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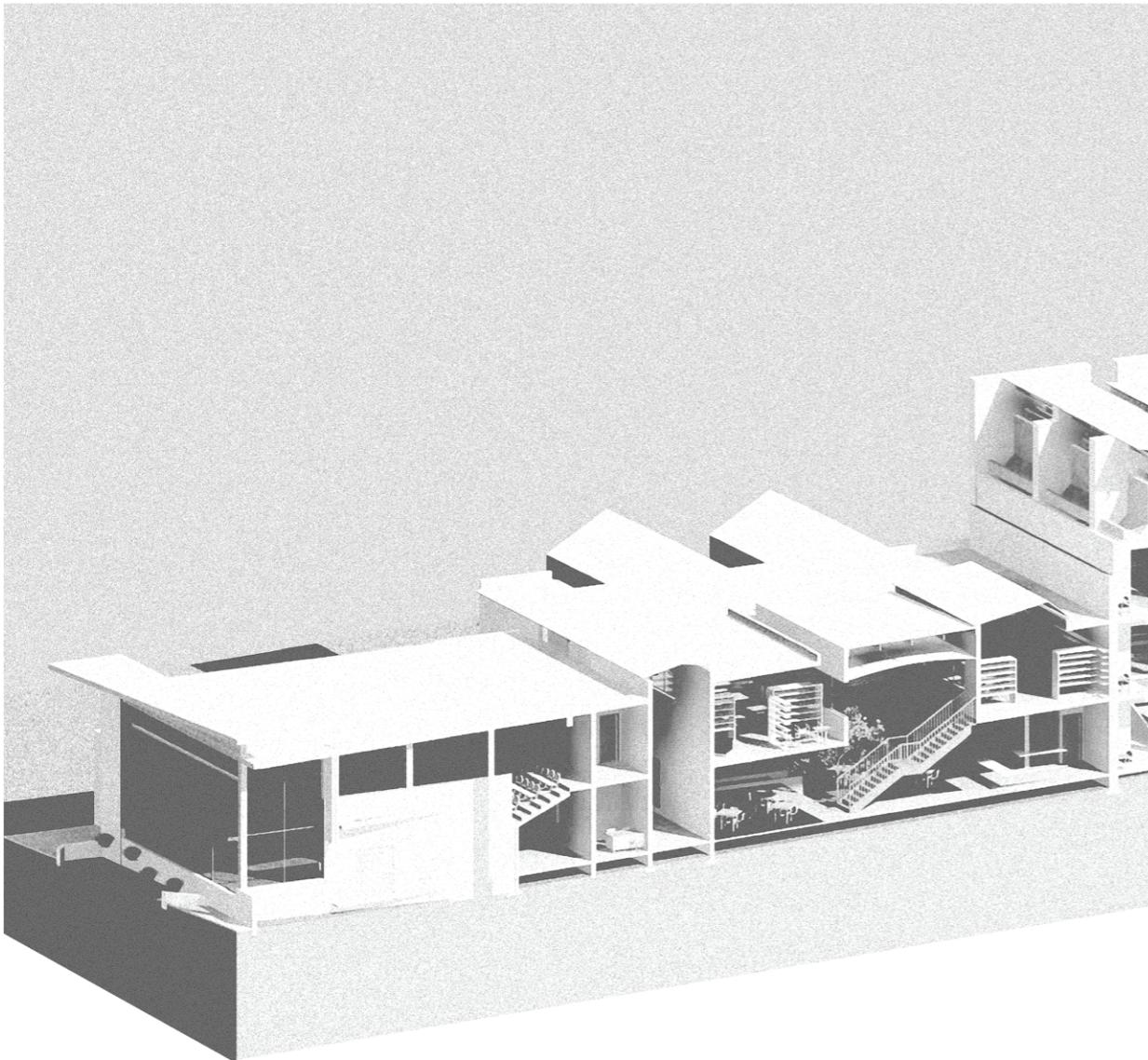
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Final presentation and reflection



Fig. 276. Portion of final section.

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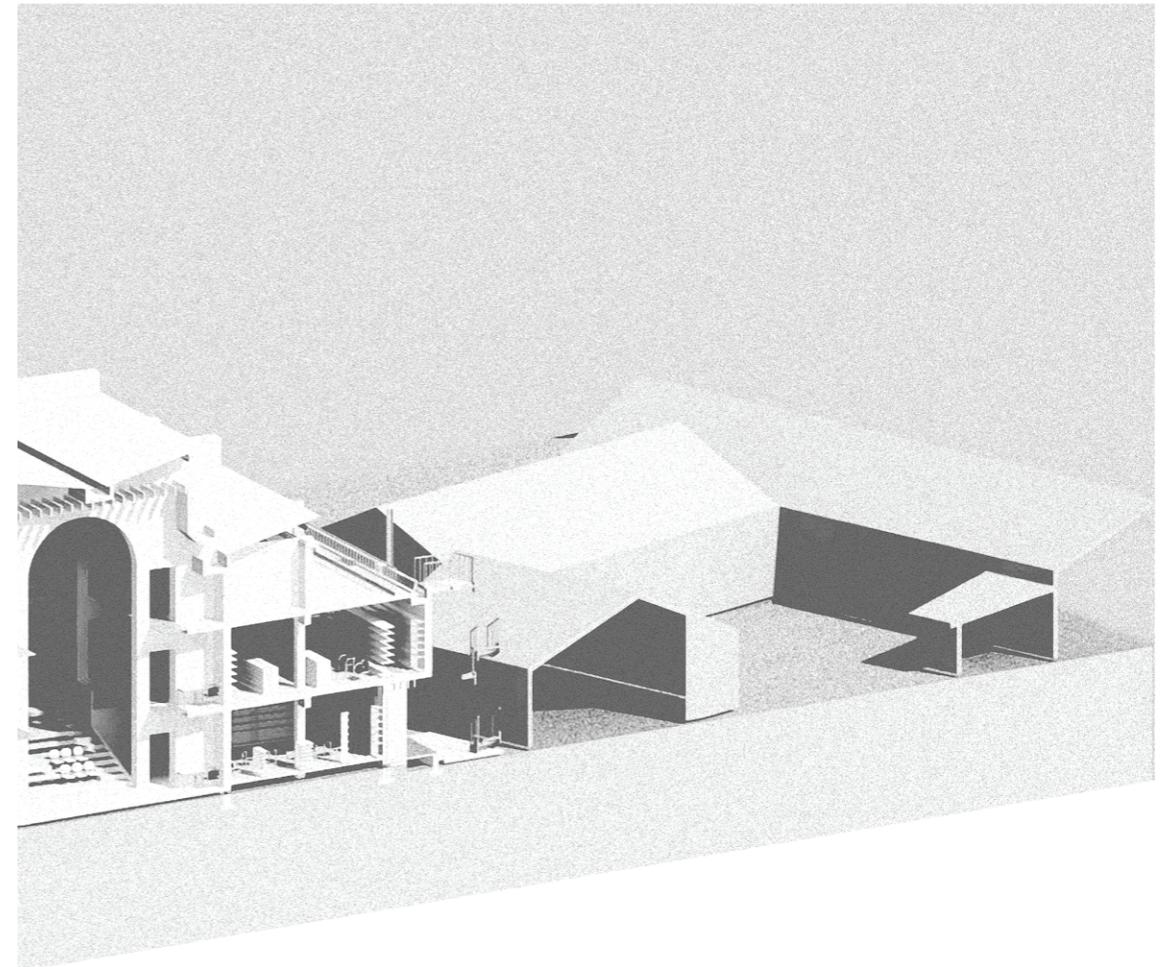


Fig. 277. Sectional model illustrating the various volumes

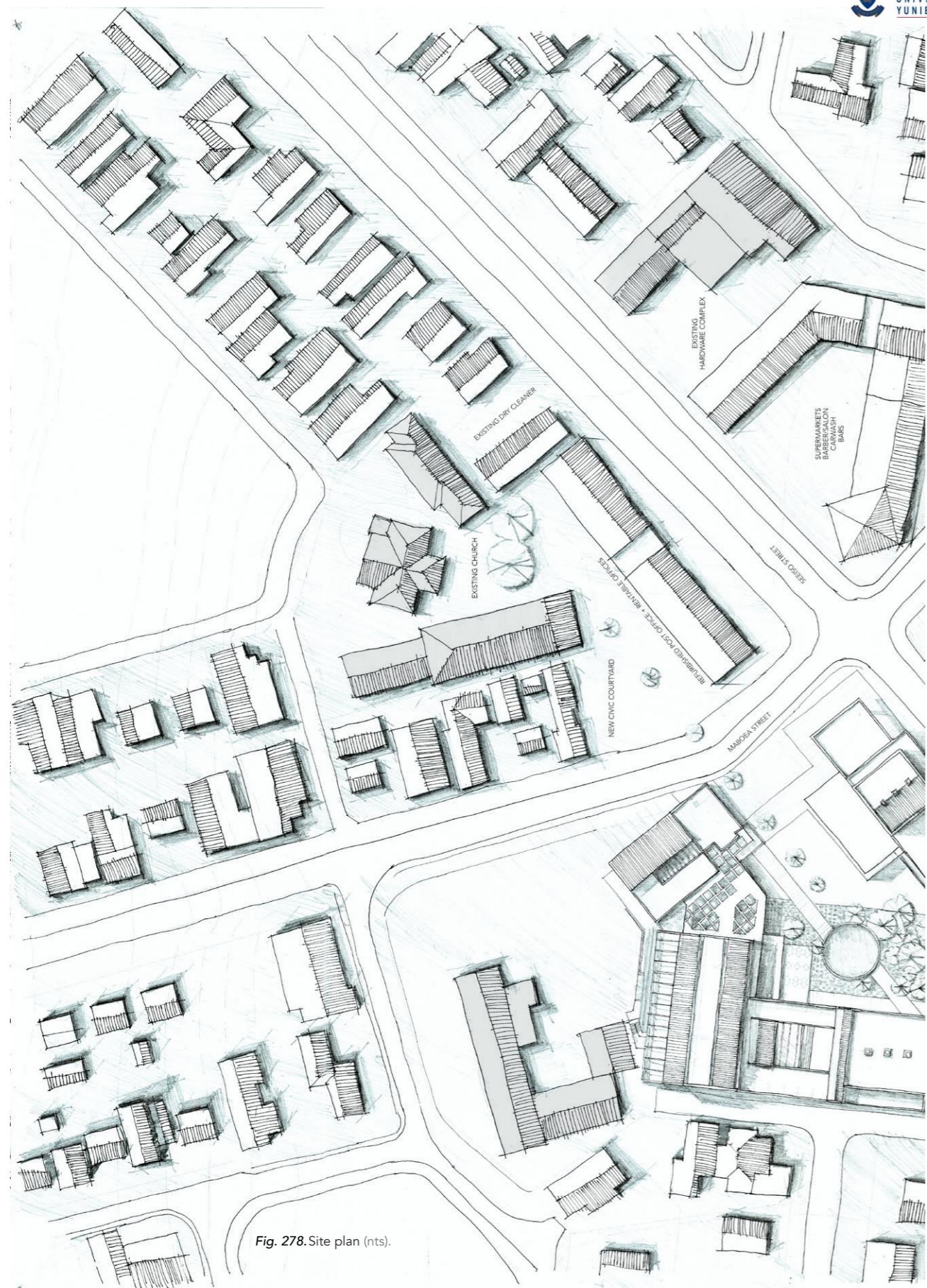
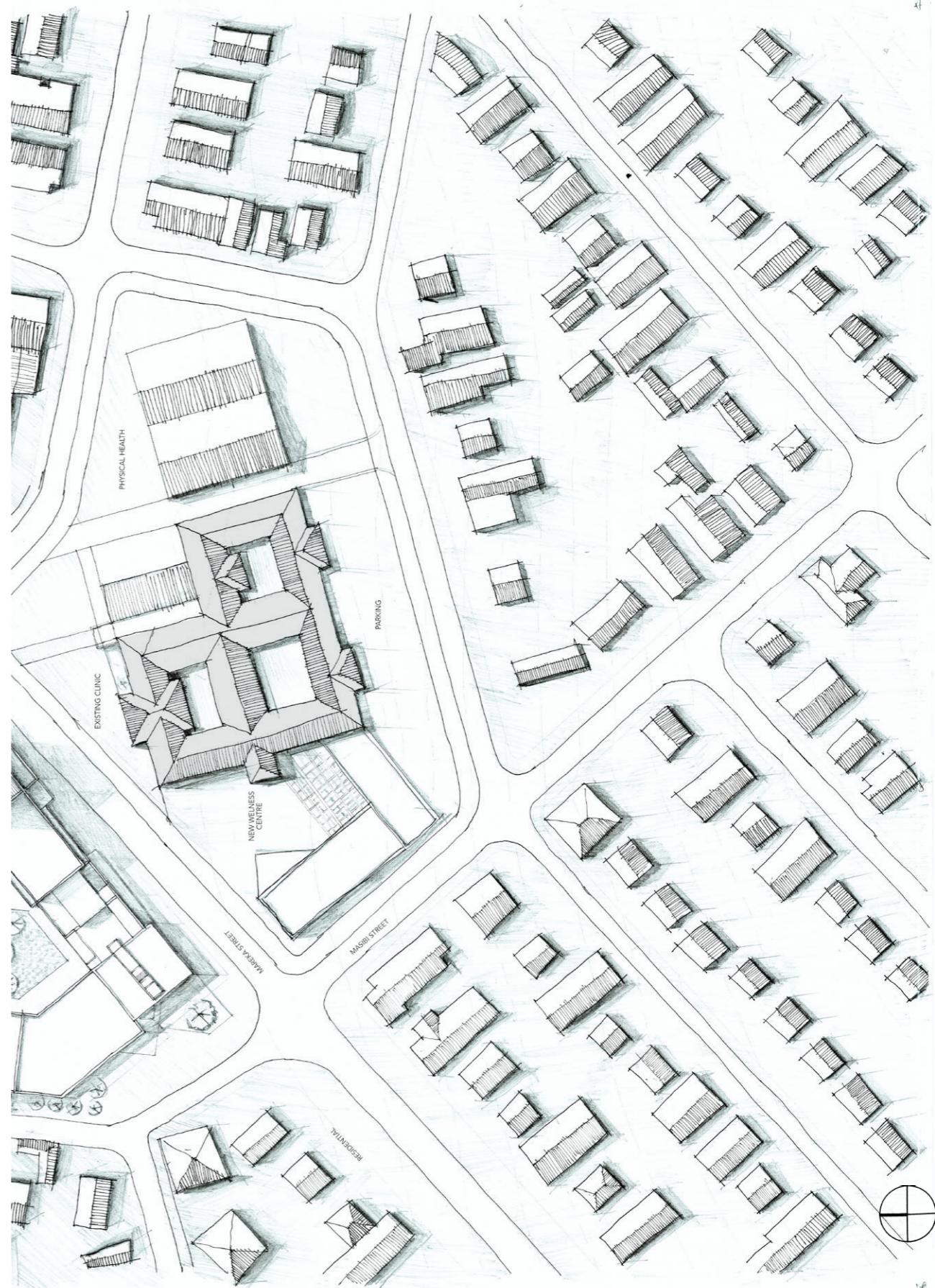


Fig. 278. Site plan (nts).



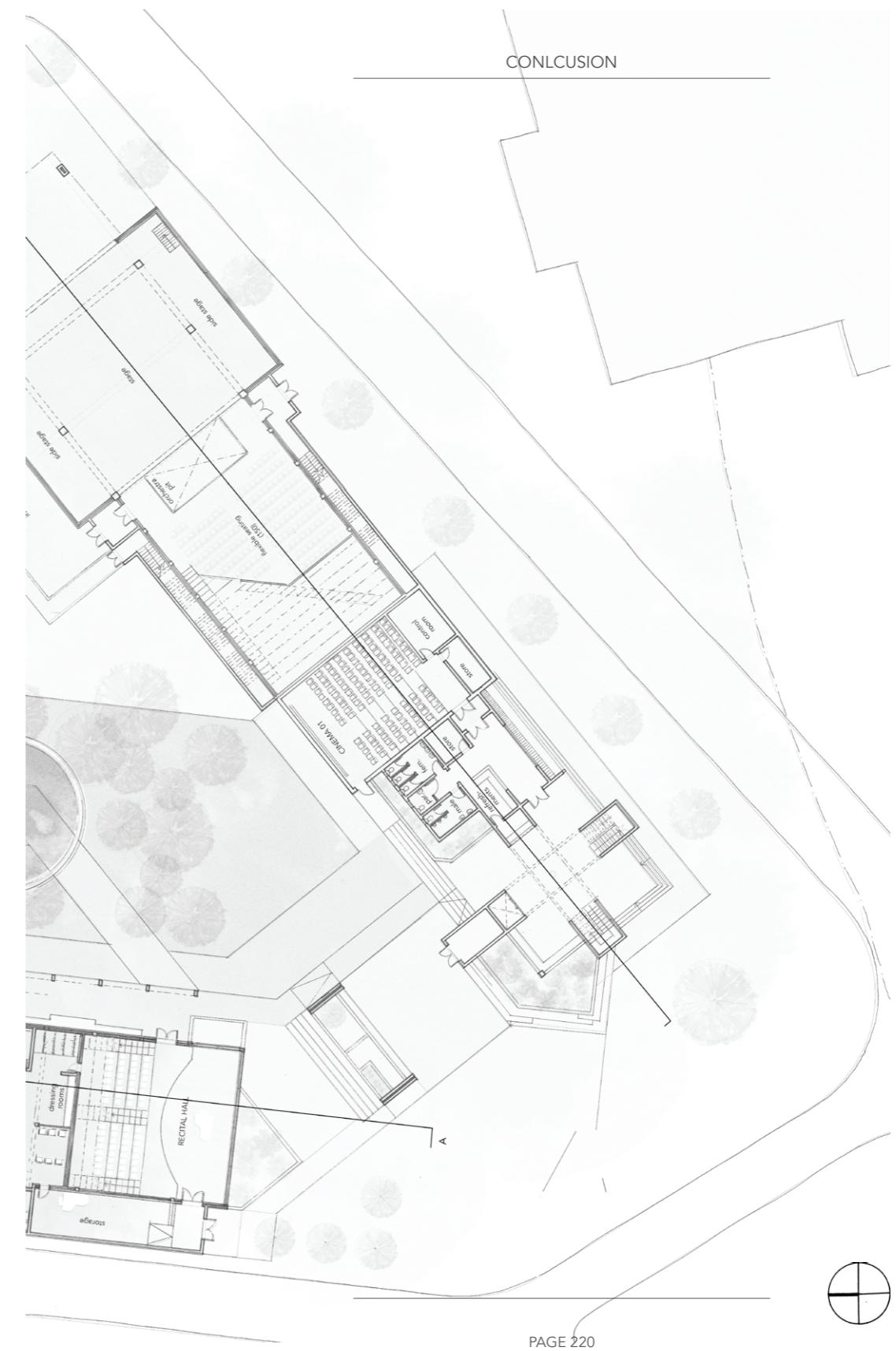
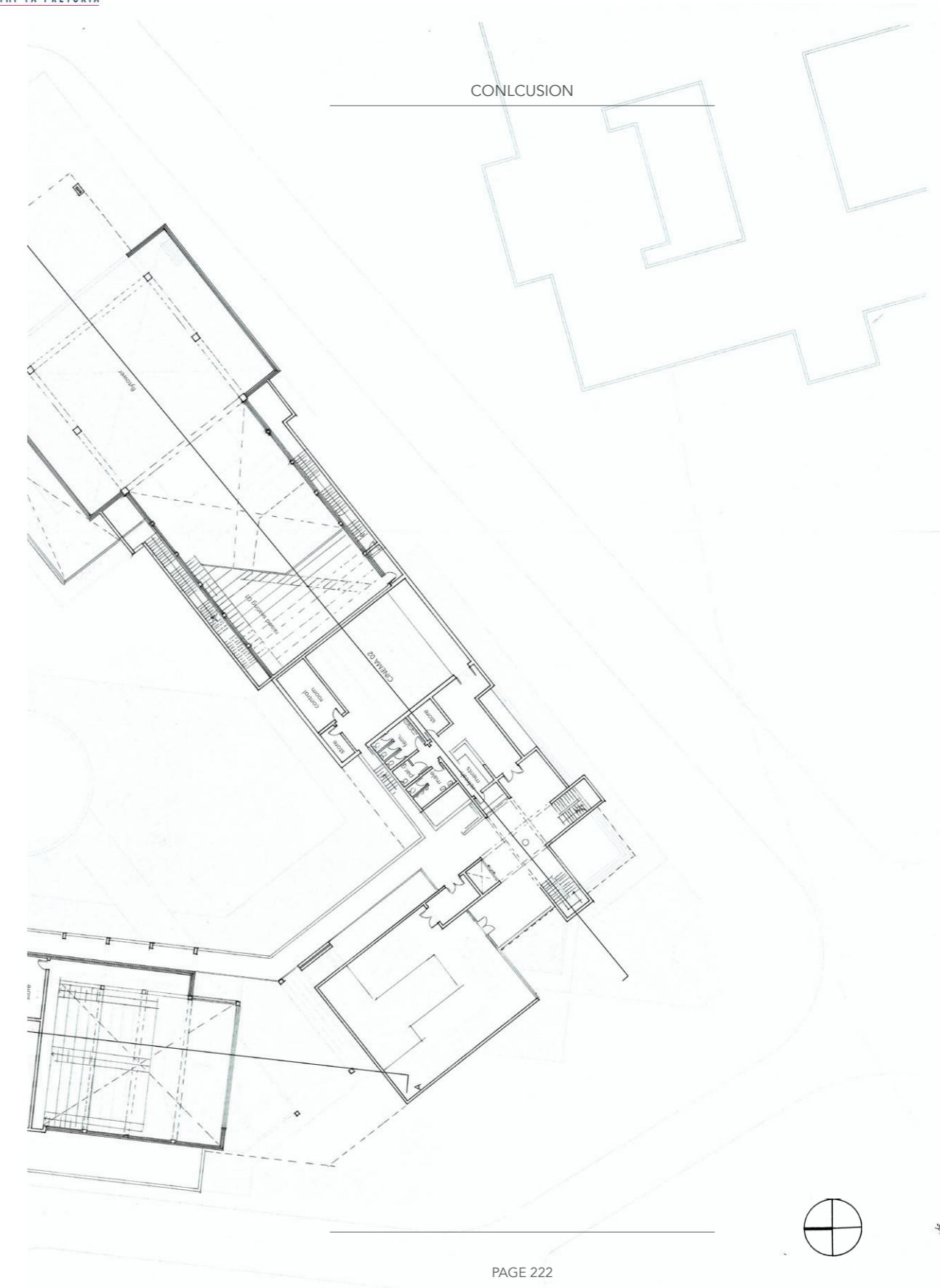




Fig. 280. First floor plan (nts).

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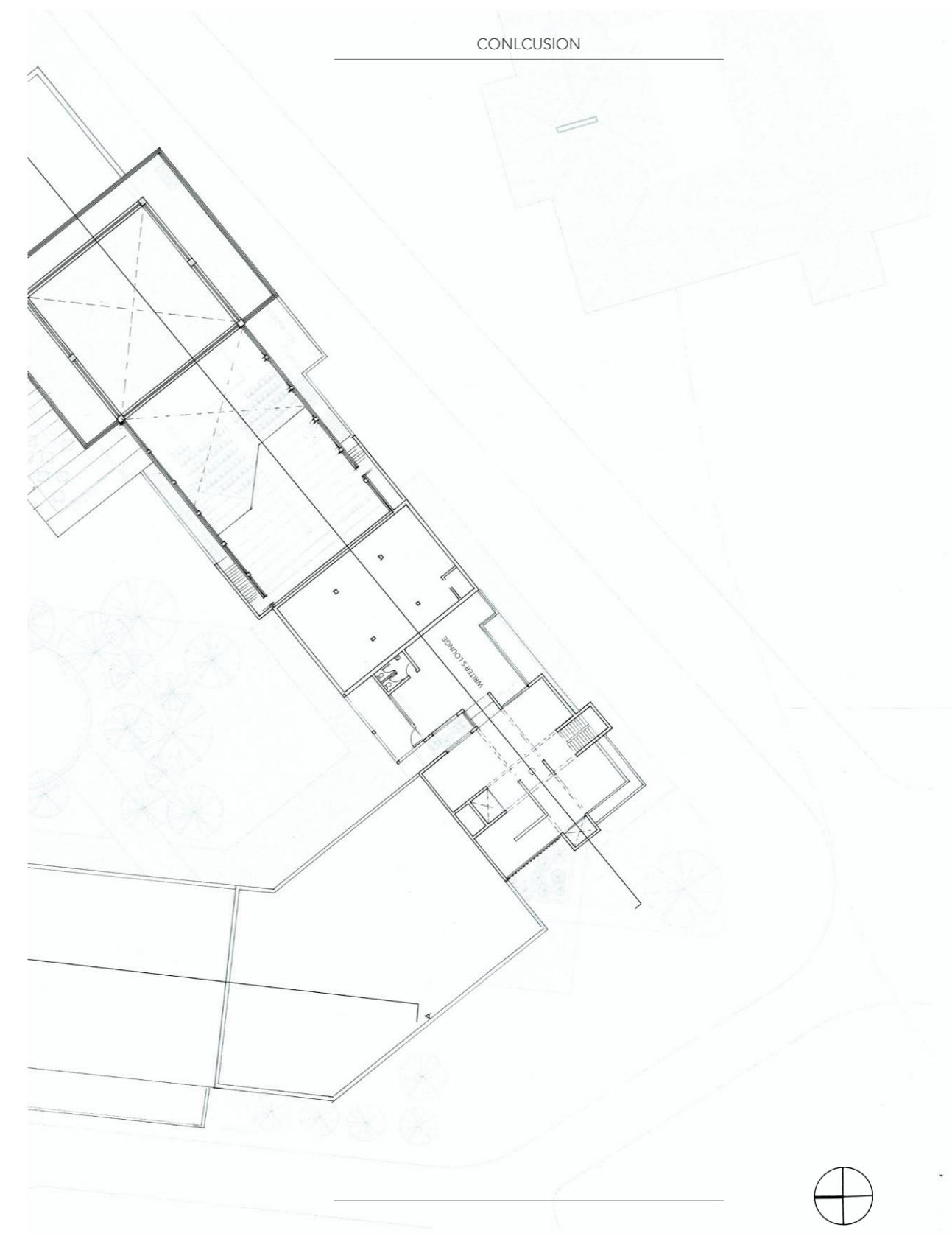
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Fig. 281. Second floor plan (nts).

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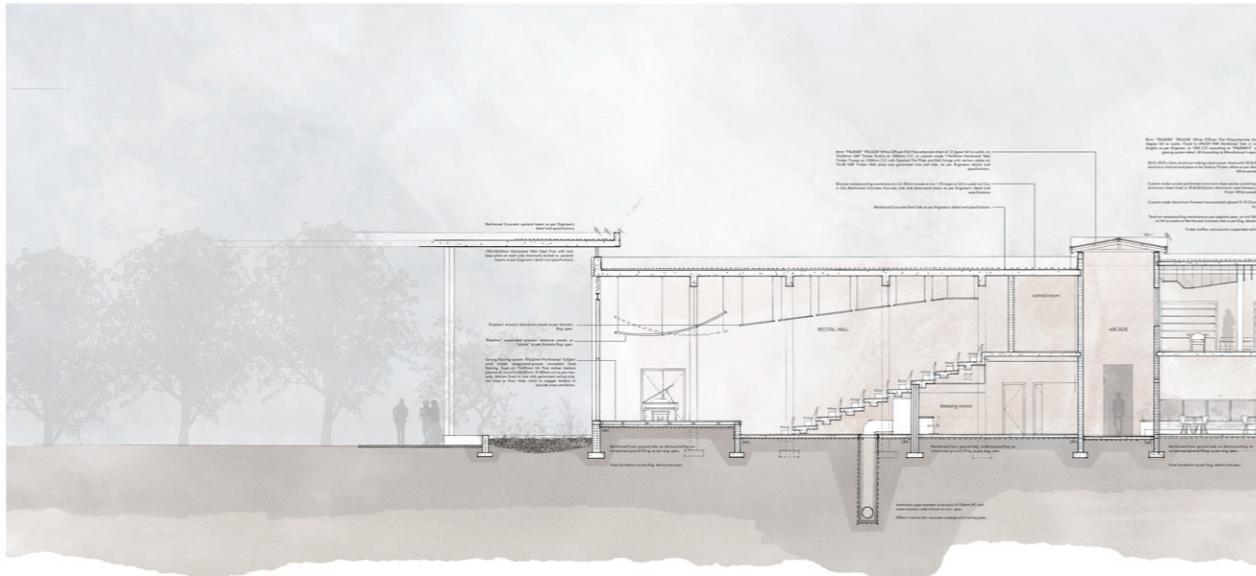
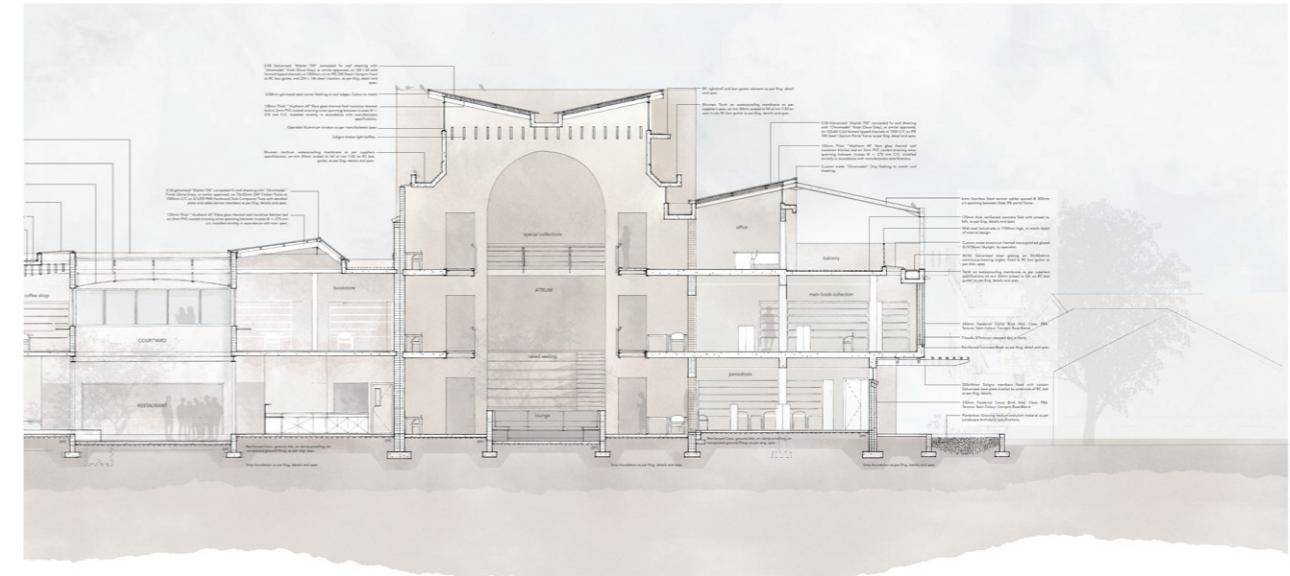


Fig. 282. Technical section AA (nts).

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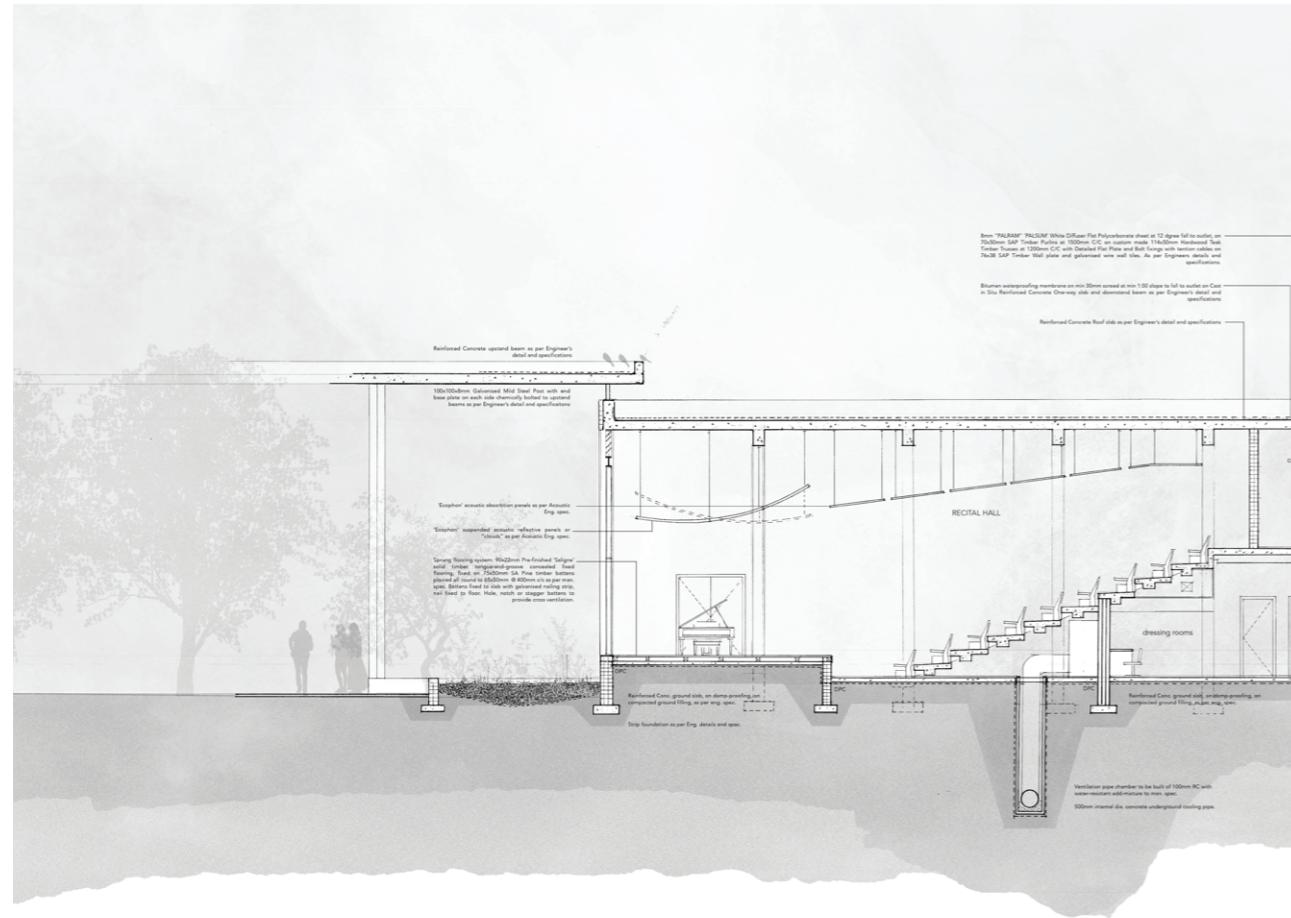


Fig. 283. Section AA - recital hall (nts).

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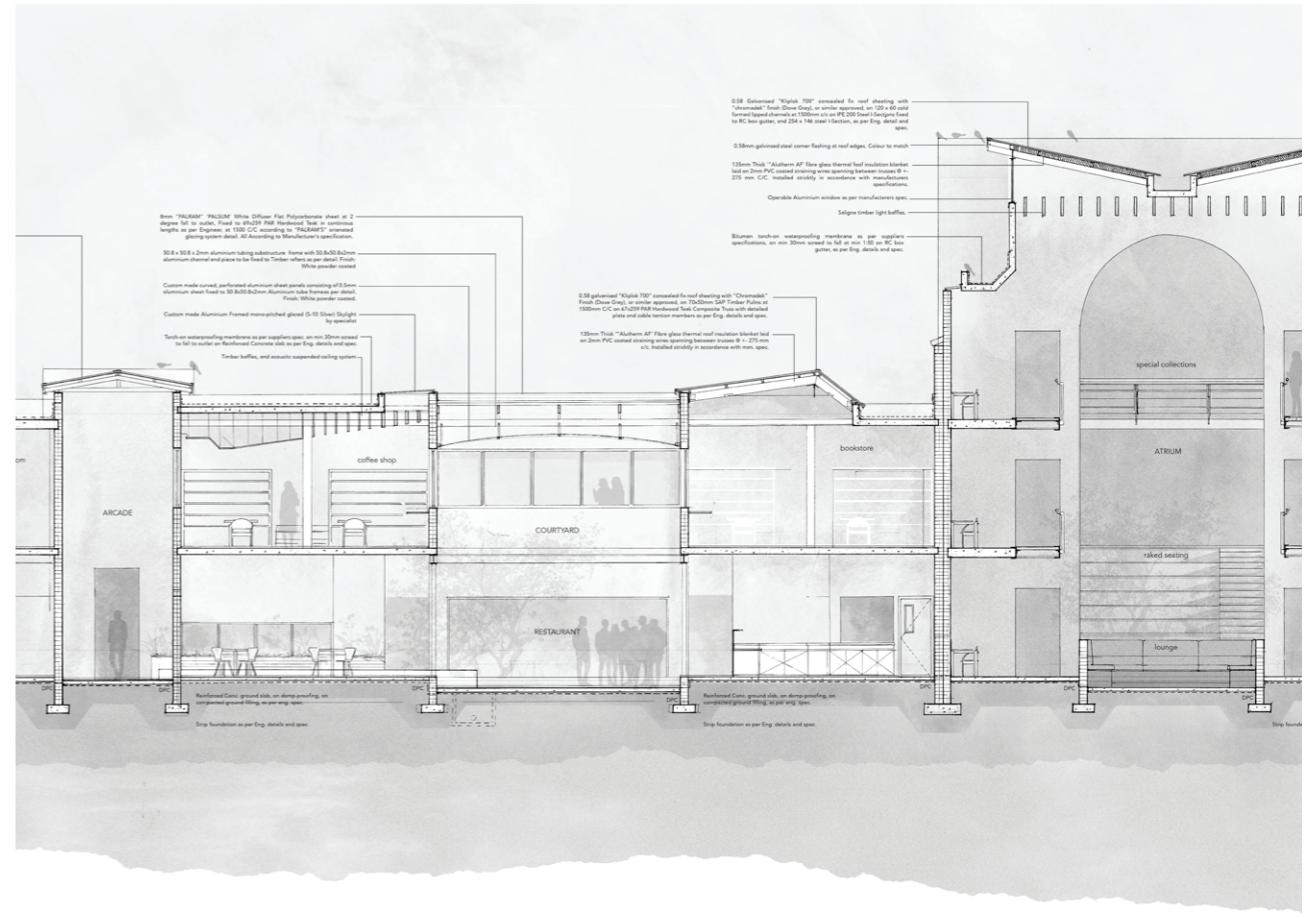


Fig. 284. Section AA - restaurant and coffee shop (nts).

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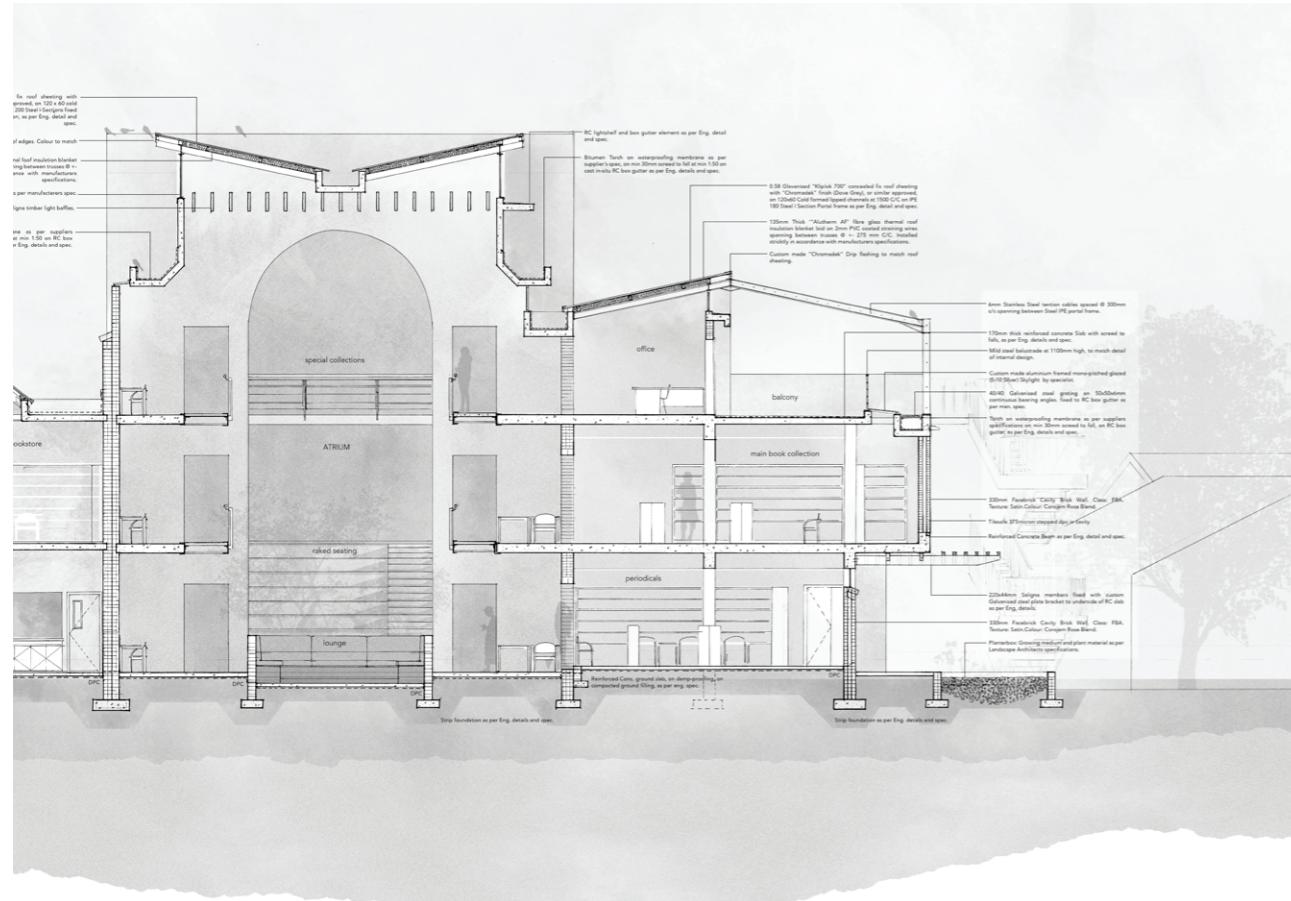


Fig. 285. Section AA - library (nts).

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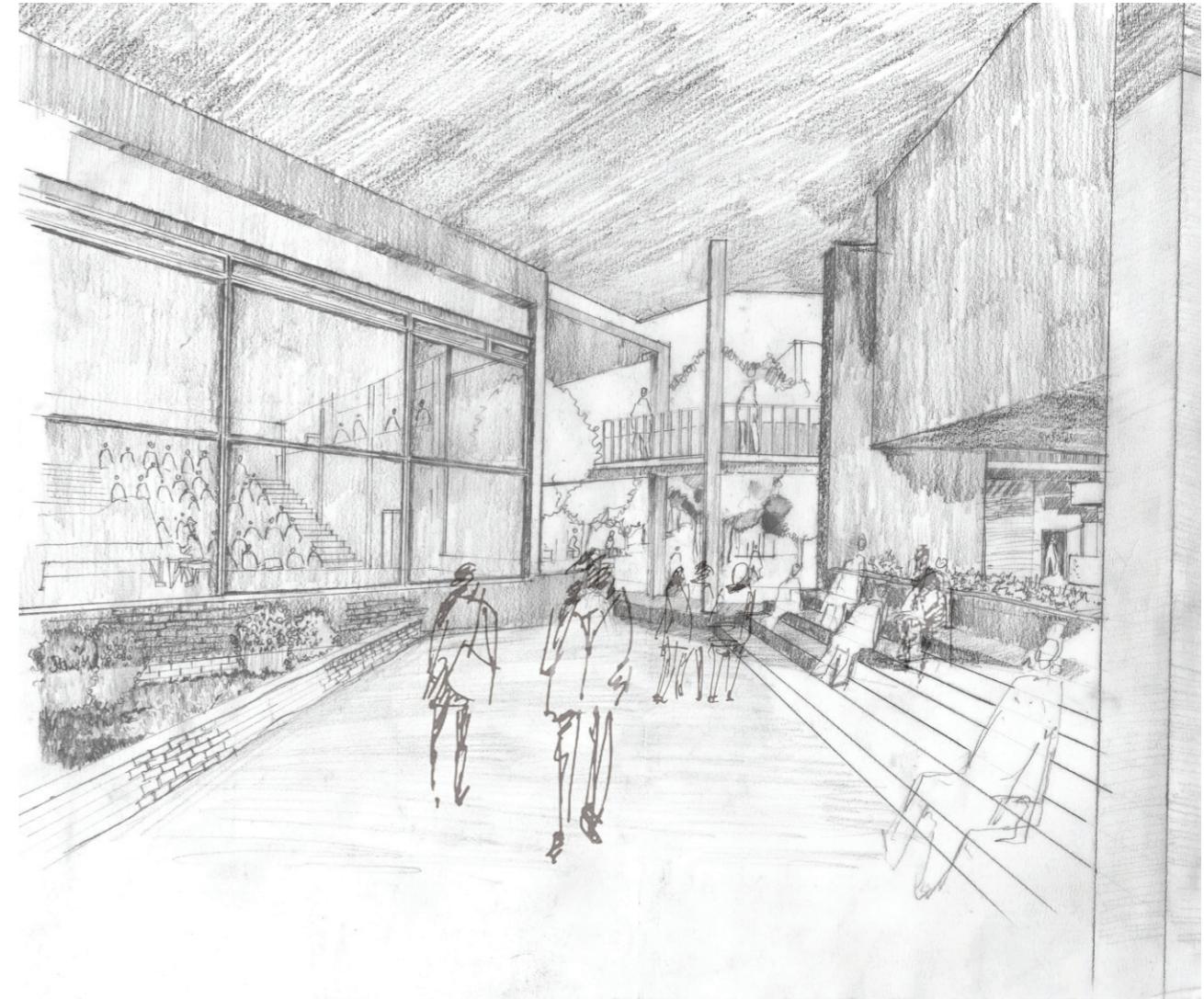


Fig. 286. Perspective - recital hall amphitheatre.

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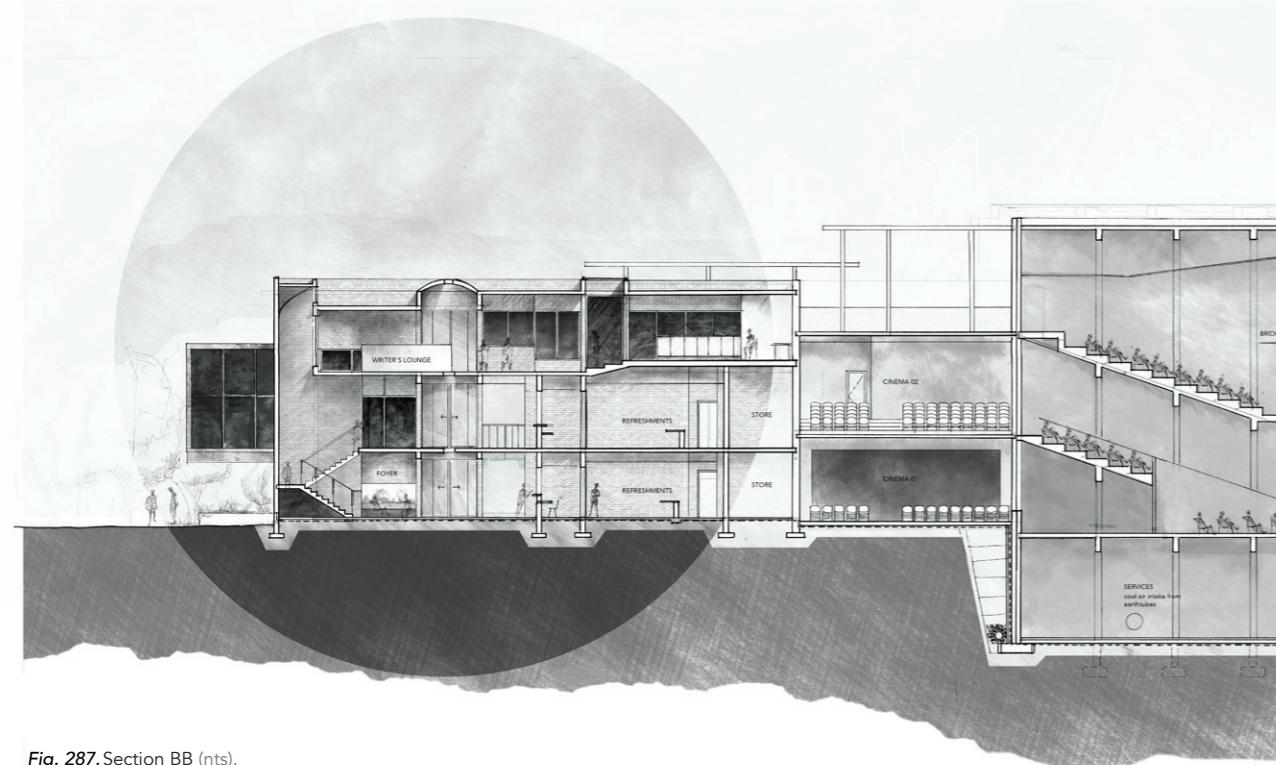


Fig. 287. Section BB (nts).

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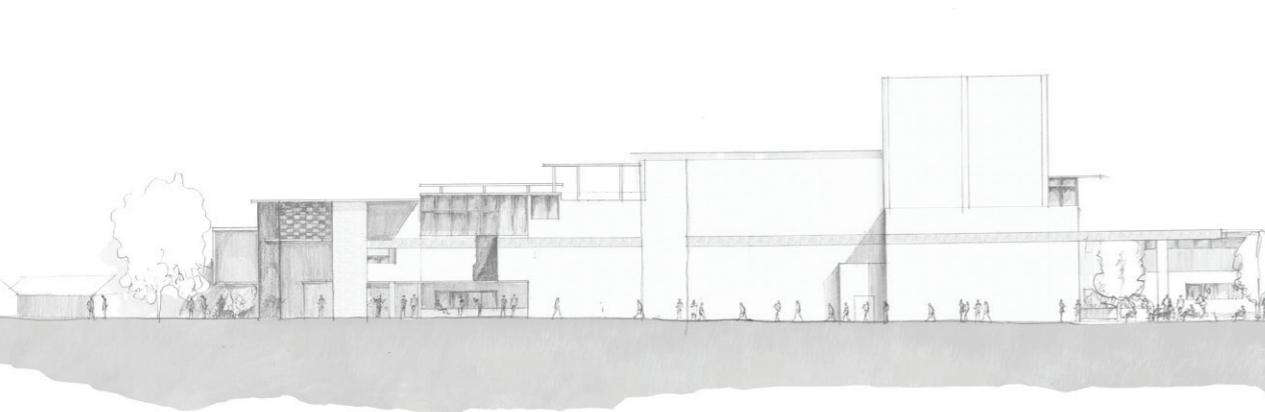
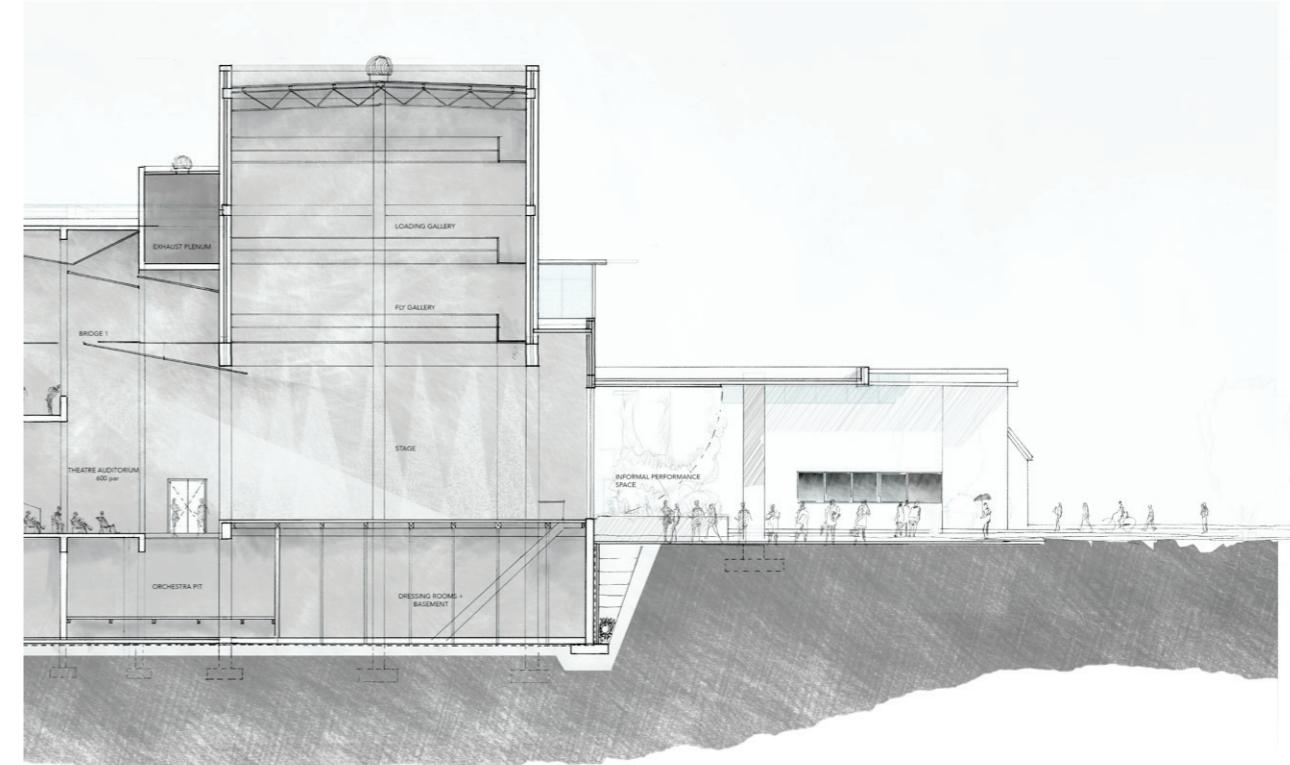


Fig. 288. South elevation (nts).

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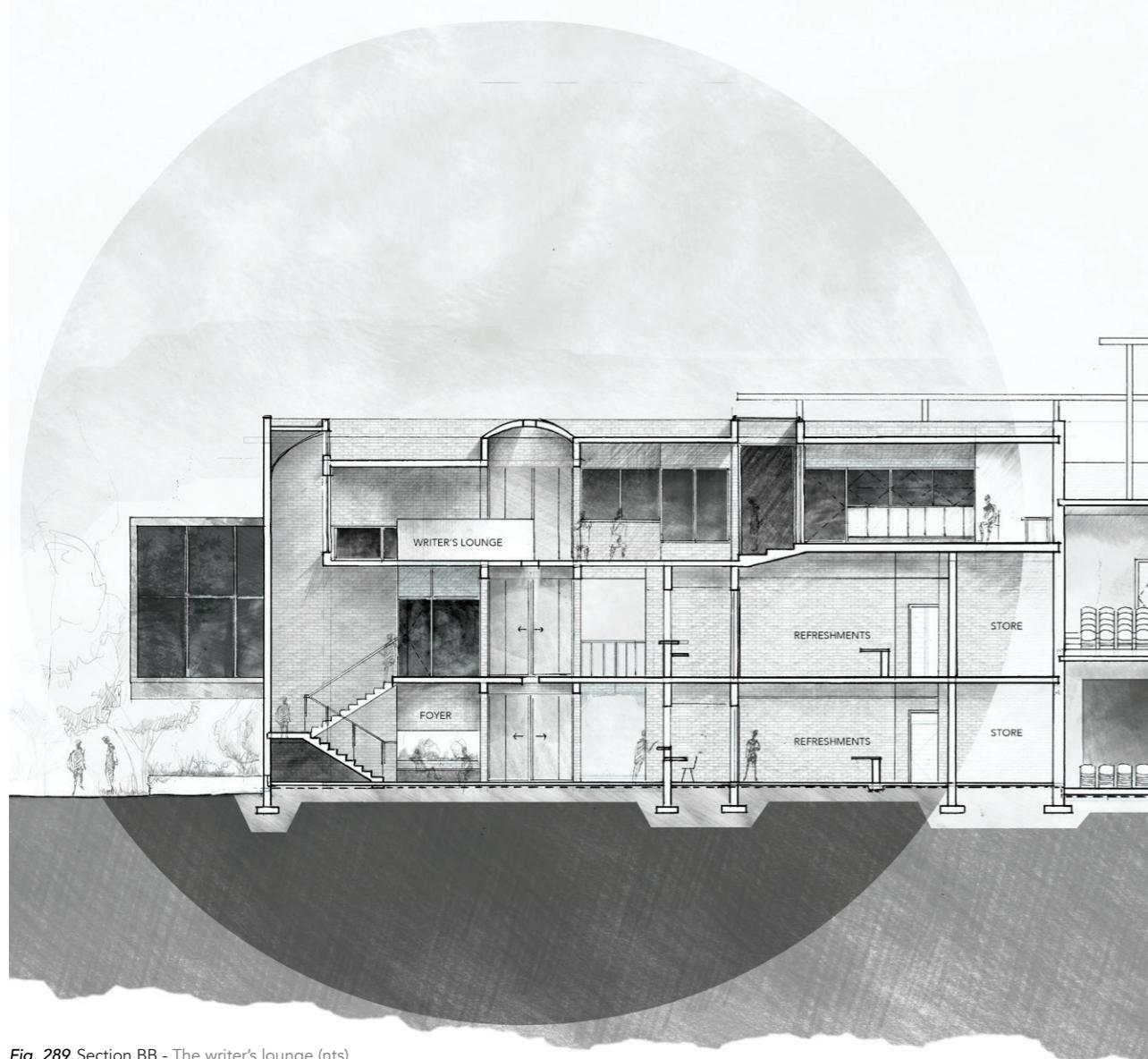


Fig. 289. Section BB - The writer's lounge (nts).



Fig. 290. Perspective - outside the restaurant (nts).

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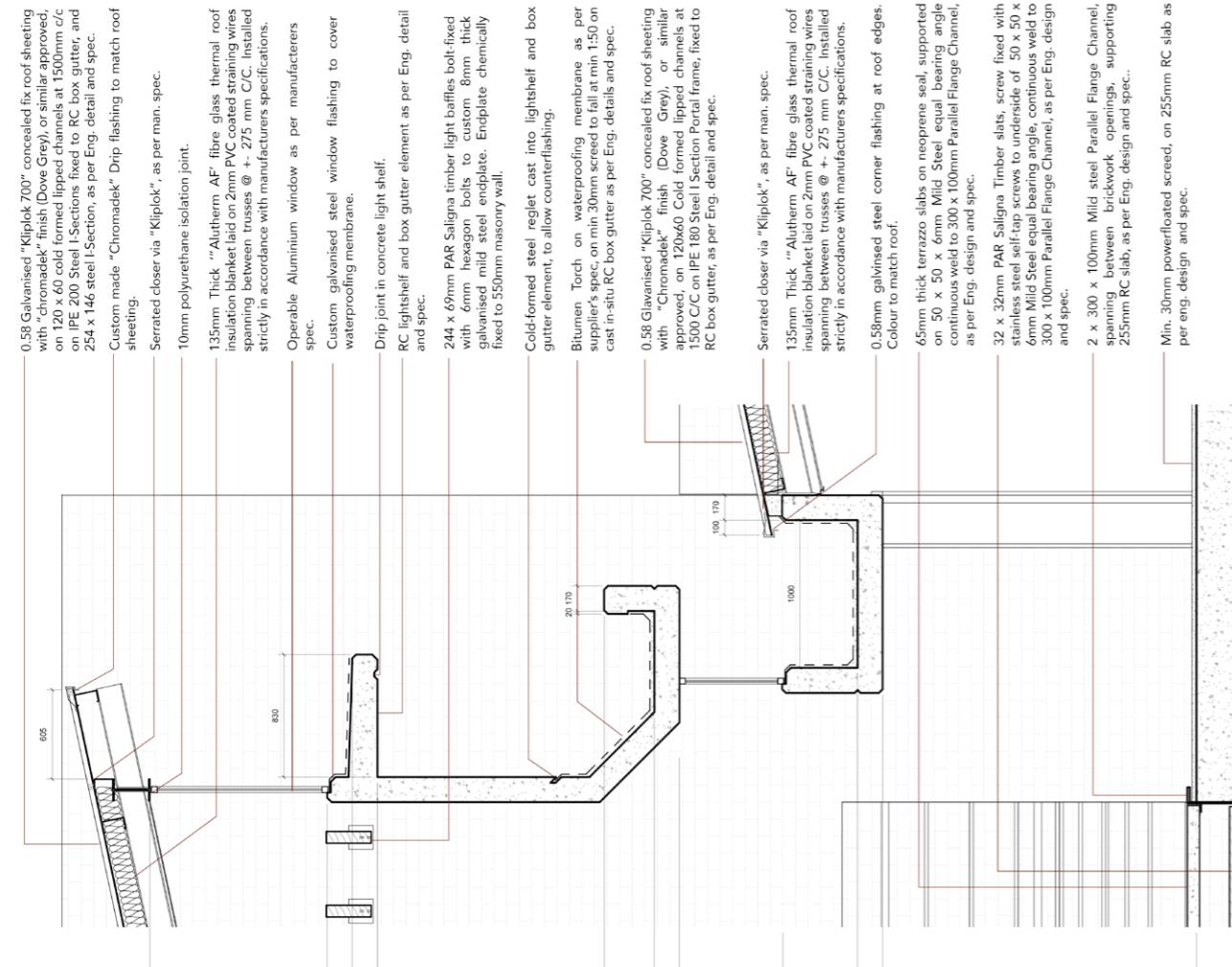
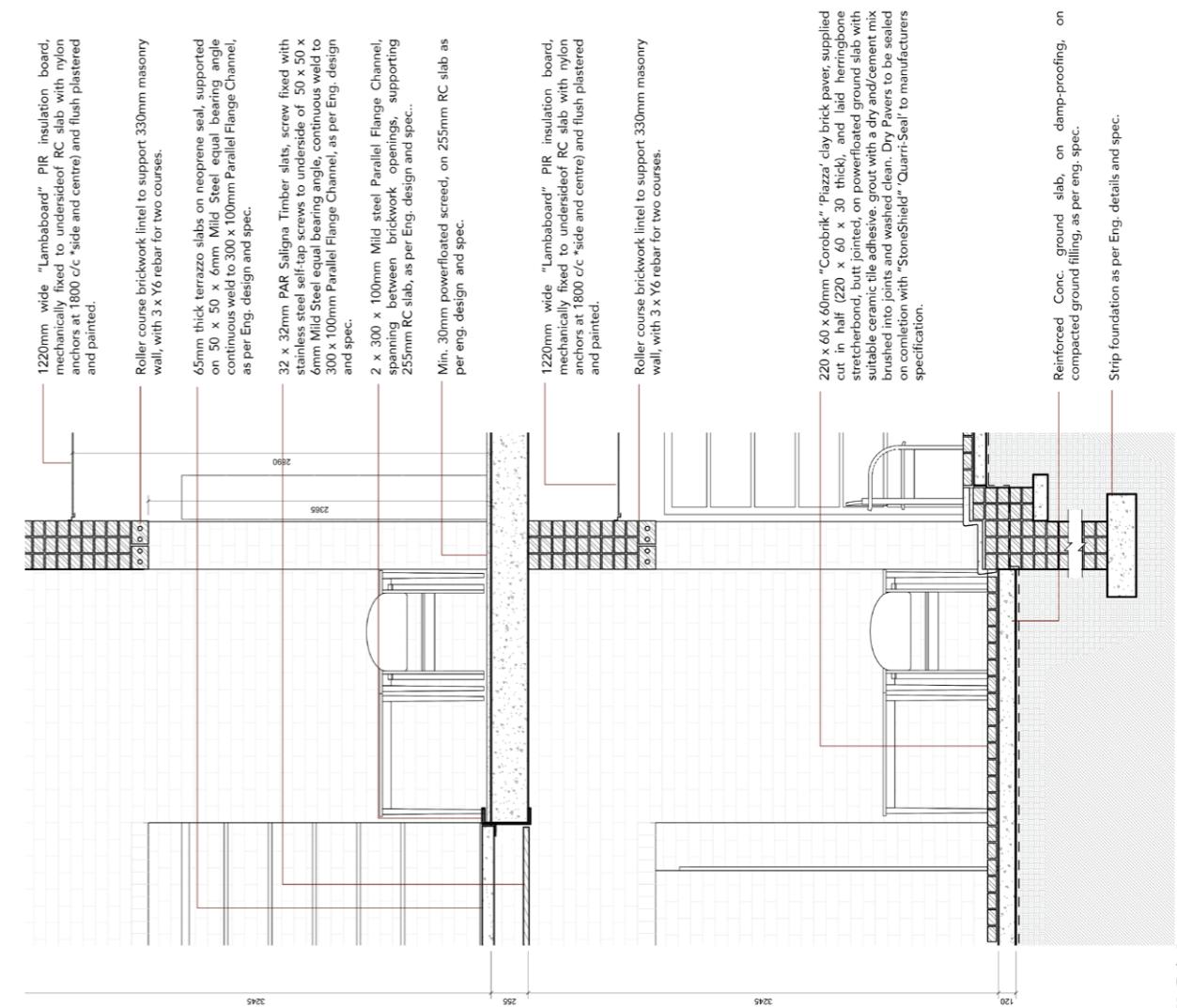


Fig. 291. Detail wall section - library (nts).

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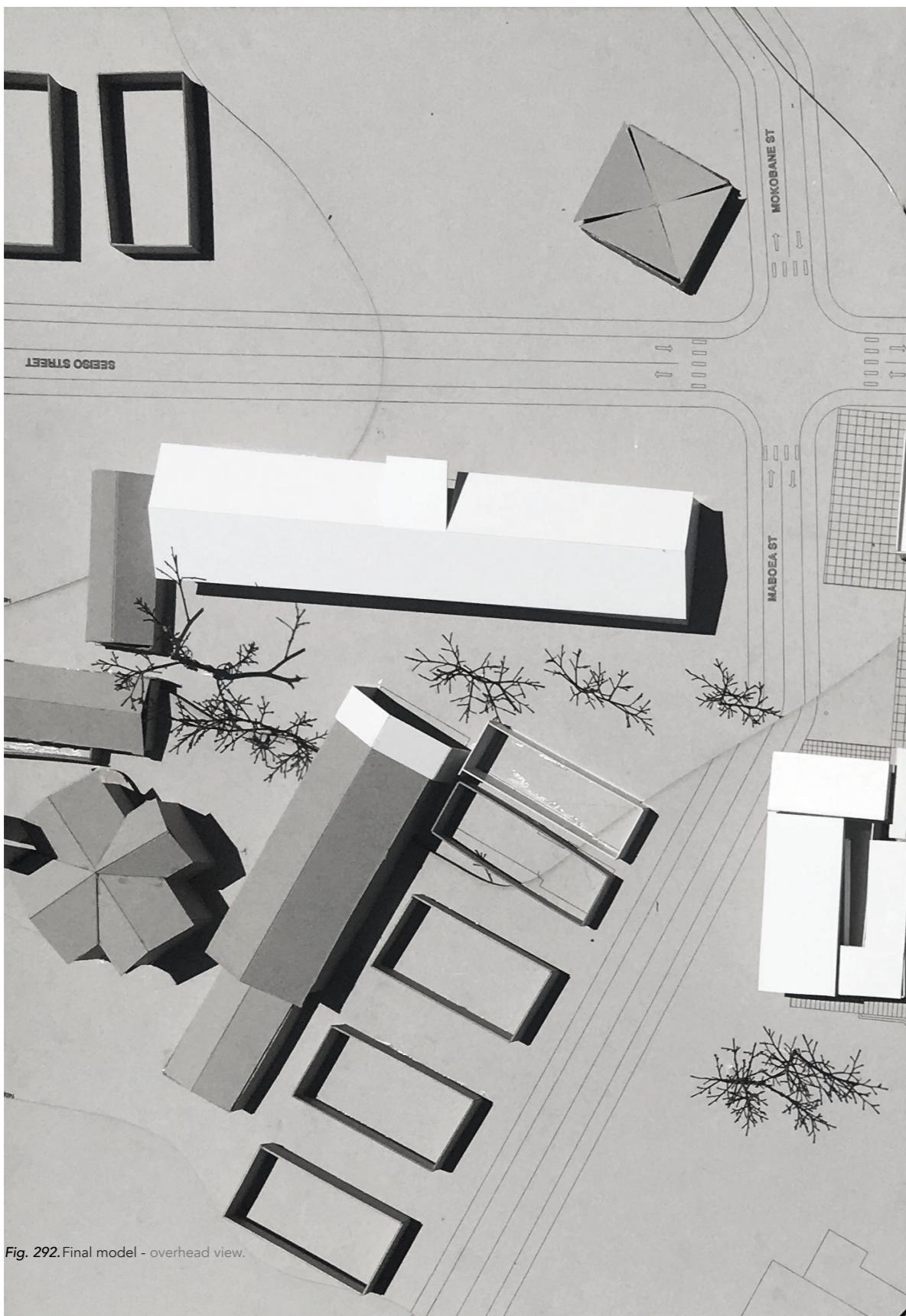


Fig. 292. Final model - overhead view.



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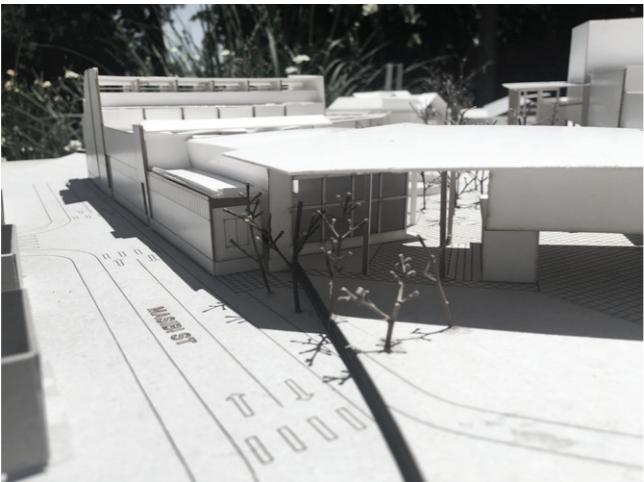


Fig. 293. Final model. Corner of Masibi street (recital hall + black box theatre).

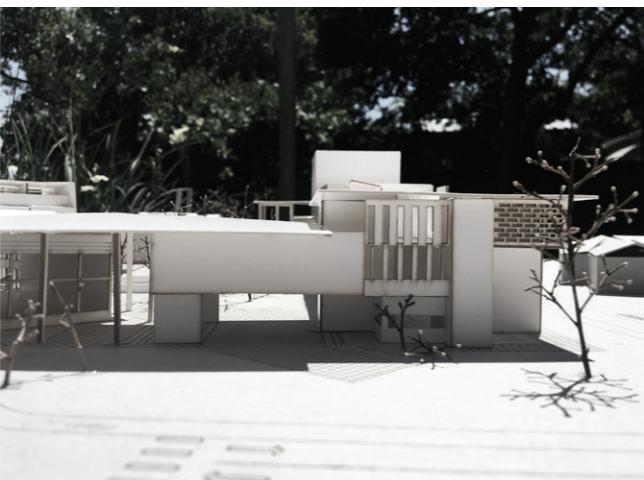


Fig. 294. Final model. Corner of Masibi street.



Fig. 295. Final model. Mareka street (southern facade).

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Fig. 296. Final model. Corner of Masibi street (entrance).



Fig. 297. Final model. Courtyard



Fig. 298. Final model. Library entrance



Fig. 299. Memories. Brion Tomb entrance. 2013.

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REFLECTION

This proposal reveals what may come from a scheme which grew from place. The result: a collection of memories to produce a new memory.

This investigation stemmed from a desire to create beautiful architecture. Not a superficial beauty, but one that touches the user at an emotive level.

If not getting lost in space, the user can be lost in thought or event. The new complex provides an opportunity to participate visually, or become part of the spectacle. The scheme encourages all levels of activity — from the extremely private to the extremely public. The user may wander through all the levels of privacy, allowing this new platform to become an extension of the existing *third place*. With a collage of places to get lost, the user is welcomed to cross the threshold and enter a realm beyond the mundane.

Although it is difficult to evaluate the *appropriateness* of a scheme for a township, the intention was to challenge what is ordinarily proposed in these dormitory towns. The goal was to interrogate the typologies typically implemented so as to start a conversation about the impact of architecture in South Africa.

This has been a difficult journey. Challenging the norm was often met with resistance and criticism. But, despite this, I believe important questions were asked and I have learnt so many valuable lessons to take forward.

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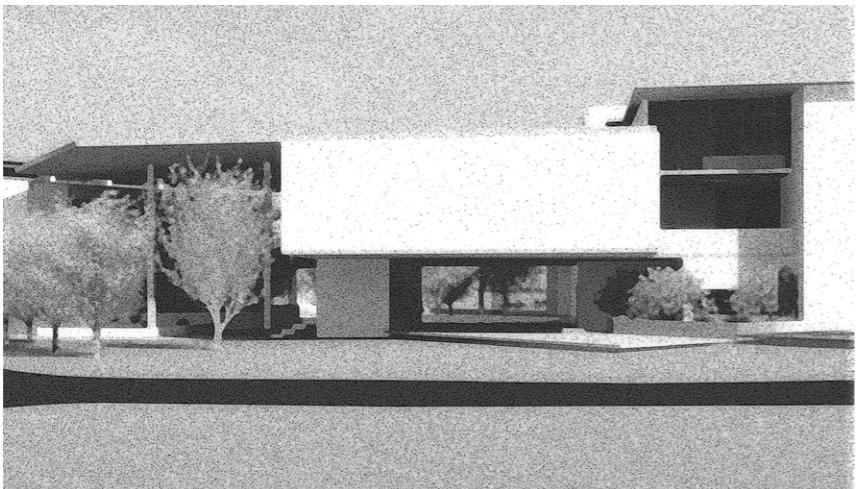
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APPENDIX A

Renderings

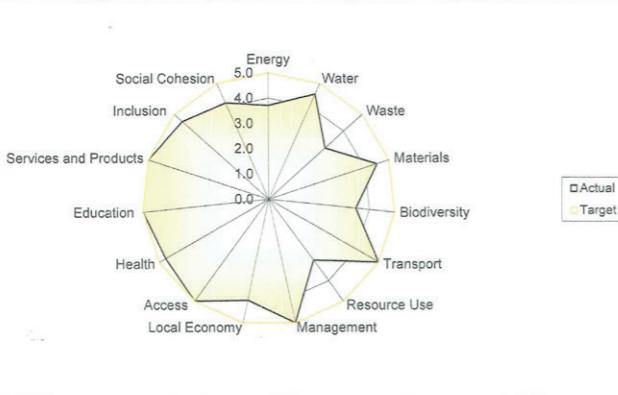


APPENDIX B

Calculations

SBAT

RENEWABLE BUILDING ASSESSMENT TOOL RESIDENTIAL

| SBAT REPORT | | Achieved |
|---|------|----------|
| SB1 Project | 0 | 4.3 |
| SB2 Address | 0 | |
| SB3 SBAT Graph | | |
|  | | |
| SB4 Environmental, Social and Economic Performance | | Score |
| Environmental | 3.8 | |
| Economic | 4.4 | |
| Social | 4.7 | |
| SBAT Rating | 4.3 | |
| SB5 EF and HDI Factors | | |
| EF Factor | 4.0 | |
| HDI Factor | 4.6 | |
| SB6 Targets | | |
| Environmental | 77 | |
| Economic | 88 | |
| Social | 94 | |
| SB7 Self Assessment: Information supplied and confirmed by | | |
| Name | Date | |
| Signature | | |
| SB8 Validation: Documentation validated by | | |
| Name | Date | |
| Signature | | |
| SB9 Validation Report Version | | |
| | | IVR |

| RAINWATER YIELD CALCULATION | | | |
|-----------------------------|-----------------------------------|---------------------------------|---------|
| MONTH | AVE. MONTHLY PRECIPITATION (l/m²) | AVE. MONTHLY PRECIPITATION (m³) | YIELD |
| January | 132,0 | 0,132 | 568,06 |
| February | 68,0 | 0,068 | 292,64 |
| March | 69,0 | 0,069 | 296,94 |
| April | 54,0 | 0,054 | 232,39 |
| May | 13,0 | 0,013 | 55,95 |
| June | 7,0 | 0,007 | 30,12 |
| July | 3,0 | 0,003 | 12,91 |
| August | 5,0 | 0,005 | 21,52 |
| September | 20,0 | 0,020 | 86,07 |
| October | 7,0 | 0,007 | 30,12 |
| November | 10,0 | 0,010 | 43,04 |
| December | 108,0 | 0,108 | 464,78 |
| | 496,0 | 0,496 | 2134,54 |

| RAINWATER CATCHMENT AND COLLECTION | | | |
|------------------------------------|-----------|-------------|----------|
| TYPE | AREA (m²) | COEFFICIENT | YIELD m³ |
| Permeable paving | 1700,0 | 0,70 | 1190,0 |
| Corrugated iron (existing) | 0,0 | 0,80 | 0,0 |
| Corrugated iron (new) | 1125,0 | 0,90 | 1012,5 |
| Flat roof | 2362,0 | 0,95 | 2101,0 |
| Green Roof | 0,0 | 0,50 | 0,0 |
| Grass | 0,0 | 0,78 | 0,0 |
| | 5187,0 | 4,63 | 4303,5 |
| | | | 3113,5 |

| RAINWATER YIELD CALCULATION (ROOF YIELD ONLY) | | | | | | |
|---|-----------------------------------|---------------------------------|----------|-----------|-----------------|-----------------|
| MONTH | AVE. MONTHLY PRECIPITATION (l/m²) | AVE. MONTHLY PRECIPITATION (m³) | YIELD m³ | DEMAND m³ | MONTHLY BALANCE | VOL. IN TANK |
| January | 132,0 | 0,132 | 410,98 | 40,94 | 370,04 | 636,39 1529,64 |
| February | 68,0 | 0,068 | 211,72 | 40,94 | 170,77 | 807,17 2336,81 |
| March | 69,0 | 0,069 | 214,83 | 40,94 | 173,89 | 981,06 3317,87 |
| April | 54,0 | 0,054 | 168,13 | 40,94 | 127,19 | 1108,24 4426,11 |
| May | 13,0 | 0,013 | 40,48 | 40,94 | -0,47 | 1107,77 5533,88 |
| June | 7,0 | 0,007 | 21,79 | 40,94 | -19,15 | 1088,62 6622,50 |
| July | 3,0 | 0,003 | 9,34 | 40,94 | -31,60 | 1057,02 7679,52 |
| August | 5,0 | 0,005 | 15,57 | 40,94 | -25,38 | 1031,64 8711,17 |
| September | 20,0 | 0,020 | 62,27 | 40,94 | 21,33 | 0 675 |
| October | 7,0 | 0,007 | 21,79 | 40,94 | -19,15 | -19,15 655,85 |
| November | 10,0 | 0,010 | 31,14 | 40,94 | -9,81 | -28,96 626,89 |
| December | 108,0 | 0,108 | 336,26 | 40,94 | 295,31 | 266,36 893,25 |
| | | | 1544,30 | | 491,33 | |

TANK SIZE 675,0

APPENDICES

WATER DEMANDS

| TYPE | NO. OF PEOPLE | DAILY NO. OF USES | TOTAL DEMAND | | | REDUCED TOTAL PER DAY | % REDUCTION | POSSIBLE WATER CONSUMED DAILY | POSSIBLE WATER PRODUCED DAILY | GREYWATER PRODUCED DAILY | BLACKWATER PRODUCED DAILY |
|--|---------------|-------------------|-------------------------|------------------------|------------------------|-----------------------|-------------|-------------------------------|-------------------------------|--------------------------|---------------------------|
| | | | STANDARD LITRES PER USE | STANDARD TOTAL PER DAY | REDUCED LITRES PER USE | | | | | | |
| Library & writers & all cleaning staff | | | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Toilets male (staff) | 0,00 | 2,00 | 8,00 | 8,00 | 4,50 | 1,50 | 0,00 | 45,00 | 45,00 | 0,00 | 0,00 |
| Toilets female (staff) | 5,00 | 3,00 | 8,00 | 8,00 | 4,50 | 4,50 | 5,67 | 283,50 | 283,50 | 16,88 | 16,88 |
| Toilets female (public) | 21,00 | 3,00 | 8,00 | 8,00 | 4,50 | 4,50 | 5,67 | 30,00 | 30,00 | 21,60 | 21,60 |
| Toilets female (public) | 15,00 | 0,25 | 8,00 | 8,00 | 4,50 | 4,50 | 5,67 | 18,00 | 18,00 | 13,50 | 13,50 |
| Urinals (staff) | 48,00 | 1,00 | 8,00 | 8,00 | 4,50 | 4,50 | 5,67 | 384,00 | 384,00 | 46,20 | 46,20 |
| Urinals (public) | 33,00 | 1,25 | 8,00 | 8,00 | 4,50 | 4,50 | 5,67 | 36,00 | 36,00 | 30,30 | 30,30 |
| Showers | 0,50 | 1,00 | 2,50 | 2,50 | 1,50 | 1,50 | 0,00 | 17,33 | 17,33 | 12,60 | 12,60 |
| Wash hand basins | 200,00 | 2,00 | 1,00 | 1,00 | 0,50 | 0,50 | 0,00 | 200,00 | 200,00 | 100,00 | 100,00 |
| Jamitorial duties | 0,00 | 5,00 | 1,00 | 1,00 | 0,50 | 0,50 | 0,00 | 315,00 | 315,00 | 157,50 | 157,50 |
| SUBTOTAL | | | | 1964,20 | | 1119,80 | 0,43 | 527,60 | 315,00 | 212,60 | 59,220 |
| Ground maintenance & office | | | | | | | | | | | |
| Shutterstock | 0,00 | 3,00 | 40,00 | 40,00 | 0,00 | 30,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Grounds* | | | | | | | | | | | |
| Vegetation upkeep | 1,00 | 3,00 | 250,00 | 750,00 | 200,00 | 600,00 | 24,00 | 38,50 | 38,50 | 0,00 | 0,00 |
| Outer cleaning | 1,00 | 3,00 | 10,00 | 30,00 | 8,00 | 8,00 | 0,00 | 10,00 | 10,00 | 0,00 | 0,00 |
| Sundries | 1,00 | 1,00 | 10,00 | 10,00 | 10,00 | 10,00 | 0,00 | 10,00 | 10,00 | 0,00 | 0,00 |
| Cleaning | 0,00 | 3,00 | 5,00 | 15,00 | 0,00 | 4,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Office* | | | | | | | | | | | |
| Tea/coffee | 30,00 | 2,00 | 0,35 | 60,00 | 21,00 | 0,35 | 21,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| dishes | 15,00 | 1,00 | 2,00 | 30,00 | 10,00 | 1,00 | 10,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Kitchens** - butchery* | 22,00 | 4,00 | 0,25 | 88,00 | 20,00 | 0,25 | 20,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| drinking | 0,00 | 4,00 | 0,35 | 16,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Toilets | 0,00 | 3,00 | 1,50 | 45,00 | 15,00 | 1,50 | 15,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| day staff** | 0,00 | 1,00 | 0,00 | 8,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| night staff** | 0,00 | 1,00 | 0,00 | 8,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| occupants | 0,00 | 1,00 | 0,00 | 8,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Wash hand basins | 0,00 | 1,00 | 1,00 | 10,00 | 0,00 | 0,50 | 0,50 | 0,00 | 0,00 | 0,00 | 0,00 |
| Cleaning | 0,00 | 4,00 | 5,00 | 20,00 | 0,00 | 5,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Laundry† | 0,00 | 1,00 | 25,00 | 25,00 | 0,00 | 25,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| SUBTOTAL | | | | 1000,80 | | 542,80 | 0,46 | 542,80 | 214,30 | 328,50 | 0,00 |
| Coffee shop & Rest. | | | | | | | | | | | |
| Kitchen | | | | | | | | | | | |
| cooking | 50,00 | 3,00 | 1,50 | 225,00 | 1,50 | 1,50 | 225,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| dishes | 1,00 | 3,00 | 4,00 | 120,00 | 35,00 | 105,00 | 105,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Toilets | 0,00 | 3,00 | 8,00 | 8,00 | 4,00 | 0,00 | 0,00 | 3,00 | 0,00 | 0,00 | 0,00 |
| dry staff** | 0,00 | 1,50 | 8,00 | 8,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| night staff** | 0,00 | 4,00 | 8,00 | 8,00 | 4,00 | 0,00 | 0,00 | 4,00 | 40,00 | 40,00 | 40,00 |
| occupants | 0,00 | 2,00 | 1,00 | 8,00 | 0,00 | 0,50 | 0,00 | 0,50 | 35,00 | 35,00 | 35,00 |
| Wash hand basins | 1,00 | 2,00 | 0,35 | 35,00 | 15,00 | 0,35 | 15,00 | 4,00 | 12,00 | 12,00 | 12,00 |
| Tea/coffee | 0,00 | 3,00 | 1,00 | 12,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Cleaning | 0,00 | 1,00 | 0,00 | 12,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Laundry‡ | | | | | | | | | | | |
| GRAND TOTAL | | | | 475,00 | | 471,700 | 0,12 | 417,00 | 237,00 | 180,00 | 0,00 |
| TOTAL (m³) | | | | 4,30 | | 279,40 | 0,30 | 213,30 | 787,30 | 1346,10 | 618,20 |
| AVE. MONTHLY DEMAND | | | | 130,88 | | 84,24 | 0,54 | 64,89 | 23,95 | 40,94 | 18,74 |

APPENDICES

WATER REDUCTIONS

| TYPICAL + REDUCED DEMANDS IN LITRES PER USE | | | | | |
|---|------------------|---------------------|----------------------|-------------|-------------------------|
| ITEM | USE | AVE. LITRES PER USE | REDUCTION | REDUCED USE | BRAND NAME |
| Private whb | handwash | 1 | aerator | 0,5 | generic |
| Public whb | handwash | 1 | aerator + demand tap | 0,25 | generic + cobra |
| Shower | 16l/min @ 4.5min | 72 | 5.6l/min @ 4.5min | 25,2 | lio gio |
| Toilet | flush | 8 | dual flush | 25 | vail ecoline |
| Dishwasher | single wash | 30 | green machine | 1 | generic |
| Dish washing | hand wash | 2 | aerator | 0,5 | generic |
| Washing machine | | 10l/kg | recycle rinse water | 7,5 | generic |
| Tea/coffee | cup | 0,35 | n.a. | 0,35 | n.a. |
| Urinal | flush | 0,8 | waterless | 0 | vail lavatera sweetpea\ |

ELECTRICAL REQUIREMENTS

| ELECTRICAL DEMAND - REDUCED | | | | | |
|---|----------|---------|-------|-------------|----------|
| EXTERNAL | | | | | |
| ITEM | QUANTITY | WATTS | HOURS | KWh PER DAY | ANNUALLY |
| street lights | 6 | 20,00 | 0 | 0,00 | 0,00 |
| paving lights | 20 | 2,90 | 11 | 0,64 | 232,87 |
| tree uplighters | 13 | 18,00 | 11 | 2,57 | 939,51 |
| | | | | 3,21 | 1172,38 |
| | | | | | 3,21 |
| SERVICE YARD | | | | | |
| pumps - 40psi (32l/m) | 0 | 1200,00 | 1,4 | 0,00 | 0,00 |
| electrical outlets | 6 | 10,00 | 2 | 0,12 | 43,80 |
| | | | | | 0,12 |
| LIBRARY/WRITING ROOM/OFFICES/ALL OTHER INTERNAL | | | | | |
| electrical outlets | 133 | 30,00 | 9 | 35,91 | 13107,15 |
| lighting | 192 | 15,00 | 2 | 5,76 | 2102,40 |
| | | | | 41,67 | 15209,55 |
| PUBLIC ABLUTIONS | | | | | |
| internal lighting | | | | 9,00 | 3285,00 |
| external lighting | | | | 0 | 0 |
| geyser 450l | 1 | 2500,00 | 7 | 17,50 | 6387,50 |
| | | | | 26,50 | 9672,50 |
| | | | | | 9,00 |
| THEATERS | | | | | |
| ITEM | QUANTITY | | | | |

APPENDICES

ELECTRICAL REQUIREMENTS (cont.)

| Cinemas/media room | | | | | |
|----------------------------|----------|---------|-------|-------------|---------------|
| ITEM | QUANTITY | WATTS | HOURS | kWh PER DAY | kWh PER ANNUM |
| internal lighting | | | | 5,00 | 1825,00 |
| media | | | | 0 | 5,00 |
| projector | 2 | 1000,00 | 15 | 30,00 | 10950,00 |
| sound | 2 | 5000,00 | 15 | 150,00 | 54750,00 |
| passage lighting | 32 | 2,00 | 15 | 0,96 | 350,40 |
| outlets | 20 | 10,00 | 15 | 3,00 | 1095,00 |
| HVAC | 2 | 3500,00 | 15 | 105,00 | 38325,00 |
| dishwasher | 0 | 870,00 | 4 | 0,00 | 0,00 |
| fridge | 0 | 0,00 | 0 | 0,00 | 0,00 |
| misc | 0 | 50,00 | 4 | 0,00 | 0,00 |
| bar fridge | 0 | 0,00 | | 0,00 | 0 |
| water heating | | | | 0 | |
| geyser 450l | 0 | 0,00 | 0 | 0,00 | 0,00 |
| | | | | 293,96 | 107295,40 |
| | | | | | 109,43 |
| Restaurant & coffee shop | | | | | |
| ITEM | QUANTITY | WATTS | HOURS | kWh PER DAY | kWh PER ANNUM |
| internal lighting | | | | 3,00 | 1095,00 |
| external lighting | | | | 0 | 3,00 |
| appliances | | | | 0 | |
| internet | 1 | 6,00 | 24 | 0,14 | 52,56 |
| computers | 1 | 80,00 | 9 | 0,72 | 262,80 |
| kettle | 2 | 1600,00 | 3 | 9,60 | 3504,00 |
| stove/oven | 2 | 2000,00 | 5 | 20,00 | 7300,00 |
| microwave | 2 | 600,00 | 1 | 1,20 | 438,00 |
| dishwasher | 1 | 870,00 | 4 | 3,48 | 1270,20 |
| fridge | 2 | 200,00 | 6 | 2,40 | 876,00 |
| misc | 0 | 50,00 | 4 | 0,00 | 0,00 |
| bar fridge | 0 | 0,00 | 0 | 0,00 | 0,00 |
| machinery | | | | 0 | |
| water heating | | | | 0 | |
| geyser 450l | 2 | 0,00 | 0 | 0,00 | 0,00 |
| | | | | 40,54 | 14798,56 |
| | | | | | 5,51 |
| Computer room/ study nooks | | | | | |
| ITEM | QUANTITY | WATTS | HOURS | kWh PER DAY | kWh PER ANNUM |
| appliances | | | | 0 | |
| internet | 1 | 6,00 | 24 | 0,14 | 52,56 |
| computers | 20 | 400,00 | 9 | 72,00 | 26280,00 |
| outlets | 30 | 10,00 | 8 | 2,40 | 876,00 |
| misc | 1 | 50,00 | 8 | 0,40 | 146,00 |
| bar fridge | 0 | 296,00 | 0 | 0,00 | 0,00 |
| | | | | 74,94 | 27354,56 |
| TOTAL | | | | 519,66 | 189674,37 |
| | | | | | 133,76 |

0,56

APPENDICES

PV CELLS REQUIRED (cont.)

| | |
|--------------------------------|----------------------|
| daily demand | 519,66 |
| pv cell factor | 1,30 |
| actual daily demand (kW) | 675,55 kWh/day |
| actual daily demand (w) | 675552,56 W/day |
| irradiation pretoria | 5,46 kWh/day |
| PV cell power | 290,00 Wp |
| panel weight | 18,00 kg |
| panel size | 1,65 m ² |
| total panels needed | 426,65 qty. |
| actual no of panels | 427 round up |
| total area needed | 704 m ² |
| total weight | 7679,64 kg dead load |
| unit price | 4324 R |
| total panel price | 1844820,80 |
| Battery sizes | 11,60 kWh |
| Number req. | 45 qty. |
| unit price | R |
| Total PV cost | R |
| current eskom prices | 1,47 R/kWh |
| annual eskom tariff (estimate) | 363034,85 R/annum |

APPENDICES

End

APPENDICES