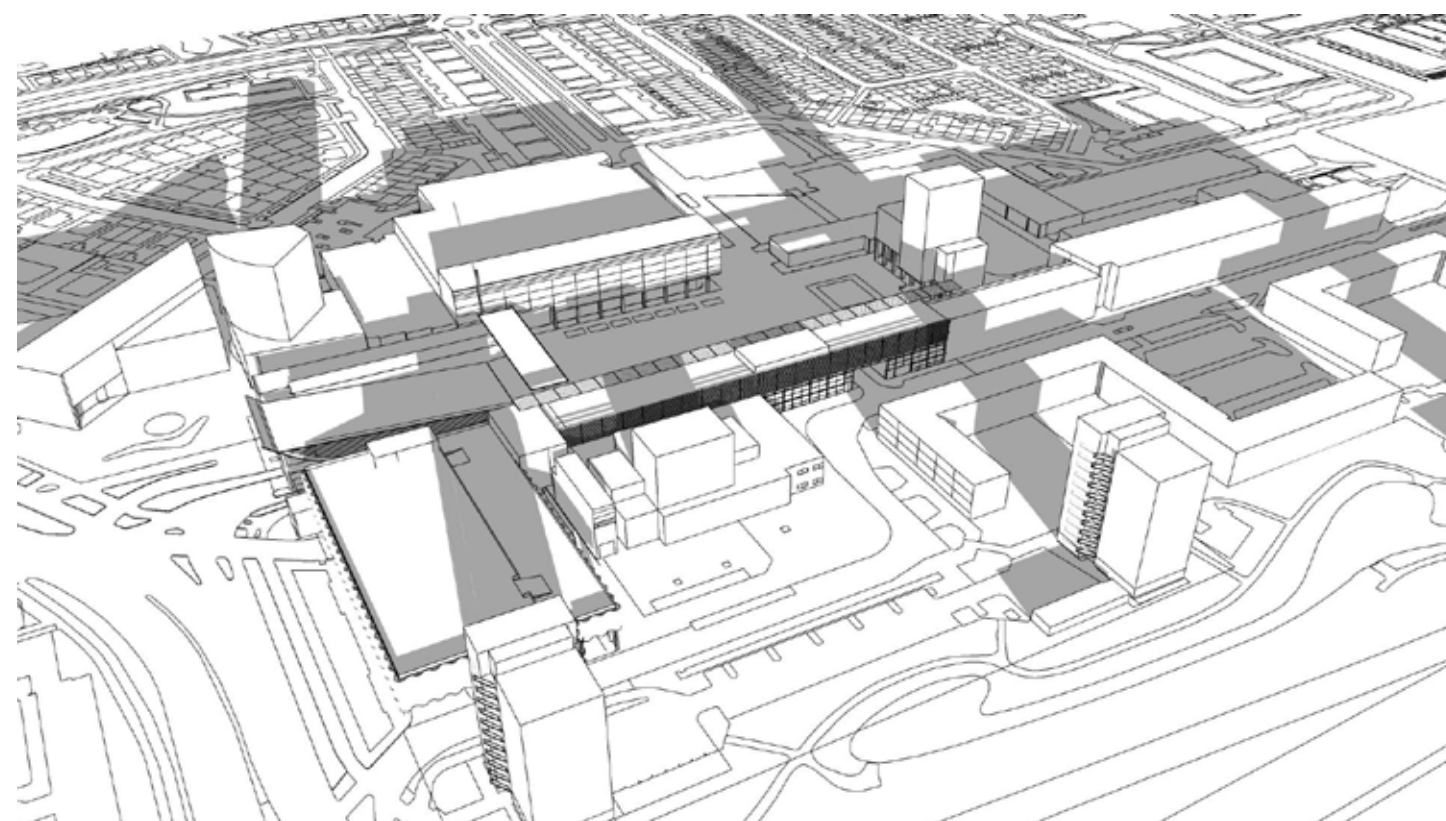


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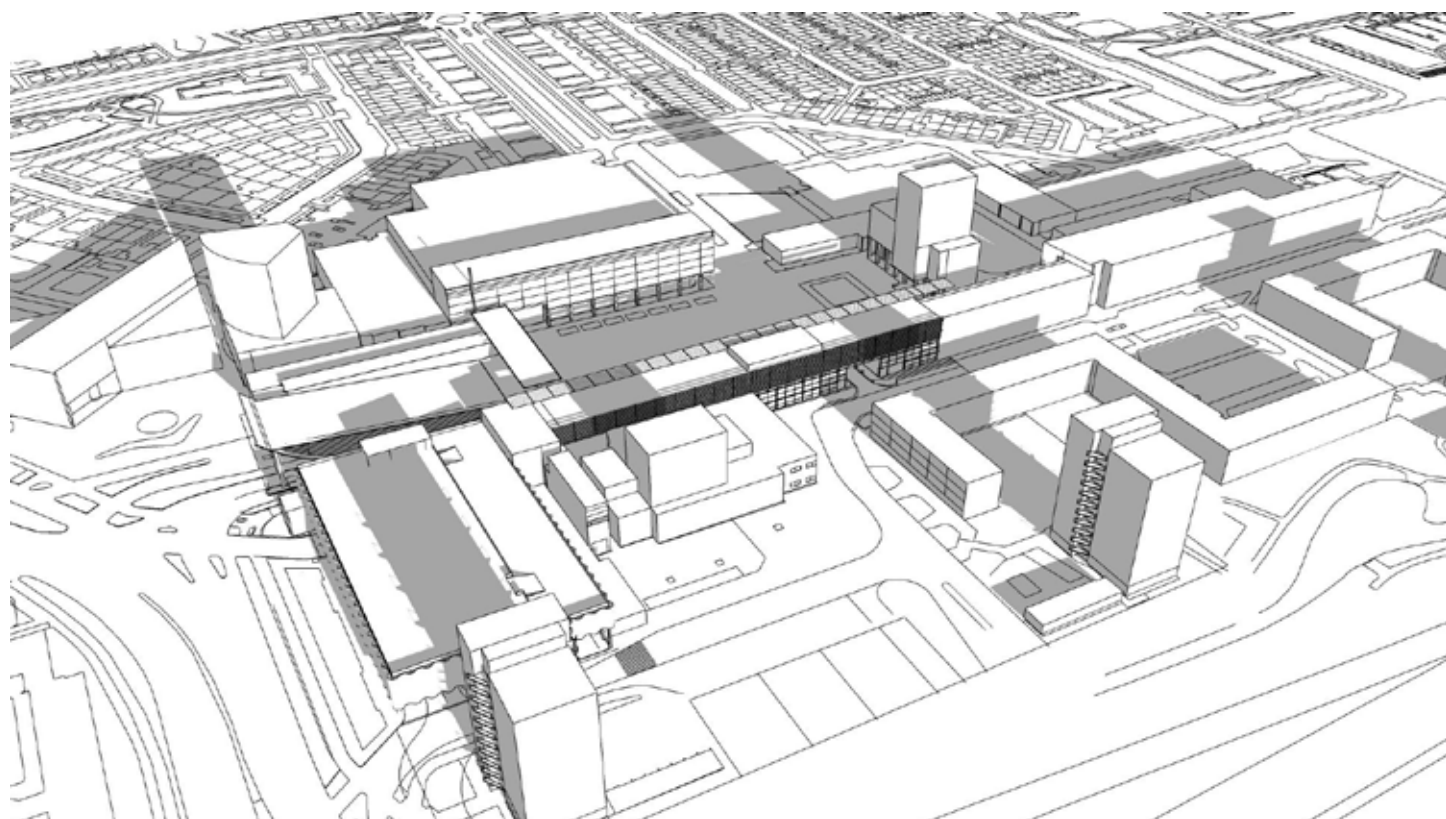


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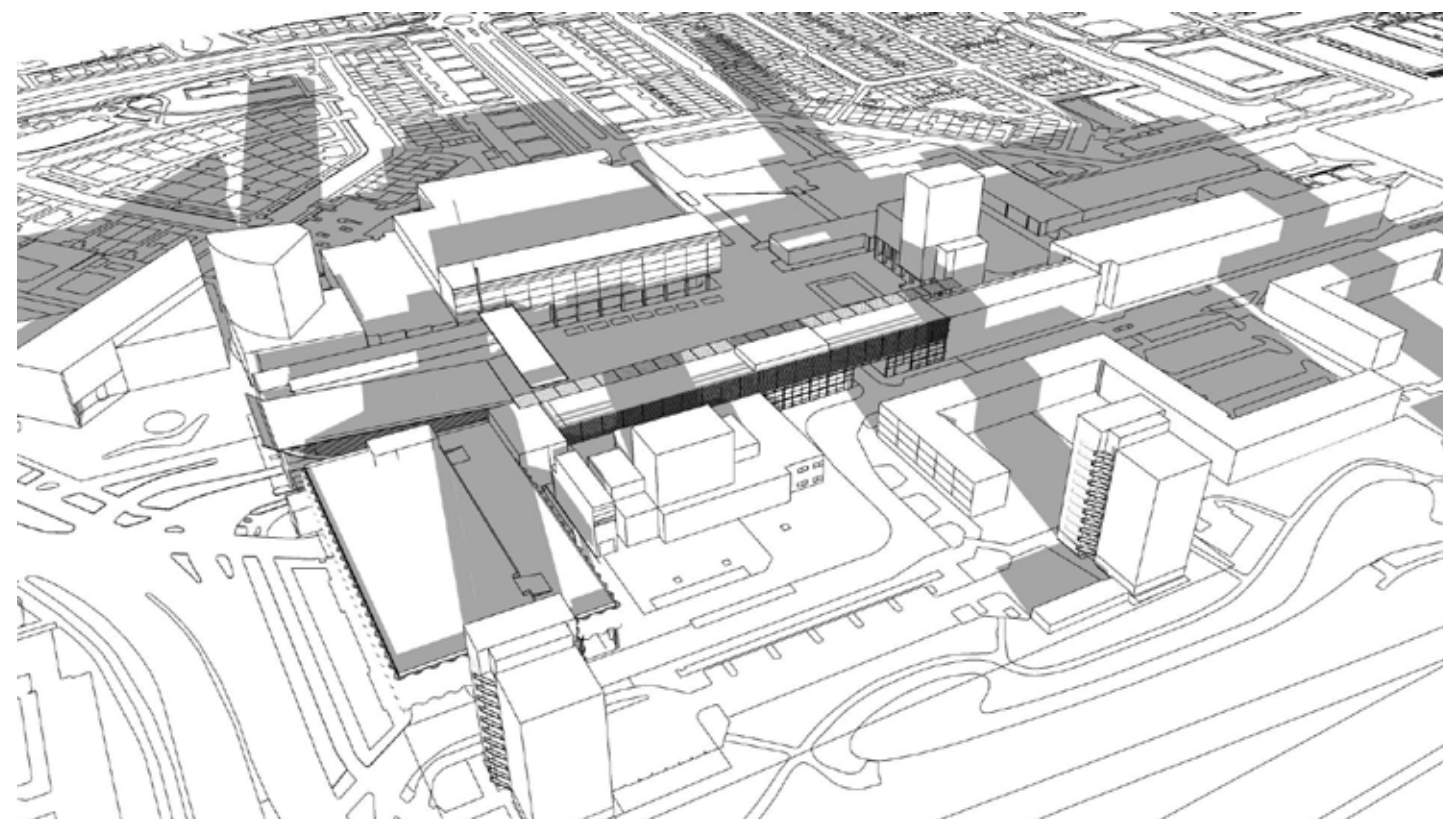


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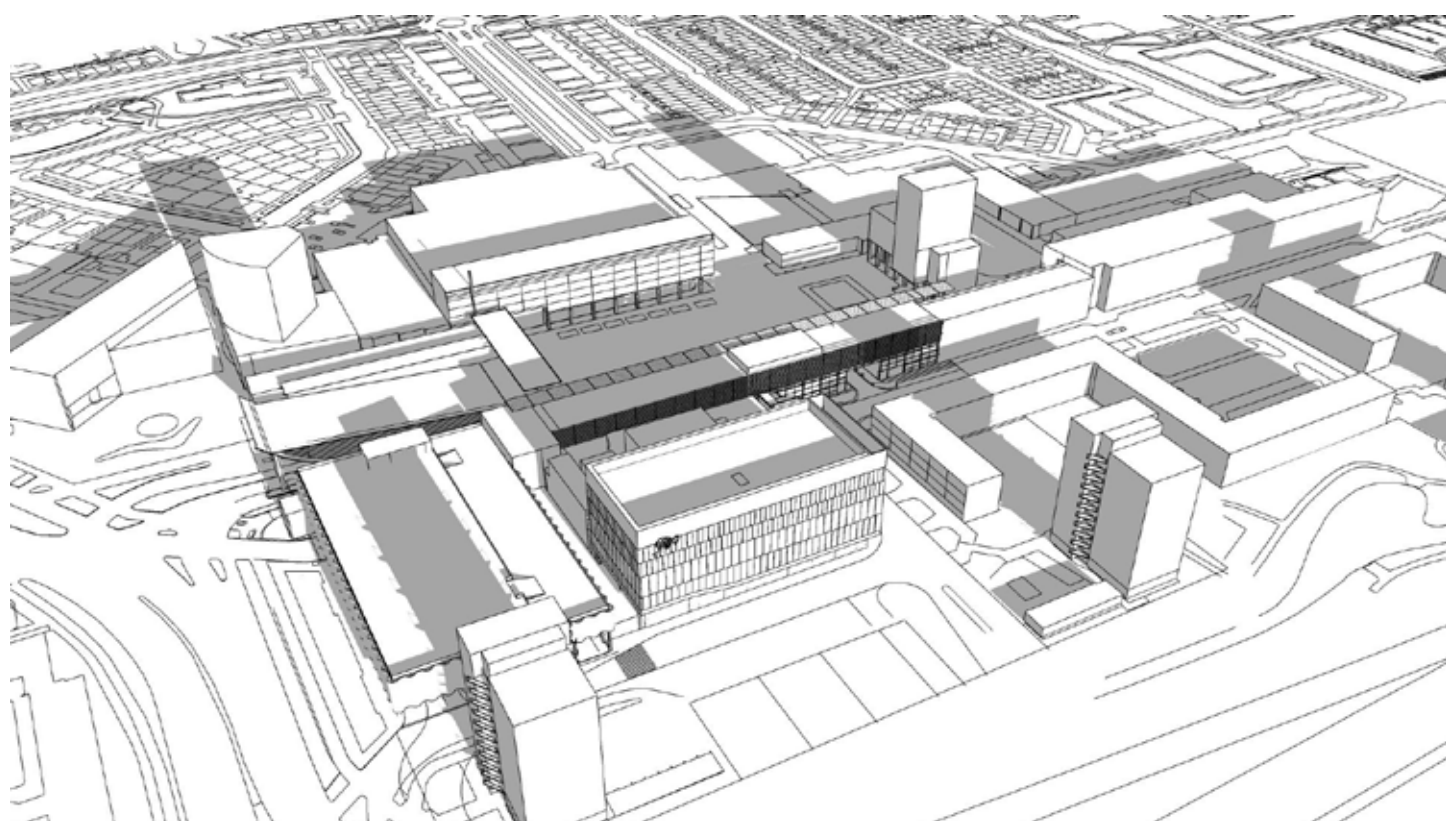


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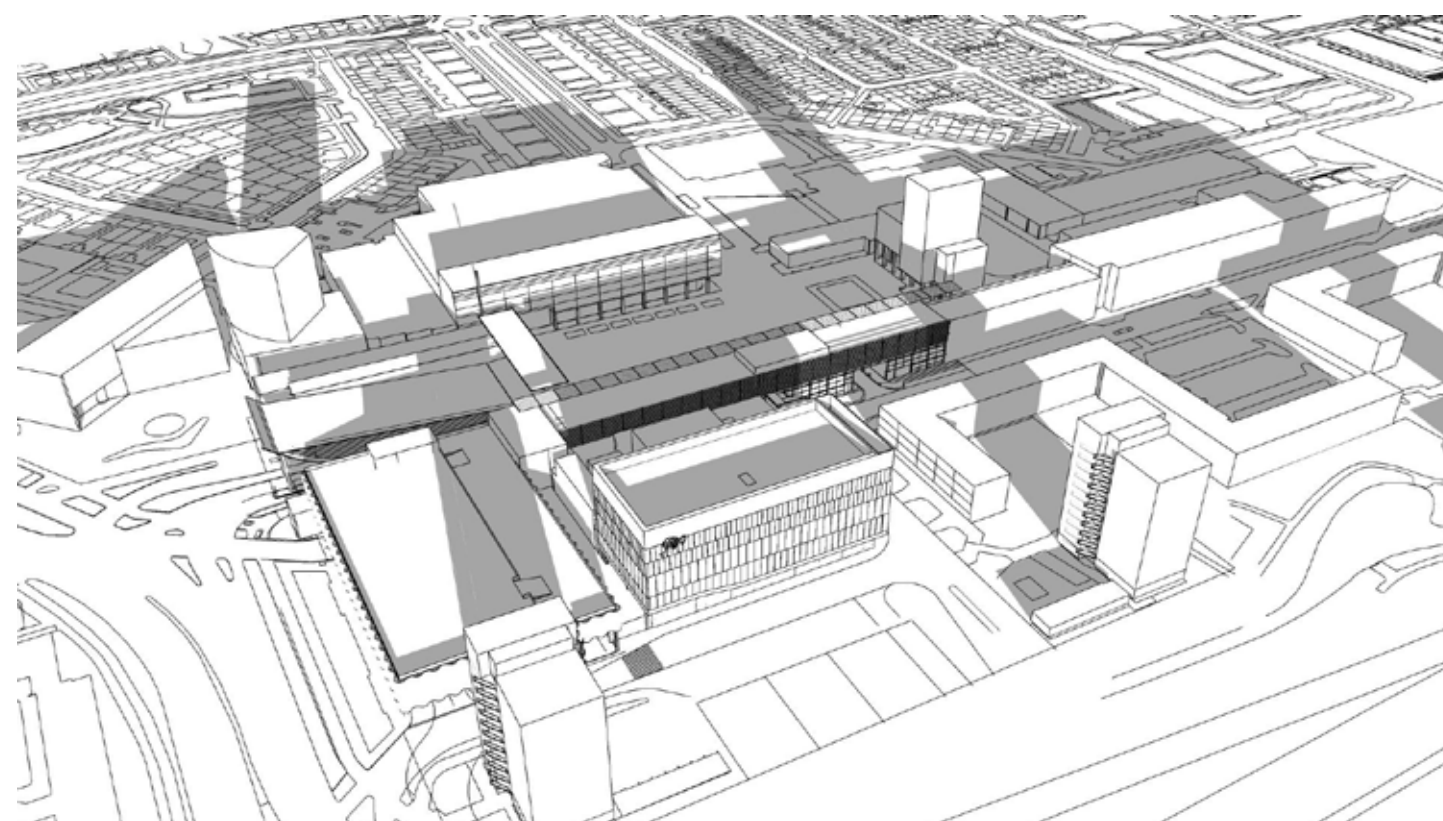


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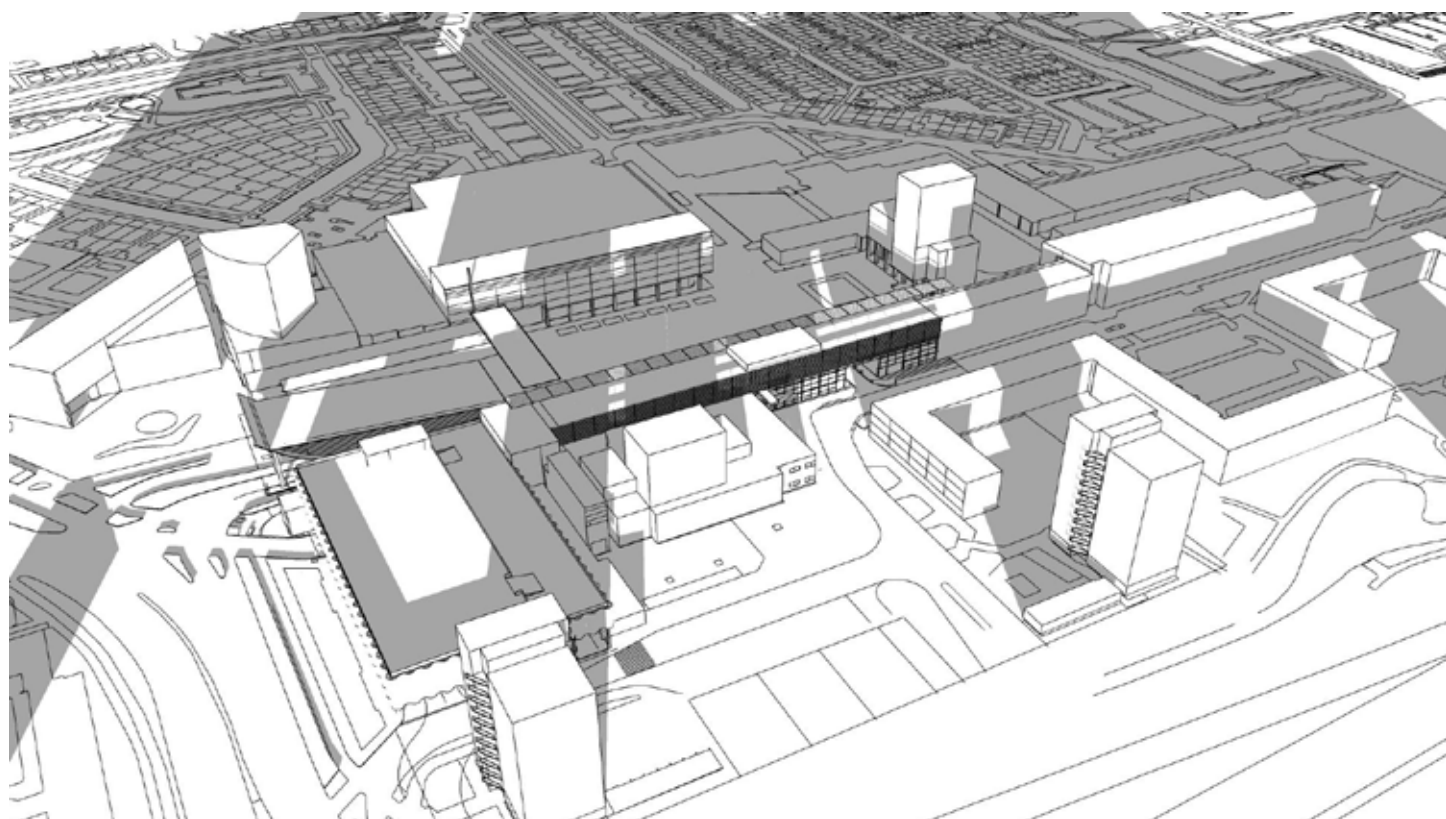


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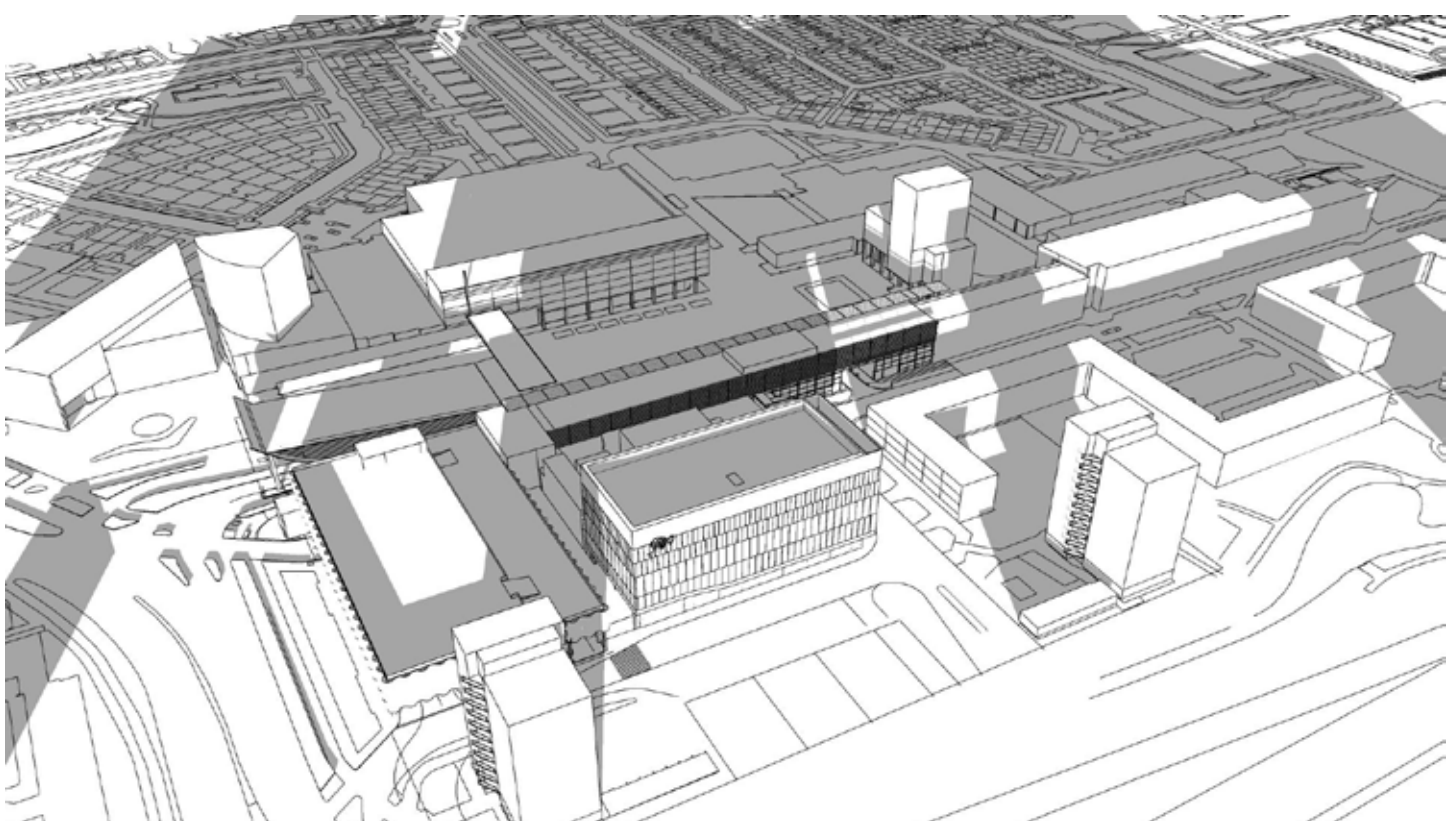
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17:00

zon al onder

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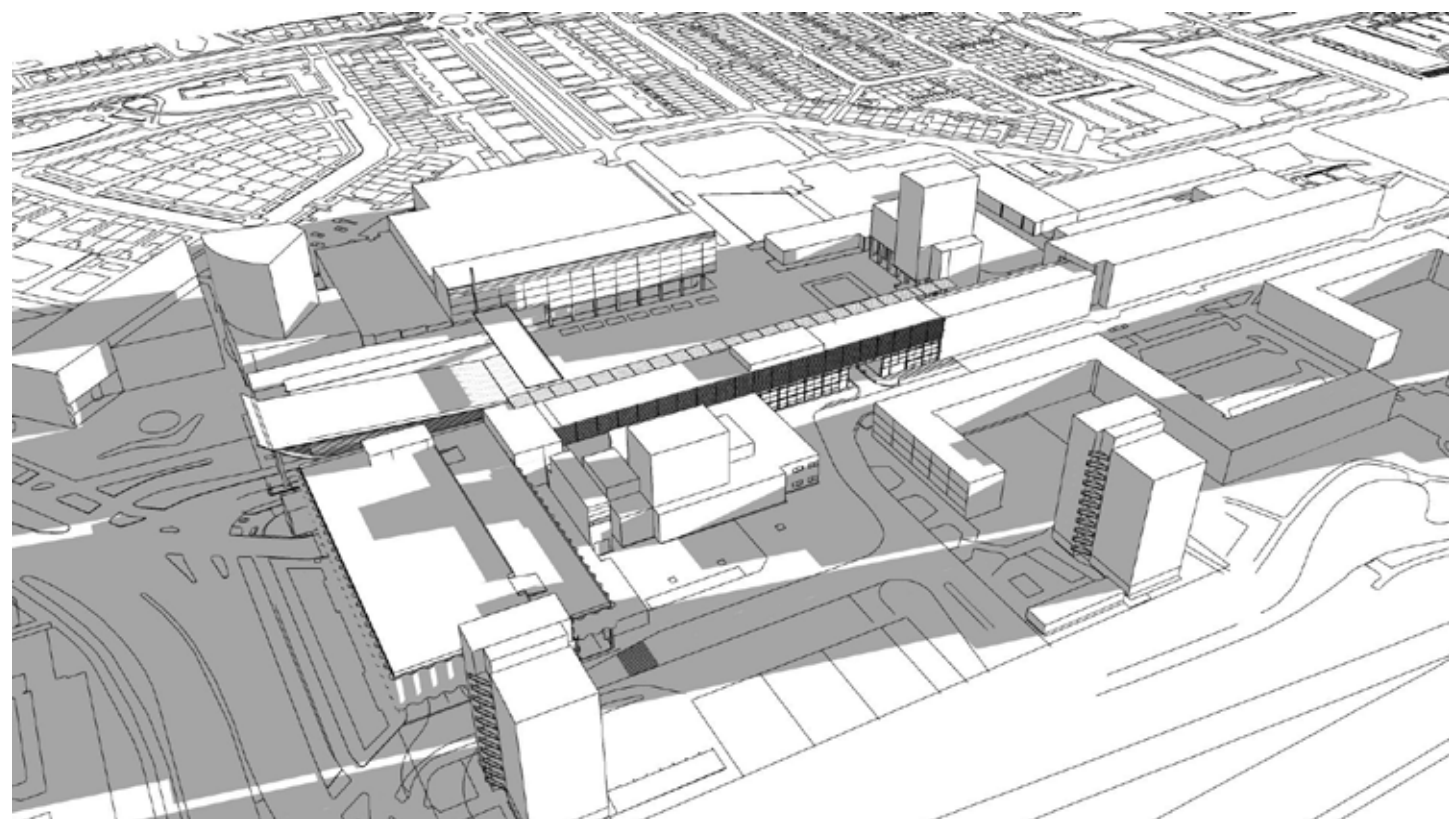
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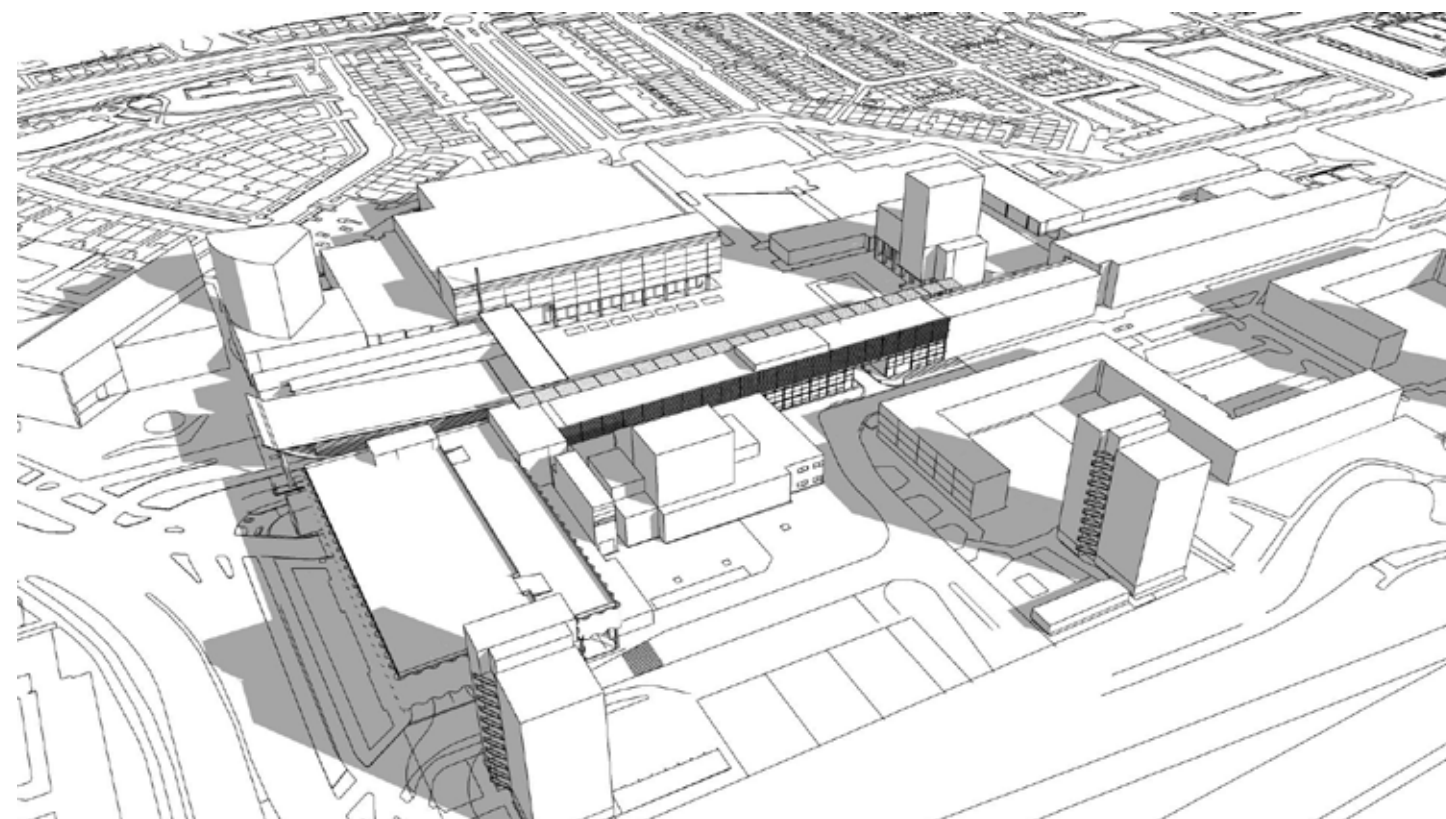
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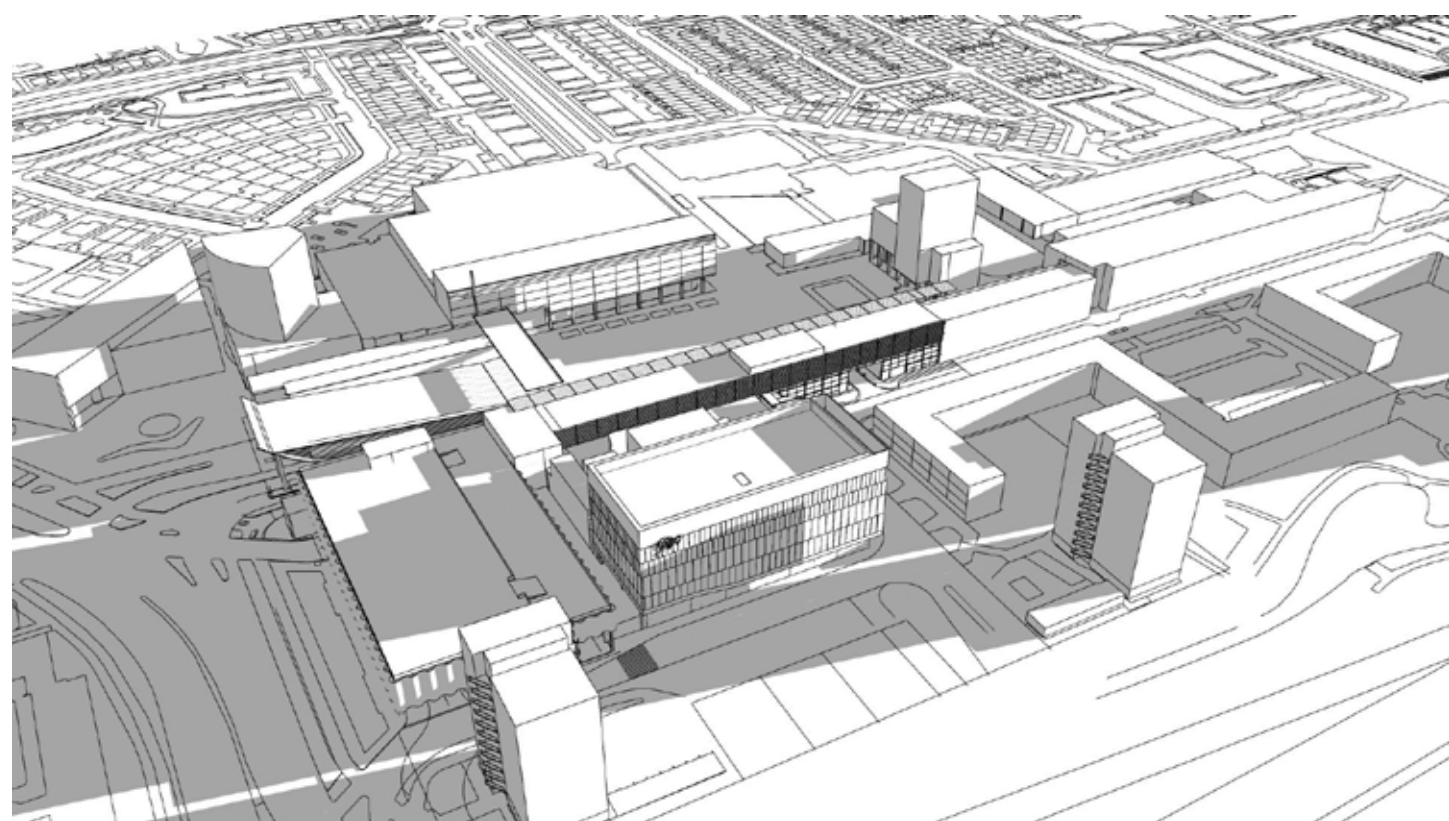


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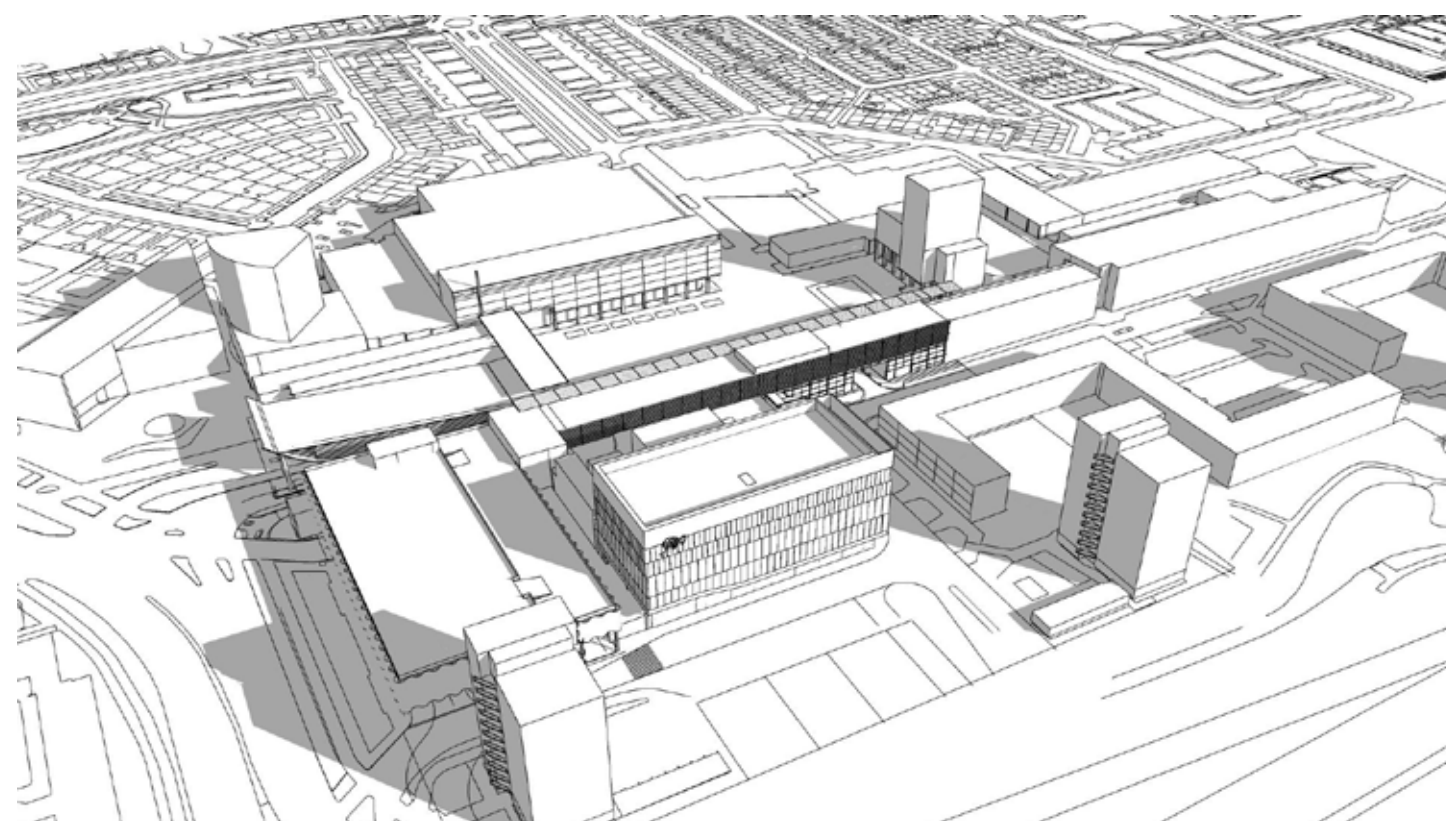


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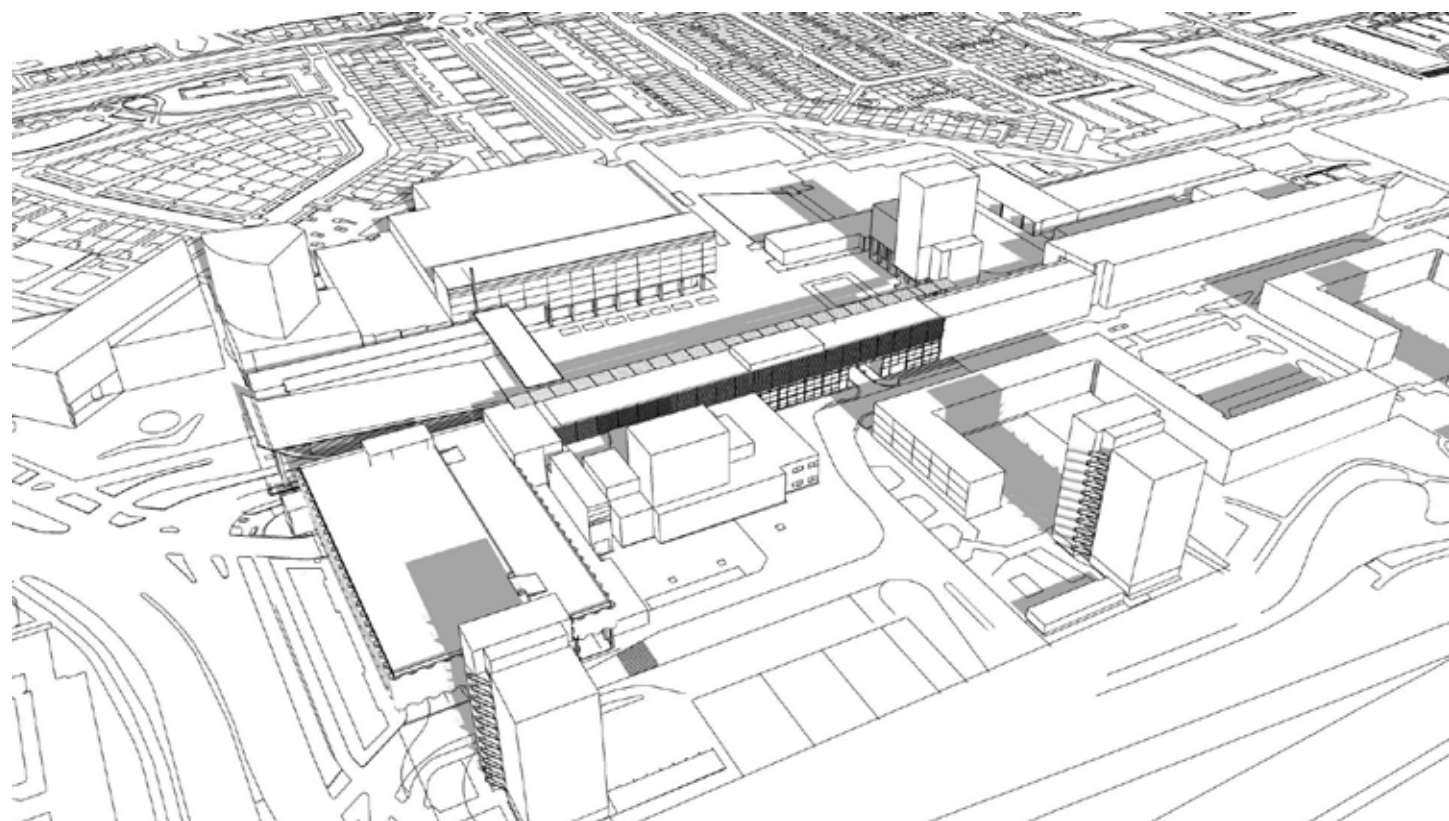


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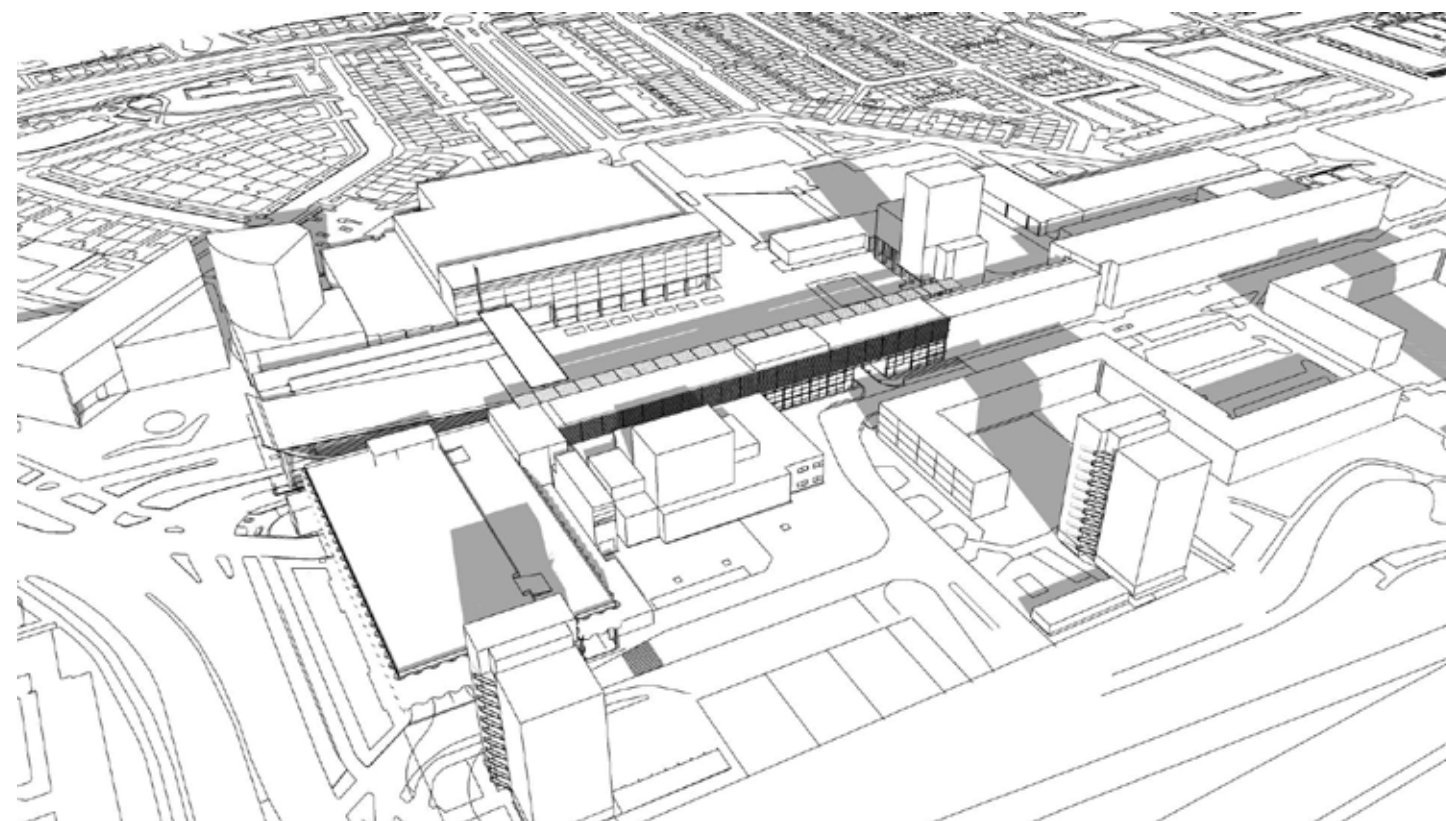


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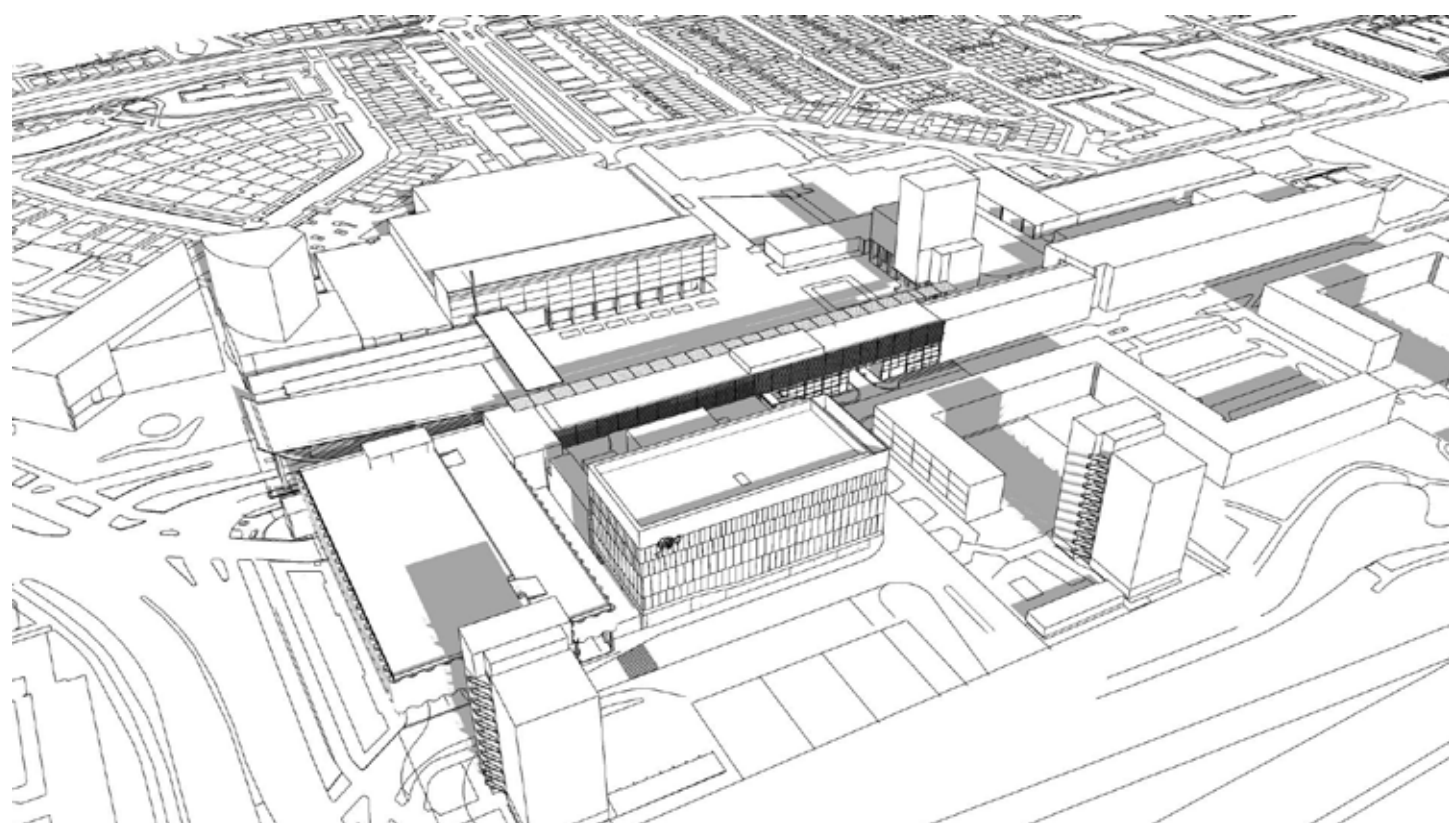


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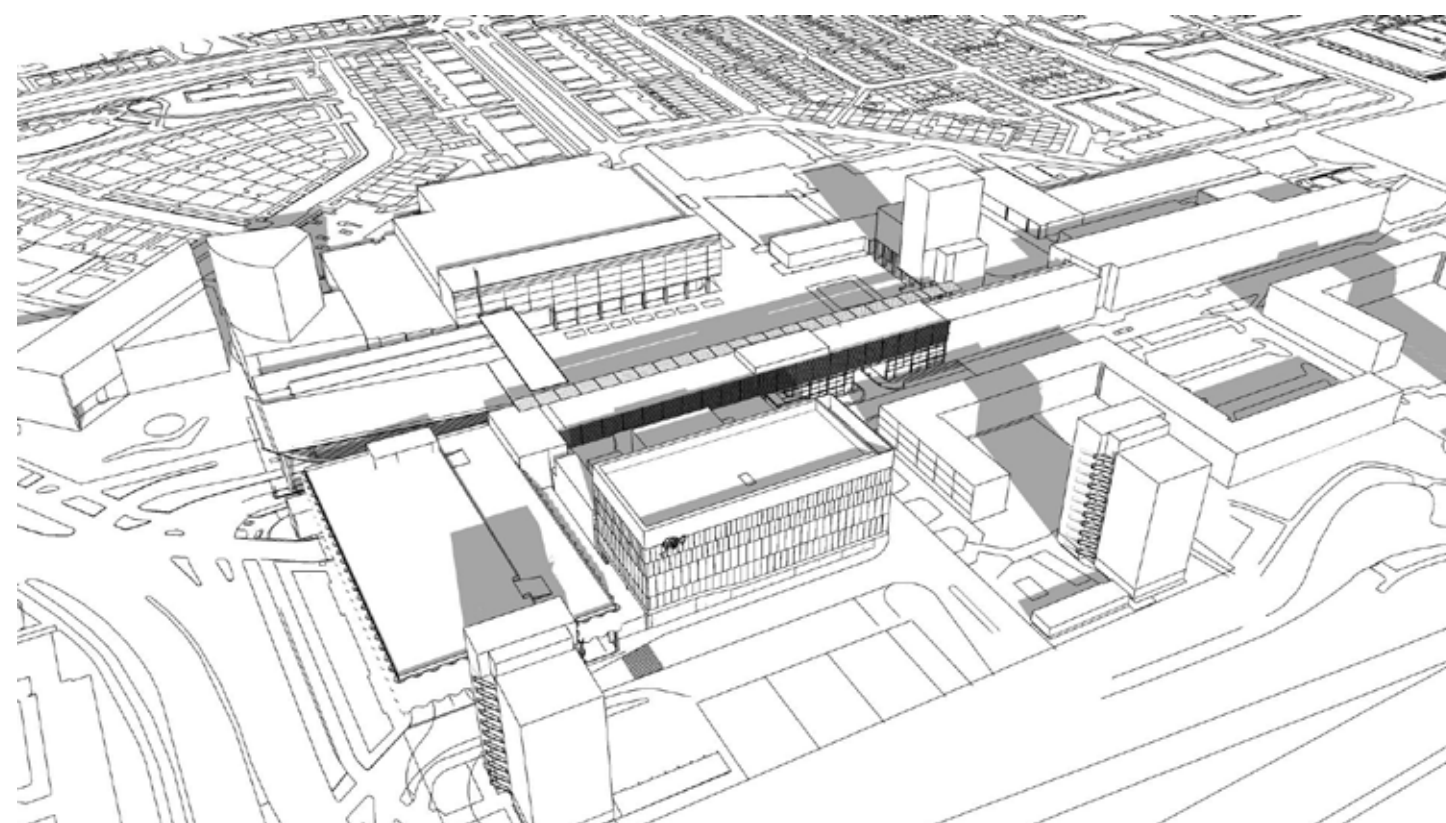


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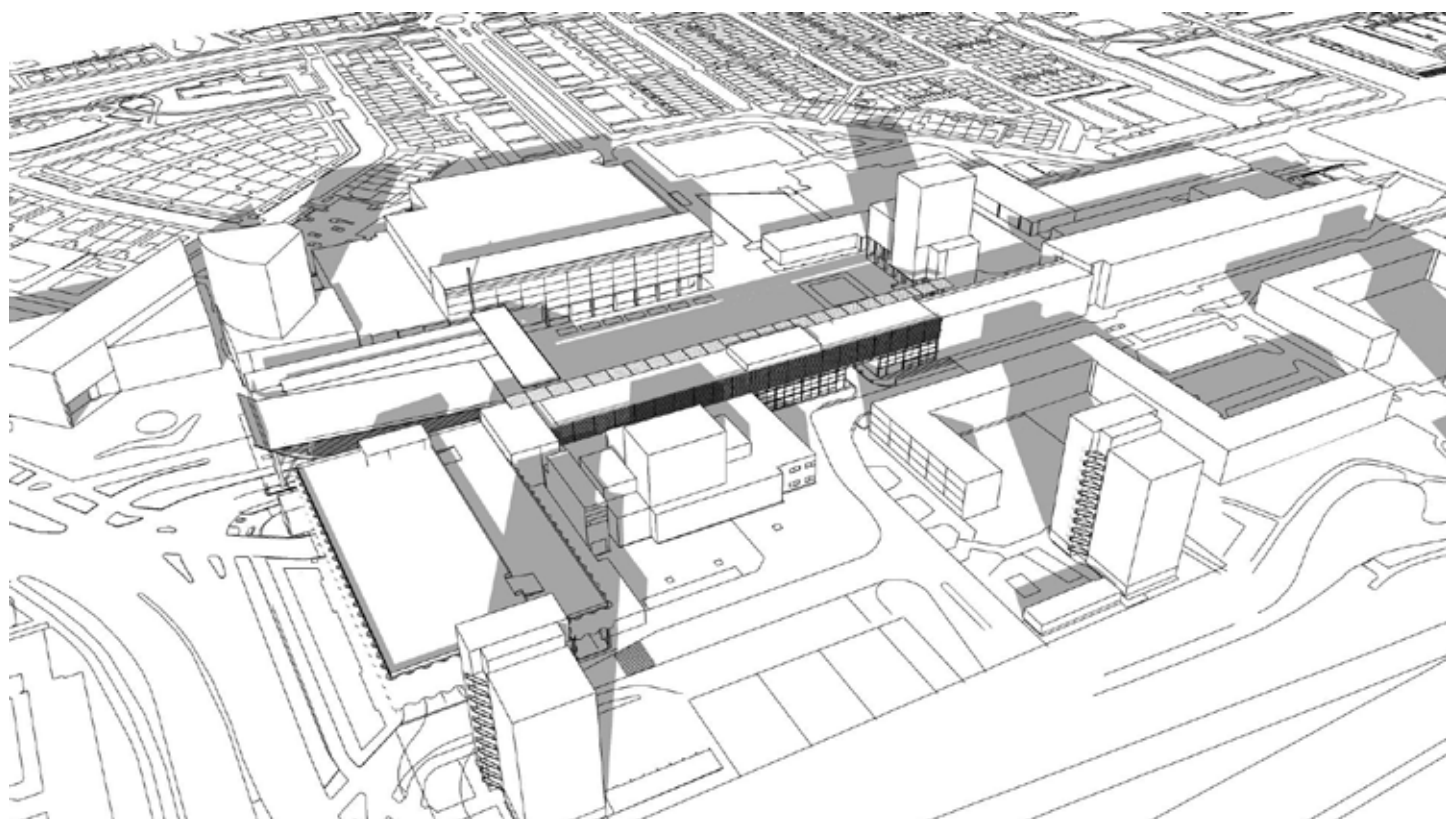


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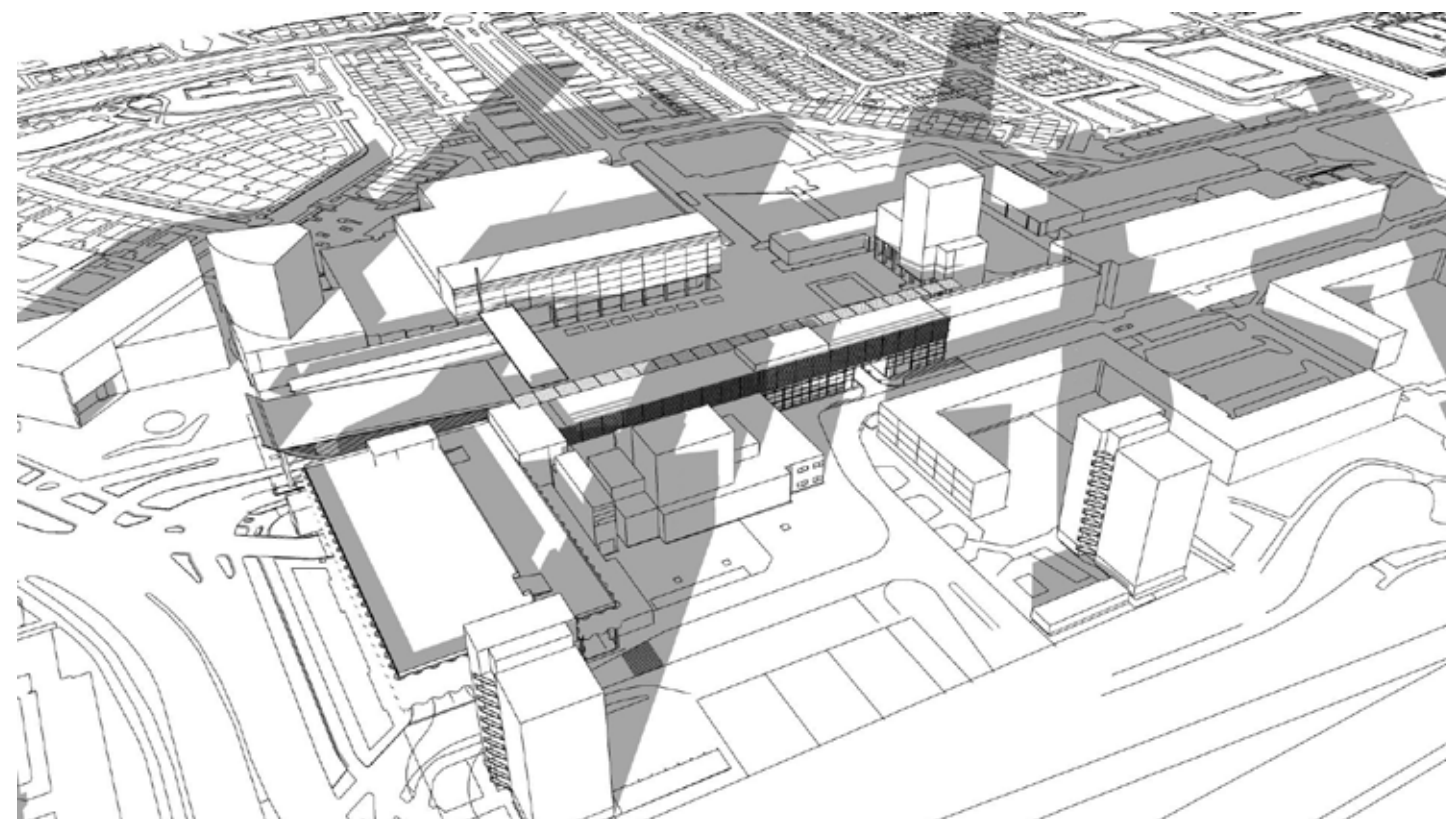


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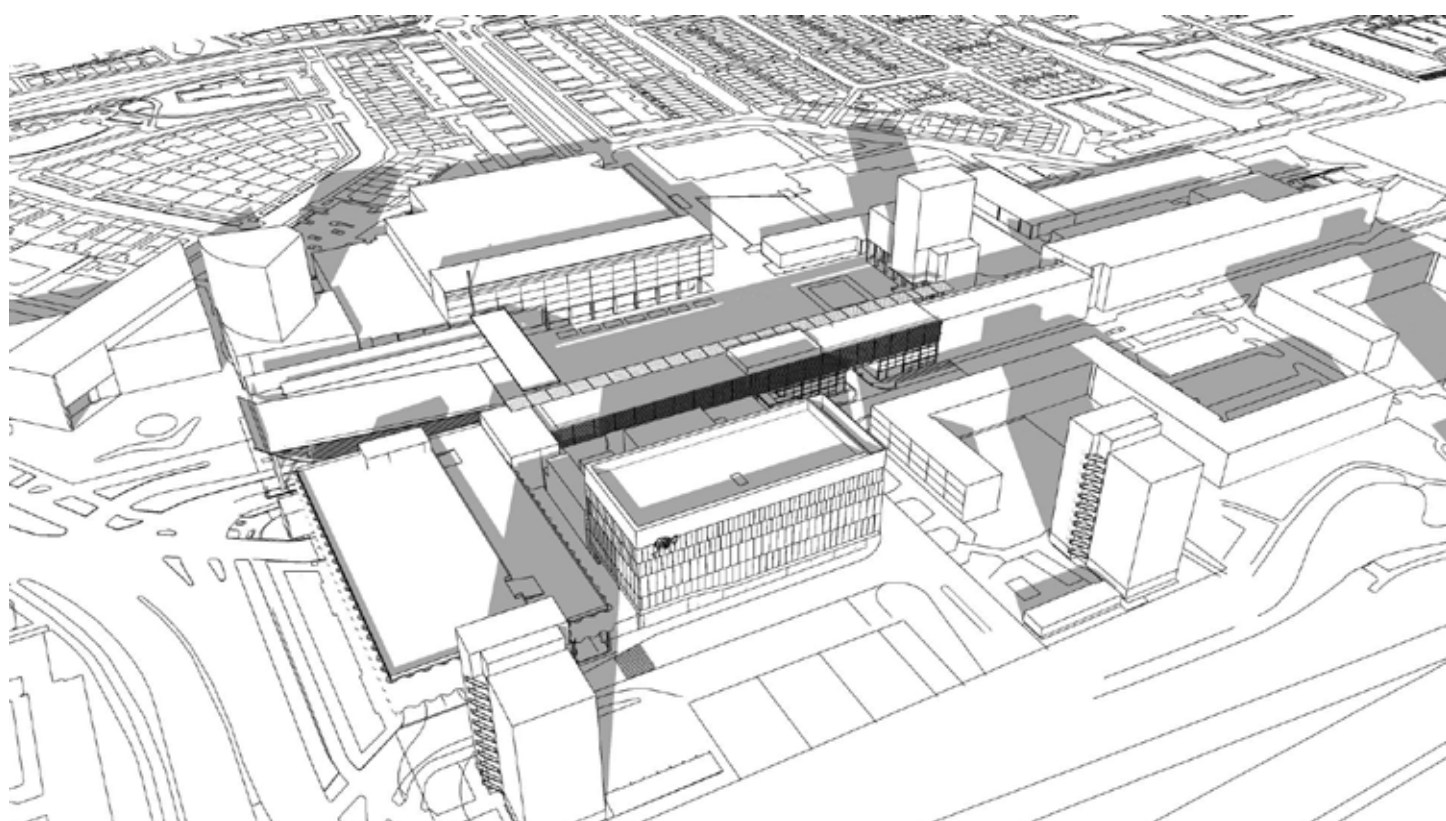


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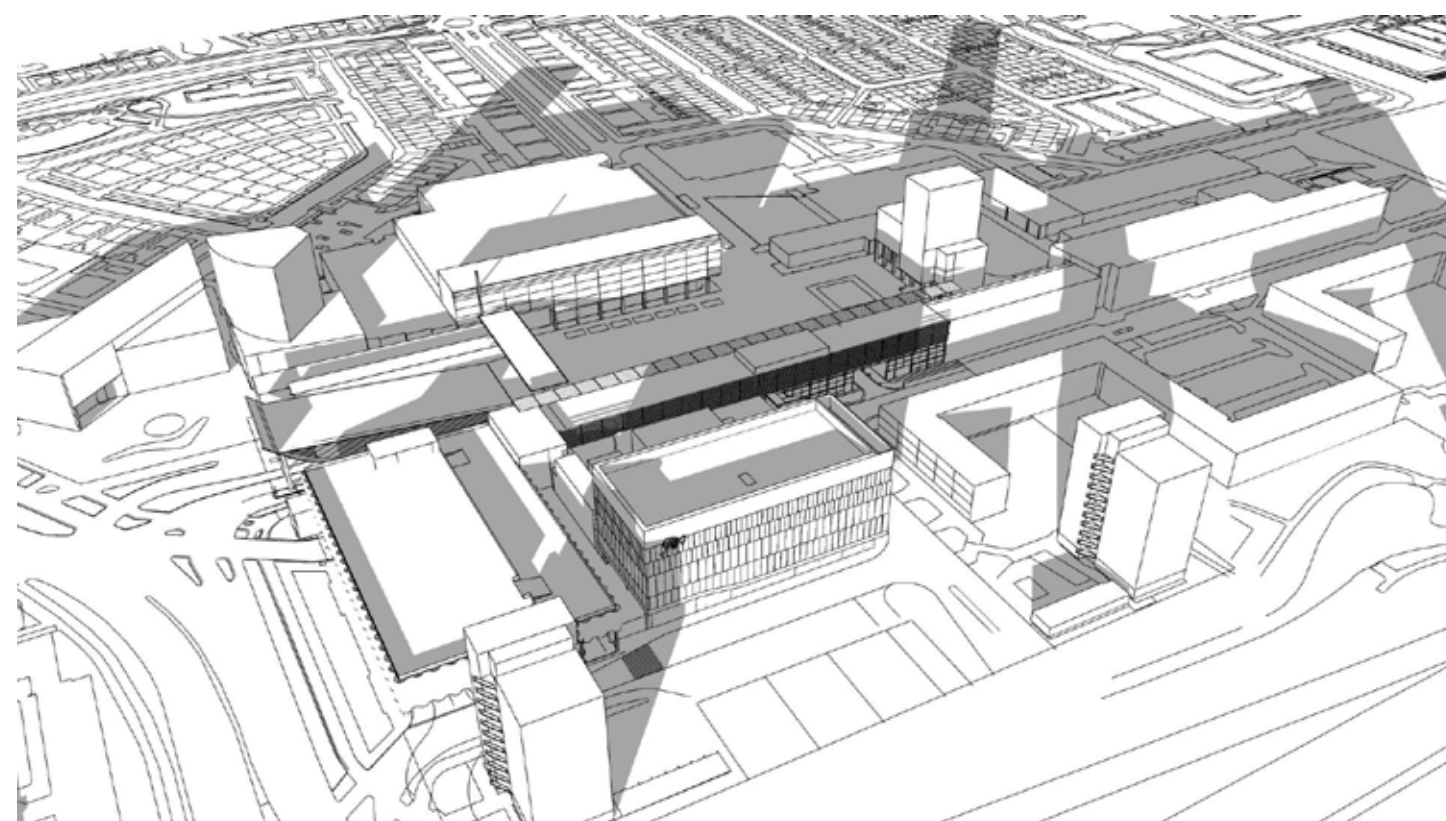


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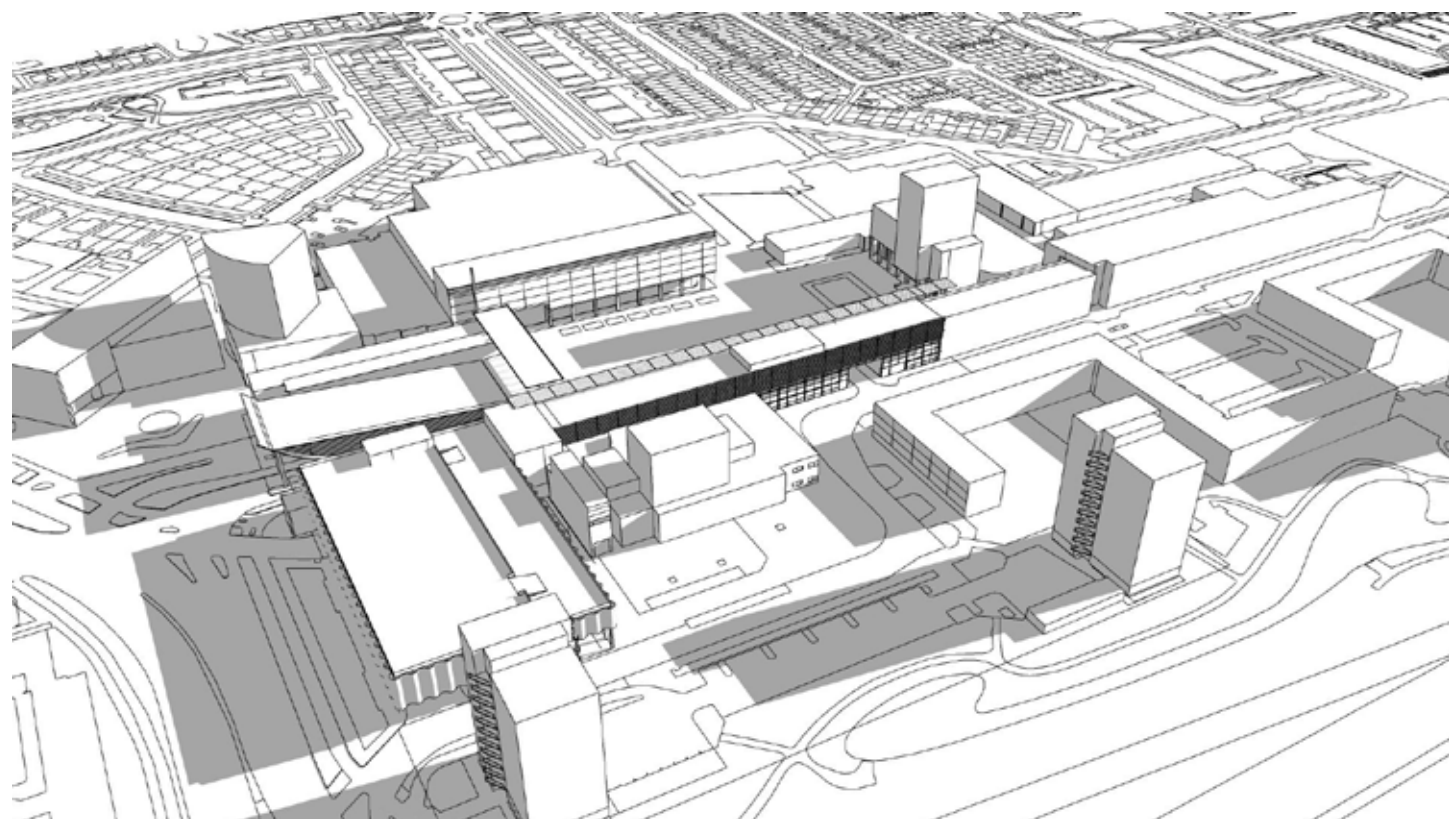


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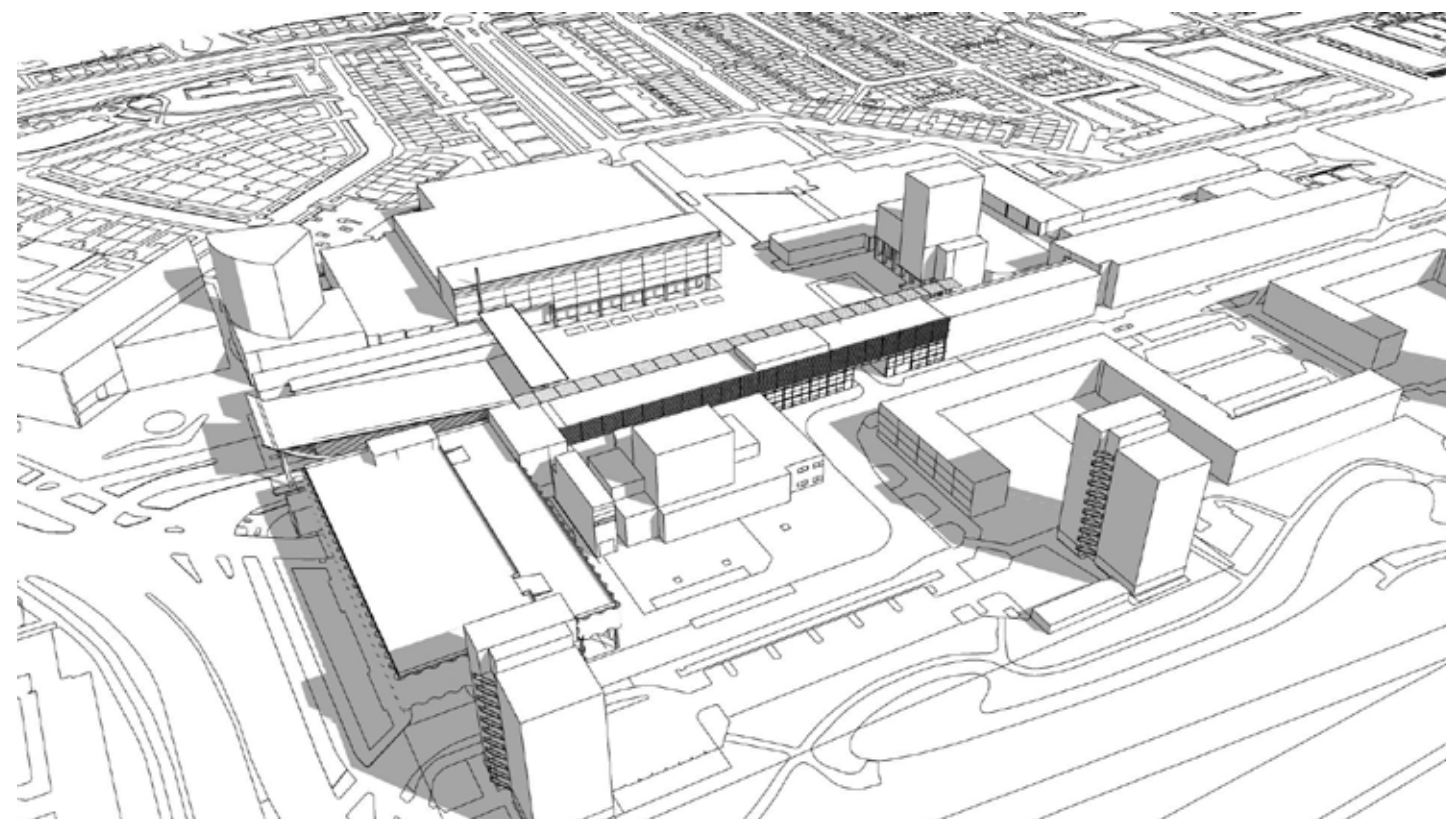


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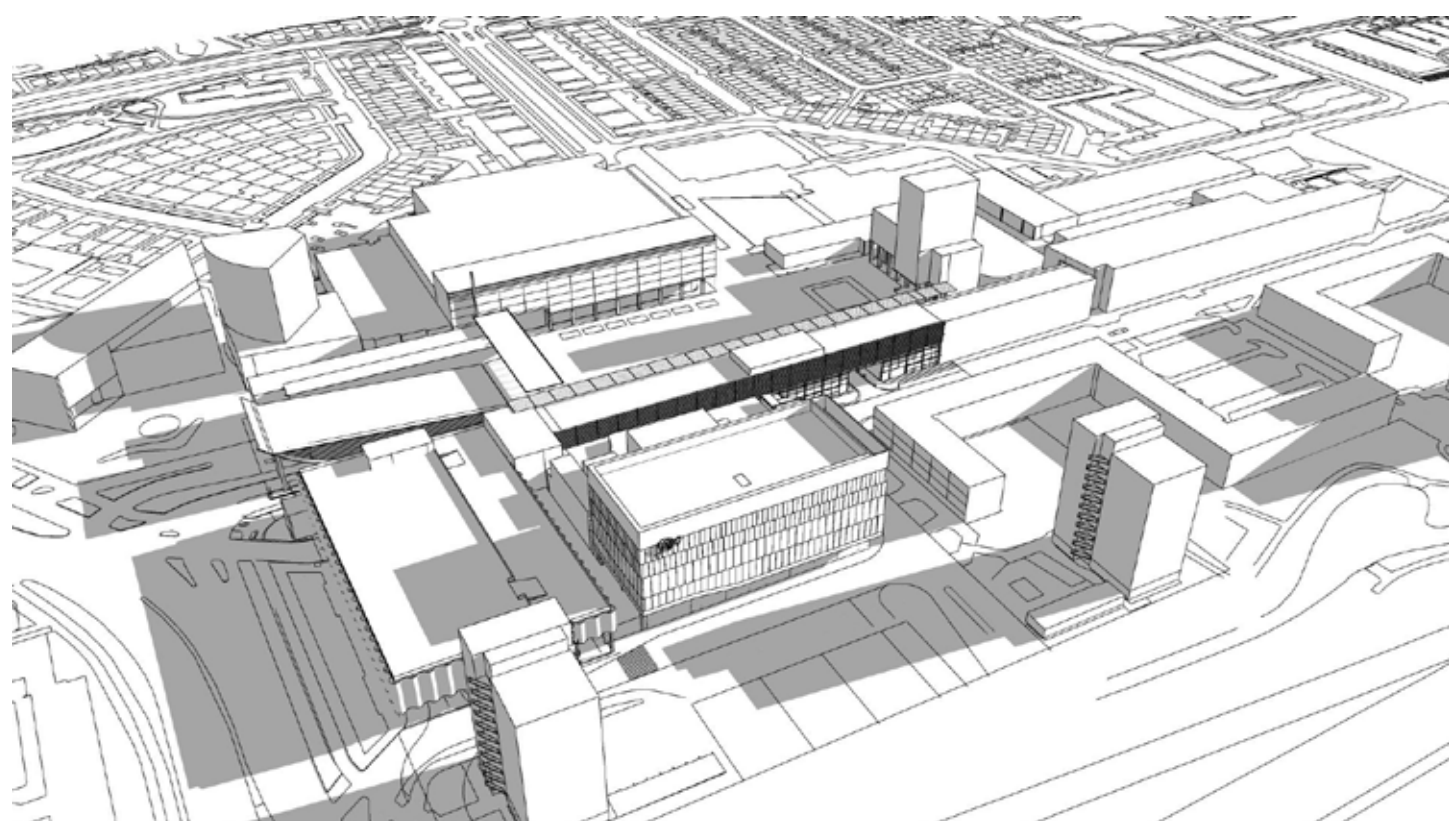


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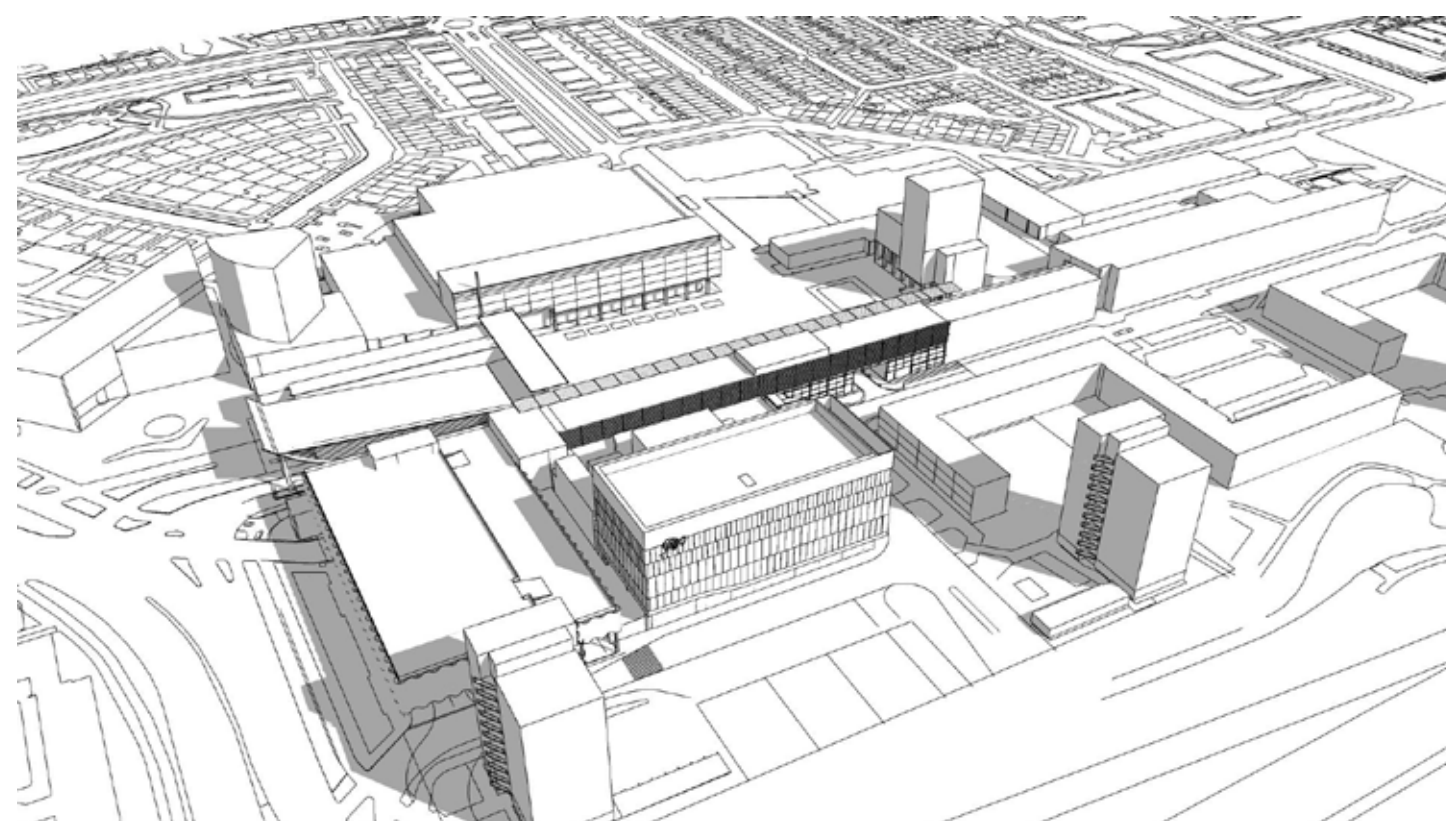


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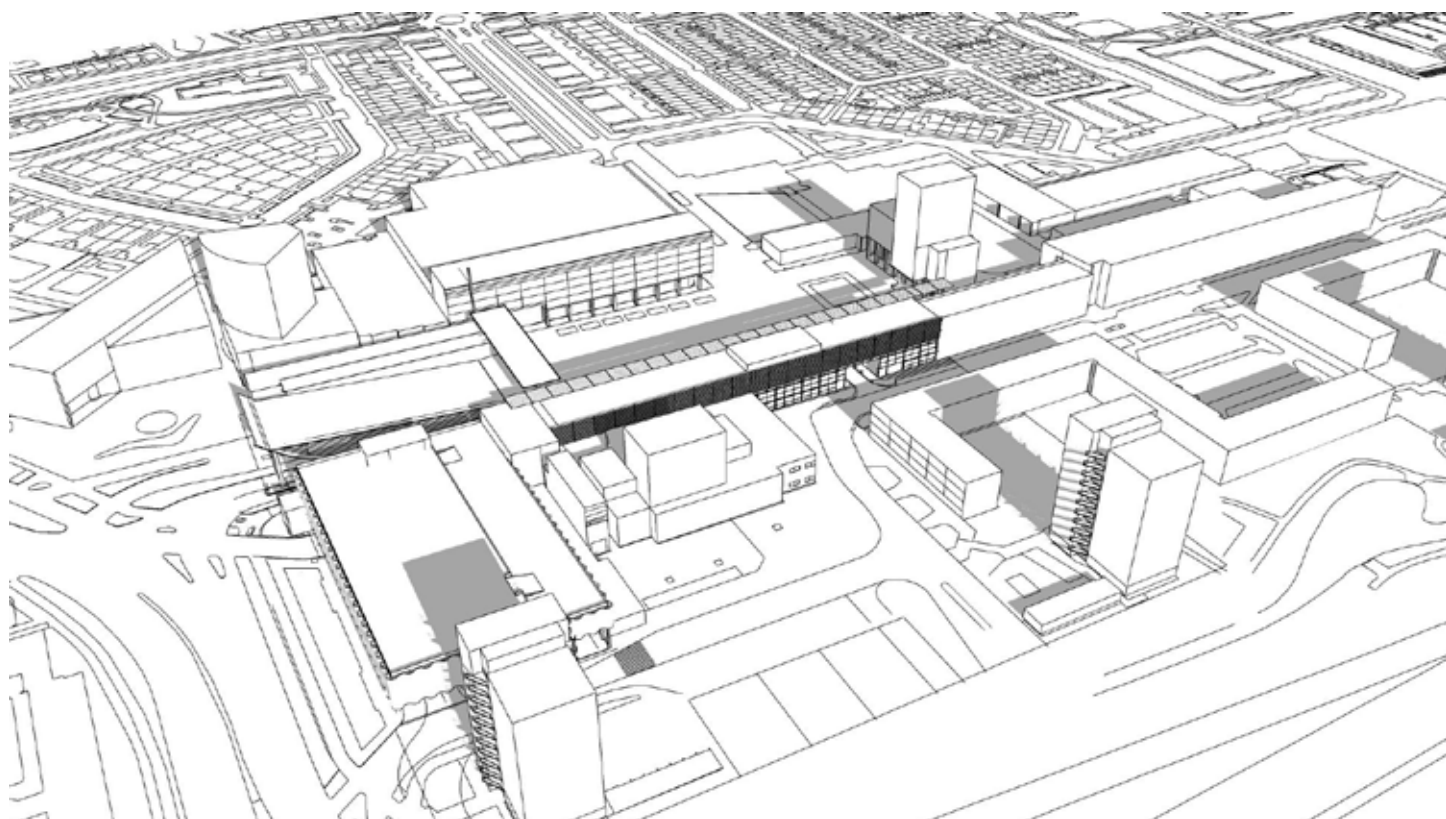


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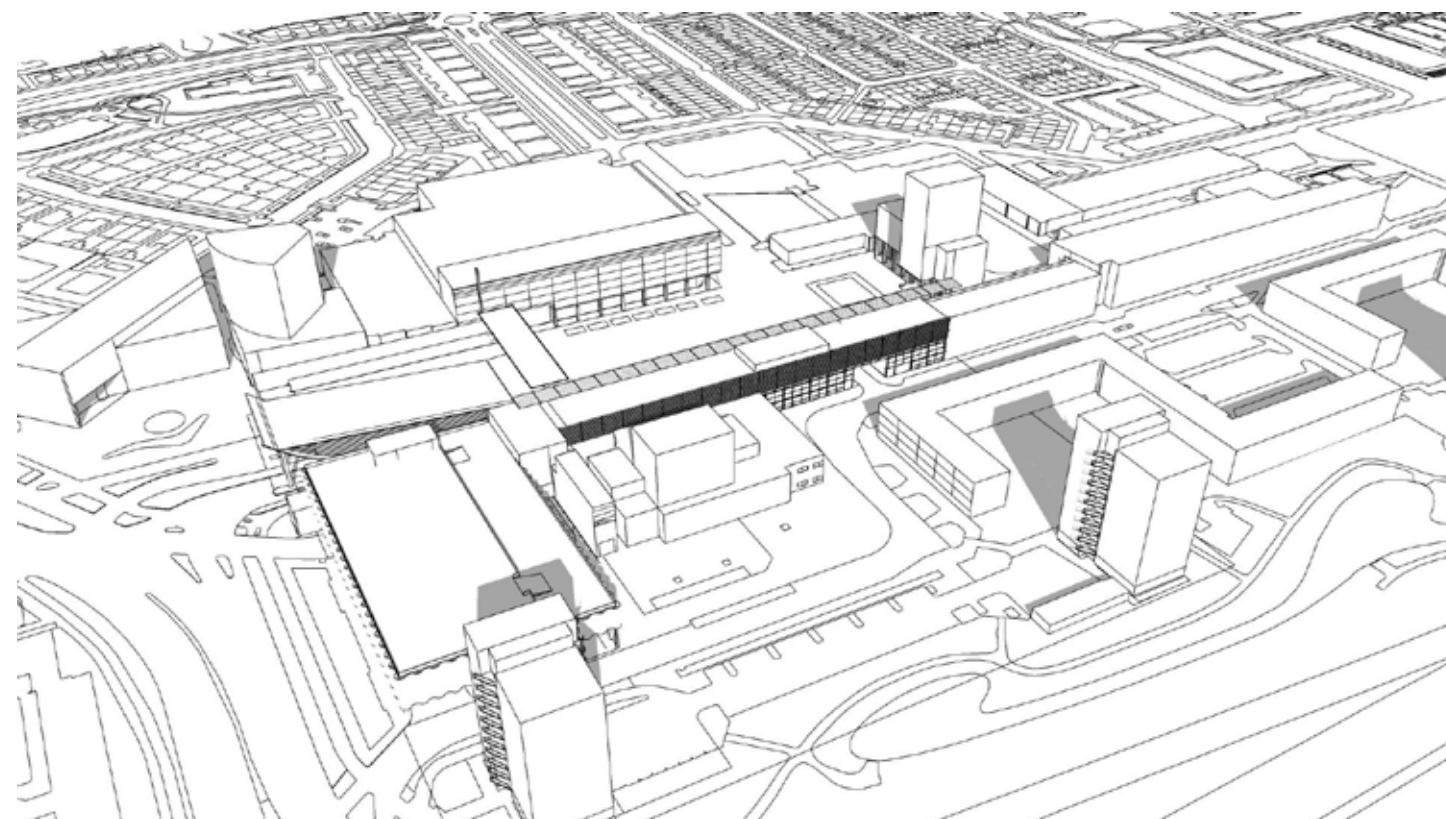


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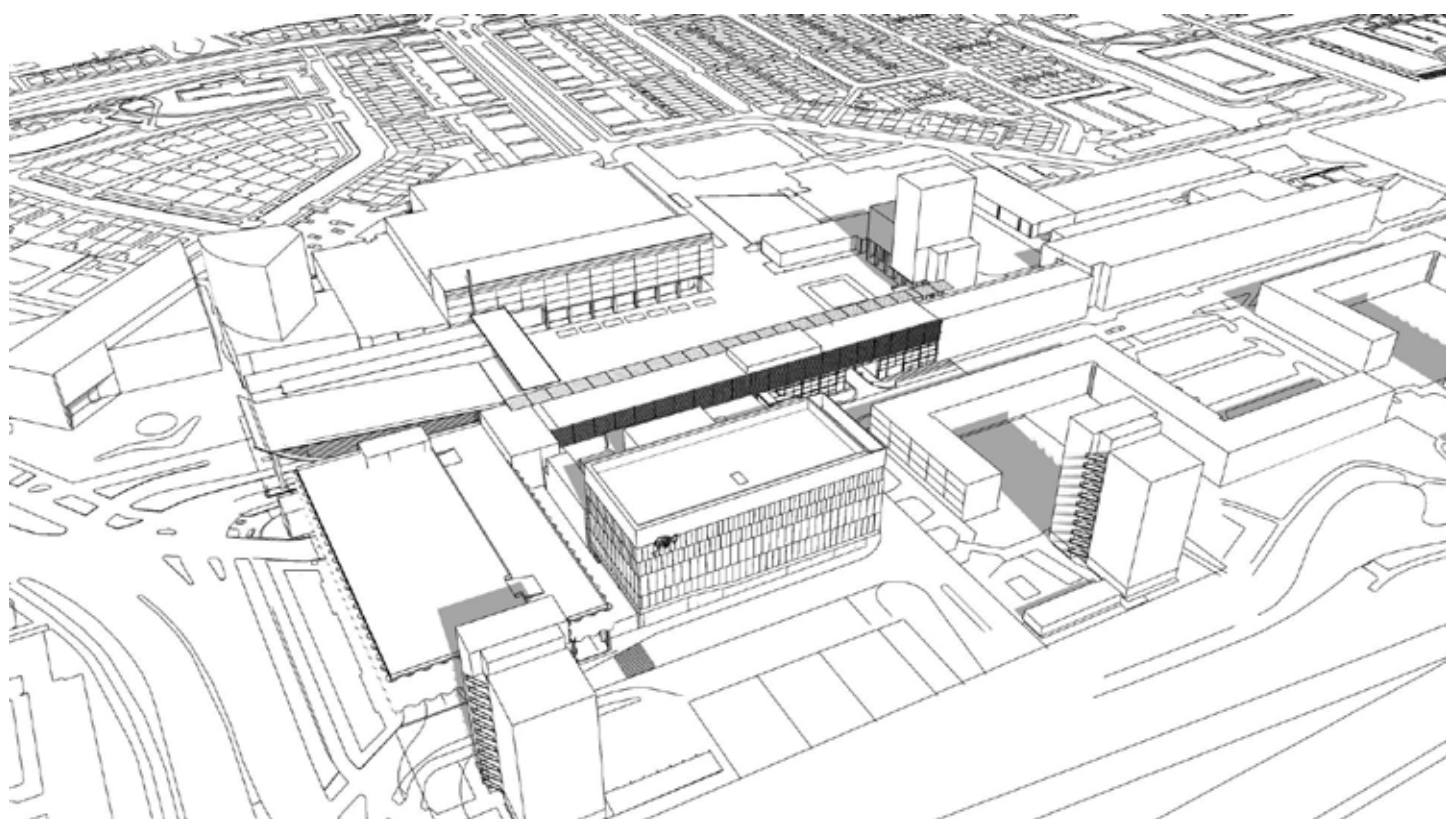


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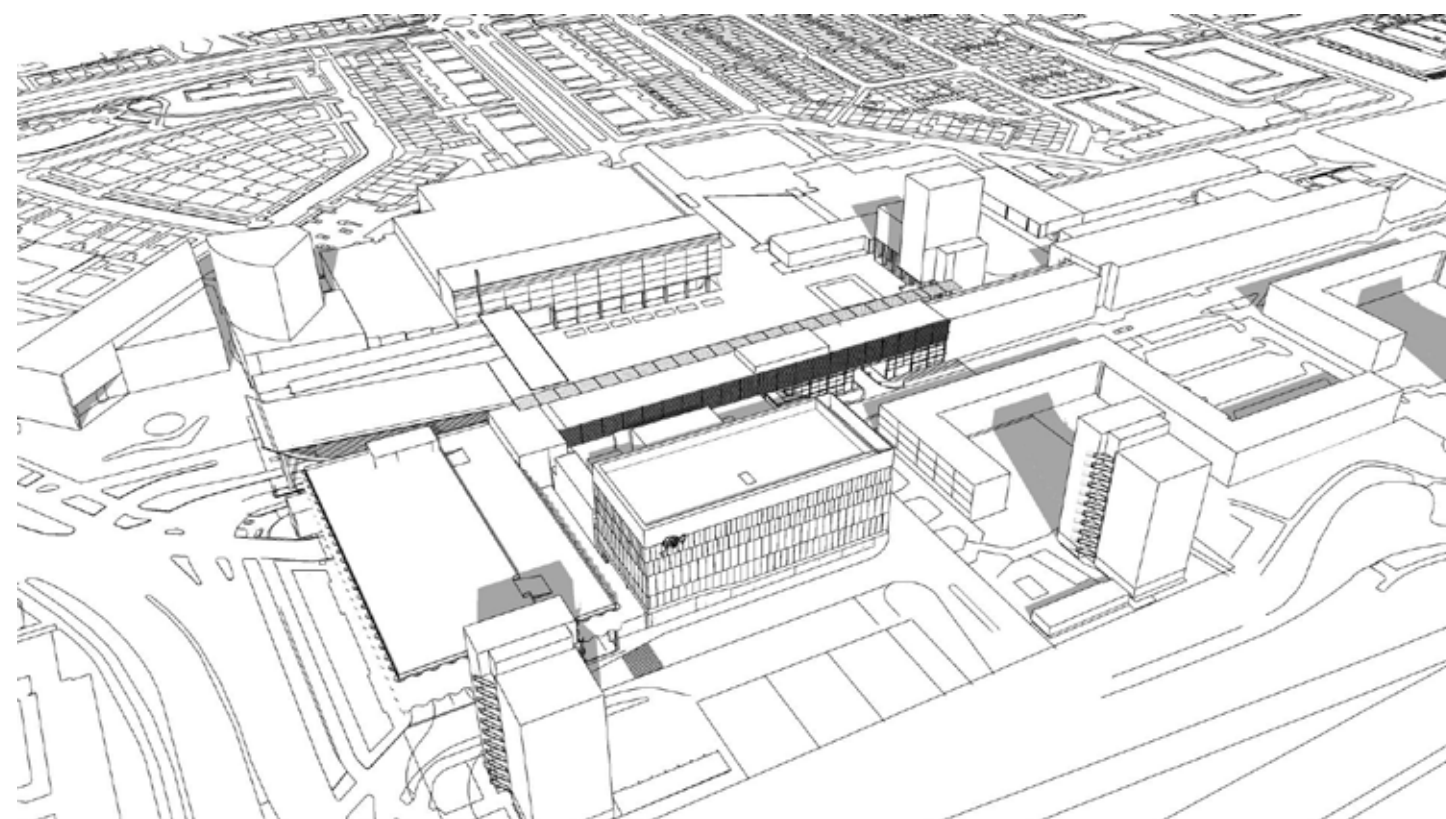


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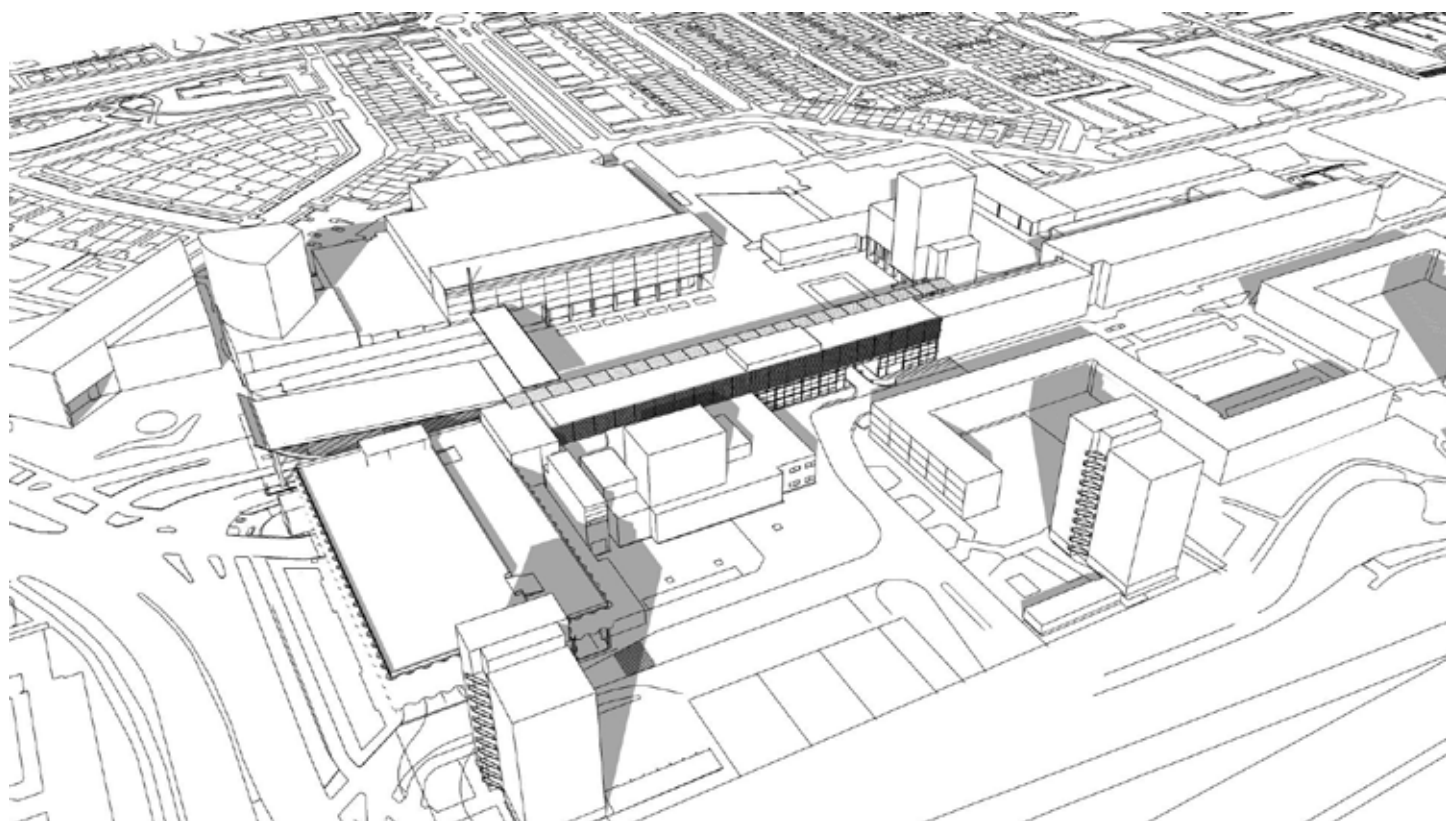
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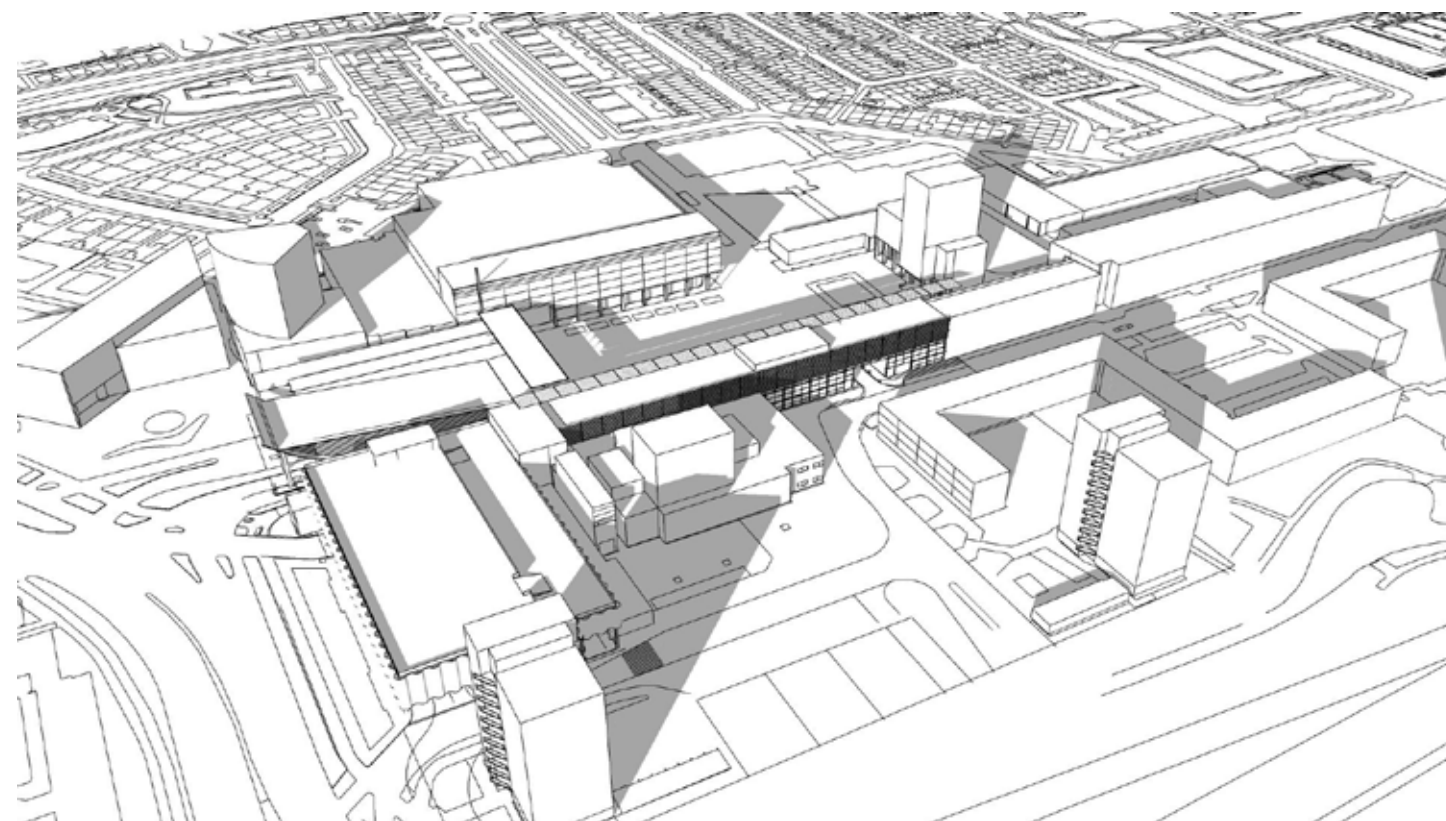
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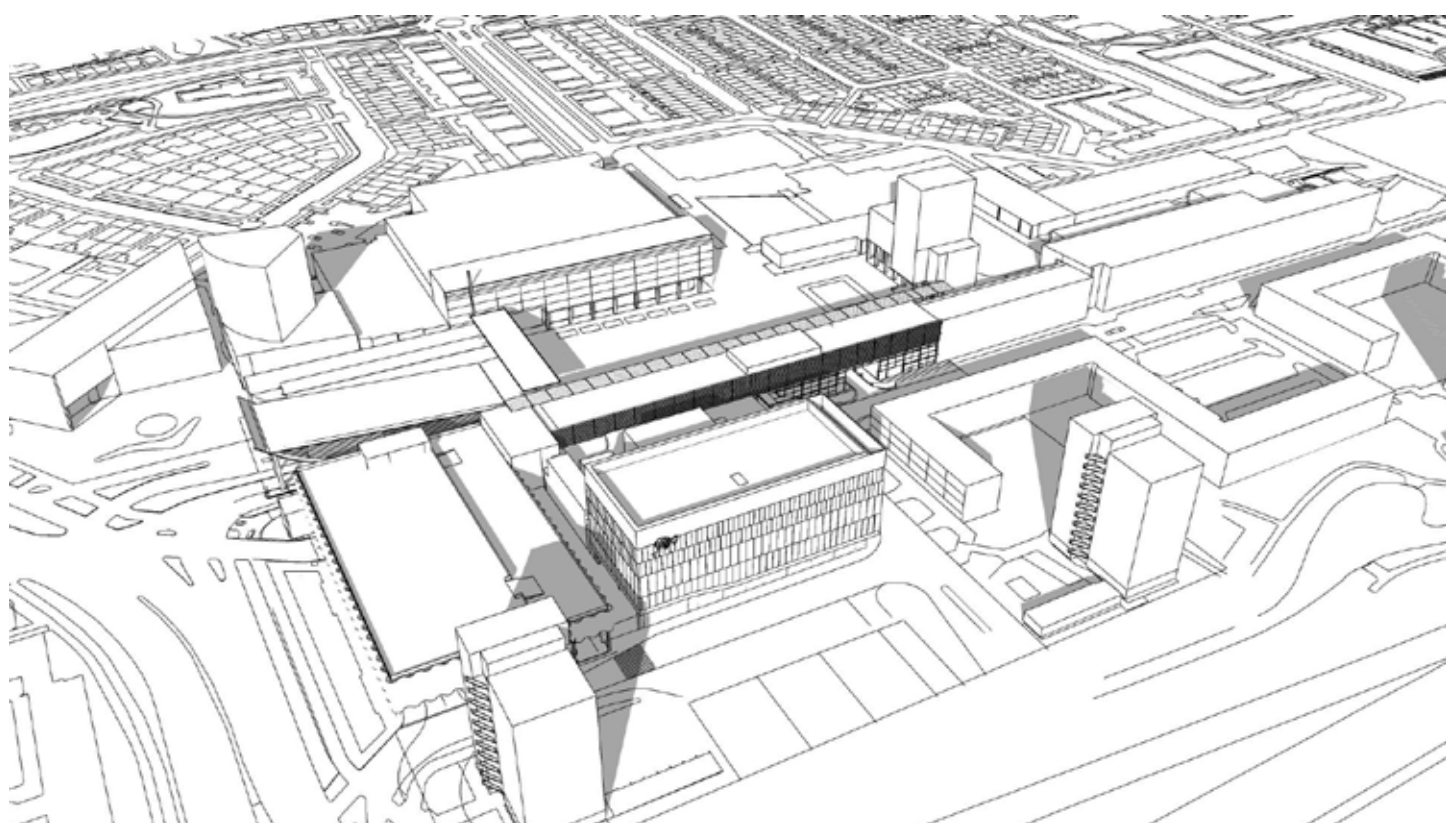
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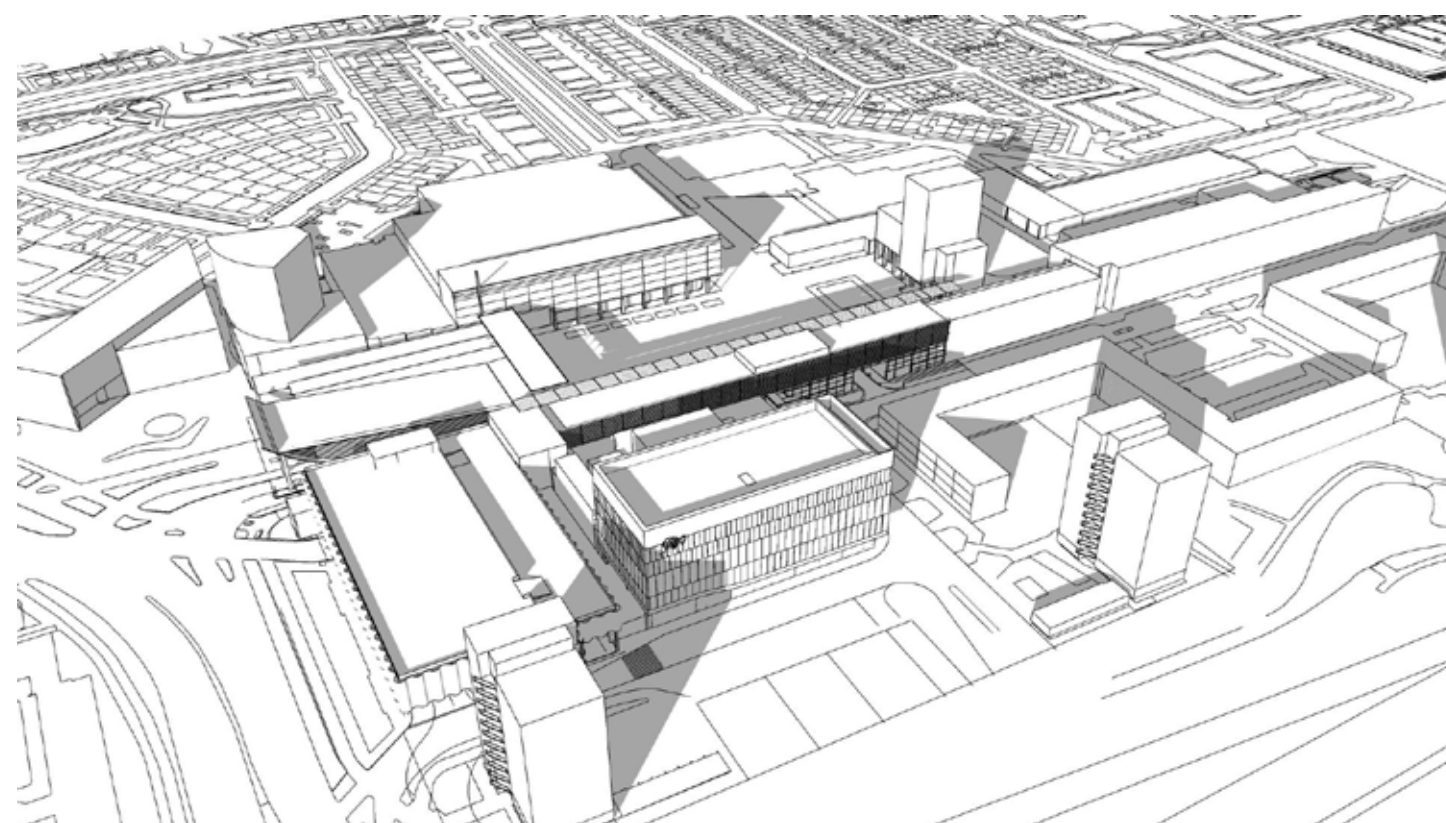
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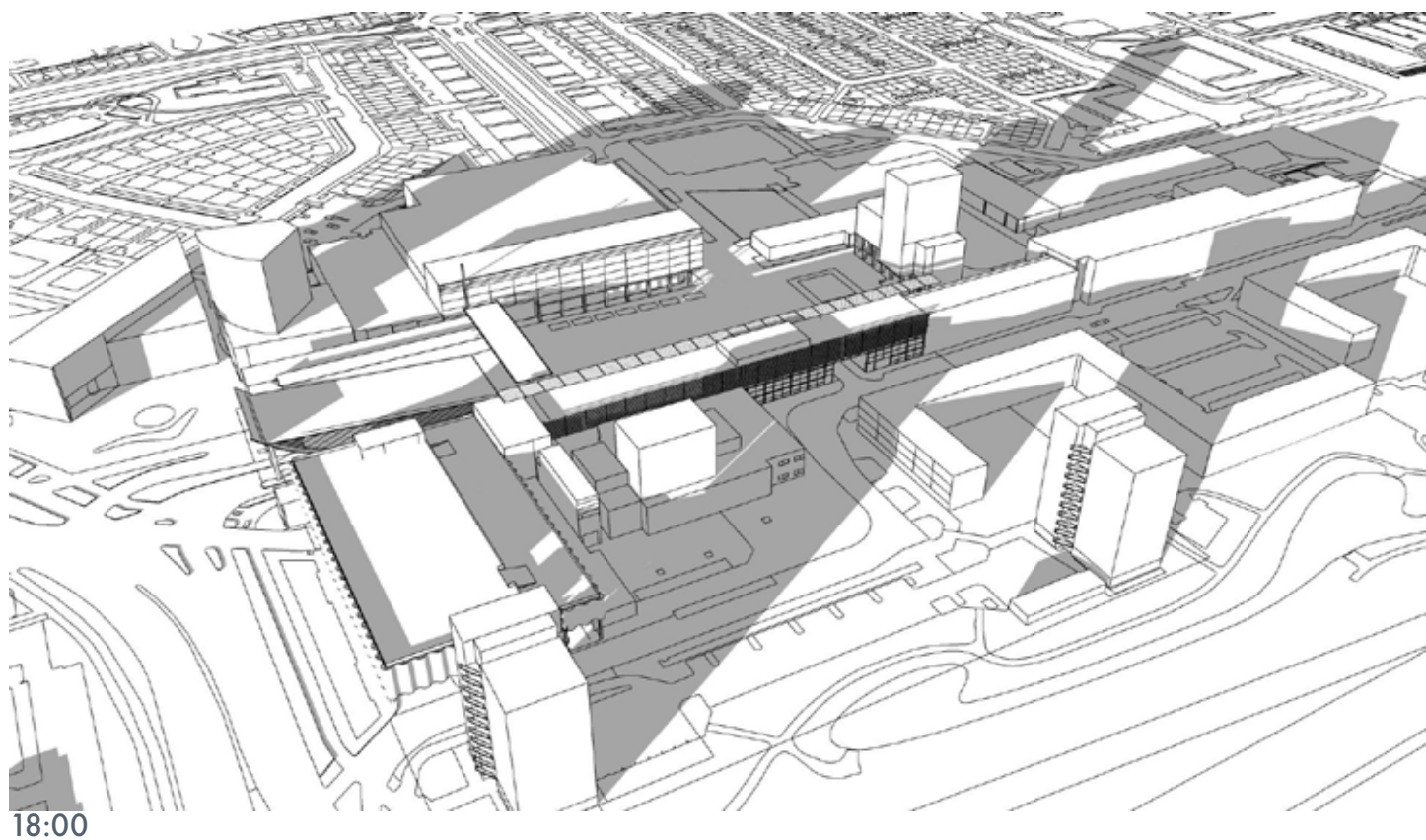


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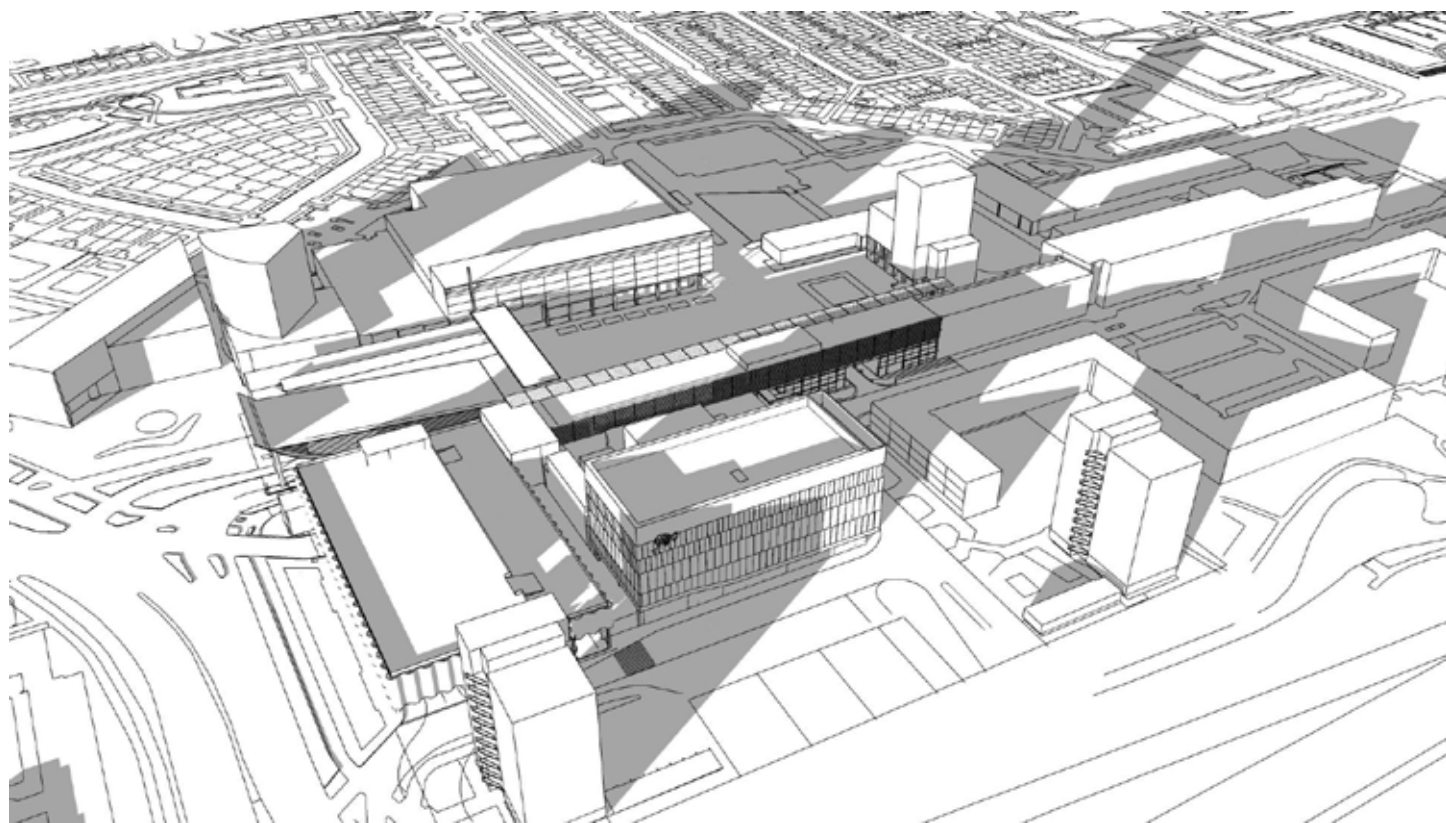
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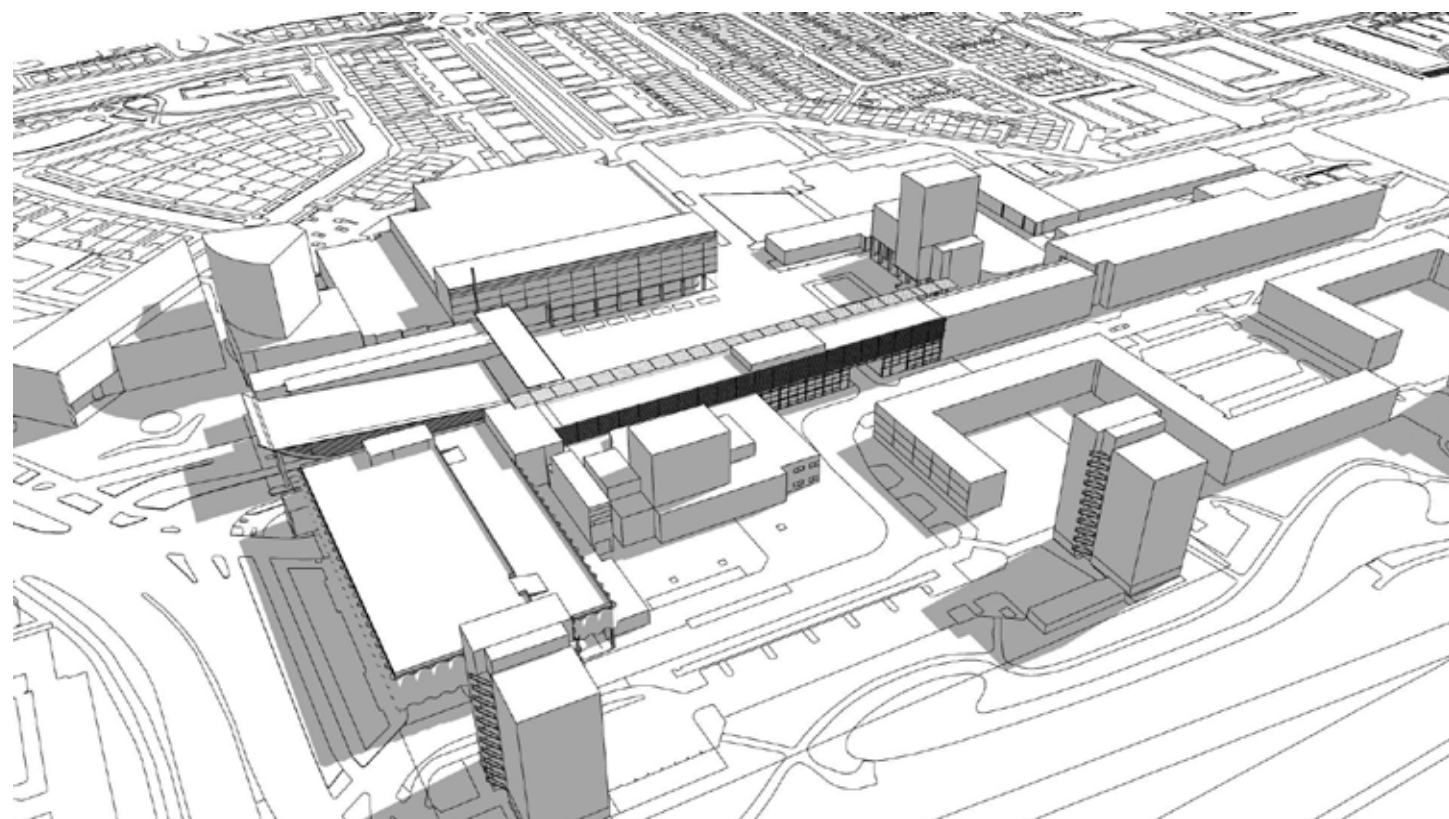


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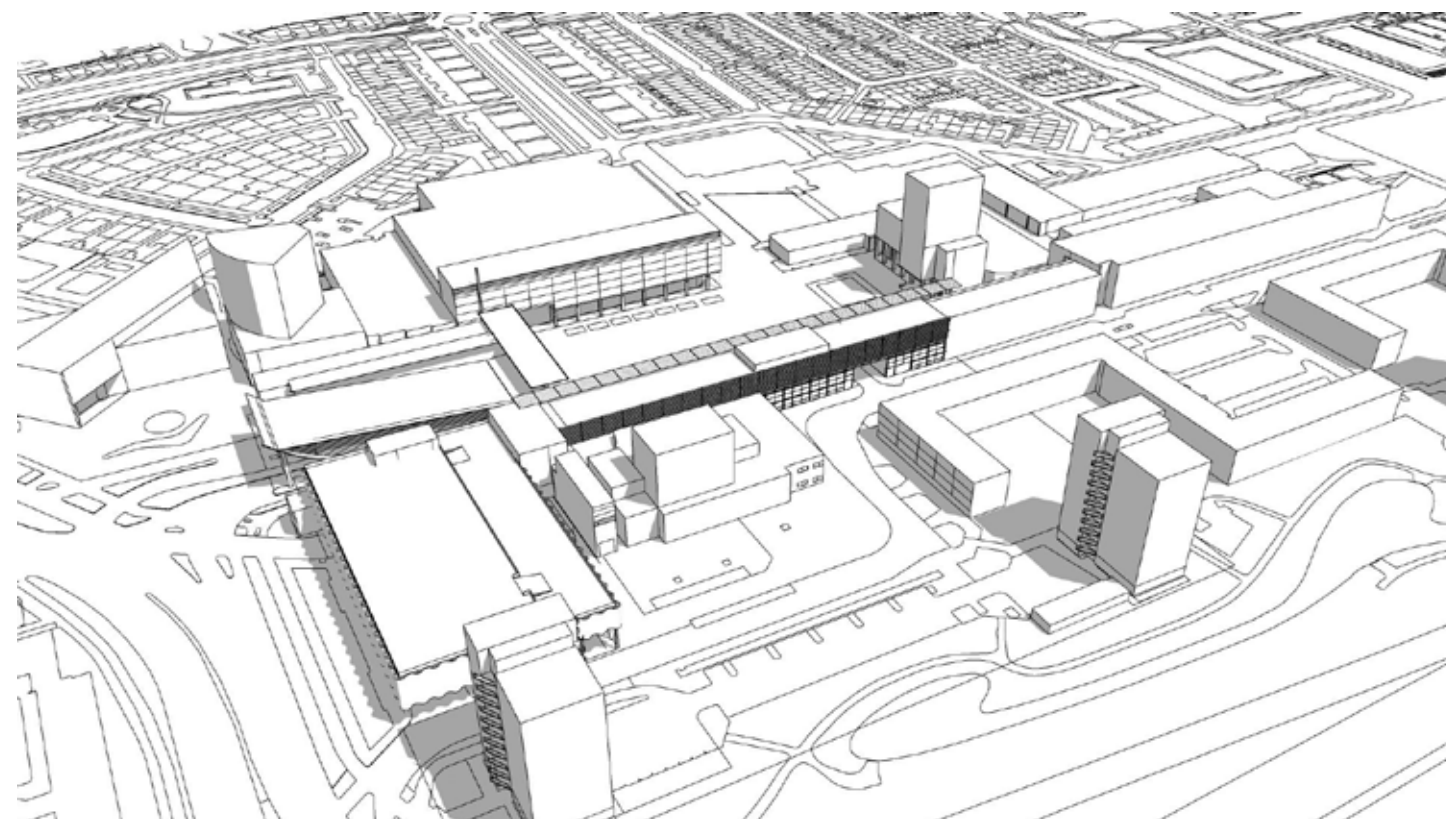
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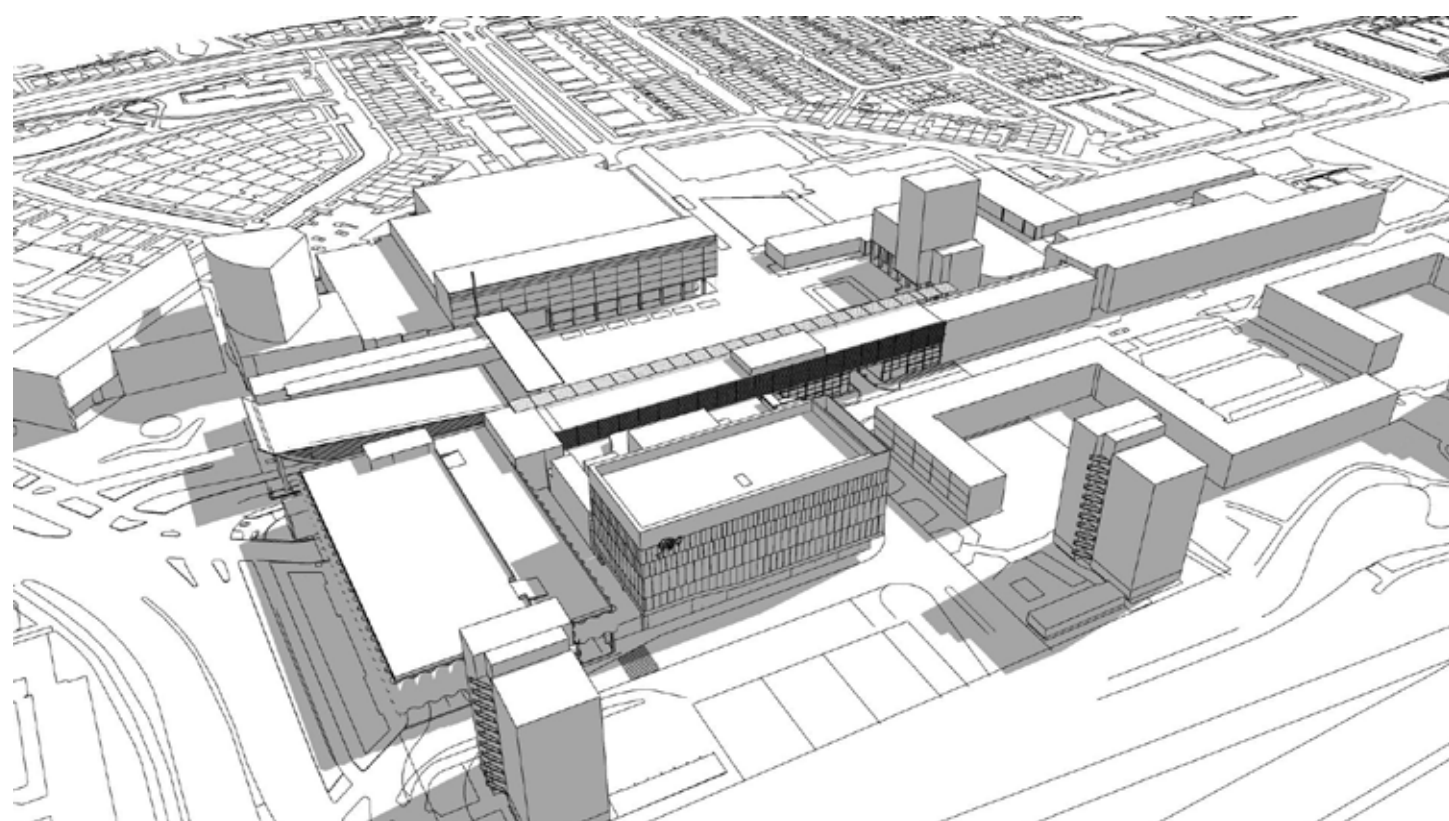
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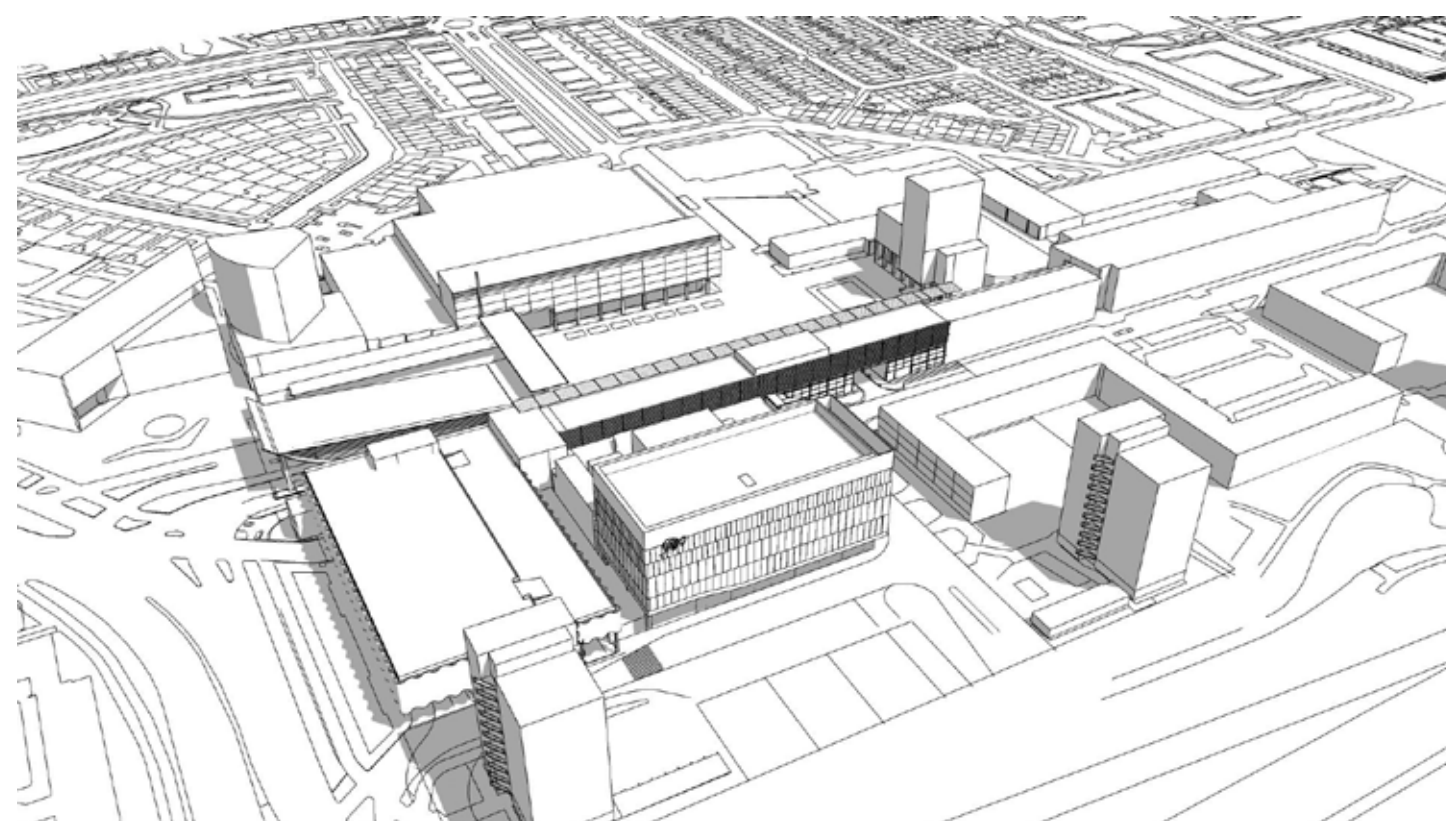
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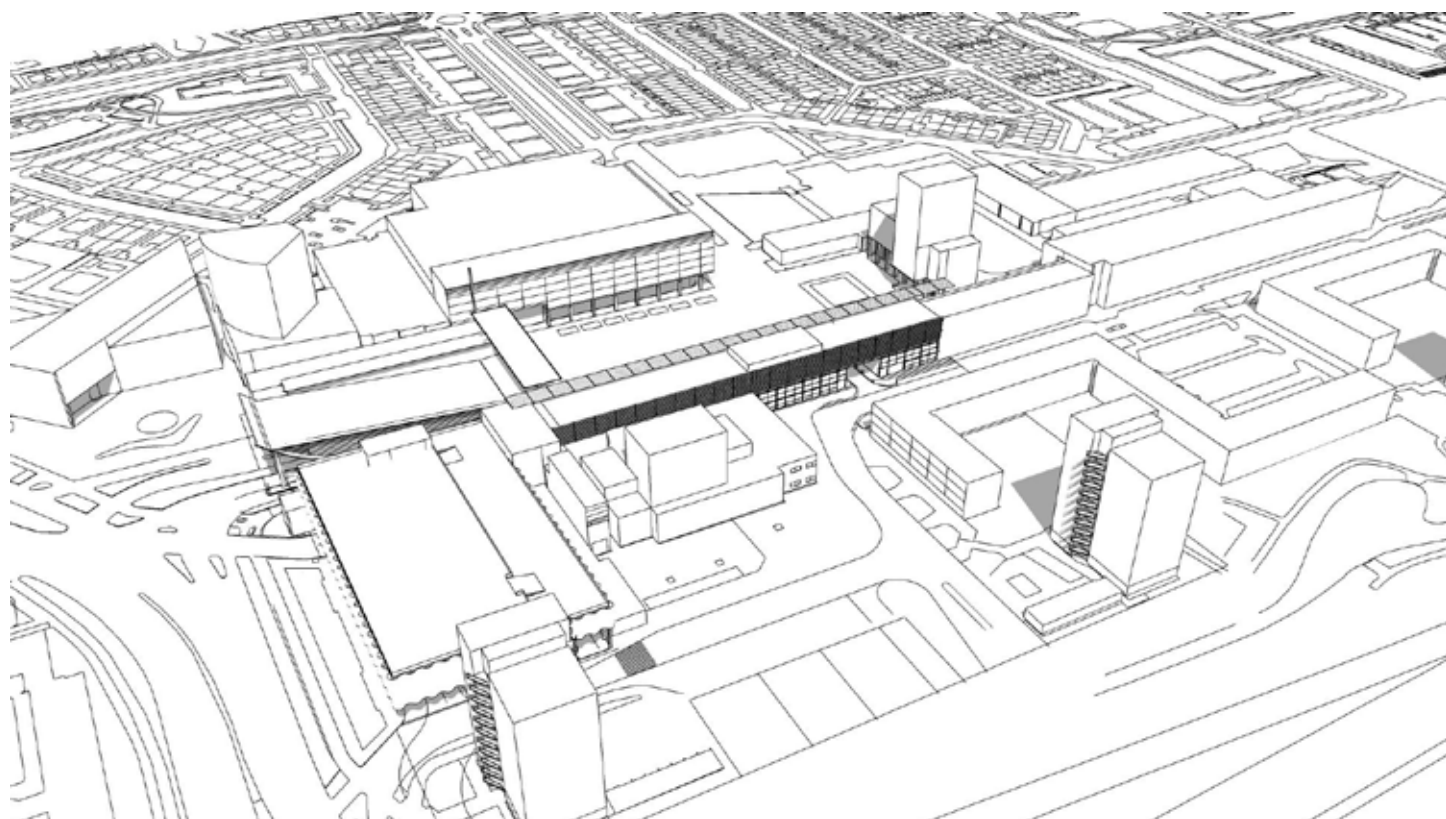


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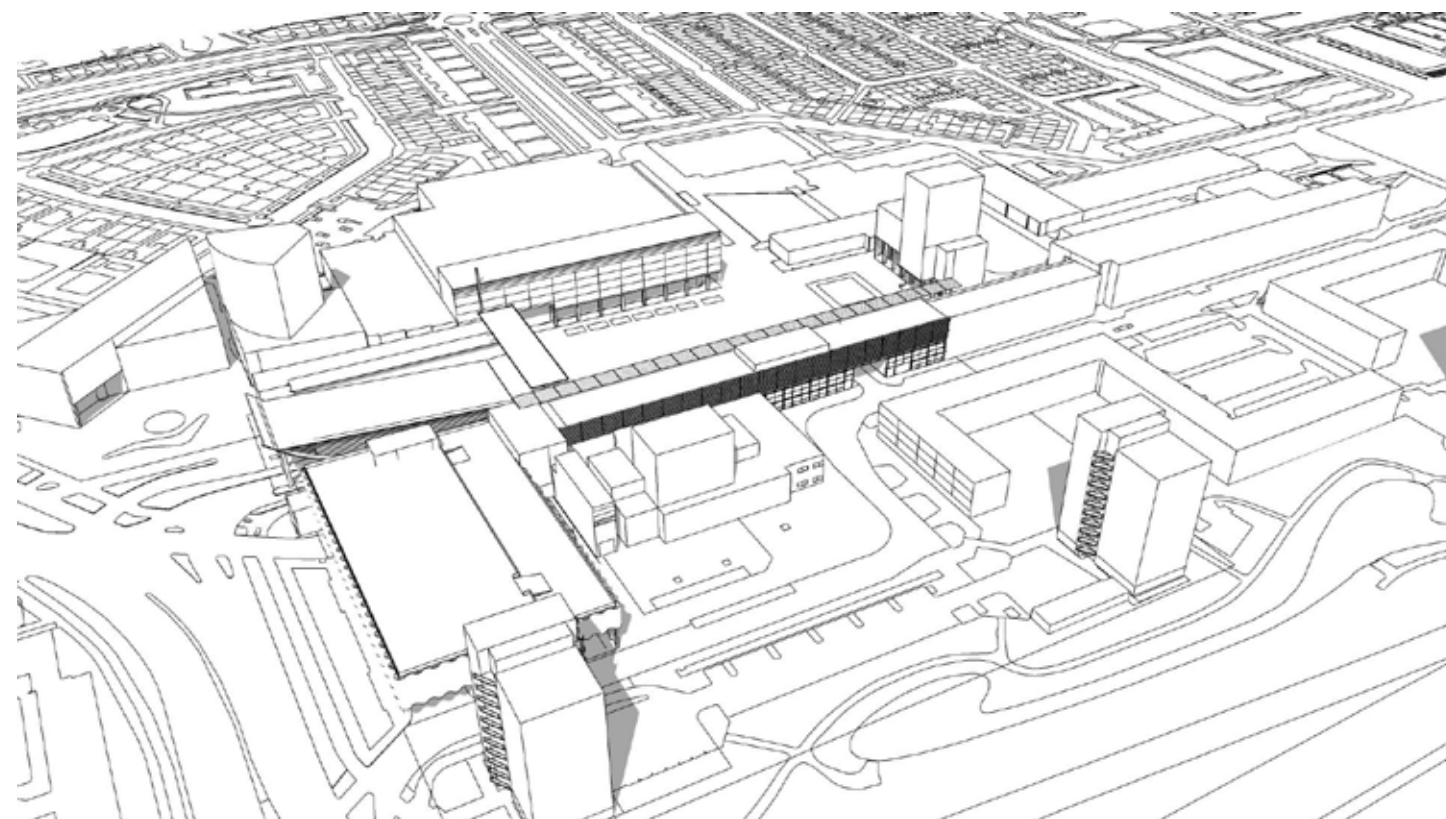


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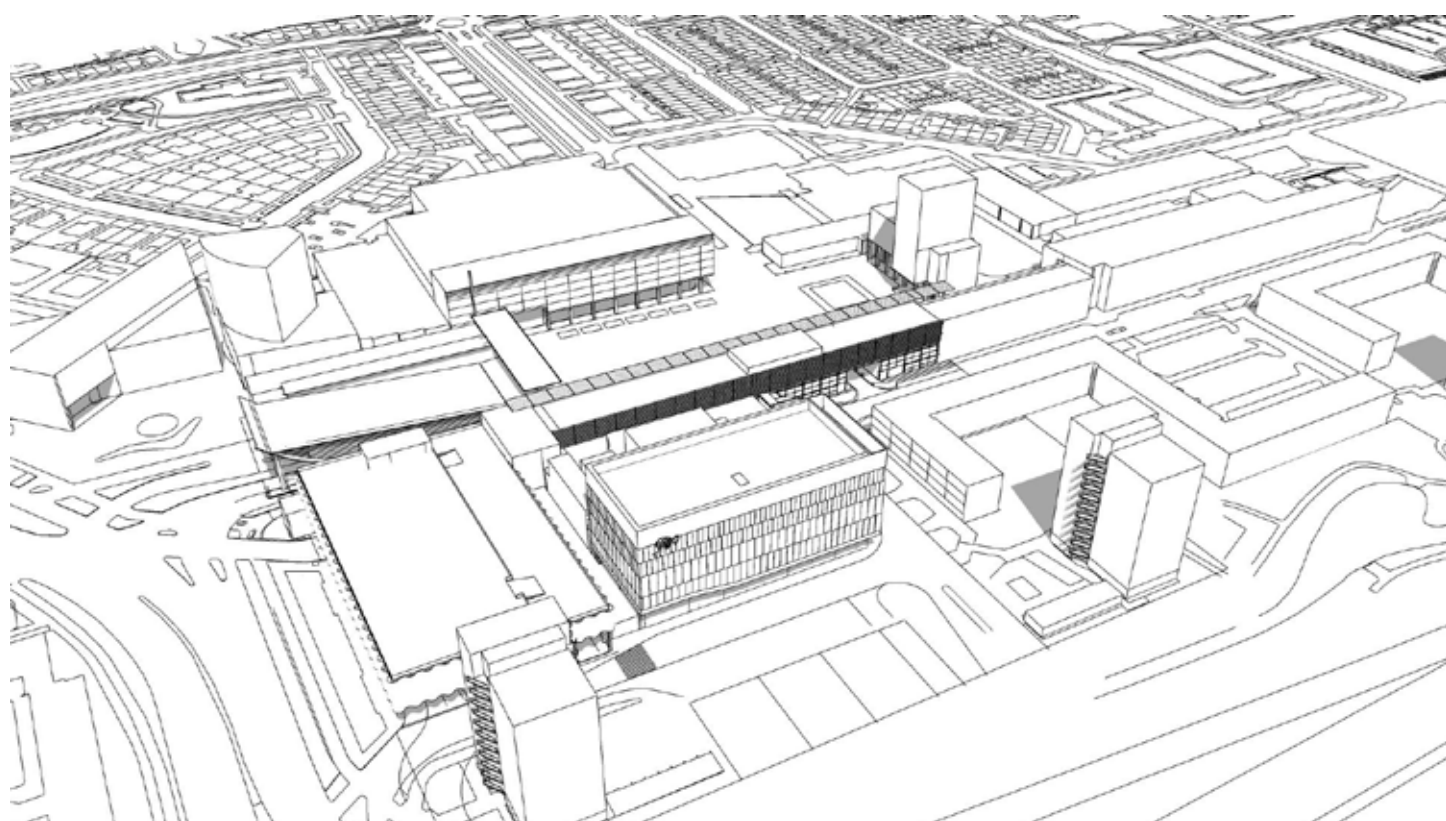


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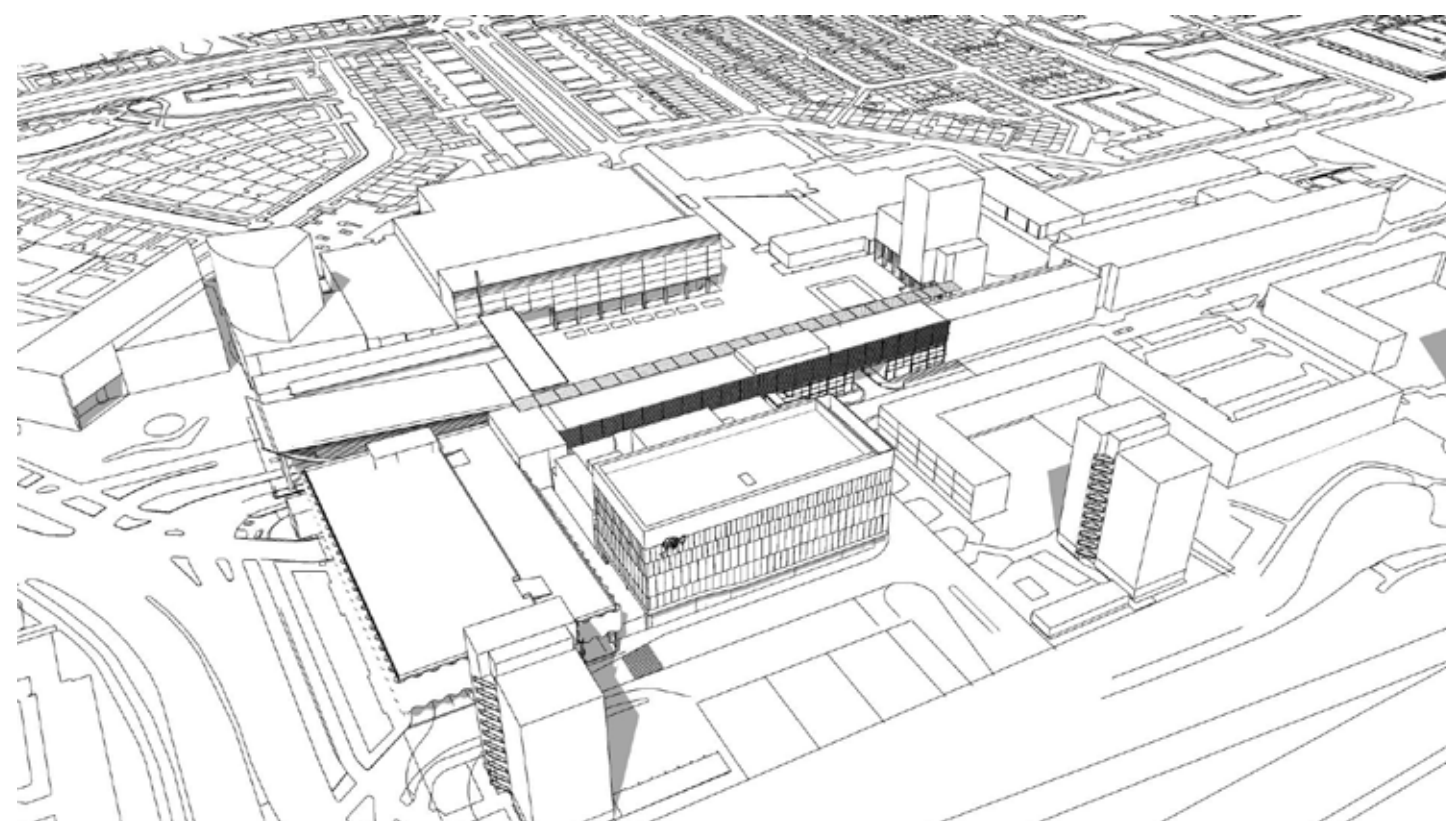


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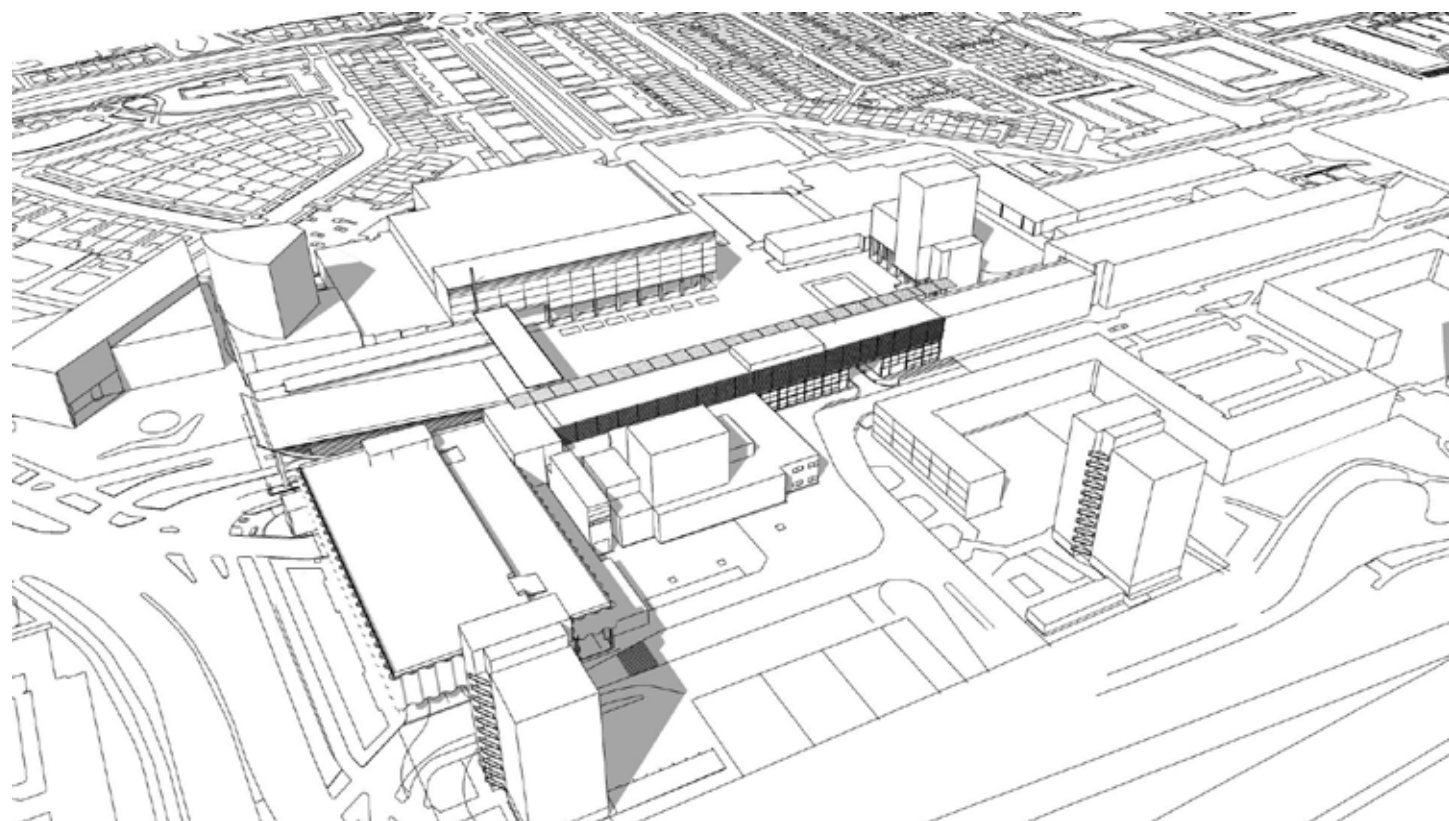
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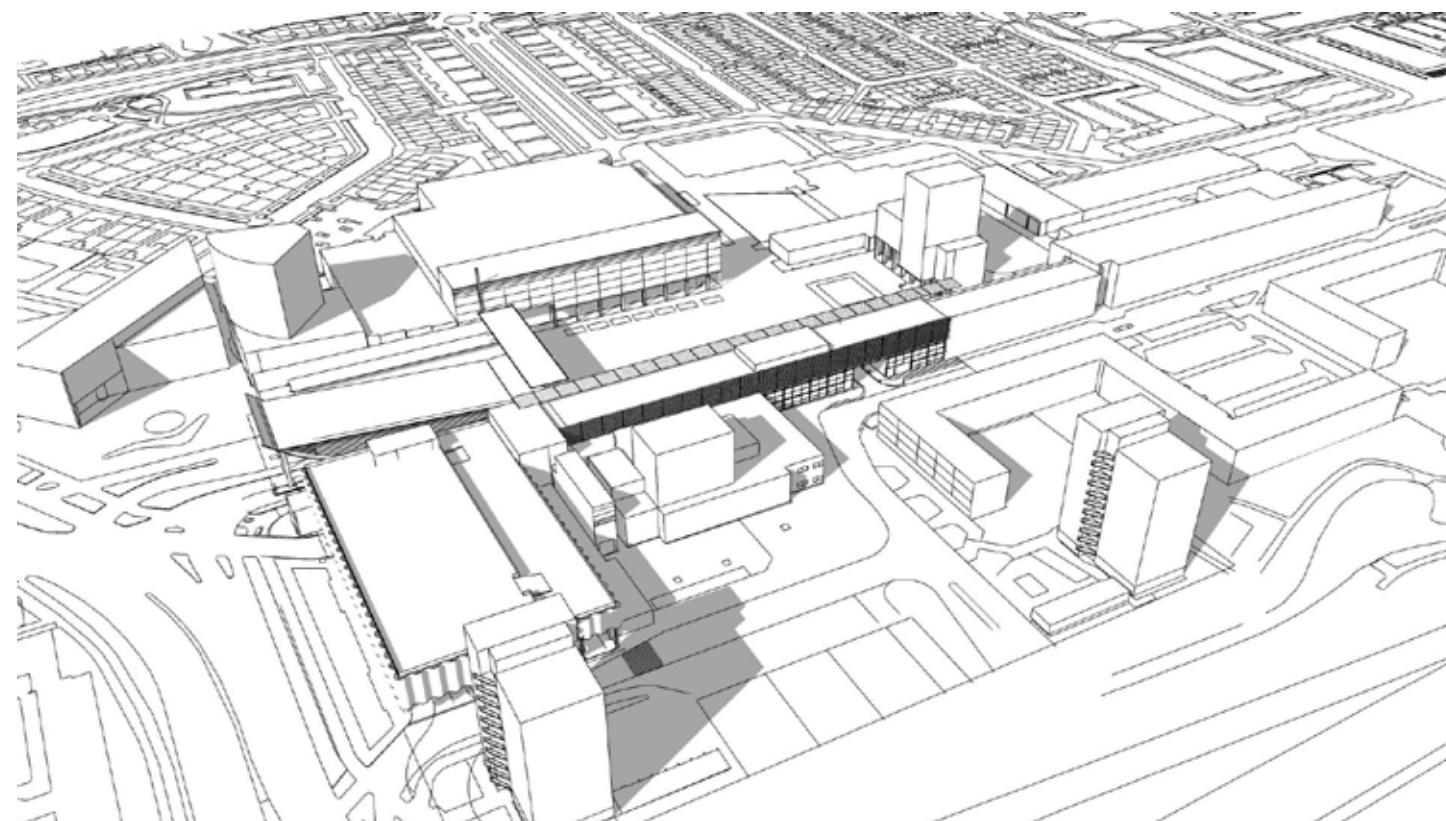
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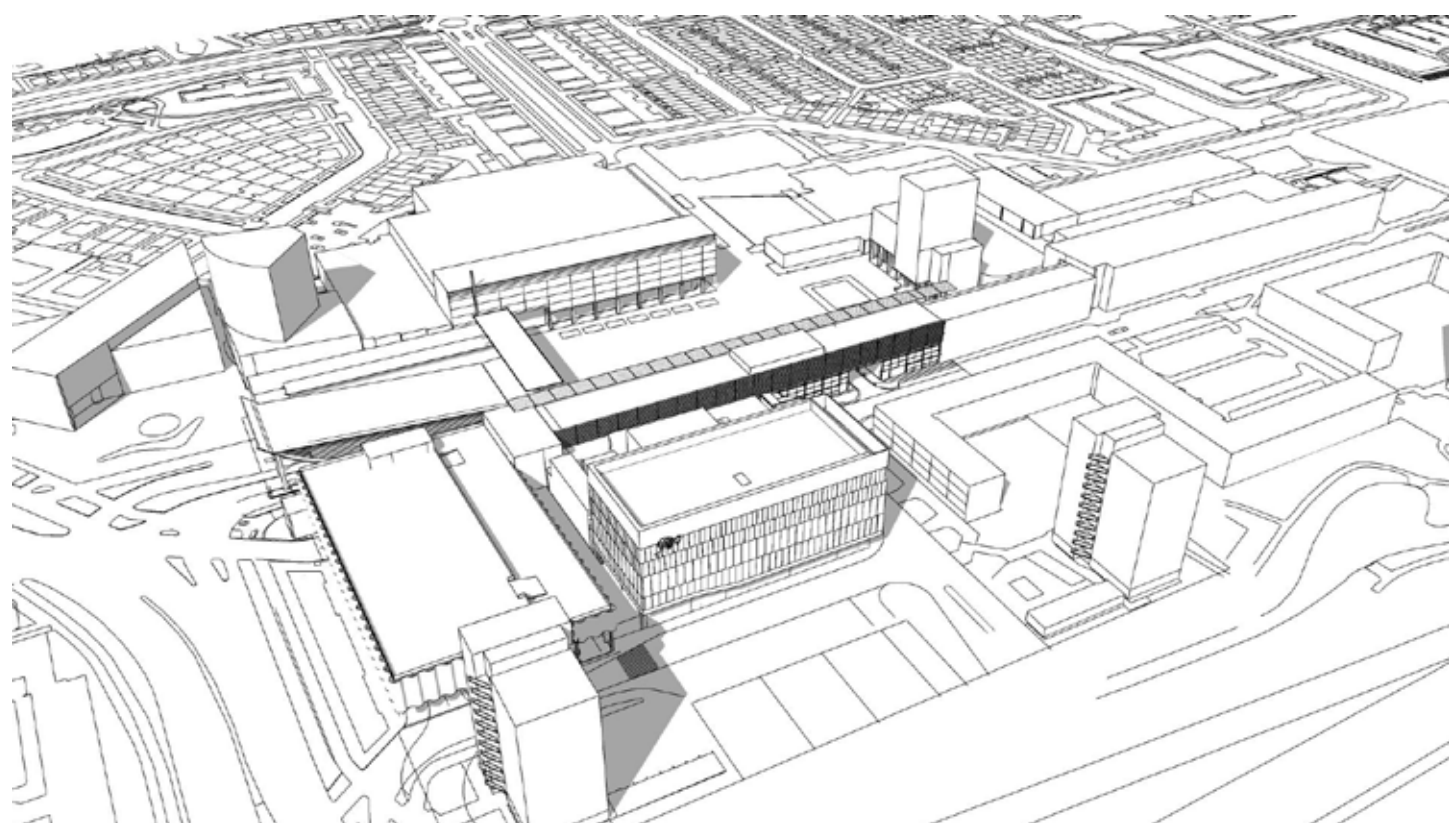
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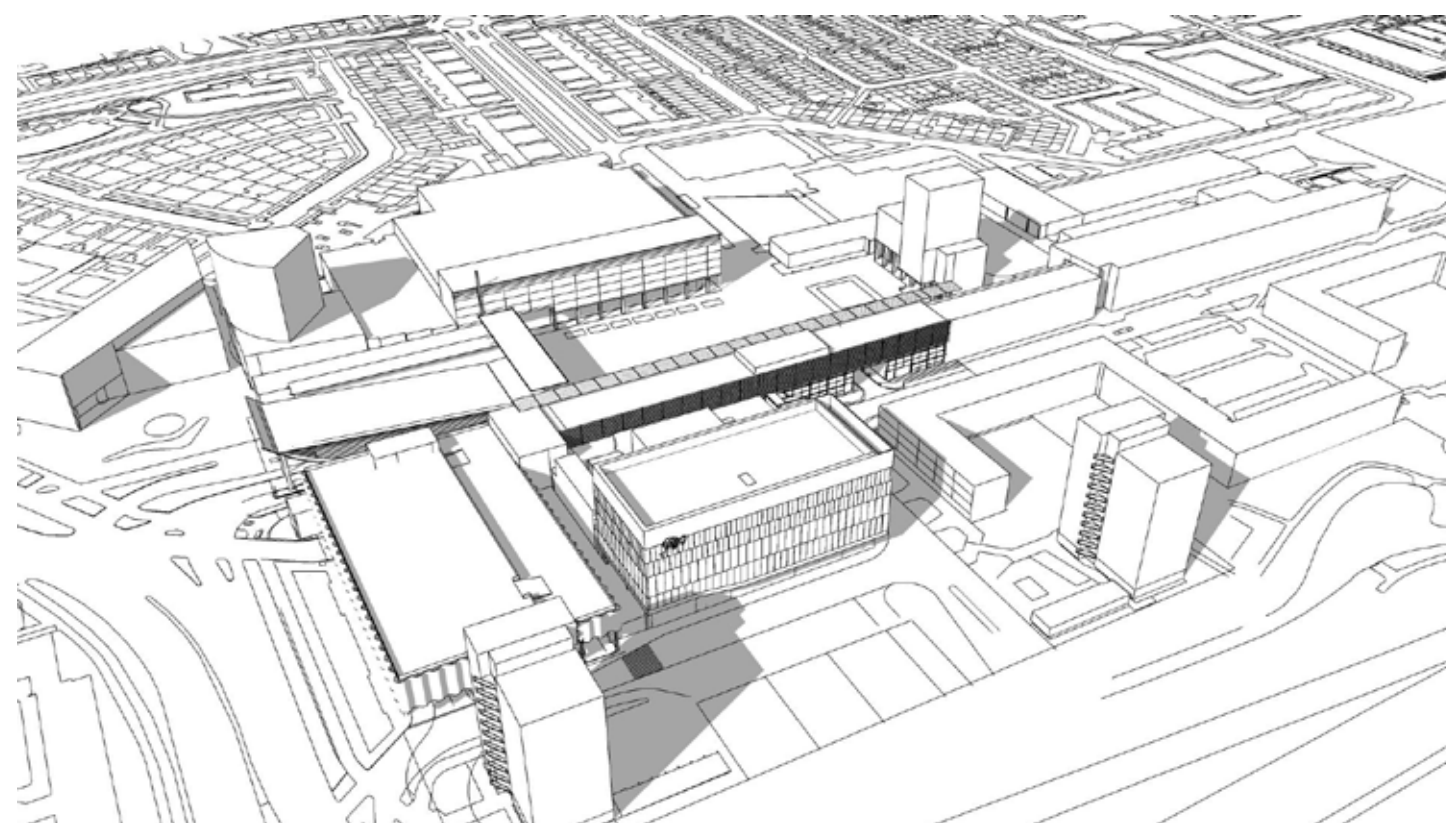
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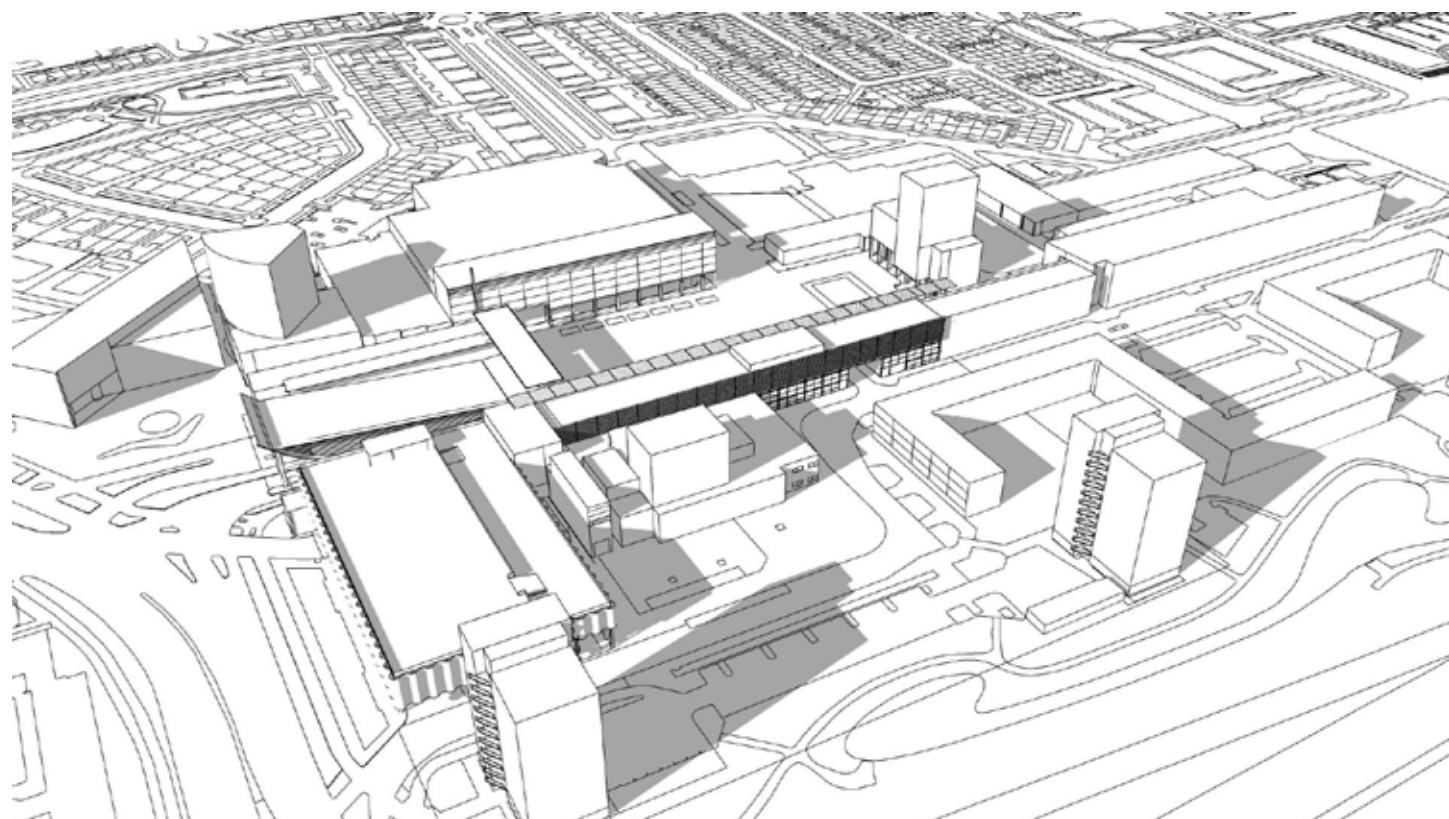


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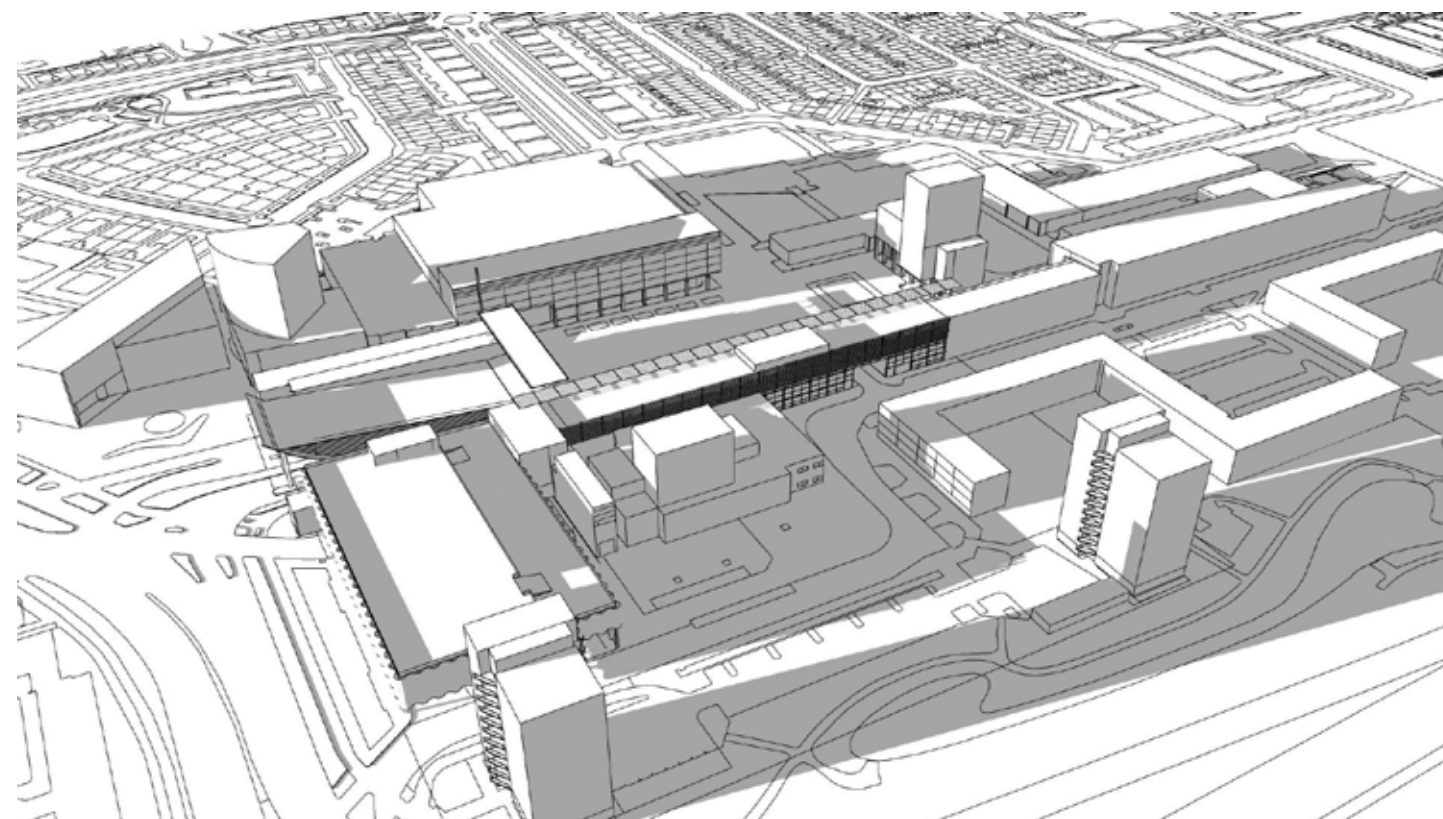


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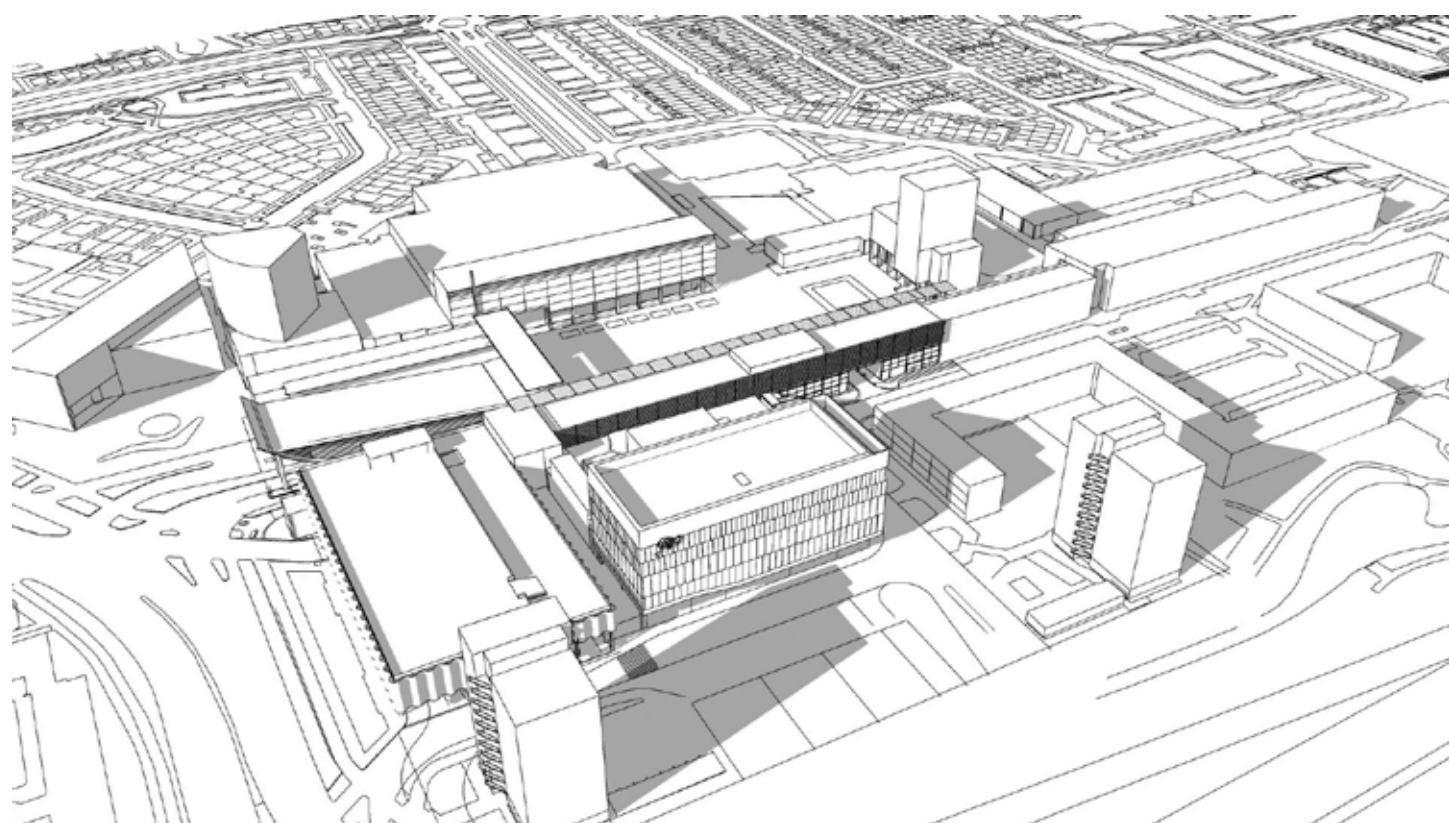


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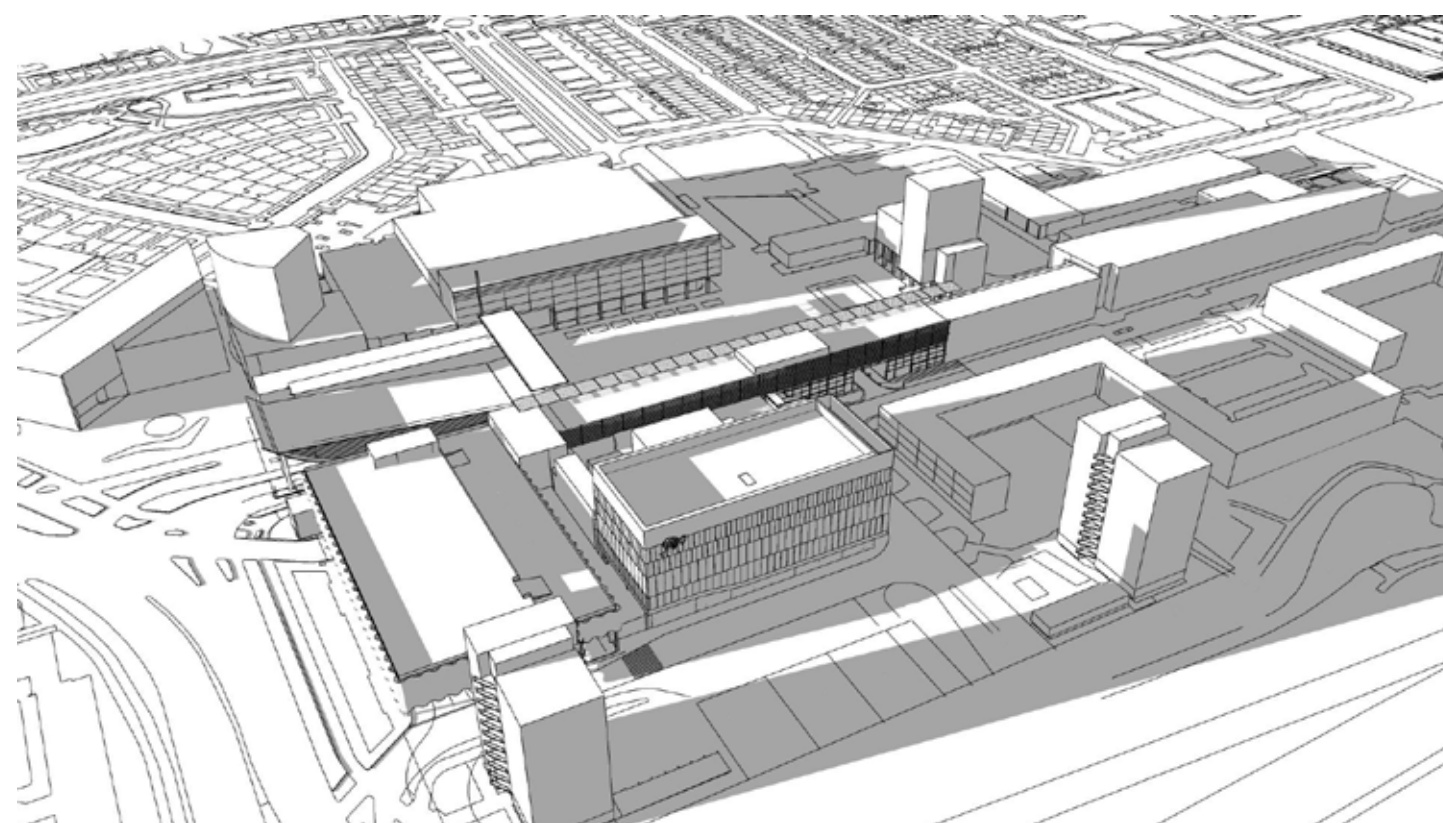


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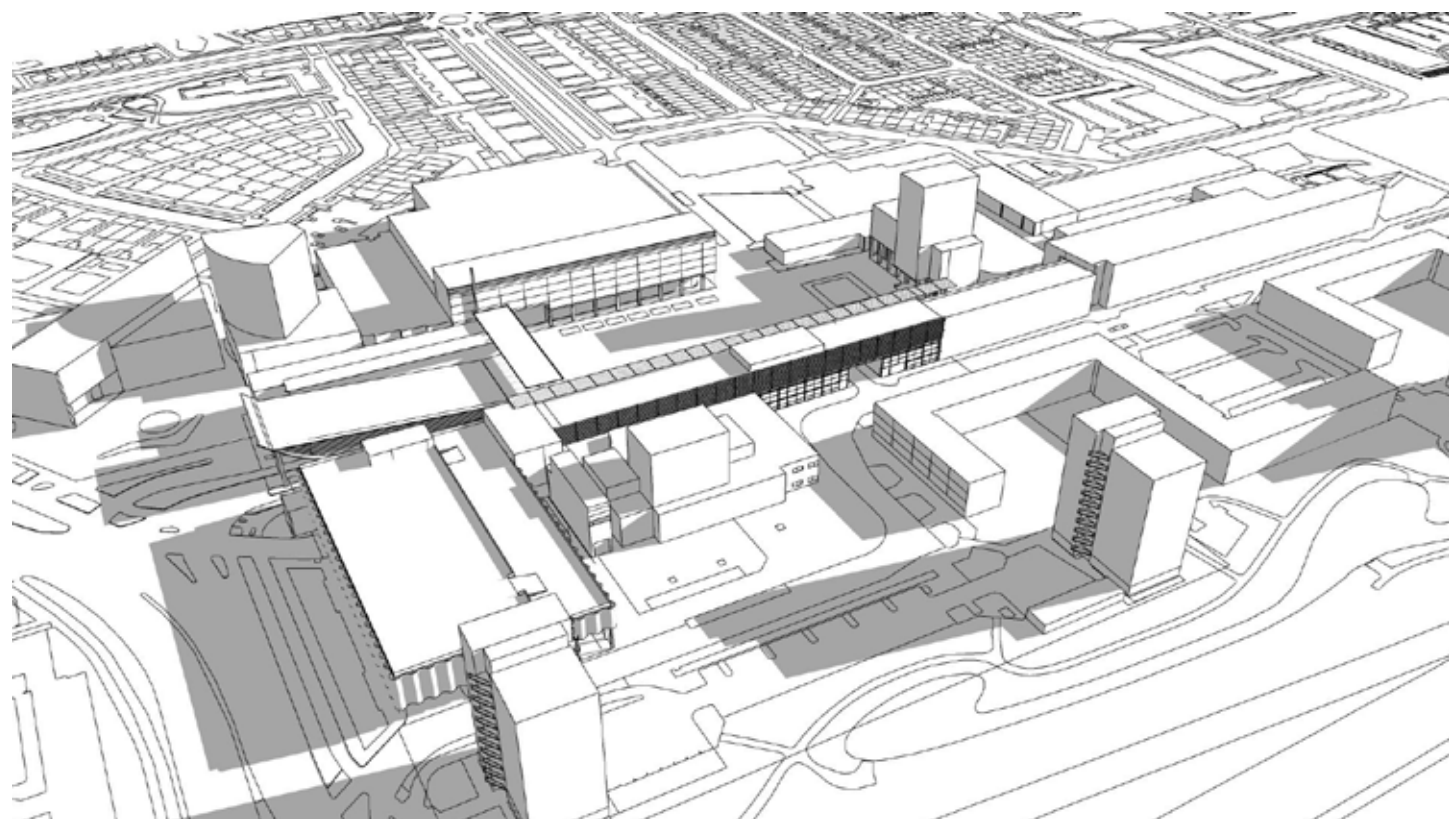


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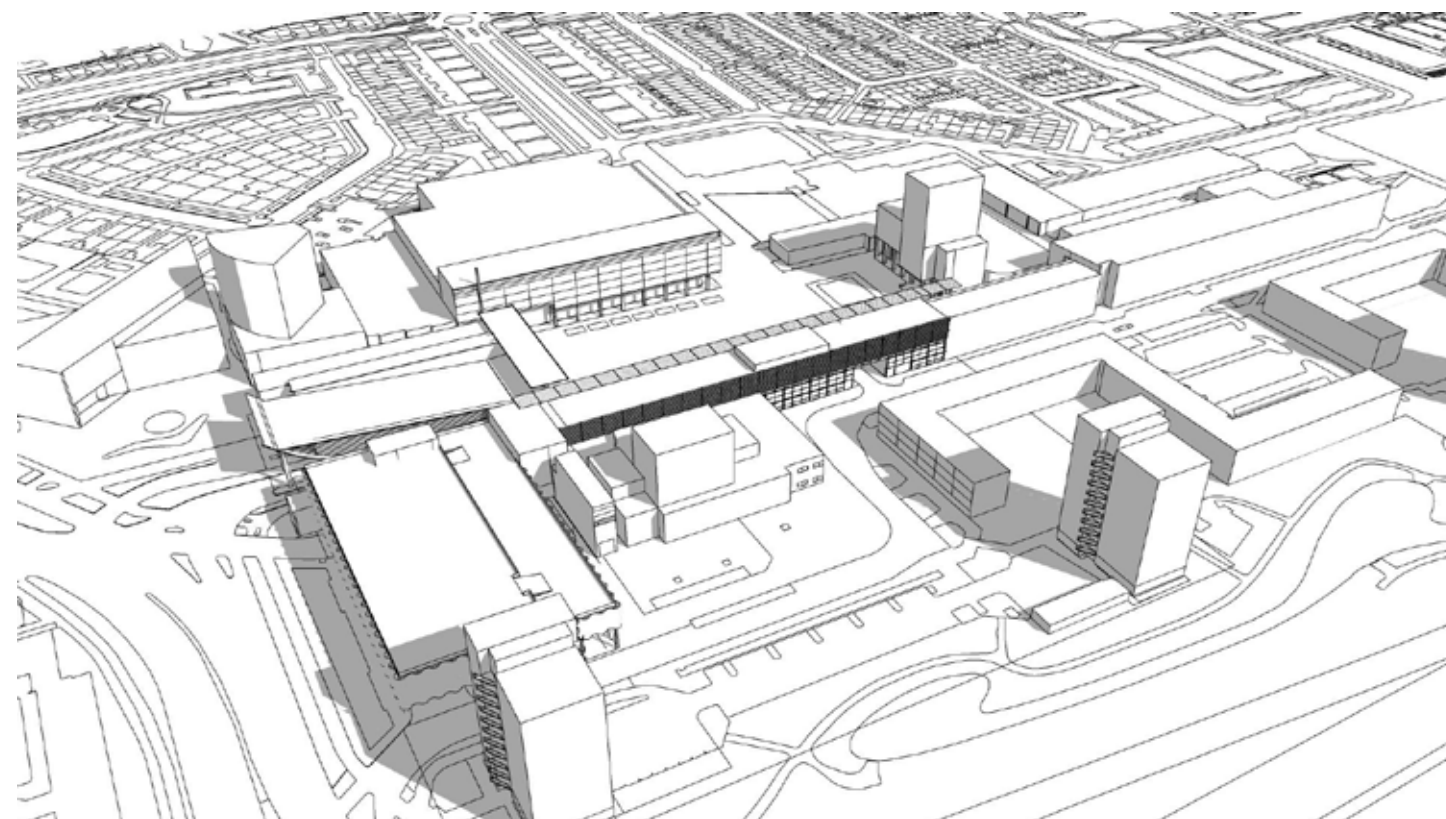


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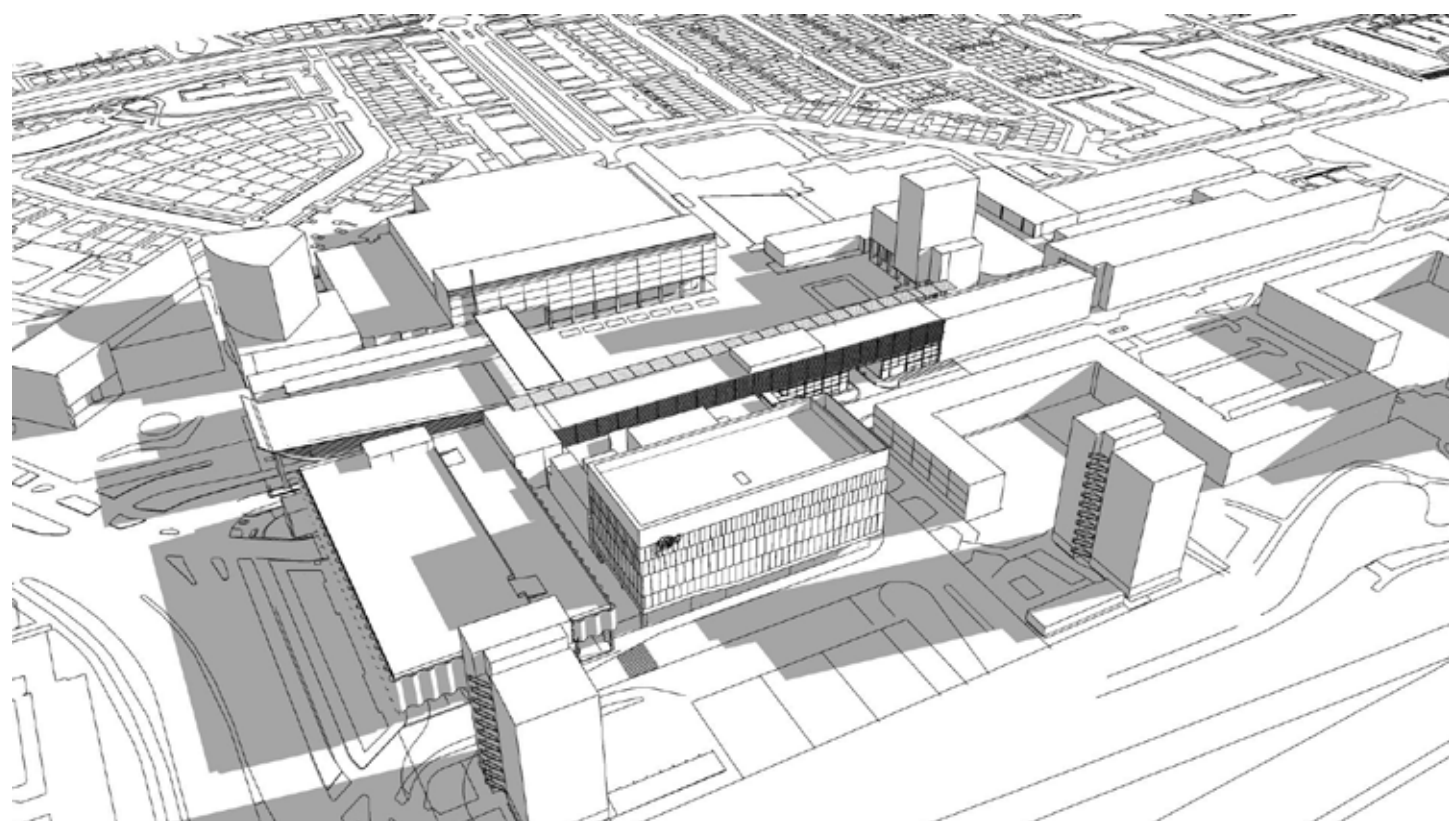


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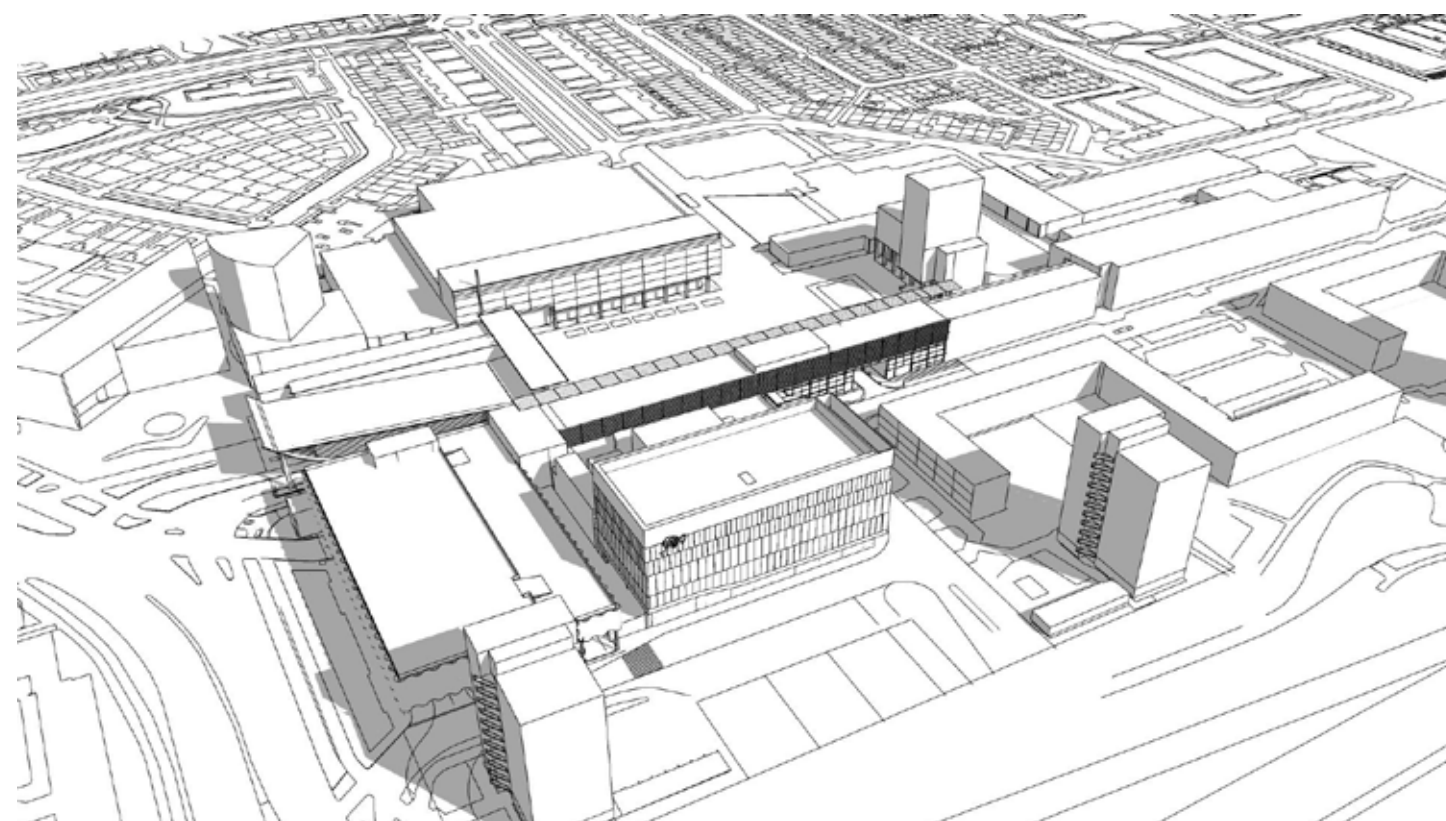


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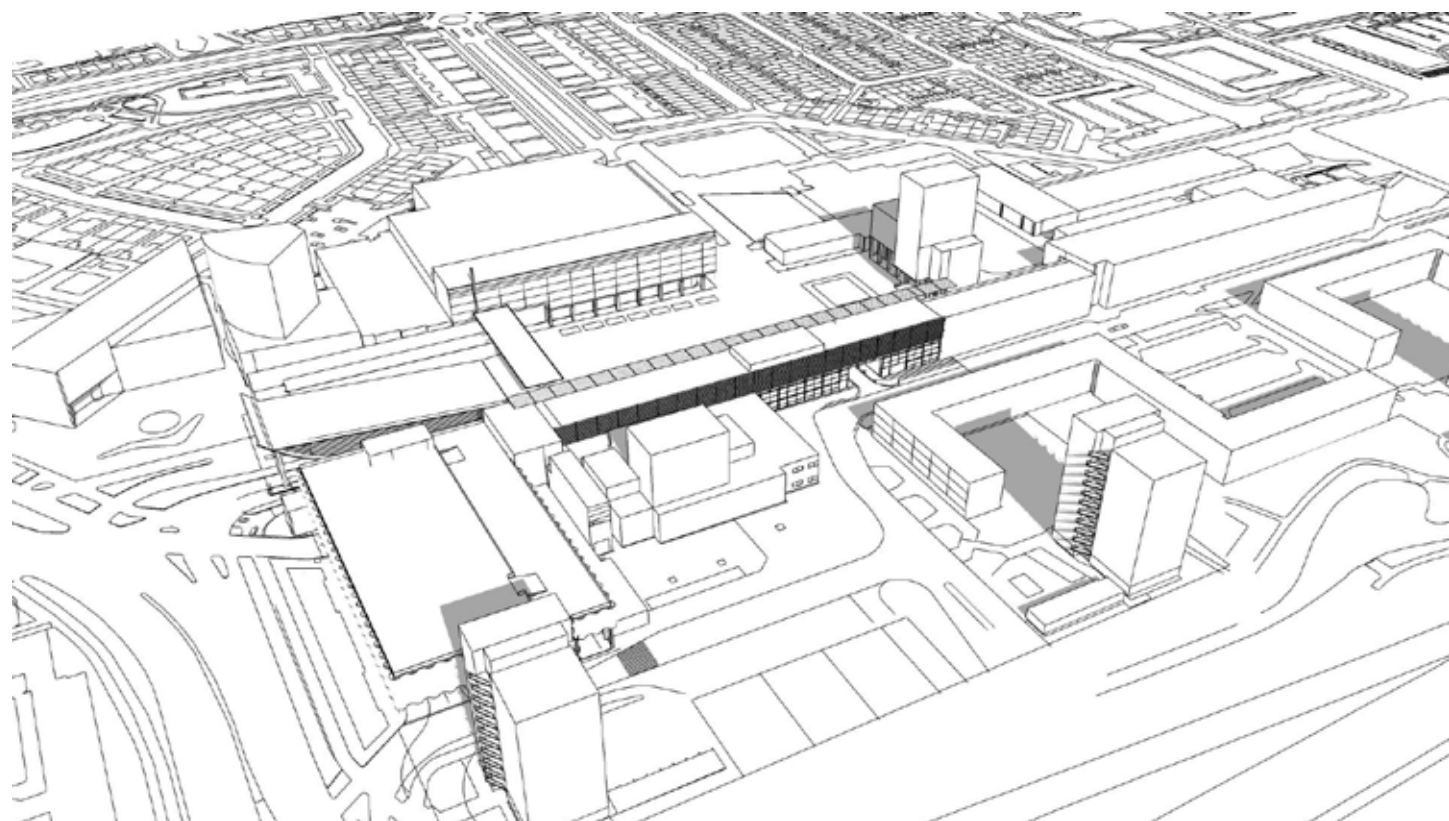


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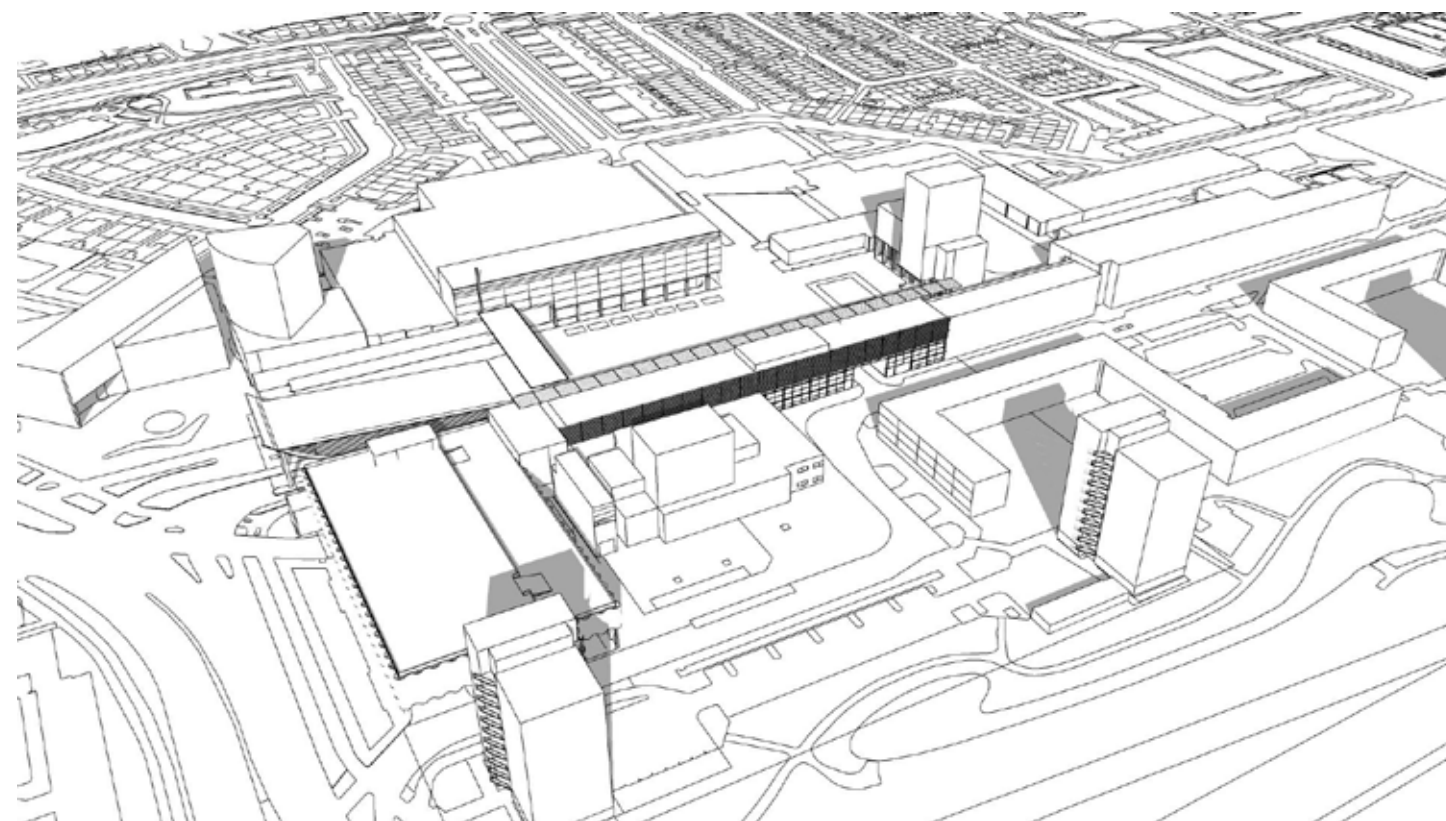


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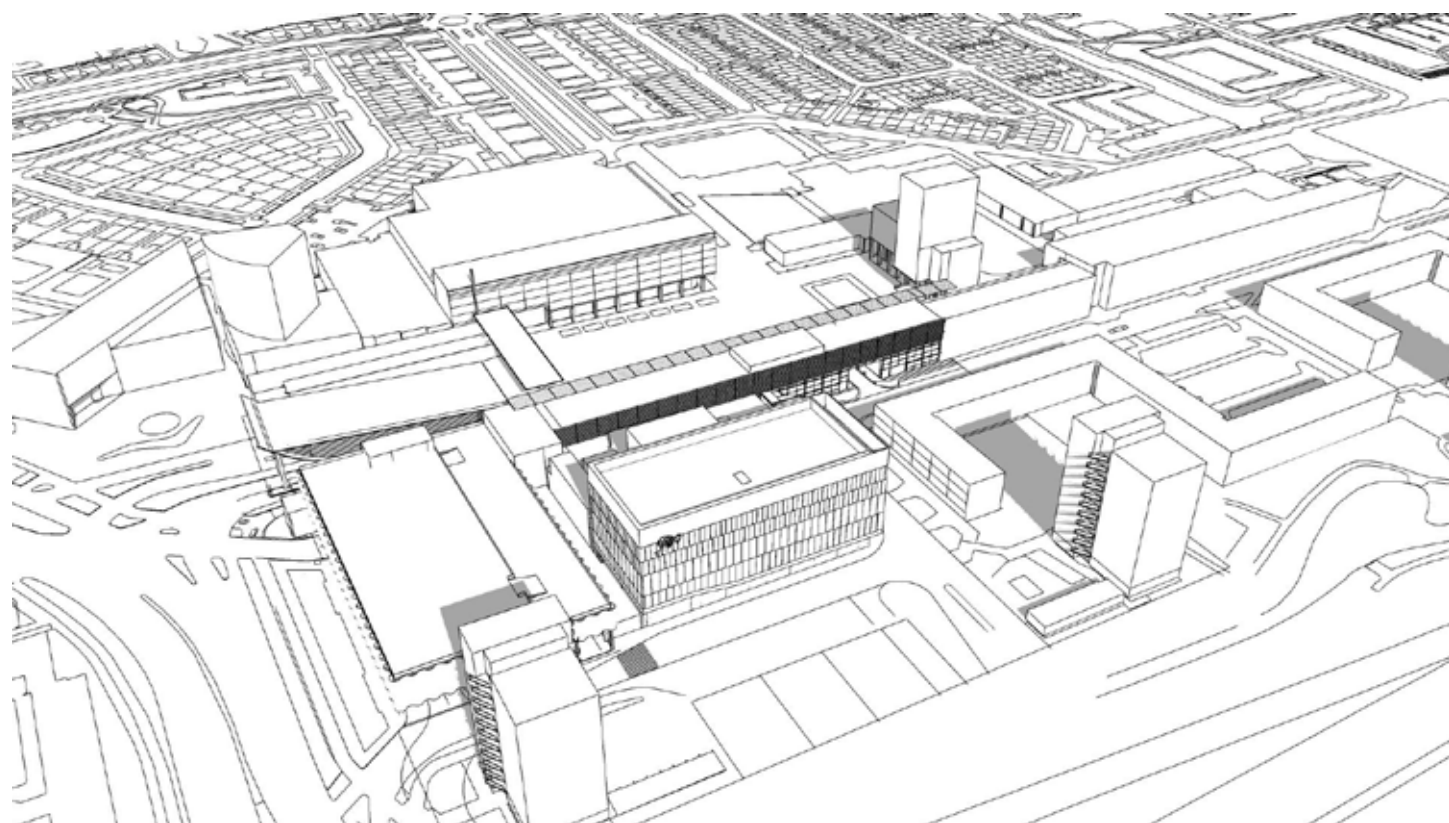


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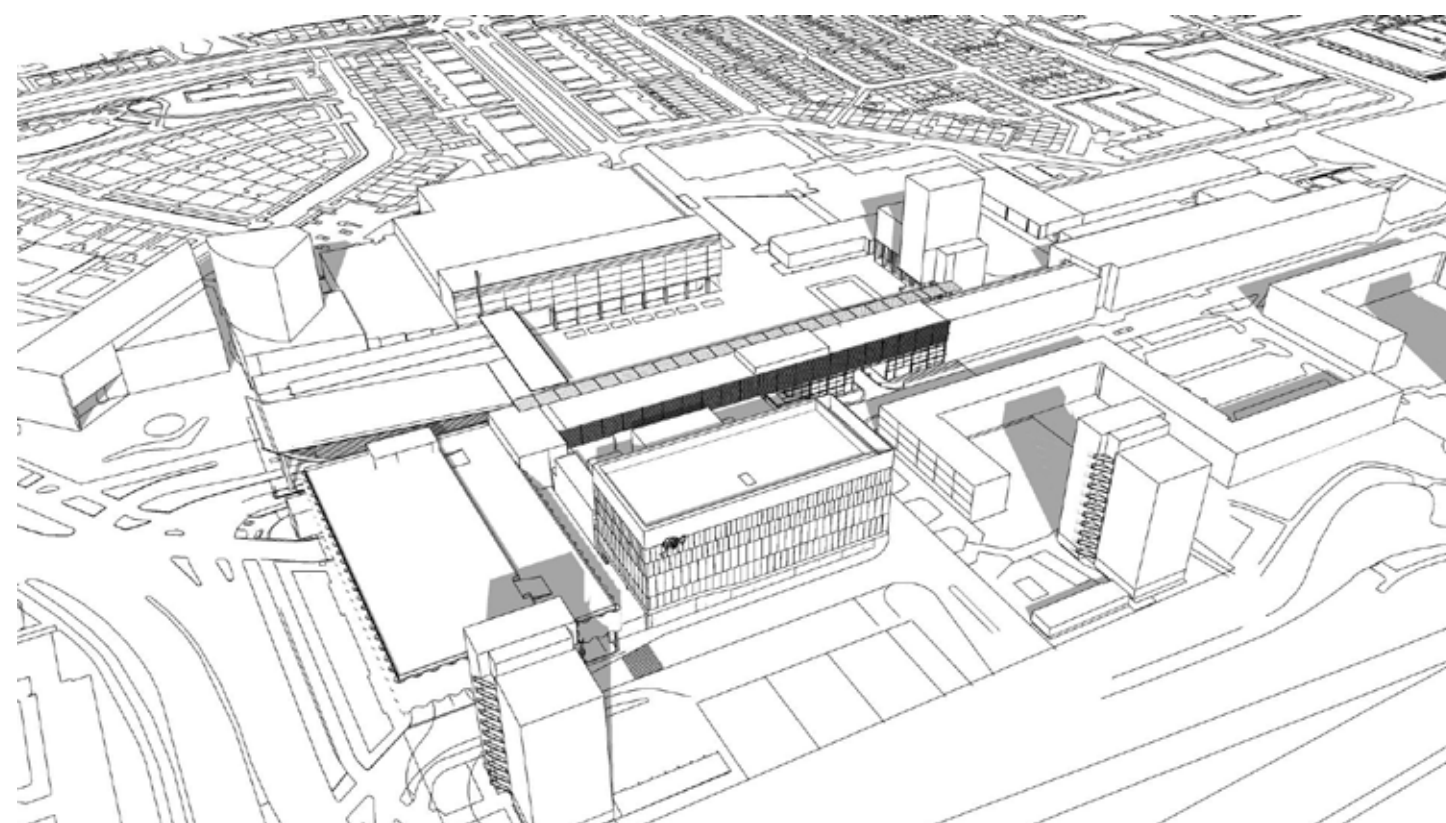


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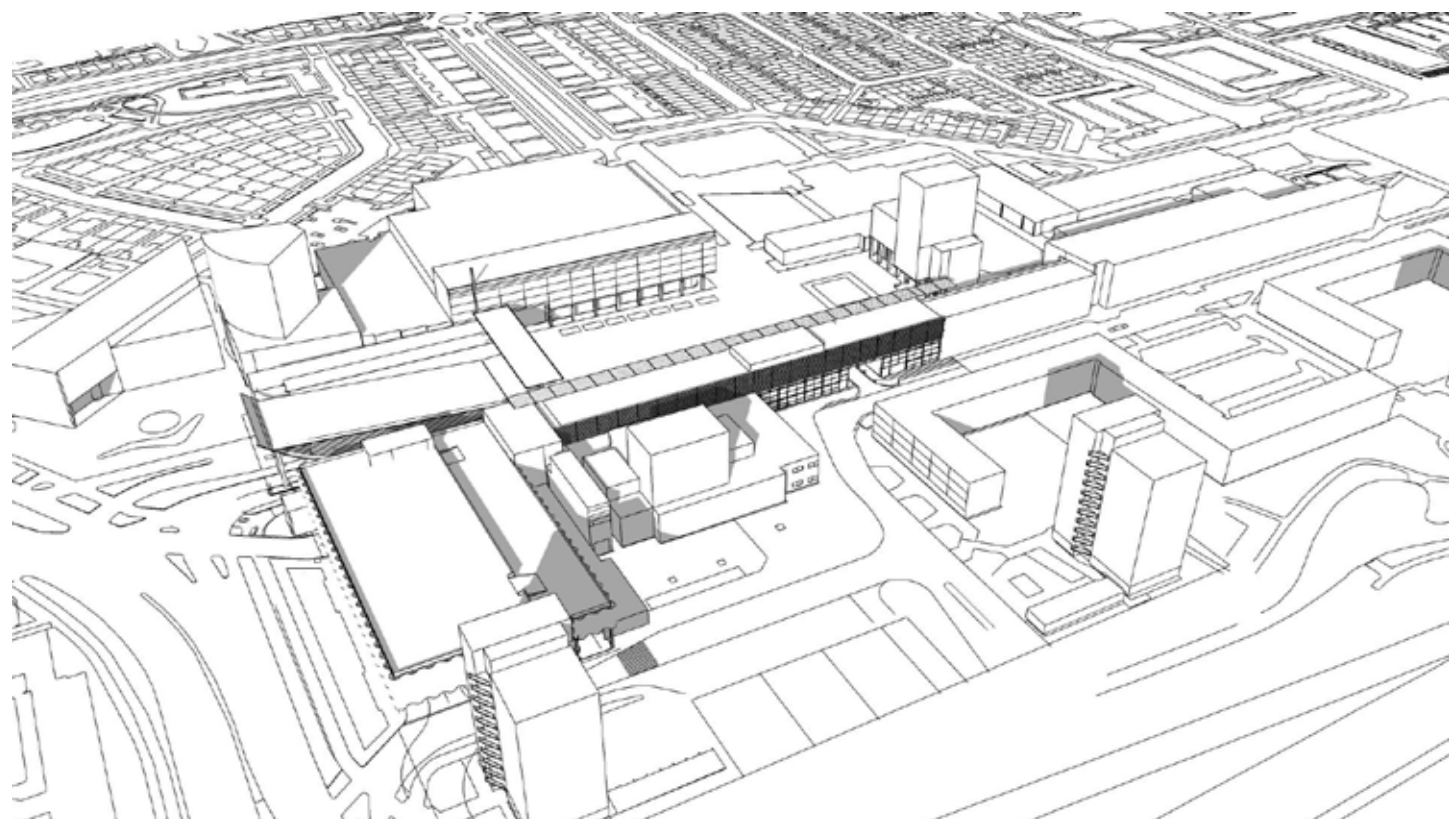


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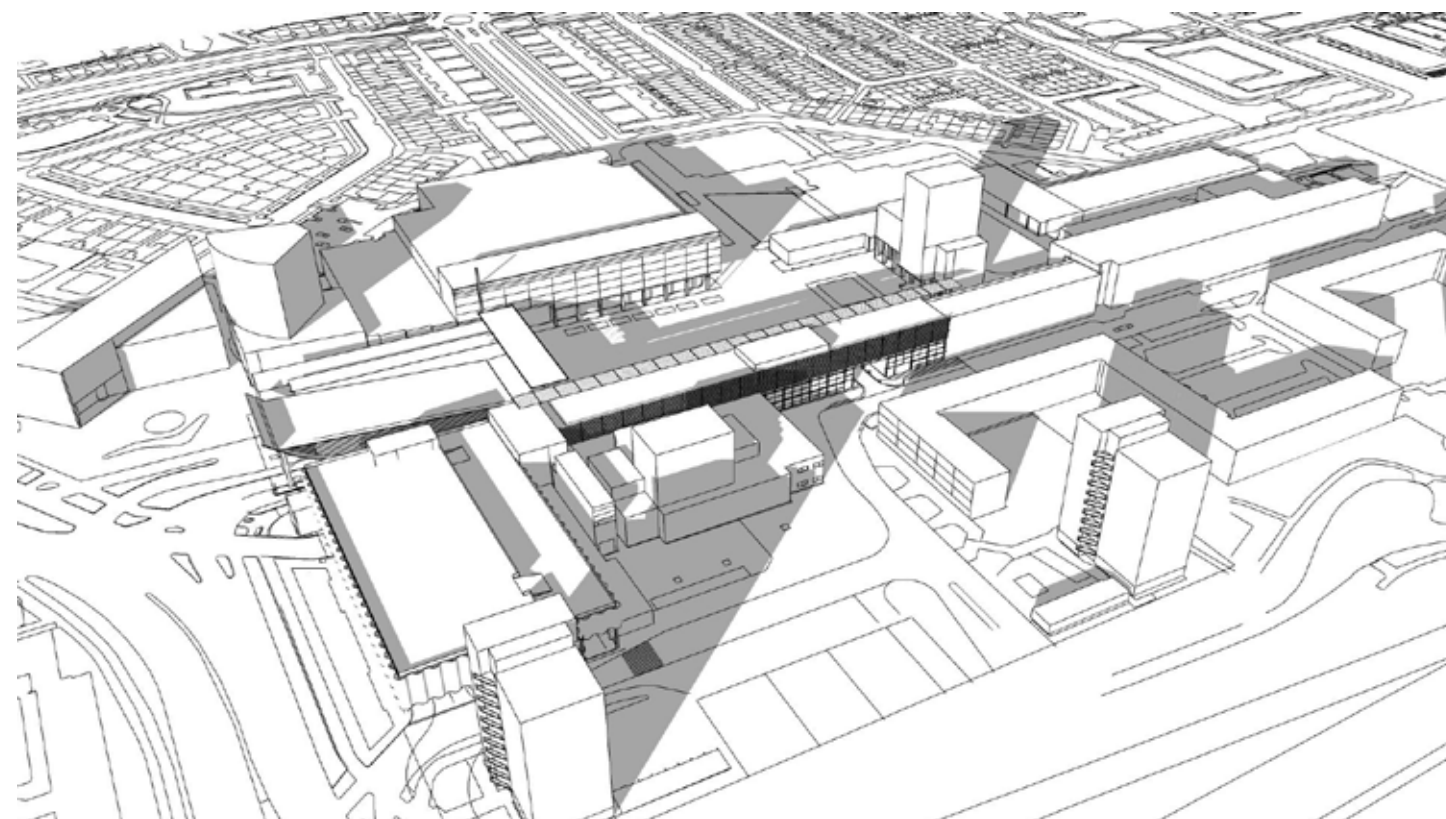


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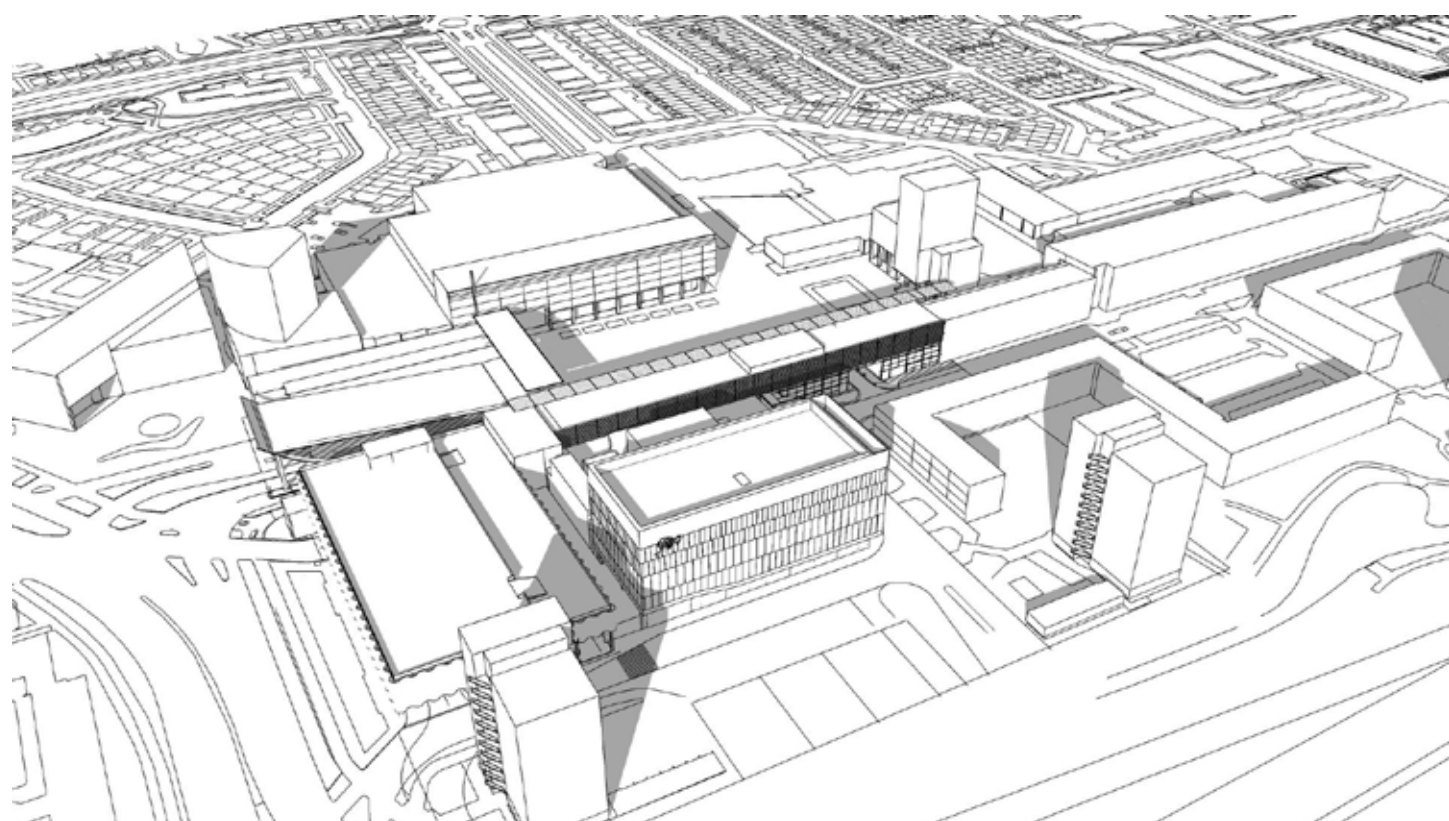


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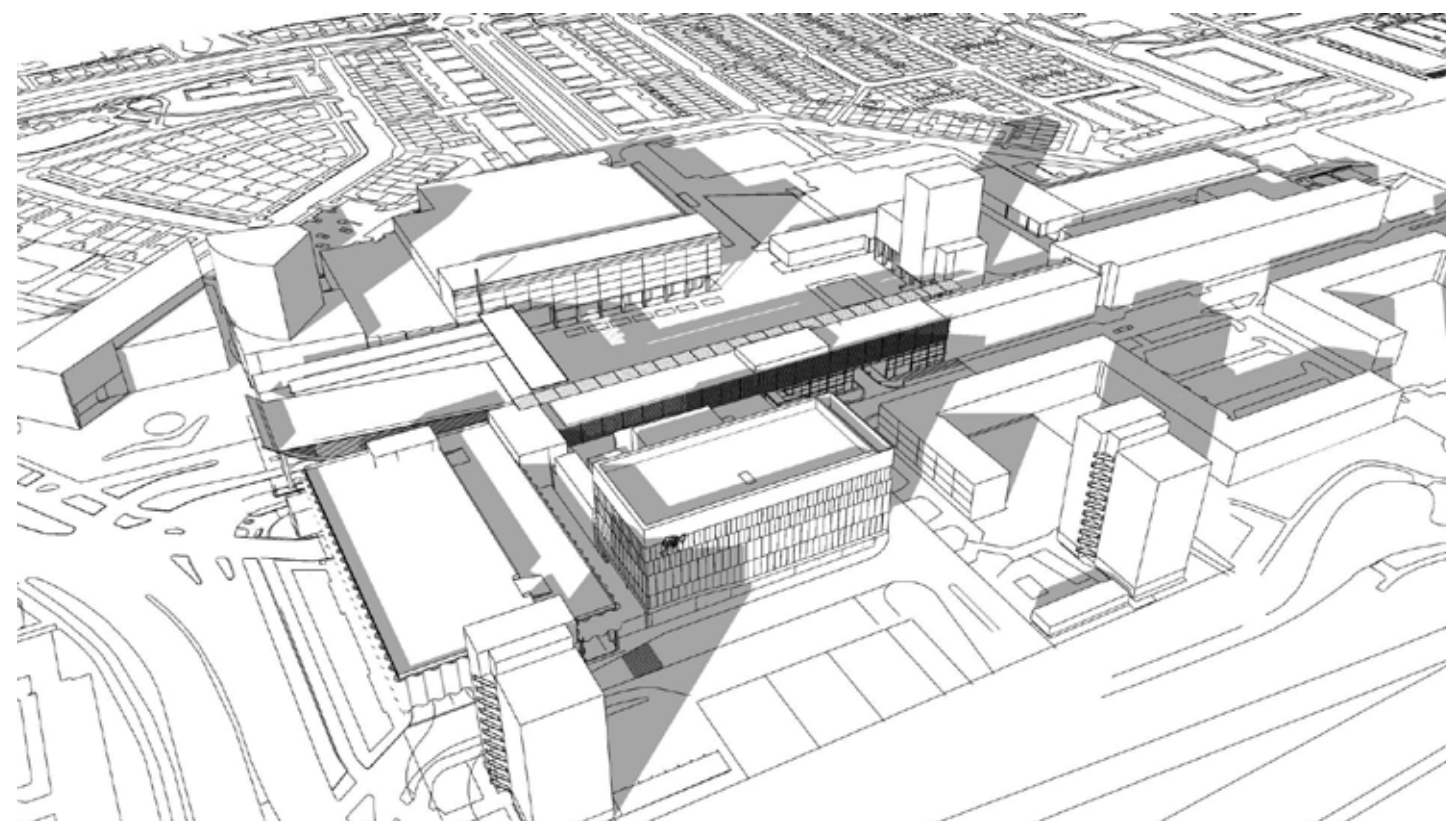


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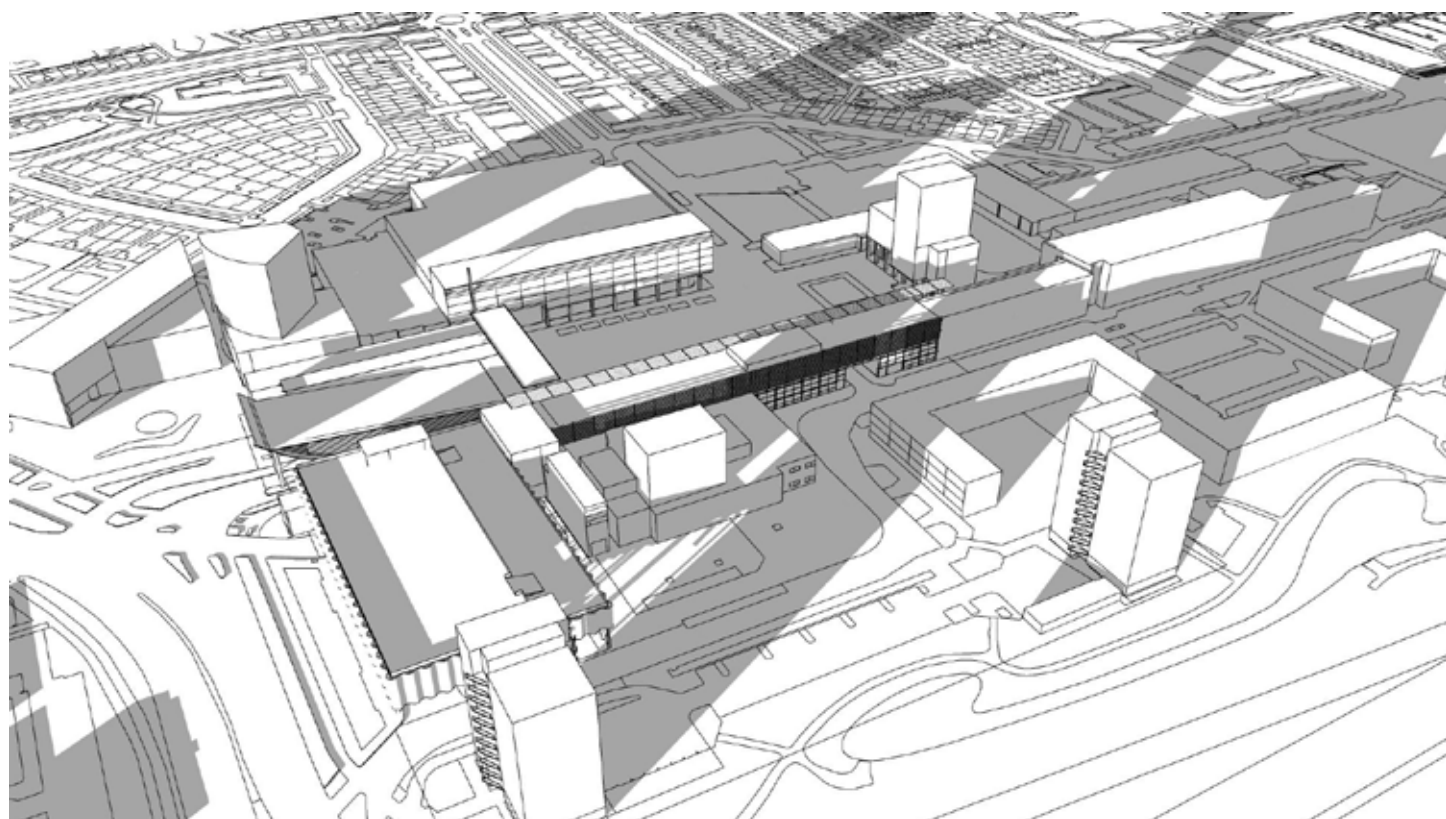


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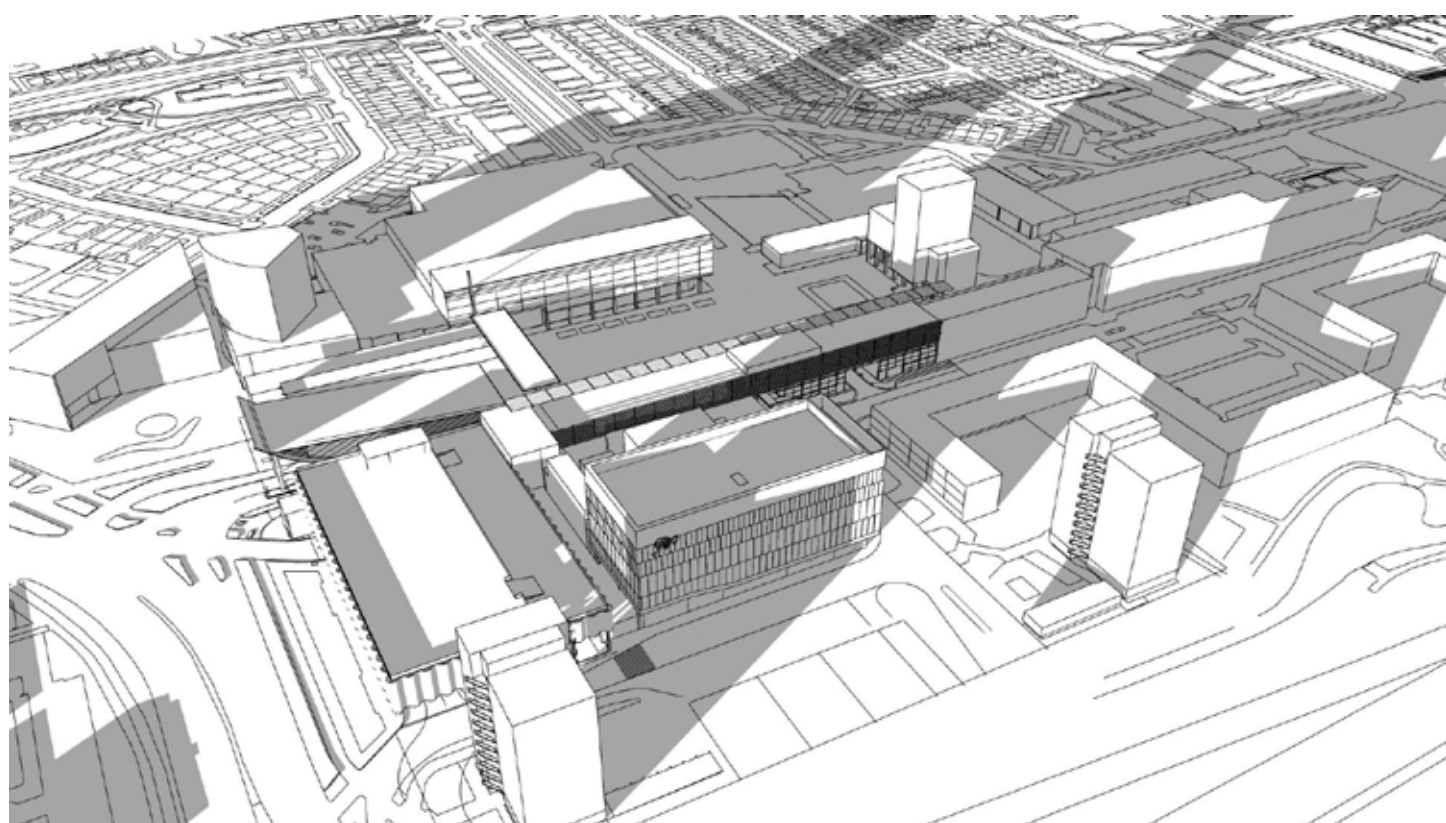
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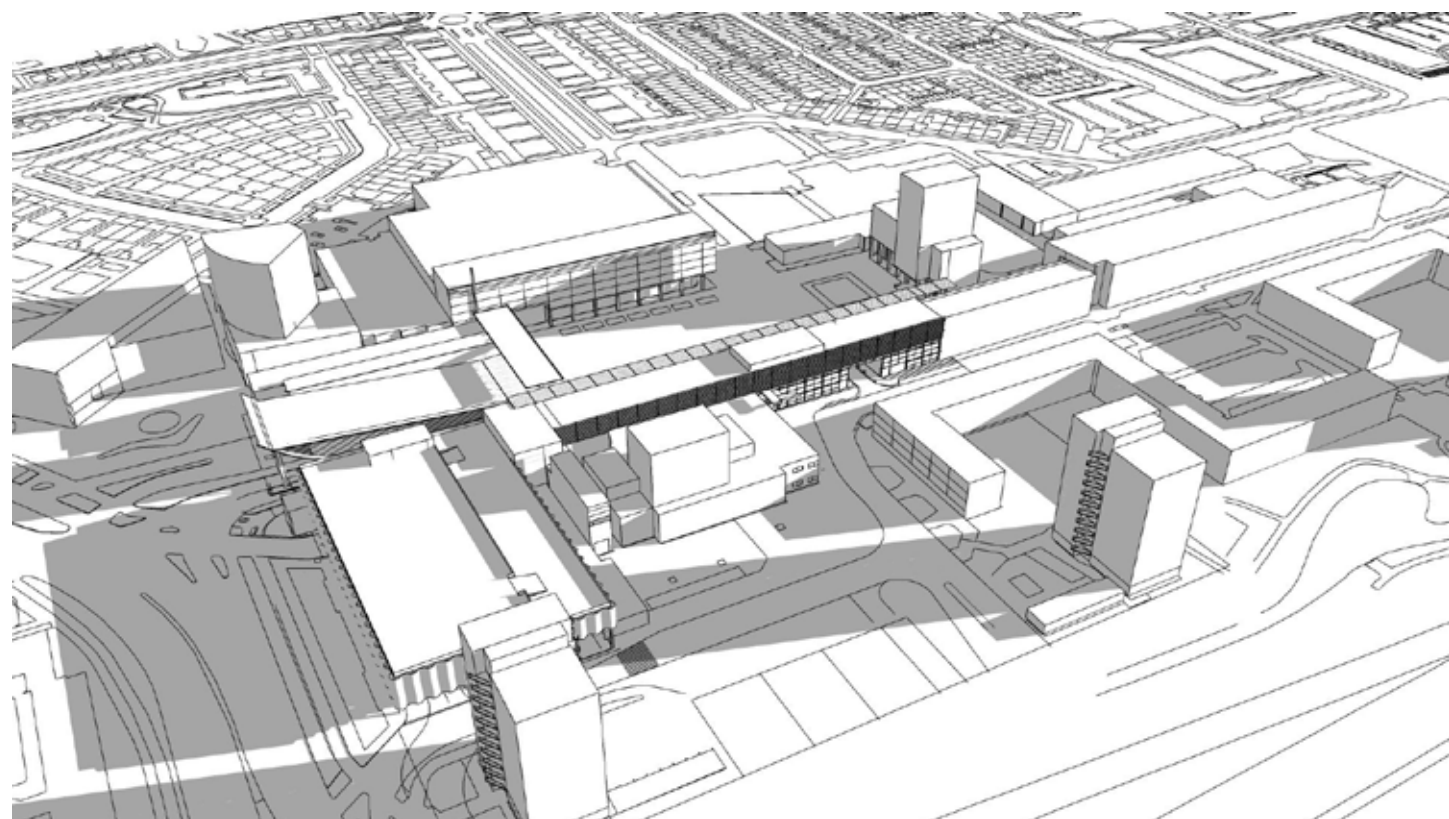
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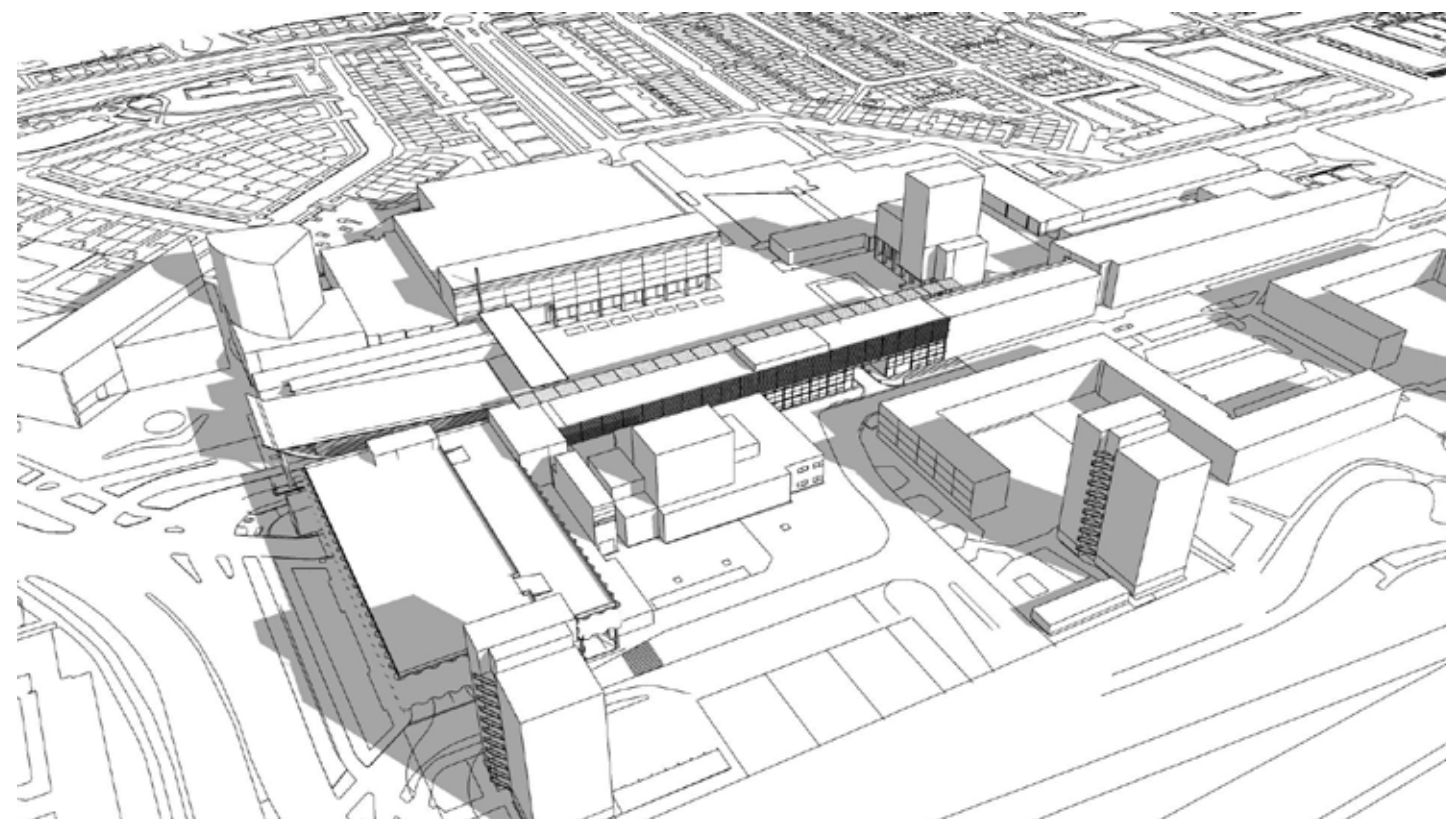


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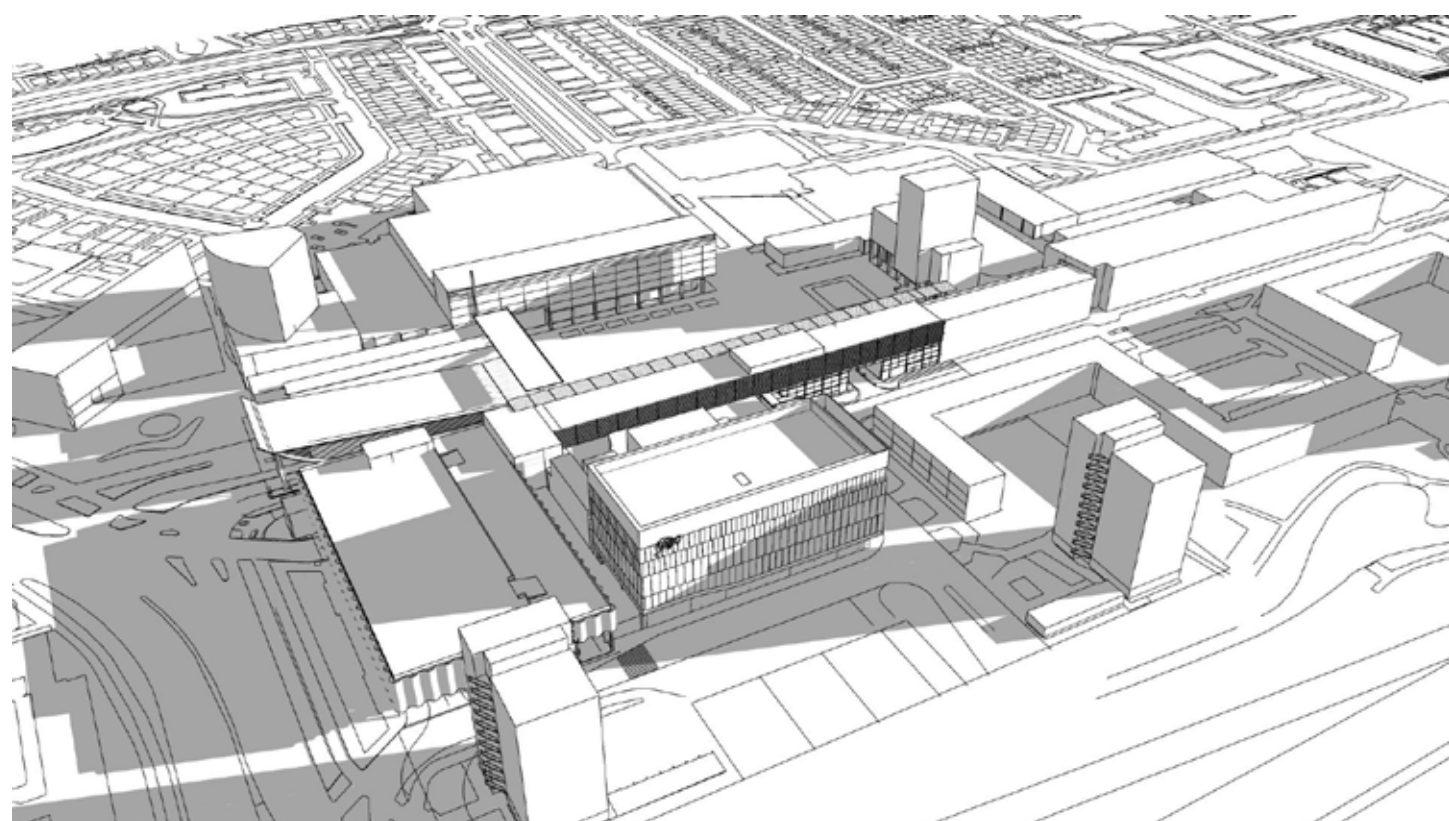


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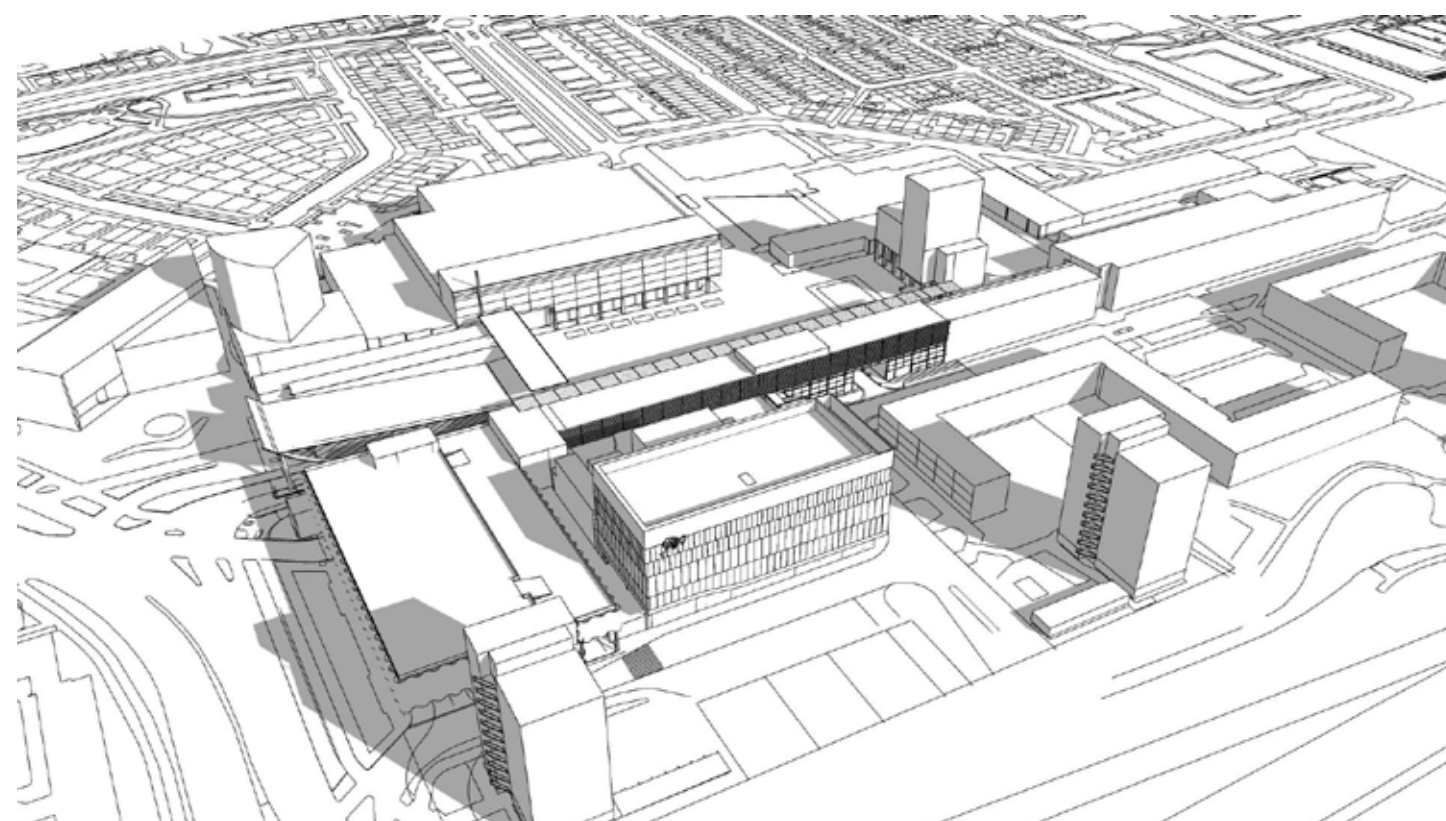


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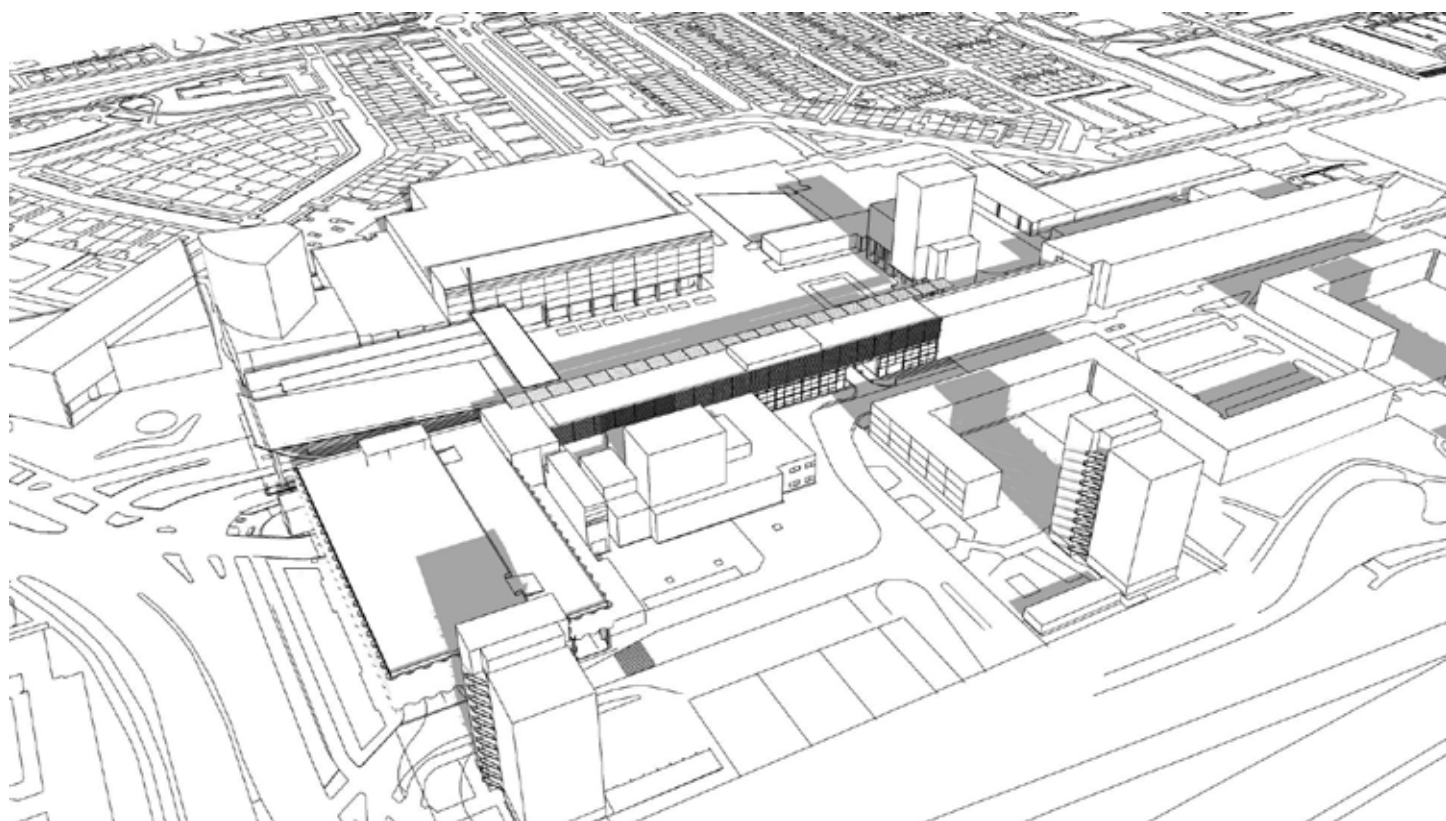


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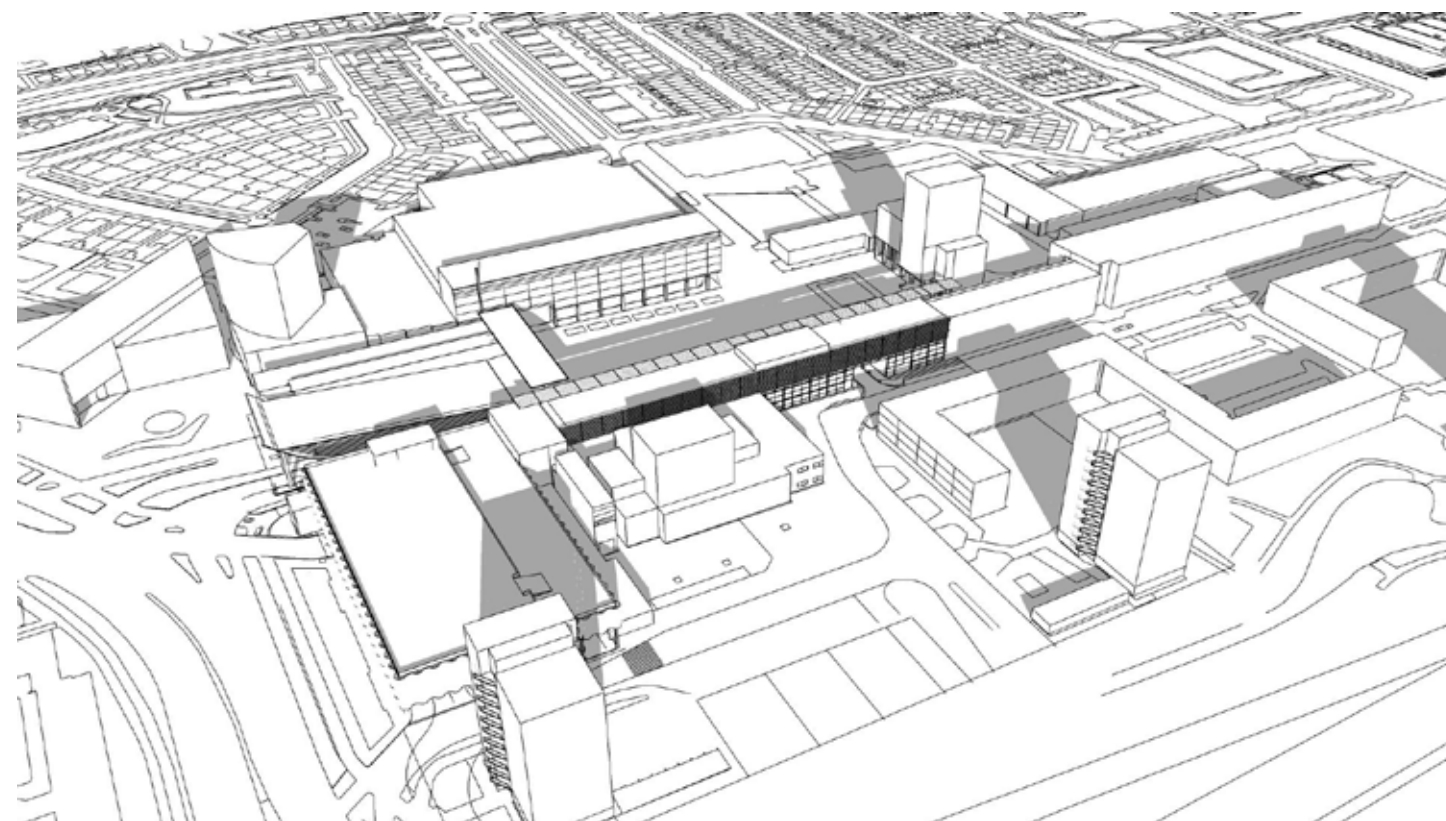


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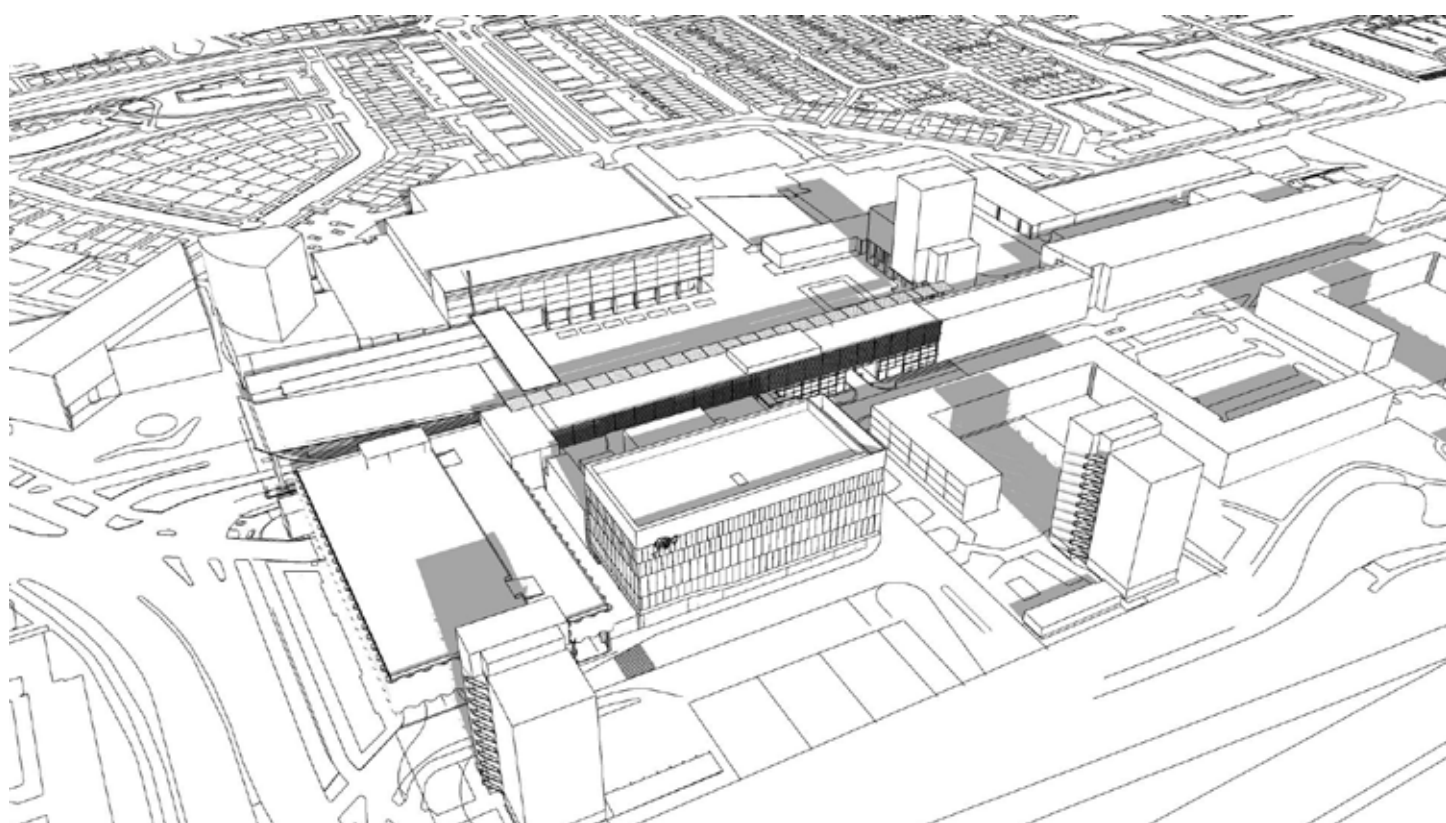


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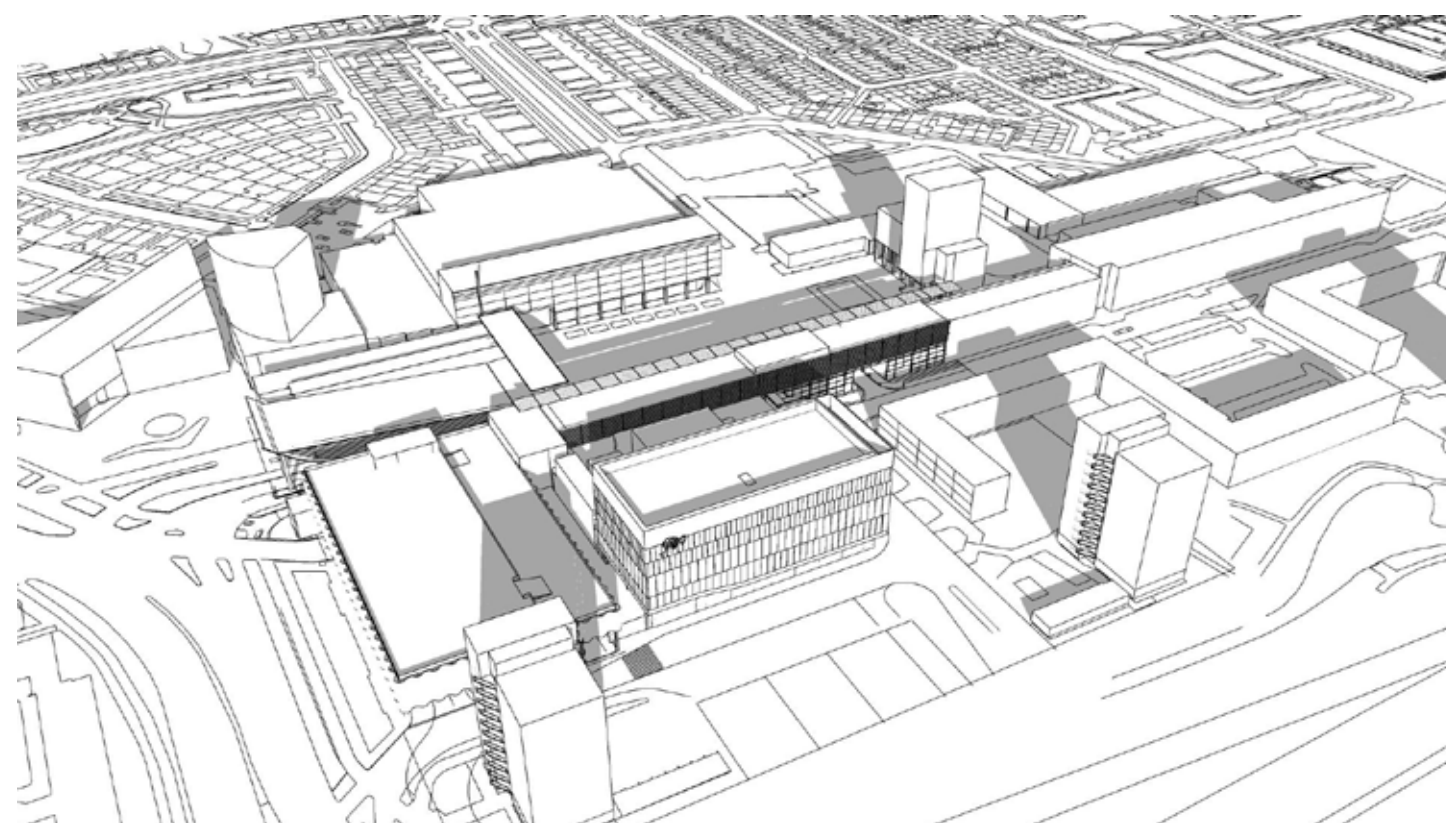


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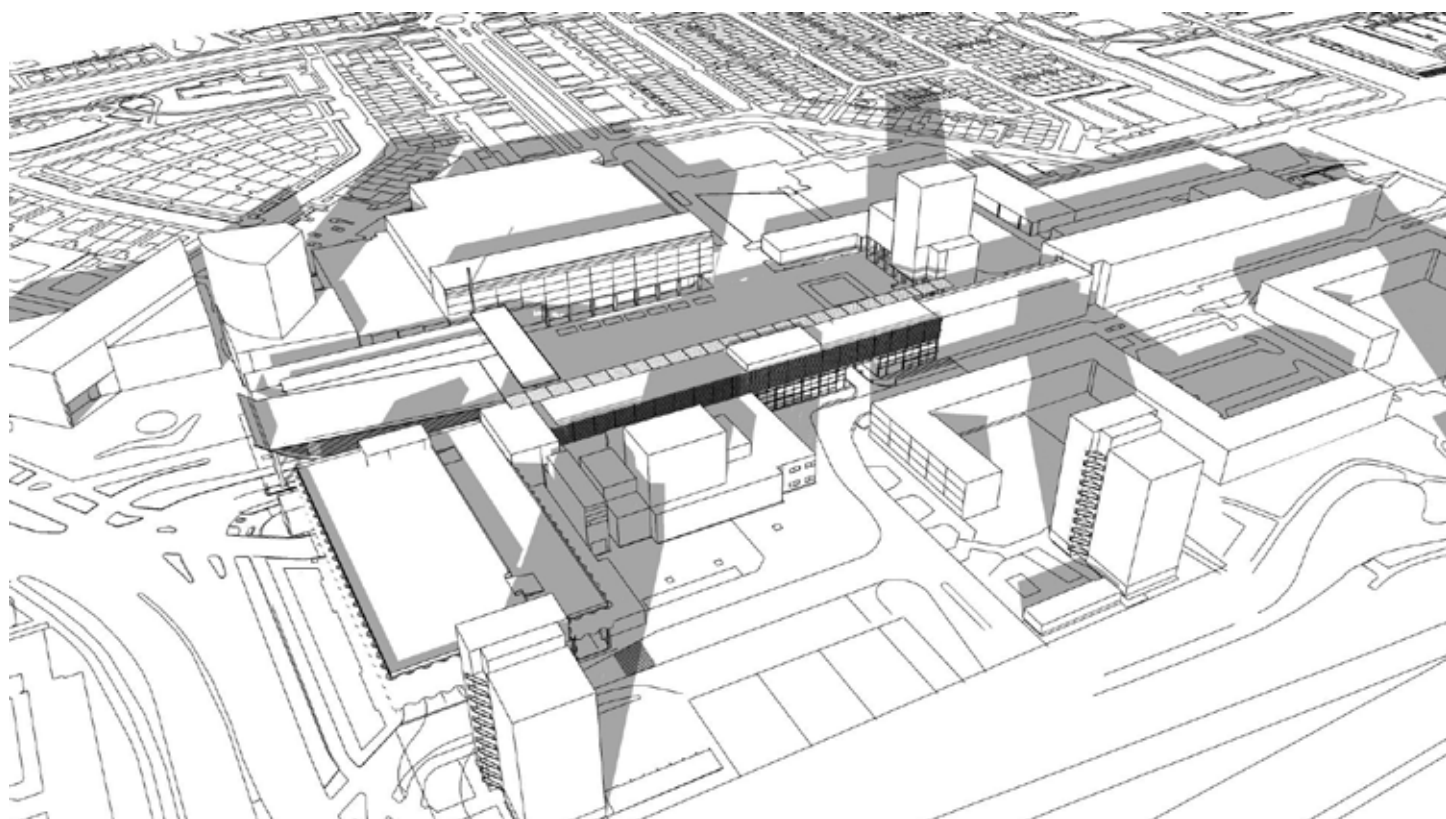
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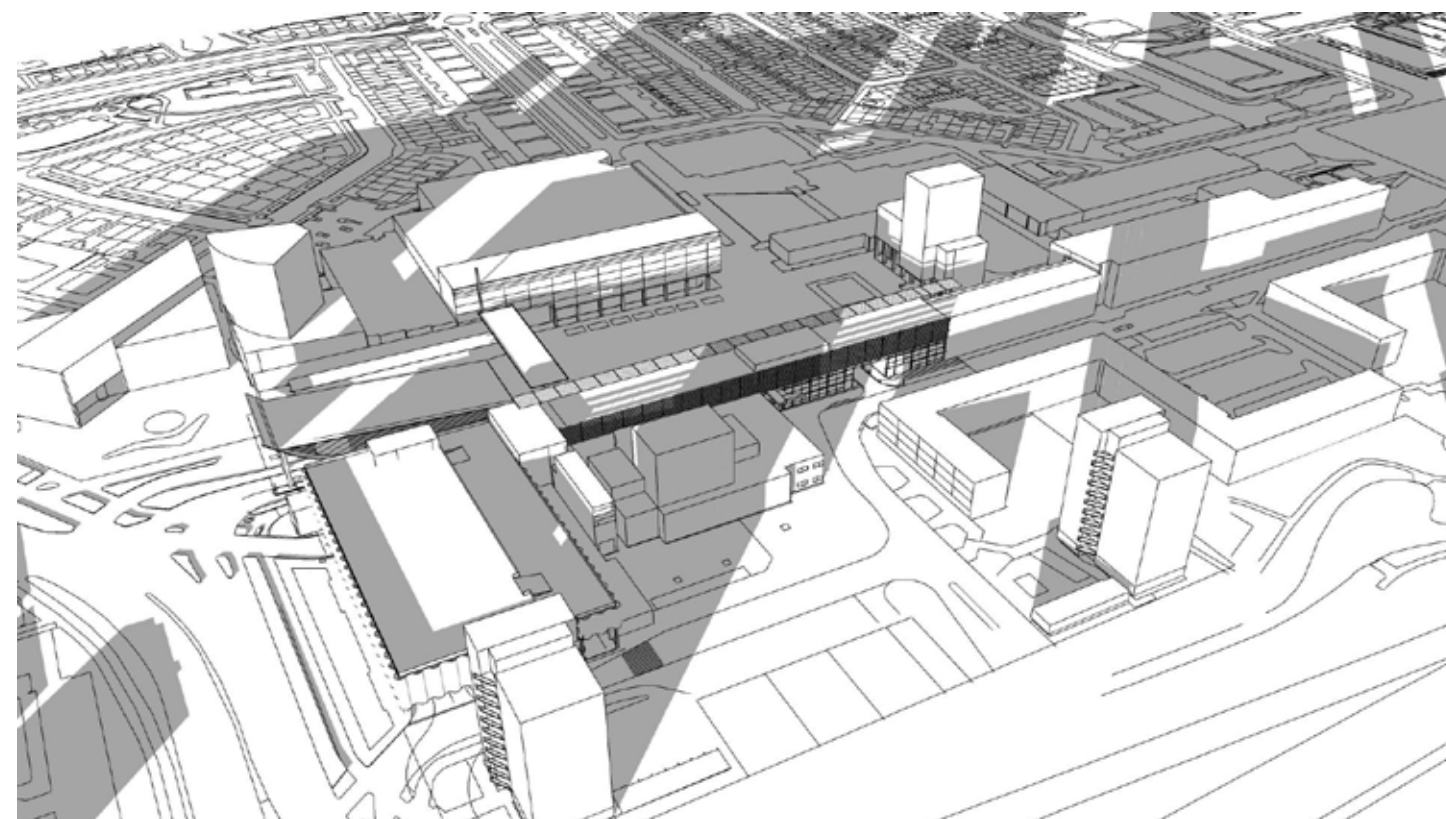
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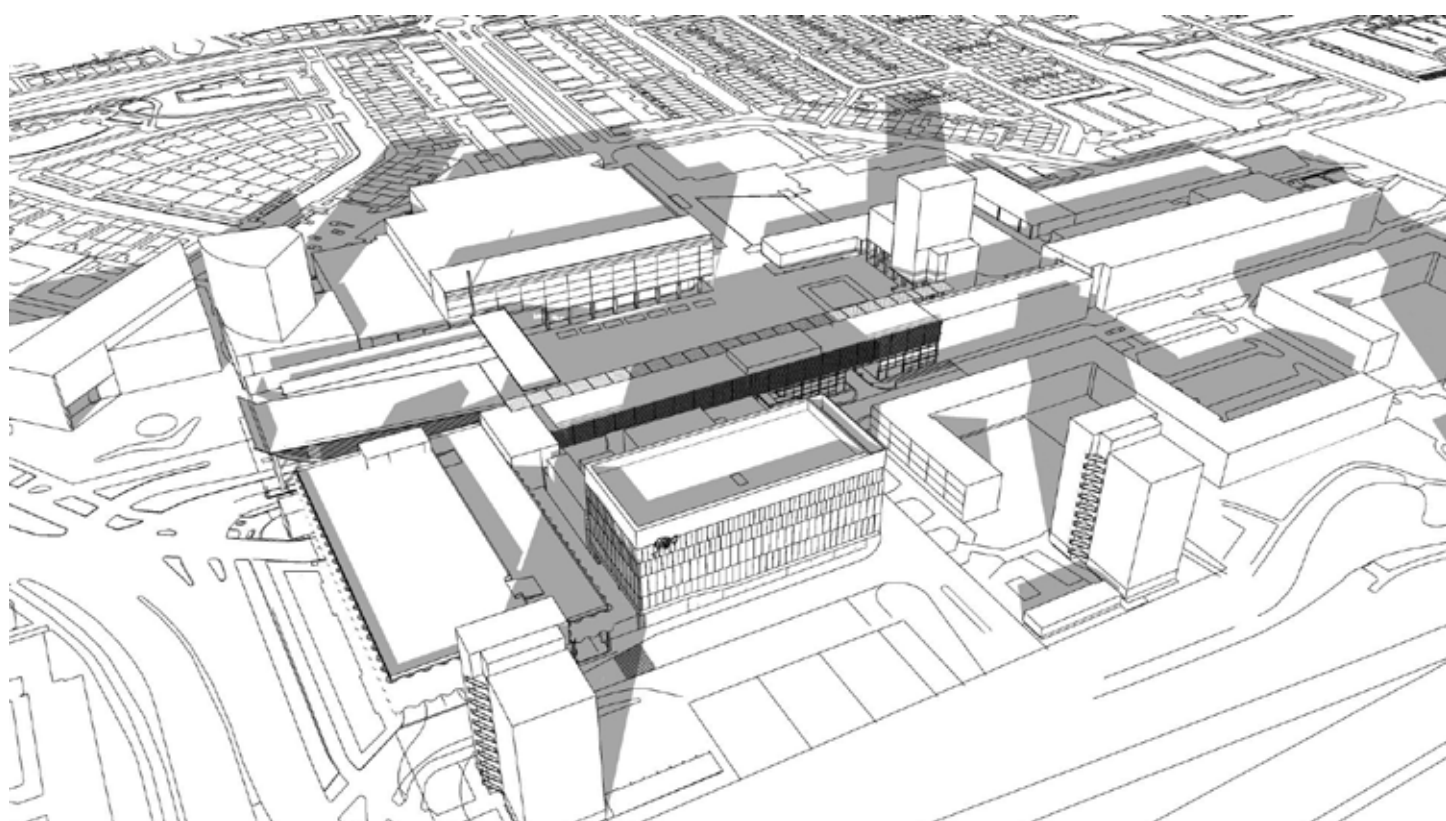
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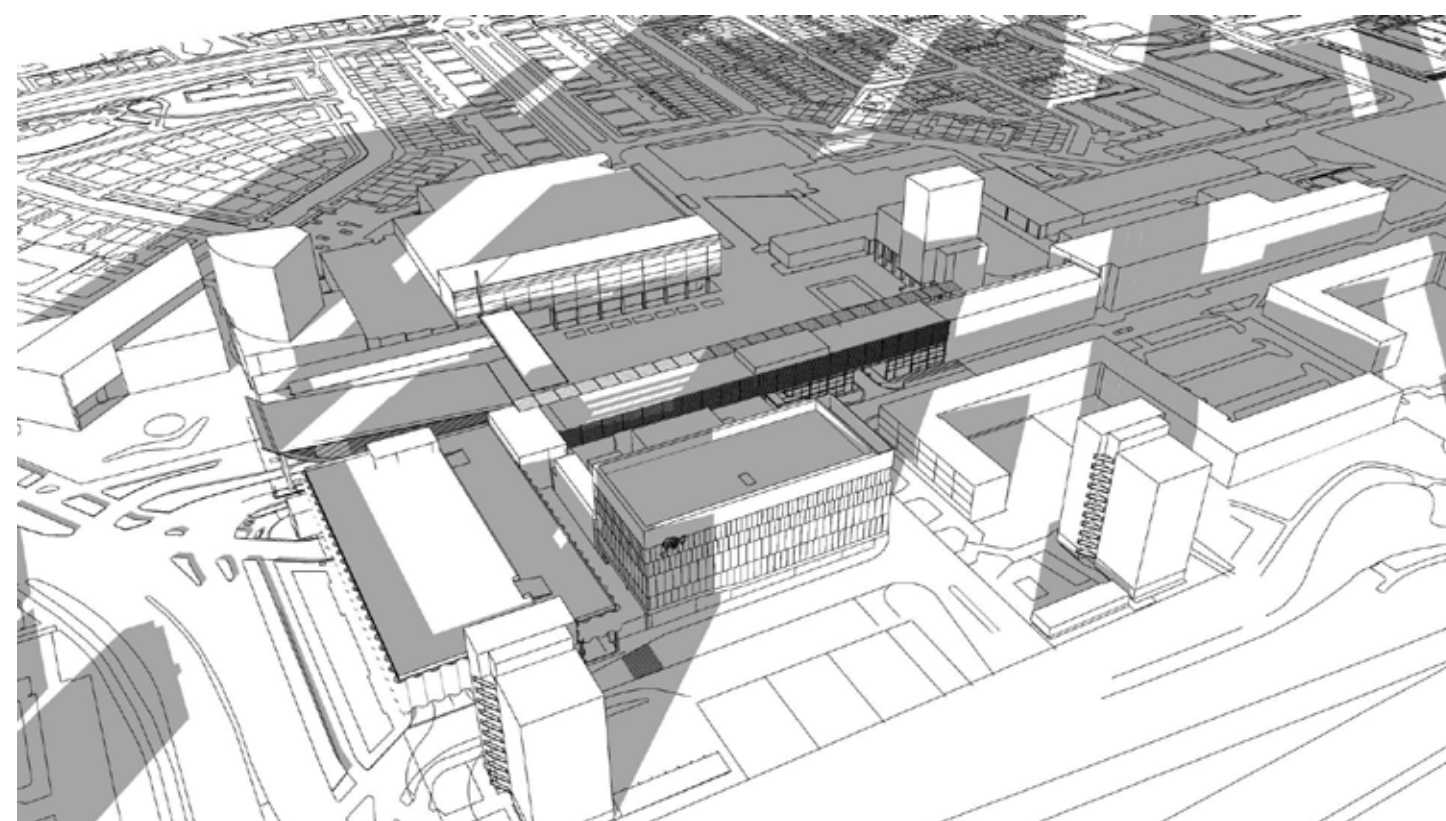
16:00



17:00



16:00



17:00

MEANDER 01 ONDERSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1			
21 MRT							1	1				
21 JUN							1	1	1			
23 SEP							1	1				
21 OKT							1	1				

MEANDER 01 MIDDELSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1			
21 MRT							1	1				
21 JUN							1	1	1			
23 SEP							1	1				
21 OKT							1	1				

MEANDER 01 BOVENSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1			
21 MRT							1	1				
21 JUN							1	1	1			
23 SEP							1	1				
21 OKT							1	1				



MEANDER 02 ONDERSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet voldoet voldoet voldoet voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet voldoet voldoet voldoet voldoet
19 FEB							1	1	1			
21 MRT							1	1	1			
21 JUN							1	1	1			
23 SEP							1	1	1			
21 OKT							1	1	1			

MEANDER 02 MIDDELSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet voldoet voldoet voldoet voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet voldoet voldoet voldoet voldoet
19 FEB							1	1	1			
21 MRT							1	1	1			
21 JUN							1	1	1			
23 SEP							1	1	1			
21 OKT							1	1	1			

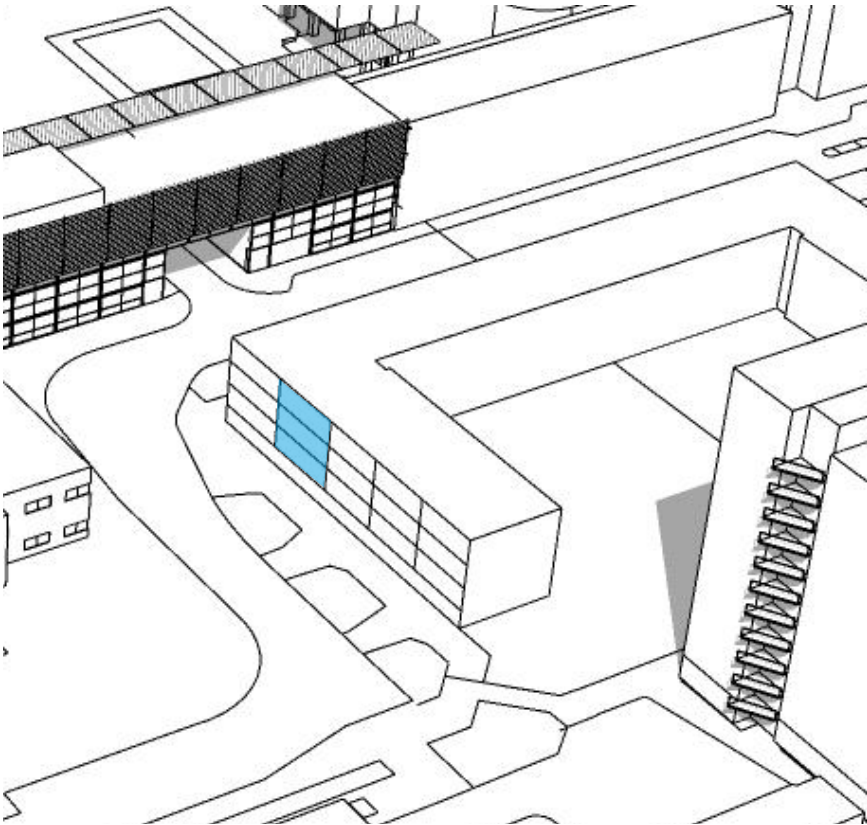
MEANDER 02 BOVENSTE APPARTEMENT

Huidige Situatie

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22 DEC							1	1	1			voldoet voldoet voldoet voldoet voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet voldoet voldoet voldoet voldoet
19 FEB							1	1	1			
21 MRT							1	1	1			
21 JUN							1	1	1			
23 SEP							1	1	1			
21 OKT							1	1	1			



MEANDER 03 ONDERSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		voldoet

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1			
21 JUN							1	1	1			
23 SEP							1	1	1			
21 OKT							1	1	1			voldoet

MEANDER 03 MIDDELSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		voldoet

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1			
21 JUN							1	1	1			
23 SEP							1	1	1			
21 OKT							1	1	1			voldoet

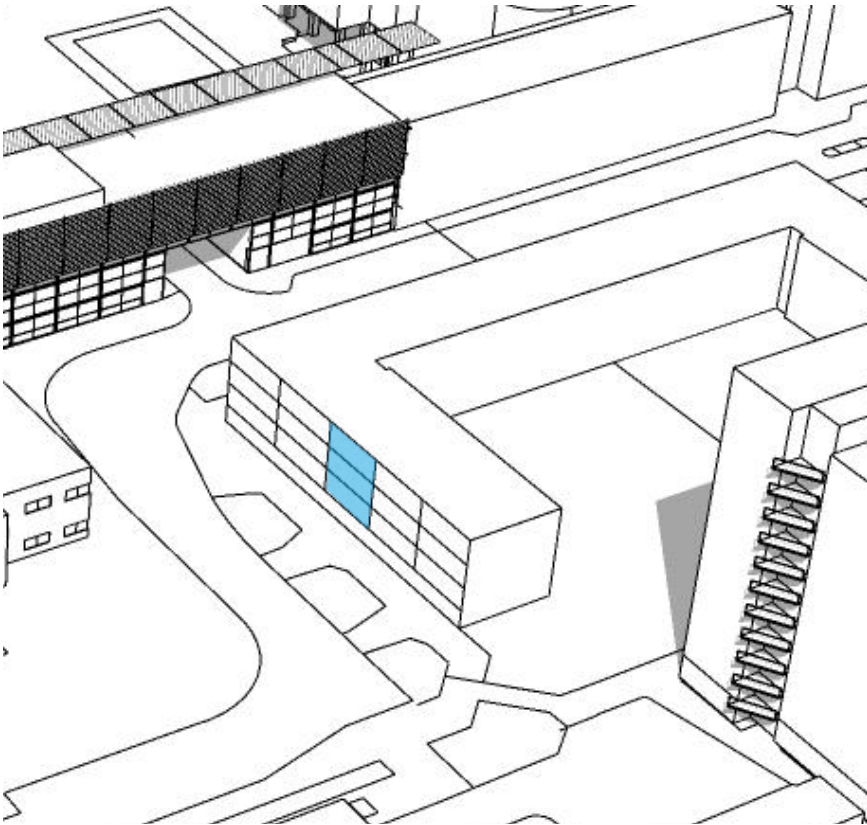
MEANDER 03 BOVENSTE APPARTEMENT

Huidige Situatie

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22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		voldoet

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1			
21 JUN							1	1	1			
23 SEP							1	1	1			
21 OKT							1	1	1			voldoet



MEANDER 04 ONDERSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1			
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

MEANDER 04 MIDDELSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
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19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
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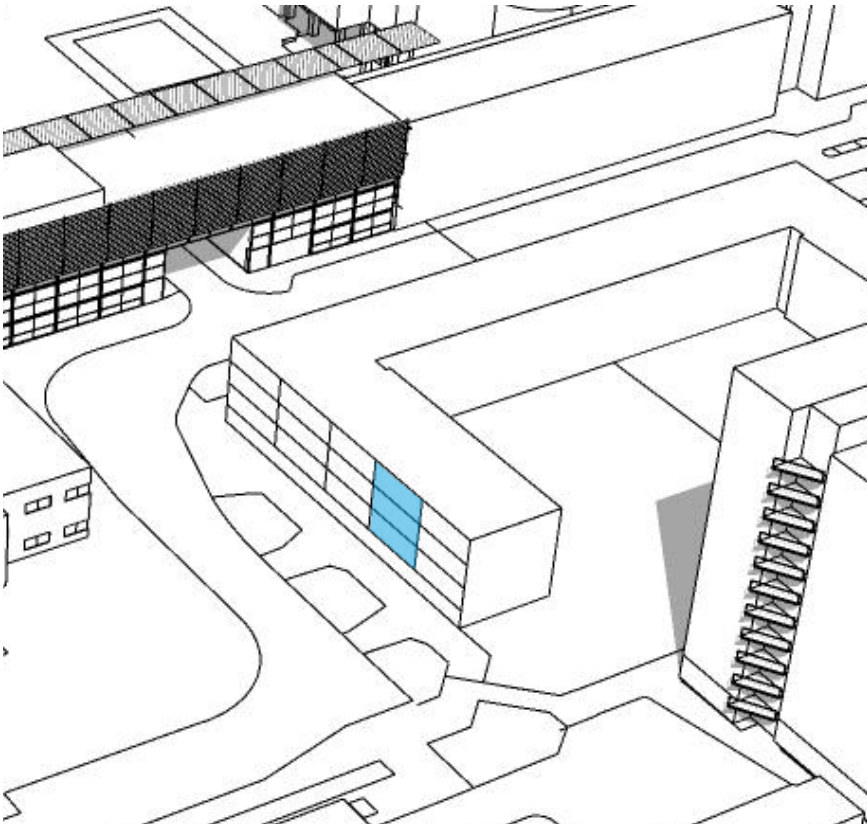
MEANDER 04 BOVENSTE APPARTEMENT

Huidige Situatie

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19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1	1	1	
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			voldoet
19 FEB							1	1	1	1		
21 MRT							1	1	1	1		
21 JUN							1	1	1			
23 SEP							1	1	1	1		
21 OKT							1	1	1	1		



MEANDER 05 ONDERSTE APPARTEMENT

Huidige Situatie

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21 MRT							1	1	1	1		voldoet
21 JUN							1	1	1	1	1	voldoet
23 SEP							1	1	1	1		voldoet
21 OKT							1	1	1	1		voldoet

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			
19 FEB							1	1	1	1		voldoet
21 MRT							1	1	1	1		voldoet
21 JUN							1	1	1	1		voldoet
23 SEP							1	1	1	1		voldoet
21 OKT							1	1	1	1		voldoet

MEANDER 05 MIDDELSTE APPARTEMENT

Huidige Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			
19 FEB							1	1	1	1		voldoet
21 MRT							1	1	1	1		voldoet
21 JUN							1	1	1	1	1	voldoet
23 SEP							1	1	1	1		voldoet
21 OKT							1	1	1	1		voldoet

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			
19 FEB							1	1	1	1		voldoet
21 MRT							1	1	1	1		voldoet
21 JUN							1	1	1	1		voldoet
23 SEP							1	1	1	1		voldoet
21 OKT							1	1	1	1		voldoet

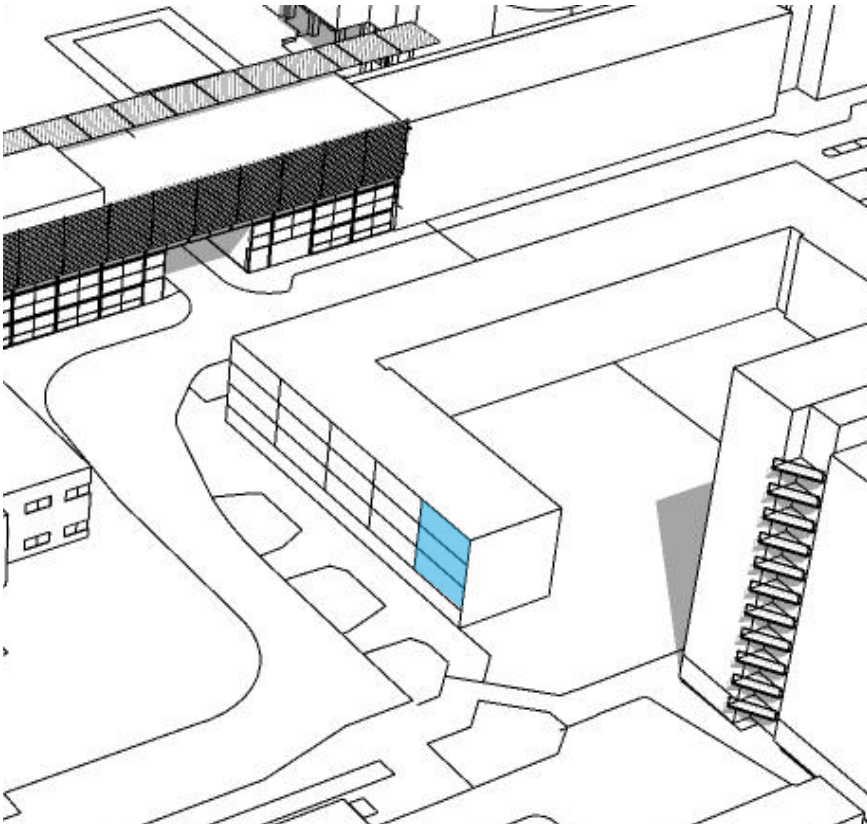
MEANDER 05 BOVENSTE APPARTEMENT

Huidige Situatie

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22 DEC							1	1	1			
19 FEB							1	1	1	1		voldoet
21 MRT							1	1	1	1		voldoet
21 JUN							1	1	1	1	1	voldoet
23 SEP							1	1	1	1		voldoet
21 OKT							1	1	1	1		voldoet

Nieuwe Situatie

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	TNO eis
22 DEC							1	1	1			
19 FEB							1	1	1	1		voldoet
21 MRT							1	1	1	1		voldoet
21 JUN							1	1	1	1		voldoet
23 SEP							1	1	1	1		voldoet
21 OKT							1	1	1	1		voldoet









EUP
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