COMMUNITY ALIENATION TO INTEGRATION

Reweaving history and legacy through adaptive-reuse and community revitalization

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DPD801_Design Report

ABSTRACT

This design project investigates the effects and shortcomings of the large-scale development project on the vulnerable community of Salvokop and the potential of these developments to positively benefit the communities they inhabit. The disparate nature of large-scale development projects situated within vulnerable communities, disregard the people, the community and the heritage of the area, effecting the social development of the community and displacing people. This phenomenon is know as Urban fragmentation. This design project challenges the current Salvokop Spatial Development Framework which is set to transform the Salvokop area into a Mixed-Use Government Precinct as part of the Tshwane Inner City Regeneration Program. The Spatial Framework will largely displace the existing community of Salvokop with high-density commercial and office typologies.

This project will set out to propose an alternative spatial development framework which is centered around the community and celebrated the heritage of Salvokop. It is argued that large scale developments disrupt established development patterns, isolating communities and reinforce physical and social divisions. A further critique on the proposed Salvokop SDF for the Government Precinct, is that it has limited integration with the established residential fabric of the area. This exclusion within the proposal further perpetuates the isolation and division that is created by the large-scale development. The phased roll-out of the Government Precinct is currently underway through the implementation of infrastructure and road works.

The outcome of urban fragmentation created by large scale developments is gentrification, where wealthier populations displace lower-income residents (Smith, 2002). in the case of Salvokop, the people who reside in the area do not own the properties. There was an agreement between them and the Department of Public Works and Infrastructure in the late 1990's to pay rent for the homes. due to neglect and lack of maintenance by DPWI, living conditions have deteriorated, prompting some tenants to withhold rent (Kgosana, 2020).

Already the impact of the development on the community can be observed through the displacement of people, the disruption of the existing community patterns and community institutions being closed down or permanently relocated outside the community.

The project approaches development through the lens of both the ecomuseum and incremental development. Viewing Salvokop as an ecomuseum enables an exploration of the complex relationships between the community, heritage, and the environment that form the urban fabric of the area. Incremental development serves as the strategy for preserving these relationships, ensuring that urban growth remains sustainable and respectful of the community's existing social and cultural dynamics.

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PROJECT DETAILS

TITLE: Community Alienation to Integration

BUILDING TYPOLOGY: Civic Centre

ADDRESS: Portion 406 of the farm Pretoria Town & Townlands 351JR, Salvokop precicnt

DEPARTMENT RESEARCH FIELD: Climate Change Technologies

GPS COORDINATES:

CLIENT: Salvokop Community

THEORETICAL PREMISE: Urban Ecomuseum and Incremental Development in response to Urban Fragmentation

LINK TO RESEARCH

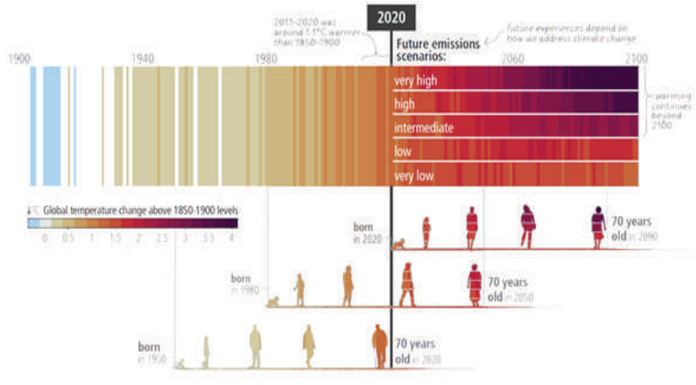
CLIMATE CHANGE ON A GLOBAL SCALE

Climate change is not a novel occurring phenomenon created by mankind. Climate fluctuations (climate change) have occurred both locally and internationally since the planet originated some 4.5 billion years ago. The IPCC (2007a) recognised the following climatic variations: the Ice Age of 20,000 years ago (glacial maximum), the Little Ice Age that affected Europe in the early Middle Ages, the subsequent mediaeval warm era, and the cooling of the 17th, 18th, and 19th centuries (IPCC, 2007).

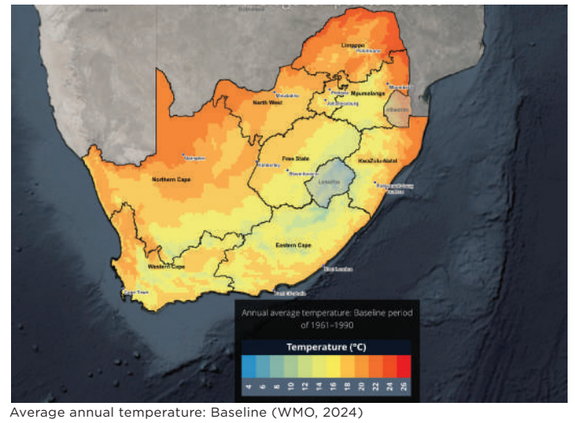
The IPCC (2007a) states that underlying denominator which has caused these climatic variations is the concentration of carbon dioxide (CO_2) in the atmosphere. Carbon is an essential element for sustaining life on Earth, serving as the fundamental building block for all living species including plants, animals, and bacteria. The quantity of carbon dioxide in the atmosphere has played a crucial role in stabilising the climate over long periods of time, thanks to the carbon cycle. In natural conditions, the emission of CO_2 is balanced by carbon sinks, which maintains a stable balance with the energy absorbed from the Sun (IPCC, 2007).

Human actions, especially since the Industrial Revolution, have accelerated the rate at which climate change occurs by modifying the atmospheric chemistry through the burning of fossil fuels, posing a major risk to the fragile equilibrium between human progress and the natural environment (Altomonte, 2008).

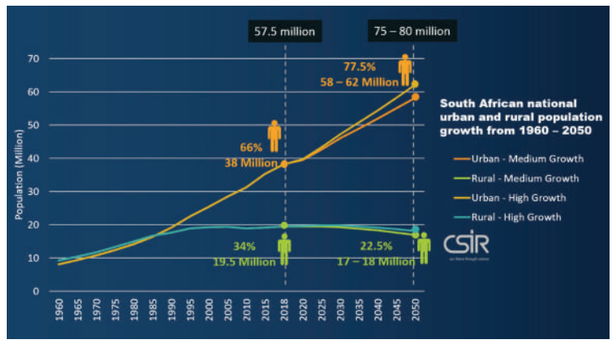
The impacts of climate change are increasingly evident in global shifts within the water cycle, atmospheric and oceanic warming, and heightened occurrences of extreme weather events (IPCC, 2018; WMO, 2023). However, O'Brien (2018) underscores that these effects will vary significantly across different regions. Specifically, higher latitudes are expected to experience more pronounced impacts compared to tropical regions (UNFCCC, 2006). Furthermore, weather patterns are projected to become more variable, leading to intensified rainfall in some areas, prolonged droughts in others, and simultaneous occurrences of both phenomena across various regions (UNFCCC, 2006).



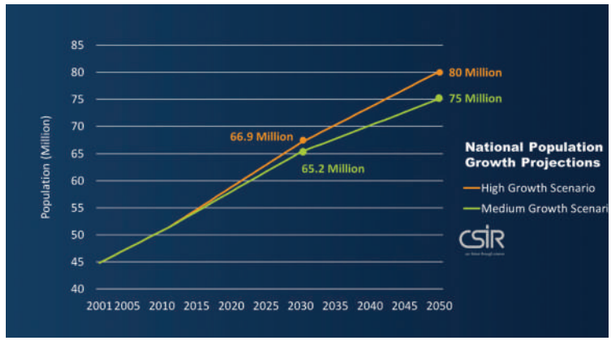
Observed global temperature levels (1900–2020) and projected (2021–2100) changes in global surface temperature and its impacts to the current generation (IPCC, 2023).



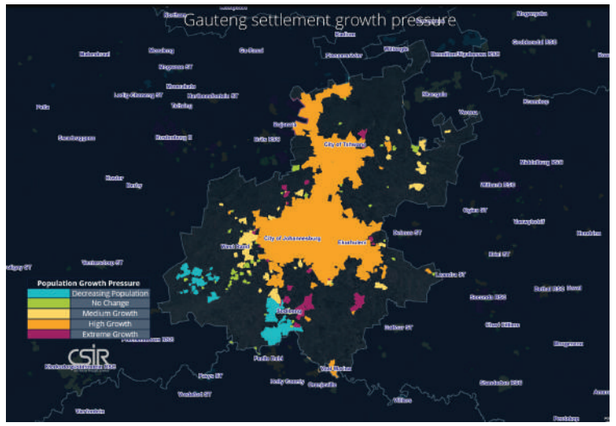
Average annual temperature: Baseline (WMO, 2024)



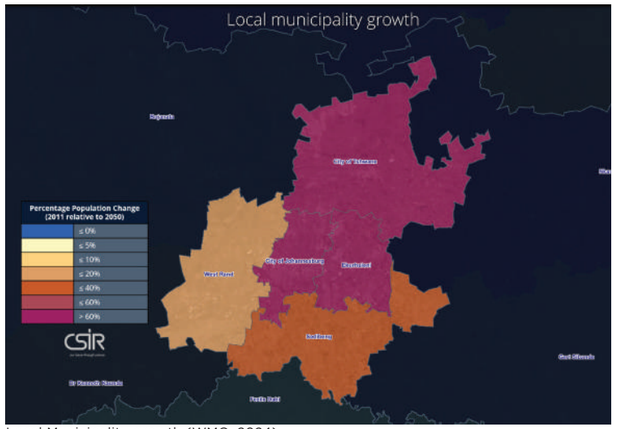
South African national urban and rural population growth from 1960-2050 (WMO, 2024)



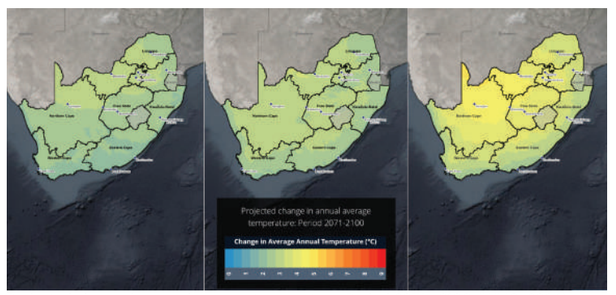
National population growth projections from 2001 - 2050 (WMO, 2024)



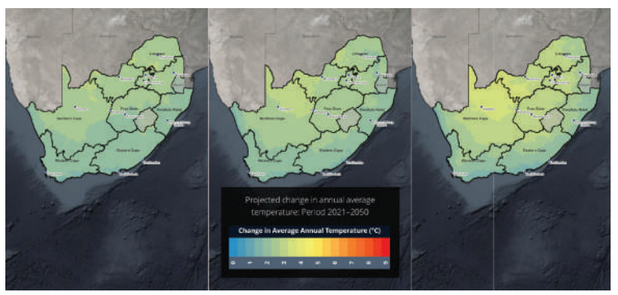
Gauteng settlement growth pressure (WMO, 2024)



Local Municipality growth (WMO, 2024)



Projected change in annual average temperature: Period 2071 - 2100 (WMO, 2024)



Projected change in annual average tem1perature: Period 2021 - 2050 (WMO, 2024)

CLIMATE CHANGE ON A LOCAL SCALE

The impacts of climate change are increasingly evident in the fluctuations of the global water cycle, the warming of the atmosphere and oceans, and the variations in extreme climate events (IPCC, 2013; 2014). Between 2015 and 2020, South Africa experienced prolonged droughts and heatwaves, contributing to the six warmest years of recorded global temperatures (WMO, 2020; 2021). Although heatwaves may not exhibit the dramatic intensity of events like flash floods or cyclones, they significantly affect human systems, impacting health, livelihoods, and infrastructure (WMO and WHO, 2015). The latest IPCC report warns that such climate change impacts will become increasingly frequent and accelerate over time (Agence France-Presse, 2021; IPCC, 2021).

South African cities must also address the challenges of global urbanization, with 60 percent of the world's population projected to live in cities by 2030 (UNSDG, 2019). Research identifies inadequate housing, deteriorating infrastructure, congestion, and rising air pollution as common urban issues (UNEP, 2019; UNSDG, 2019). Transition pathways for urban climate adaptation are critical, but the technical feasibility of architectural technologies for these pathways within South African cities must be carefully developed. This consideration forms the basis of this project.

Vulnerable and impoverished communities face disproportionately high risks from global warming, significantly affecting their livelihoods (IPCC, 2018). The Salvokop precinct was selected due to its exposure to climate risks. Close to Pretoria's CBD, it is characterized by urban sprawl, with many residents living in substandard backyard dwellings and deteriorated historic buildings. The area also lacks public and green spaces, worsening congestion issues. This project addresses climate impacts on vulnerable communities by mitigating urban sprawl through sustainable development strategies (urban scale) and using passive design technologies (building scale) to enhance climate resilience for both the community and its built environment.

BACKGROUND

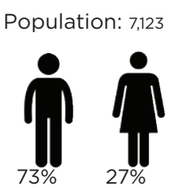
The Salvokop suburb is located on Portion 406 of the farm Pretoria Town & Townlands 351JR (Pelser, 2013), situated between Potgieter Street and the Pretoria Station, just south of the central business district (CBD). It falls within Ward 80 in Tshwane Region 3. Salvokop is an area of high cultural heritage significance, with numerous structures over 60 years old that are protected by the National Heritage Resources Act. The precinct is set within a diverse built environment, encompassing a variety of existing residential buildings, informal backyard dwellings, the Baghdad informal settlement on its western periphery (Seedcracker Environmental Consulting, 2014), Freedom Park heritage site and the modern R1.4 Billion STATS SA building (Kgosana, 2020).

Salvokop's proximity to the Pretoria CBD and its walking distance to a major modal interchange have made it an attractive location for migrants and residents from distant regions, fostering a richly diverse community (Kgosana, 2020). However, despite these advantages, Salvokop is constrained by significant infrastructural and natural boundaries, which isolate the area from its surrounding context. Its origins as a railway precinct have resulted in limited accessibility to and from the area, further compounded by the absence of key infrastructure such as modal transport nodes, clinics, and formal retail stores. These limitations continue to alienate the community from its broader urban environment.

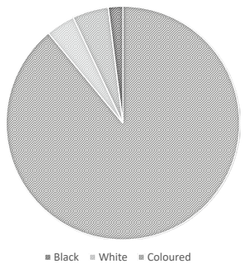
Salvokop has a population of 7,123 people (Census, 2011), with an additional 1,000 individuals residing in the informal settlement of Baghdad (Kgosana, 2020). The current demographic makeup of the area includes informal business owners, street traders, young residents, families, and government employees, along with an influx of visitors.

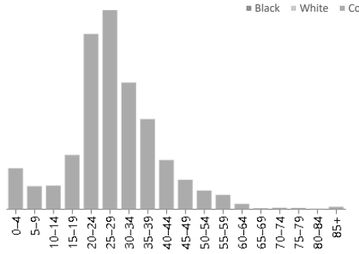
DEMOGRAPHICS

Population: 7,123

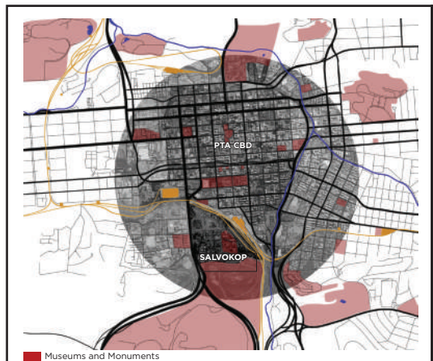


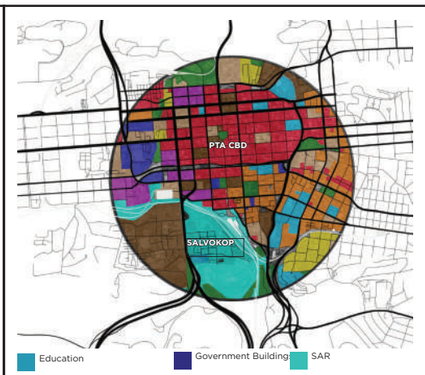
(Census, 2011)



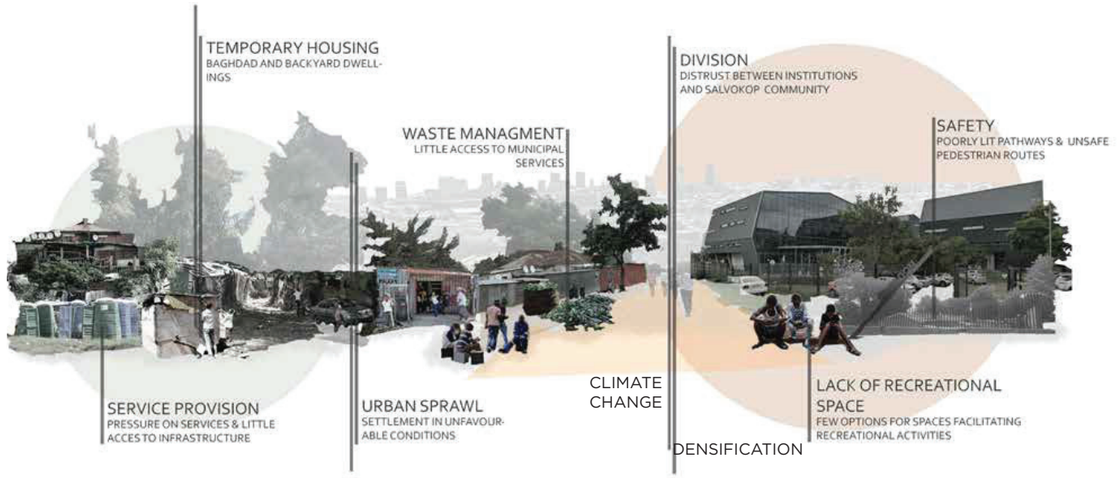


CURRENT USER PERSONA





Historically, the suburb is emblematic of both social progress and racial segregation, representing the hardships faced by people of colour during the early 20th century. Presently, it remains a symbol of resilience amid economic challenges and persistent infrastructural neglect. The suburb has suffered from prolonged neglect by both the municipality and the Department of Public Works and Infrastructure, resulting in irregular service delivery, deteriorating infrastructure, and inadequate maintenance of homes under governmental ownership (Kgosana, 2020). In response to this neglect, Salvokop's residents have cultivated a strong sense of community resilience. Local leaders have established social development initiatives, including sports and recreational programs aimed at supporting the youth.



Vulnerabilities of the Salvokop Community (Honours Group, 2022)

Strengths of the Salvokop Community (Author, 2024)

Additionally, community-led safety and cleanliness initiatives, such as a local Community Policing Forum and cleanup groups, actively maintain and secure the area. Informal economies have flourished as well, with residents constructing backyard dwellings for rental income and establishing food and trade markets. These initiatives not only support the local economy but also enrich the cultural fabric of Salvokop, establishing it as a hub for market and food activities that attract people from surrounding neighborhoods, the Pretoria CBD, and even visitors from further afield.

Community development initiative in the streets of Salvokop (Salvokop Youth Development Centre Facebook page).

Community clean up groups (Salvokop Youth Development Centre Facebook page).

Salvokop youth cycling day(Salvokop Youth Development Centre Facebook page).

Salvokop youth fun day(Salvokop Youth Development Centre Facebook page).

Empower-Her Salvokop netball team (Salvokop Youth Development Centre Facebook page).

Salvokop youth development initiatives (Salvokop Youth Development Centre Facebook page).

Salvokop youth sport day at Joupie Fourie Primary School (Salvokop Youth Development Centre Facebook page).

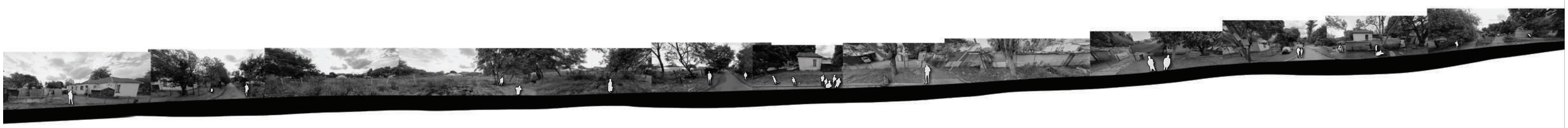
Salvokop community (Salvokop Youth Development Centre Facebook page).

Local Salvokop barber on Skietpoort Avenue

Informal food store making food for the

Informal trade market on Koch street

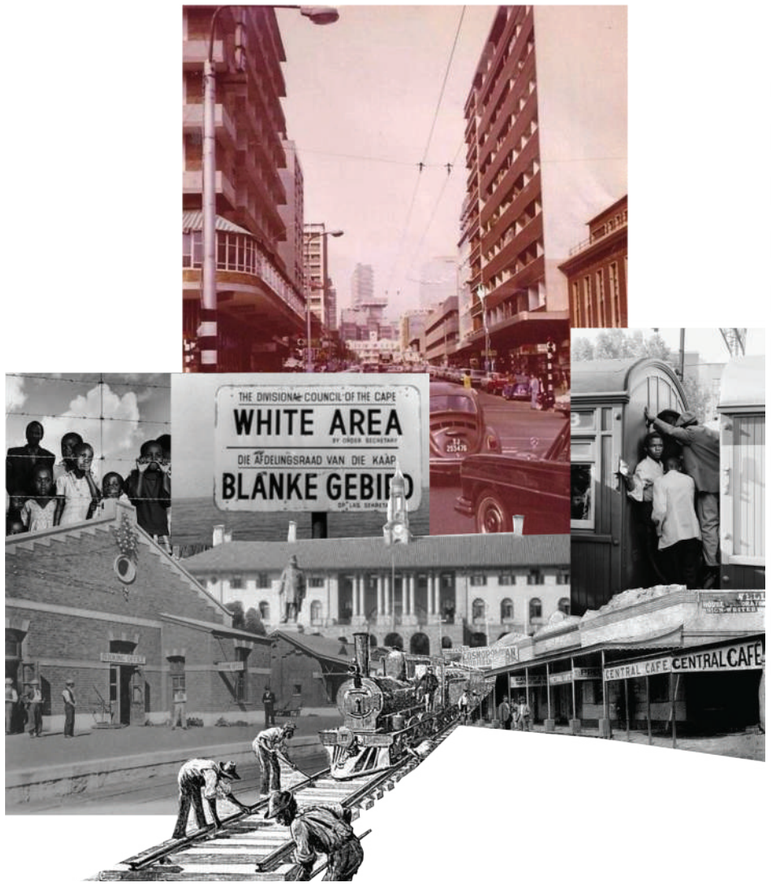
Informal food store and car wash (author, 2024)



Typical Site Section Through Eastern edge of 2nd Street (Activity Corridor)

CONTEXTUAL INFORMANTS: History of Pretoria

THEN: BEFORE 1994



- NAZSM COURT
- CSAR WORKFORCE
- APARTHEID PLANNING
- RACIAL SEGREGATION
- DISPLACED
- MARGINALIZED
- IMPOVERISHED
- DISADVANTAGED

Issues faced by vulnerable communities (people of colour) due to an Apartheid Government

NOW: POST 1994

- REINTEGRATED INTO CITY
- ISOLATED
- URBAN SPRAWL
- ECONOMIC CHALLENGES
- BACKYARD DWELLINGS
- IMPOVERISHMENT
- SENSE OF COMMUNITY
- DEVELOPMENT FROM GOVERNMENT
- MARGENALISED
- ISOLATION
- DISREGARDED
- DISPLACED

Issues faced by vulnerable communities by current governance.

1880
Salvokop was named Time Ball Hall during the Anglo Boer War

1886
Discovery of Main Gold Reef in Witwatersrand, railway was proposed to link Reef and Time Ball Hall (Botha, 209)

1887 - 1901
NZASM village was established. The village comprised of a school, twenty-one individual staff houses and recreation ground. Buildings were arranged around an oval common with a cycle path at its perimeter (Botha, 2019).

1902
After Anglo Boer War, focus returned to providing a national railway network, the NZASM was reinvented as the Central South African Railways (CSAR)

1904
Time Ball Hill was pronounced as 'whites only' railway camp and a workers compound developed (the current site). The suburb established as an active economic hub.

1912
The opening of Pretoria Station, designed by Sir Herbert Bakker

1948
The National Party was voted into power. People of colour were forcibly removed from Salvokop to Mamelodi.

1990
DPWI began leasing out the railway houses to people of colour, as a means to reintegrated the people of colour into the city. Salvokop was a prime location for this scheme due to its close proximity to the CBD and transport network.

1994
ANC came into power. This led to an influx of people to the CBD. Salvkop became a destination spot for workers and people living far.

2005
Construction of Freedom Park

2014
Construction of STATS SA

2017
Establishment of Veterans Voice at Freedom Park

2019
The Salvokop Spatial Development Framework was developed. The Construction of the social housing residential block began on the eastern

2022
Phase 1 of the Salvokop SDF commenced, displacing people and further isolating the community.

Racial Segregation

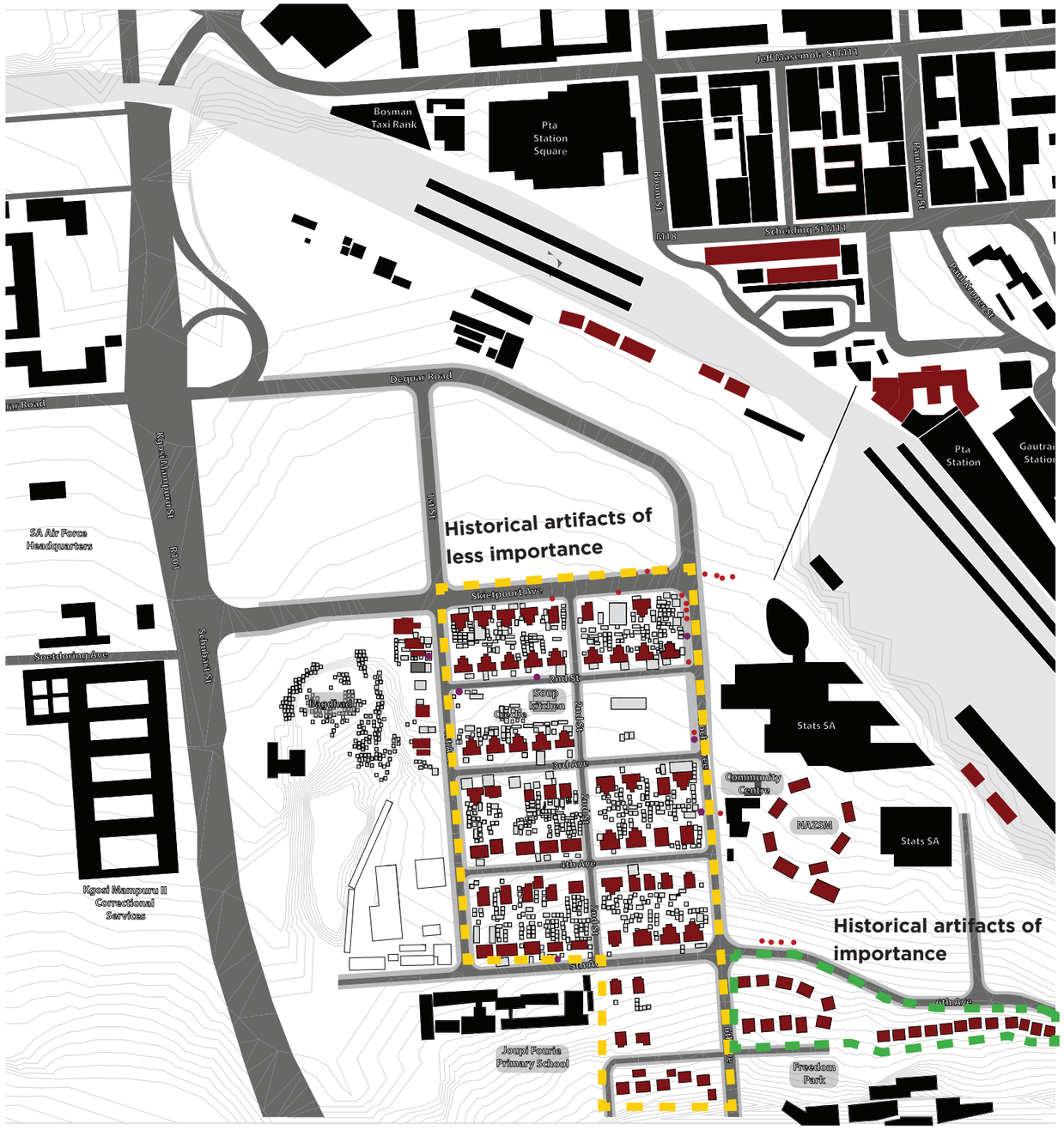
Population densification and historical scars

Historical Timeline: Development of Salvokop

CONTEXTUAL INFORMANTS: Salvokop Heritage

The Salvokop precinct was established and built between 1890 and 1930 (Kgosana, 2020). It was established by Transnet to house white employees who worked at the railway station and bus depot (Kgosana, 2020). The first development was marked by the establishment of the NZASM (Nederlandsche ZuidAfrikaanse Spoorweg Maatscha ppij) in 1887 and later the South African Railways and Harbours (SAR&H) association in 1910 (Pelser, 2013:13). However, after the general elections of 1948, Apartheid-era policies enforced racial segregation, leading to the displacement of many residents of colour. In the 1990s, with the end of apartheid, people returned to Salvokop, re-establishing a community marked by resilience and diversity.

A few rembrants of Salvokops history remain, most notably the red kirkness clay brick house, constructed in 1948 by the SAR&H to house railway workshop workers on the souther periphery of the suburb (Pelser, 2013). This southern extension of Salvokop holds significant historical importance. The small red brick dwellings and the curved street layout contrast with the traditional grid structure, illustrating the mid-20th-century expansion of the Salvokop residential area. This area thus embodies a unique urban development phase, showcasing a shift in design principles and the adoption of softer engineering solutions for residential planning. According to Pelser (2013), there is a hierarchical level of importance in Salvokop's architectural heritage, with the NZASM village and the 1948 housing units being particularly significant elements of the historical urban fabric.



"To seek 'causes' of poverty in this or that characteristic of poor people is to miss the point. The point is the way cities are organized. Poverty has to do with the nature of the community organization, and of the larger organization that engulfs them." (Jacobs, 1961 p. 115)

Urban planning requires an understanding of the community's social and economic dynamics, including the existing social networks, daily rhythms, and informal systems within communities, to create designs that genuinely support and enrich the lives of residents (Jacobs, 1961).

CONTEXTUAL INFORMANTS: Development of the Salvokop fabric

Salvokop Precinct holds high heritage significance, despite extensive disturbances from residential, industrial and other developments over the past 140 years (Pelser, 2013). The suburb of Salvokop is currently undergoing—and is slated to undergo further—urban changes that significantly impact its fabric, often in ways that are insensitive to both its heritage and community identity. These changes include the construction of the STATS SA building, which stands in stark contrast to the area's living heritage, and a new government development currently in phase 1 of construction.

The area's urban fabric is expanding and adapting over time, as shown in the developmental timeline. The formation of the Baghdad community and its expansion, further enriches the diversity found within Salvokop. New urban projects should aim to balance respect for Salvokop's historical landscape with the need to create opportunities that support the rapid growth of the community and resilience (Pelser, 2013).

According to the Heritage Impact Assessment (HIA) by Pelser (2013), any development within Salvokop must be preceded by an HIA of the residential houses to ensure proposed changes respect the area's historical importance and architectural legacy.

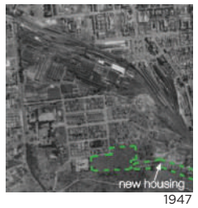
Development of Salvokop Fabric

1937

The earliest records showing the fine residential area was formed according to the grid layout.

1939

Pedestrian patterns to the south of the site become more pronounced as the suburb steadily grows.



1947

Additional housing is established on the south-eastern corner of the suburb as a response to the growth. This extension of the Salvokop urban pattern is a unique feature as it deviates from the standard grid layout, opting for a linear layout that follows the contour of the ridge.

1991

Drastic changes to the area can be observed. The light industrial zone is demolished along with the row of houses in the residential area.

2001

The Chief Engineers office has been converted to a POP-UP (People Upliftment Program) social upliftment project. The vacant sites were used as pedestrian shortcuts to the CBD.

2005

The construction of Freedom Park commences. The vacant land to the north of the suburb is turned into illegal dumps sites. The beginning of the back yard dwellings can be observed in the residential area.

2007

The vacant land in the north deteriorated rapidly. The residential area is further populated with more backyard dwellings.

2009

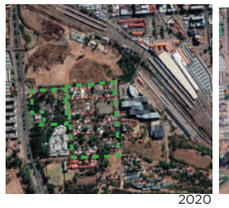
Traces of the formation of the Baghdad community can be observed to the western periphery of the suburb.

2015

The construction of STATS SA commences. Backyard dwelling increase in population, with several turning into informal economies to service the community.

2018

The Baghdad community increases in scale due to the prevalence of the sites location. The community however suffers from lack of service provision and forest fires.



2020

Backyard dwellings further increase in population, due to urban sprawl.

2024

Phase 1 of the Salvokop SDF commences, displacing people and further isolating the community

The Salvokop precinct's development in the 1900's was closely linked to the development of the railway and Pretoria as a whole (Pelser, 2013). Since the 1990s, Salvokops fabric began to change from an industrial setting to a residential streetscape. This resulted in the additions of backyard dwellings and alterations to the SAR&H railway houses. These adaptations stem from the economic hardships and neglect faced by the local community. While these additions may diminish the historical and structural integrity of the architectural artifacts, they contribute to the evolving cultural identity of Salvokop.

Although some of the buildings slated for reuse are considered to have lesser historical importance, they possess a high usage value that is essential for bridging Salvokop's heritage from past to present. This approach creates a rich palimpsest—layering architecture, storytelling, and residual spaces—to construct a nuanced historical narrative that honors the combined architectural and cultural heritage of Salvokop's past, present, and future. The image below showcases the current building typology that currently exists in the precinct,showcasing the rich heritage and diversity of the built fabric.

People Embody Legacy

CONTEXTUAL INFORMANTS: Macro-Mapping

The project is guided by various contextual informants, with a primary focus on responding to the site's complex existing conditions. Salvokop is a rapidly growing, densely populated suburb that suffers from a significant lack of public amenities, such as open recreational spaces, modal transport nodes, and healthcare facilities. While transport nodes are accessible nearby, the project aims to capitalize on the absence of internal transport networks in Salvokop by integrating new urban interventions with existing infrastructure patterns.

The proposed connection is designed to enhance accessibility while preserving and respecting the pedestrian routes that are vital to the area's social and economic fabric. By integrating the pedestrian-centered nature of Bosman Street with Koch Street, the design strengthens the existing network without disrupting the established pedestrian flows. The mapping identified that Salvokop is predominantly a pedestrian focused suburb. This showcases the opportunity to create a pedestrian-focused streetscape, promoting a safer environment (Jacobs, 1961).

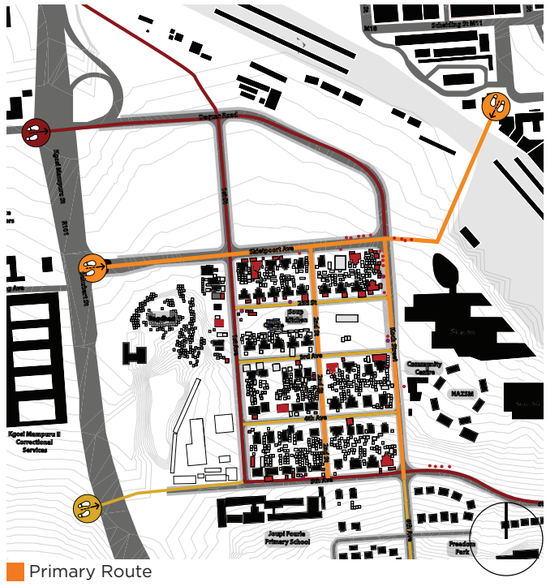
SITE BOUNDARIES

- Kgosie Mampuru Freeway(R101)
- Salvokop Ridge
- Railway Tracks

SITE ZONING

- Education
- High Rise Residential
- Commercial
- Government Buildings
- Institutional Buildings
- Modal Interchange

PEDESTRIAN ROUTES



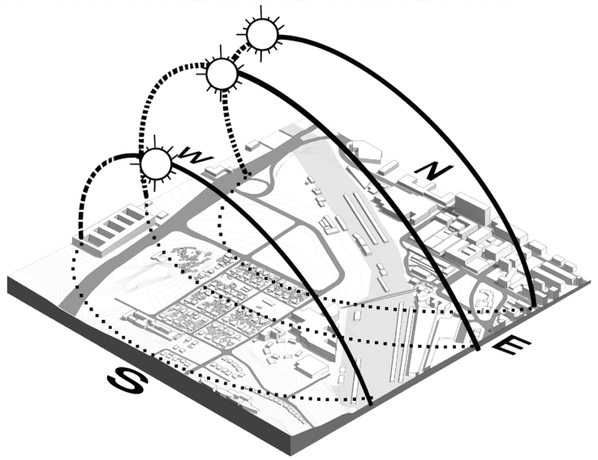
- Primary Route
- Secondary Route
- Tertiary Route

VEHICULAR ROUTES

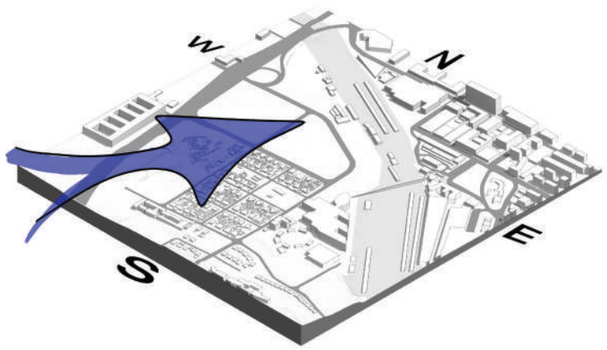
- Primary Route
- Secondary Route

The site is surrounded by infrastructural and natural boundaries, which dictate the limited vehicular access and contribute to the area's isolation. This isolation, however, has given rise to thriving informal economies that have intricately adapted to and shaped the urban fabric. The urban design interventions proposed by this scheme is aimed at using the existing barriers as opportunities for linkage. Enhancing Salvokop's connectivity to the CBD presents an opportunity to expose the community's rich culture to a broader audience, but it also poses potential risks to the social and economic balance that has evolved in relative seclusion. A strategic approach is proposed that capitalizes on an in-depth understanding of the community's functionality within its unique constraints. This strategy involves establishing a connection between Bosman Street and Koch Street, taking advantage of the existing informal market located at the intersection of Koch Street and Skietpoort Avenue.

ENVIRONMENTAL ANALYSIS



SOLAR STUDY

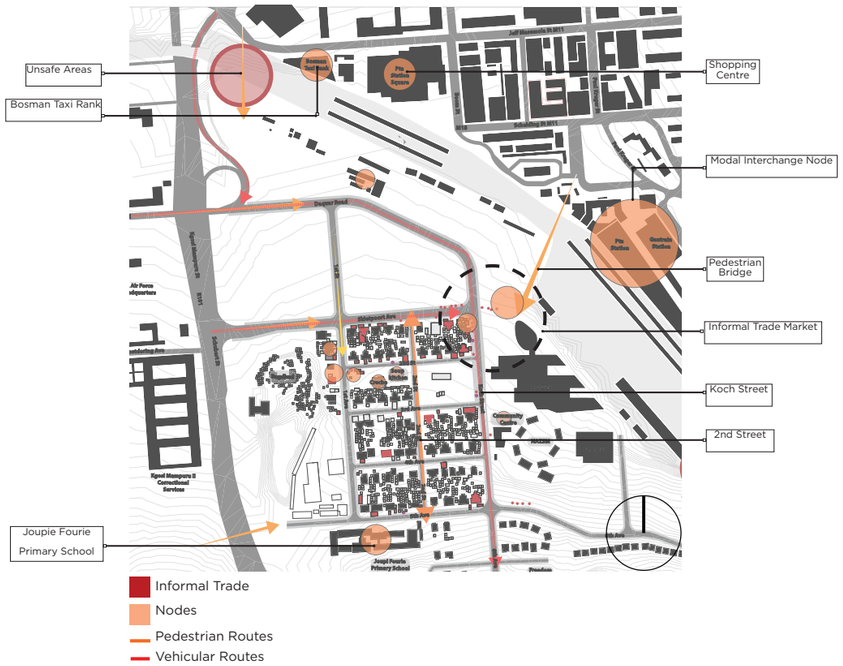


WIND STUDY

A noticeable existing urban dynamic is the congregation of informal traders near the only formal pedestrian bridge connecting Salvokop to the CBD, which is located adjacent to the nodal transport hubs in the CBD. These traders provide essential goods, such as food and household items, to visitors and residents commuting to work. The pedestrian bridge, therefore, serves as a crucial symbol of cultural and economic exchange, reinforcing its significance as a key connector.

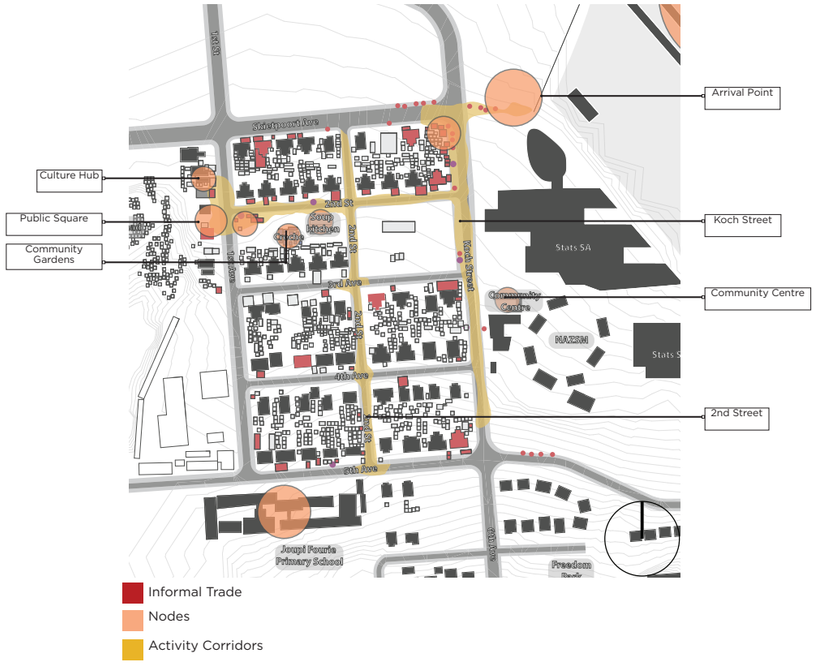
The project strategically leverages this pedestrian access corridor to reconnect the Salvokop urban fabric, recognizing its critical role in community life and dynamic networks. By enhancing this corridor's function and accessibility, the intervention aims to promote a more integrated and sustainable urban environment. Compounding Salvokop's complex urban context is the acute shortage of accessible public spaces for the residents. The high population density has resulted in backyards crowded with informal dwellings and community gardens, while vacant land that once housed railway workshops is earmarked for government precinct development under the Salvokop Spatial Development Framework (SDF).

Accessibility



Vacant Land

Activity Corridor



The pedestrian and vehicular routes within Salvokop are shaped by the area's infrastructural and community-driven layout. Koch Street and Skietpoort Avenue are major routes used by both vehicles and pedestrians, with Koch Street extending to Freedom Park. However, 2nd Street is the primary pedestrian artery, as it bisects the community and fosters high levels of foot traffic. This central pedestrian corridor has become a hub for informal economies, with spaza shops and salons strategically positioned to plug into the activity

Although Freedom Park and Joupie Fourie Primary School present potential public spaces, they are fenced off and inaccessible to local residents (Seedcracker Environmental Consulting, 2014). Additionally, the only other vacant land within the community's perimeter is similarly restricted by fencing. As a result, residents have adapted by using the streets as informal public spaces for social interaction, sports, and cultural events. Public space, therefore becomes a guiding principle for the urban scheme and architectural design of the project.

Typical Site Section Through Western edge of 2nd Street (Activity Corridor)

"The more people use a street, the safer it becomes because the natural surveillance from people using the street is a deterrent to crime." (Jacobs, 1961; p. 35).

CONTEXTUAL INFORMANTS: Stakeholders

Key informants for the development of this architectural scheme are the existing community institutions that drive social and economic development within Salvokop. These institutions, apart from the People Upliftment Program (POP-UP), are organized and managed by community members, reflecting the active participation and investment of local residents in the advancement of their community. Consequently, these institutions are vital stakeholders in shaping the design of the proposed scheme. POP-UP plays a crucial role in supporting underprivileged communities through a holistic approach to empowerment. As a skills training and development center, POP-UP fosters social change by promoting economic upliftment. The program offers a comprehensive array of skills development opportunities, including life skills, enterprise development, as well as soft and technical skills.

Previously, POP-UP provided its services to the Salvokop community from the Railway Engineers Office until the commencement of Phase 1 of the Salvokop Spatial Development Framework (SDF), which necessitated their relocation. The architectural scheme seeks to address this displacement by creating a dedicated center to reintegrate the POP-UP facility, positioning it as a central component of the design. By incorporating POP-UP as a primary stakeholder, the scheme aims to reinforce the organization's mission of fostering social and economic growth while ensuring its sustainable presence in Salvokop.

SALVOKOP DRAMA CLUB

Salvokop Youth Development Centre

POPUP
People Upliftment Programme

CONTEXTUAL INFORMANTS: Archetypes

To comprehend the complexity of Salvokop's urban fabric, user archetypes have been developed to represent the typical profiles of residents and visitors. By maping the daily activities of these archetypes, a detailed network of interactions between people, programs, and places emerges. Notably, 2nd Street stands out as a key route frequented by both residents and visitors, facilitating daily social engagement and reinforcing the street's role as a vital activity corridor. This observation highlights the potential of 2nd Street to further catalyze social development through increased movement and interaction within the community.

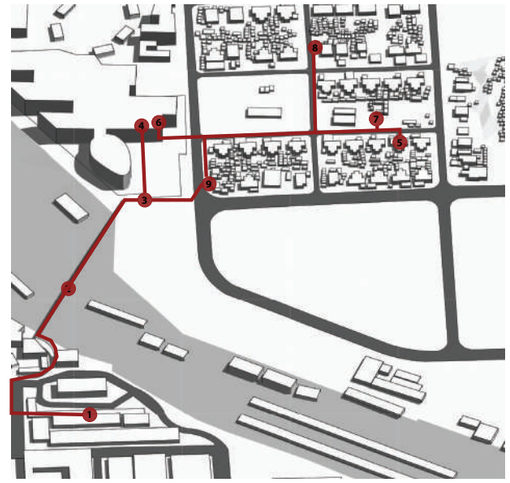
Another strategic opportunity lies in the extension of 2nd Street to the north, connecting through the vacant land and linking with Daqaur Street (currently a informal pedestrian route). This extension would amplify the pedestrian-oriented nature of Salvokop, enhancing accessibility and fostering additional social interactions among residents, visitors, and future employees. By integrating these opportunities, the design aims to strengthen the social and economic vitality of the suburb.

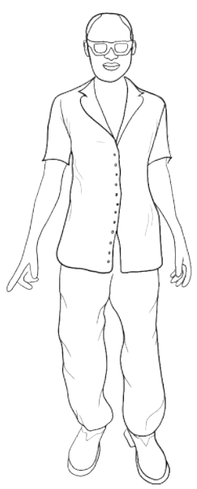
The mother (Tailor)

1. House
2. Walk along activity corridor
3. Drop child off at the nursery
4. Set up shop to tailor clothes for community and visitors
5. Lunch at local restaurant
6. Pick up child at childcare facility
7. Buy groceries at local spaza shop
8. Collect herbs at community

The Stats SA employee

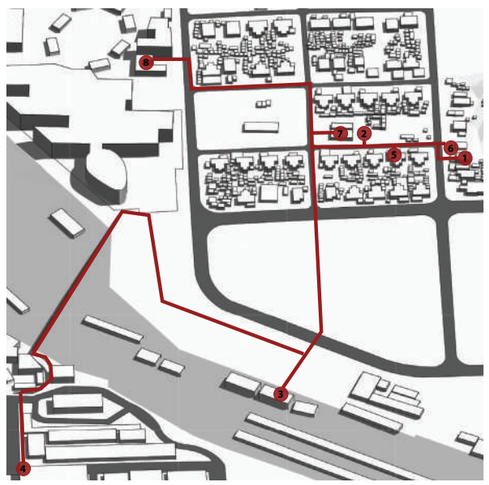
1. Arrive from bus stop on Bosman street
2. Walk along pedestrian bridge to enter Salvokop
3. Buy snacks at local street vendors (informal market)
4. Enter Stats SA facility
5. Lunch at local food vendors
6. Go back to work
7. Buy vegetables from the community gardens
8. Buy groceries at local spaza shop
9. Pick up clothes fixed by local tailor on the way home





The man (Owner of Culture Hub)

1. House
2. Work in community gardens
3. Attend classes at POP-UP
4. CBD for grocery shopping
5. Lunch at local food store
6. Help children at Culture Hub
7. Assist at community soup kitchen
8. Attend community meeting at community centre

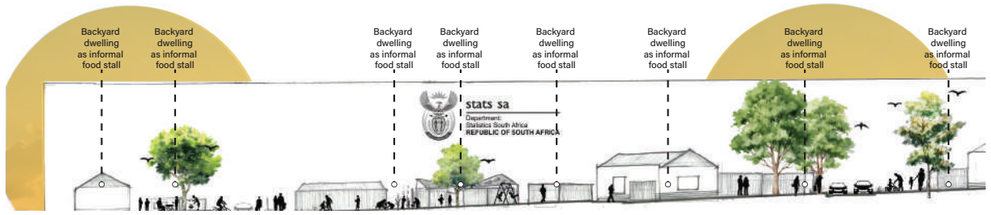


The youth

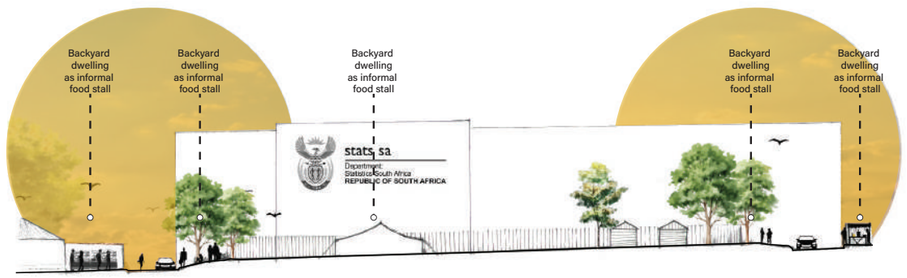
1. House
2. Walk along activity corridor
3. Attend Joupie Fourie Primary School
4. Get tutoring at Youth Development Centre
5. Play soccer
6. Music lessons at culture hub
7. Get dinner at community soup kitchen

CONTEXTUAL INFORMANTS: Site Analysis

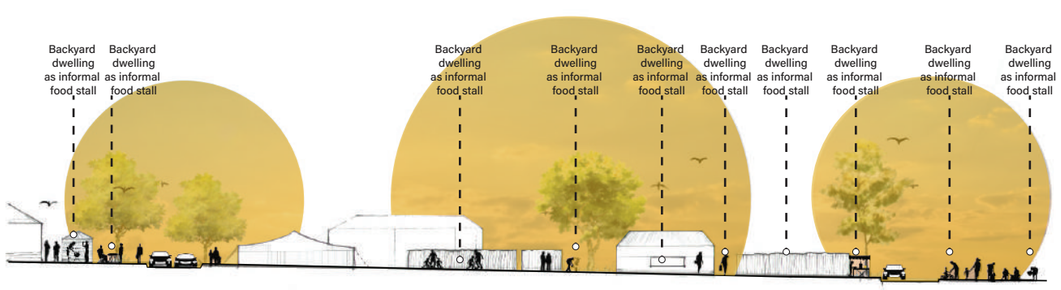
An in-depth site analysis has revealed a robust sense of community within Salvokop, characterized by existing cultural practices, city-making traditions, spatial identity, and dynamic interactions between people, spaces, and places. Key opportunities previously discussed in this report include the creation of public spaces, the development of pedestrian-friendly streetscapes, and the activation of 2nd Street as a vibrant community engagement corridor.



One significant observation is the adaptive use of heritage buildings by the community. Rather than serving purely as places of rest, these architectural artifacts, though often dilapidated, act as active hubs for cultural and social engagement. These buildings support backyard dwellings and business hubs, becoming living vessels that foster development and community gatherings. This presents an opportunity for adaptive reuse, integrating the material heritage of these structures with their social significance, or “living heritage,” in the proposed architectural and urban scheme.



Salvokop’s community coherence is further evident in the physical openness of properties, marked by low boundary fences and unobstructed access. This reflects a sense of safety, created by an active street life and strong social bonds among residents. The scheme can leverage this aspect by creating public spaces and amenities that are open, unfenced, and accessible to all, enhancing community interaction while building on the existing sense of safety and unity.



SWOT

STRENGTHS

- Vibrant and strong sense of community
- Resilience
- Developed community institutions
- Informal economies
- Pedestrian predominant
- Activity corridor
- Primarily safe
- Heritage
- Culture
- Locality

WEAKNESSES

- Isolated
- Infrastructural and natural boundaries
- Accessibility
- Lack of civic amenities
- Transport node
- Backyard dwellings - health risk
- Lack of biodiversity
- Lack of public recreational space
- Unsafe bicycle routes

OPPORTUNITIES

- Improve accessibility
- Create linkages to CBD
- Introduce modal interchange nodes near informal trade routes
- Provide high density residential blocks
- Provision of public and recreation space.
- Inclusion of Baghdad community
- Waste management

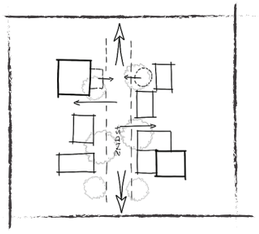
THREATS

- Ownership
- Neglect from government and municipalities
- Dilapidated historical housing
- Alienated from development scheme.
- Exclusion

DESIGN INFORMANTS: The Salvokop Typology

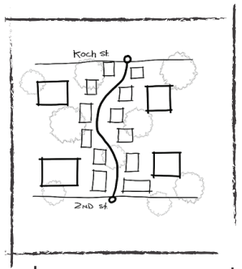
Local knowledge and relationships formed within a community are invaluable in creating vibrant, safe and well-functioning urban spaces that are centered around cultural heritage of place (Jacobs, 1961). The understanding of place within the Salvokop community entailed documenting how residents create and define space, alongside observing complex social patterns and behaviors that characterize the area. Observations made in the community reveal several key features:

A.



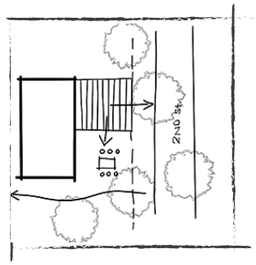
Programs and informal backyard dwellings are oriented toward the activity corridor, promoting passive surveillance and fostering a strong sense of community.

B.



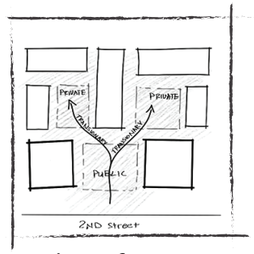
Secondary access routes between these activity corridors and the backyard dwellings create meandering pathways, encouraging interactions between pedestrians and residents, thereby strengthening social ties.

C.



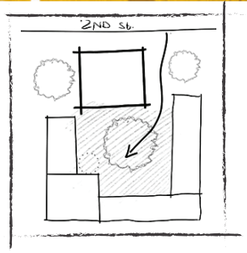
The boundaries of the dwelling units create unprogrammed spaces for ownership of space, allowing the appropriation of space through agency.

D.



The scale of spaces within the community facilitates different levels of engagement—ranging from public interactions to more intimate, transitional engagements between residents on the same property, as well as in private spaces. These levels of engagement are created by threshold spaces.

E.



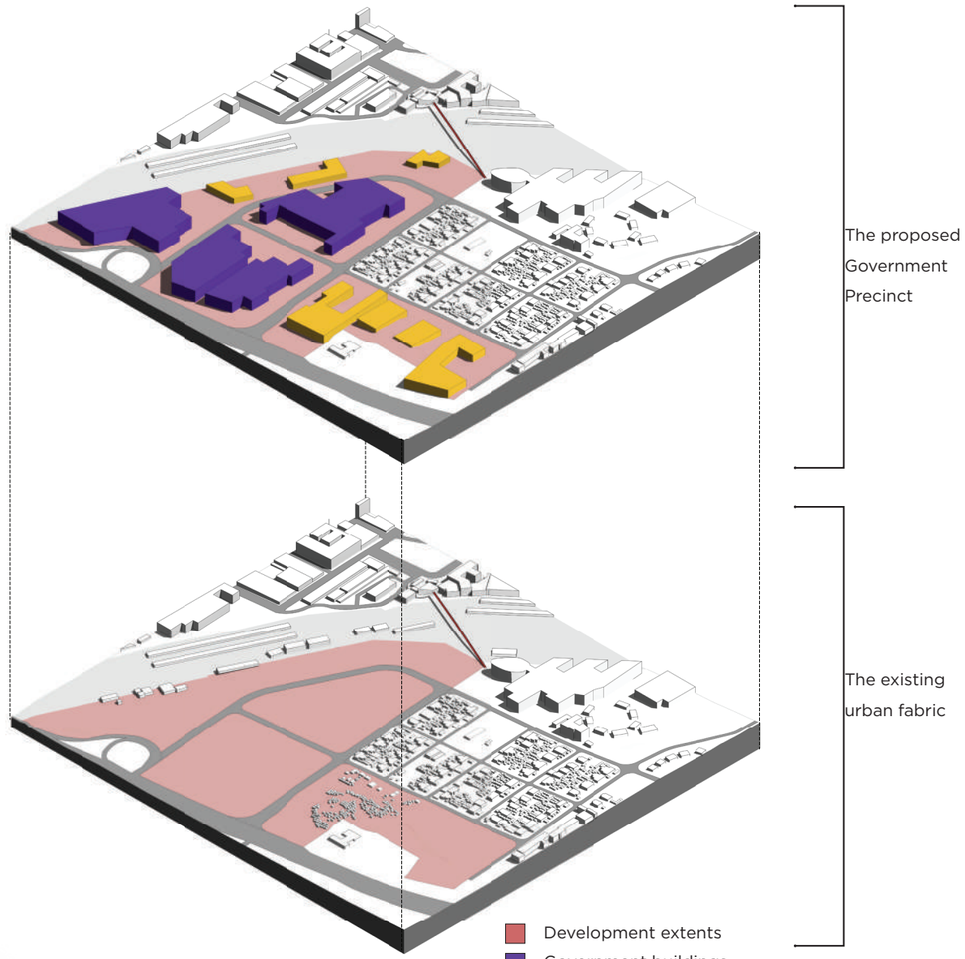
The heritage houses in Salvokop serve as living vessels for community engagement, transforming from mere places of dwelling to hubs for informal activities such as food sharing and congregational gatherings. This shift is largely due to the lack of formal public spaces, prompting these homes to play an active role in social interaction.

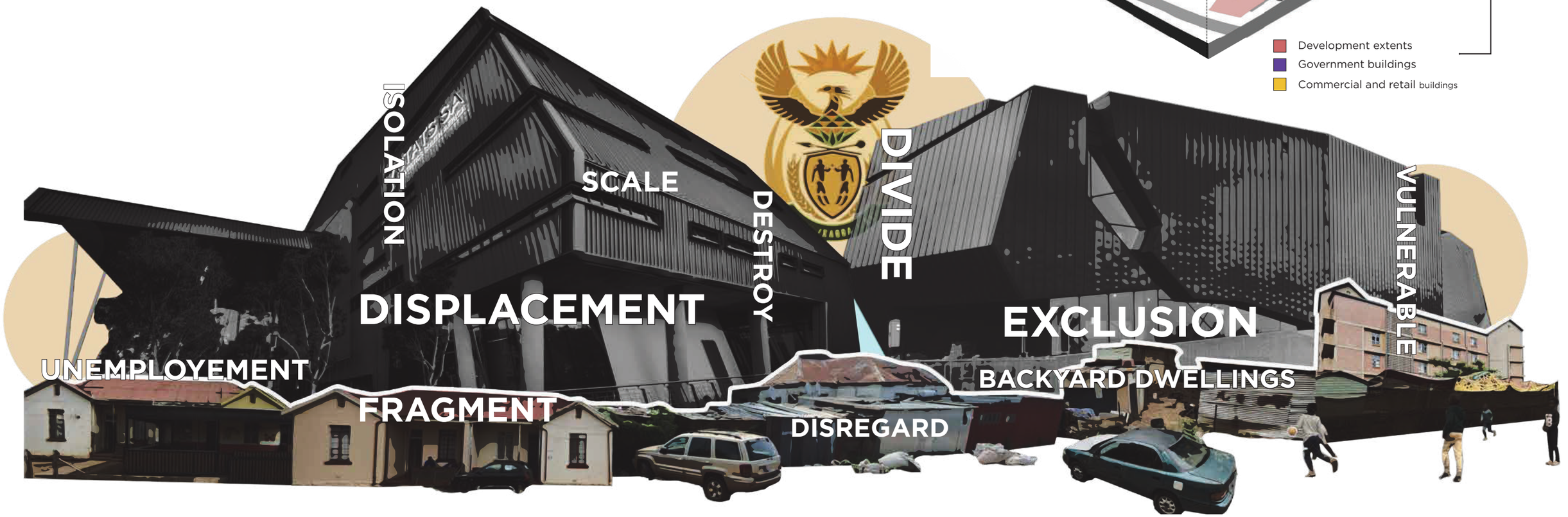
> "A city street equipped to handle strangers, and to make a safety asset, and to pool together a knowledge of the people of the place, is a marvelous asset." (Jacobs, 1961; p. 50).

THE PROBLEM: Urban Fragmentation

Salvokop is currently experiencing significant disruptions to its urban fabric, driven by the Department of Public Works and Infrastructure. The proposed Salvokop Spatial Development Framework (SDF) is part of the broader Tshwane regeneration initiative, which aims to transform Salvokop into a government precinct. This redevelopment plan, encompassing an R18 billion investment, includes the relocation of multiple government departments and the construction of mixed-use residential and commercial buildings (Gerber, 2019). Currently in Phase 1 of construction, the development's scope excludes the Salvokop community, creating an enclave of isolated government buildings that further alienate the existing residents from their surroundings.

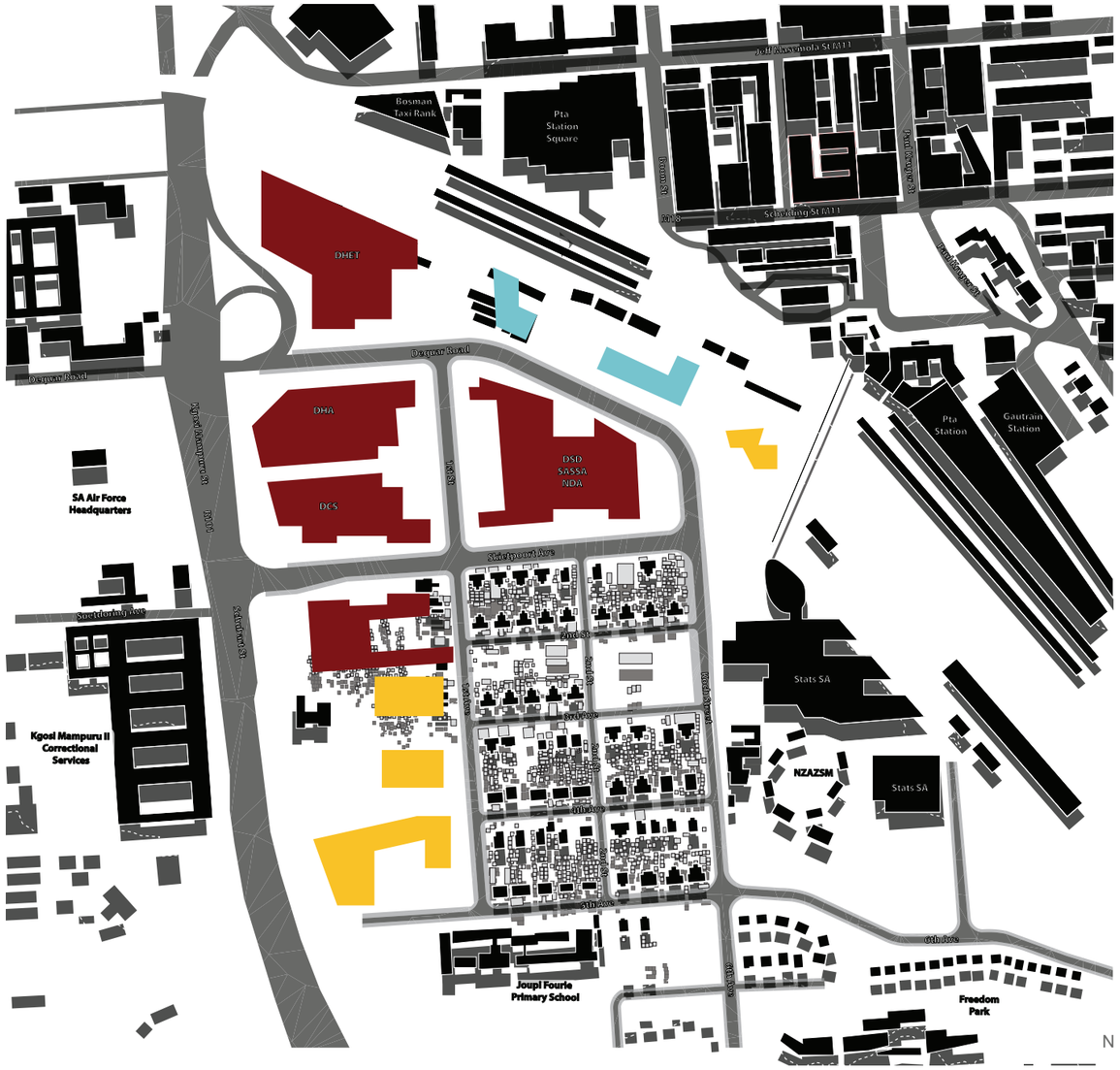
The phased approached of the current SDF overlooks the needs of the local community, many of whom do not own the land they live on. The land is under the ownership of the DPWI, which leased it to residents but failed to maintain the properties or address the deteriorating infrastructure. The community has long experienced neglect, making the prioritization of this largescale development without addressing local needs highly problematic. Despite the government's responsibility as a landlord, there has been no effort to improve living conditions, while vast resources are allocated to the new precinct.





GOVERNMENT DEVELOPMENT

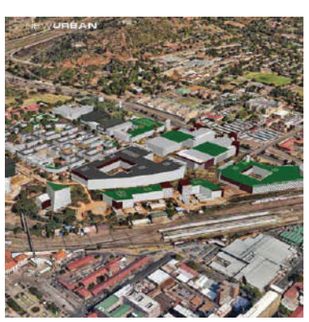
Mixed-use Government Precinct

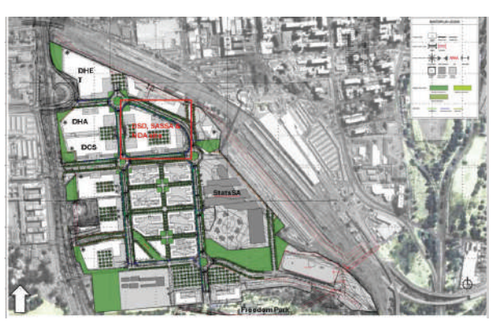


LEGACY CONCERNS:

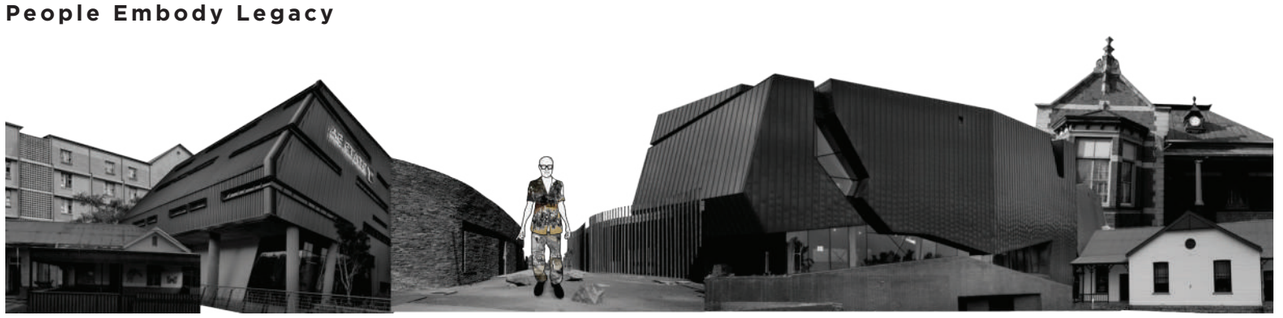
Effects of the Development on the Community

Mixed-use government precinct proposal by New Urban currently in phase one of development





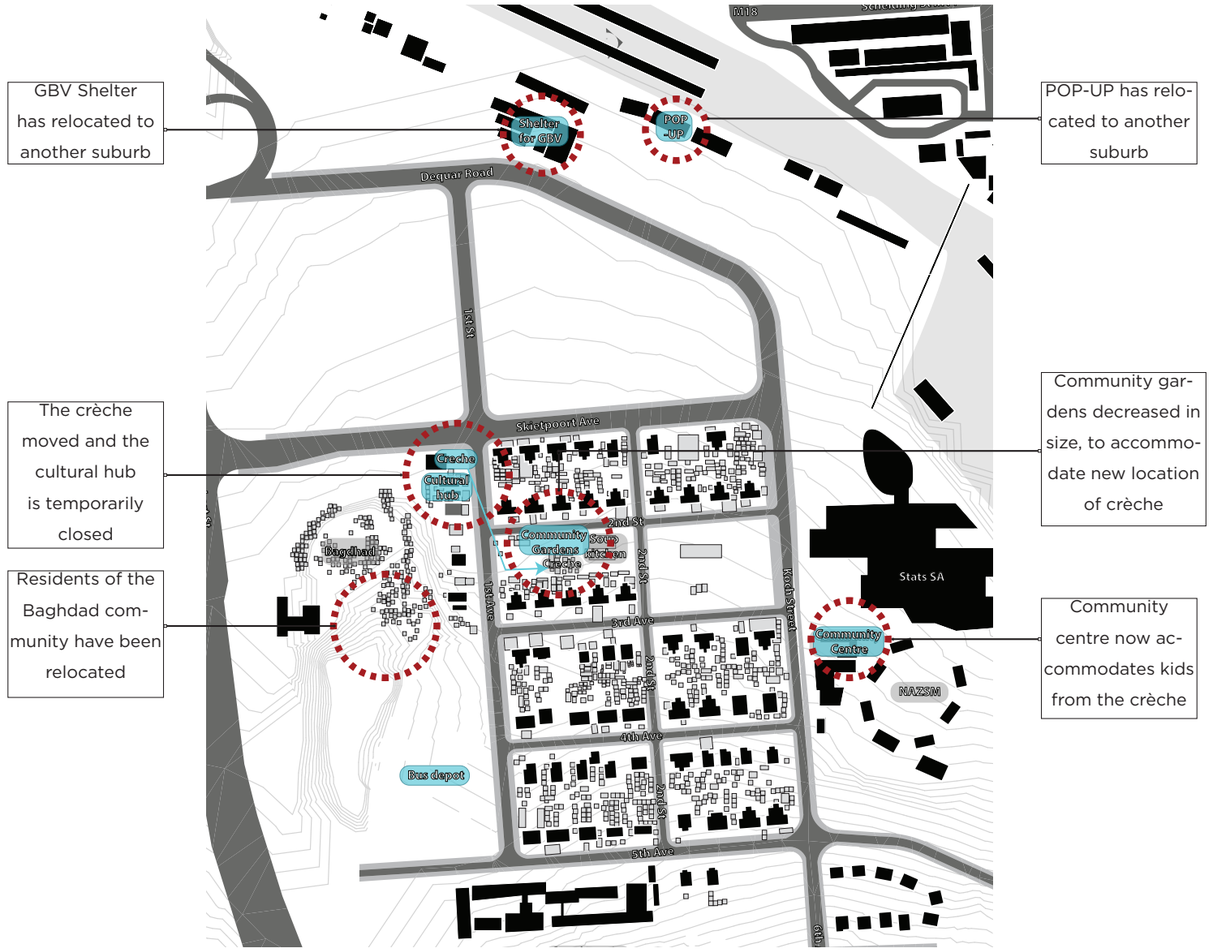
People Embody Legacy



Urban Fragmentation in Salvokop

The ongoing construction has disrupted the community's fine-grained urban fabric, causing upheaval among residents. People have been displaced, front yards have been destroyed for road expansions, and informal traders have been forced to relocate or shut down their operations. Furthermore, critical community institutions, such as the POP-UP Centre, have had to relocate out of Salvokop. These disruptions have generated incoherence and instability among residents, who are already facing economic and social hardships. A critical consideration is that the current development proposal lacks provisions to accommodate and support the community throughout the construction phase. This omission fails to preserve existing community dynamics, compelling residents to adapt to the disruption and destruction of their environment.

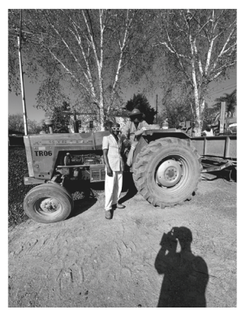
This phenomenon, known as urban fragmentation, occurs when large-scale developments disrupt established patterns, isolating communities and creating physical and social divides (Smith, 2002). In Salvokop's case, the imposed development disregards the existing social and spatial fabric, exacerbating divisions and undermining community cohesion (Graham & Marvin, 2001).



Residents relocated

Residents from Baghdad relocated

Affected main route to the school, unsafe cycling conditions for school kids



Affecting vibrant street life

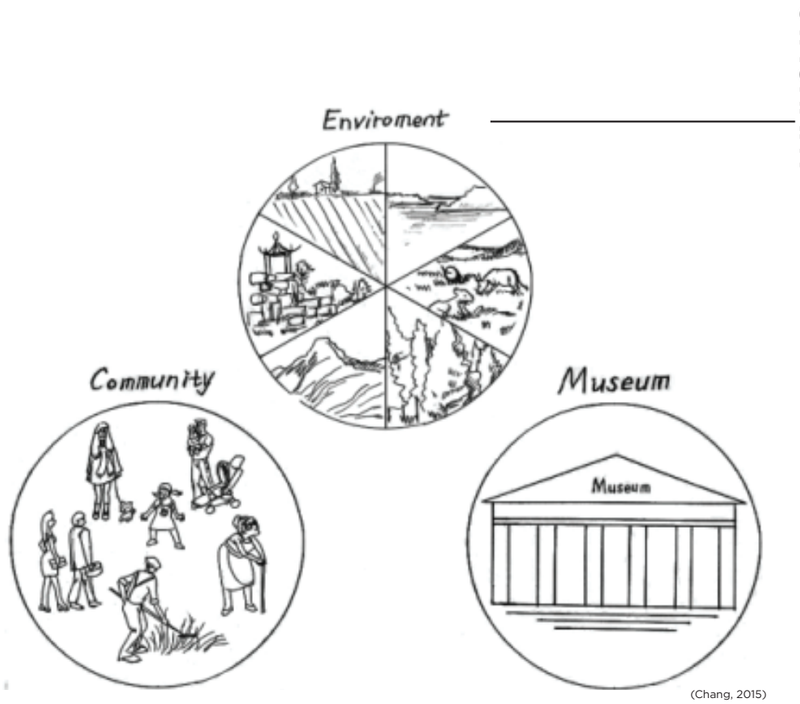
Demolished front yard for road extension

Informal economies

How can an architectural intervention adaptively re-use the physical fabric of place, weaving living heritage into the tapestry of sustainable development?

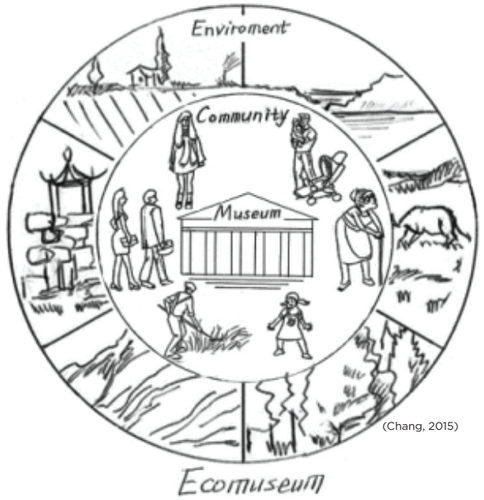
THEORETICAL FRAMEWORK: Urban Ecomuseum

An ecomuseum focuses on the intricate relationships between human beings and their environments, promoting sustainable development and active community involvement (Borelli et al., 2022; Davis, 2007, p. 116). Ecomuseums' emerge from interactions between community members, their heritage, and the surrounding environment, offering an approach that challenges conventional understandings of heritage (Chang, 2015). Rather than isolating heritage as a static, preserved entity, ecomuseums' incorporate both natural and social environments into a broader cultural narrative, embedding heritage within everyday community life.



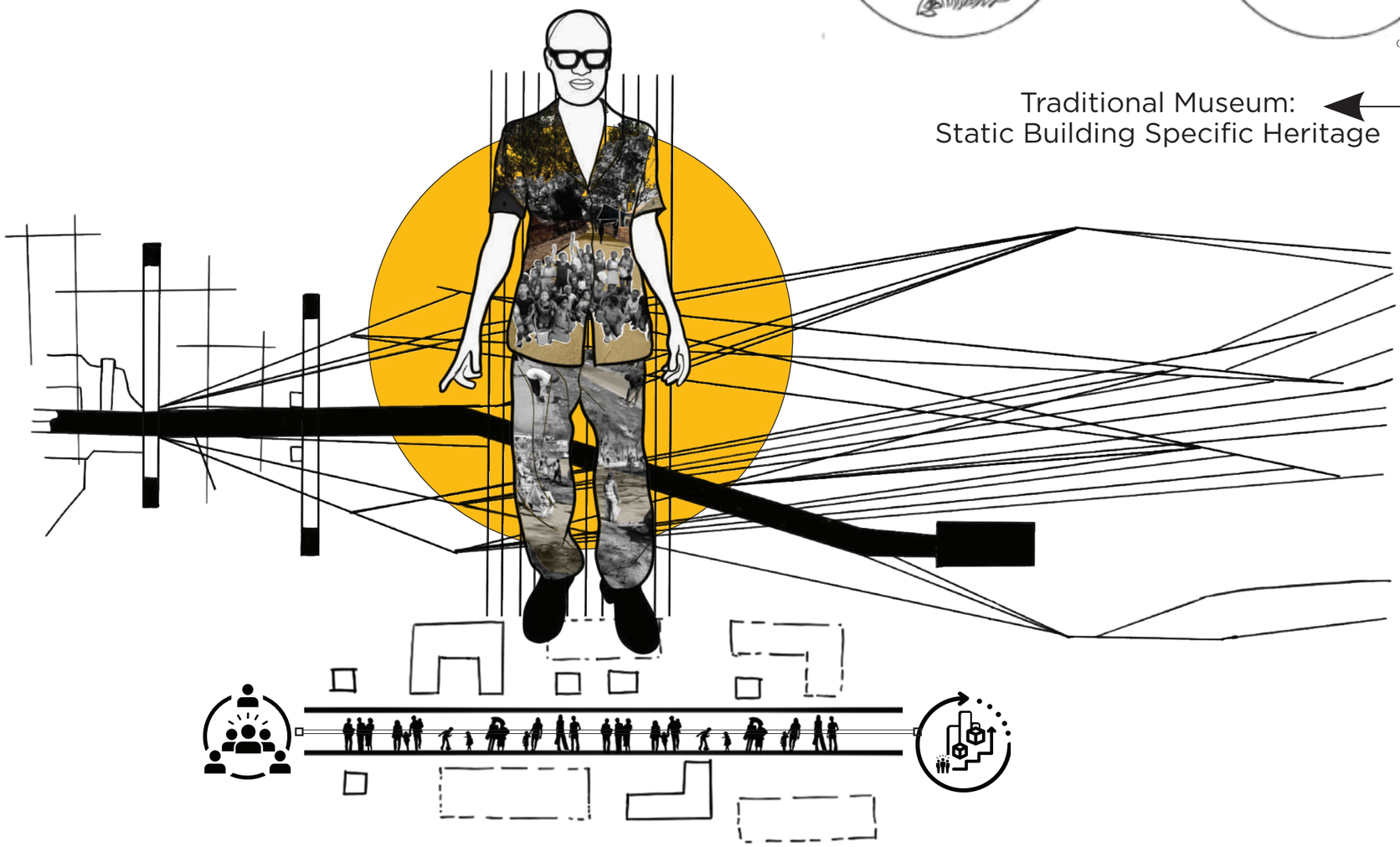
STAGNANT

CONTINUOUS



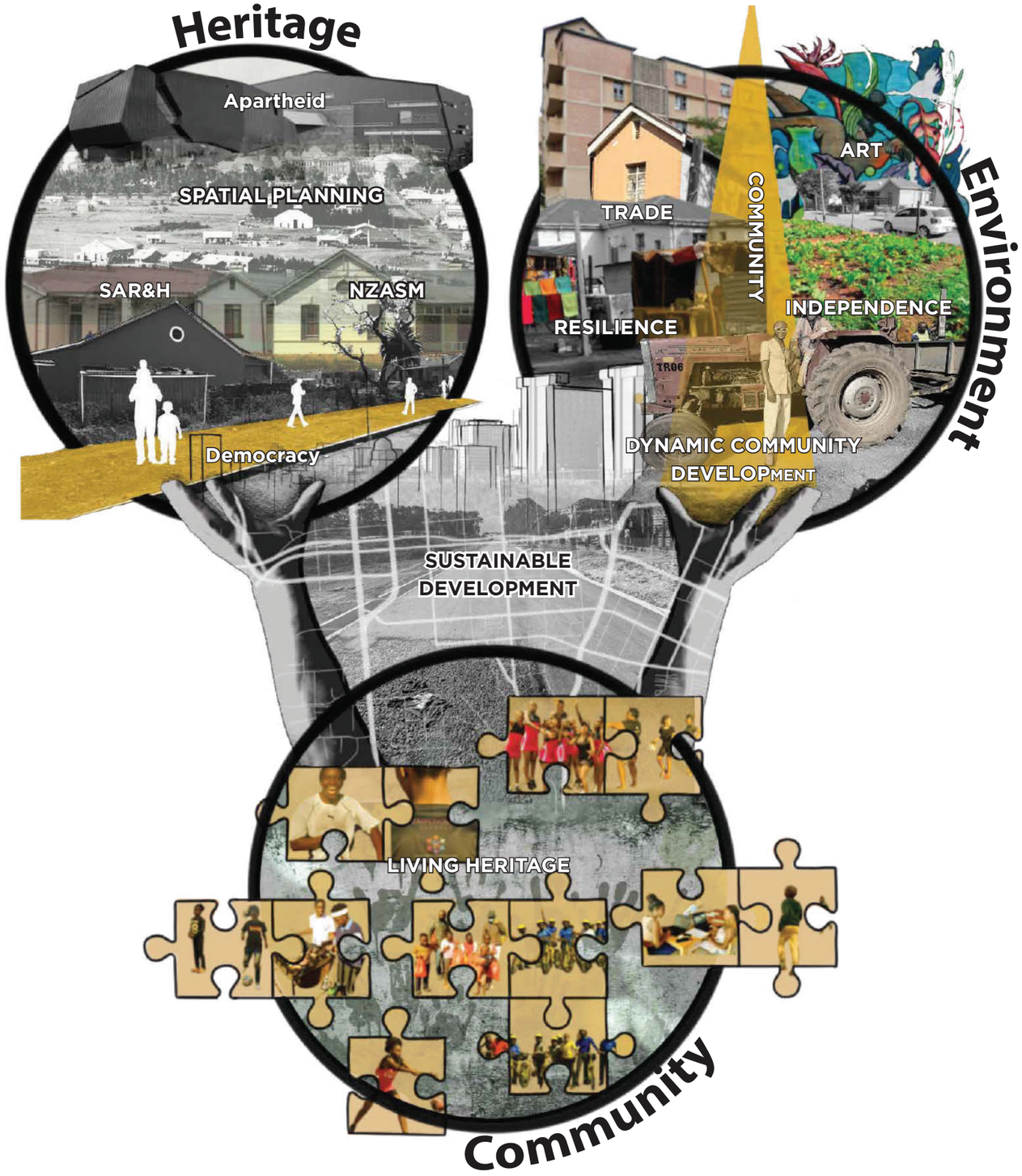
Traditional Museum:
Static Building Specific Heritage

Ecomuseum:
Living Heritage Created In-Situ



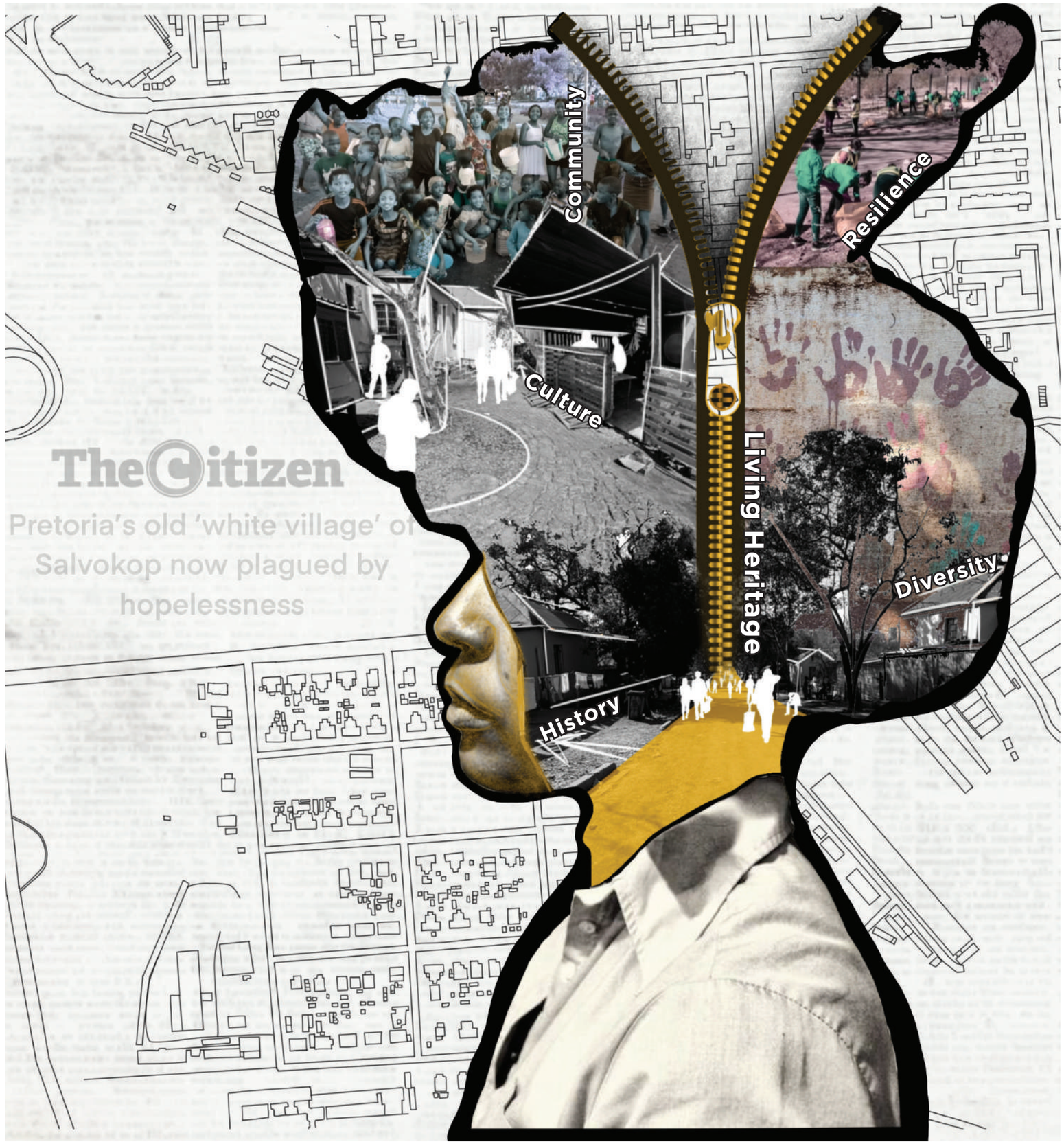
In Salvokop, heritage takes on a dynamic role, constantly reshaped by community values, beliefs, and practices. This living heritage reflects how residents actively engage with their environment, making heritage an element of continuous community development and a source of shared identity (Chang, 2015). Borelli et al. (2022) highlight that cultural heritage must be a foundation for any development project.

SALVOKOP ECOMUSEUM



To ensure sustainable development in Salvokop, the preservation of living heritage must be integrated into urban planning (Chang, 2015). The project's objective, then, becomes the holistic development and protection of this heritage. Incremental development emerges as a strategic approach, facilitating gradual, community-responsive changes while maintaining the urban fabric. Jacobs (1961) underscores the importance of vibrant, mixed-use neighborhoods, arguing that cities flourish when they promote diversity, density, and active street life. Her advocacy for short blocks, buildings of varied ages, and community-focused planning emphasizes that incremental development supports social cohesion and guards against the fragmentation caused by large-scale, top-down projects. Opting for a phased approached, the development can maintain the integrity of existing social and physical structures, supporting a community's natural evolution while addressing its needs (Jacobs, 1977).

CONCEPT: Urban Zipper

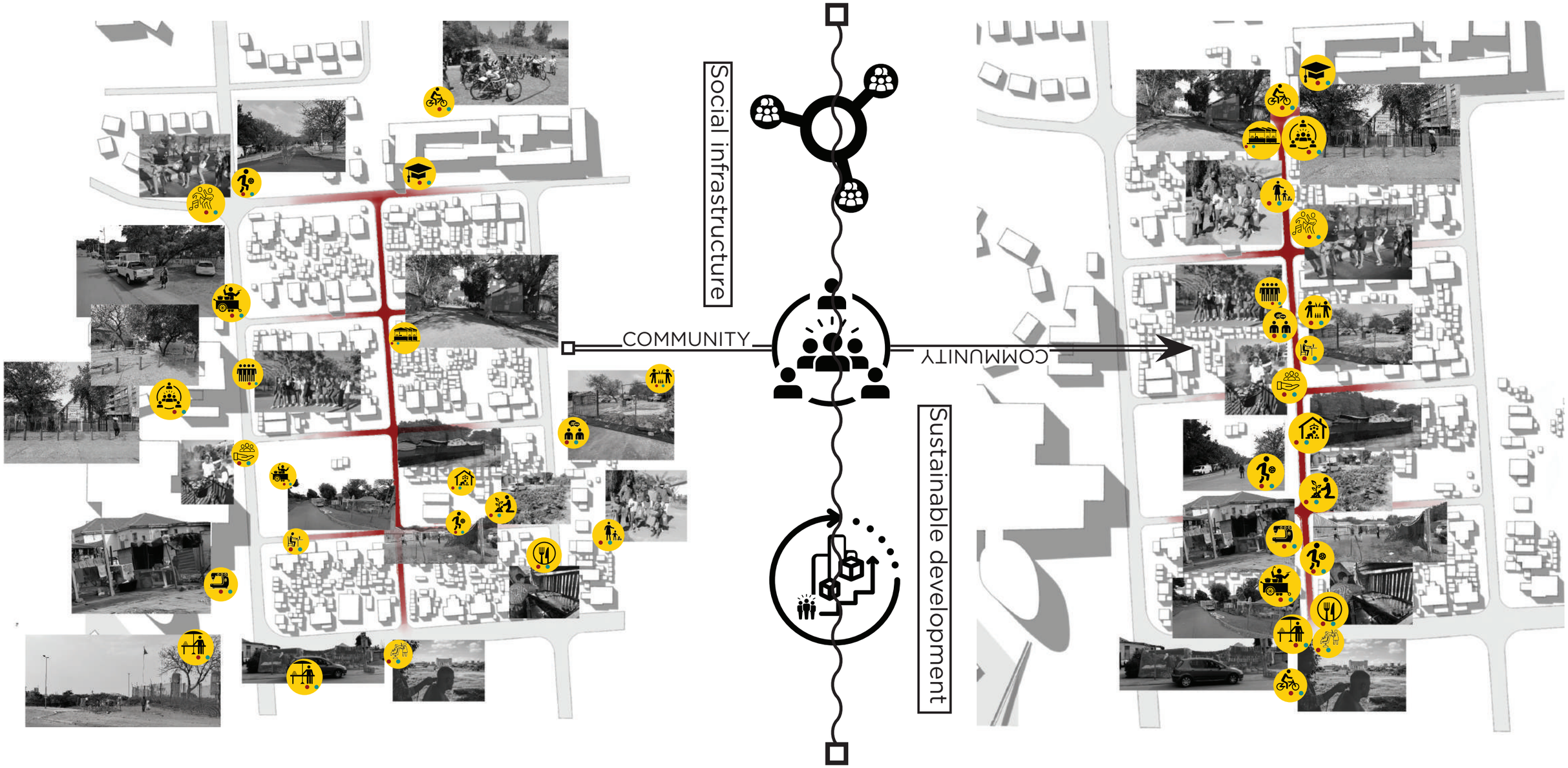


The concept of the Urban Zipper serves as a metaphorical framework to weave together the fragmented Salvokop community, through the lens of an ecomuseum. This approach aims to promote and sustain Salvokop's living heritage, preserving both the critical tangible and intangible elements embedded in the urban landscape. By re-integrating these elements, the Urban Zipper seeks to revitalize and strengthen community cohesion.

In response to the ongoing and anticipated impacts of the Salvokop Spatial Development Framework (SDF), the Urban Zipper proposes an alternative development strategy. By prioritizing cultural preservation, this approach emphasizes sustainable development that reintegrates and leverages heritage and legacy. The Urban Zipper's objective is to ensure that Salvokop's cultural identity remains central, integrating the area's unique social and historical fabric into the development.

This conceptual approach aligns with the Spatial Planning and Land Use Management Act (SPLUMA) by directly addressing past spatial and regulatory imbalances. It promotes uniformity in land use and planning processes, aiming to rectify historical exclusions and facilitate the development of disadvantaged areas. By focusing on inclusive and equitable urban planning, this strategy supports the creation of resilient communities, fostering long-term social and economic sustainability (MSDF, 2018).

APPROACH: Stitching on an Urban Scale



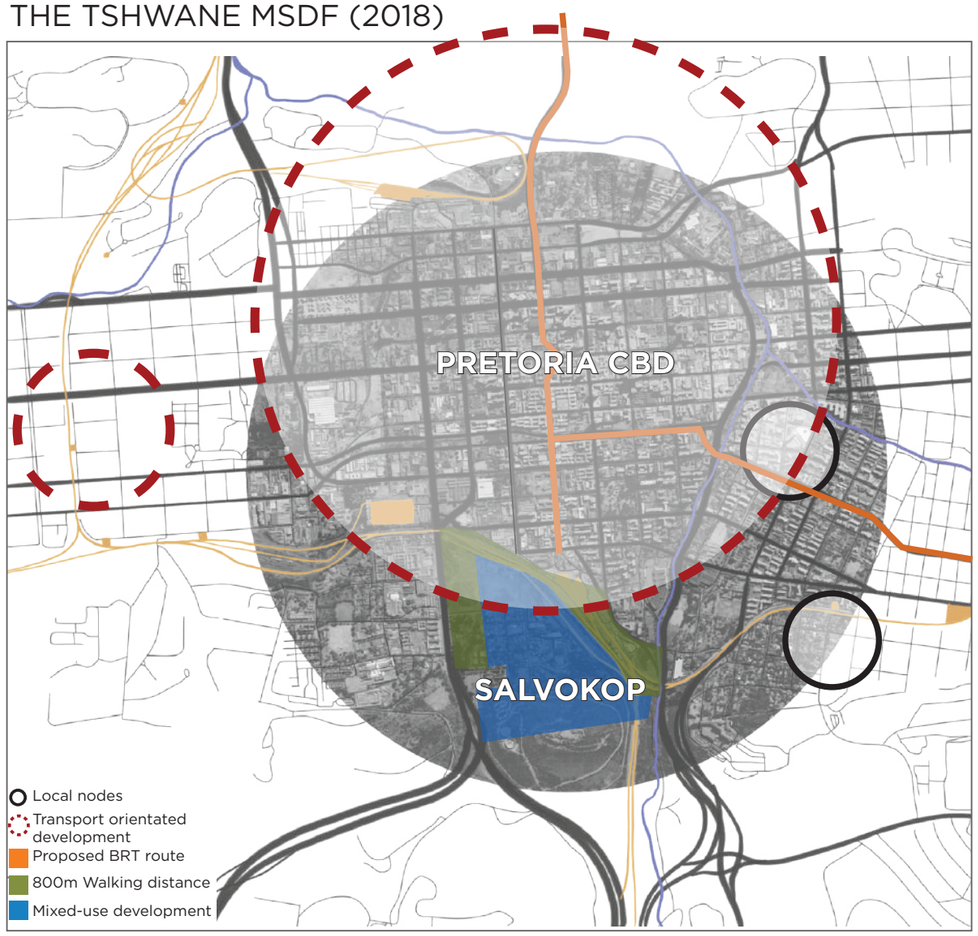
"...underlying any genuine city district is a certain balance of uses, and this balance is controlled by the intricate interplay of human behavior and local conditions." (Jacobs, 1961, p. 199)

Stitching on an urban scale involves centralizing the existing social networks within Salvokop along the primary activity corridor. This approach allows for development to occur around this corridor while preserving and respecting the complex social dynamics that ensure community cohesion.

By prioritizing these interactions, the design ensures that the living heritage of Salvokop continues to thrive even amidst new developments. The essence of this heritage lies not in the physical buildings themselves but in the vibrant social patterns created by the community's interactions with each other and their environment.

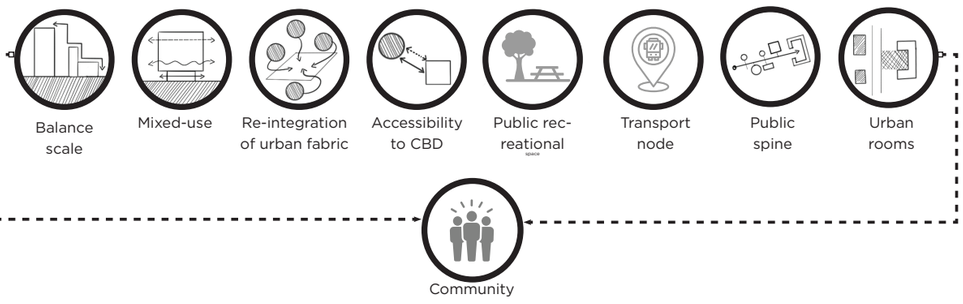
APPROACH: Urban Informants

THE TSHWANE MSDF (2018)



CURRENT URBAN CONDITION

PROPOSED URBAN CONDITION

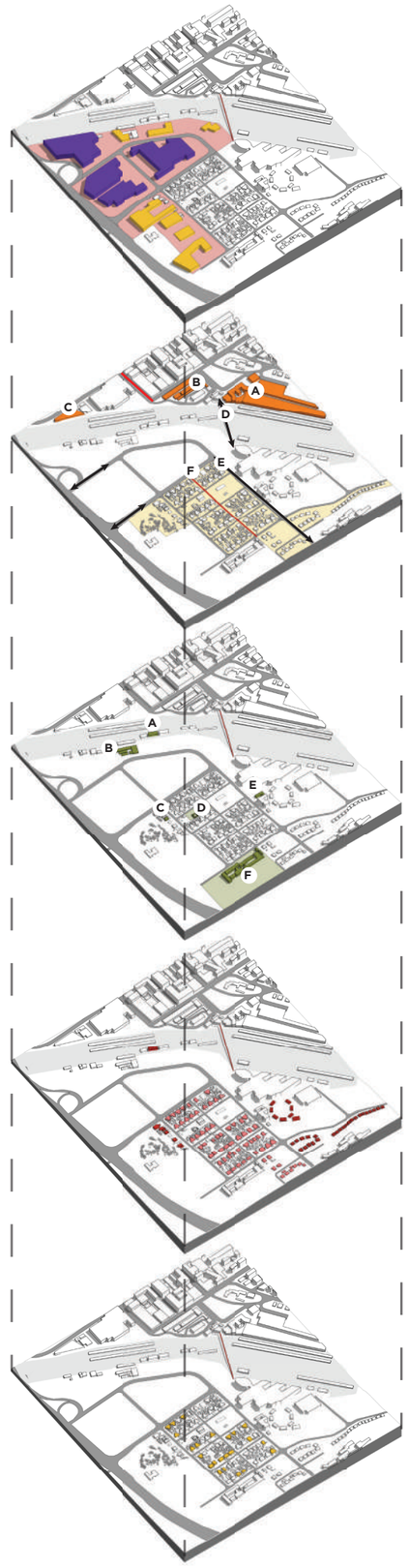


THE TSHWANE MSDF (2018)

The urban framework is guided by the 2018 Tshwane Metropolitan Spatial Development Framework (MSDF), which designates the precinct for mixed-use development. Jane Jacobs (1961) emphasizes the importance of urban areas that feature a diverse mix of residential, commercial, and public spaces to create vibrant neighborhoods where people can interact in various ways.

Drawing from this concept, the project embraces the mixed-use elements of the existing Salvokop Spatial Development Framework (SDF). However, the placement of different typologies is deliberately planned to ensure that existing social and economic networks can benefit from and integrate seamlessly with the new development.

Additionally, the project aims to connect the proposed Bus Rapid Transit (BRT) route to the northern periphery of the precinct by establishing a modal interchange, falling within the transit-oriented development area outlined in the Tshwane MSDF of 2018.



The Salvokop SDF Government Proposal
- Development extents
- Government buildings
- Commercial and retail buildings

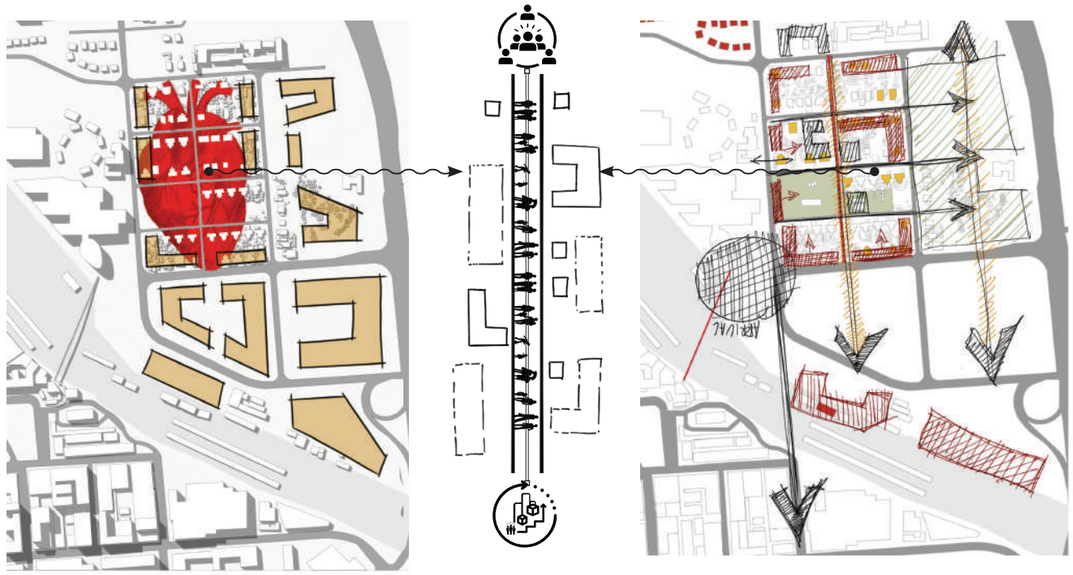
Important Nodes
- A. Pretoria and Gautrain Stations
- B. Bosman Bus Stop
- C. Bosman Taxi Rank
- D. Pedestrian bridge
- E. Koch street
- F. 2nd street as activity corridor

Community Institutions
- A. POP-UP facility
- B. GBV shelter
- C. Community garden/soup kitchen
- D. Crèche
- E. Community Centre
- F. Joupie Fourie Primary School

Heritage Buildings
- Least important
- Important

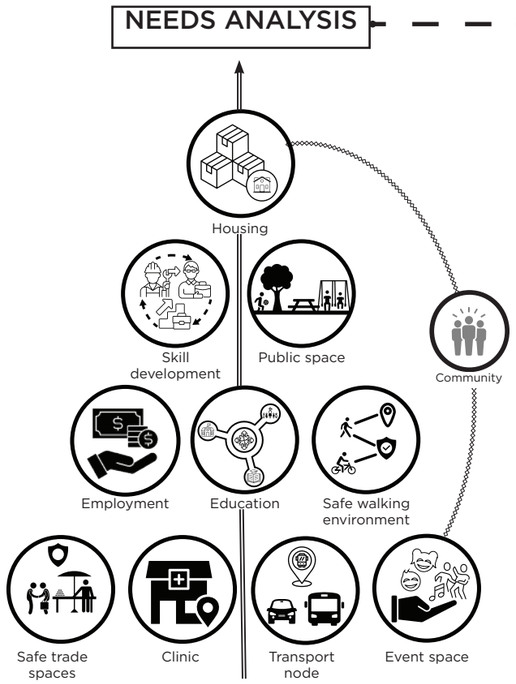
Dilapidated Architectural Artefact's
- Railway houses

APPROACH: Urban Response



The design seeks to retain the existing social and economic networks that form the heartbeat of Salvokop. The proposed urban framework is centered around this vibrant core, preserving the living heritage of the place

The development places the community at its core, centralizing social needs and engagement as fundamental aspects of the design.



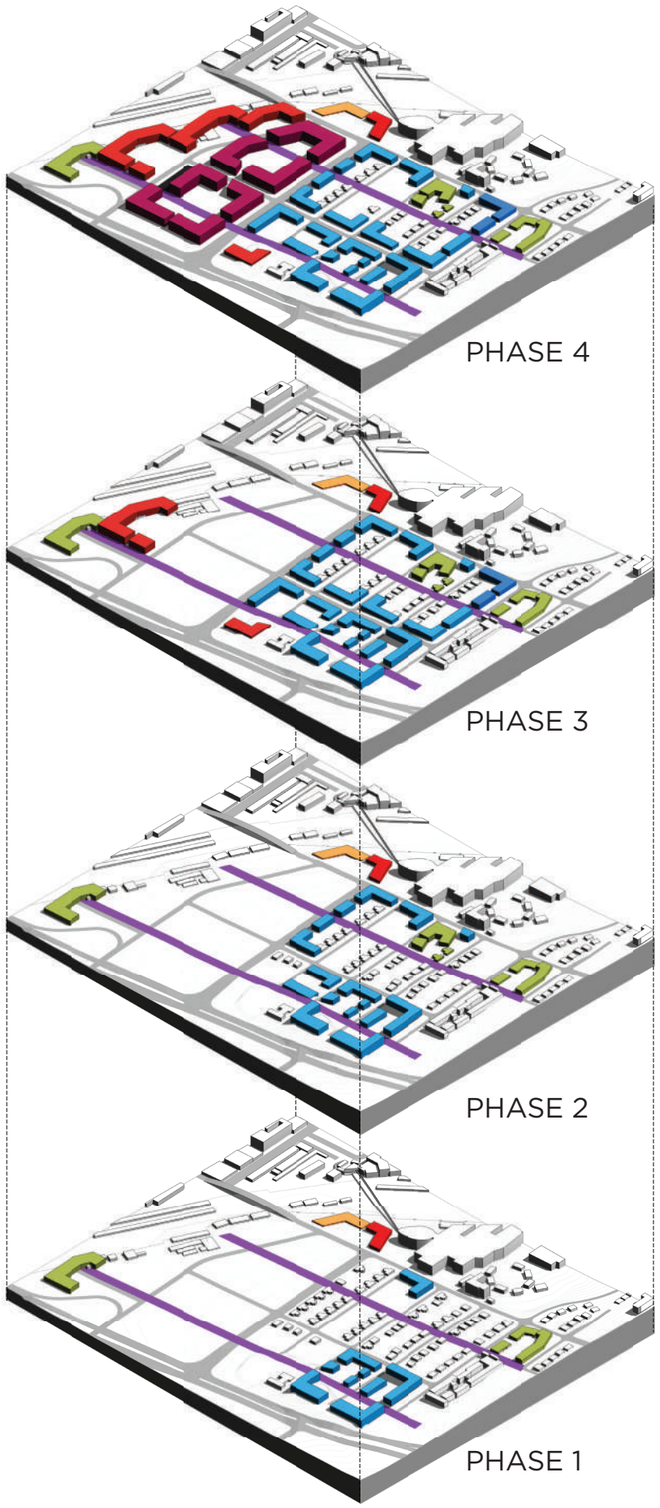
The needs analysis is prioritized based on the immediate needs of the community, driving the phasing of the urban proposal. Addressing these needs ensures the preservation of the existing urban fabric while fostering a community-centric development that allows for growth and adaptation over time.

Phase 1:
Residential buildings will be built on vacant land to relocate residents from dilapidated houses. A modal interchange and market square will be developed to support the informal market, creating economic opportunities. A waste management center will also provide employment and income through waste recycling. Public spines will preserve social and economic networks and offer recreational spaces, alongside a clinic and transitional housing.

Phase 2:
Residential buildings will be added along the perimeter, including Baghdad, addressing housing needs and urban sprawl. Civic buildings will support the social and economic growth of residents.

Phase 3:
The final residential buildings will be completed, and a retail building on the western perimeter will create economic opportunities.

Phase 4:
The Salvokop Spatial Development Plan (SDP) will be implemented, integrating government department and commercial buildings on the northern periphery.



URBAN FRAMEORK

Due to the current housing condition and crisis - exacerbated by urban sprawl and the compaction of the current community driven by the Salvokop SDF - The proposed urban scheme of the project emphasizes densifying the periphery of the existing community boundary. Desnification with in this project context, recognises the inherent potential of economic and social activities evident in Salvokop (Lock, 1977). Thus, the densification strategy is meticulously implemented along the communities perimeter, delineating and preserving the current social dynamics that exist while distinguishing community spaces form the broader mixed-use precinct.

The introduction of public spines and pedestrian corridors within this densification framework ensures that socio-economic activities are not isolated but are integrated into the broader design. This integration facilitates the flourishing of existing community interactions and economic opportunities, making densification a means to enhance, rather than disrupt.

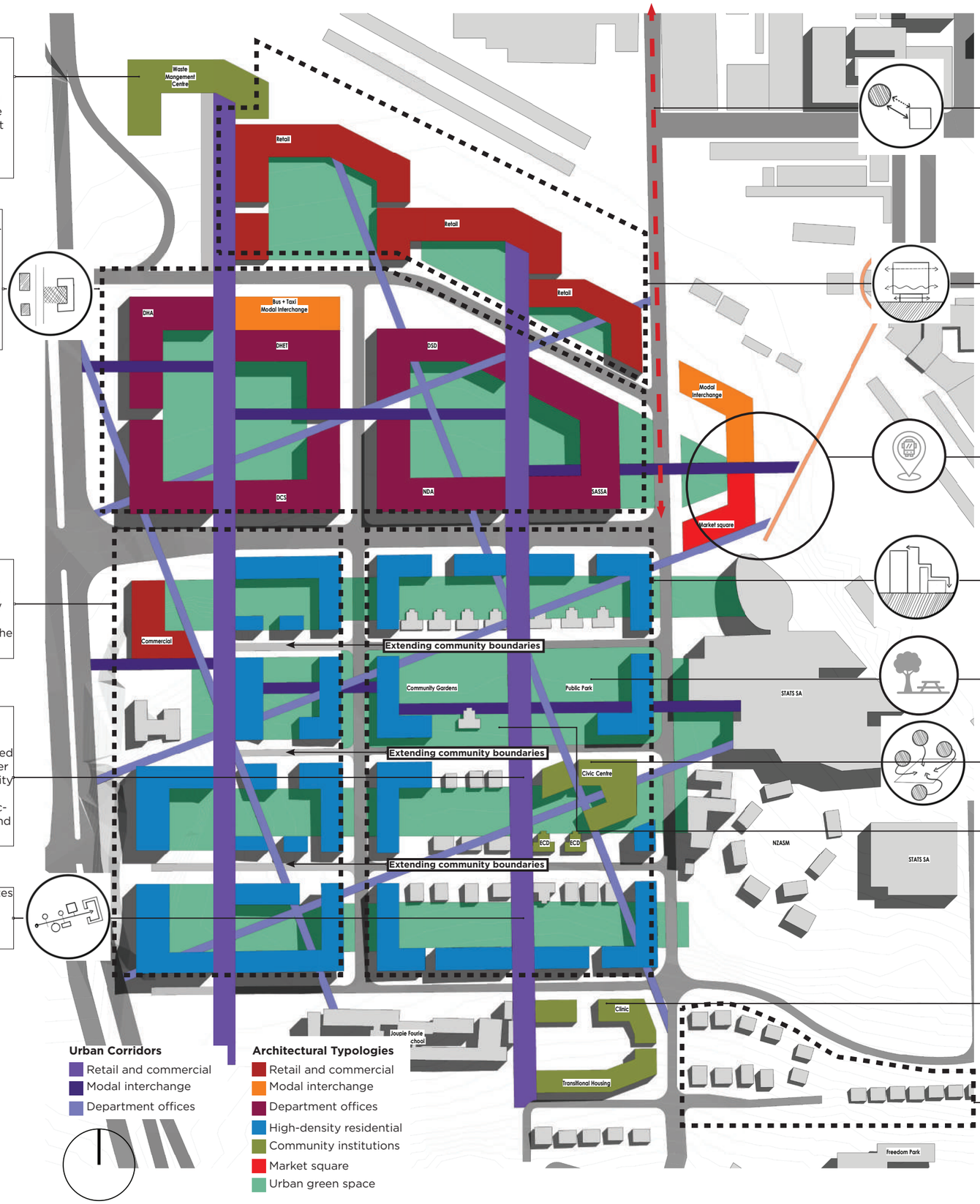
The waste management center provides an opportunity for the community to collect and sell waste to the facility. This intervention, currently operating on a smaller scale, addresses the community's waste management challenges while simultaneously offering economic benefits to residents.

The urban scheme amalgamates the existing Salvokop SDF proposal by strategically integrating the departmental buildings into the broader design framework. The architectural forms are designed to harmonize with the existing community patterns, establishing a cohesive and well-integrated urban fabric.

The extension of the Salvokop community to the western periphery of the precinct, where the current Baghdad community reside. This extension integrates the informal community within the framework

Public spines connects the Salvokop urban fabric, serving as vital arteries within the urban scheme. These spines are enriched with social infrastructure to foster interaction and vibrant community life, preserving existing social dynamics and enhancing connections between the community and its environment.

The rotated urban corridor creates efficient shortcuts across the precinct, seamlessly connecting various programs and places.



Linking Bosman street with Koch Street (increase accessibility)

Retail spaces for both formal and informal economies are strategically positioned along the northern periphery, effectively capturing activity and terminating pedestrian routes to prevent the dissipation of space. The introduction of these spaces is to create employment for the community and increase diversity within the precinct.

Structuring the original informal market into a market square. The location of the modal interchange adjacent to existing market

The existing community perimeter is defined by the introduction of residential blocks along the outer edges, creating a clear demarcation between the community space and the surrounding mixed-use precinct. These perimeter blocks are strategically densified to balance the scale transition from the adjacent office buildings into the residential community.

Public park

Salvokop Civic Centre

Existing community gardens

The Salvokop Clinic is situated on the southern periphery, adjacent to a transitional housing block designed for victims of GBV and to temporarily accommodate residents during the development phases of this proposal.

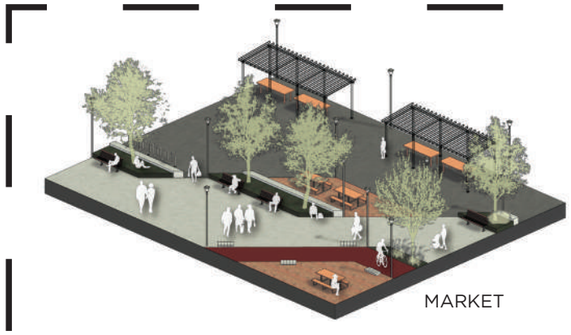
The southern periphery has no development prescribed due to its high historical importance within the Salvokop. The railway houses will be maintained.

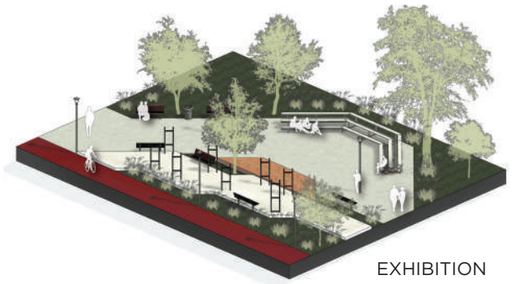
URBAN FRAMEWORK: Public Spines

The public spine within the urban framework aims to preserve Salvokop's legacy as a vibrant community with active street life. The activity corridor is central to creating and maintaining this livingheritage. It supports informal economic activities like food vendors, salons, and tailoring, as well as sports, dancing, live music, and social interactions.

The public spine emulates this dynamic environment by integrating the community's social and economic activities. It provides spaces for play, exhibitions, congregation, refuge, and informal markets, fostering social engagement and a sense of ownership. By prioritizing human-scale, lively spaces, the design sustains the existing urban fabric and encourages daily community interactions (Jacobs, 1961).

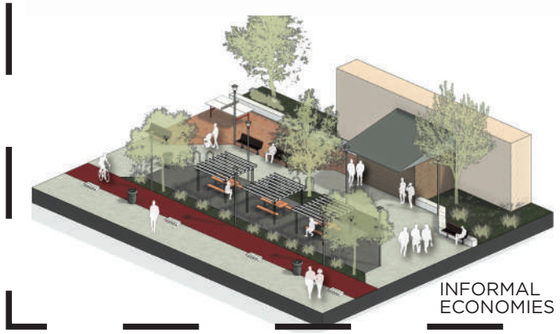
The spine also functions as a connector, linking spaces and programs within the precinct. This enhances interactions between residents and visitors, strengthening the social network and reducing the current sense of isolation in the community. The public spine achieves this by extending to both the southern and northern edges of the precinct. Additionally, the spine contributes to public safety by creating active, well-populated areas, thereby increasing natural surveillance.


MARKET

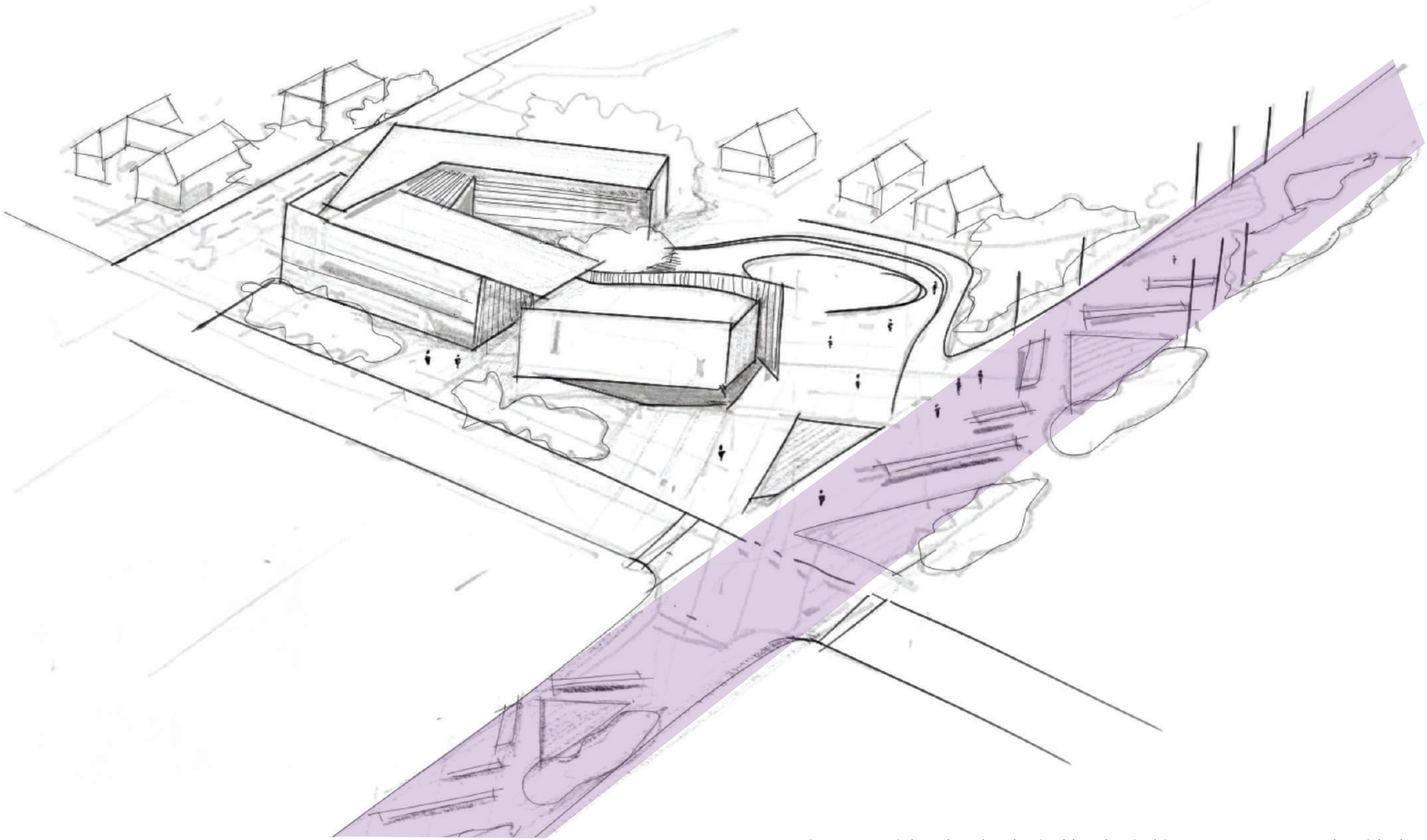

EXHIBITION


PLAY


SPORT


INFORMAL ECONOMIES

APPROACH: Stitching on a Building Scale



Stitching on a building scale entails a multifaceted approach, addressing both spatial and material/technological dimensions. On a spatial level, stitching fosters community engagement and social development. The architecture acts as an ecomuseum vessel, catalyzing interactions between place, space, and people. It serves as a community emblem, promoting continuous development and nurturing the growth of residents and their social networks. This is enhanced through spaces designed to encourage connections between individuals and their environment.

On a material and technological level, stitching reconnects people with the site by incorporating site-specific materials, such as earth (excavated on site) and reclaimed bricks from the dilapidated heritage houses, integrates the community's heritage and sense of place into the architecture.

PROGRAMME

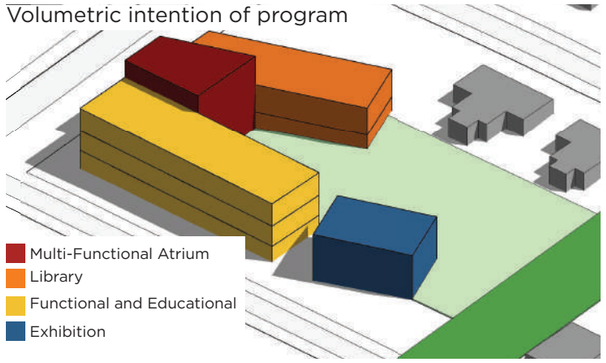
The Civic Center is designed to foster social interaction and cultivate new relationships between residents, stakeholders, and visitors. The spatial organization of the programs is structured to prioritize public access, with publicly orientated spaces located on the ground floor, with the privacy of spaces increasing vertically. This hierarchy of space encourages community engagement while ensuring a progressive sense of privacy.

The allocated programs are orientated around the reintegration of existing institutions that focus on the social and economic development of the community, alongside flexible spaces that empower users, promote ownership, and future-proof the center. These institutions become vital stakeholders within the project:

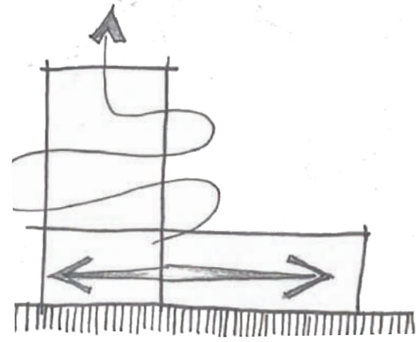
- The Salvokop Youth Development Centre: Youth orientated programs such as counseling, social events, sports days, assisted learning and tutoring.
- The Salvokop Drama Club: Youth orientated cultural club
- POP-UP: Focuses on technical and soft skill development

The center is organized into four main sections to address specific programmatic needs and stakeholder functions.

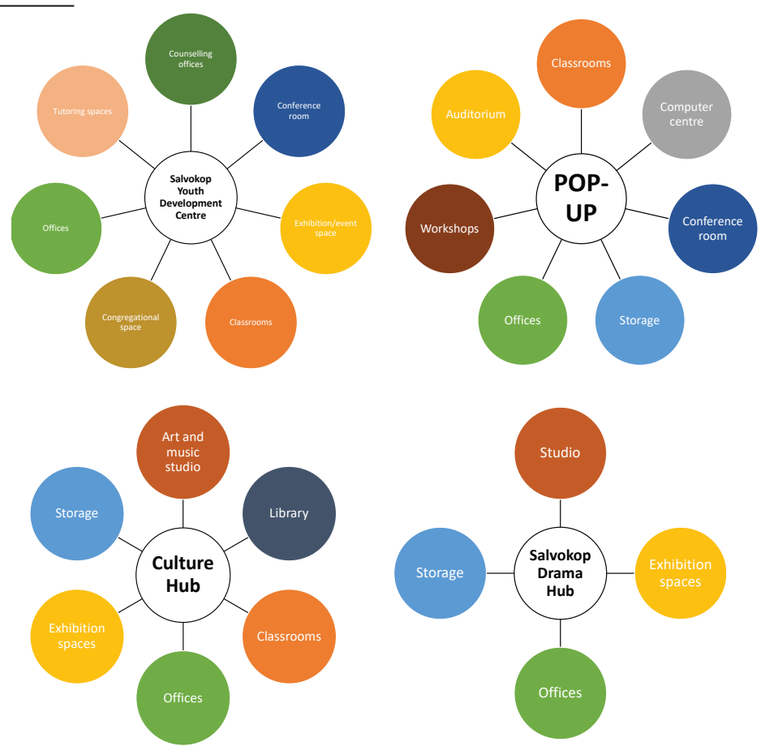
Volumetric intention of program



More public spaces are concentrated on the ground floor, promoting accessibility and engagement. As the building rises, spaces and programs become increasingly intimate, offering a gradient of privacy and exclusivity.

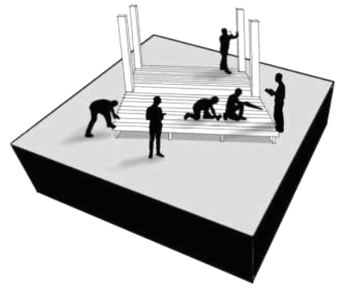


Programmatic requirements for the stakeholders



Classrooms/educational spaces

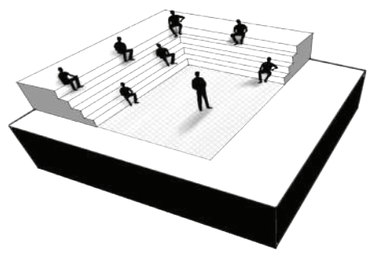
Library/resource centre



Technical workshops

Multi-functional spaces

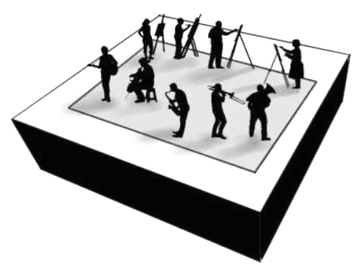
Community gathering spaces



Public gathering spaces for exhibition, events

Private consultation spaces/offices

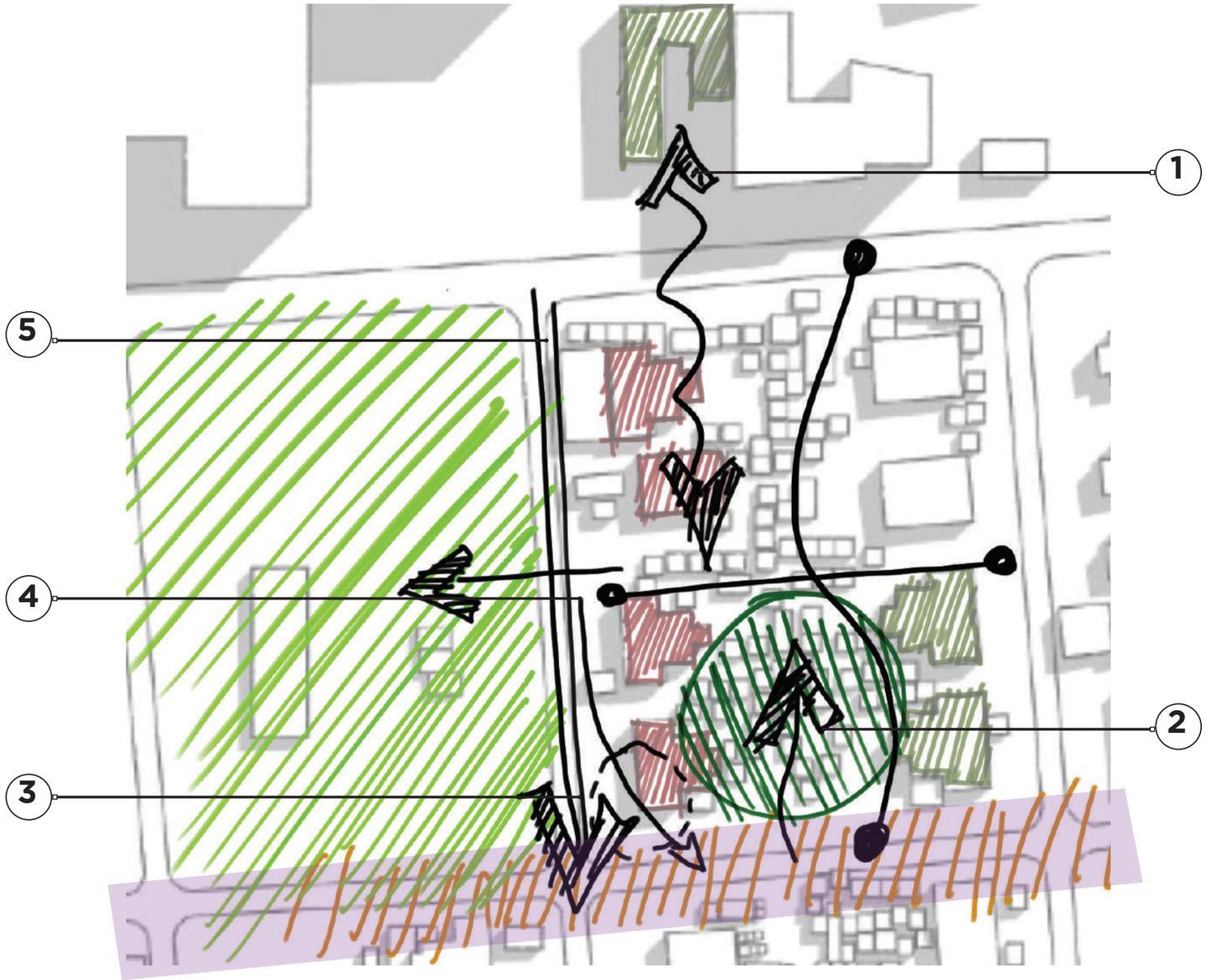
Spaces for social interaction

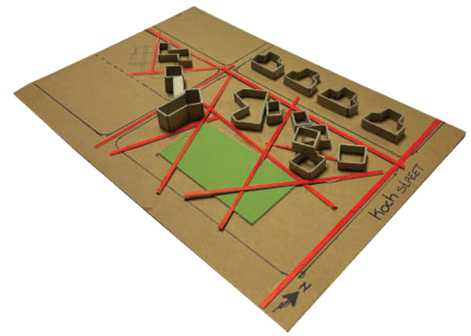


Art and culture spaces

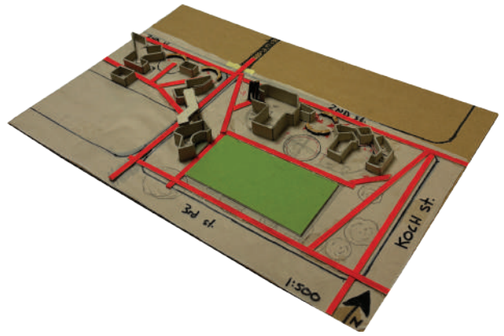
RESPONSE: Provocation

The design responds to the existing conditions and informants on site. The site is located between two activity corridors, Koch street and 2nd street (public spine). The site is adjacent to the public park on its northern edge and is located opposite the existing community centre. The site has existing dilapidate historical infrastructure.





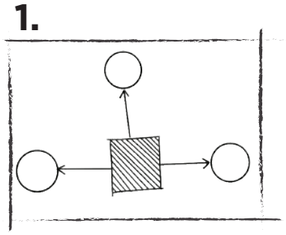
Movement, clustered layout, celebrate street edge, threshold, permeability



Scale of publicness, threshold, connection, spill out spaces

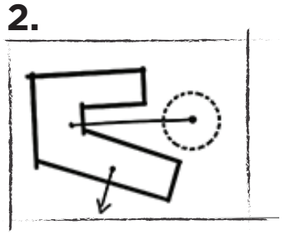
Building scale, movement, connection to existing and proposed, urban room

1.



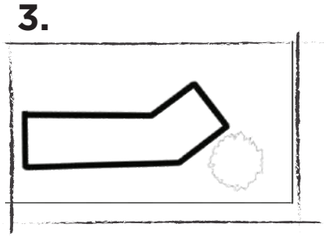
Connection to urban fabric

2.



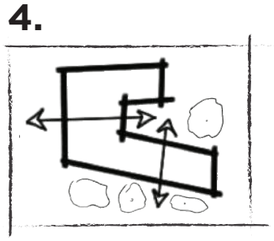
Spill spaces

3.



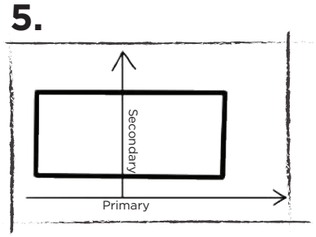
Celebrate the corner

4.



Permeability

5.



Primary and secondary movement

PROVOCATION: CITY MAKING

Building performance, as defined by Williams (2006:435), refers to a building's ability to meet the functional and financial needs of its occupants while maintaining its physical and financial integrity over time. Williams identifies three aspects of building performance: physical, functional, and financial. This report focuses on the functional performance of the Salvokop Civic Centre design, specifically how well it contributes to city-making. The design is positioned in contrast to the current government development initiatives that threaten to transform Salvokop's dense, small-scale urban fabric into a government precinct. These developments, imposed without regard for the existing community, contribute to urban fragmentation—dividing spaces and disrupting social cohesion (Graham & Marvin, 2001). Urban fragmentation occurs when large-scale developments disrupt existing patterns, isolating communities and creating physical and social divisions. This often leads to gentrification, where wealthier populations displace lower-income residents (Smith, 2002), further deepening inequalities. Jane Jacobs, in The Death and Life of Great American Cities (1961), offers a solution to such fragmentation, advocating for the preservation of vibrant, mixed-use neighbourhoods. She argues that cities thrive when they promote diversity, density, and active street life, fostering social interaction and economic vitality. Jacobs emphasizes that short blocks, varied building ages, and dense developments support community cohesion and prevent the fragmentation caused by top-down planning. In response to the government's development plans, city-making emerges as an alternative approach. City-making architecture, as defined by Enia and Martella (2019:157), involves shaping, transforming, and sustaining the urban environment with careful, intentional interventions. Architects, in this framework, have a responsibility to revitalize urban spaces with a focus on human mobility and sensory experience (Gehl, 2010:32). The performance criteria for city-making are thus centred on human needs and experiences. Drawing from key literature, particularly Jan Gehl's Cities for People (2010) and Jacobs' seminal work, as well as research from the 2024 City-Making DIT research group.

The limitation of the assessment framework is the level of intervention that was required. Unfortunately, the assessment was a 'check box' exercise and did not quantify the level of intervention or assessment needed beyond implementation. This leaves many areas open for interpretation and refinement. However, the assessment was successful in approaching the proposed Civic Centre in a responsive, contextually appropriate manner that is respondent to the urban fabric, creating an architecture that becomes part of the city as opposed to fragment it.

The performance measures for the Salvokop Civic Centre design are grounded in the principles researched by the City-Making DIT research group under the supervision of Dario Schouland. City-making architecture involves the role of architecture in shaping, transforming, and sustaining the urban environment (Enia and Martella, 2019:157). Consequently, the architect bears the responsibility of revitalizing urban spaces through intentional and carefully crafted interventions, with a particular focus on human mobility and sensory experiences as key drivers for city design (Gehl, 2010:32).

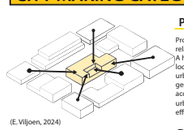
City-making architecture centers its design approach on human needs and experiences, positioning the individual as the primary protagonist in the urban narrative. The performance criteria developed for city-making initiatives are thus focused on these human-centered elements, establishing a framework for assessing how interventions perform within their urban context. The areas of focus were identified through an analysis of literature, particularly Jan Gehl's Cities for People (2010), and further informed by the research conducted by the 2024 City-Making DIT research group.

Once these key focus areas were defined, six award-winning precedents were analyzed to determine how these principles were successfully implemented in practice. This research and analysis formed the basis of the city-making performance criteria, which guided the assessment and subsequent modification of the street interface in the Salvokop Civic Centre design

CITY MAKING PERFORMANCE CRITERIA

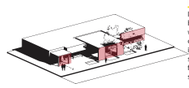
	Compliance: Yes/NO
1) Proximity	
Programmed spaces are diverse horizontally and complementary programmes are placed vertically.	Yes/No
There should be a unifying element connecting programmes	Yes/No
Programs should be closely situated, forming a compact urban environment.	Yes/No
Include responsive public spaces to serve as spill-out areas, supporting surrounding activities.	Yes/No
Orient entrances of key programs towards shared common spaces.	Yes/No
Where applicable, consider/ensure the connection of off-site programs.	Yes/No
2) Diversity	
The diversity of uses should ensure a mix of necessary, optional, and social uses, tailored to the needs of the users	Yes/No
Incorporate recreational areas and informal trade platforms to support core functions.	Yes/No
Promote diverse operating hours, encouraging 24/7 activity.	Yes/No
Strategically place programs to enhance passive surveillance, maintaining safety throughout the day and night.	Yes/No
3) Adaptability	
Design spaces with flexibility in mind, allowing for sub-uses to emerge, fostering a sense of agency from community.	Yes/No
Explore the adaptive reuse of the existing building stock to foster new developments.	Yes/No
4) Scale and proportion	
Use landscaping to establish a human-scale environment.	Yes/No
Include intimate, human-scale entrances to programs which contrast with larger spaces.	Yes/No
Maintain a ground floor to street edge height ratio of 1:1 or 1:2	Yes/No
In multi-building environments, provide varying levels of intimacy based on occupancy: - Small (3-6 m) - Medium (6-15 m) - Large (15+ m)	Yes/No
Ensure overhead elements at the street interface are 1 to 2 stories high.	Yes/No
Introduce programmed spaces that reduce the scale of large public areas.	Yes/No
Overhangs should be 1 story high, with a height-to-width ratio of 1:1, and no higher than 3m above ground level.	Yes/No
Ground floor height should be larger/taller than the above floors.	Yes/No
Building interface should include human scale elements to fragment large buildings.	Yes/No
5) Interface	
Articulate the form of buildings to create safer public space and more inviting public spaces.	Yes/No
Articulate building interface to create welcoming entrances	Yes/No
Activated interface which encourages engagement.	Yes/No
Ensure visual and/or physical permeability of building elements to maintain openness.	Yes/No
Textured interface	Yes/No
Visual (materiality) variation included in interface	Yes/No
Sound buffer (noise buffer) included in interface	Yes/No
Vertical elements included in interface to breakup horizontality	Yes/No
Within the public realm articulate movement and areas for gathering.	Yes/No
6) Pedestrian conditions	
Differentiate pedestrian pathways based on primary and secondary movement (materiality, landscaping).	Yes/No
Provide seating, shading, and greenery in places where people can linger.	Yes/No
Use buffers to separate pedestrian and vehicular routes.	Yes/No
Offer essential public amenities such as water points, WiFi zones, public restrooms, and charging stations.	Yes/No
7) Sustainability	
Include expressed sustainable practices contributing the city's ecological resilience (water harvesting, solar, landscaping).	Yes/No
8) Image	
Ensure the design reflects and engages with the surrounding context (considering visual, formal, and vernacular elements).	Yes/No

CITY MAKING CATEGORIES: Explaining the focus areas of measurement


(E. Viljoen, 2024)

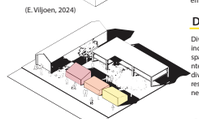
Proximity

Proximity in city-making refers to the spatial relationship between programs or functions. A high degree of proximity, where programs are located closer together, creates a more compact urban environment. Such compactness is generally seen as favorable, as it encourages accessibility and interaction between different urban elements, promoting a more vibrant and efficient urban life.


(E. Viljoen, 2024)

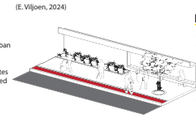
Interface

Interface as a performance measure examines how a design's street-facing facade interacts with the public realm and the broader urban context. A well-articulated and inviting interface enhances engagement with the street, serving as both a welcoming element for users and a protective boundary for interior spaces.


(E. Viljoen, 2024)

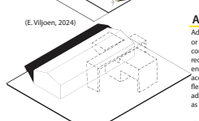
Diversity

Diversity as a city-making measure entails the inclusion of a variety of programs within an urban space, which fosters a diverse user group. By integrating multiple functions and activities, diversity enriches the urban fabric and generates responsive environments that cater to the varied needs of dense urban populations.


(E. Viljoen, 2024)

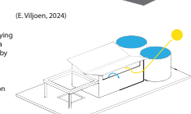
Pedestrian Conditions

Pedestrian Conditions within the framework consider the well-being of pedestrians as a critical aspect of city-making. Favorable conditions are determined by how well the design accommodates pedestrian needs, including street furniture, lighting, accessibility, and other urban amenities that enhance the pedestrian experience.


(E. Viljoen, 2024)

Adaptability

Adaptability refers to a design's capacity f or physical manipulation to accommodate varying conditions over time. This flexibility allows for a reduction in the overall intervention footprint by enabling structures to evolve, adapt, or shift according to changing needs. In this context, flexibility is a specific manifestation of adaptability, allowing for spatial reconfiguration as necessary.


(E. Viljoen, 2024)

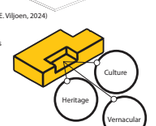
Sustainability

Sustainability in the city-making performance criteria focuses on the design's impact on social, ecological, and environmental sustainability at an urban scale. This approach prioritizes the long-term viability of the city itself, rather than solely human-centered needs, emphasizing sustainable urban systems and their capacity to support resilient communities.


(E. Viljoen, 2024)

Scale and Proportion

Scale and Proportion within the city-making framework emphasize the importance of human scale in architectural design. This principle advocates for the consideration of human proportions relative to the designed space. In addressing the challenge of large buildings, design strategies, such as incorporating landscaping elements, overhangs, and other architectural features, help balance and mitigate the imposing scale of these structures, creating a more human-centered environment.



Image

Image within this framework assesses the relationship between the design and both its urban context and its users. This concept explores how a design visually communicates its identity and function within the larger cityscape, shaping the perception of the built environment.

ANALYZED PRECEDENTS FOR **CITY MAKING CRITERIA**

Watershed - WOLFF Architects

1) Proximity
Arrange mixed programs in close proximity; either horizontal or vertical arrangement

2) Diversity
Eyes on the street through varies program offerings is necessary for safety, and interaction purposes.

3) Adaptability
Recessing the public ground floor facade can provide more opportunity for space apropriation by the publict.

4) Scale and proportion
Building entrance proportions are very important, creating inviting brighter space

5) Interface
Visual permeability (transparent facades) offer provide visual street connection and interaction.
Many buildings entrances could offer further interaction opportunities for the public to engage with the building in.

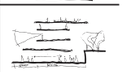
6) Pedestrian conditions
Opportunities for pedestrian rest through street furniture create more welcoming and vibrant streets

7) Sustainability
Passive cooling/heating & lighting systems are best achieved through material, choice, roof angle opportunities, facade treatment, and internal floor openings.

8) Image
Material and form choice must relate to context ;part of the intention

138 Jan Smuts - C76 Architects

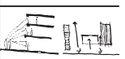
1) Proximity
Programmes are in close proximity through placement, directly adjacent and above each other



2) Diversity
Diversity of uses achieved through the incorporation of both small businesses and developing larger businesses. The inclusion of market spaces and food establishments ensures operational hours run from early hours till late.

3) Adaptability
Existing building reused as shell of new development.

4) Scale and proportion
Appropriate scale achieved through fragmenting the existing 12m high shed into 3 stories.



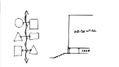
5) Interface
Transparent and active interface. Pedestrian street passes through businesses and market spaces on ground floor creating an arcade typology.

6) Pedestrian conditions
Exclusive pedestrianized street with no vehicular disturbance. Centrality of pedestrian street creates a safe environment to walk through as the surroundings offers surveillance.
Natural light brought in by completely opening up the entrance and exit, replacing existing roof sheeting with clear sheeting.
The projection of the market space and businesses projects artificial lighting onto the street. Surface treatment of the pedestrian walkway (existing paving) is different to the surface treatment of the programmed spaces.

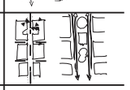
7) Sustainability
Cross ventilation is achieved by completely opening the large entrance and exit.

8) Image
By keeping the existing building's shell, the building remains appropriate in its context characterized by a series of industrial buildings.

Jewel City - GASS Architecture Studios



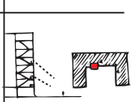
1) Proximity
Street, as spine, connecting programs (street as unifying element).
Program diversity achieved vertically and horizontally.
Street as spill out space for housed programmes.



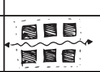
2) Diversity
Diversity of programs results in a diversity of user groups.
Transient program and building typology on street/street edge.
Placement of residential blocks along street ensure passive surveillance and joint security for precinct.

3) Adaptability
Flexible outdoor spaces.
Adaptive reuse of existing building to facilitate the new development.

4) Scale and proportion
Balance of scale in the urban fabric is achieved through implementing buildings of different scales.
Building overhangs reduces the scale difference for the users.
Active and programmed street balances the scale of the buildings.
The streets' large scale is reduced by implementing programs and activities on the street, separating active from the passive activities.



5) Interface
Articulation of the building form, introduces public spaces for the specific building.
Permeability created on the ground floor
Eyes on the street is created by introducing windows on the buildings which face the street.
Movement routes in the buildings are permeable to the public, creating visibility and eyes on the street.



6) Pedestrian conditions
The street contains places for congregation, refuge and rest. The strategic use of street furniture and landscaping elements makes this possible.

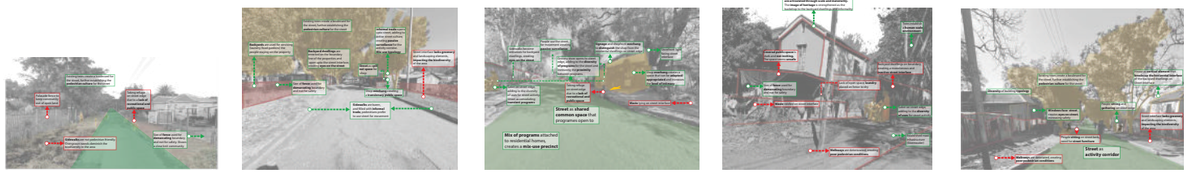
7) Sustainability
Social sustainability is achieved through the implementation of different residential blocks for users of different economic backgrounds.
The street acts as a buffer zone for social engagement.

8) Image
Retaining of historical buildings in the precinct connects the new precinct to its historical fabric. Artworks on the facades of the buildings which make the precinct lively and more inviting, adding a layer of culture to the precinct.

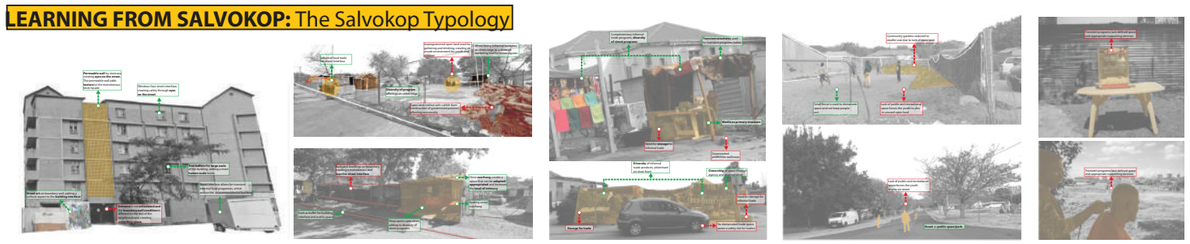
Site Location: Salvokop, Tshwane Ward 60

EXISTING STREET CONDITIONS

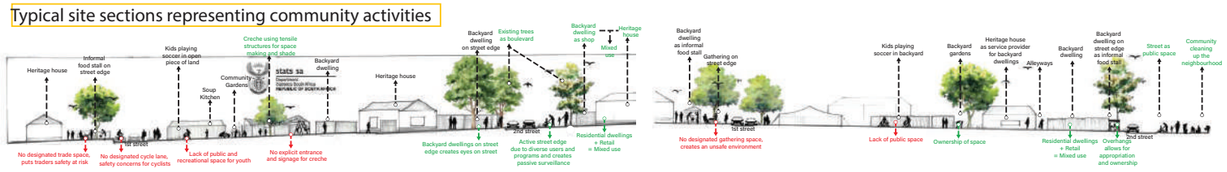
A recent site visit was conducted through the lens of urban design, specifically city making, with a focus on understanding the spatial and socio-cultural dynamics of 2nd Street and the surrounding Salvokop neighbourhood. The analysis centered on the relationship between street activity and the interface with the adjacent backyard dwellings and heritage residential buildings. This approach aimed to uncover the community's existing cultural and city-making practices, spatial identity, and modes of interaction with the built environment, in order to inform the project's city-making approach. The primary challenge encountered during this analysis was the limited access to certain areas due to privacy concerns and the sensitive nature of parts of the area. Nevertheless, the photographic documentation provided a valuable resource, offering insight into the current conditions and enabling a detailed analysis to support the city's broader urban planning objectives for the Salvokop community.



LEARNING FROM SALVOKOP: The Salvokop Typology



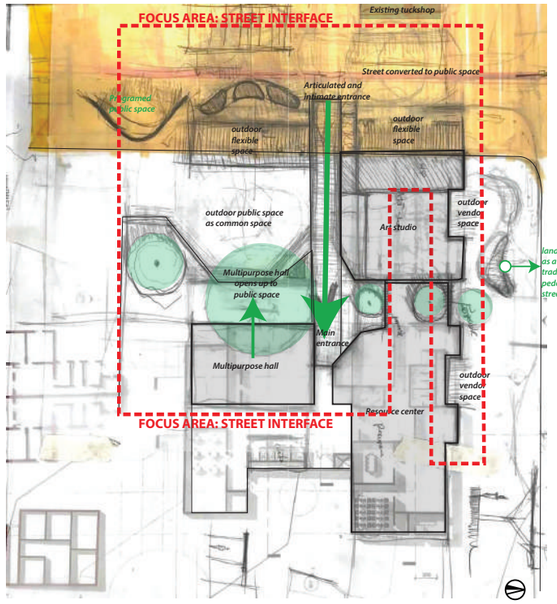
Typical site sections representing community activities



BASE CASE

CITY MAKING PERFORMANCE CRITERIA

	Yes/No	Notes
1) Proximity		
Programmed spaces are diverse horizontally and complementary programmes are placed vertically.	No	There is an understanding of this spatial layout which will be further iterated in the final iteration
There should be a unifying element connecting programmes	Yes	The street tunnel public space and the plaza are the common spaces that programs open to
Programs should be closely situated, forming a compact urban environment.	Yes	
Include responsive public spaces to serve as spill-out areas, supporting surrounding activities.	No	There are public spaces that must be further developed on spill-out spaces
Orient entrances of key programs towards shared common spaces.	Yes	The street tunnel public space and the plaza are the common spaces that programs open to
Where applicable, consider/ensure the connection of off-site programs.	No	
2) Diversity		
The diversity of uses should ensure a mix of necessary, optional, and social uses, tailored to the needs of the users	Yes	Iterations can include a more diverse mix of uses based on community needs and informal trade
Incorporate recreational areas and informal trade platforms to support core functions.	Yes	Iterations can include integrate the recreational areas and trade better
Promote diverse operating hours, encouraging 24/7 activity.	No	
Strategically place programs to enhance passive surveillance, maintaining safety throughout the day and night.	No	Introduction of balconies and more public programs on the first level will increase the eyes on street. Further activating the public space with more diverse uses will increase passive surveillance
3) Adaptability		
Design spaces with flexibility in mind, allowing for sub-uses to emerge, fostering a sense of agency from community.	NO	
Explore the adaptive reuse of the existing building stock to foster new developments.	Yes	The existing heritage building roof can be altered to allow diffused light into the ground floor space
4) Scale and proportion		
Use landscaping to establish a human-scale environment.	Yes	There is an established boulevard that adds the human scale element to the design
Include intimate, human-scale entrances to programs which contrast with larger spaces.	Yes	
Maintain a ground floor to street edge height ratio of 1:1 or 1:2	N/A	
In multi-building environments, provide varying levels of intimacy based on occupancy: - Small (3-6 m) - Medium (6-15 m) - Large (15+ m)	N/A	
Ensure overhead elements at the street interface are 1 to 2 stories high.	Yes	
Introduce programmed spaces that reduce the scale of large public areas.	Yes	
Overhangs should be 1 story high, with a height-to-width ratio of 1:1, and no higher than 3m above ground level.	Yes	
Ground floor height should be larger/taller than the above floors.	Yes	
Building interface should include human scale elements to fragment large buildings.	Yes	This can be further iterated by the implementation of overhangs and pergola like structure
5) Interface		
Articulate the form of buildings to create safer public space and more inviting public spaces.	Yes	
Articulate building interface to create welcoming entrances	No	
Activated interface which encourages engagement.	No	
Ensure visual and/or physical permeability of building elements to maintain openness.	No	
Textured interface	No	
Visual (materiality) variation included in interface	Yes	Permeable brick walls add a layer of texture
Sound buffer (noise buffer) included in interface	No	
Vertical elements included in interface to breakup horizontality	No	
Within the public realm articulate movement and areas for gathering.	Yes	This is achieved through the implementation of overhead structures and the ground floor plans
6) Pedestrian conditions		
Differentiate pedestrian pathways based on primary and secondary movement (materiality, landscaping).	No	
Provide seating, shading, and greenery in places where people can linger.	No	
Use buffers to separate pedestrian and vehicular routes.	No	
Offer essential public amenities such as water points, WiFi zones, public restrooms, and charging stations.		
7) Sustainability		
Include expressed sustainable practices contributing the city's ecological resilience (water harvesting, solar, landscaping).	No	The iteration can focus on water harvesting methods, passive design principles and the inclusion of planting to increase biodiversity
8) Image		
Ensure the design reflects and engages with the surrounding context (considering visual, formal, and vernacular elements).	No	
	Score	**16/34**



The base case design achieved a score of 16 out of 34 in the initial performance assessment of the street interface. During this evaluation, several areas for improvement were identified, alongside measures that had not been addressed in the base case. The most significant gaps were in the categories of pedestrian conditions, which were not considered and therefore received no score, as well as sustainability and image. These deficiencies indicate that the base case design leaves substantial room for improvement, particularly in relation to key aspects of the city-making process.

ITERATION 1

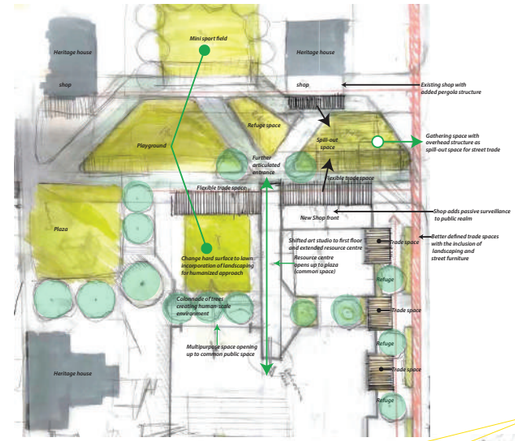
CITY MAKING PERFORMANCE CRITERIA

	Yes/No	Notes
1) Proximity		
Programmed spaces are diverse horizontally and complementary programmes are placed vertically.	Yes	Further development with the implementation of the programmed public space in the street. This can be further iterated with the implementation of new programs to increase diversity
There should be a unifying element connecting programmes	Yes	Implementation of the pergola like structure, linking the public space with the building
Programs should be closely situated, forming a compact urban environment.	Yes	
Include responsive public spaces to serve as spill-out areas, supporting surrounding activities.	Yes	This can be further iterated based on interrogating the type of space required for that spill-out out space
Orient entrances of key programs towards shared common spaces.	Yes	
Where applicable, consider/ensure the connection of off-site programs.	Yes	
2) Diversity		
The diversity of uses should ensure a mix of necessary, optional, and social uses, tailored to the needs of the users	Yes	Iterated according to the type of informal trade. Implementation of services for informal traders
Incorporate recreational areas and informal trade platforms to support core functions.	Yes	Iterated according to the type of informal trade. Implementation of services for informal traders
Promote diverse operating hours, encouraging 24/7 activity.	Yes	Iterated according to the type of informal trade. Implementation of services for informal traders
Strategically place programs to enhance passive surveillance, maintaining safety throughout the day and night.	Yes	Consider the placement of the ablutions. Making it accessible from the public realm, increases the use of the space as there is a lack of public
3) Adaptability		
Design spaces with flexibility in mind, allowing for sub-uses to emerge, fostering a sense of agency from community.	Yes	Consider the trade spaces and how they can be adapted and appropriated.
Explore the adaptive reuse of the existing building stock to foster new developments.	Yes	Next iteration, change the roof material to allow light through the adapted heritage facade to illuminate the interior
4) Scale and proportion		
Use landscaping to establish a human-scale environment.	Yes	
Include intimate, human-scale entrances to programs which contrast with larger spaces.	Yes	
Maintain a ground floor to street edge height ratio of 1:1 or 1:2	Yes	
In multi-building environments, provide varying levels of intimacy based on occupancy: - Small (3-6 m) - Medium (6-15 m) - Large (15+ m)	N/A	
Ensure overhead elements at the street interface are 1 to 2 stories high.	N/A	
Introduce programmed spaces that reduce the scale of large public areas.	Yes	
Overhangs should be 1 story high, with a height-to-width ratio of 1:1, and no higher than 3m above ground level.	Yes	
Ground floor height should be larger/taller than the above floors.	No	The first floor has the studio which requires a larger volume as opposed to the resource center
Building interface should include human scale elements to fragment large buildings.	Yes	
5) Interface		
Articulate the form of buildings to create safer public space and more inviting public spaces.	Yes	
Articulate building interface to create welcoming entrances	No	Walls added at the entrances can display community art while articulating the entrance
Activated interface which encourages engagement.	Yes	Can be further created through recessing the building form or articulating elements.
Ensure visual and/or physical permeability of building elements to maintain openness.	Yes	
Textured interface	Yes	
Visual (materiality) variation included in interface	Yes	
Sound buffer (noise buffer) included in interface	Yes	
Vertical elements included in interface to breakup horizontality	Yes	
Within the public realm articulate movement and areas for gathering.	Yes	
6) Pedestrian conditions		
Differentiate pedestrian pathways based on primary and secondary movement (materiality, landscaping).	Yes	
Provide seating, shading, and greenery in places where people can linger.	Yes	
Use buffers to separate pedestrian and vehicular routes.	Yes	
Offer essential public amenities such as water points, WiFi zones, public restrooms, and charging stations.	No	Water points and services to informal traders as well as community.
7) Sustainability		
Include expressed sustainable practices contributing the city's ecological resilience (water harvesting, solar, landscaping).	Yes	Next iteration: Water tanks can be placed under tower to capture runoff as well as allowing the gutters from the roofs to run into he water tanks (to central part of the site).
8) Image		
Ensure the design reflects and engages with the surrounding context (considering visual, formal, and vernacular elements).	Yes	Articulated walls at entrances can be canvas for community artists to express their art, adding a vibrant and community centered image to the centre.
	Score	**31/34**

ITERATION 2

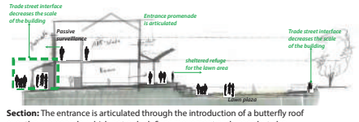
CITY MAKING PERFORMANCE CRITERIA

	Yes/No	Notes
1) Proximity		
Programmed spaces are diverse horizontally and complementary programmes are placed vertically.	Yes	
There should be a unifying element connecting programmes	Yes	To be further developed and integrated better with the design
Programs should be closely situated, forming a compact urban environment.	Yes	
Include responsive public spaces to serve as spill-out areas, supporting surrounding activities.	Yes	Types of public programs to be further developed and integrated into overall design
Orient entrances of key programs towards shared common spaces.	Yes	
Where applicable, consider/ensure the connection of off-site programs.	Yes	
2) Diversity		
The diversity of uses should ensure a mix of necessary, optional, and social uses, tailored to the needs of the users	Yes	
Incorporate recreational areas and informal trade platforms to support core functions.	Yes	
Promote diverse operating hours, encouraging 24/7 activity.	Yes	To be further developed
Strategically place programs to enhance passive surveillance, maintaining safety throughout the day and night.	Yes	To be further developed
3) Adaptability		
Design spaces with flexibility in mind, allowing for sub-uses to emerge, fostering a sense of agency from community.	Yes	To be further developed
Explore the adaptive reuse of the existing building stock to foster new developments.	Yes	
4) Scale and proportion		
Use landscaping to establish a human-scale environment.	Yes	
Include intimate, human-scale entrances to programs which contrast with larger spaces.	Yes	
Maintain a ground floor to street edge height ratio of 1:1 or 1:2	Yes	
In multi-building environments, provide varying levels of intimacy based on occupancy: - Small (3-6 m) - Medium (6-15 m) - Large (15+ m)	N/A	
Ensure overhead elements at the street interface are 1 to 2 stories high.	N/A	
Introduce programmed spaces that reduce the scale of large public areas.	Yes	
Overhangs should be 1 story high, with a height-to-width ratio of 1:1, and no higher than 3m above ground level.	Yes	
Ground floor height should be larger/taller than the above floors.	Yes	
Building interface should include human scale elements to fragment large buildings.	Yes	
5) Interface		
Articulate the form of buildings to create safer public space and more inviting public spaces.	Yes	
Articulate building interface to create welcoming entrances	Yes	
Activated interface which encourages engagement.	Yes	
Ensure visual and/or physical permeability of building elements to maintain openness.	Yes	
Textured interface	Yes	To be further developed
Visual (materiality) variation included in interface	Yes	
Sound buffer (noise buffer) included in interface	No	
Vertical elements included in interface to breakup horizontality	No	
Within the public realm articulate movement and areas for gathering.	Yes	
6) Pedestrian conditions		
Differentiate pedestrian pathways based on primary and secondary movement (materiality, landscaping).	Yes	
Provide seating, shading, and greenery in places where people can linger.	Yes	
Use buffers to separate pedestrian and vehicular routes.	Yes	
Offer essential public amenities such as water points, WiFi zones, public restrooms, and charging stations.	Yes	
7) Sustainability		
Include expressed sustainable practices contributing the city's ecological resilience (water harvesting, solar, landscaping).	Yes	To be further developed
8) Image		
Ensure the design reflects and engages with the surrounding context (considering visual, formal, and vernacular elements).	Yes	
	Score	**32/34**



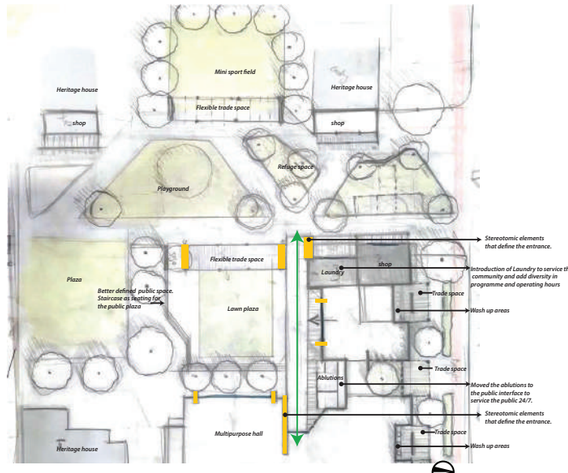
Section: The design emphasizes "eyes on the street," with the articulation of the first-floor street interface helping to define and activate public space. Overhead elements create a sense of private space while remaining flexible, allowing for community appropriation and ownership, particularly by informal traders. These overhead features also reduce the perceived scale of the building, fostering a more intimate, human-scale environment that enhances the connection between the built form and its users.

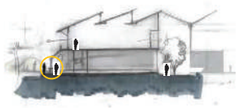
Section: The creation of a balcony on the first floor enhances street surveillance by increasing "eyes on the street." Relocating the art studio to the upper level further supports this, as the studio's afternoon and evening hours provide extended passive surveillance, compared to the classrooms that were previously situated there. The articulation of the roof to allow natural light to flood the studio serves as a passive design strategy, contributing to the sustainability goals of the project. Additionally, the pergola structure helps define public space while allowing for flexibility, appropriation, and adaptation by the community.



Section: The entrance is articulated through the introduction of a butterfly roof over the promenade, which not only defines movement and space but also provides sheltered refuge for the adjacent lawn area. This roof form enhances the scale and dynamic quality of the entrance promenade, establishing a more engaging interface. The resource center is recessed, creating a transitional space that opens onto the common lawn, facilitating a seamless connection between the built environment and the outdoor area. The first-floor façade of the art studio, composed of permeable brick, fosters a relationship with the exterior environment, allowing for visual permeability along the street edge and further reinforcing passive surveillance.

Section: The integration of street furniture along the street interface provides pedestrians with safe spaces for rest and refuge, while also activating and enhancing the building's interface. This design intervention enriches the pedestrian

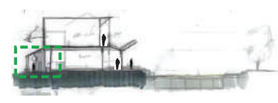




Section: Implementing multi functionality to the informal trade spaces.

Section: Articulating roof overhang to protect interior space from western sun.

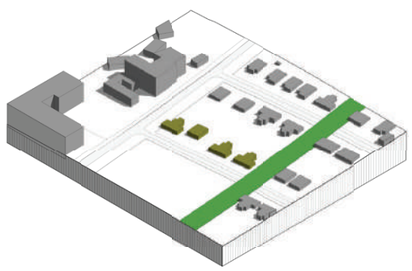
Section: Creating a more intimate space for resource centre by decreasing the ceiling height. the overall height for first floor was increase to create a greater sense of proportion and scale. The implementation of water tanks under the lawn area acting as a central water harvesting system that harvest rainwater and stormwater runoff.



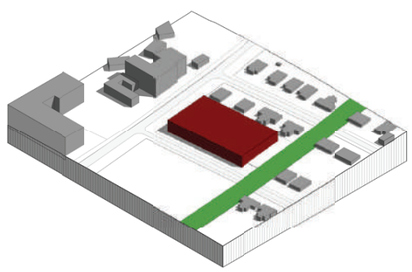
Section: Integration of washing up area for informal traders by recessing the niche space further into the building. This wash up area can also be of service to the community

GESTALT: Form Making

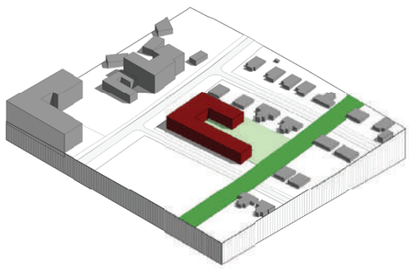
Evolution of Form:



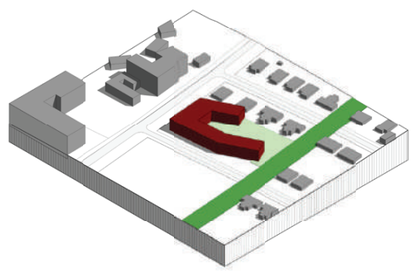
Existing condition



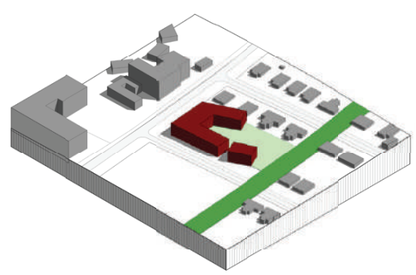
Mass



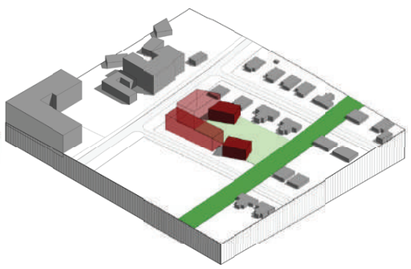
Urban room



Articulation of form: Celebrating the corner

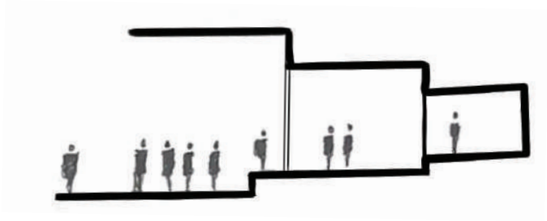


Articulation of form: Movement and accessi-bility

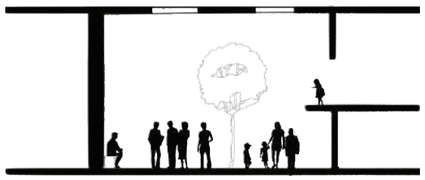


Functionality

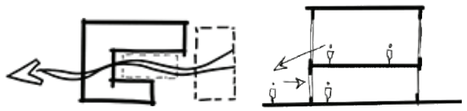
DESIGN STRATEGIES



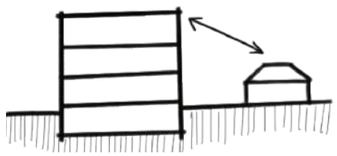
SCALE OF ENGAGEMENT



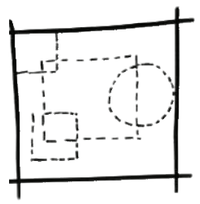
Threshold



Permeability

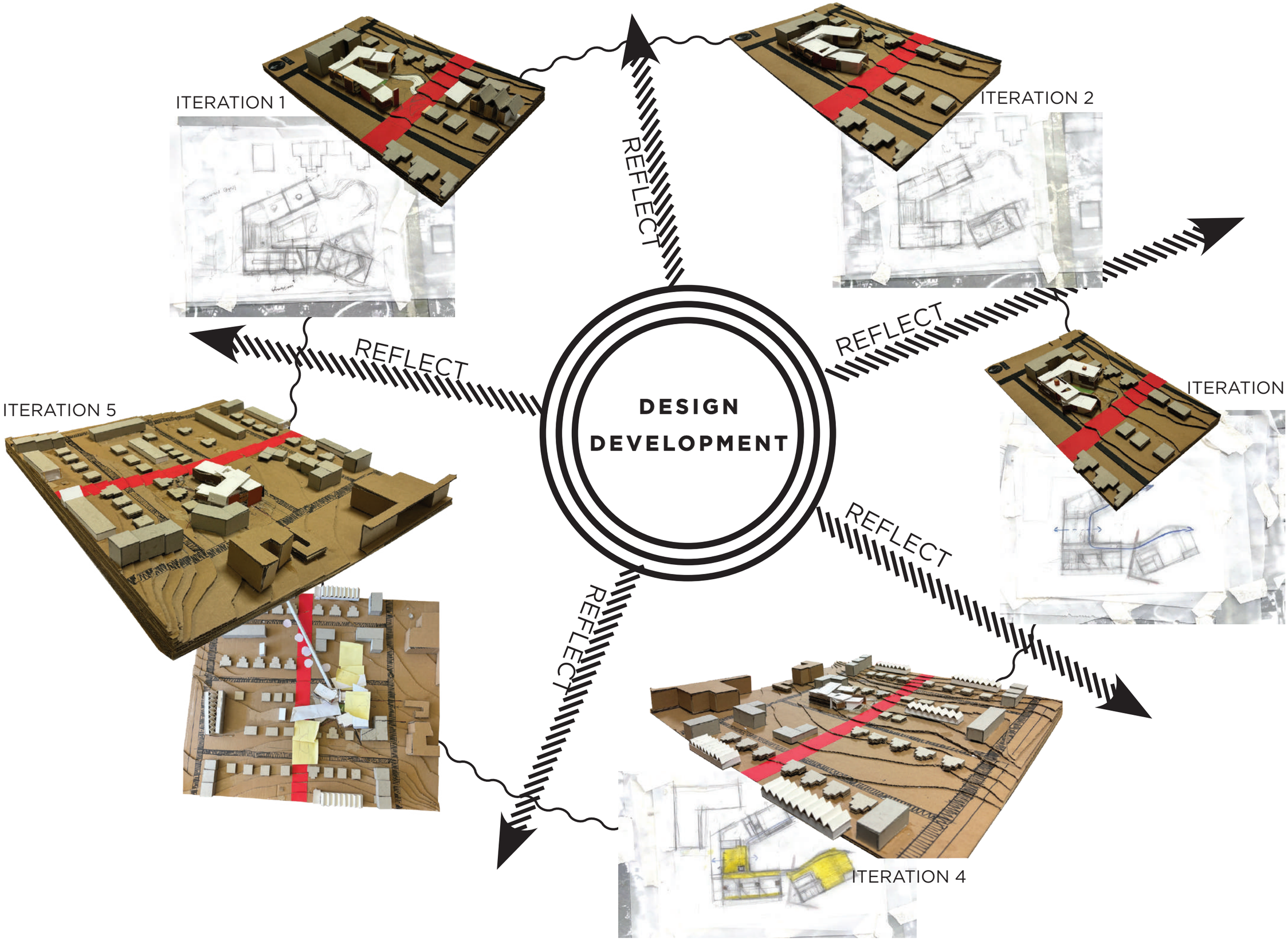


Building Scale



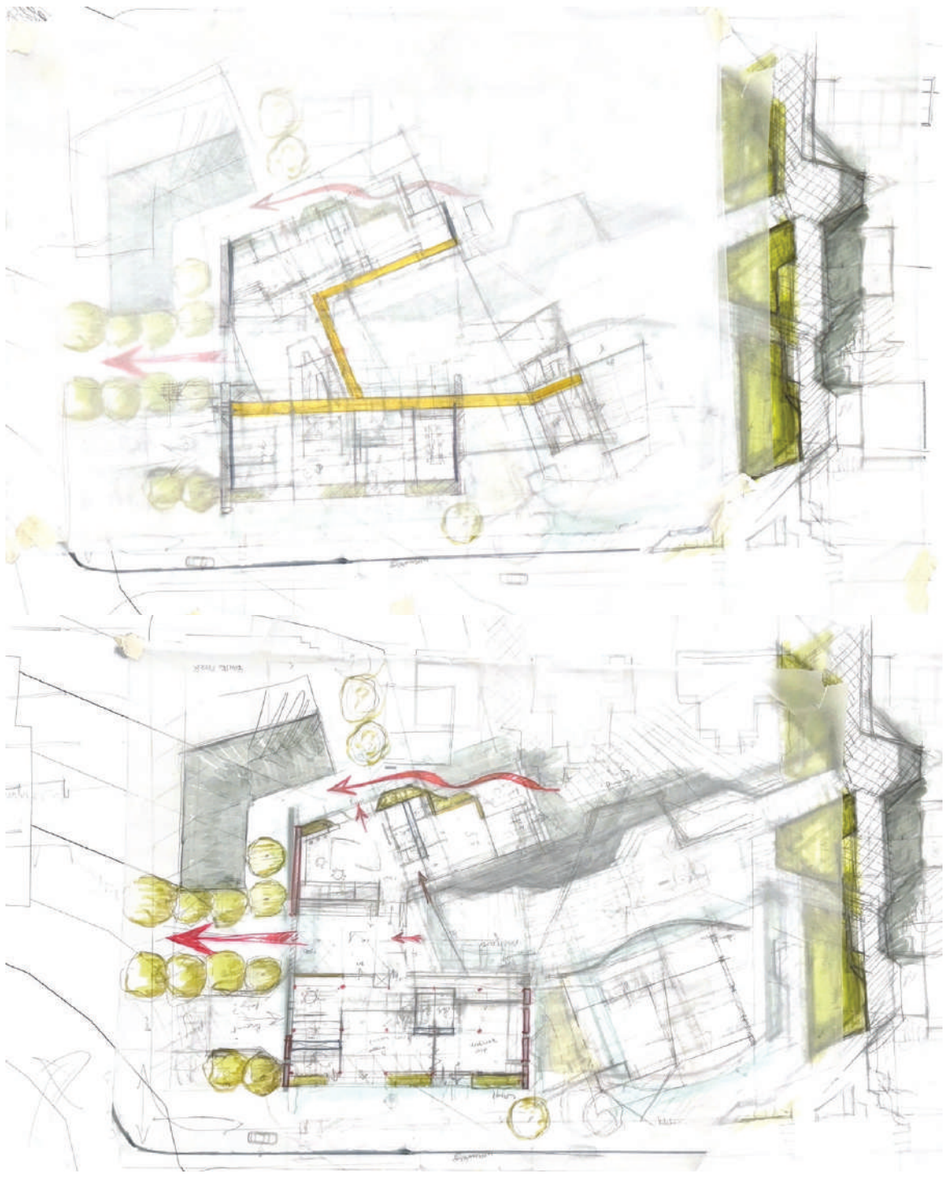
Flexible Space

DESIGN ITTERATION

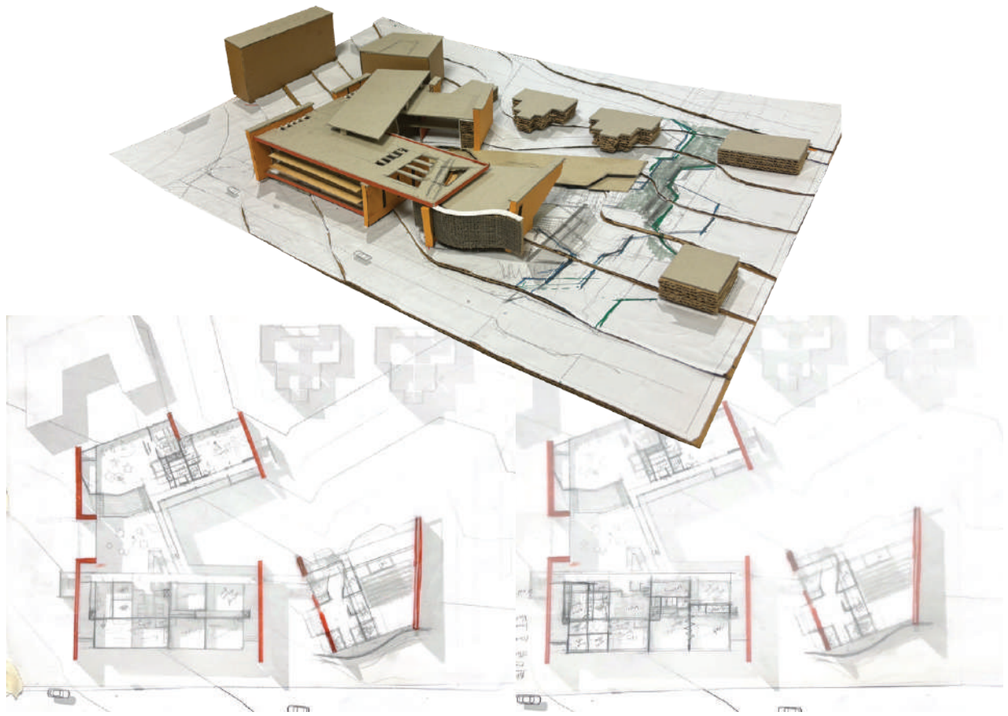


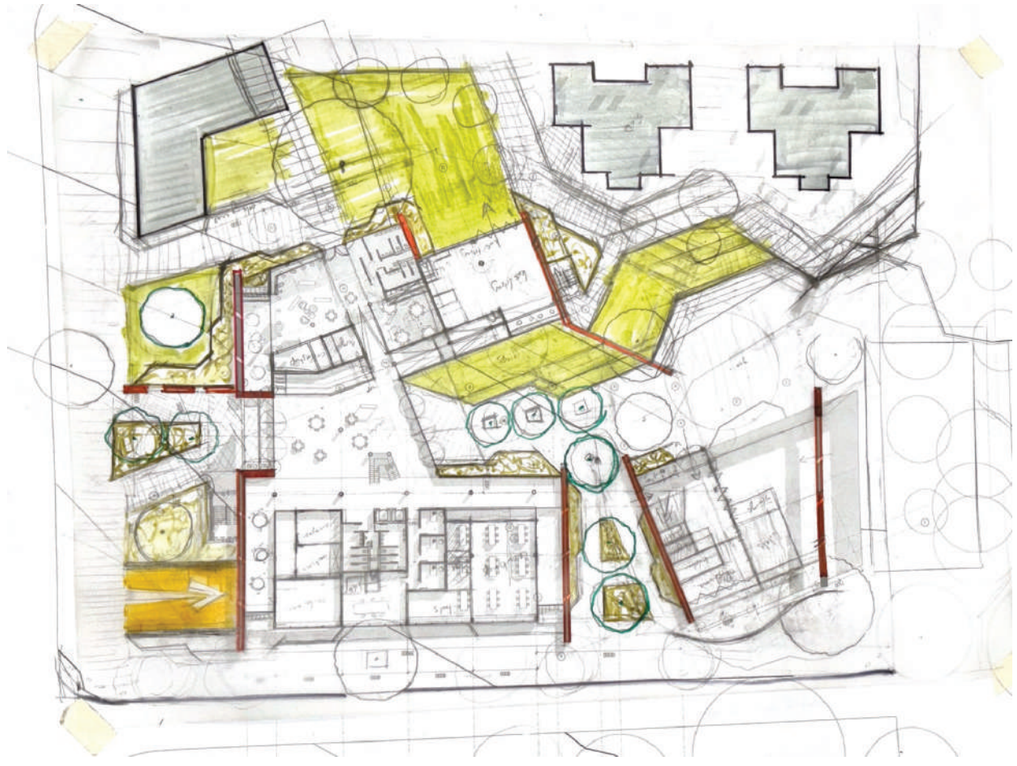
SKETCH PLAN DEVELOPMENT

ITERATION 1



ITERATION 2

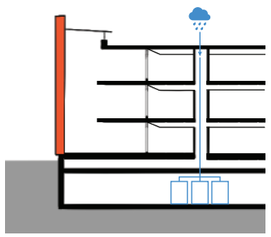




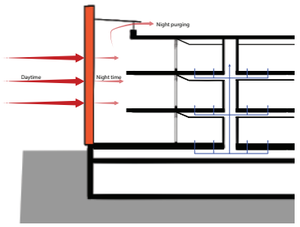
TECHNOLOGICAL APPROACH

The technological approach is twofold. First, it explores how the architecture can integrate passive design principles to ensure adaptability to a changing climate. Second, it considers how technology and materiality can embody the site's sense of place and history. Thus, the approach addresses climate change through passive design strategies and honors heritage through the use of site-specific materials.

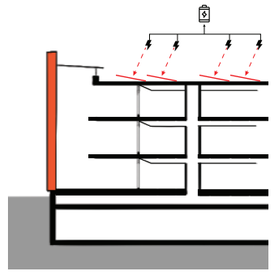
Passive Design Principles



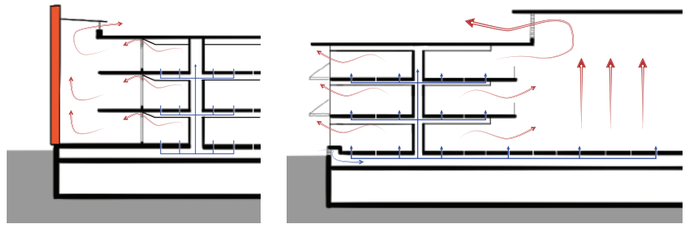
Rainwater harvesting



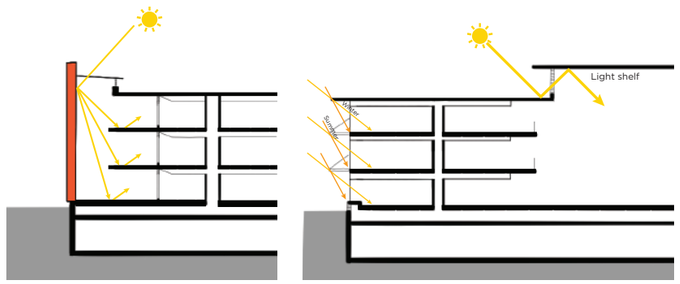
Thermal mass - Night purging and cooling



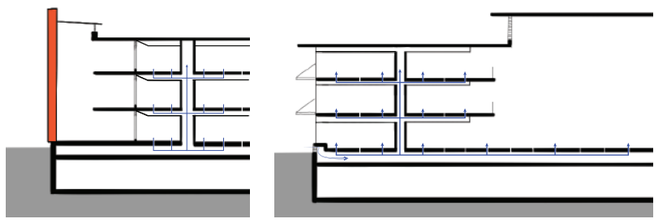
Energy



Passive ventilation - stack effect



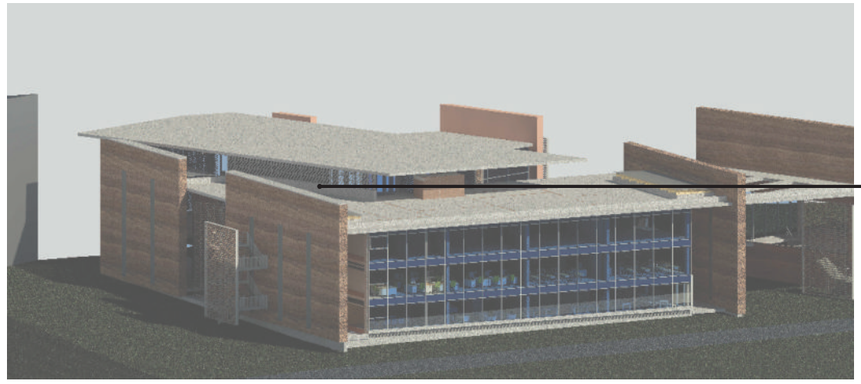
Daylighting - light shelves, light wells and shading devices



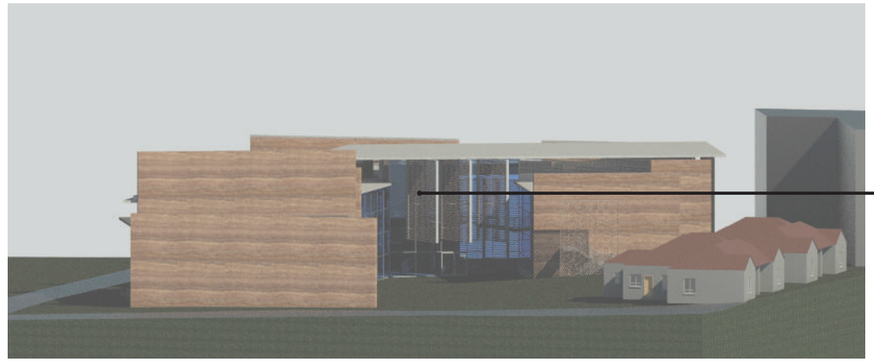
Passive cooling (mechanically assisted)- rock bed and radiator.

Materiality

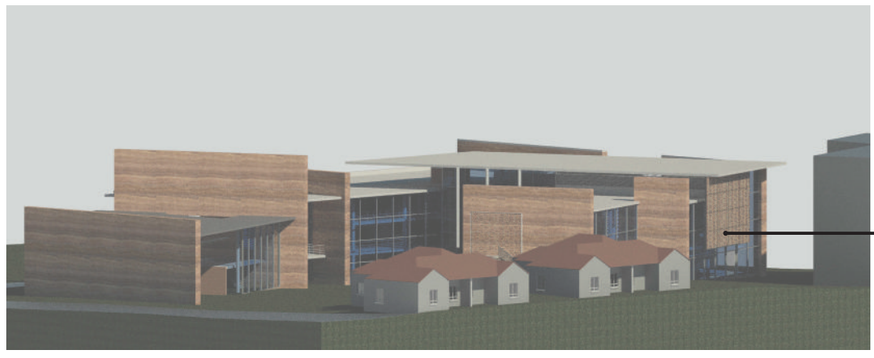
The materiality will incorporate site-specific materials that reflect the rich heritage of the site and the legacy place. These materials possess thermal mass properties, which will be integrated with passive design strategies to enhance the building's climate adaptive capacity.



Rammed earth walls: The rammed earth walls will be constructed using rock and sand excavated from the site's basement work, creating feature walls that 'hug' the building. Rammed earth provides excellent thermal mass, with walls facing east and west to absorb solar radiation during the day and release it at night.



Brick Brise-Soleil: Bricks will be sourced from existing homes on-site and reused, honoring the heritage and historical presence of the area. These reclaimed bricks will be re-purposed as brise-soleil screens for the east and west-facing facades, providing sun shading and enhancing the building's sustainability.

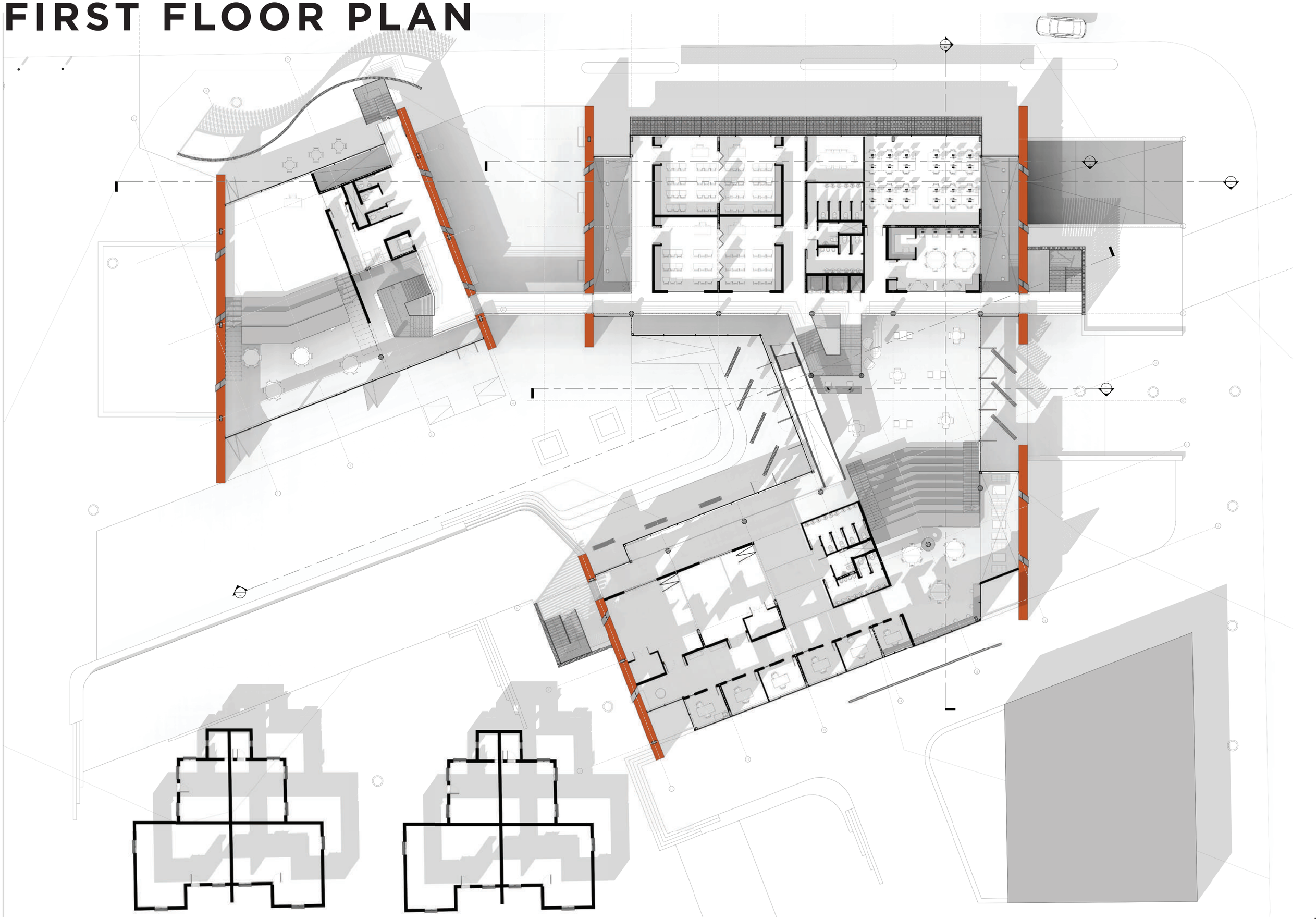


Re-purposed Brise-Soleil Screen

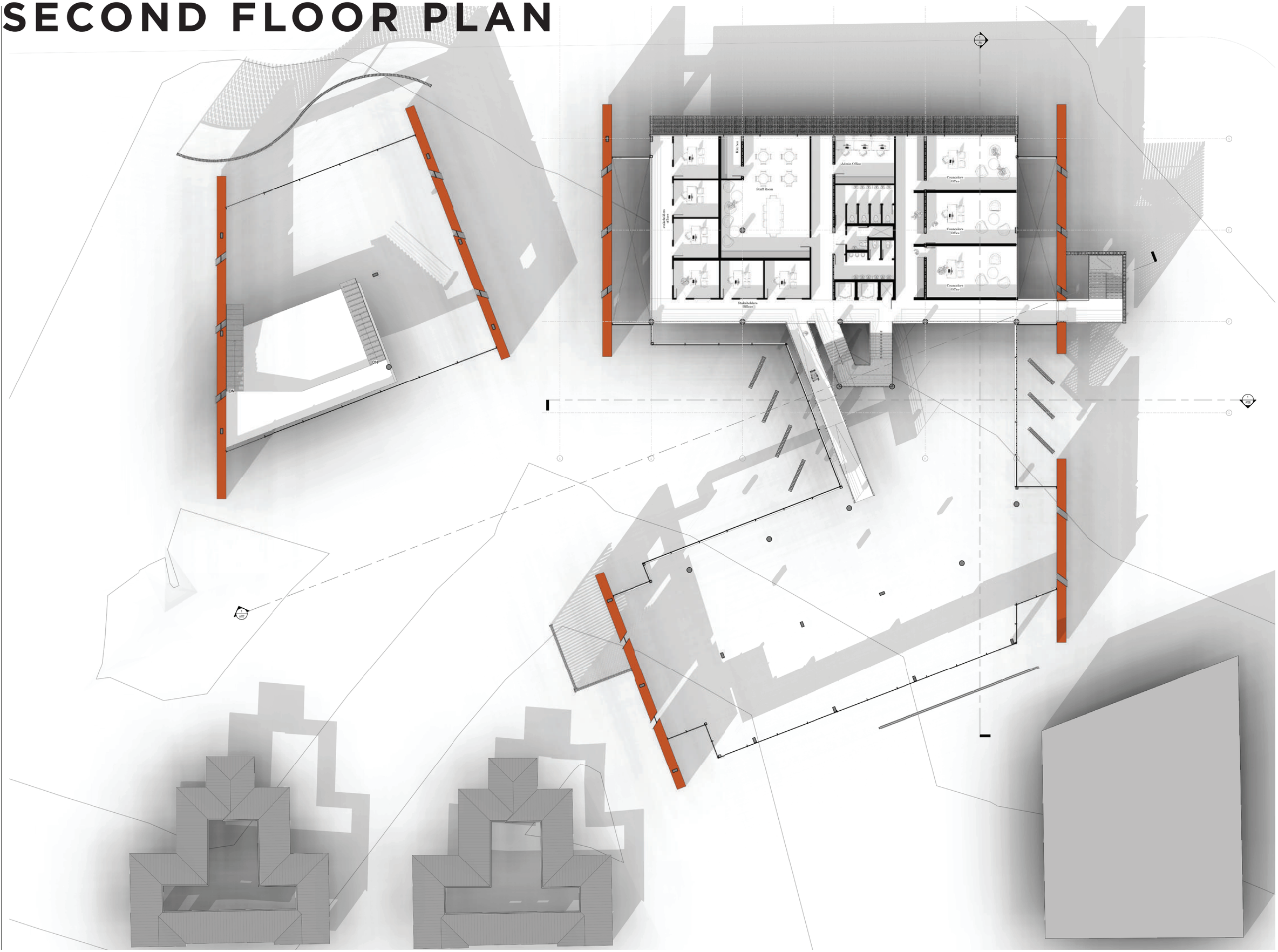
GROUND FLOOR PLAN

Emergency Staircase
Restaurant
Goods Lift
Storage
Kitchen
Multi-Functional gathering/ performance space
Multipurpose Hall
Stage
Tool Workshop
Work Cubicles
Spillout workspace
Workshop
Storage
Sewing Workshop
Storage
Workshop
Basement Parking Entrance
Emergency Staircase
Multipurpose Atrium Space
UP
Multi-Functional Staircase
Kitchen
Coffe Shop
Public Courtyard
3000
Lift
Office
Kids Library
Activity Room
Work stations
Emergency Staircase
ECD Playground
ECD
ECD

FIRST FLOOR PLAN



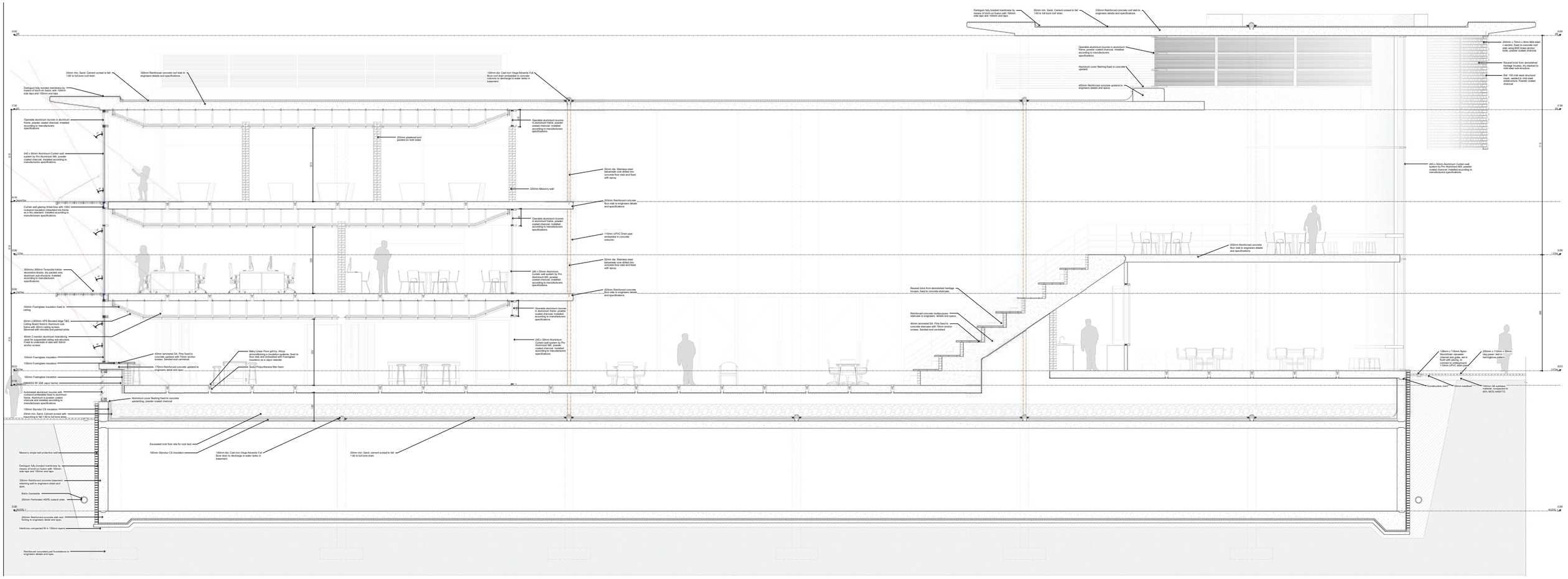
SECOND FLOOR PLAN



SECTION AA

8000
8000
8000
34.160
02 - Second Floor
3230
30.930
01- First Floor
3230
27.700
00-Ground Floor
4420
23.280
B1-Basement

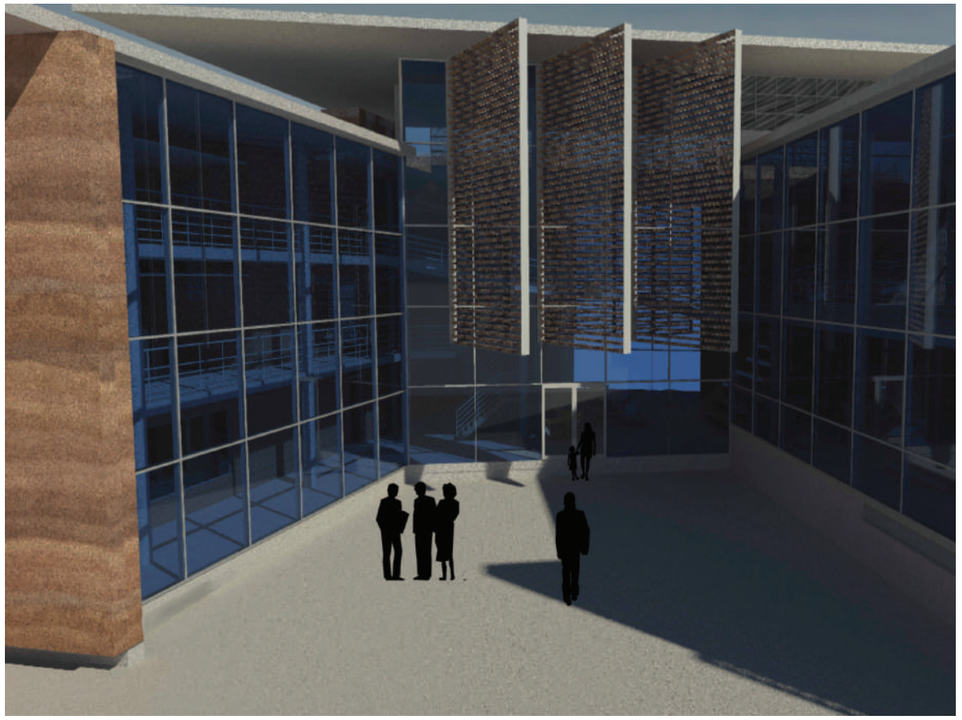
TECHNOLOGICAL SECTION AA



SECTION CC


1
2
3
4
40.000
R2
37.390
R1
34.160
02 - Second Floor
30.930
01- First Floor
27.700
00-Ground Floor
23.280
B1-Basement
2610
3230
3230
3230
4420

REFLECTION



This architectural thesis challenges the ongoing transformation of Salvokop, a community being threatened by the large-scale redevelopment proposed by the Salvokop Spatial Development Framework (SDF). The issue arises from the exclusion of the Salvokop community in the planning process. The ongoing construction has displaced residents, destroyed informal economic spaces, and disrupted vital community institutions. This process of urban fragmentation is creating physical and social divides, undermining cohesion within the community.

The design enquiry centers on how architecture can reuse the physical fabric of Salvokop while preserving its living heritage. The “Urban Zipper” concept is proposed as a framework to reconnect the community, integrating tangible and intangible elements of Salvokop’s heritage. This approach prioritizes the preservation of community identity and social networks, fostering an environment where growth can occur without losing the essence of the place.

The project advocates for incremental development, where urban growth occurs gradually and in harmony with the community’s existing social and cultural dynamics. The ecomuseum concept further enriches the design by positioning architecture as a vessel for preserving and showcasing Salvokop’s heritage, while promoting sustainability and social engagement.

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