

**Developing publics:**

Opportunities for the community in the  
Mississauga Employment Areas

by  
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A thesis  
presented to the University of Waterloo  
in fulfillment of the  
thesis requirement for the degree of  
Master of Architecture

Waterloo, Ontario, Canada, 2020  
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**Authors declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## **Abstract**

The post-war suburbs were not designed to be cities. As they mature and grow, these places need to adapt to take on the roles of new urban centres. However, increasingly it seems these places are inflexible to change in use and form. Furthermore, changes that do occur end up being large scale developments representing interests that favour capital accumulation rather than the needs of the surrounding communities. While these conventional urbanization models, consisting of residential, commercial, and office uses, do provide improvements to the public realm, they also create speculative pressures which reduce the viability for financially weak entities to operate in the resultant fabric. As such, local actors, community organizations, non-profits, etc., often find themselves unable to find a place in areas of planned intensification.

The thesis presents the possibility of the employment areas in Mississauga to take on locally initiated change and growth. Although once peripheral, many of these industrial areas have now been enveloped over time by new city growth and now find themselves centrally located in the region. These areas find themselves slowly outdated by the needs of contemporary industries, but also find themselves resistant to speculative development due to the underdeveloped public infrastructure and zoning policies designed to protect the productive uses they host.

At first glance, it is hard to discern anything of interest but a closer look at the landscape of these mute buildings reveals a strange urbanity. Here, a radical shift is occurring. Programs populate this spatial matrix with seeming randomness— a body shop neighbours a halal grocer in an industrial unit, taekwondo classes are taught in an office park, a Sunday service begins between two warehouses. An unplanned public realm is emerging in this productive landscape.

This thesis looks at the conditions propelling these developing publics in Mississauga and projects forward how we might capture and amplify those conditions to give local agents and communities an avenue of agency to express the needs and wants of the surrounding communities, ultimately nourishing, shaping, and growing the public realm of our post-war suburbs.



## **Acknowledgements**

I would like to first and foremost thank Maya Przybylski, my supervisor. Thank you for your incisive and guiding presence; you have been a voice of clarity over the course of this thesis. I am greatly appreciative of the patience, support, and insight in all of our meetings. Our discussions have really been transformative for my way of thinking both during the development of the thesis and beyond.

Thank you, to Lola Sheppard, my committee member, for your valuable insights and thoughts both during the thesis and in my undergraduate studios. I am lucky to have learned so much from you in my formative years.

To Jonathan Enns, my internal reader, thank you for your insightfulness and clarity of thought, it came at crucial times throughout the thesis and have been helpful in the shaping of this document.

To David Correa, a mentor and a friend. I am so grateful to have been a part of the opportunities you helped provide. Thank you for your support throughout this masters program.

Finally, thank you to my parents and my family for their unwavering support throughout the years. To my friends, classmates and peers, thank you all for going on this journey and growing with me.



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## **Introduction**

The post-war suburbs have been much maligned since their conception, and despite constant academic, social, ecological, and political criticism of the suburbs over those decades, the general form of the suburbs—for the most part—has remained relatively unchanged<sup>1</sup>. But as these suburbs have grown, they have been forced to take on the position of urban centres and develop into cities in their own right.

Introducing a new civic dimension onto the suburbs has been difficult. Much of the contemporary literature suggests that traditional public urban forms, such as plazas and squares—which are typically situated in dense urban fabrics—do not work in sparser contexts<sup>2</sup>. Due to a multitude of economic, regulatory, and infrastructural structure, these areas have been resistant to change for decades<sup>3</sup>. Likewise, municipal efforts to intensify commercial areas, such as around indoor malls or sections of major arterial roads, with the intent to increase density and uses instead raises real-estate values and prices out vital entities—such as local shops, cultural centres, and community organizations—from participating<sup>4</sup>. Consequently, the uses which fill these spaces, such as condo towers and franchises, speak to regional or global economies rather than the immediate city<sup>5</sup>. Instead an alternative space, in the form of the employment areas—industrially designated zones—offers an overlooked and unique ground for addressing some of the inadequacies of the suburbs.

On passing glance, the employment areas do not appear very interesting. The resultant built fabric appears self-evident; they look like, and they were, an area driven and produced by economic and logistical considerations. Since they are based off a simple premise—which was to put industrial buildings into the same place and keep them separate from where people live—their presence in the public consciousness is overlooked. However, these once peripheral industrial zones now do not exist in the same context as during their conception. Older employment areas have been outgrown and enveloped by newer suburban developments and now occupy central geographic locations within their metropolitan areas. Despite intense urbanization pressures in the region, the employment areas have resisted speculative real estate interests due to zoning restrictions set in place decades ago<sup>6</sup>. However, they are also increasingly inconveniently located and expensive for industrial uses<sup>7</sup>. This no man's land between two opposing economic models becomes a space of uncertainty and opportunity for the local community.

And a closer look at these mute buildings begins to reveal strange traces of urbanity. For those who live near these areas, these may be obvious facts of life, but here a radical shift is occurring. A mosque shares an industrial building with a logistics operation (fig. 1), taekwondo classes

1. Berger, Kotkin, and Leventhal  
*Center for Advanced Urbanism, Infin.  
Suburbia*, 10–11.

2. Segal and Verbakel, “Urbanism  
*Without Density*,” 7.

3. Sorensen and Hess, “Building  
*Suburbs, Toronto-Style: Land  
Development Regimes, Institutions,  
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Dependence*,” 433.

4. Moskowitz, *How to Kill a City:  
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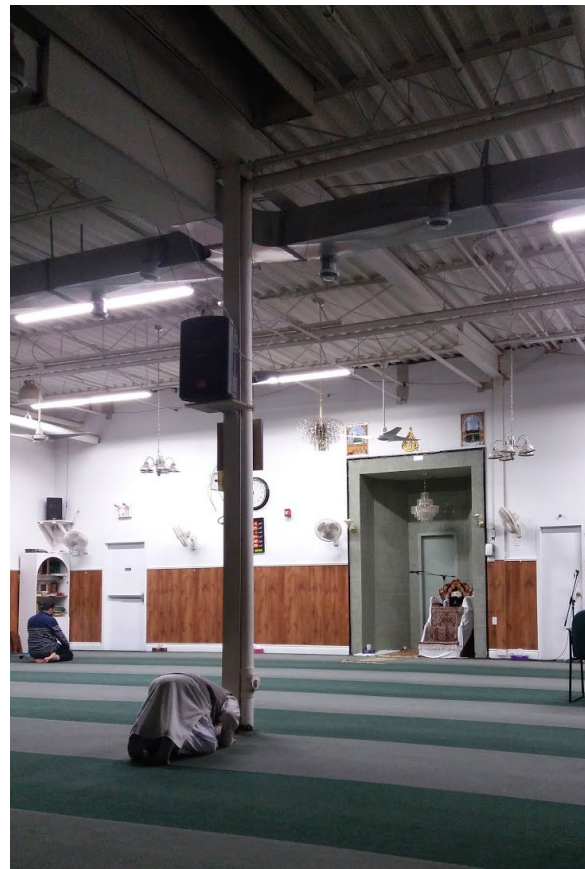
5. Stein, *Capital City: Gentrification  
and the Real Estate State*.

6. Greenberg, “More than a Desk  
and a Parking Spot: Tapping  
into the Region's Employment  
Lands.”

7. Lehrer and Wieditz,  
“Gentrification and the Loss of  
*Employment Lands: Toronto's Studio  
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*fig. 1*  
exterior of jamia islamia muslim  
centre and mosque, captured from  
Google street view



*fig. 2*  
interior of jamia islamia muslim  
centre and mosque

are taught in an office park (fig. 3), a Sunday service begins between two warehouses (fig. 4). Inside these places, an unplanned public realm is emerging, and moments of daily life are finding their way into these industrial areas.

While these phenomena could be read as passing curiosities or plain opportunism, together they begin to reveal the sum of—and the pragmatic response to—the fields of forces, constraints, and processes which shapes the contemporary city. People live and work in a landscape which is resistant to change but also of a prior era's economy and praxis: this divergence between initial design intent and later inhabitation provides a lens to examine larger issues and change in our cities. They hint at the shifting balance of use and market values of land and property through the processes of deindustrialization and the rise of the real estate sector; they speak about the value of land outside of economic and speculative terms; they reveal inefficiencies and rigidities of contemporary development and planning regimes in meeting local needs; and they provide glimpses of the future of the public and civic realms in maturing low density cities. By understanding the forces and actors behind the creation and the subsequent organic unplanning of the employment lands, there may be opportunities in this space of indeterminacy to carry forward some of that momentum and unlock more potential for change within the existing framework.

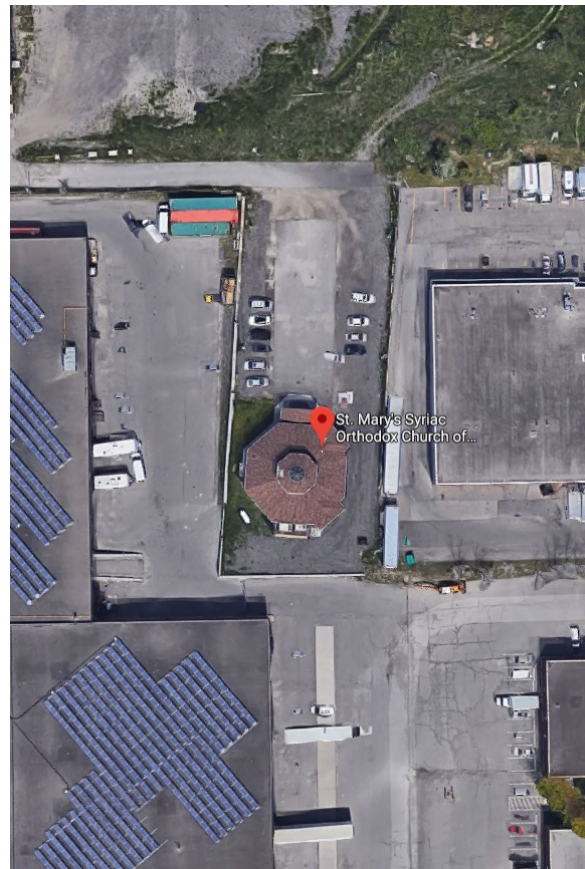
The motivation is to engage and unlock potential spaces and uses within the existing fabric and framework with the hope that through increased possibilities to engage the built environment, local agents and communities are given an avenue of agency to transform our post-war cities into alternate public centres for their neighbourhoods.

Through the tools of architectural and urban design, this thesis will attempt to understand and document this emerging alternate public realm in Mississauga and the context it has arisen from. Then, through scenarios and design interventions, the work will extrapolate and re-imagine how these employment areas might further develop. The thesis is structured into three parts.

The first part, *Change in the suburbs*, lays out an understanding of contemporary urbanization through the framework of industrial and real estate capital, and the implications on its inhabitants and the public realm. This section discusses the obstacles against change in the existing suburban fabrics and the reduced capacity to accommodate growing community needs. The non-residential fabric, specifically the employment areas, are proposed and studied for their capacity to accommodate change and growth in the post-war suburbs. This forms a basis to understand the unplanned public realm appearing in the employment areas.



*fig. 3*  
taekwondo classes on semenyek cr.,  
captured from Google street view



*fig. 4*  
aerial image of st. mary's syriac  
orthodox church, from Google Maps

The second, *Mapping change*, grounds the research into the context of Mississauga through a collection of maps. With the assumption that change in the suburbs happens in the areas which are not residential, the analyses look at the city through the lenses of employment and use. It begins by understanding the spatial conditions of the employment areas, both its relationship to the surrounding urban contexts, as well as the building stocks which form these fabrics. Maps of employment and businesses are produced to then further understand and visualize changes in Mississauga and in the employment areas. These maps are then used to document and locate the emergence of community uses. Sites in the employment areas with high densities of businesses, mixed uses, and community actors, are then identified for further design studies.

The final part, *Unlocking opportunity*, tests possible spatial opportunities in the existing fabric of the employment areas to accommodate the changing needs of the local community and expand the public realm. Informed by the research and mapping in the previous sections, four design interventions are undertaken to address the interface between the existing industrial fabric and the public realm which is appearing. Each scenario looks at a different spatial condition commonly found in the employment areas. Engaging the existing to its fullest, the designs attempt to find the minimal built intervention required to unlock new uses and introduce new spatial opportunities for local community actors while maintaining the productive nature of these places.

While the work is focused on the specificities of Mississauga and each site within Mississauga, the hope is that some of the methods and motivations can be applied to similar conditions of sprawl and suburbia elsewhere.

*fig. 5*  
a picnic table on orwell st, captured  
from Google street view



*fig. 6*  
a parcel of land to be developed into  
industrial units on eglinton ave. w



**Change in the suburbs**





### Post-war urbanization

*“Everyone likes to live in the suburbs. Everyone pokes fun at the suburbs. Everyone respects those who made the suburbs. Everyone despises the suburbs. Everyone’s friends lives in the suburbs. Everyone hates the kind of people who live in the suburbs. Everyone wants bigger and better suburbs. Everyone thinks there is just too much suburbs. You and I live in the suburbs —it’s lovely to have a nice home in the suburbs. The whole idea of the suburbs fills us with dismay, alarm, and frustration. Almost everyone’s business is dedicated to making the suburbs more and more and more enjoyable. The suburbs are a crashing bore and desolating disappointment. The suburbs are exactly what we asked for. The suburbs are exactly what we got.”*<sup>8</sup>

Humphrey Carver, *Cities in the Suburbs*

Urbanization is not the same process and does not produce the same result as city-building. Rather than creating communities or cities, the processes of urbanization are a means for colonization and expansion, an infrastructure for the aggregation of homes<sup>9</sup>. What typically results is sprawl.

Here, the distinction between city and urbanized areas is easy to experience but hard to describe. It can be in part understood by the viability and legibility of the public realm, which entails a sense of sharing and belonging in a space with other beings. This sense of the public realm can be extended as well into broader notions, such as the urban commons<sup>10</sup> or the idea of the right to the city<sup>11</sup>, which speak about a collective realm, of shared interests, and shared stakes in our cities. Cities can also be differentiated from sprawl through a sense of urbanity, which is equally nebulous. The qualities of urbanity are described by many authors in different ways. Jane Jacobs and Jan Gehl describe it through activity and street life. Peter Buchanan talks about place-making. Kevin Lynch talks about the perception of urban forms. But most, if not all agree the condition of urbanity is key to successful cities<sup>12</sup>. For the purposes of this thesis, urbanity is used as a broader term which encompasses the public realm, and can be taken as all that is not private, domestic life: the conditions where societal interaction (exchange, production, etc.) can occur.

This shift towards urbanization rather than city-building, enabled by the proliferation of the personal automobile, pushed forward the viability and desirability of dispersed living. As a result of the rise of increased mobility, distance is no longer measured by kilometres but by time<sup>13</sup>. Destinations are no longer related by spatial adjacencies but rather

8. Carver, *Cities in the Suburbs*, 3.

9. Pier Vittorio Aureli, “Toward the Archipelago,” *Log 11* (2015): 94-95.

10. Harvey, “The Creation of the Urban Commons.”

11. Harvey, “The Right to the City.”

12. Montgomery, “Making a City: Urbanity, Vitality and Urban Design.”

topological connections, and place becomes a blur in the car. The public realm is dispersed from places and neighbourhoods into a network of destinations<sup>14</sup>.

Concurrent to the dramatic expansion of personal mobility, somewhere in the post-war transition—a period of reinvention which saw new prototypes for architecture and new ways of living—finance, insurance, and real estate (FIRE) economies rose to global prominence<sup>15</sup>. With the invention and reduced friction of new financial instruments for investment, capital sought for ways to commodify real estate on a global level. In contrast to historical means of intensification, which consisted of subdividing land and incremental additions, contemporary mechanisms of land use intensification are now processes of land assembly and redevelopment<sup>16</sup>. This new system of development is incentivized towards large-scale projects, where risk—and therefore diversity—is minimized through homogenized low risk financial models<sup>17</sup>, and where economies of scale come into full force to leverage maximum profit. Here risk, and therefore control, is assumed by the developer and not the city nor residents prior to the sale of property, and as such, dissonant interests between built design and user are introduced<sup>18</sup>. The confluence of these changes, along with the dire need for mass housing after the war, an abundance of open land and eager capital, and a country looking to lead the future, allowed the early suburbs to prosper.

These prototypical suburbs were not designed to be cities. They were intended to be an extension of the urban form and not as autonomous communities<sup>19</sup>; areas where the nuclear family unit could live separate from the city—a space of domesticity. The needs of work life, civic life, and public life were to be addressed in the city proper. These social, spatial, and auto-centric organizational patterns were further engrained and compounded over time through the ‘tyranny of small decisions’<sup>20</sup>. While this type of urbanization has been (and still is) under heavy criticism from academics, professionals, and the general public since their rise to prominence in the post-war era, it is becoming clear that the suburbs are not going away. The rate of urbanization is currently at its peak, projecting to double the urban population by 2050 yet the density of urban areas is decreasing<sup>21</sup>. More and more people are moving not to the city, but to their peripheries. This lack of the public or civic dimension to post-war urbanization has been a common critique since the first suburbs, and now becomes even more relevant as they become larger, more distant, and more detached from the city centre.

As urban regions continue to grow over time, necessary changes are needed in peripheral cities—due to geographic relevance and population growth—as they take on roles as new urban centres<sup>22</sup> (fig. 7). Despite decades of reform efforts, the general form and pattern of development of both old and new suburbs have remained relatively unchanged<sup>23</sup>. However, there is now a need for maturing suburbs to become cities and take on the functions of complete communities. In Mississauga this narrative holds

13. Bertaud, *Order without Design : How Markets Shape Cities*. 155-156.

14. Rafi Segal and Els Verbakel, “Urbanism Without Density,” *Architectural Design*, 2008, 7-8, <https://doi.org/10.1002/ad.601>.

15. Stein, *Capital City: Gentrification and the Real Estate State*, 24–26.

16. Myers and Baird, “Vacant Lottery.”

17. Keenan, “The Art & Science of Real Estate Development.”

18. Moskowitz, *How to Kill a City: Gentrification, Inequality, and the Fight for the Neighborhood*; Stein, *Capital City: Gentrification and the Real Estate State*.

19. Easterling, *Organization Space : Landscapes, Highways, and Houses in America*, 130; Sewell and Jacobs, *The Shape of the City*, 21.

20. Grose, “Designing Backwards for Suburbia,” 502–3.

21. *The Economist*, “The Transformation of Cities - A Suburban World.”

22. Hemson Consulting Ltd., “Long-Range Forecasts - City of Mississauga 2011-2051,” 9.

23. Sorensen and Hess, “Building Suburbs, Toronto-Style: Land Development Regimes, Institutions, Critical Junctures and Path Dependence.” 429.

true; the Greater Toronto Area (GTA) is experiencing a period of rapid growth. Building construction in Toronto has reached a fevered pitch, and this increased activity in real estate speculation has subsequently spread to the surrounding regions. The *Ontario Provincial Growth Plan* acknowledges this fact and are actively attempting to address it through the concept of complete communities:

*“these are communities that are well designed to meet people’s needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, public service facilities, and a full range of housing to accommodate a range of incomes and household sizes”*<sup>24</sup>.

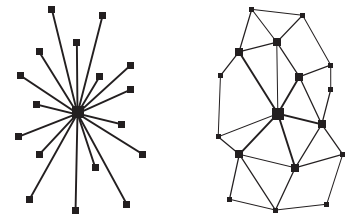
Although there are ongoing efforts to achieve these goals, these needs are difficult to incorporate due the structural inflexibility of the urban fabric.

Change in the suburbs is difficult; there is a strong inertia against alterations in use and form that is structurally inherent in the physical forms and bureaucratic systems which have been built up. Joel Garreau in *Edge City* describes suburban master planning as,

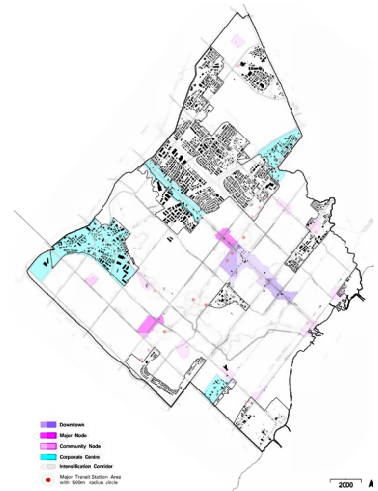
*“that attribute of a development in which so many rigid controls are put into place, to defeat every imaginable future problem, that any possibility of life, spontaneity, or flexible response to unanticipated events is eliminated”*<sup>25</sup>.

Infrastructural networks, lot configurations, discontinuous (and often curved) road systems, low densities, zoning laws, municipal planning policies, mortgage and real estate practices, and development regimes further replicate and reinforce the spatial patterns of the residential fabrics. The aptly designated “Stable Residential Neighbourhoods” in the GTA created from these policies were intentionally designed to prevent incremental change<sup>26</sup>. Additionally, the form of the house remains resistant to change. The standardization of forms, materials, and construction methods of the housing industry has further cemented the system of production, consumption, and exchange<sup>27</sup>. Mortgage and real estate practices have turned the house into a ‘product’ that must remain consistent in order to be evaluated and commodified<sup>28</sup>. This system of urbanization produces not just ‘machines for living’ but also ‘machines for investment’, and the ‘tyranny of small decisions’ which led us to the ‘stuck-ness’ of the suburban residential areas has also reduced its capacity for change.

This thought is reflected by the official Mississauga intensification plan. Growth, and the need for complete communities is not pursued in the single-family residential areas. The Mississauga intensification plan, for example, looks to densifying the spaces surrounding major transit corridors and shopping malls rather than developing the residential areas<sup>29</sup> (fig. 8). The type of developments that the intensification plan



**fig. 7**  
diagram describing the shift from monocentric to polycentric urban regions as suburbs mature and grow into centres of their own



**fig. 8**  
city of Mississauga intensification plan overlaid with employment area outlines and footprints (black)

24. Ontario Ministry of Municipal Affairs and Housing, “Places to Grow: Growth Plan for the Greater Golden Horseshoe (2017).” 10.

25. Joel Garreau, *Edge City: Life on the New Frontier* (New York: Anchor Books, 1992), 453.

26. Hess and Sorensen, “Choices for Scarborough: Transit, Walking, and Intensification in Toronto’s Inner Suburbs.”, 15.

27. Easterling, *Organization Space: Landscapes, Highways, and Houses in America*, 176–93; Brody, “The Neighbourhood Unit Concept and the Shaping of Land Planning in the United States 1912-1968.”

28. Brand, *How Buildings Learn: What Happens after They’re Built*. 81.

29. Glatting Jackson Kercher Anglin et al., “Downtown 21 Creating an Urban Place in the Heart of Mississauga”; Hemson Consulting Ltd., “Long-Range Forecasts - City of Mississauga 2011-2051”; City of Mississauga, “Mississauga Official Plan Schedule 2 - Intensification Areas.”

30. Grant, “Mixed Use in Theory and Practice,” 80.

31. Grant, 73.

32. Grant, 76.

33. Grant, 74.

34. Carver, *Cities in the Suburbs*, 76.

prescribes, along with structural biases in the development protocol, creates a disposition for large-scale, mixed use projects. Despite municipal efforts to move away from the land-use planning which created rigid separations of use, the reality of what is built typically does not reflect these desires<sup>30</sup>. Although the consensus towards mixed-use in an urban fabric is positive, there is increasingly strong evidence which points to the failure of contemporary methods for mixed-use developments. Resistance from market desires, neighbourhood pushback, and planning biases have largely prevented true mixed use (e.g. group homes, day-care centres, halfway houses, industrial uses, parks, and playgrounds) from being built<sup>31</sup>. Furthermore, these types of developments see high vacancies in ground floor commercial units due to incompatible spatial constraints and proximity of housing<sup>32</sup>. So instead of true mixed-use, mixed-use developments tend to consist of some combination of residential, institutional, retail, and commercial uses<sup>33</sup> which speak of a specific demographic and subsequent urban form. And, the catch-22 of these planned centres, as Carver noted in his book *Cities in the Suburbs* was,

*“the very act of designating a strategic location on a city plan automatically places a high value on this land. Consequently, purchasers cannot afford these sites for the very purposes they should fulfil”*<sup>34</sup>.

Instead, the agents who can afford to develop these planned centres represent regional and global interests, and not the local community. Furthermore, the public spaces which follow (in the forms of parks, plazas, and squares) are conceived of as amenities or commodities rather than spaces of gathering and interaction.

Current avenues for accommodating community needs within the residential fabric and areas of planned intensification are suppressed by a speculative market and ingrained planning structures. It is this assumption that leaves the employment areas to be of interest for further investigation.

### **Everything not residential**

An equally radical spatial shift occurred alongside the changes in urbanization practices. Engrained in the planning values of the suburbs was the separation of work and family life and the expulsion of everything not domestic<sup>35</sup>, including the condition of urbanity. For this thesis, the assumption is made that one of the precursors to urbanity is the presence of work and action (i.e. businesses, jobs).

Whereas the industrial city had their factories in the city centre, close to the lives of their workers, the post-war reaction to their polluted city centres was to create clear spatial divisions between work and home. This spatial shift, along with the offshoring of labour-intensive manufacturing activity and the reduced friction for global logistics, was the impetus for the deindustrialization of cities<sup>36</sup>.

What industrial activity that remained was pushed out into the peripheries of cities due to rising land prices, pressure from incompatible uses, and increased congestion in the core city. Furthermore, planning practices of monofunctional zoning, alongside city initiatives to decentralize place-unspecific workspaces, and the growth of regional logistics networks, led to clusters of offices, warehouses, and factories to appear alongside the suburbs at the outskirts of metropolitan areas<sup>37</sup>. As such, these spaces have coincidentally been spared from the immutable fate of the residential fabrics. Instead, these industrial areas are the spaces of flux, flexibility, and adaptivity demanded by a post-Fordist, post-industrial, neoliberal economy. In Mississauga and the Greater Toronto Area, these industrially zoned areas became designated as 'Employment Areas' and 'Business Parks'. These industrial areas, along with arterial corridors, vacant lots, and parking lots, provide spaces to absorb change in an otherwise inflexible urban fabric<sup>38</sup> (fig. 9).

The distinction between industrialization and urbanization can be further understood from how each process values land. Samuel Stein in his book, *Capital City*, describes this dichotomy between the two poles of capital—industrial capital and real estate capital—which form the basis for urban development over the centuries. At the risk of being reductive, we can begin to understand and illustrate the fundamental divide between the interests of industrial tenants and real estate developers in driving urbanization. Besides the incompatibility of use created by heavy industry in terms of noise, pollution, and traffic, there is a curious bimodality towards land's inherent value and potential value<sup>39</sup>. For real estate developers, expensive land and expensive buildings imply higher rents to be charged and higher property sales prices, and thus more profit. Land is viewed in terms of its speculative profit. Under this view, design and planning are utilized as tools to commodify space, strengthen claims to privately owned property, and maximize market value. Conversely, for

35. Sewell and Jacobs, *The Shape of the City*; Easterling, *Organization Space : Landscapes, Highways, and Houses in America*. 16-22.

36. Howland, "Planning for Industry in a Post-Industrial World: Assessing Industrial Land in a Suburban Economy," 40.

37. Berger, *Drosscape: Wasting Land in Urban America*; Jones and Williamson, *Retrofitting Suburbia : Urban Design Solutions for Redesigning Suburbs*.

38. Hess and Sorensen, "Choices for Scarborough: Transit, Walking, and Intensification in Toronto's Inner Suburbs." 16.

39. Stein, *Capital City: Gentrification and the Real Estate State*, 44.



*fig. 9*  
everything not residential in the city  
of Mississauga, plan showing non-  
residential footprints, major roads,  
transit lines, and green spaces

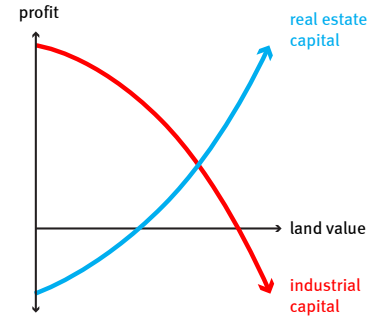
industrial uses, cheap land and cheap buildings imply low maintenance fees, low property taxes, and low rent. Land value is an operational cost <sup>40</sup> (fig. 10).

The tension arises through what the geographer Neil Smith describes as a ‘rent gap’ wherein the difference between the value of a current use is lower than another potential use <sup>41</sup>. Another way this is framed by developers is the idea of “highest and best use”, where land values are not determined by existing values, but by the optimal values given by their highest and best uses. Since industrial uses generate the lowest land values by nature and incentive, residential and commercial uses will always be preferred in this framework <sup>42</sup>. Rising housing demand, shortage of available greenfield sites in peripheral cities, and rising land values of urbanized areas in the GTA has only further increased the attractiveness for the conversion of industrial areas to residential or commercial spaces<sup>43</sup>. Speculation is a powerful deterrent to industrial businesses already sensitive to changes in rent <sup>44</sup>.

However, suburban municipalities are finding value in retaining industrial uses and production based economic activity within their boundaries. The functional value of these industrial areas has been classified by urban planners as spaces for production, distribution, and repair activities to occur, and are necessary for the proper functioning of the immediate neighbourhood, urban core, and region <sup>45</sup>. Additionally, industrial businesses bring relatively well-paying, low entry-barrier employment opportunities as well as low cost spaces for start-up businesses to inhabit. Besides the economic activity which these areas host, these industrial areas due to their underdevelopment, also become land reserves for an uncertain future <sup>46</sup>.

These contrary motivations for industry and land for use and speculation are managed and enforced through zoning designations which restrict certain uses in certain areas; consequently, zoning determines land value. In the employment areas of the GTA and Mississauga, the monofunctional zoning framework which was originally created to preserve suburban housing prices from decreasing from neighbouring industrial uses is now the same framework which is holding speculative interests at bay from the employment areas. Provincial and municipal policies have been put into place to protect the jobs in these areas, emphasizing the value which these different industries offer the city beyond the dominant retail and commercial businesses in the city proper<sup>47</sup>.

There is criticism about the necessity of subsidizing increasingly valuable land for industrial uses that are relocating elsewhere <sup>48</sup> coupled with the increased importance of the knowledge-based economy. This view assumes the value of the employment areas can be measured by the number of jobs created; since office and retail conversions could increase the density of jobs, they are arguably a higher and better use here. However, this view discounts the quality of jobs and the productive



*fig. 10*  
diagram of the profitability of industrial capital and real estate capital in relation to land values

40. Stein, 29–40.

41. Smith, “Gentrification and the Rent Gap.”

42. Chapple, “The Highest and Best Use? Urban Industrial Land and Job Creation”; Lehrer and Wieditz, “Gentrification and the Loss of Employment Lands: Toronto’s Studio District”; Stein, *Capital City: Gentrification and the Real Estate State*, 48.

43. Lehrer and Wieditz, “Gentrification and the Loss of Employment Lands: Toronto’s Studio District.”

44. C. Scott Dempwolf, “An Evaluation of Recent Industrial Land Use Studies: Do Theory and History Make Better Practice?,” 25.



value of the types of industry they would replace in favour of quantity. So, despite development pressures, strict stances are currently taken against redevelopment of employment lands in order to keep land prices predictable for existing industrial occupants<sup>49</sup>; the easing of any one employment area would open speculative pressures and land values across all employment areas<sup>50</sup>.

Furthermore, as seen with the unprecedented pace of technological and social development in the past decades, the future for employment and the nature of the economy is uncertain. The rise in automation technologies, digital fabrication, online marketplaces, digital collaboration, etc. are some of the early signs that a new normal in the way work, employment, and economies will be carried out is unfolding. In the face of an uncertain and volatile future, municipalities are prudent in committing to drastic changes.

The effect of these policies of preserving the industrial areas, on an urban and regional level, was the creation of an ephemeral archipelago of voids — resistant to speculative interests and urbanization — in the urban fabric. And while industrial and real estate capital are locked in conflict over their vision for these employment areas, there is space in the no-man's land for a third party, the local community, to take hold.

45. Howland, "Planning for Industry in a Post-Industrial World: Assessing Industrial Land in a Suburban Economy," 42.

46. Chapple, "The Highest and Best Use? Urban Industrial Land and Job Creation," 312.

47. City of Mississauga, "Mississauga Official Plan Schedule 2 - Intensification Areas"; Ontario Ministry of Municipal Affairs and Housing, "Places to Grow: Growth Plan for the Greater Golden Horseshoe (2017)."

48. Lester, Kaza, and Kirk, "Making Room for Manufacturing: Understanding Industrial Land Conversion in Cities"; Greenberg, "More than a Desk and a Parking Spot: Tapping into the Region's Employment Lands."

49. Lehrer and Wieditz, "Gentrification and the Loss of Employment Lands: Toronto's Studio District."

50. Hess and Sorensen, "Choices for Scarborough: Transit, Walking, and Intensification in Toronto's Inner Suburbs." 18.

**Mapping change**



**Traces of change**

*“Man’s most consistent and on the whole, his most successful attempt to remake the world he lives in more after his heart’s desire. But, if the city is the world which man created, it is the world in which he is henceforth condemned to live. Thus, indirectly, and without any clear sense of the nature of his task, in making the city man has remade himself.”*<sup>51</sup>

David Harvey quoting Robert Park, *The Right to the City*

To ground the line of inquiry for the thesis, it is worth looking at the traces of change in the employment areas of Mississauga from a morphological, economic, and urban perspective and apply these observations towards an understanding of the underlying forces which have allowed emergent public domains to appear in the employment areas.

The assumption that the presence of employment is a precondition for a public realm and overall sense of urbanity can be used as a heuristic to identify areas of interest. This assumption comes from an intuitive understanding of activity in a city—it is hard to imagine a city or community without stores, restaurants, libraries, churches, etc. and the necessary people who run them. Due to regulatory measures, these entities are registered with municipalities as businesses and provided as spatial data—it is through this vector which we can analyse and map out potential public domains in the employment areas and the suburbs. Spatial and employment data was gathered from the business directory sets, provided by the City of Mississauga Open Data Catalogue, and analysed to produce the following studies and maps.

In the GTA we can begin to distinguish what seem to be two types of employment areas: the older era of industrial lands served by the rail lines, and the newer era served by the highway network (fig. 12). The transition in the reliance of the industrial areas on the railway system to the highway network can be seen as a parallel development in the transition from an industrial sector focused on the production of goods to an economy focused on the movement of goods. Similar to the expulsion of industry in the urban core to the periphery due to deindustrialization, rising urbanization pressures and increasing congestion in post-greenfield municipalities have further pushed large industrial tenants towards the outskirts where freight trucks can easily access the highway network. This categorization of employment areas as rail-based or highway-based provides a method for identifying older employment areas within the region, which typically are connected to the commuter rail network (fig. 13) and contain building stocks with smaller footprints, that are primed for change.



**fig. 11**  
map showing building permits per parcel overlaid with employment area outlines, showing most change in Mississauga happening in the employment areas

51. Harvey, *“The Right to the City,”* 1.



*fig. 12*  
employment areas in the greater Toronto area in relation to the highway network (white) and railway system (cyan), highlighted areas (red) are detached from the highways, and are likely older

Mapping change – Traces of change





fig. 13 regional map showing the Mississauga employment areas, in relation to downtown Toronto, and commuter rail stations

### Employment Area building footprints and building age

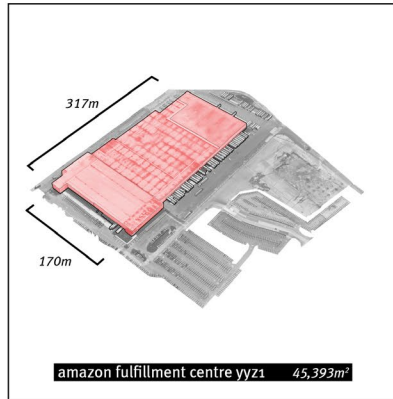
Correlated to the infrastructural shift is an increase in building footprints. Regional logistics, distribution centres, warehousing, and Amazons, has led to an increase in the average building size in employment areas over the years due to industry demand: a clear correlation between the age of the employment area and the average building size can be drawn (fig. 15).

These increases in building footprints maps to a change in building typologies and industrial needs (fig. 14). The older employment areas are composed mostly of cheap buildings with narrow and deep plans: multi-unit industrial condos, small standalone industrial units, and large factories. They form an adaptable, cheap urban grain which small-scale actors can easily utilize. In contrast. the buildings with the largest footprints: warehouses, distribution centres, and corporate headquarters, require vast amounts of built and open space previously unseen in the older employment areas. Due to the immense size of the operations involved, these buildings are at a scale where only the largest actors can access and benefit from them. In addition, these newer employment areas with larger building footprints gravitate towards the highway network due to a combination of availability of land, low land values, and the direct connection to regional networks. In terms of urban and spatial considerations, current industrial demands have outgrown the smaller factories and industrial unit condos of prior employment lands.



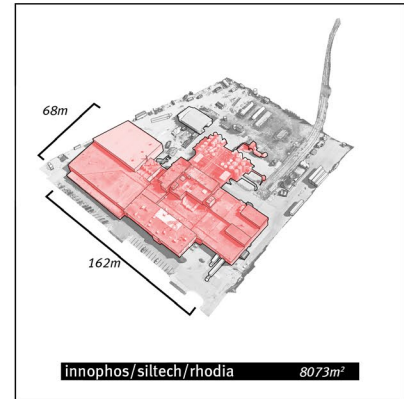
**XL: > 25,000m<sup>2</sup>**

amazon fulfillment centre  
 chrysler canada  
 walmart logistics  
 xpo logistics  
 canada post  
 sysco toronto  
 delmar international  
 pepsi bottling group  
 american standard canada  
 global distr. & warehousing  
 acco brands canada  
 sherway group warehousing  
 thie international centre  
 kember kreative floors  
 cardinal couriers  
 tjx canada  
 closeout king  
 archway canada inc.  
 tonolli canada ltd.  
 crh canada group  
 ups



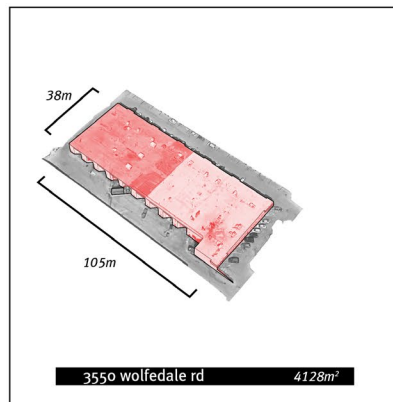
**L: 7,500-25,000m<sup>2</sup>**

innophos/siltech/rhodia  
 golden square centre  
 miway  
 ontario court of justice  
 curtiss-wright indal tech.  
 oceans warehouse  
 provincial store fixtures ltd.  
 kal-polymers  
 peel children's services  
 720 burnhamthorpe  
 alectra service centre  
 napa auto parts mssga  
 canadian tire  
  
 closeout king  
 mississauga chinese centre  
 laser quest  
 jp enterprises  
 cryovac  
 dixie studios  
 nightingale corporation



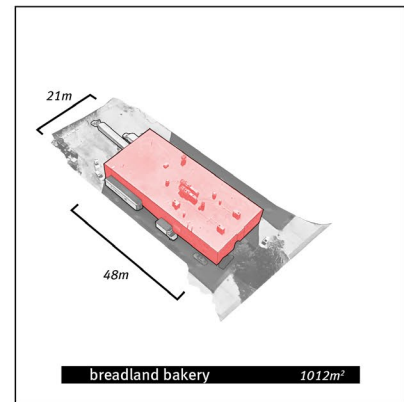
**M: 1,500-7,500m<sup>2</sup>**

3550 wolfedale rd  
 info canada  
 reynolds paper ltd  
 al huda elementary school  
 payal banquet hall  
 canlan sportsplex  
 guardian pharm & supermarket  
 skyzone trampoline park  
 3545 hawkestone park  
 rogers  
 go transit-west region  
 athletic leaders fitness  
 o a routes car rentals  
 canadian auto centre  
 united soccer centre  
 cooksville lumber  
 solace health inc.  
 777 dundas st w  
 mississauga flea market  
 graham packaging canada  
 smartstop self storage



**S: 500-1,500m<sup>2</sup>**

breadland bakery inc.  
 crown display & news racks  
 christ embassy  
 miway administration office  
 feldstein family law group  
 macmillans auto parts  
 carstar  
 sean boutillier dance  
 best auto repair service  
 max motorsport inc  
 shaheen food centre  
 first student charter  
 good measure food bank  
 mississauga animal services  
 mavis welding and fabricating  
 henderson machinery moving  
 gerdau metals recycling  
 g.t. wood company ltd.  
 larry's auto & truck repair  
 wolfedale tool & stamping  
 mississauga news



**XS: < 500m<sup>2</sup>**

s.t. auto repairs  
 mississauga auto repairs  
 smok sausage and meat  
 s.k. auto collision  
 ron small engines  
 b&g auto centre  
 fmd auto repair  
 neptune security services  
 24/7 auto collision inc  
 cantech autos  
 a auto tech service centre  
 miko auto sales inc  
 innocon  
 lane's landscaping  
 mavis garden supplies  
 muslim welfare centre - masjid  
 south peel vet. hospital  
 cookesville auto recycling  
 lafarge canada  
 cut stone  
 mavron transport

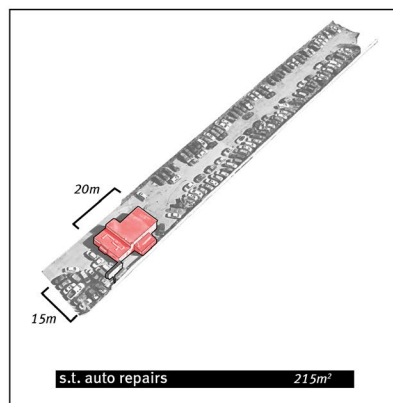
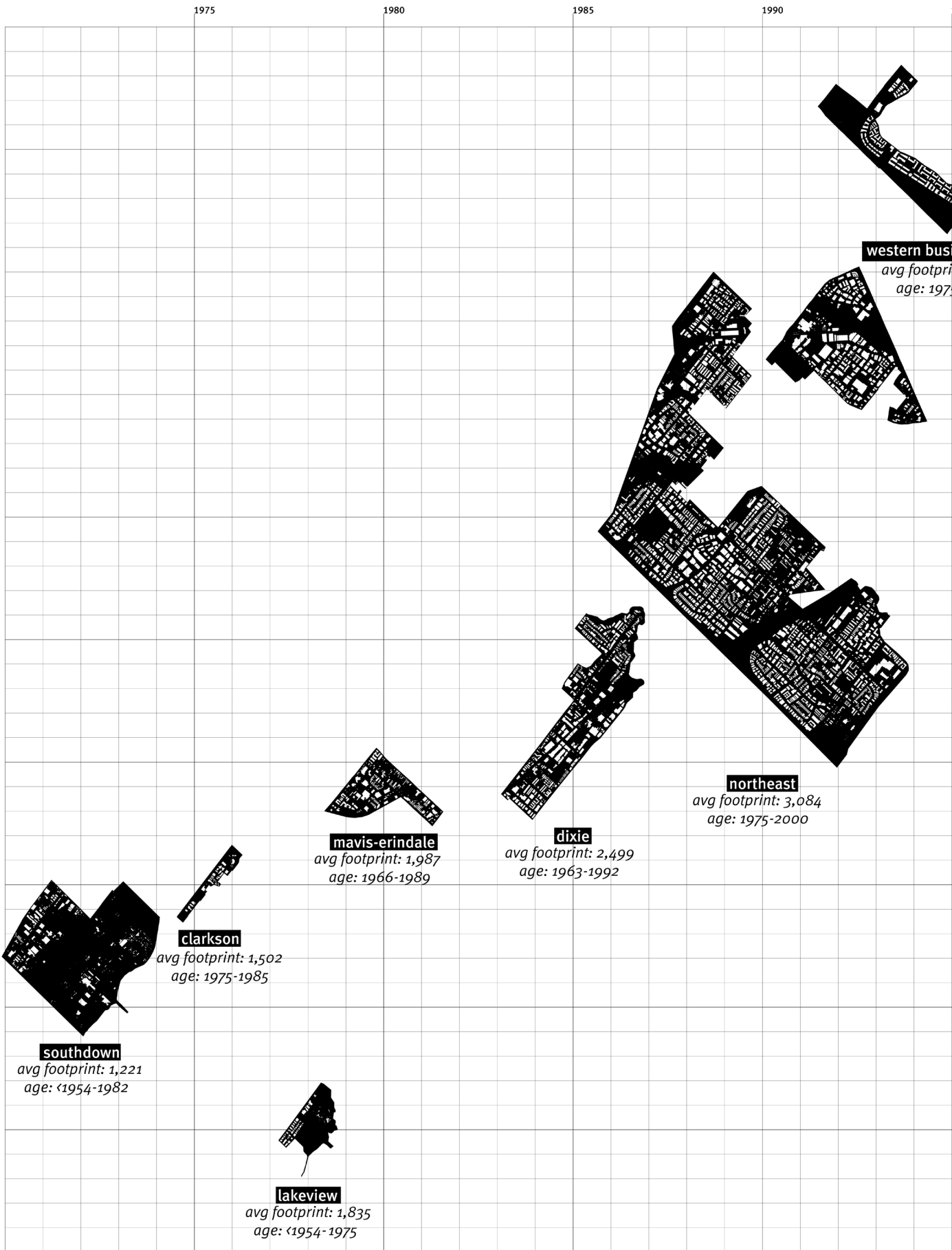


fig. 14

building footprint size and  
 corresponding building typologies  
 and examples of businesses found  
 in them

Mapping change – Traces of change



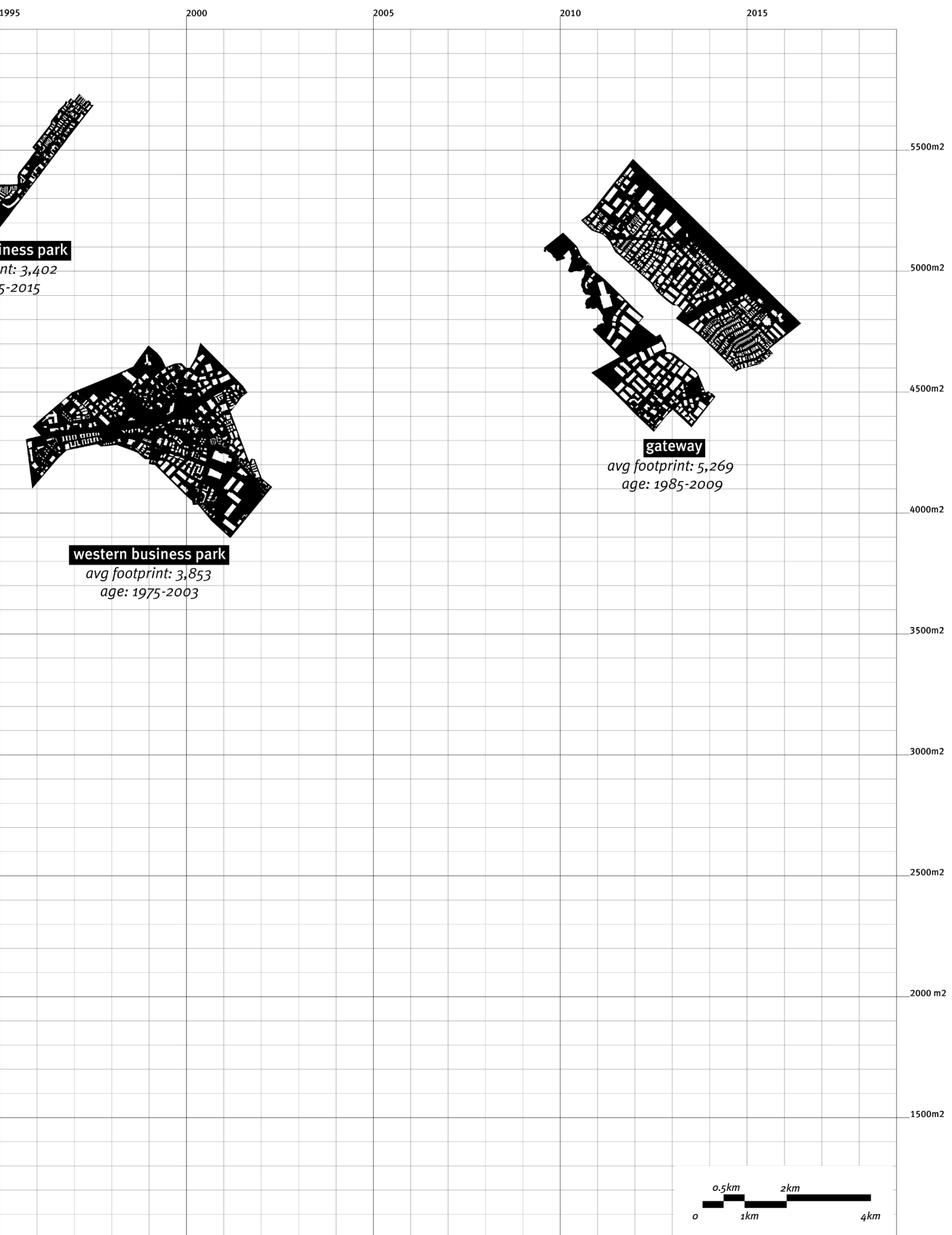
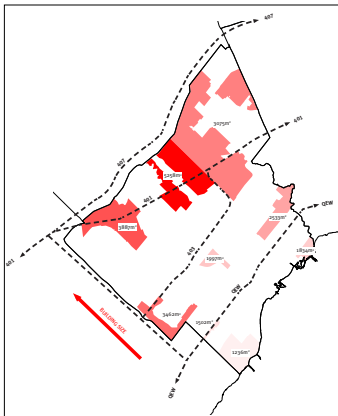


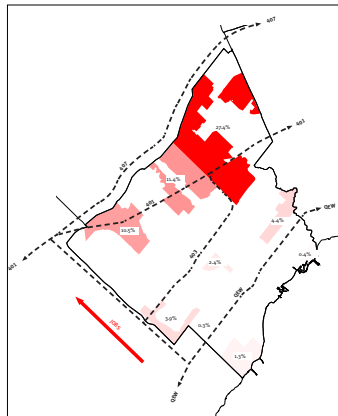
fig. 15 employment areas graphed by construction date and avg. building footprint

Job composition of the Employment Areas

Parallel to the ongoing spatial outmoding of the older industrial areas, we can observe compositional and distributional differences in the actors that occupy these employment areas. Echoing the distribution of building sizes (fig. 16), the distribution of employment follows a similar pattern of clustering around the highway network (fig. 17). This employment distribution can be further unpacked by differentiating the business sectors which they support (fig. 18). Using the framework of the North American Industry Classification System (NAICS), employment types were clustered, in part with consideration to spatial requirements, into broader business sectors: industrial businesses, office-based businesses, commercial and retail businesses, cultural and recreational businesses, and institutional businesses. Business data was used in place of land use categorizations to capture the nuances and surprises which would have been missed. Again, we can start to see differences in the composition of the employment areas based on the age of the employment area. Industrial and office-based jobs are more prominent in the newer employment areas attached to the highway network, such as Northeast, Gateway, or Meadowvale. Whereas commercial, institutional, cultural, and recreational jobs are more prominent in older employment areas such as Mavis Erindale, Southdown, or Dixie.



*fig. 16*  
increasing average building footprint size along the 401&407 highways



*fig. 17*  
increasing number of total jobs per employment area along the 401&407 highways

*fig. 18*  
employment composition (2018 data) of the Mississauga employment areas, with height showing number of jobs, colored by business sector

- Industrial businesses:**  
NAISC '41', '21' - primary industry, NAISC '23' - construction, NAISC '31', '32' - manufacturing, NAISC '41' - wholesale trade, NAISC '48', '49' - transportation & warehousing
- Office based businesses:**  
NAISC '51' - information & cultural industries, NAISC '52', '53' - FIRE, NAISC '54' - professional, scientific, technical services, NAISC '55' - management, NAISC '56' - admin & support
- Commercial businesses:**  
NAISC '44', '45' - retail trade, NAISC '72' - accommodation & food services, NAISC '81', '8' - '813' - other services
- Cultural + Recreational businesses:**  
NAISC '61' - educational, NAISC '71' - arts & recreation & entertainment, NAISC '813' - religious, grant-making, civic, and professional and similar organizations
- Institutional businesses:**  
NAISC '62' - health care, NAISC '91' - public administration

**NORTHEAST**

89800	Total jobs
65%	%Industrial
16%	%Office
11%	%Commercial
7%	%Cultural
2%	%Institutional

**GATEWAY**

40118	Total jobs
64%	%Industrial
21%	%Office
10%	%Commercial
7%	%Cultural
2%	%Institutional

**DIXIE**

12717	Total jobs
55%	%Industrial
12%	%Office
25%	%Commercial
4%	%Cultural
3%	%Institutional

**MAVIS ERINDALE**

7802	Total jobs
48%	%Industrial
17%	%Office
17%	%Commercial
8%	%Cultural
12%	%Institutional

**LAKEVIEW**

1200	Total jobs
70%	%Industrial
20%	%Office
10%	%Commercial
0%	%Cultural
0%	%Institutional

**MEADOWVALE**

54970	Total jobs
48%	%Industrial
22%	%Office
16%	%Commercial
8%	%Cultural
3%	%Institutional

**WESTERN BUSINESS PARK**

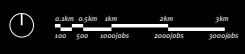
12232	Total jobs
45%	%Industrial
10%	%Office
24%	%Commercial
3%	%Cultural
3%	%Institutional

**CLARKSON**

746	Total jobs
33%	%Industrial
23%	%Office
9%	%Commercial
16%	%Cultural
0%	%Institutional

**SOUTHDOWN**

4280	Total jobs
66%	%Industrial
15%	%Office
15%	%Commercial
3%	%Cultural
4%	%Institutional

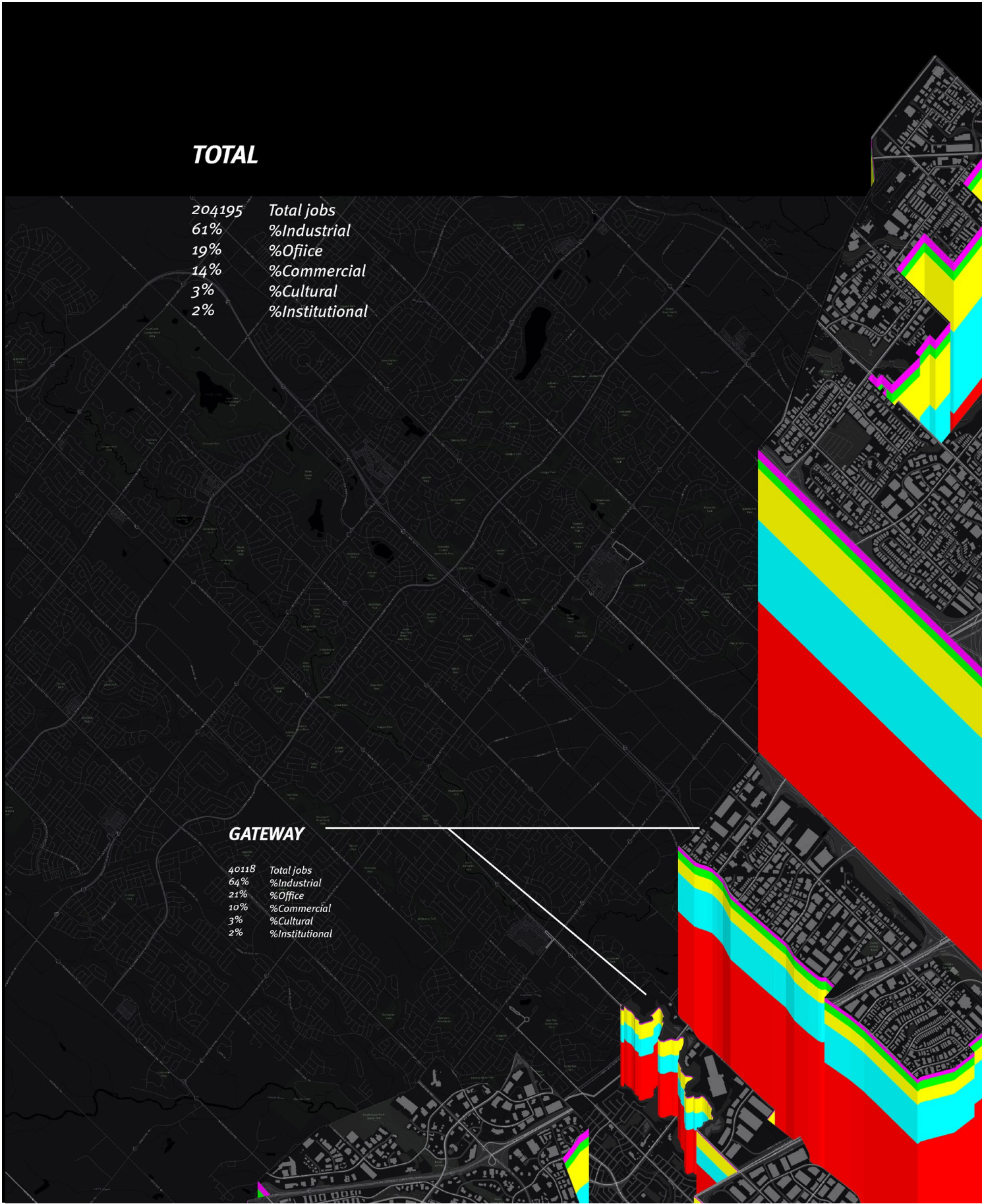


## TOTAL

204195 Total jobs  
61% %Industrial  
19% %Office  
14% %Commercial  
3% %Cultural  
2% %Institutional

## GATEWAY

40118 Total jobs  
64% %Industrial  
21% %Office  
10% %Commercial  
3% %Cultural  
2% %Institutional



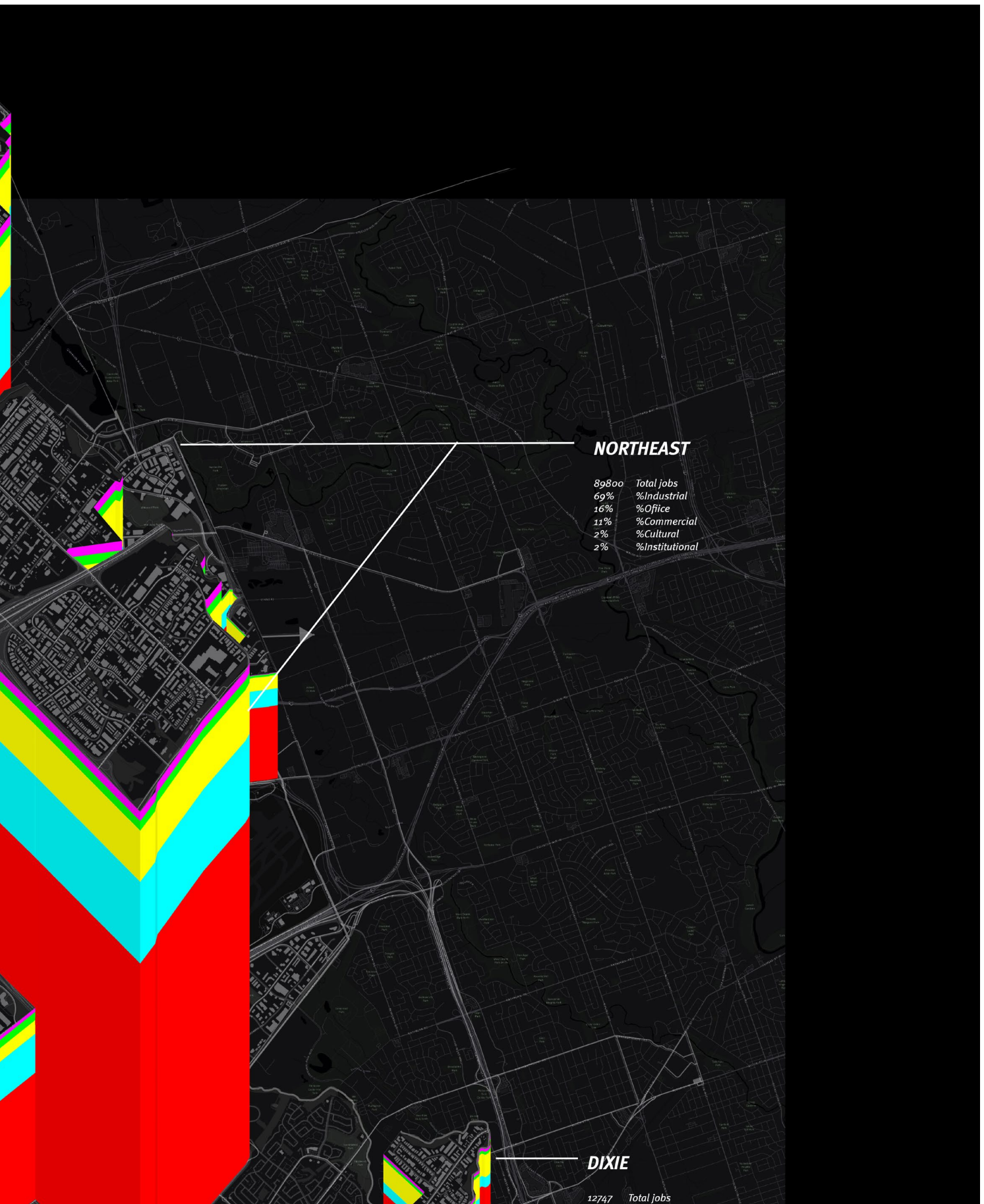


fig. 19 enlargement of Mississauga employment area composition map



**MEADOWVALE**

34970	Total jobs
48%	%Industrial
29%	%Office
16%	%Commercial
4%	%Cultural
3%	%Institutional

**WESTERN BUSINESS PARK**

12232	Total jobs
48%	%Industrial
18%	%Office
26%	%Commercial
5%	%Cultural
3%	%Institutional

**CLARK**

746	Total jobs
53%	%Industrial
23%	%Office
9%	%Commercial
16%	%Cultural
0%	%Institutional



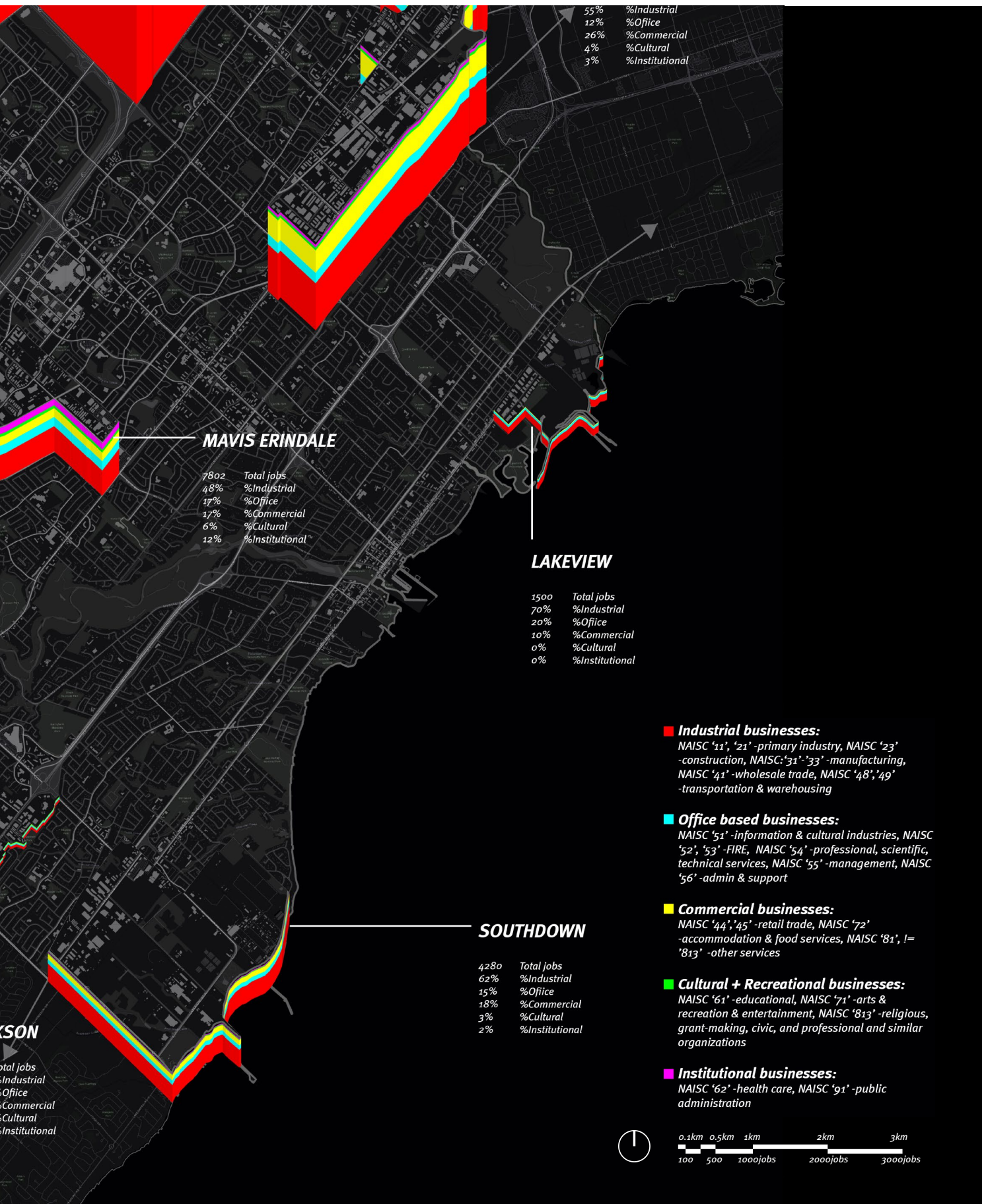


fig. 20 enlargement of Mississauga employment areas composition map

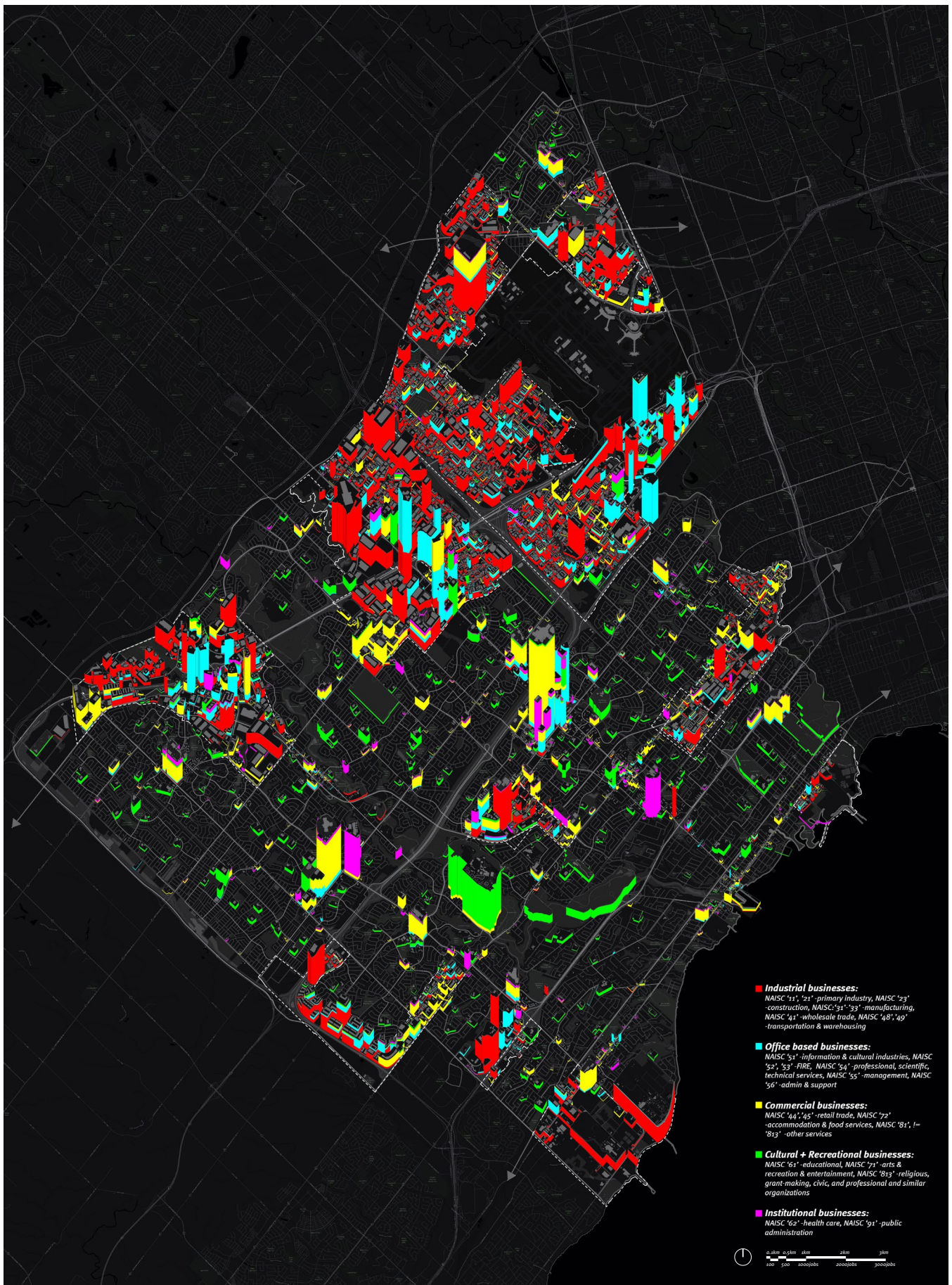
### Employment landscape of Mississauga

There is a decreased demand for industrial uses in the older employment areas of Mississauga. As seen from the previous maps, industrial and office uses cluster towards the highway network, leaving the prior era of employment lands behind. In the vacuum formed by vacating industrial uses, new actors are flowing in. Industrial occupants now share structures, materials, and customers with unconventional and unfamiliar neighbours.

To analyse this, a granular map of employment distribution and diversity of use is created by plotting the number of jobs, coloured by sector, in each parcel of land. By doing so, a picture of the employment landscape and their corresponding public realms becomes clear. While many inferences can be drawn from this mapping exercise, what is of interest to the thesis are the moments where unexpected uses, public domains, and urbanity appear. From the exercise, it becomes clear that the areas with the most diverse uses are the employment areas. In contrast, the residential fabrics are mostly activated and tied together by cultural uses such as schools, libraries, and community centres. Shopping malls and arterial commercial strips consist predominately of commercial and office-based uses. The map begins to demonstrate both the inflexibility of the residential fabric to take on mixed uses which were not planned for, as well as the commercialization of the remaining land which is forcing out viable (if not economically weak) entities.

*fig. 21*

*Mississauga job landscape map  
(2018 data) divided by land parcels,  
with height showing number of jobs,  
and colored by business sector*







*fig. 22* enlargement of Mississauga job landscape map



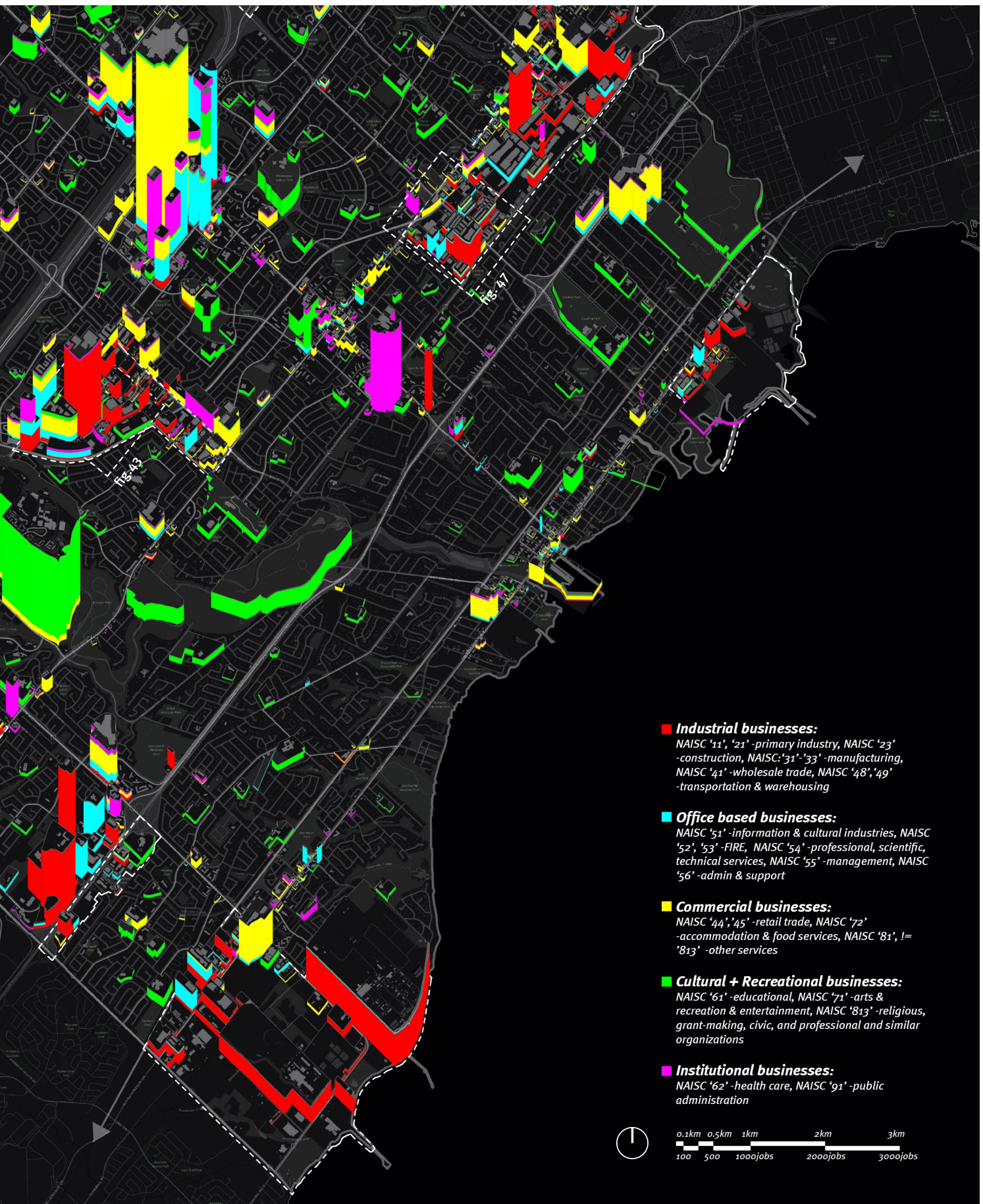


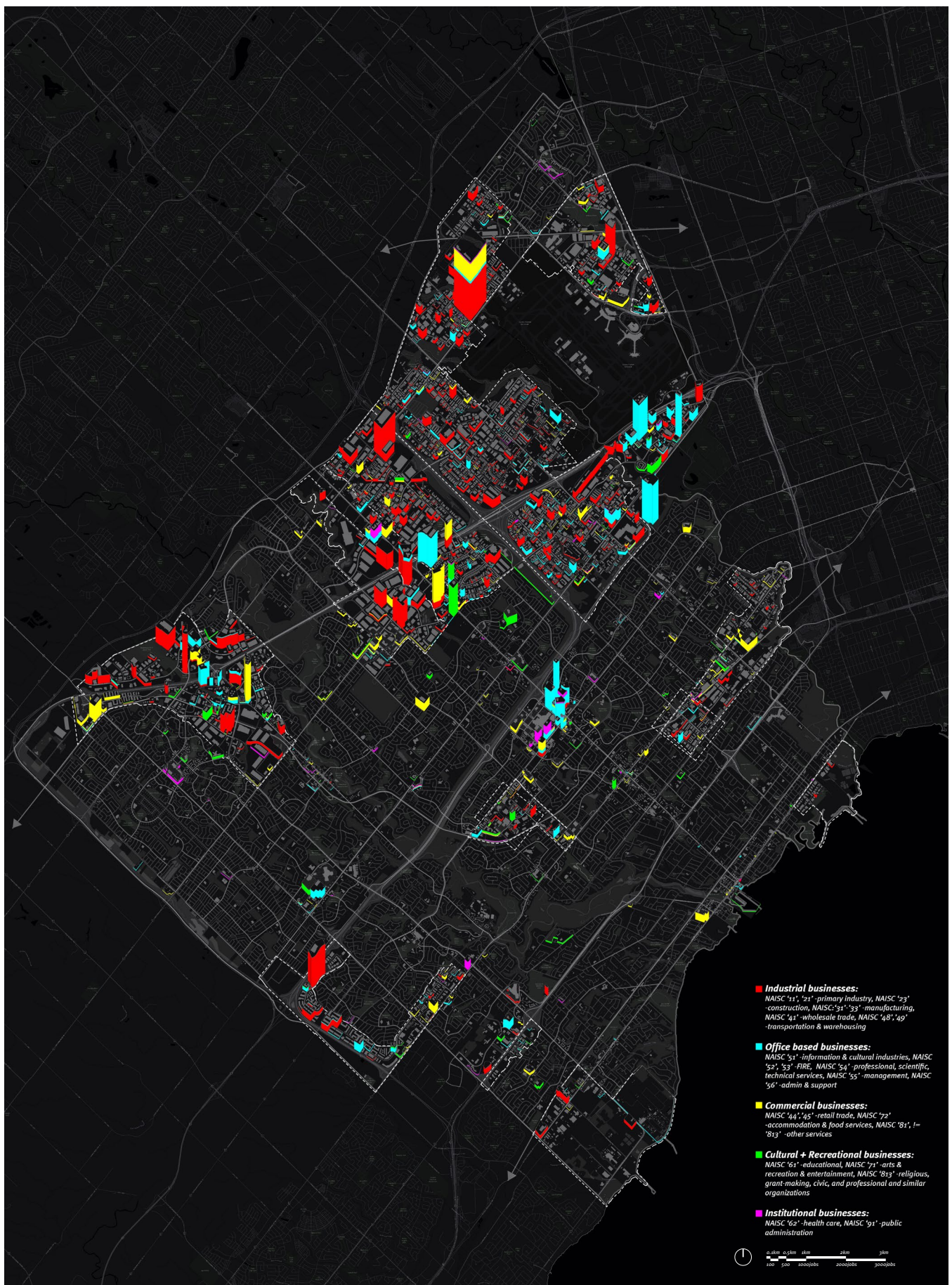
fig. 23 enlargement of Mississauga job landscape map

### Employment change in Mississauga

This study maps out the absolute difference between the number of jobs, per parcel, per business sector, between 2016 and 2018. These years were chosen as they were the oldest and newest available data sets to analyse. We can see slight industrial activity growth in the employment areas closer to the 401 highway, as well as overall commercial and office growth. This follows what was expected, supporting the idea of logistics growth and real-estate pressures producing commercial and office uses. Also of interest, are the small moments of cultural and institutional uses which have popped into some parcels in the employment areas. While these uses are also growing in planned centres, we also find a substantial number of these parcels located within the employment areas.

*fig. 24*  
*Mississauga (absolute) employment*  
*change map from 2016 to 2018*

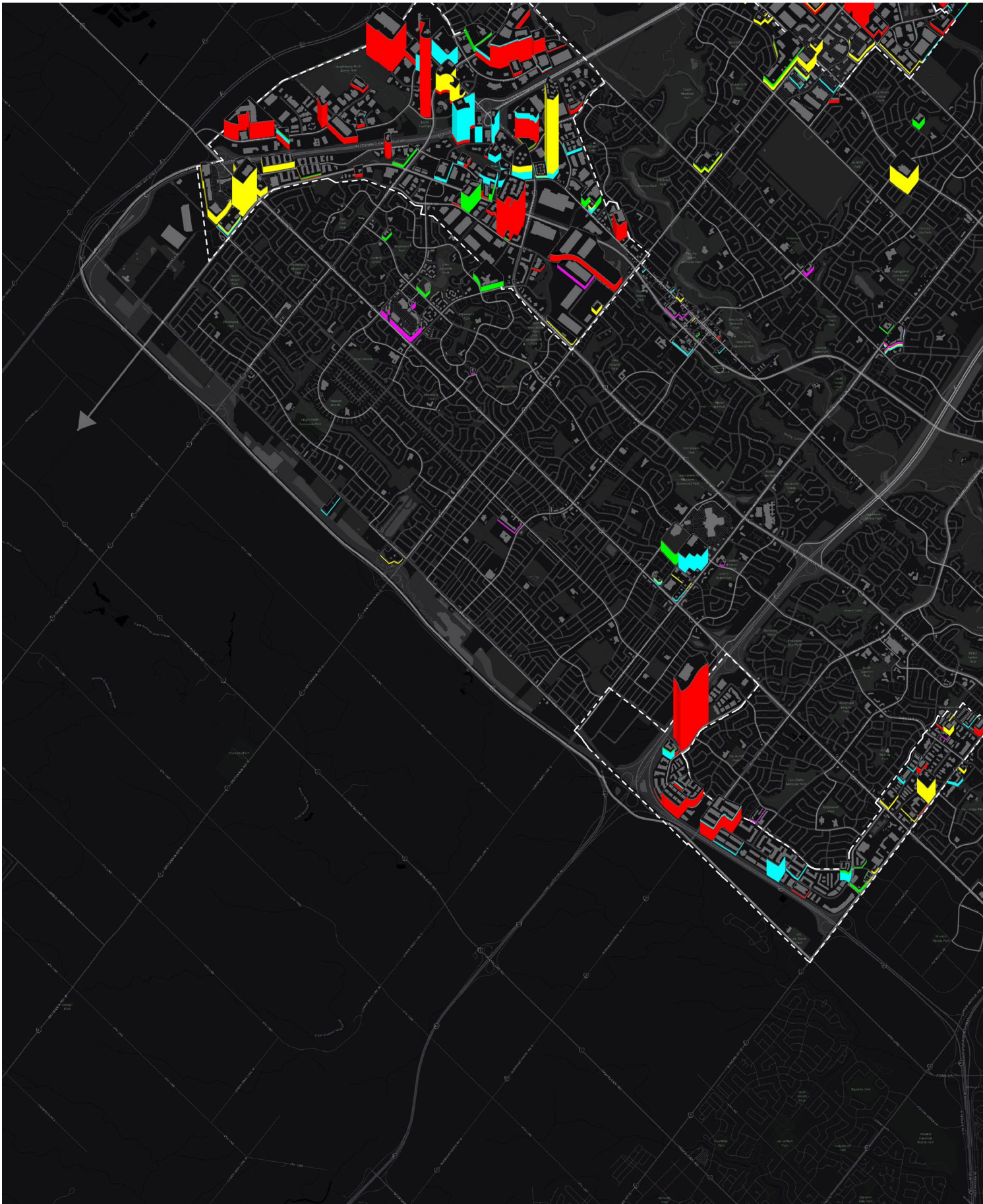








*fig. 25 enlargement of Mississauga employment change map*



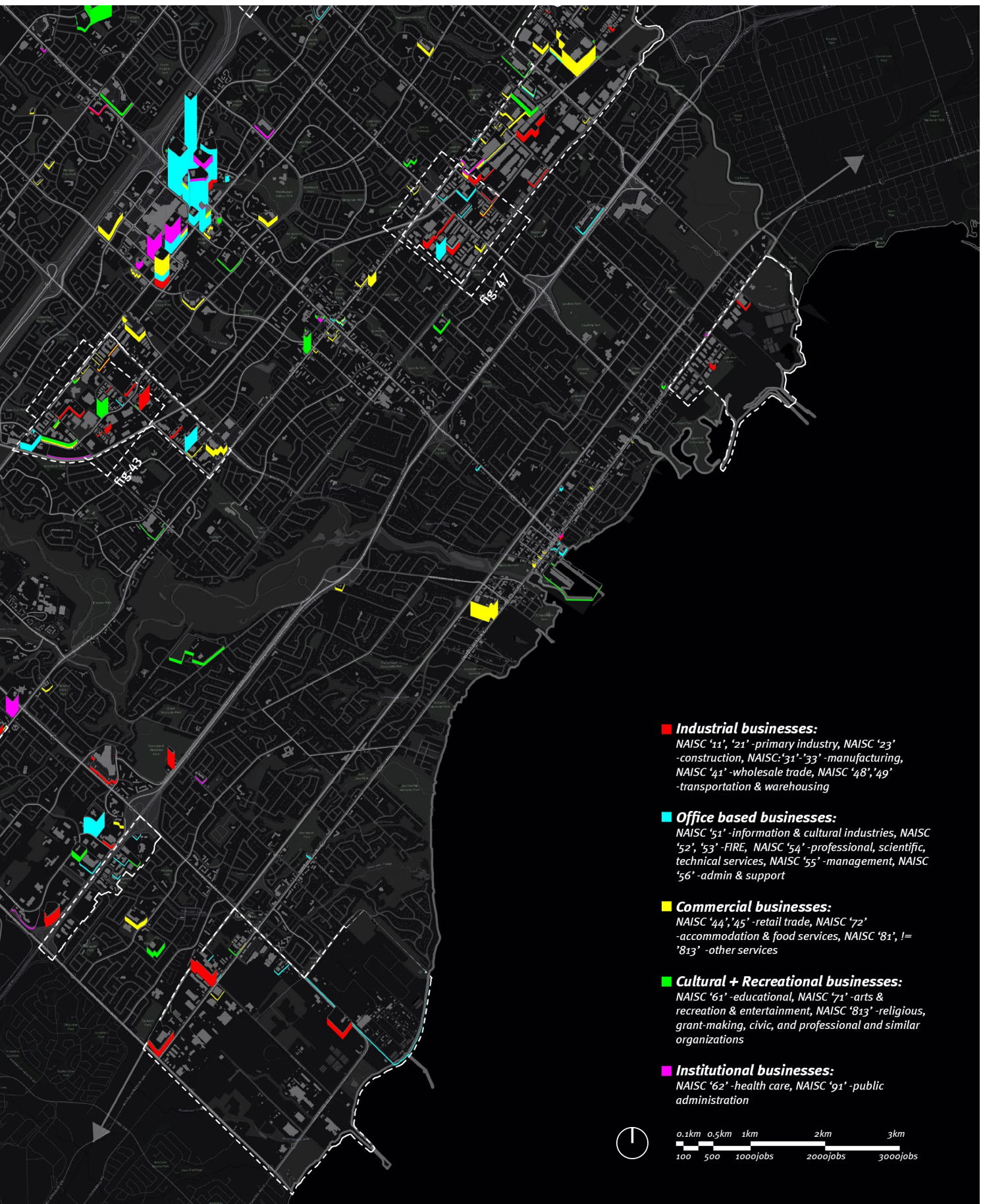


fig. 26 enlargement of Mississauga employment change map

### Hybrid-use parcels

Instances of diversity and unexpectedness can be filtered out by selecting parcels within the employment areas with more than one predominant use or parcels with cultural and recreational uses. These parcels diverge from the planned homogenous land-use patterns seen elsewhere in the suburbs. This analysis forms a starting point for identifying interesting moments of urbanity within the fabric of Mississauga. These ‘hybrid parcels’ are distributed as linear strips along major roads, reaching into patches of employment areas when they pass by. An implication of such a distribution is that these mixed-use parcels are still accessed and dependent on the mobility provided by the automobile. These clusters of hybrid parcels start becoming legible as alternate centres in the greater suburban fabric.

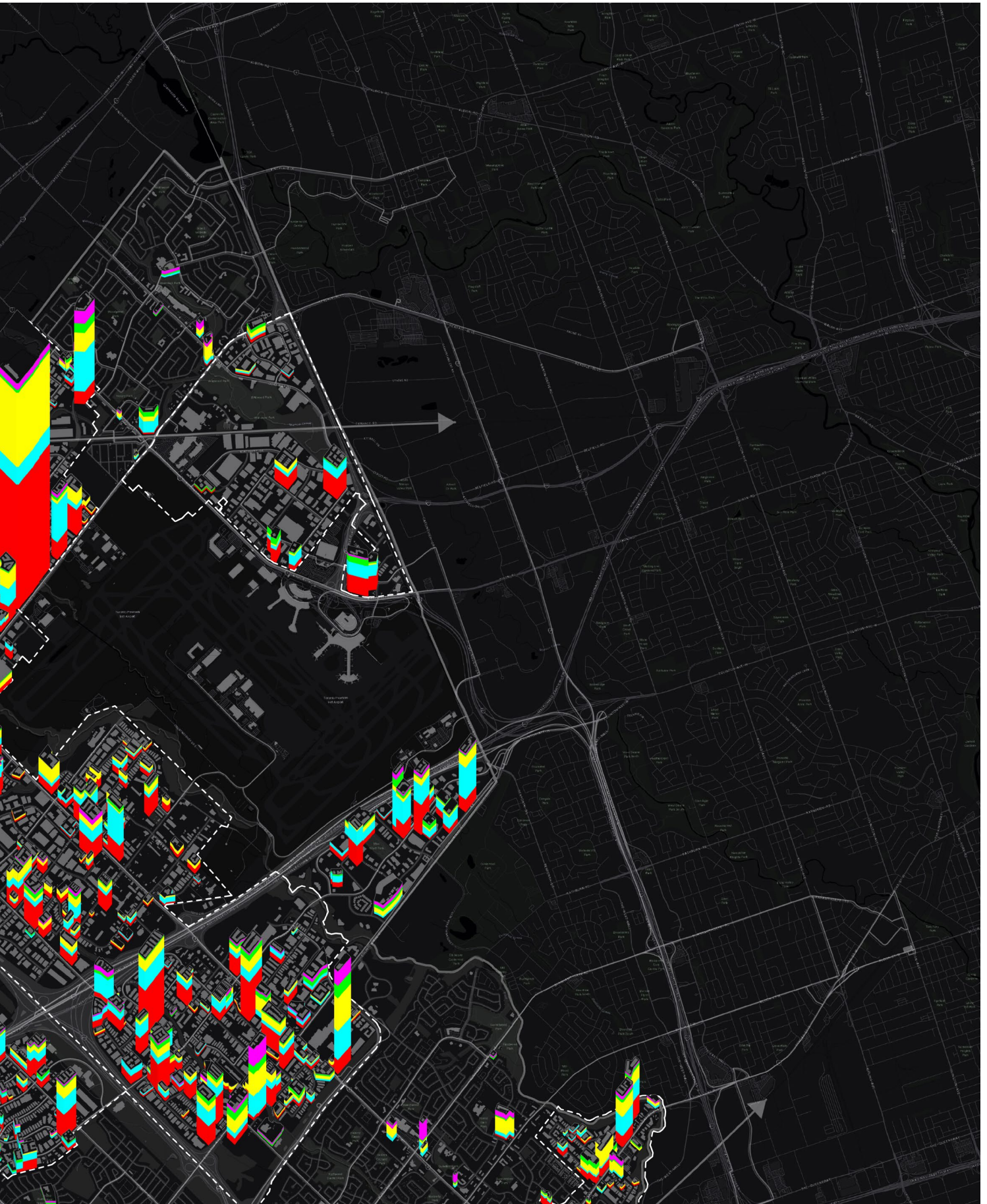
*fig. 27*  
*hybrid parcels map, showing non-homogenous employment parcels (2018 data) where the number of dominant sector jobs is <70% of the number of total jobs in the parcel, or if cultural uses are present*



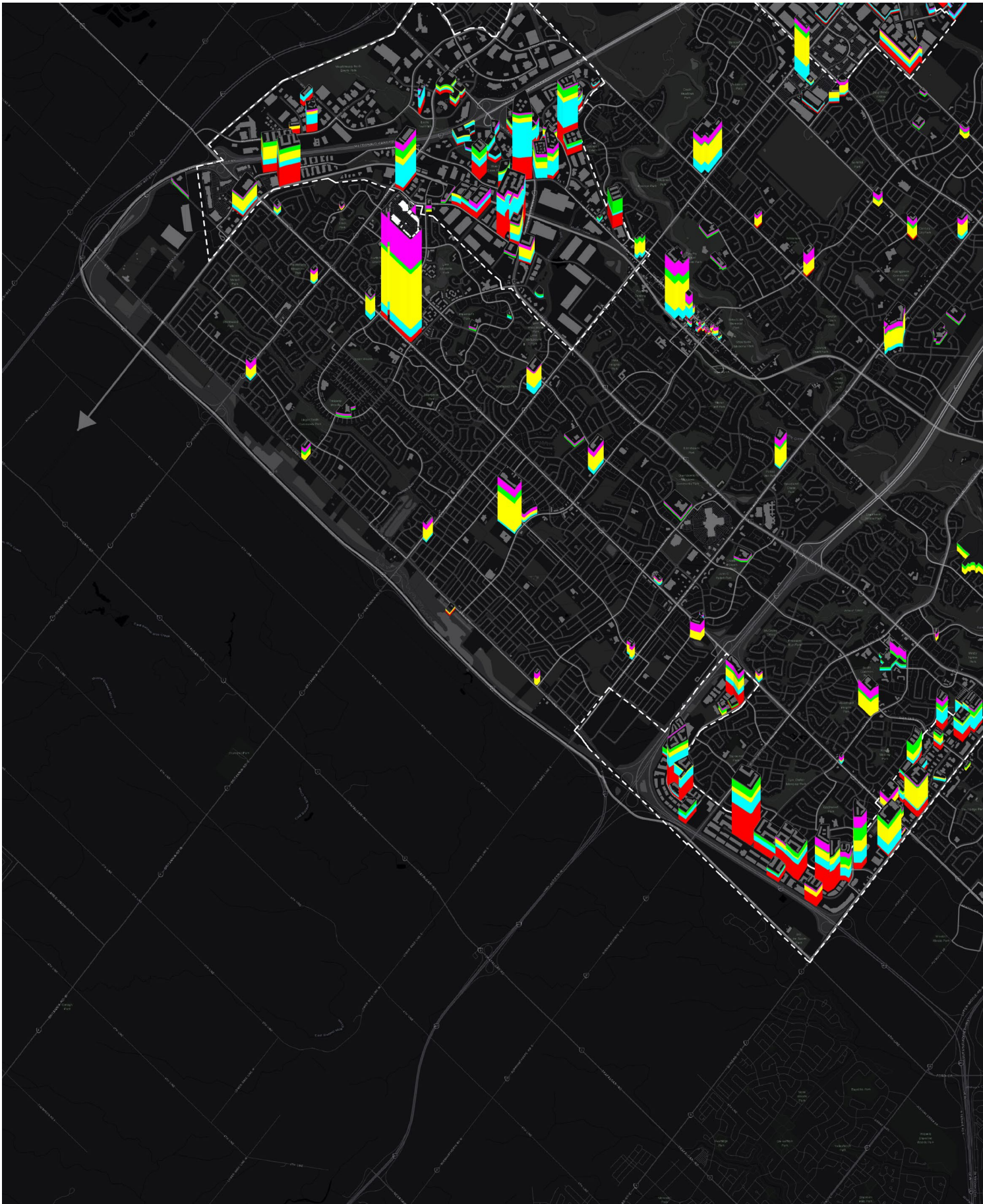
Mapping change – Traces of change







*fig. 28* enlargement of hybrid parcels map



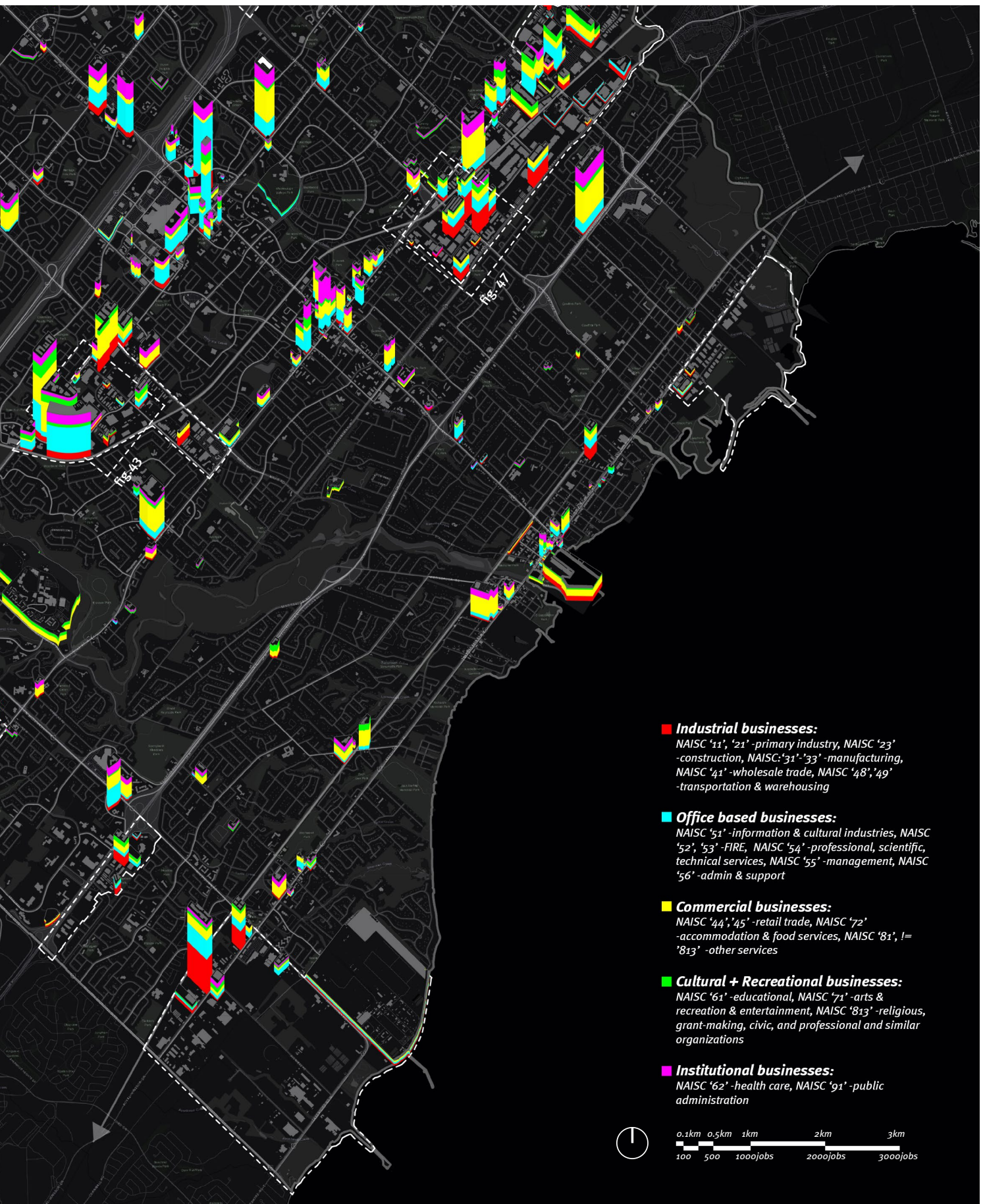


fig. 29 enlargement of hybrid parcels map

### 5-minute pedestrian cities

Additionally, it is useful to understand the employment areas through a more standard urban-planning perspective: that of the pedestrian experience. The pedestrian realm can be estimated using the 400-meter, or a 5-minute walking distance metric. This distance is generally used as a rule of thumb to determine the pedestrian shed from a given point; people are more willing to drive if a destination is more than a 5-minute walk away<sup>52</sup>. By taking the spatial data used to generate the previous maps and projecting a 400-meter walking radius from each business, coloured by business sector, a general picture of walkability in this fabric can be understood. Brightness measures business density and colour, specifically the whiteness of the overlay, measures use and diversity of use.

From this map, we can see that there are patches in the employment areas with a density of businesses that are equivalent to those in the commercial centres, and therefore could potentially support a pedestrian realm. Similar to the alternate centres highlighted by the hybrid parcels drawing, we find areas with a high density of mixed-uses within close proximity to each other, not only in the commercial areas (which is expected) but also in the employment areas.

*52. Jones and Williamson, Retrofitting Suburbia : Urban Design Solutions for Redesigning Suburbs, 175.*

*fig. 30*  
*5-minute pedestrian realms map, approximating walkability, with brighter areas showing higher business densities, and whiter areas showing more diversity of uses*







*fig. 31* enlargement of 5-minute pedestrian realms map

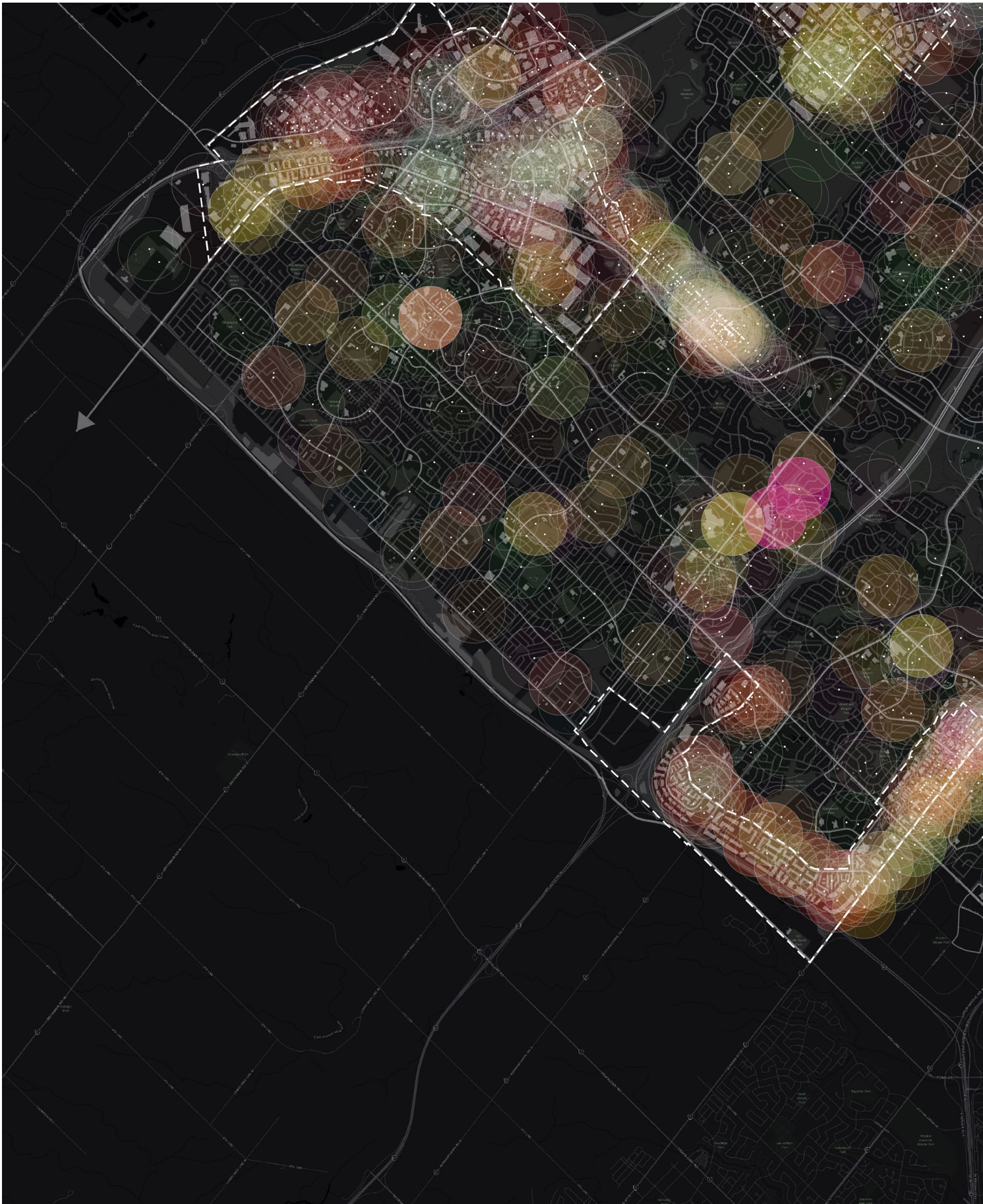






fig. 32 enlargement of 5-minute pedestrian realms map

### **Modes of change**

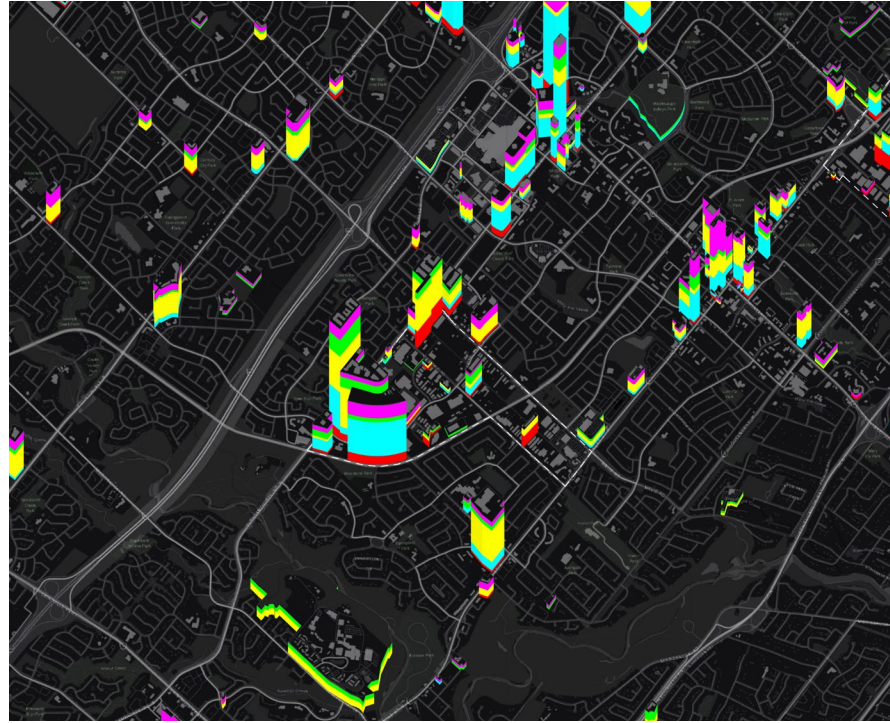
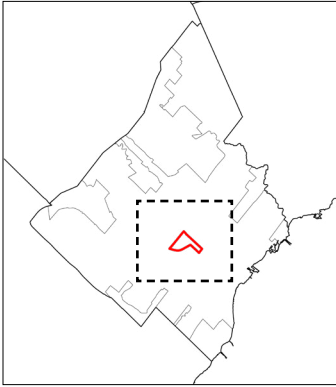
*“Yesterday’s under-utilized industrial sites may be our communities of tomorrow, through a mix of housing, office, and retail development. But we are being held back by unhelpful rules and procedures that prevent us from using our land resources more effectively.”*<sup>53</sup>

Ken Greenberg, *More than a Desk and a Parking Spot*

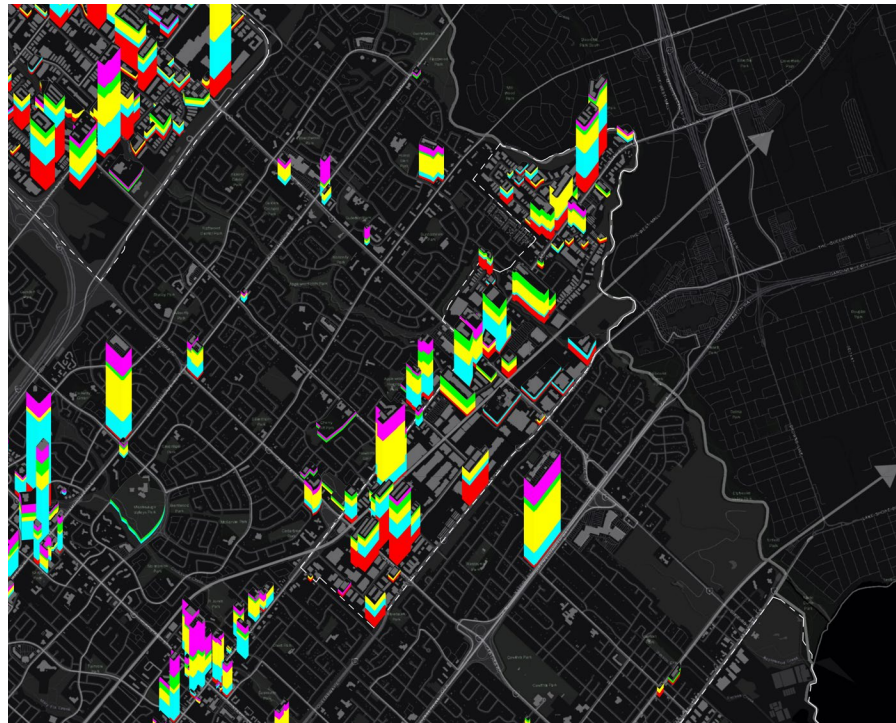
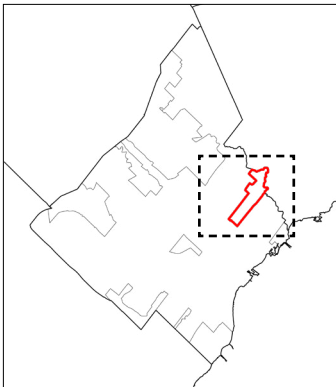
In the employment areas of Mississauga, we can see there is both the need as well as the conditions for change to occur. Despite municipal policies in place to preserve these areas, it seems change is inevitable and is already underway. For the sake of the argument, we can begin to broadly categorize the urban change in the employment areas into two modes of operation: one which is incremental and unplanned, and one which is top-down and planned. While there is not such a clear a black and white dichotomy, it is useful to think along this axis when evaluating the changes that are happening. On one extreme, small community entities such as mosques and foodbanks are entering and repurposing previously industrial spaces, and on the other, entire employment areas are decommissioned and redeveloped as new neighbourhoods. These two modes of change are analysed and discussed in terms of their implications on urban growth and the public realm.

To help illustrate the changes that are—and have been—undergoing in the Mississauga employment areas, the following case studies were located and identified with help from the hybrid use map shown earlier. To limit the search to a manageable scope, the Mavis-Erindale Employment Area and the Dixie Employment Area were chosen predominately as the sites for research due to their central locations in the region, average building footprints, and a high diversity and density of businesses, relative to the other employment areas. Images and information about use and occupancy were gathered from a variety of online sources (predominately Google Maps and Canada247), as well as in person visits. Findings from these studies and searches—including constraints, conditions, and contexts—were filtered and then used to inform the speculative design studies in the next section.

53. Greenberg, *“More than a Desk and a Parking Spot: Tapping into the Region’s Employment Lands.”* 1.



*fig. 33*  
enlargement of hybrid map, showing  
the mavis erindale employment area



*fig. 34*  
enlargement of hybrid map, showing  
the dixie employment area

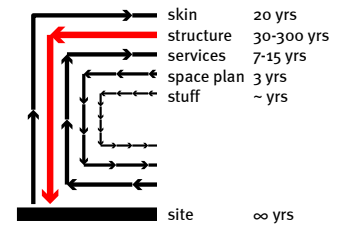
### Incremental change

The majority of buildings in the older employment areas are scrappy, bare-boned, and nearing their expected lifespan. In some cases, it is cheaper for developers to demolish existing buildings and rebuild a new one when change is needed. This building stock consists of structures that Steward Brand would call “Low Road” buildings: buildings where “any change is likely to be an improvement”<sup>54</sup>.

Contrary to the idea that architecture should be permanent and refined, it is the almost disposable and unfussy nature of these buildings which brings them their value. Typically, these buildings would be constructed to be robust but cheap: concrete masonry unit walls with light-weight steel trusses, clad in brick or corrugated metal, with minimal interior finishes. Mechanical services would be exposed and sometimes messy, but over specified to allow for wide ranges of industrial activity. Electrical outlets at various voltages provide flexibility for equipment<sup>55</sup>. The floorplans are large and deep as they are not constrained to the daylight restrictions that office and residential buildings are bound by, allowing for uses of all dimensions to comfortably inhabit. The inherently designed robustness and flexibility provide these buildings with the freedom to accommodate a wide range of uses. Because they started life as industrial buildings, most of the investment was placed in a robust structure, and as such, these building stocks have good bones for maintenance and change (fig. 35).

The relative cheapness of the building stock in comparison to those produced by speculation, gives financial room and agency for tenants to shape and invest in their spaces. Modifications, tweaks, and renovations to what is existing provides a means for change that can be phased into smaller, more financially manageable stages instead of having to take on a single large loan or multi-decade mortgage<sup>56</sup>. The smaller financial burden of rent and renovation begins to allow small, independent, and sometimes not-profit-driven, entities to inhabit these spaces. These buildings provide a repository of optionality for uses and users for the urban fabric. And in these buildings, new tenants are populating the spatial matrix with seeming ignorance for (or economically forced to live with) the other programs around them. In this undervalued and hard-to-commodify urban fabric, local economies and diverse uses have found a foothold.

Here, we see a mosque inside a logistics building. We see a halal grocer neighbouring an auto upholstery shop in a small industrial unit. We see taekwondo classes being taught in an office park. We see a specialty printing company taking over a warehouse and starting a skate park in the leftover space. We see a day-care sharing a building with a roofing company while a sausage and meats maker operates in the back. We see a trampoline park and a rock-climbing gym inside an old factory. We see a



*fig. 35*  
 diagram of expected lifespan of building layers, showing more initial value is placed in the bones of an industrial buildings than in other layers, adapted from Stewart Brand's 'Shearing layers of change'

54. Brand, *How Buildings Learn : What Happens after They're Built.* 24.

55. Wilkinson, "How Buildings Learn: Adaptation of Low Grade Commercial Buildings for Sustainability in Melbourne."

56. Brand, *How Buildings Learn : What Happens after They're Built.* 84.

Sunday service begin in the driveway behind two warehouses.

We see moments of daily life taking place in the backdrop of the employment areas. People go to recreational facilities, such as sports centres, martial arts dojos, dance groups, fitness gyms, table tennis clubs, and rock-climbing walls. They have cultural spaces, such as religious institutions for niche and minority groups, food banks, schools, and day-cares. And they run errands in spaces such as butchers, ethnic grocers, repair shops, and restaurants.

We also see changes in the way industrial uses occupy these spaces. Besides the reuse of prior industrial buildings for new industrial uses, we also see the engagement of the public realm for many manufacturing and distribution businesses through the small commercial or retail operations. This is permitted in the municipal zoning by provisions which allow up to 20% of the gross floor area of an employment use to be for accessory uses<sup>57</sup>. In addition, the nature of ownership is changing. Old industrial condo buildings are being renovated and sold as rent-to-own industrial units<sup>58</sup>, allowing for small actors to have equity and a stake in the urban context.

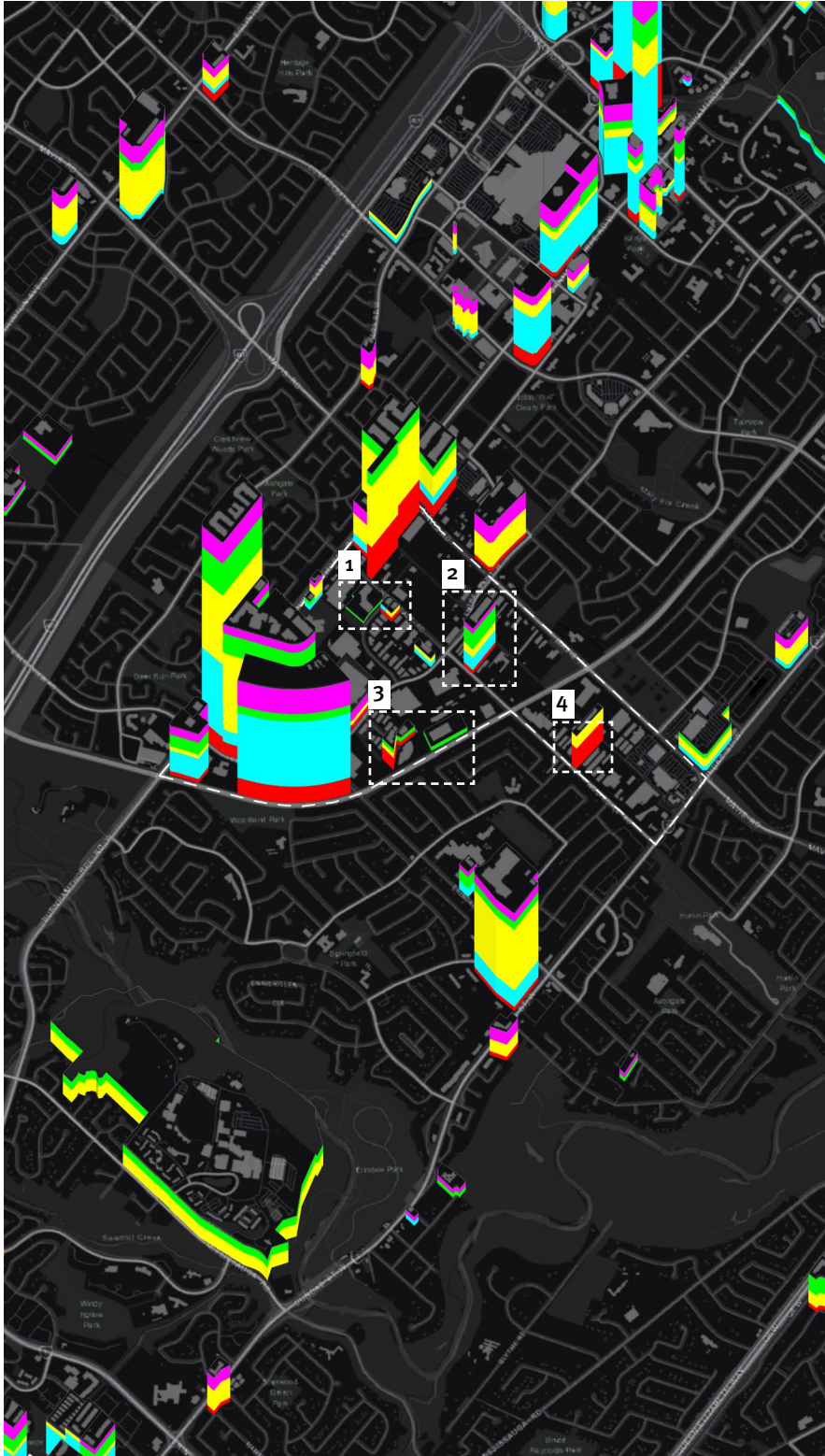
One way to read this resultant diversity is that it is the residue of uses, needs, and communities excluded from or priced and planned out of the new commercial centres and residential neighbourhoods. In the employment areas, these entities—out of necessity—have found a means to gain a spatial foothold for new collective identities to emerge and express themselves within a spatial matrix left behind by prior economic cycles. While individually, these can be seen as isolated cases of opportunistic actors, the cumulative effect is the gradual formation and strengthening of a public realm within the employment areas.

As it is unplanned and unintentional, this type of change acts on the notion of that the city is an ongoing process as opposed to a predetermined product. Here, the final outcomes are unknown to the participants. Businesses fail and move out, and businesses succeed and grow. The system, as a result of its flexibility and adaptability, allows for trial-and-error processes to occur and provides a means for the local community to select the direction of the urban fabric. And through cumulative processes of re-inhabitation and adaptive reuse, the original fabric becomes un-designed—breaking down and degrading the original driven design intent to create conditions for new opportunities to emerge.

However, because this change is happening in an unplanned and organic way, there has not yet been a cohesive architectural, landscape, or urban response to the new public dimension emerging in the employment areas. As such, underlying the flexibility of this environment is a state of precariousness for the existence of these places.

57. City of Mississauga, “General Provisions for Employment Zones and E1 to E3 Permitted Uses and Zone Regualtions.”

58. Q 755 Queensway East, “Why Rent When You Can Own.”

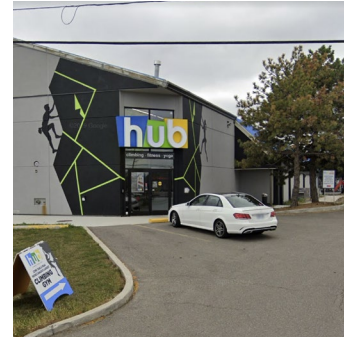
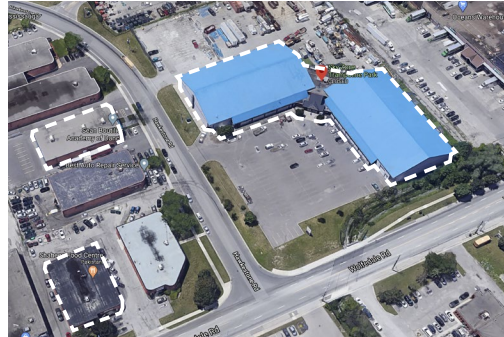


*fig. 36 (left)*  
enlargement of hybrid map, showing  
locations of studies in the mavis  
erindale employment area

*fig. 37 (right)*  
study locations in the mavis erindale  
employment area, informed by  
hybrid uses map, aerial images  
captured from Google maps

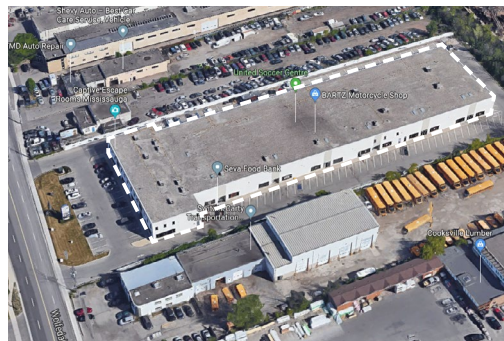
1. 3636 hawkestone rd,  
3623 hawkestone rd,  
3570 wolfedale rd

skyzone trampoline park  
the hub rock climbing gym  
sean boutelier dance  
shaheen food centre



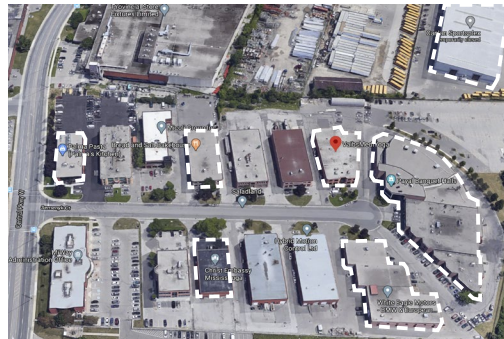
2. 3413 wolfdale rd

united soccer centre  
seva food bank  
sylvan learning  
my health rehab centre  
karate & martial arts  
captive escape rooms  
bartz motorcycle shop  
small engine repair shop  
...and more



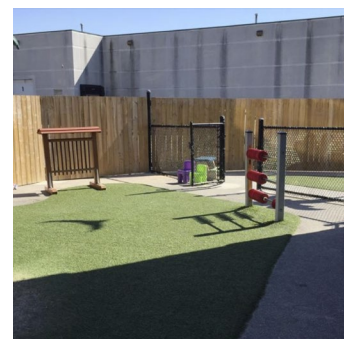
3. semenyek cr,  
3360 wolfedale rd

payal banquet halls  
canlan sports centre  
valbsmed yoga  
christ embassy Mississauga  
bread and salt bakehouse  
sargent farms halal chicken  
weldflow metal products  
..and more



4. 3225 wolfdale rd

brightpath daycare  
xpert tech roofing  
smok sausage and meat  
products





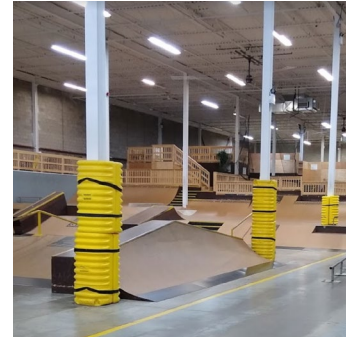
*fig. 38 (left)*  
enlargement of hybrid map, showing  
locations of studies in the dixie  
employment area

*fig. 39 (right)*  
study locations in the dixie  
employment area informed by  
hybrid uses map, aerial images  
captured from Google maps



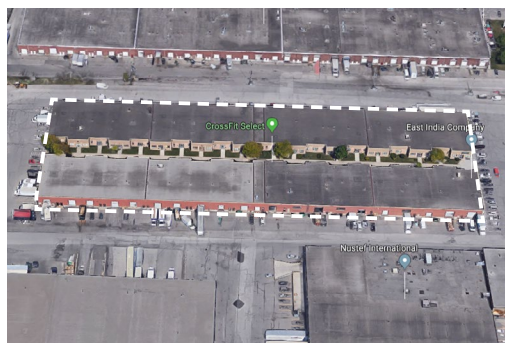
1. 560 hensall circle

cj graphics inc.  
cj's skatepark



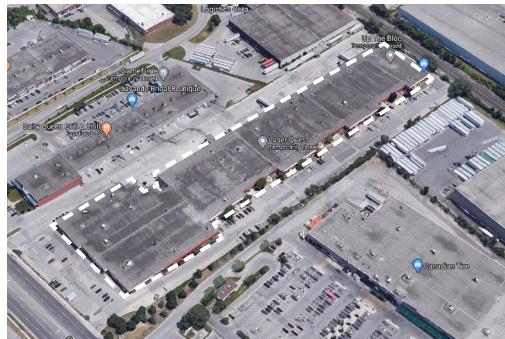
2. 2446 cawthra rd

east india company  
produce central inc  
crossfit select  
bailey's refinishing  
seedo's bakery  
consolidated salvage  
bryant electric inc  
long branch rental  
..and more



3. 1224 dundas st e

archery district Toronto  
laser quest  
al-risala academy  
kingdom covenant academy  
up the bloc rock climbing  
chase auto parts  
vinpow bath centre  
midha's furniture gallery  
...and more



4. 1590 dundas st e,  
1650 dundas st e

apple self storage  
transport training centre  
centre for clinical dental studies  
wynn fitness  
monte carlo billiards  
delta bingo & gaming  
master seo's taekwondo  
... and more



### Top-down change

*“Chain stores, chain restaurants, and banks go into new construction. But neighbourhood bars, foreign restaurants, and pawn shops go into older buildings. Supermarkets and shoe stores often go into new buildings; good bookstores and antique dealers seldom do. Well subsidized opera and art museums often go into new buildings. But the unformalized feeders of the arts—studios, galleries, stores for musical instruments or art supplies, backrooms where the low earning power of a seat can absorb uneconomic discussions—these go into normal buildings.”*<sup>59</sup>

Jacobs, *The Life and Death of Great American Cities*

The other mode of change which is occurring in this reshuffling is based on a top-down model of redevelopment. There are intense urbanization pressures to up-zone parcels in the employment areas (especially the older ones) and redevelop them into profitable ventures. These developments operate on multiple scales, from single parcels to entire employment areas, but the common feature is that of demolition and reconstruction: a tabula rasa mode of development. As the existing building stock is typically cheaply made (in respect to new construction standards) and or too small for new commercial or industrial operations, it is easier for developers to demolish and rebuild anew. The incentives for this mode of change are multiple, but in most cases, they are related to processes for the commodification of land.

Industrial lots are being cleared and replaced with low-risk development models such as power retail centres<sup>60</sup>, office buildings[example], and neighbourhood masterplans<sup>61</sup>.

While the redevelopment and the corresponding uses might not be problematic, the consequential financial implications are. Due to the high cost, these inevitably begin with or end up tangled in webs of financial structures and investors. The resulting incentives for such projects then become about reducing risk and increasing return on investment. Arguably, urban growth cannot happen without capital. The concern is now is that added value does not necessarily benefit the end user but rather provide small gains for investment funds<sup>62</sup>. An asymmetric incentive structure is created which favours outcomes that benefit the developer and investors rather than the end user.

And due to commercial and residential zoning being more valuable, these developments bring with them speculative pressures which push out the possibility for true mixed-use. The type of change that occurs

59. Jacobs, *The Death and Life of Great American Cities*, 188.

60. Lehrer and Wieditz, *“Gentrification and the Loss of Employment Lands: Toronto’s Studio District,”* 144–48.

61. *City of Mississauga, “Inspiration Lakeview.”*

62. Moskowitz, *How to Kill a City: Gentrification, Inequality, and the Fight for the Neighborhood*; Keenan, *“The Art & Science of Real Estate Development.”*

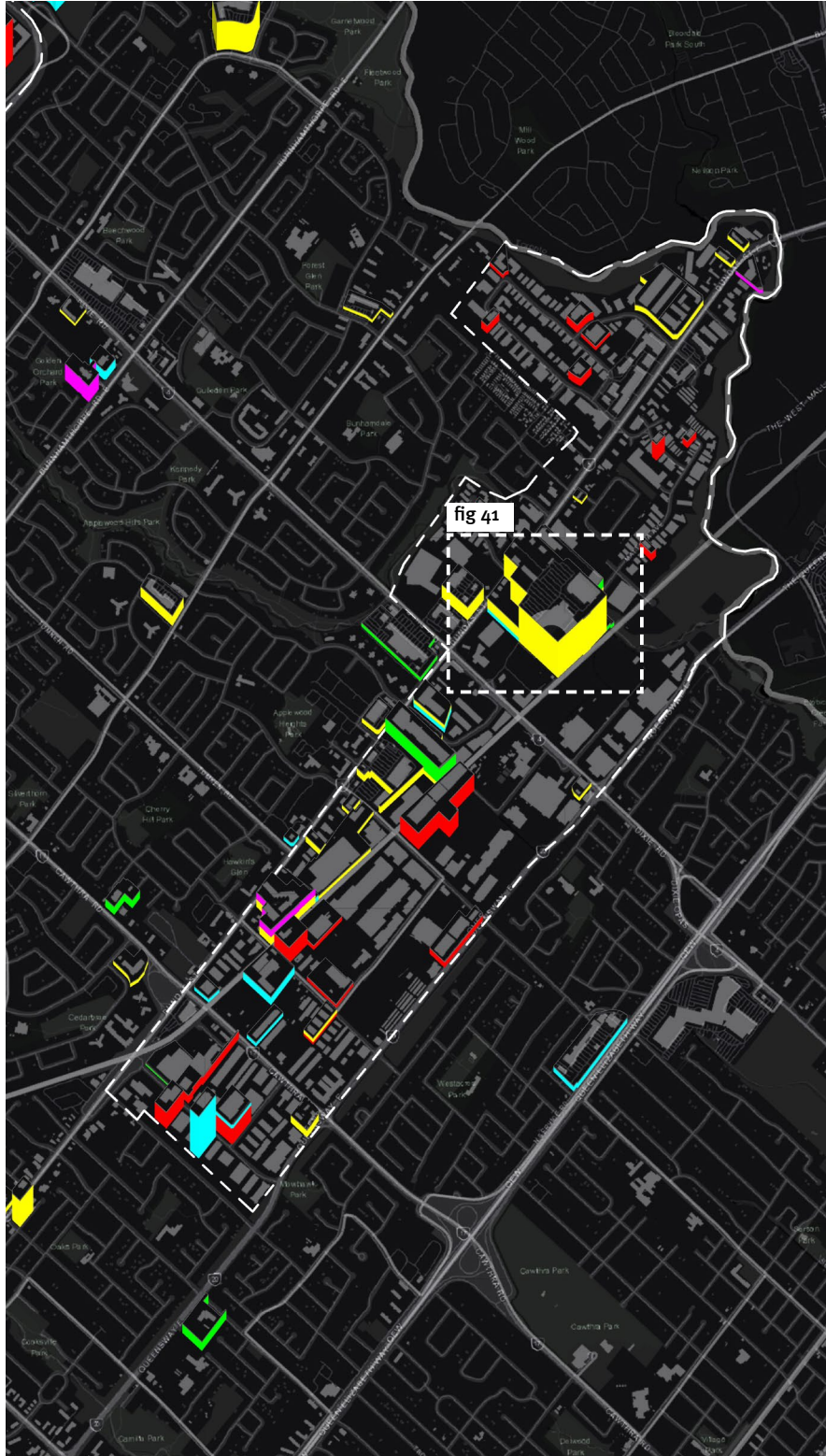
63. Stein, *Capital City: Gentrification and the Real Estate State*, 167–68.

with these planned, developer driven landscapes, in contrast with the organic re-inhabitation shown before, is that resultant use and form is one of a defined consumptive landscape as opposed to a productive one. It is a landscape where planning and suppression of the unexpected are embedded in its conception, where the movements of people and goods and space are orchestrated for optimal efficiency, and where present-day realities and constraints are baked into the future.

It is at this point where real estate capital would be framed as the antagonist of this story and industrial capital the protagonist. Re-industrialization would be the economic force to push back against speculation<sup>63</sup>. However, when it comes to the public realm, both models produce conditions which can hold back local actors from contributing to the urban fabric. Real estate developers use improvements in the public infrastructure, such as, social amenities, enhanced pedestrian experiences, street trees, and beautiful parks as tools to increase overall land values<sup>64</sup> and fuelling processes of gentrification. Conversely, while low land prices are beneficial to both industrial tenants and small-scale, local actors, there is little incentive for industrial capital to contribute to the public realm as that would reduce their bottom line<sup>65</sup>. It seems conventional development and intensification models, typically through up-zoning and tabula-rasa developments, are contradictory to the intrinsic value (which is the lack of value) in the employment lands.

64. Moskowitz, *How to Kill a City: Gentrification, Inequality, and the Fight for the Neighborhood*; Stein, *Capital City: Gentrification and the Real Estate State*, 69.

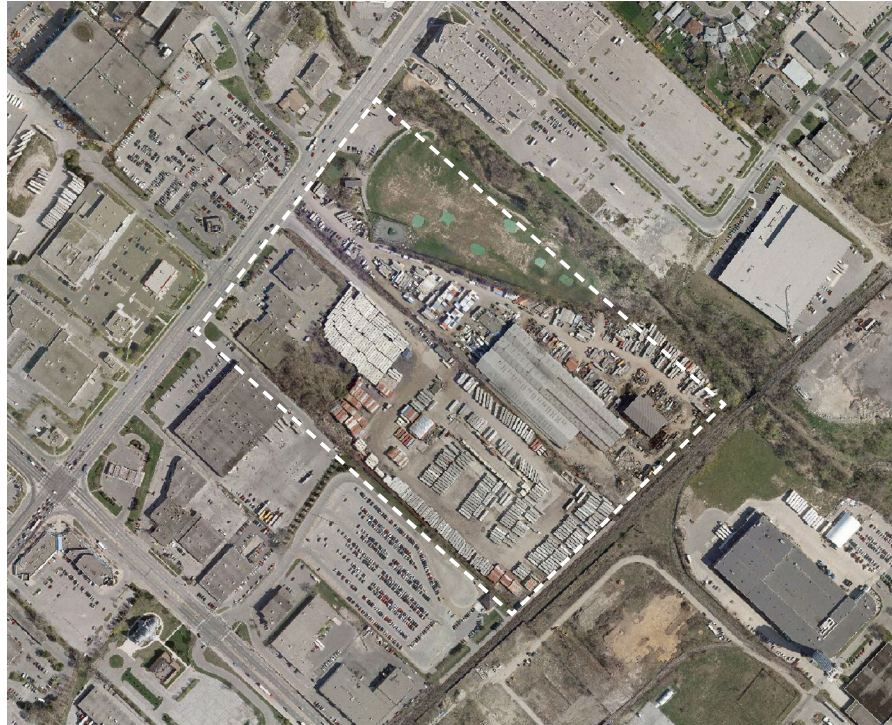
65. Stein, *Capital City: Gentrification and the Real Estate State*, 38.



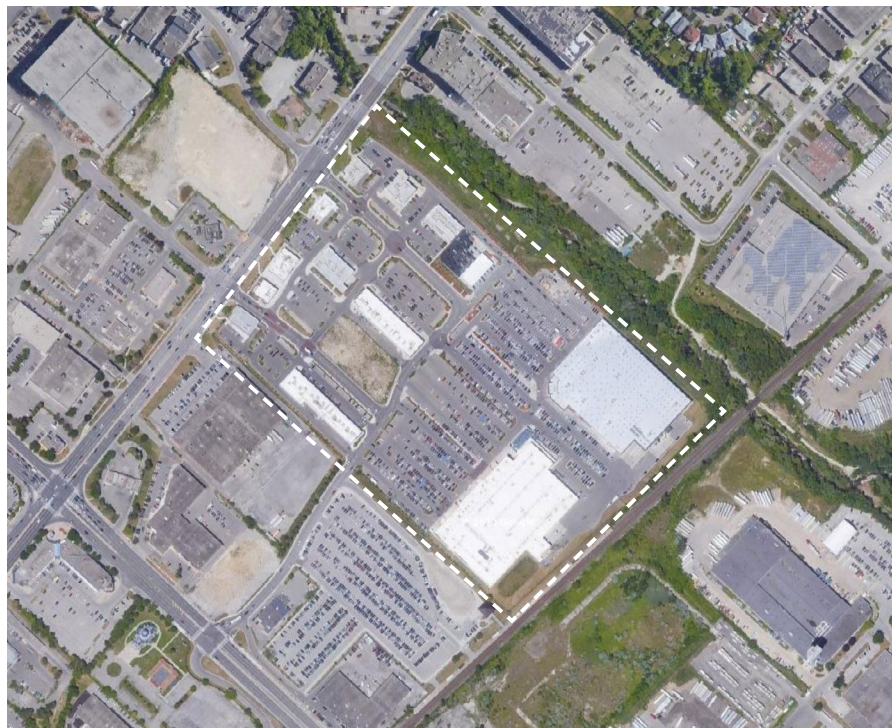
*fig. 40 (left)*  
enlargement of employment change map, showing redevelopment of an industrial site in the dixie employment area

*fig. 41 (right)*  
study locations in the dixie employment area informed by employment change map, aerial imagery from Scholars Geoportal

2006 1530 dundas st e  
industrial facilities  
golf course



2019 1530 dundas st e  
walmart  
costco  
m&m food market  
booster juice  
starbucks  
lcbo  
td bank  
rbc royal bank  
dollarama  
east side mario's



## **Opportunities for change**

*“Finding opportunities where opportunities were not expected or were not allowed to be expected. Opportunity is life. Opportunities make life. Make life different. Opportunities are found in necessity. Should be found as occasions. The turning point. The unexpected.”* <sup>66</sup>

Jan de Vylder, Bravoure Scarcity Beauty

From the research and analysis, it becomes apparent that the value of the existing fabric of the older employment areas is the low value of the building stock and land itself. And that the undervaluing of the land in contrast to the rampant speculation that surrounds them allows for niche uses to appear.

However, as these areas were planned and designed with industrial uses in mind, there is little thought to the public realm. To understand the public realm in the employment areas and their spatial implications, a fragment from the Mavis Erindale Employment Area (fig. 43) and the Dixie Employment Area (fig. 47) was taken for further analysis. The locations of these swatches were informed by the previous studies of use diversity and business density. Planimetric and 3D elements were generated from combining spatial data the Scholars GeoPortal and the Mississauga Open Data Portal.

To represent the general nature and walkability of the areas, the previous 5-minute pedestrian walking radius overlay was used as a background. Interesting, non-industrial businesses, found in the research of the previous sections, were highlighted and mapped with their respective business sector colour. Impermeable surfaces, such as roads, driveways and parking lots, etc. were hatched in grey. Parking spaces were mapped by tracing over satellite images using a standard parking space dimension of 2590mm x 5480mm. To understand the flow of materials and people, a survey in Google Maps was done to locate loading docks and public pedestrian entrances, notated with red and blue triangles respectively. Designated spaces for pedestrians were shaded in blue and the minimum automobile space shaded in red. The minimum space for automobiles was determined through the route of access to loading docks, with turning radii determined by the largest vehicle which would access each loading dock (e.g. semi-freight truck, small freight truck, car). Trees and utility pole locations were generated from spatial data provided in the Mississauga Open Data Portal.

From the maps, it becomes apparent that the main considerations of this environment were based around the logics of the freight truck and the

66. de Vylder, Bravoure Scarcity Beauty. 13.

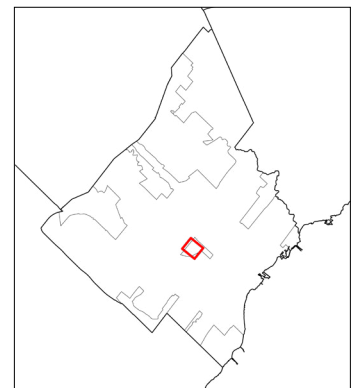


fig. 42  
location of mavis erindale study area

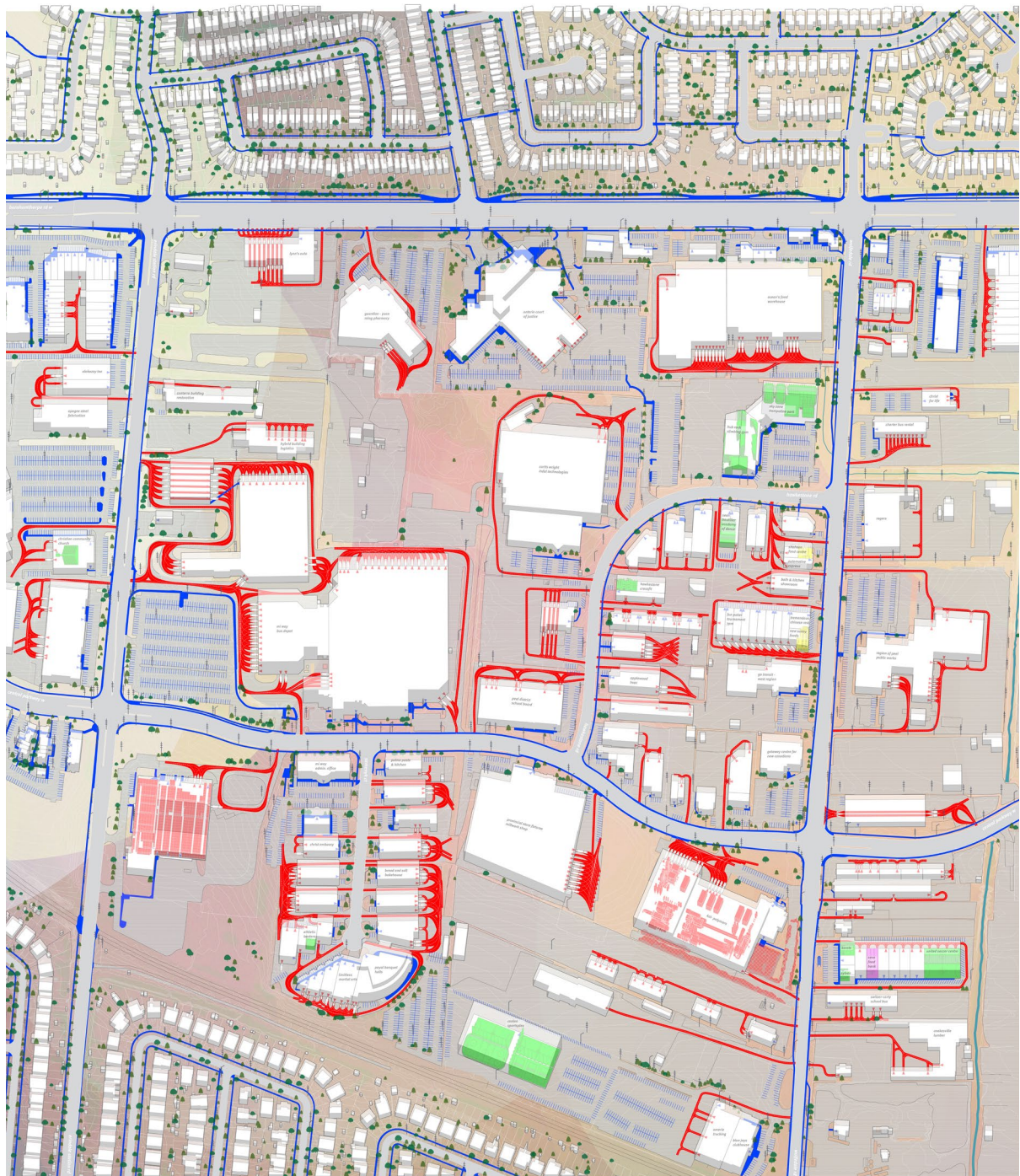
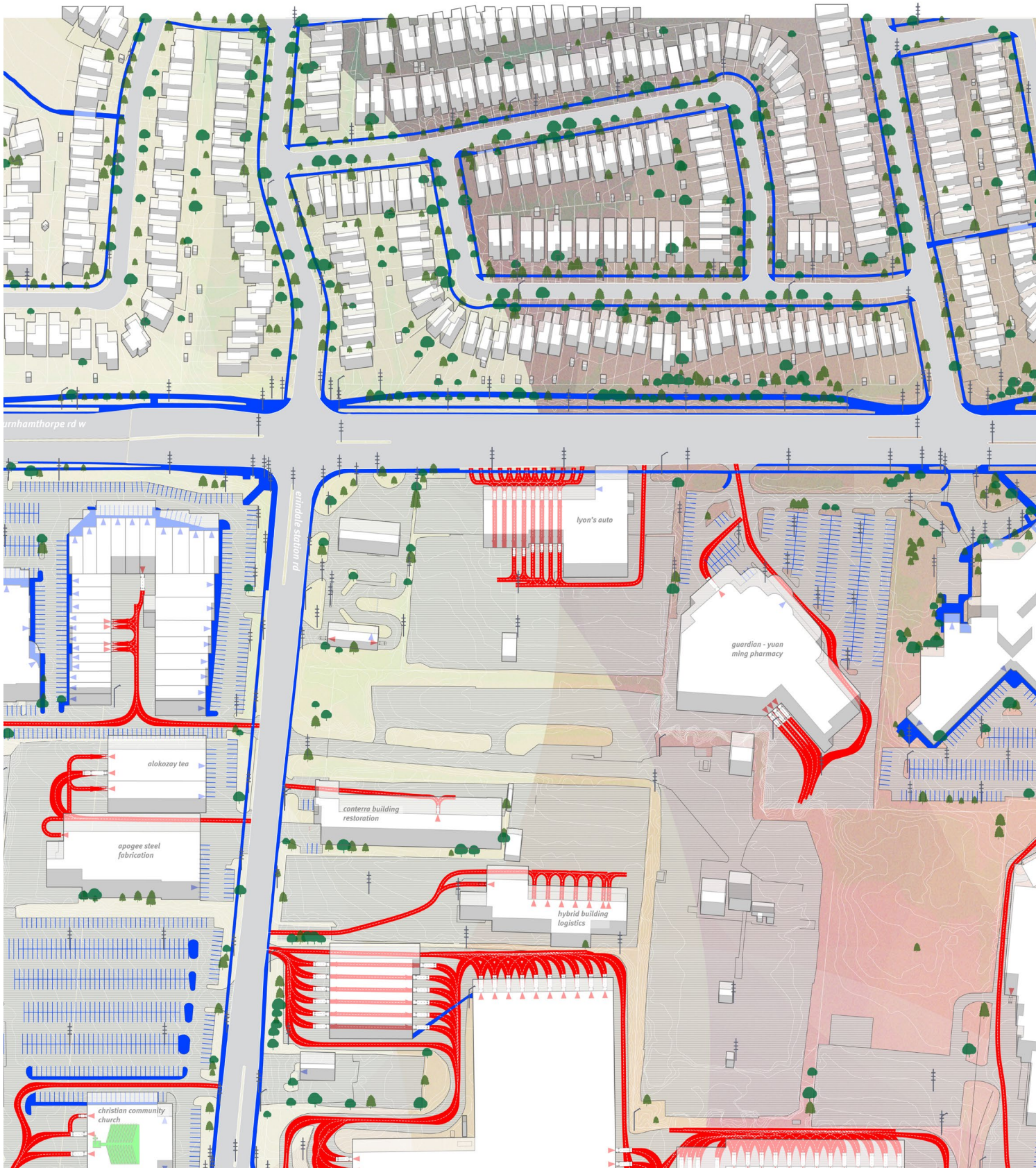


fig. 43  
mavis erindale study area

- pedestrian space
- boh vehicle space
- ped. entrance
- loading dock



Mapping change – Opportunities for change





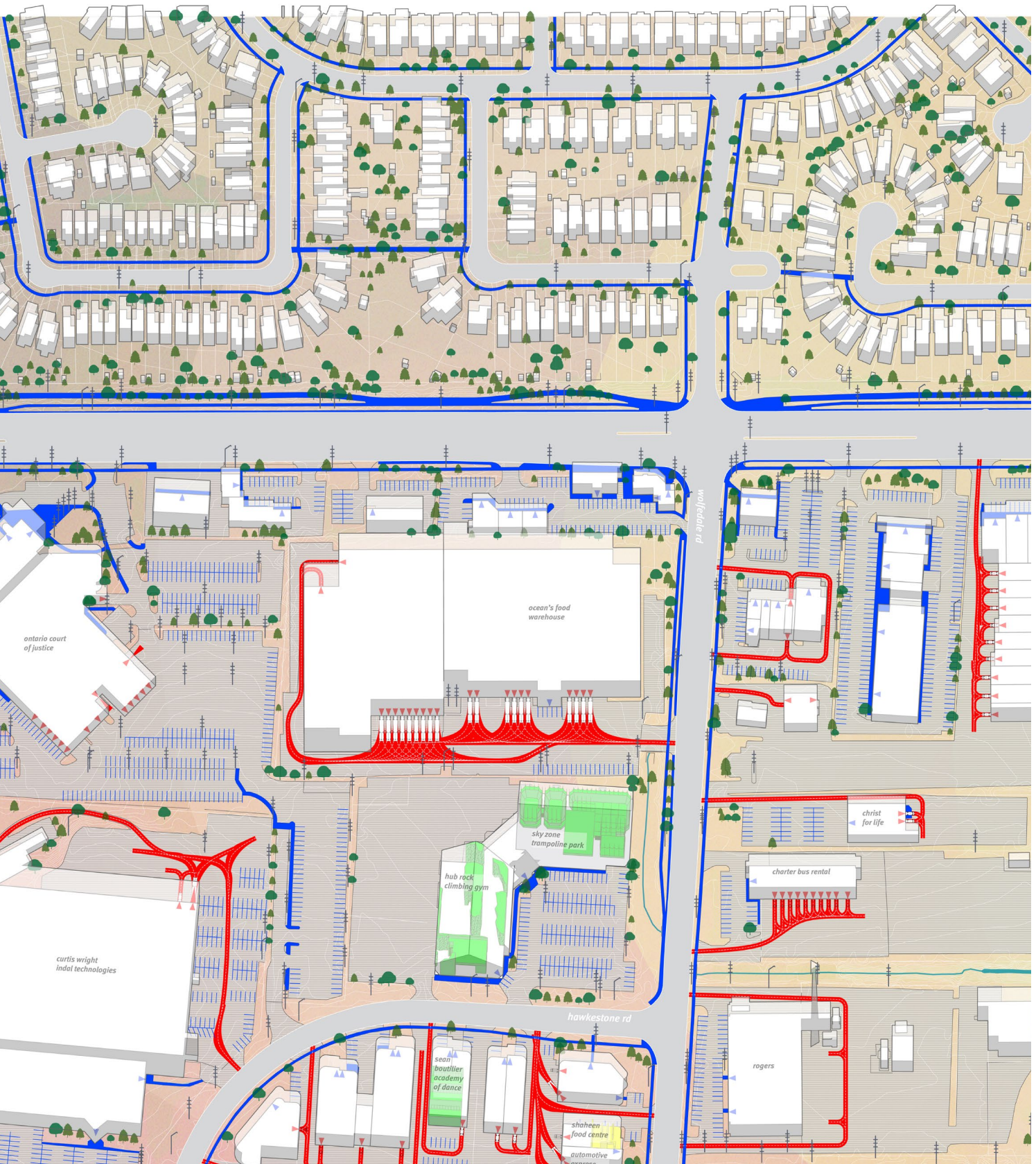


fig. 44 enlargement of mavis erindale study area

Mapping change – Opportunities for change



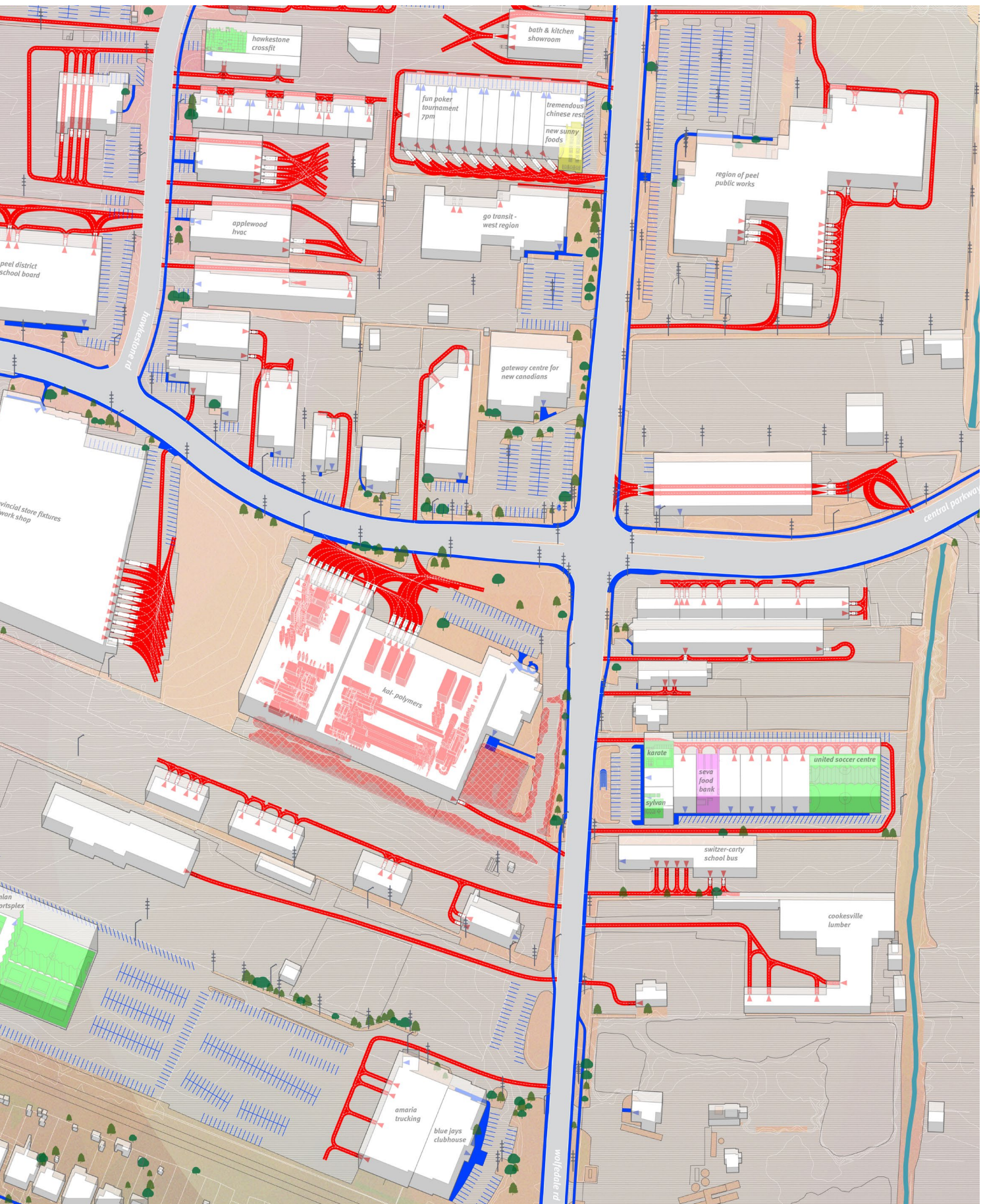
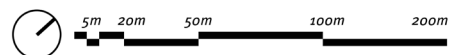


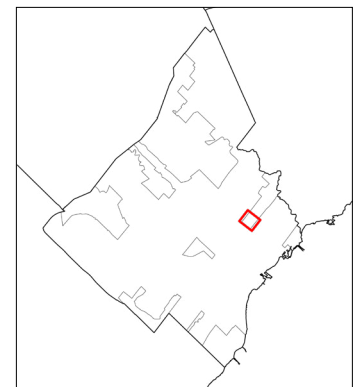
fig. 45 enlargement of mavis erindale study area



facilitation of material movement.

The public realm is underdeveloped. Pedestrian spaces are sparse and relegated to the sidewalk beside wide arterial roads or the strip in front of buildings. There are no public spaces or parks in these areas, and pedestrian movement between buildings are often indirect and circuitous. Yet looking closer, from a human point of view, there are traces of appropriation and inhabitation which underscore a desire for the existing built environment to reflect this new public realm integrating itself into these industrial areas.

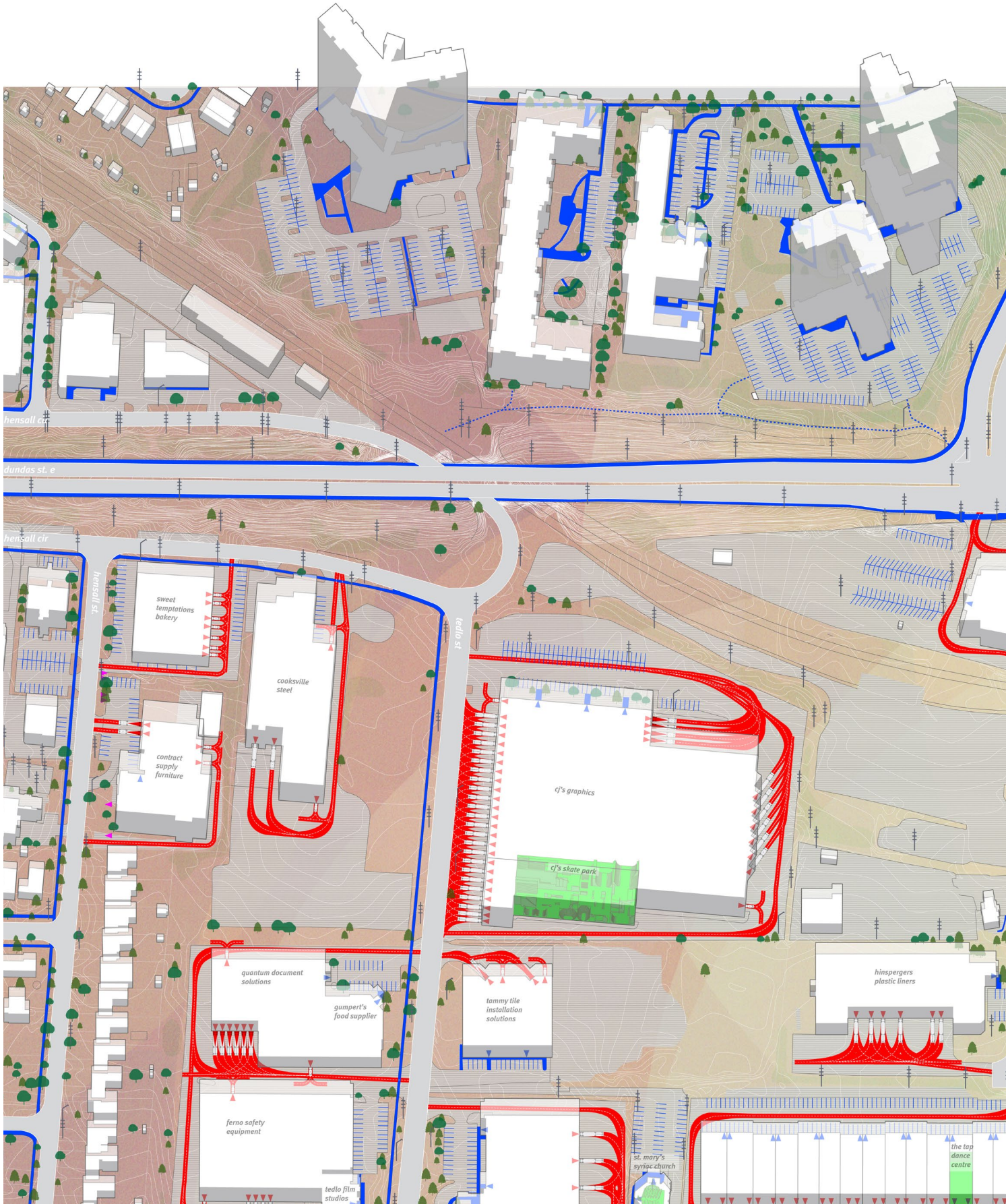
There is a disconnect between the cultural, urban, and public functions being layered on this fabric and the existing public infrastructure in which they inhabit. There is a want to address the public interface between the productive landscape and the city which is trying to reintegrate it. But conventional development methods are contradictory to the inherent value of this place, which is that it is a cheap spatial framework that small actors can reasonably inhabit. Furthermore, following this line of thinking, perhaps there are other uses which are excluded entirely from having a spatial presence because of high land values of the commercial cores and incompatible spatial configurations of the employment areas. It seems there are opportunities for the transformation of these diverse, but disparate communities to be more than just individual destinations—'hotspots within the plane of tarmac'—and become places in and of themselves.



*fig. 46*  
*location of dixie study area*



Mapping change – Opportunities for change



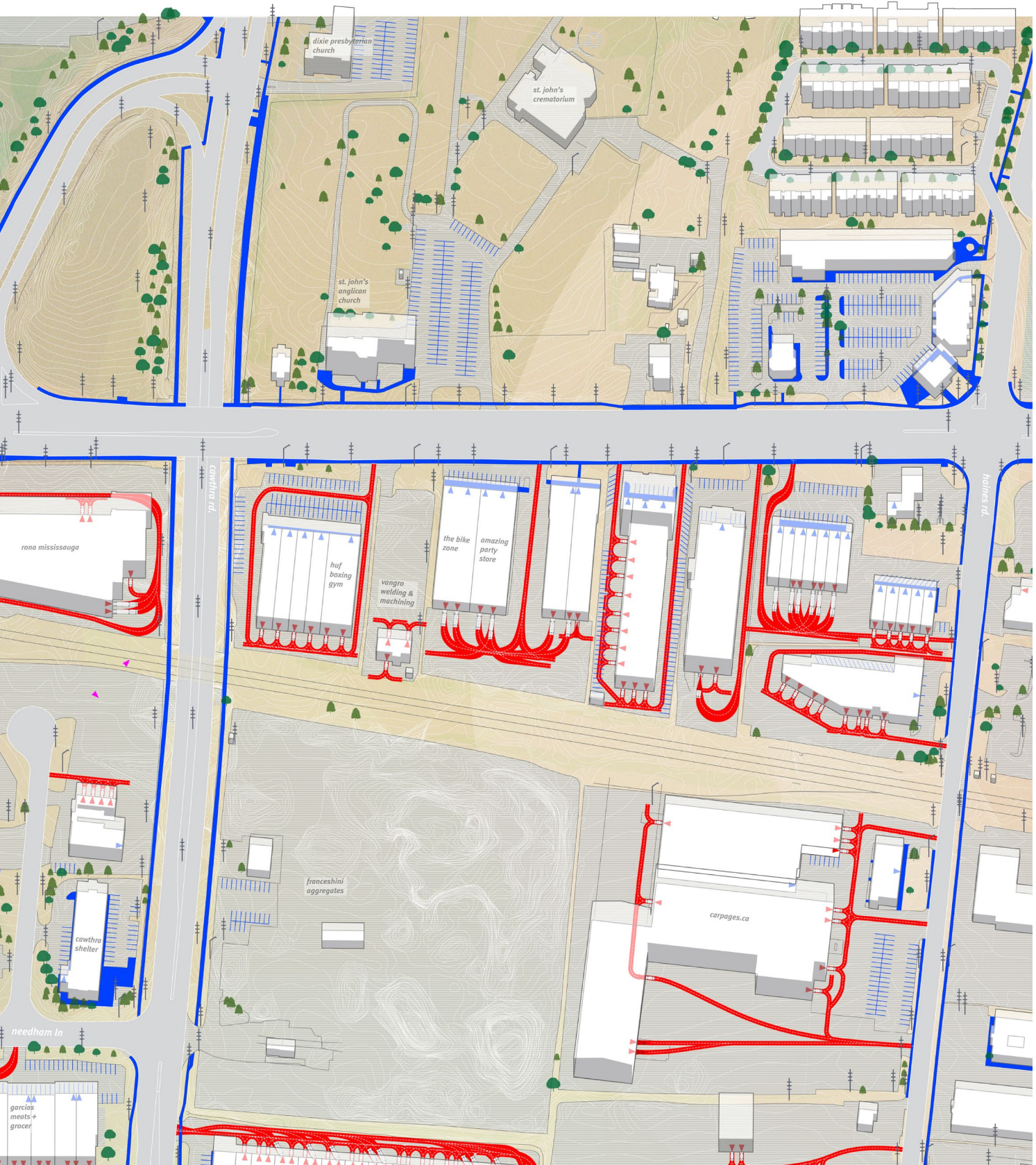


fig. 48 enlargement of the dixie study area

Mapping change – Opportunities for change







fig. 49 enlargement of the dixie study area

**Unlocking opportunity**



### **Reimagining the employment areas**

Four sites in total were chosen in the Mavis Erindale Employment Area and Dixie Employment Area to explore potential possibilities through design scenarios: one in a self-storage facility, one by a trampoline park and rock-climbing gym, one by a plastics recycling plant, and one in the interstitial back streets of an industrial block (fig. 50). Each looks at a possible spatial condition that has the potential to be reimagined: the facade, the parking lot, the landscape buffer, and the driveway. From each of these, a vignette is proposed to provoke an alternate perspective of what else these places could be without restricting their current modes of operation.

These scenarios look at amplifying existing conditions as a starting point for reimagining what these places could be. While arguably many scenarios could play out, the decision was made to pursue one in depth per site in order to understand the nuanced constraints and opportunities which these projects face. The goal is to extend the destination-like nature of these buildings from just the interior, as they are now, to encompass the exterior and landscape where they can engage the public realm and begin the process of place-making.

Here, it seems to make sense to open-up possibilities for present desires and trends to inhabit and realize themselves rather than provide a comprehensive roadmap for the future of these spaces. It makes sense to restructure the system to accept various outcomes and various agents—to maximize potential spatial and use diversity and un-design the assumptions of the automobile in the built environment. Deliberate interventions and new constructions are approached with a light touch for easy reversibility and cost reduction. As these employment areas are where the resources and processes to build and sustain the city exist and operate, solutions for materials and techniques will be drawn from the local industrial environment where possible. Compost for soil can be sourced from food distributors and landscaping operations, materials and fixtures found in millwork shops and steel processors, skilled workers found on the factory floor. It is not a stretch to imagine the employment lands building and evolving itself.

The stance is taken to resist imagining major redevelopments or introduce speculative land-uses to prevent setting off a slippery slope of real-estate prospecting, as well as to maintain and reinforce the productive nature of these spaces. Instead the projects attempt to find the minimal built intervention required to unlock new uses, introduce new spatial opportunities, and address the public realm. This will hopefully give room for the projects and places to retain the ambiguity and uncertainty and freedom for possibility that seems so rich in the existing fabric.

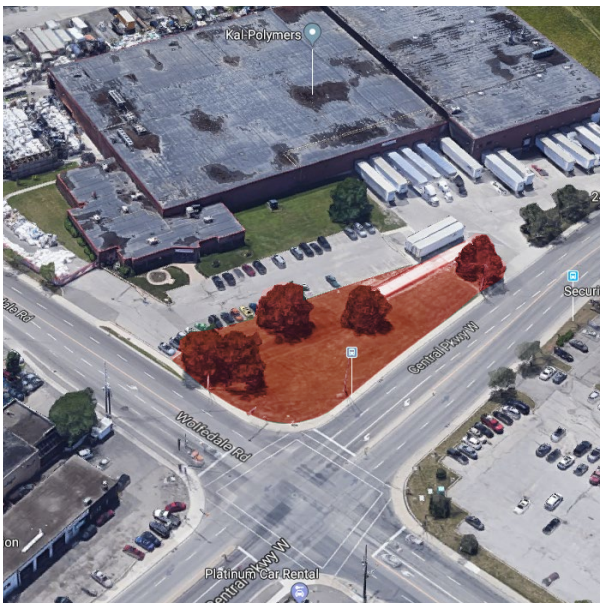
*fig. 50*  
*sites for design studies, aerial*  
*images from Google maps*



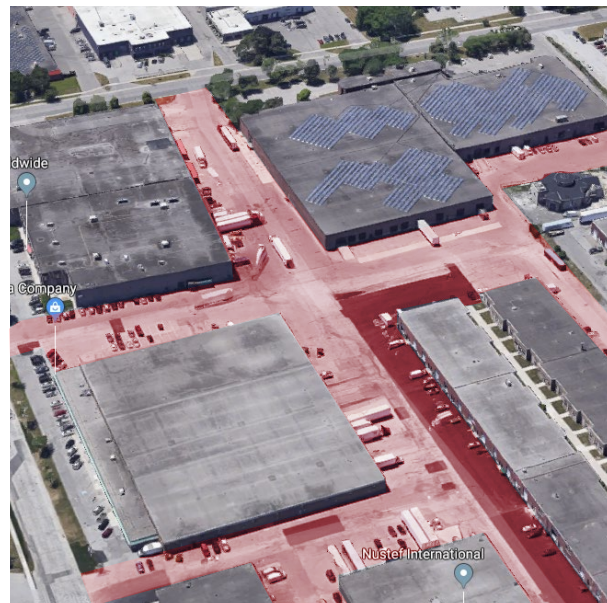
Store and work  
1000 central parkway w.  
facade



A lot of sports  
3636 hawkstone rd.  
parking lot



Plastics park  
central parkway w. and wolfedale rd.  
landscaped buffer



Driveway islands  
cawthra rd., tedlo st., and orwell st.  
driveway

## Store and work

Self-storage facilities are booming <sup>67</sup>. Residents and businesses need more and more space to store their belongings. Due to relatively low occupancy demands and renovation costs, existing industrial buildings and warehouses are finding themselves prime spaces for self-storage businesses to take over. The things in here are stored for the long term: old furniture from a downsizing family, exercise equipment from an impulse buy, childhood toys too sentimental to be thrown away, office equipment from a failed business. The architectural effect reflects the activity within; mute boxes protecting their contents from the outside world.

This specific building was originally a water chemicals production facility. Following its conversion to a self-storage facility, many of its original loading docks have been sealed with a new facade (fig. 51), mechanical services have been relocated from the mezzanine level onto the ground floor, and storage units fill the ground floor. Fencing with keycode controlled gates encloses the private areas of the facility.

But with an abundance of cheap space there is also the conditions for life. As Stewart Brand observed of these spaces two decades ago,

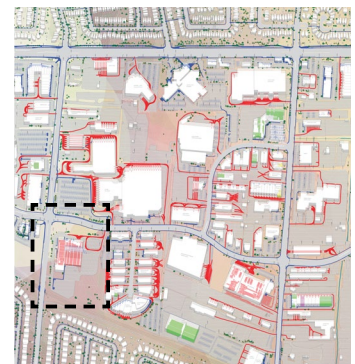
*“in these spaces you’ll find the damnedest thing—a boxer working out, quiet adultery, an old gent in a huge chair enjoying a cigar away from his wife, an entire British barn in pieces, a hydroponic garden, stolen goods, a motorcycle repair shop, an artist’s studio, someone shaping surfboards, lots of very ordinary storage, and about once a month somewhere in America, a dead body.”* <sup>68</sup>

The project looks at the facade as the point of intervention. By converting the storage unit into occupiable and flexible spaces, similar in spatial

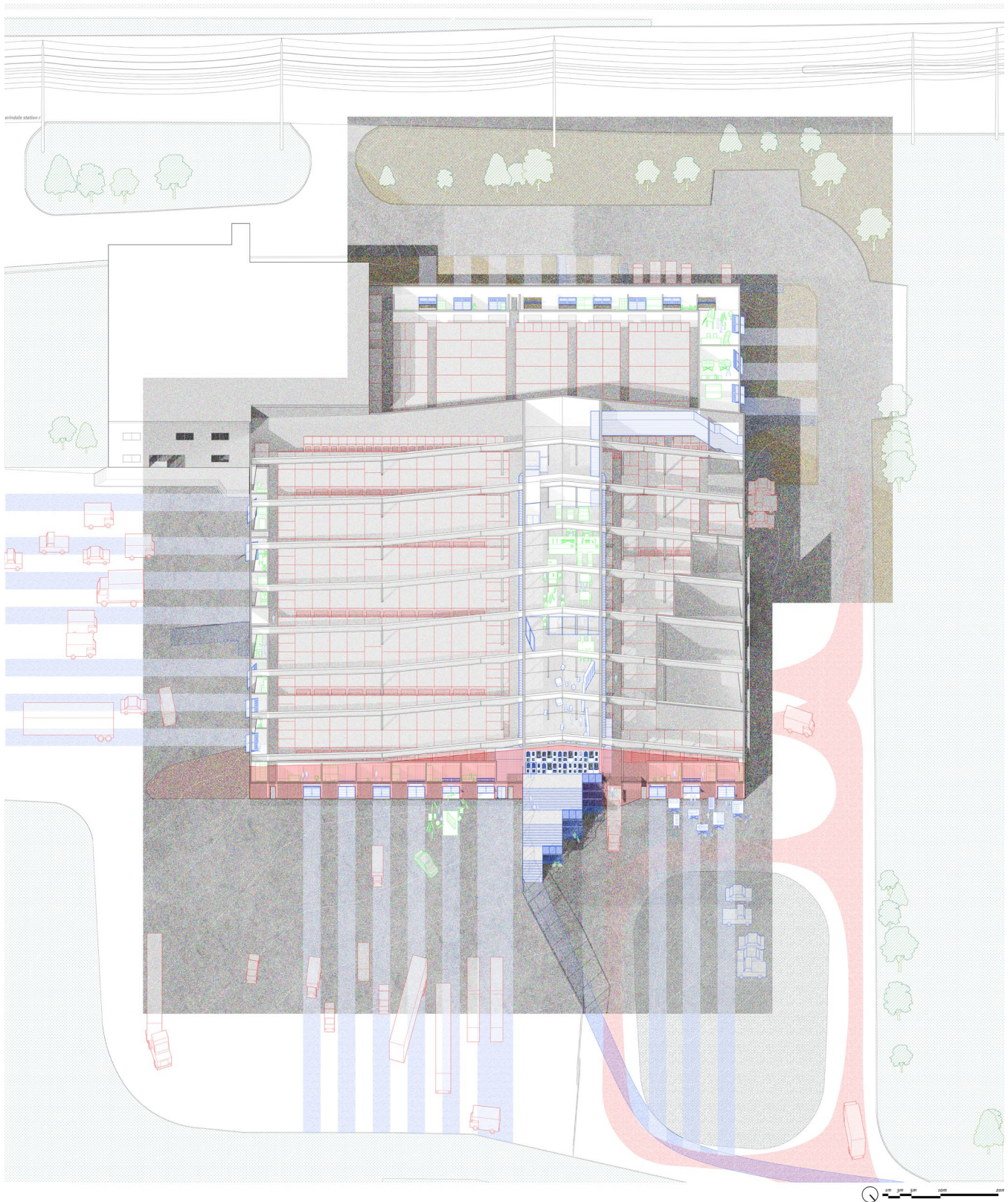
67. Kohler, “Self Storage: Inside the New Real Estate War to Stash Your Stuff.”

68. Brand, *How Buildings Learn : What Happens after They’re Built.* 29.

*fig. 51*  
exterior photo of the self-storage facility at 1000 central parkway w



*fig. 52*  
location of project in the mavis erindale study area



*fig. 53*  
store and work, plan oblique  
drawing



*fig. 54*  
the facade of a former industrial building in Lisbon is opened up with doors and windows for small workshops, artisans, and stores to inhabit and engage the public.

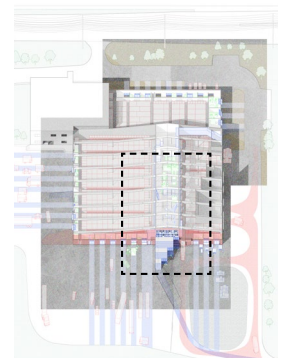


*fig. 55*  
ndsm warehouse in amsterdam was a key precedent. here, a former shipyard building turned into a cultural incubator. raw space is divided into a spatial matrix, and infilled and constructed by the occupants

quality to garages, and whose functionality is augmented with shared programs, we can activate the inert materials contained within these buildings and connect these private spaces back to public realm.

The unused mezzanine is connected with a large staircase to connect the space to the public. A large bifold door, commonly found in industrial buildings and hangars, forms the entrance. The bifold door is constructed using spare doors from the neighbouring architectural trim factory. Skylights are introduced for daylighting.

In the mezzanine level, an unprogrammed open space allows for activities to expand into and for events to happen. A community workshop allows for the inert material in the storage below to be made into new things and provides a public connection to the surrounding neighbourhoods. The



*fig. 56* keyplan



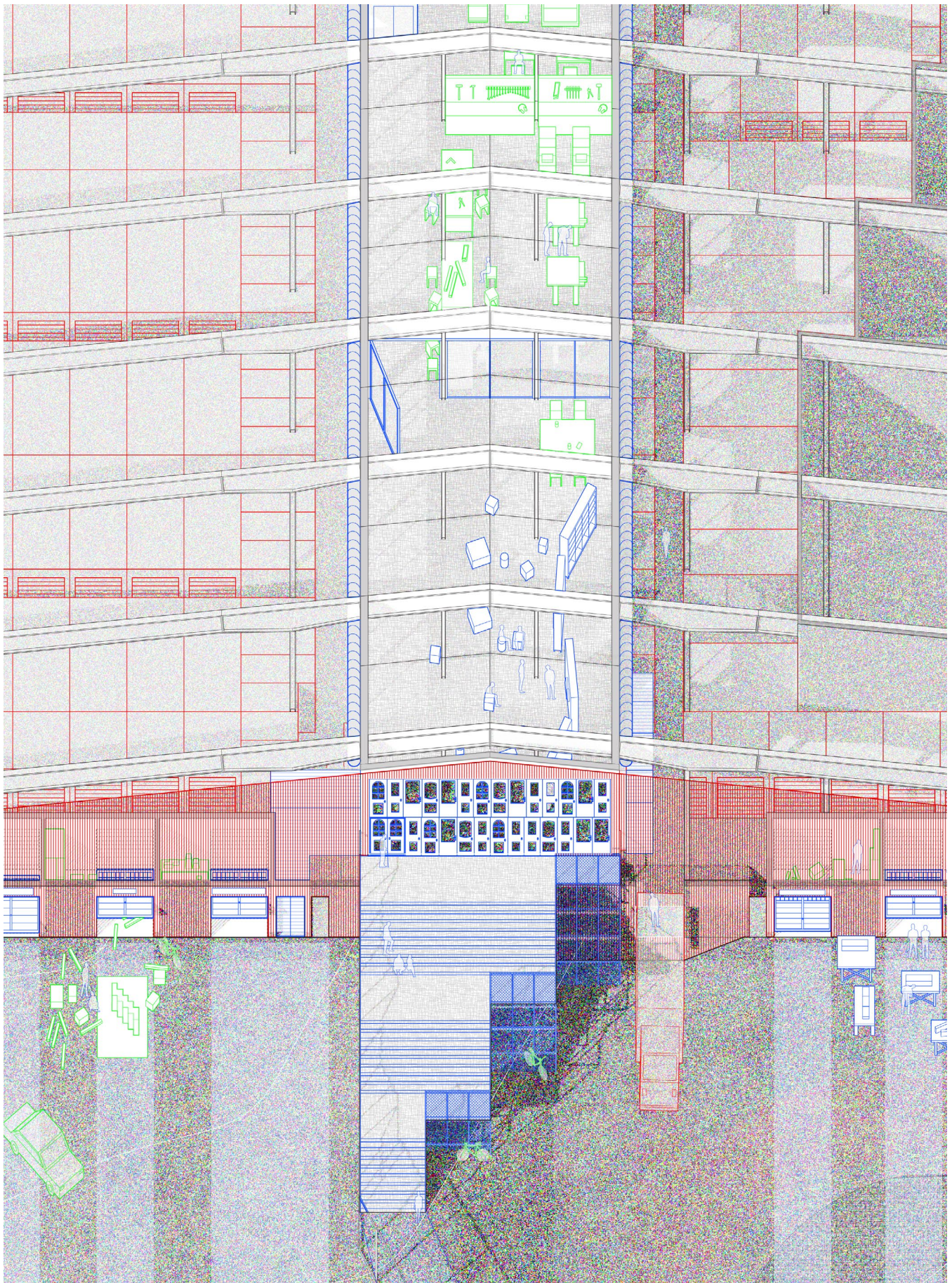
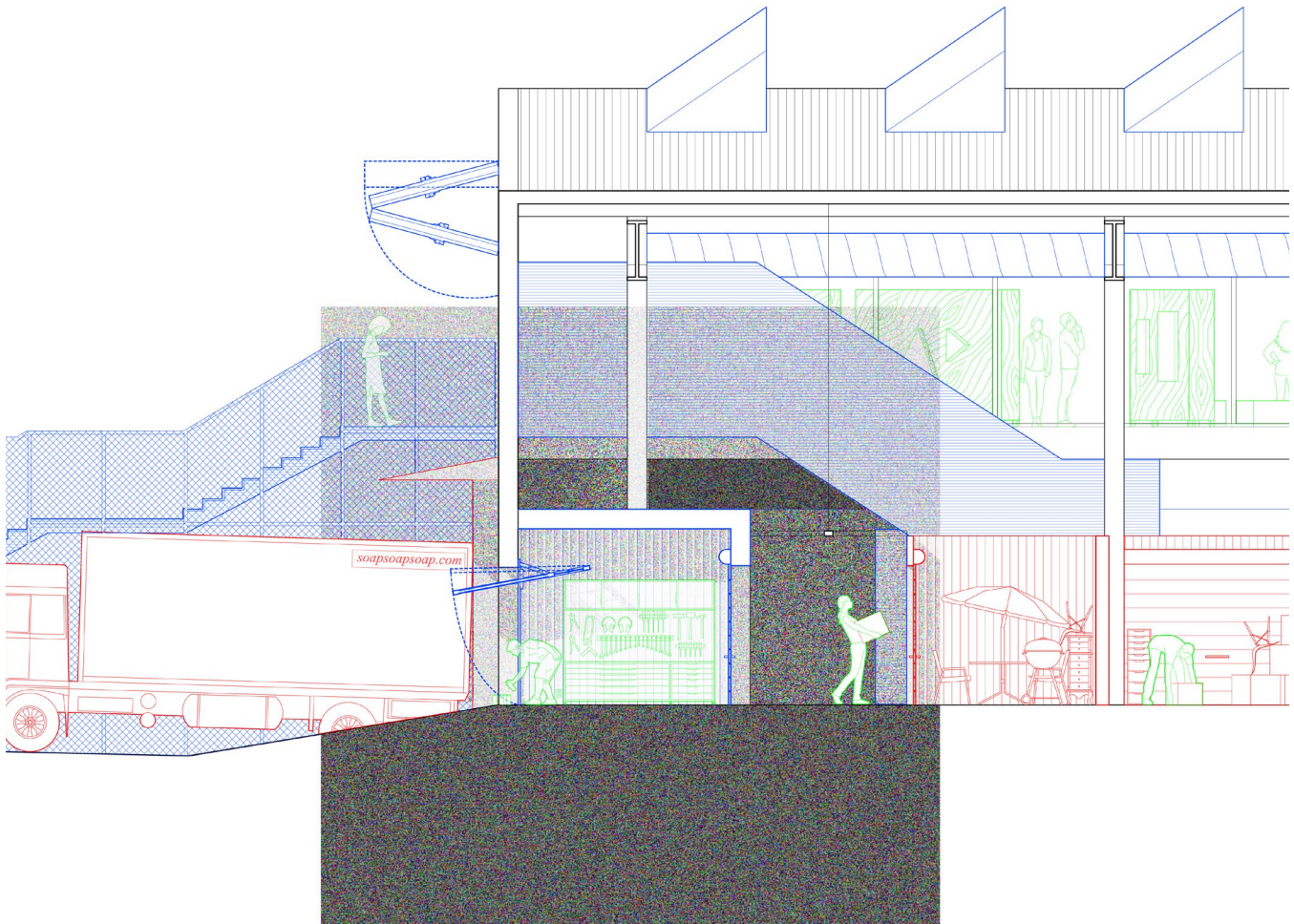


fig. 57 enlargement of store and work, plan oblique drawing, showing the public mezzanine programs

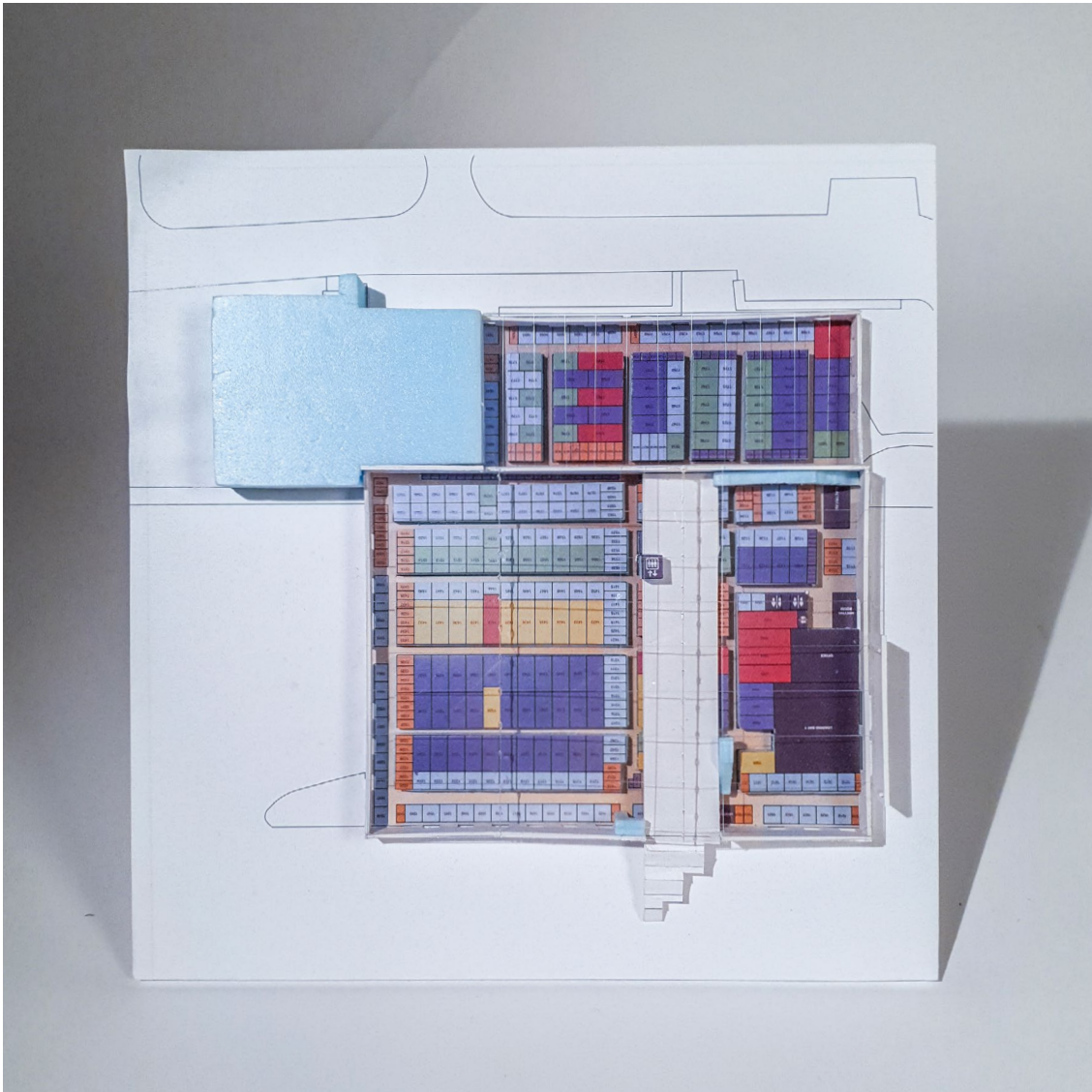


sectional separation keeps public-private relationships clear but keeps the spaces visually connected.

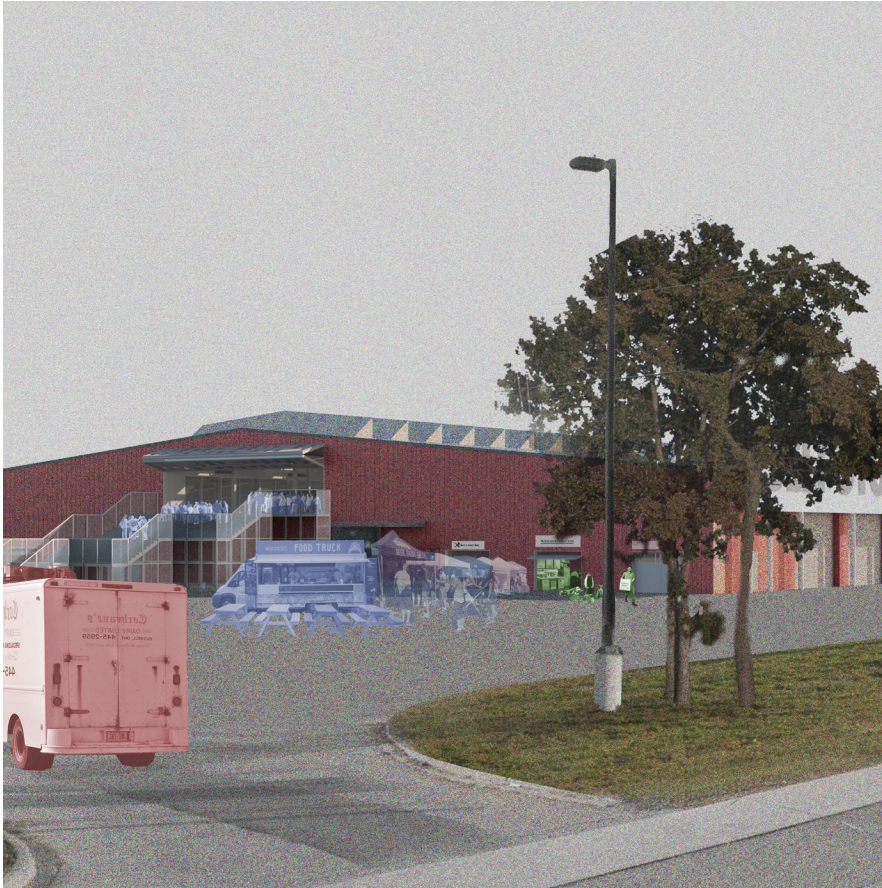
The existing storage unit configuration is untouched, with the exception of where new fire exits and elevators are placed. As storage units are typically open to above, perimeter units are enclosed and insulated. Openings in the façade are punched out and fitted with operable garage doors, allowing for ventilation and for activities to spill outside.

These activated storage units form ideal, flexible, and cheap spaces for start-ups, small businesses, and individuals to occupy. The increasing

*fig. 58*  
section of the building, showing interventions and activities. Up-and-over garage doors and bifold doors were chosen as they become canopies when opened.



*fig. 59*  
schematic model showing existing  
storage unit layout kept intact to  
preserve current functioning

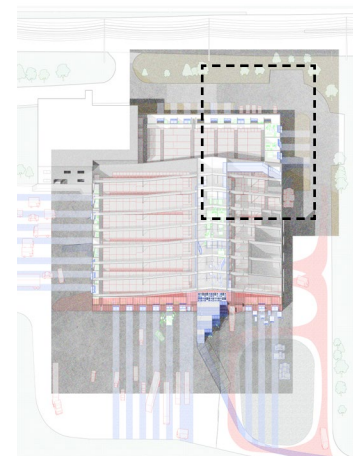


*fig. 60*  
rendering of view from central pkwy,  
showing space outside the building  
being activated with food trucks, an  
informal market, and a garage sale

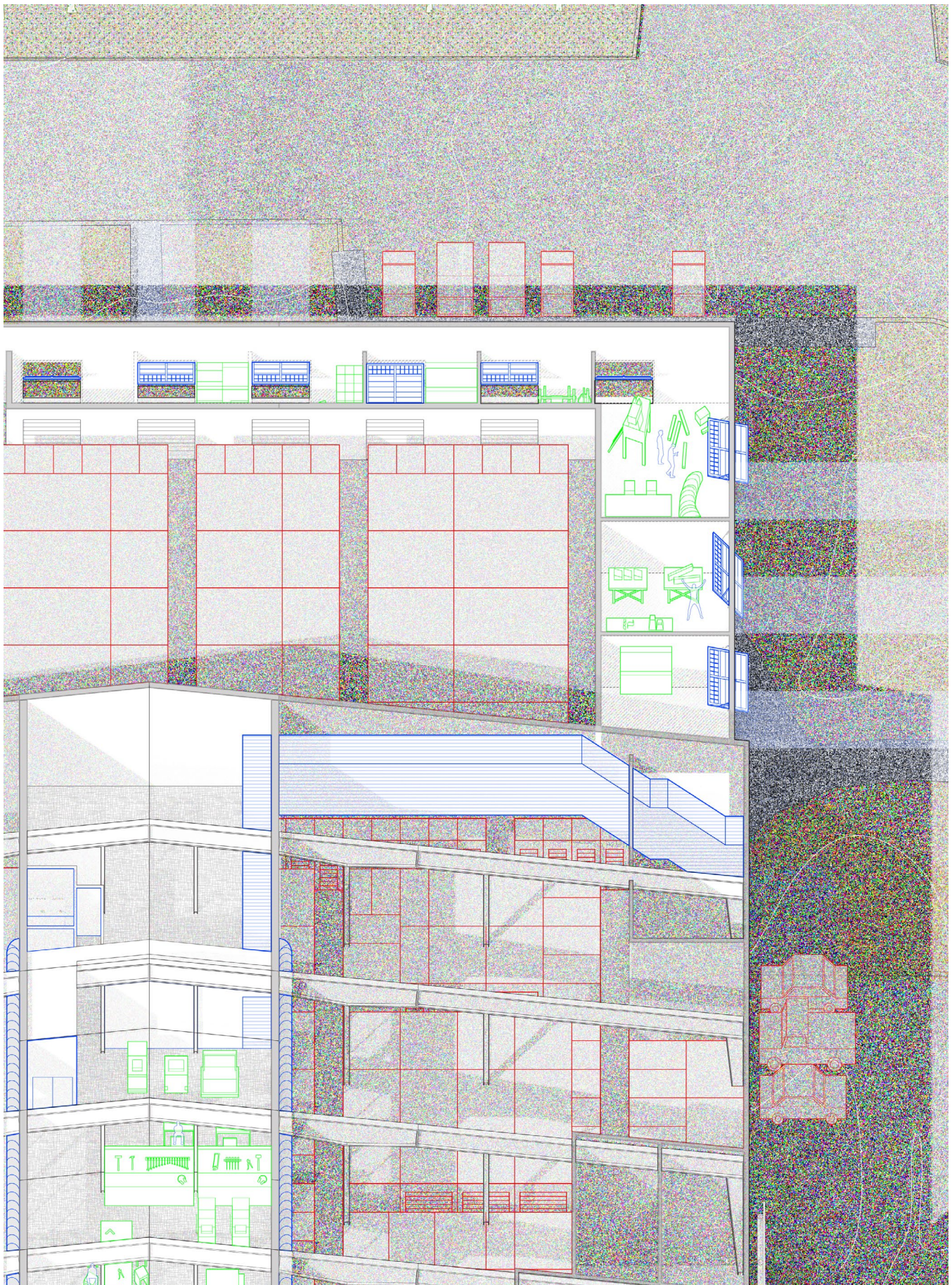
rarity of affordable housing options with garage spaces furthers the demand. Examples of uses could be, craftsmen, artists, ecommerce sellers, ghost kitchens, repair shops, fabricators, video streamers, mushroom growers, soap makers, etc. And these agents could scale their spatial presence based on their needs by renting out additional or fewer storage units. Like many start-ups started in garages, if a business is successful, they would move out to a more substantial and permanent location, freeing up space for the next generation of occupants.

Through all this, back of house storage can now be linked directly to production and front of house distribution. The inclusion of the communal workshop and flexible space provides a seed for a sense of community to grow amongst these occupants and the surrounding neighbourhood.

The new activities and uses would begin to activate the façade and the surrounding landscape, allowing for a building which engages with the public realm while increasing its productive capacity.



*fig. 61* keyplan



*fig. 62 enlargement of store and work plan oblique drawing, showing perimeter strip of activated storage units*



*fig. 63*  
*rendering showing the flexible*  
*public space in the mezzanine*



*fig. 64*  
*rendering showing the space of the*  
*community workshop*

### **A lot of sports**

Parking lots, especially nearly empty parking lots, are ubiquitous in the employment areas and in the suburbs at large. Studies have estimated there to be 2.5-3 parking spots per vehicle in non-residential areas <sup>69</sup>. This project looks at the parking lot of a programmatically charged building, where a trampoline park and a rock-climbing gym have converted and taken over the space of a previous air conditioning manufacturing plant (fig. 65). The recreational takeover is not an unexpected occurrence; the employment areas contain many buildings with large floor areas which are relatively unaffected by the speculative real estate market around them. In many ways, the employment areas are some of the few zones in the urban fabric where niche recreational uses can still operate and stay solvent.

Here, there are intermittent periods when the parking lot fills up; a birthday party, a dodgeball tournament, morning climbers, etc. but typically the spaces is far from full (especially during school and work hours). This temporal intermittency provides an opportunity to ask the parking lot to be more than a surface for the storage of cars. The project takes its initial cues from a type of outdoor space known as a multi-use games area. These spaces, typically installed in schools or public parks, are surfaces with markings and fixtures for a variety of sports to be played. They are typically enclosed with tall fencing to keep sports objects from escaping the playing area.

Through the enclosure of a field and minimal elements, these multi-use games areas transform otherwise featureless surfaces into active spaces full of options and possibility. The project looks at enclosing the site and layering basketball courts over the existing painted lines of the parking lot.

Basketball courts are laid out to work with the existing parking spots and site drainage. Basketball nets are combined with streetlamp posts to

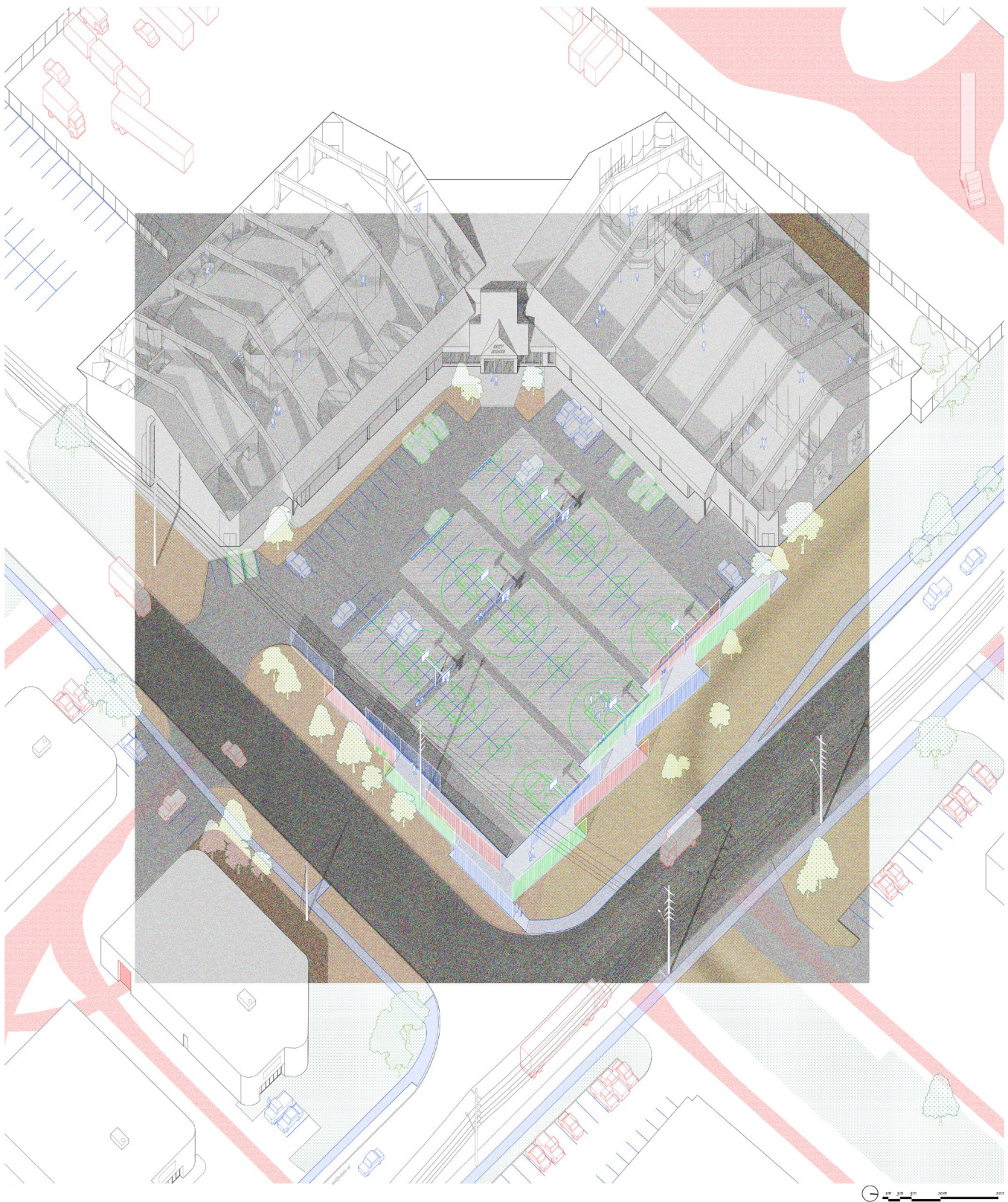
69. Joseph, *ReThinking a Lot : The Design and Culture of Parking.*

*fig. 65*  
interior photos of 3636 hawkestone rd., showing existing trampoline park and rock climbing gym

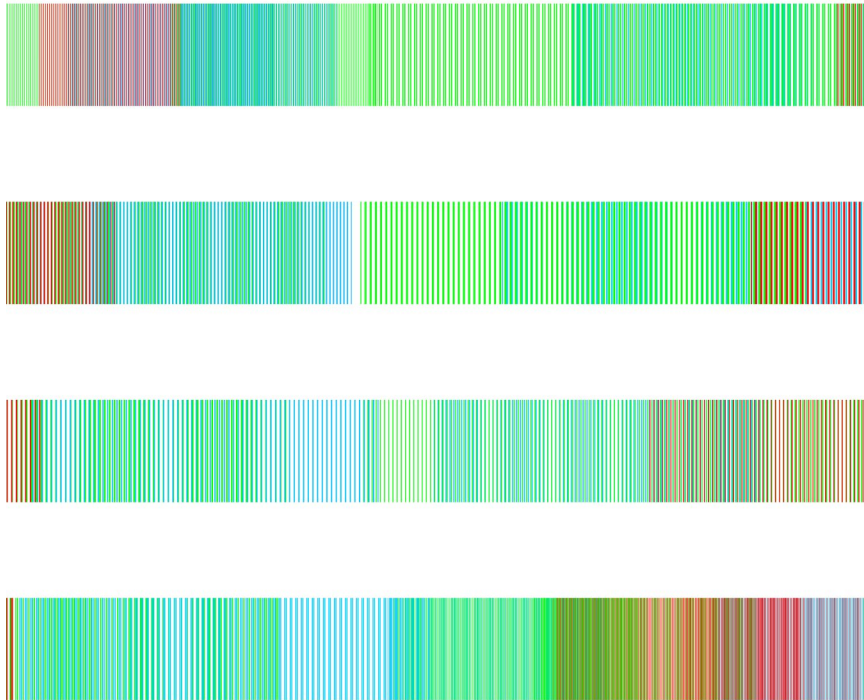


*fig. 66*  
location of project in the mavis erindale study area





**fig. 67**  
*a lot of sports, plan oblique drawing*

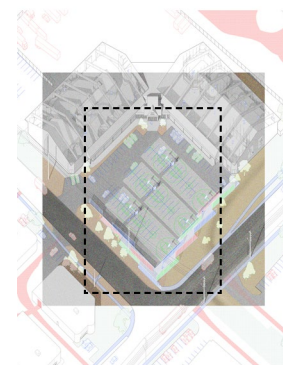


*fig. 68*  
series of elevations of the screens  
from different viewpoints showing  
the moiré effect

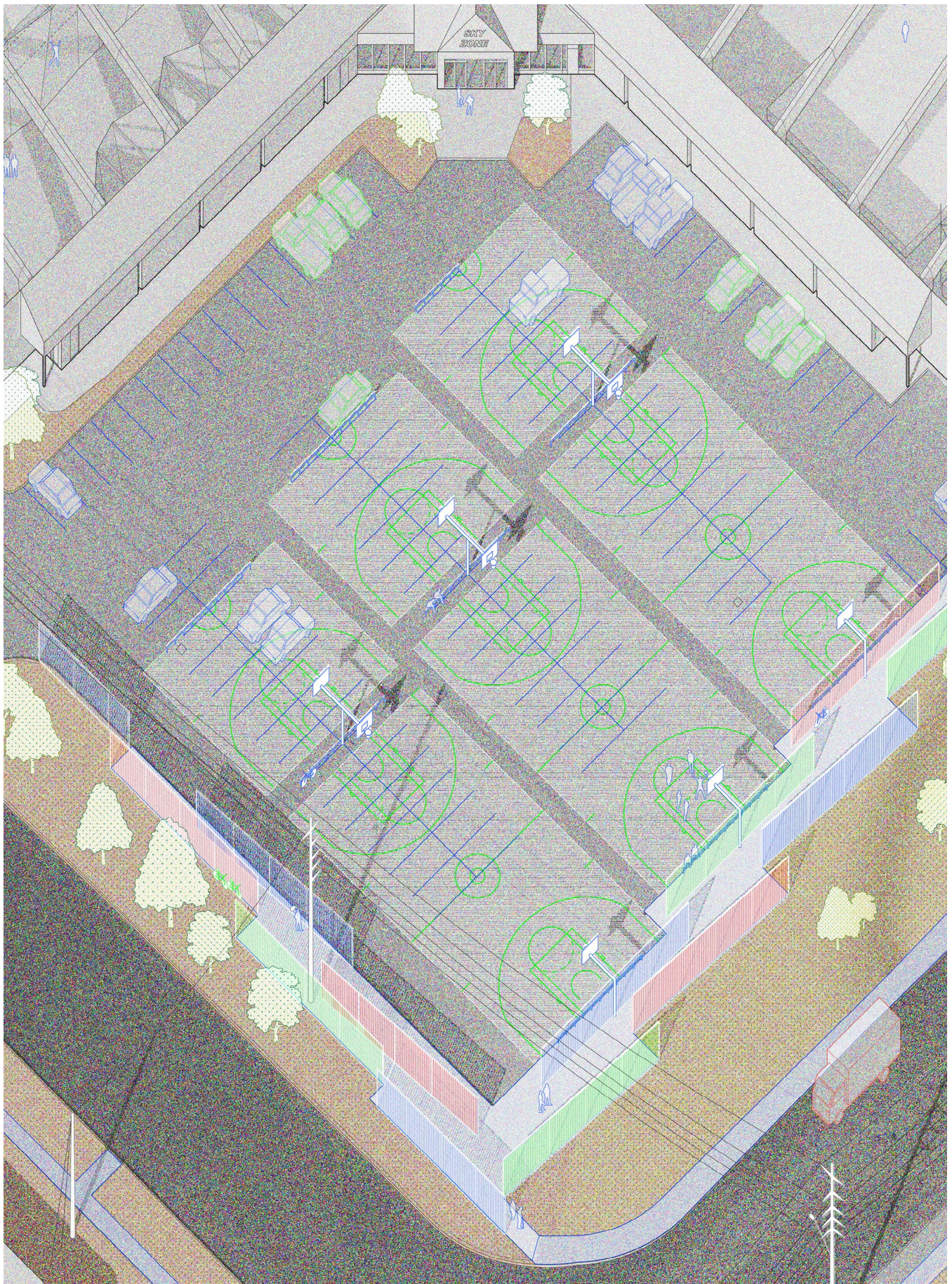
minimize obstructions for cars and ballers. Court lines are painted in a different colour than the parking lines to be easily distinguished. Nine half-courts (3 half, 3 full) allow enough flexibility for games and cars to locate themselves without disrupting each other.

The enclosure forms the basis for the project. A typical fencing solution is not porous enough to engage the public and increasing the number of openings would increase the chances for a loose basketball to escape. Thus, a system of layered and staggered screens is used. This arrangement allows for porosity through depth, while maintaining continuity to prevent the stray basketball from reaching the road. The staggering of the screens also allows flexibility in placement, such that existing trees, utility poles, streetlamps, vegetation, etc. do not need to be disturbed in the construction process. Screens are created through the simple wrapping of coloured plastic strips around fencing frames.

The moiré effect was used take advantage of the layered screen arrangement (fig. 68). This effect is created from interference of two patterns overlaid on top of each other, and animated through parallax. The effect is used to engage not only pedestrians or sports goers, but also automobiles and cyclists when they speed by, creating a point of interaction for the site with the public realm. And the buffer in between the screens becomes a place in and of itself.



*fig. 69* keyplan

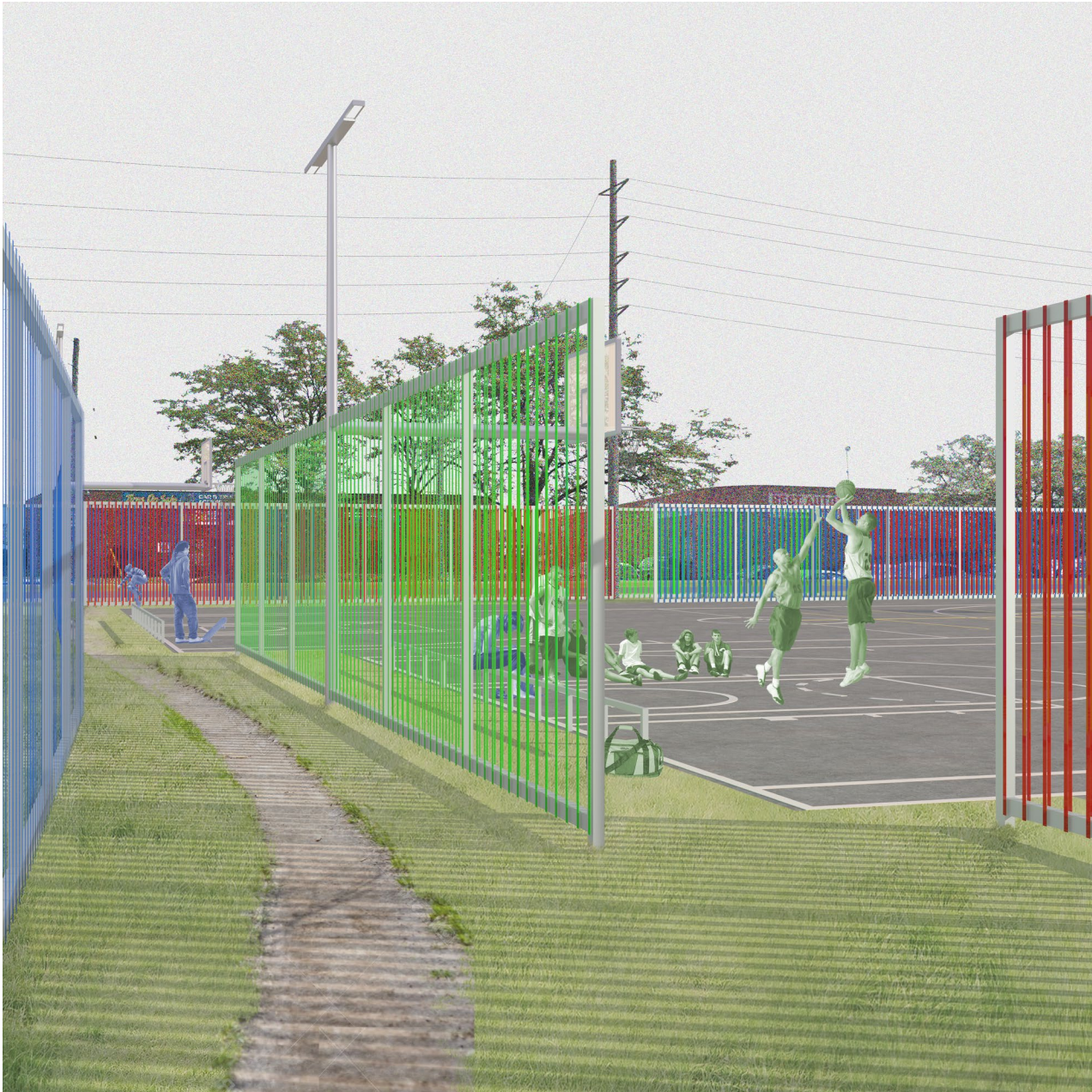


**fig. 70** enlargement of a lot of sports, plan oblique drawing, showing basketball court layout and screens

Unlocking opportunity – A lot of sports



*fig. 71*  
rendering of a view from the parking  
lot, showing cars and basketball and  
teenagers sharing the space



*fig. 72*  
rendering of a view from in between  
the screens, showing the activation  
of the landscape buffer

## **Plastic park**

The perimeter landscaped buffer is the direct result of planning regulations created with the automobile in mind. In Mississauga, and elsewhere, minimum landscaped setback depths from each street are enforced through the zoning (typically 4.5 meters minimum from the lot line)<sup>70</sup>. These spaces were in part intended to be aesthetic and noise responses to the traffic from fast roads, and as such typical design practices included the creation of berms or mounds for separation between the building and the road. Planting typically consists of mostly grass and trees along the perimeter due to its quick and conventional implementation.

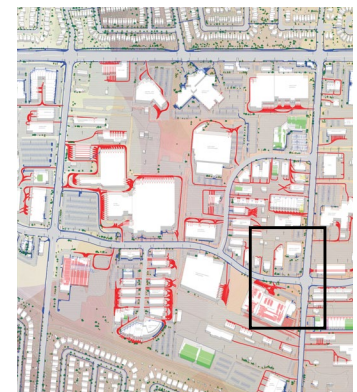
The site of the project is a landscaped buffer sandwiched between the parking lot of a plastics recycling plant and two high traffic roads. Nearby are many non-industrial parcels with a lot of community uses. The plastics recycling operation has a lot of waste plastic material going through and upcycled here. There is a bus stop here as well (fig. 73).

This project looks at activating and opening up the landscaped buffer to perform on multiple dimensions. In the surrounding context, there is a desire, especially for something this large, to be more than just a green setback. Engaging the existing nature as an aesthetic (relative to its context) landscape, the project proposes the creation of a much-needed park in this area. To take advantage of the plastics recycling plant that owns this plot of land, the design will use the recycled plastic output from the factory for construction materials.

70. City of Mississauga, "General Provisions for Employment Zones and E1 to E3 Permitted Uses and Zone Regulations." 8.2.1-3-4.

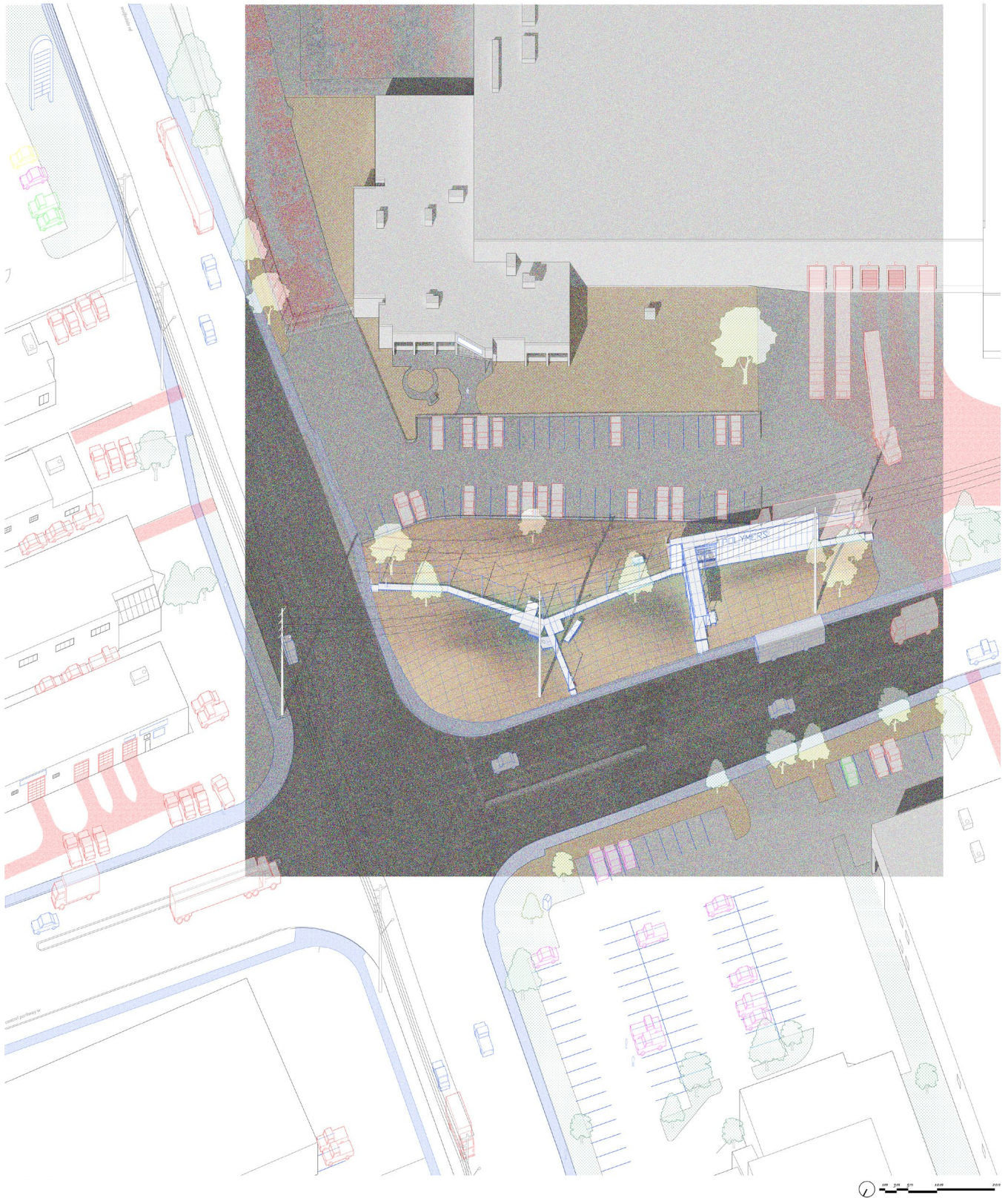
*fig. 73*

*photo of a man waiting for the bus on a grassy mound, captured from Google street view*

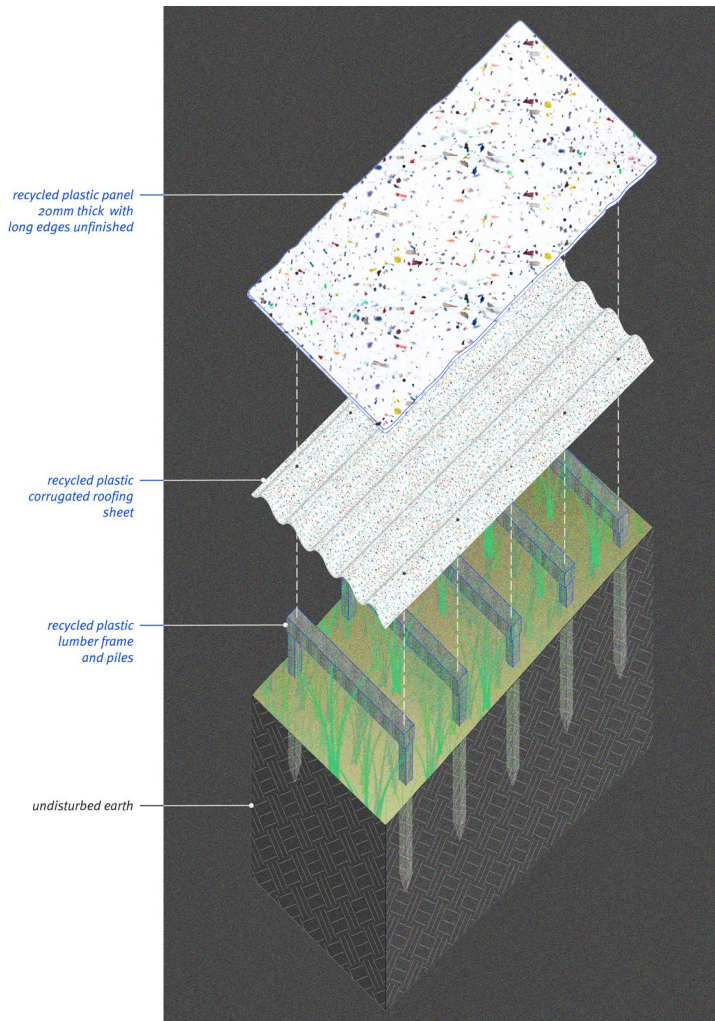


*fig. 74*

*location of project in the mavis erindale study area*



**fig. 75**  
*plastics park, plan oblique drawing*



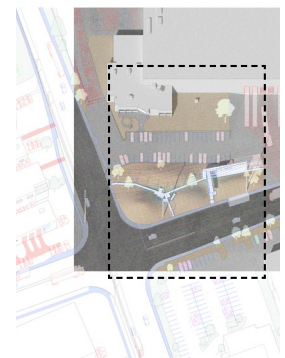
*fig. 76*  
planks of wood are suspended over a landscape in Fogo Island, forming a light walkway that can be easily adapted to an uneven landscape

*fig. 77*  
exploded plan oblique showing components of the module

Modules made from recycled plastics link together to form a walkway system (fig. 77). This system is created using standardized plastic sheets (8ft x 4ft). It is easily assembled and easily driven into the ground, which allows it to float lightly, in a sense, over the landscape. Due to the modular setup, the walkway can expand, contract, be built in phases, be used for seating or tables, etc.

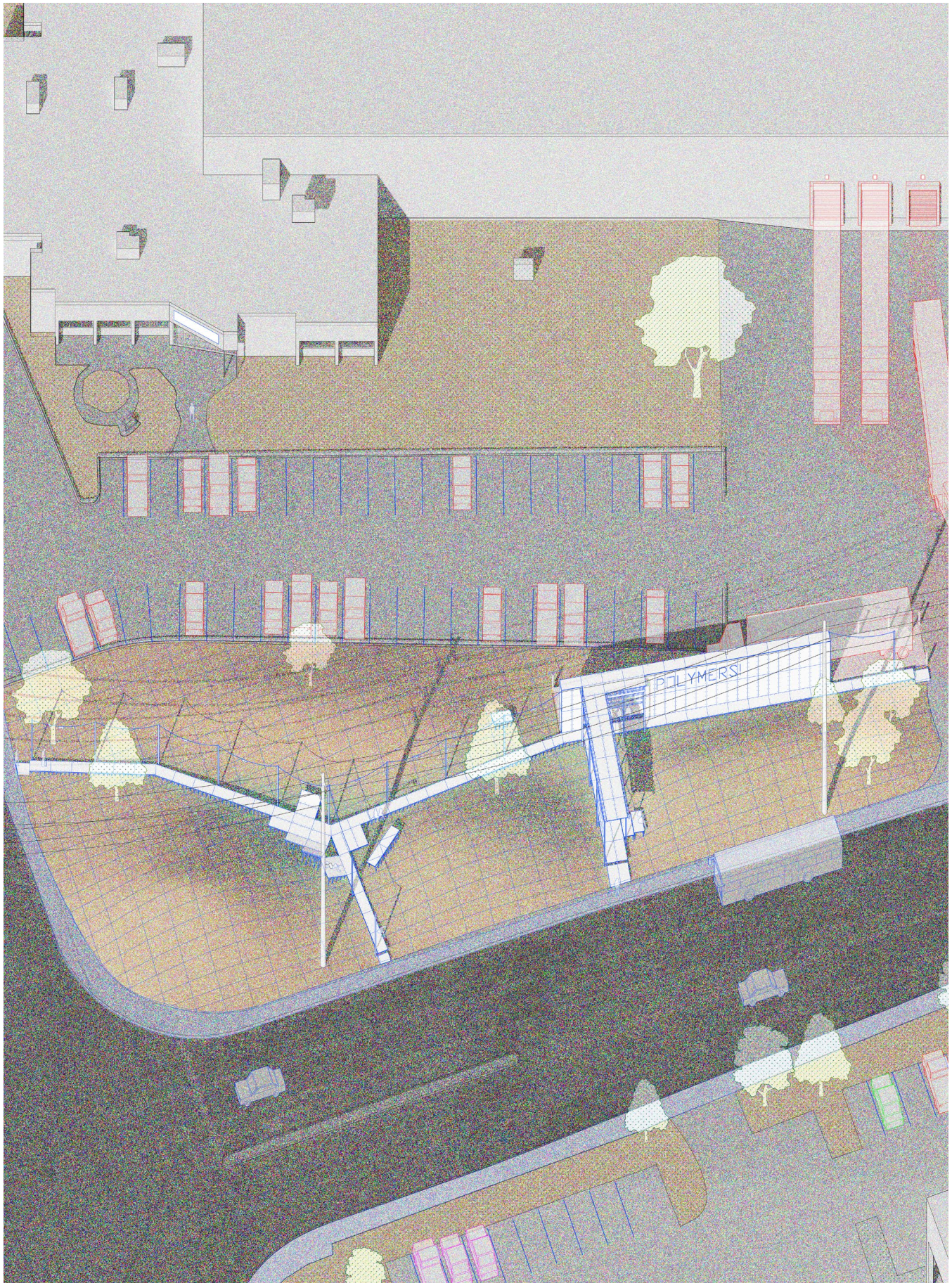
Through the entrenching of the existing mounds, a landscaping strategy—like those of bioswales—for storing and filtering water can be employed. Vegetation is chosen for their filtering capacity and hardiness.

The creation of the walkway provides an explicit invitation into the interior of the setback, opening it up and inviting the public to enter and occupy this previously ambiguous space.



*fig. 78* keyplan





*fig. 79 enlargement of plastics park, plan oblique drawing*



*fig. 80*  
*rendering of a view into the park*  
*from the sidewalk*



*fig. 81*  
rendering of a view from the  
walkway, showing the bus stop and  
landscape absorbing runoff water

### Driveway islands

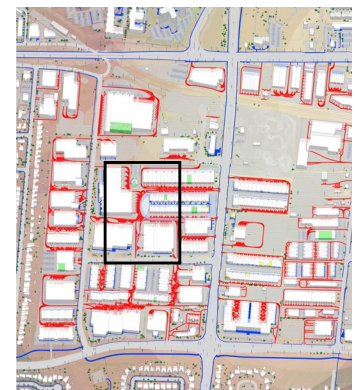
Driveways, especially the driveways in the employment areas, were planned and built for the freight truck. These back of house routes facilitate the flow of goods from one place to the next, connecting loading docks to trucks to loading docks. While still in use, there are now new, non-industrial uses or light industrial uses moving into these spaces who do not need a loading dock. Additionally, these loading docks and driveways are only active during work hours, operating on a diurnal, 8am to 6pm, Monday to Friday, schedule. The temporal use of this space during work hours suggests the possibility for other uses outside typical work hours.

At 2446 Cawthra rd., we see an industrial building which begins to engage the public realm. This building is arranged so that the front entrances of the units face each other to form a pedestrian street lined with trees and vegetation. The back facade of the building also begins to suggest a new way of inhabiting these spaces. Loading docks have been converted to new storefronts, indicating the existence of pockets of usable space in these driveways (fig. 82).

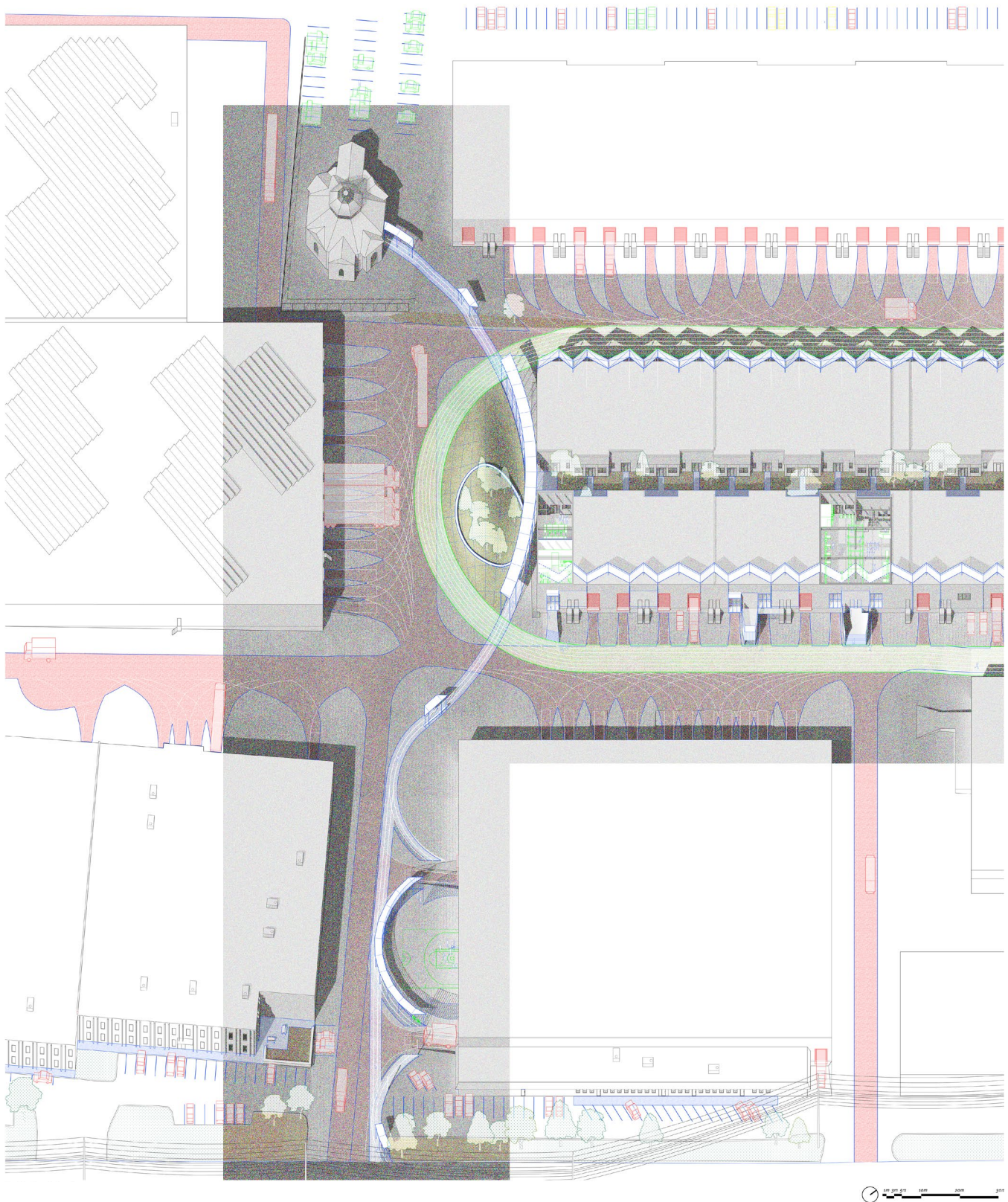
Instead of accepting that only trucks can go here, a scenario is proposed to open up the back of house driveways by making explicit the space required by trucks and cars. In doing so, islands of open space start to emerge, and this left-over space is free to be reimaged

By allowing pedestrian access into the driveways, a new front condition is created in the existing back of house. As seen with the previous example, the loading dock opening has the option to be converted into a

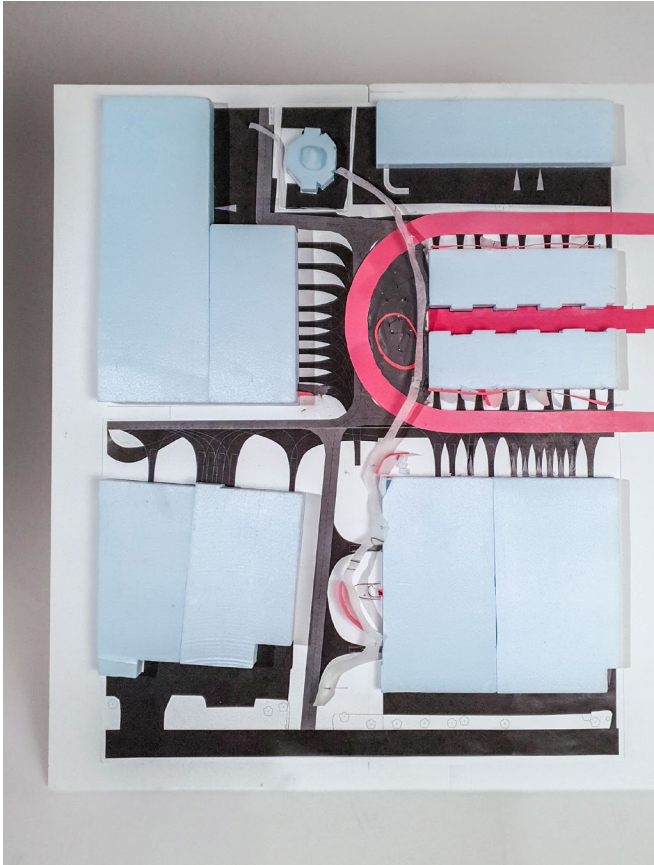
*fig. 82*  
photos of 2446 cawthra rd., showing the existing pedestrian street facing inwards, and showing loading docks being converted into a pseudo-storefront



*fig. 83*  
location of project in the dixie study area



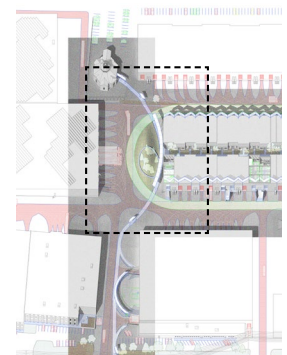
**fig. 84**  
*driveway islands, plan oblique  
drawing*



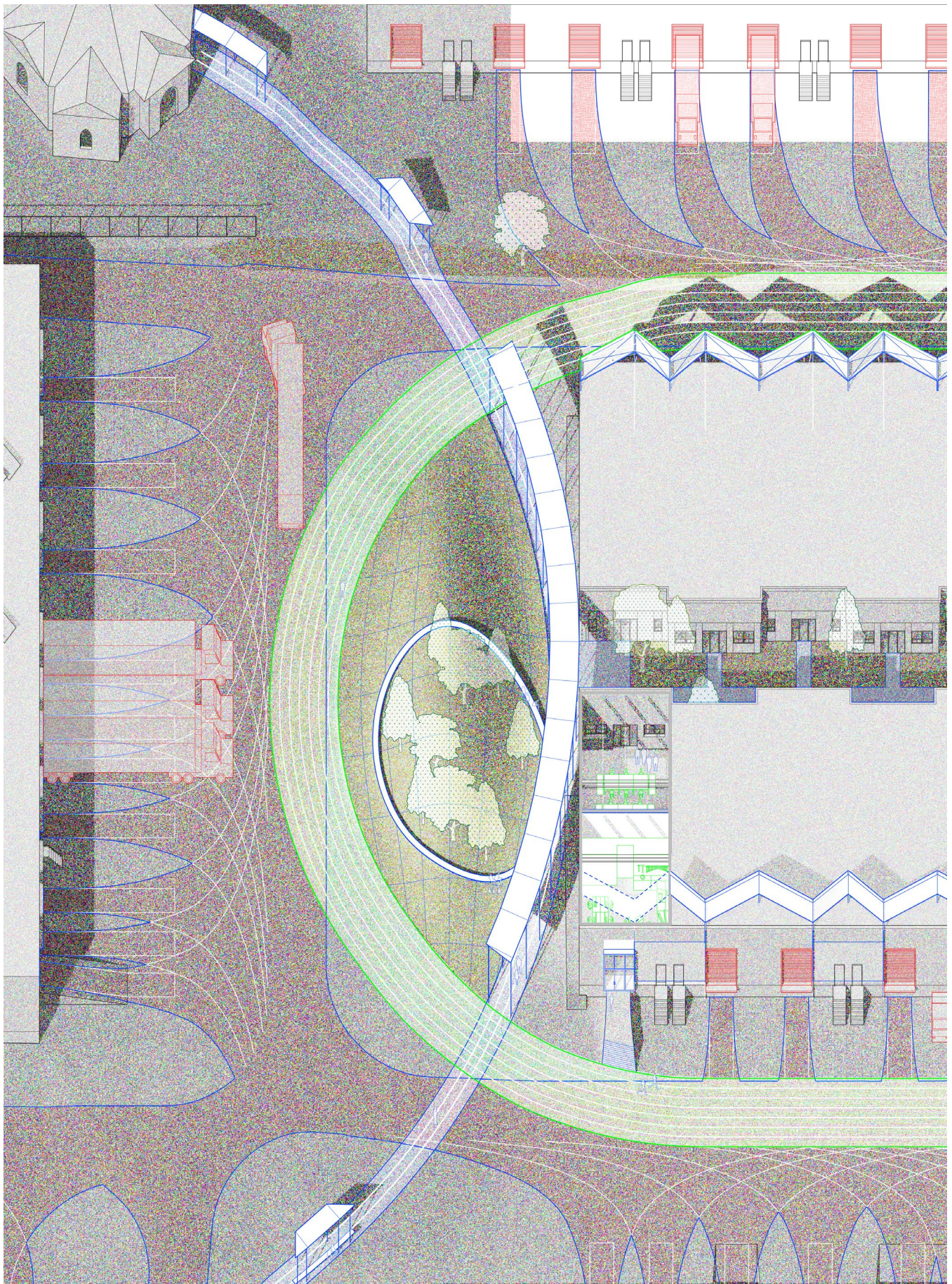
*fig. 85*  
early schematic model, showing  
diagram of free space created from  
the mapping of truck routes

new storefront. With two fronts, it is possible to subdivide units in half, allowing for even smaller enterprises to inhabit it, and creating more spatial diversity in the types of spaces available in the fabric. Offices, fabricators, manufacturers, distributors, fitness studios, repair shops, grocery stores, and restaurants are examples of some businesses that could and that are already inhabiting these units. Above, new signage is angled in a sawtooth arrangement to be visible from both the driveway and the main road.

A running track bounding the building is created as a common space to engage the emerging recreational uses which are appearing in this area. This running track also outlines a pedestrian street that provides access to each unit from the parking lot and the sidewalk. A pedestrian path is painted to create a connection through the entire length of the driveway, linking the existing Syriac church to the pedestrian street to the road at the end of the block.



*fig. 86* keyplan



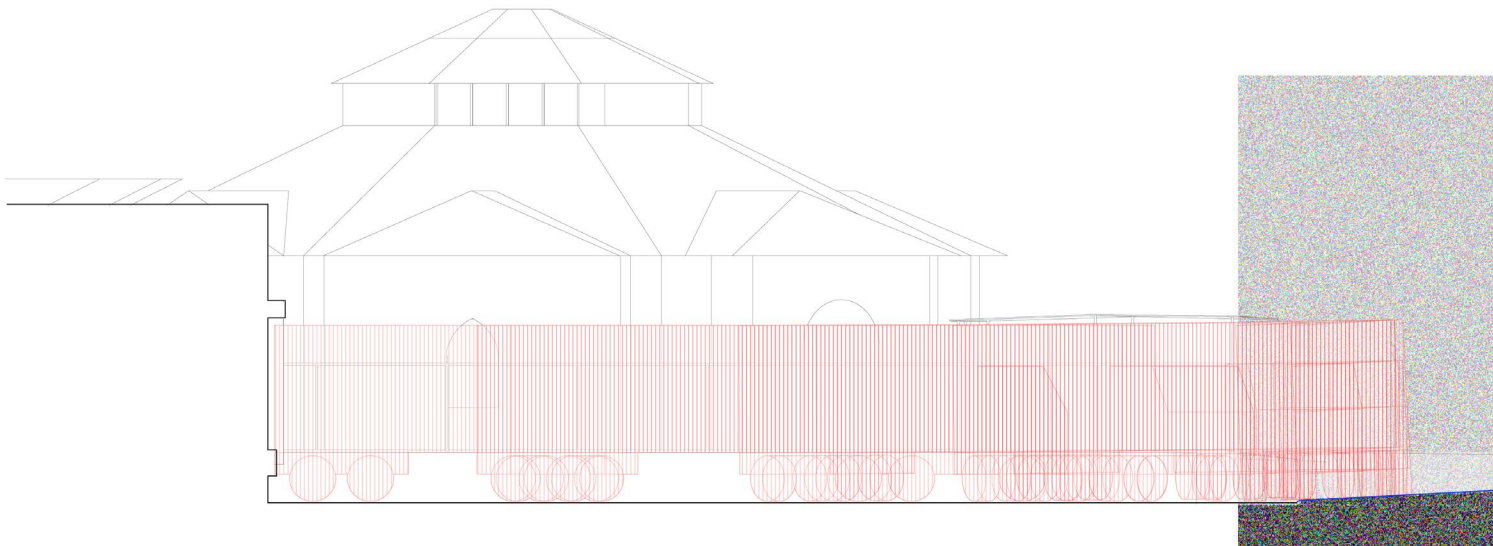
*fig. 87 enlargement of driveway islands, plan oblique drawing showing unit with new front facing driveway*



*fig. 88*  
*photo of a mound strategy in a plaza in seville, used to provide soft, drivable barriers between pedestrians and automobiles*

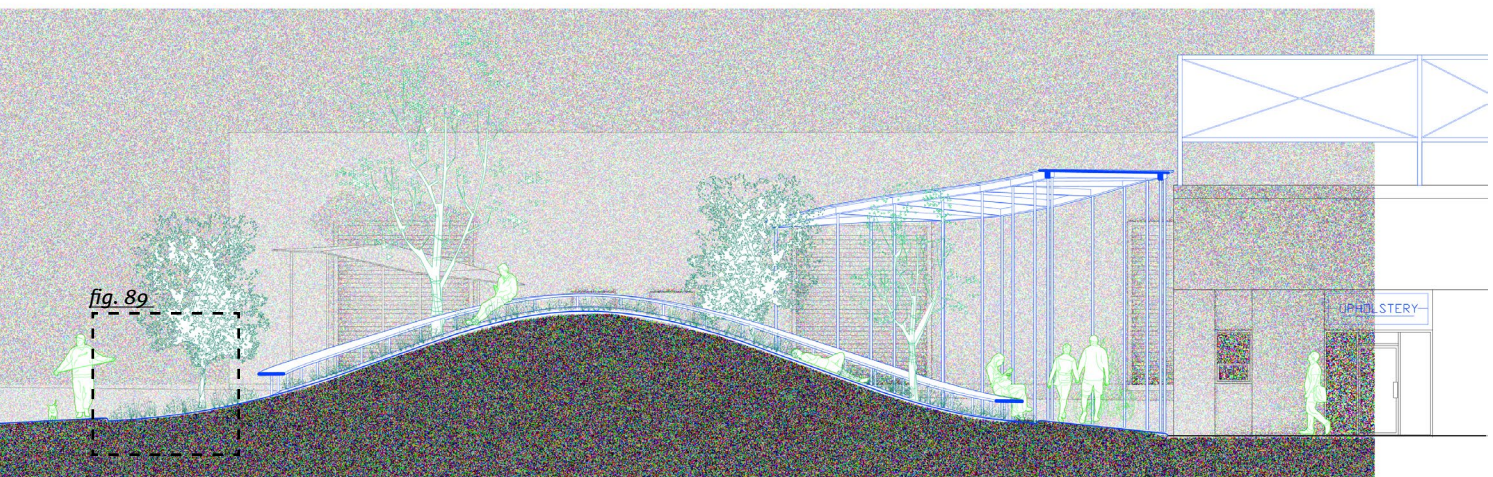
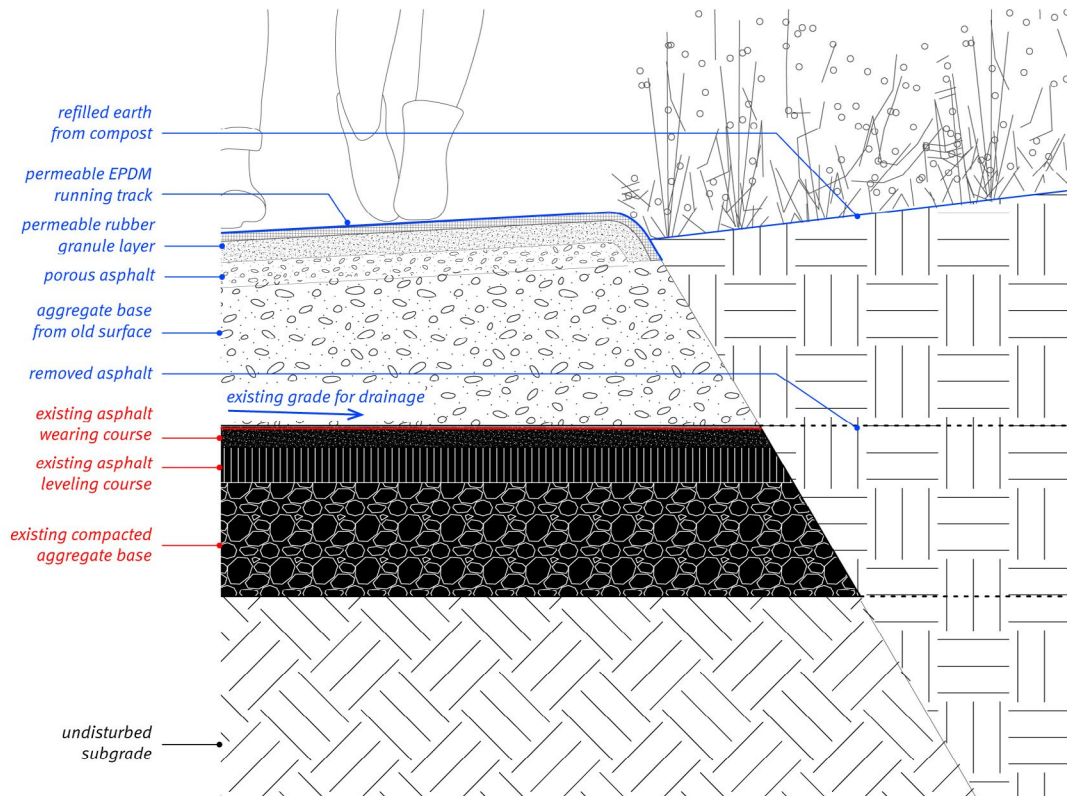
A mound is inserted at the intersection of the pedestrian path, the running track, and the existing pedestrian street. The form of the mound, besides aesthetic and noise purposes as seen in the previous project, creates a soft, gradual barrier to automobiles, which slows them down but does not preclude the possibility of them occasionally being driving over. The mound forms part of a visual and traffic strategy to mediate people and trucks in this environment and becomes the main public focal point.

Stormwater management can be incorporated in the design of the mound by removing the existing asphalt construction and backfilling with gravel and soil, to create a permeable region which run-off can be directed (fig. 89).





**fig. 89**  
 detail section through mound and  
 running track, showing existing and  
 new landscape buildup



**fig. 90** section through mound, showing relation of trucks to mound to people to existing pedestrian street

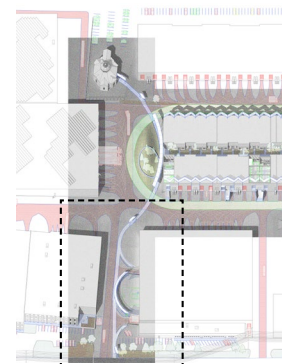


*fig. 91*  
rendering showing view of driveway  
and pedestrian street

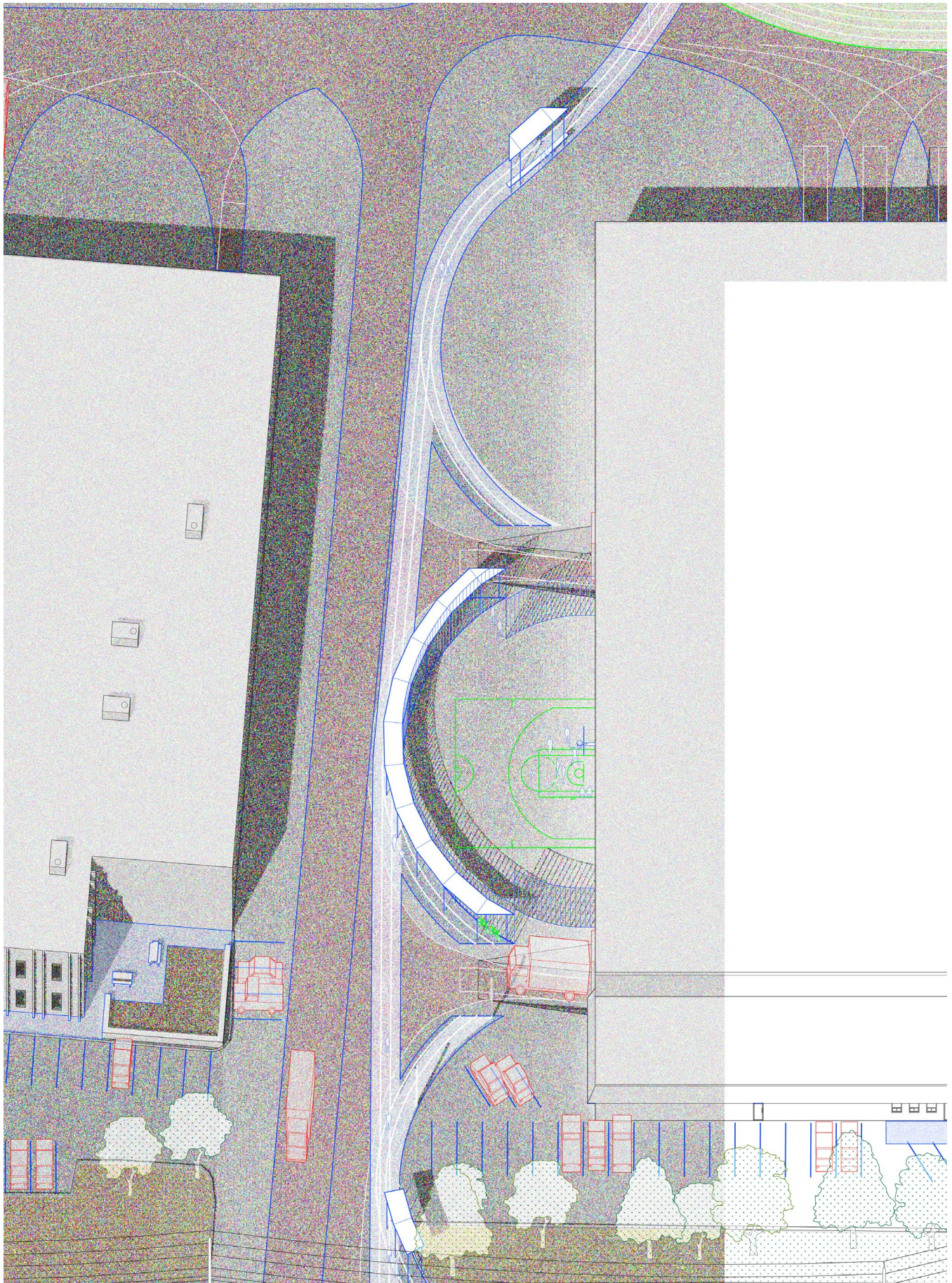
These islands of free space, created from the delineation, could then be enclosed to form recreational spaces, or rest areas for employees, or exterior workspaces, etc. depending on the needs of the occupants.

And the painting of a pedestrian path provides a suggestion for people to walk or bike from destination to destination rather than drive from parking spot to parking spot. Canopies, benches, and street furniture can be placed, where safe, to reinforce the reading of this path.

By revealing and making explicit the underlying assumptions of the back of house driveways, a framework for a new public and pedestrian infrastructure emerges.



*fig. 92* keyplan



*fig. 93 enlargement of driveway islands plan oblique drawing, showing a basketball court in one of the islands*



*fig. 94*  
*rendering of a view from the back of*  
*house driveway*



*fig. 95*  
*rendering of a view from the running track*

## **Conclusion**



## **Discussion**

The thesis took root while stumbling across an unexpected trampoline park in a non-descript industrial area of Mississauga. This was the rabbit hole that led to a fascinated outsider to learning about the public realms that were developing in our post-war cities. These places were not the plazas or parks or streetscapes which we as architects are familiar with, but were rather a strange, somewhat uncomfortable, and somewhat poetic acknowledgement of daily life in our contemporary cities. The initial motivations of the thesis have been fueled by this fascination, and the goal of the thesis has been to understand what were the conditions and reasons that allowed these publics to exist, and how might we capture and amplify these conditions to create alternate public centres in our post-war suburbs which are not subject to the restrictive motives of capital, but instead fully serve and express the needs and wants of the surrounding communities.

The literature review suggests that, although our maturing post-war suburbs need to adapt to become urban centres, it seems these places are inflexible to change—especially change enacted by small, local, actors. Furthermore, the change that does occur in these places end up being large scale developments which have dissonant incentives favouring investment returns rather than expressing the needs of the surrounding communities. While these conventional urbanization models, consisting of residential, commercial, and office uses, do provide improvements to the public realm, they also create speculative pressures which reduce the viability for financially weak entities to operate in the resultant fabric. As such, local actors, community organizations, non-profits, etc., often find themselves unable to find a place in areas of planned intensification.

However, as we've seen, change instigated by local actors is already underway in the employment areas. Non-residential areas, particularly the employment areas, have a seeming resistance towards speculative value. This resistance is shown to be in part due to zoning policies put forth by the Provincial and Municipal governments to protect the productive economic value created in these spaces despite the waves of deindustrialization taking place. It is also this suppression of speculative pressure which has allowed small enterprises to operate here.

Methods created by mapping and analyzing Mississauga using spatialized business data confirmed and identified these places in the employment areas where the trends of deindustrialization and increasing diversity are taking place in the city, and were a means to evaluate the spaces in the city by their capacity for change. These maps provided a means to quickly identify heterogeneous places with diverse uses and local participation. These sites were highlighted, with the help of the maps produced, to expand the understanding of the change that is occurring. However, the studies also make clear that these industrial landscapes were not intended



to be public places, but instead were designed to facilitate the flow of automobiles and materials, not people and interactions and that has led to a fragmented public realm of interiors and destinations.

The designs that were proposed looked to strengthen the underdeveloped public infrastructure in these places while attempting to minimize introducing speculative value. These scenarios presented an alternative model for developing the public realm by combining existing productive landscapes with community activity, as opposed to conventional models which use improvements to public infrastructures as means to increase speculative value of residential, commercial, or office developments.

By layering of public uses onto underused or left-over space from existing productive operations and fabrics, there is an avenue to improve the public realm without needing to be funded by, or contribute to, speculative value. Conversely, through the engagement of community and local entities, there is an avenue to develop a public realm in these industrial fabrics.

In the process of unlocking potential spaces and uses within the existing built fabric, the hope is that with increased possibilities to engage the built environment, local actors and communities are given an avenue of agency to transform spaces in the post-war cities into alternate public centres for their neighbourhoods.

### **Next steps and conclusion**

This thesis set out to identify sites and areas of opportunity within the existing urbanized fabric for the development of a public realm. These methods used are meant to be exploratory rather than definitive and operate on the premises that more research and design studies are needed to understand this organic development process.

To further the work, the main of focus would be to look at extending the tools and methodologies developed for the mapping studies to be applied to more data sets in order to determine their applicability both in and outside of Mississauga. Additionally, since the employment map studies were developed using readily available data, gathering data sets for previous and up-to-date years of the business directory would allow for long term trends of change to be better understood and to be monitored.

As well, since the design speculations focused primarily on immediate spatial opportunities, future explorations would look at what steps are needed to stimulate and enable this type of change. This might be through the mobilization of incentive structures and policies, government backed initiatives (such as the tower renewal project), or through community led organizations. Regardless of means, these methods would want to avoid specific end goals, instead focusing on creating possibilities in the existing framework, increasing autonomy of local actors, and empowering communities to change the built environment. Another avenue to explore would be to understand how these initial frames of urbanity can begin to etch the outlines and embed a spatial pattern for a public domain to grow and expand upon. However, the organic and unplanned nature of this type of change makes it difficult to practically assess future projections.

What has become clear however, is that there are alternate and productive public domains in the employment lands which cannot compete economically with those that inhabit the nodes of planned intensification. As change continues to propagate into these areas, perhaps the future urban environment of these places do not need to be bleak, mute places they seem to be, nor do they have to end up as more of the same retail or residential development rampant in the city proper. Instead, these places can start to express the heterogeneity that exists in daily life and become places rather than just destinations.

In form, location, and urban context, the employment areas provide a unique opportunity for the local community to take hold and transform the city to their desires and image. Here, it is interesting to reconsider the end goal of a design. Rather than designing a complete vision or end product, which has the tendency towards the commodification of said product, there is the idea of design as the structuring and re-structuring of processes and open-ended frameworks.

Instead of seeing these places as underdeveloped land—ready to be cleared and rebuilt into what ‘contemporary planning best practices’ suggest—the work asks to value the existing condition as a starting point. The work looks at how planners or architect can operate as enablers, finding opportunities in the existing system of urbanization to hack unexpected outcomes. We can find potential in the everyday by stripping away embedded assumptions and constraints about how things should be. Just as there is value in building the new, there is value in keeping the old. From that perspective, we can begin to ask how to leverage the value in the existing as much as possible to project a future reality. This embedded value, which would be ignored or destroyed through the current urbanization machine, has the potential to transform these employment lands, and the communities which surround them, into diverse, dynamic, and productive neighbourhoods.

Through a critical re-evaluation and re-imagining of what is existing, along with an eager, opportunistic mindset, we can find methods and strategies in the post-war urban fabric to nourish, shape, and grow the public and civic form of these places

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