

Hong Kong Neighborhood Recycling Center

A prototype to minimize the export of waste to our landfills

HONG KONG IS DROWNING IN WASTE ...

Each year, over 9,300 tons of Municipal Solid Waste (MSW) is generated in Hong Kong -- over half of which is dumped into three landfills which are now near capacity!

THE PROBLEMS ...

Hong Kong's existing landfills are near capacity; current solutions to handle escalating levels of MSW include expanding our existing landfills and constructing a controversial new incinerator -- both options have a variety of negative social and environmental impacts.

A large amount of this waste is recoverable. Almost 40% of this waste is food and organic matter, 40% is plastics and paper, and the remaining 20% consists of glass, metals and other materials. The shocking percentage of food waste might be partially attributable to the dire lack of food waste treatment facilities at the neighborhood level, in addition to a lack of education.

Recycling efforts are largely spearheaded by the private sector and various NGOs, in addition to an army of elderly citizens collecting recyclables to earn a bit of pocket change. While recycling bins are commonplace throughout the city, there are no mandatory government requirements to recycle, and recyclables from these bins are often just tossed into landfills anyway, due to incoherent policies and poor management.

To the Government's credit, a 20 HA "EcoPark" has been established in Tuen Mun to cater to the recycling industry; however, the vast majority of recyclable materials are exported to more competitive Mainland China processing plants, which are subject to unpredictable customs requirements, as was the case in 2013 when Mainland officials launched "Operation Green Fence," to crack down on waste smuggling.

QUESTIONS TO PONDER ...

WHAT IF ... a significant portion of waste currently transported to our landfills could be intercepted and eliminated?

WHAT IF ... a significant portion of the waste produced in our neighborhoods never actually left our neighborhoods?

WHAT IF ... society actively reduced its output of waste through incentives, mandatory recycling requirements, waste levys, and the creation of community centers to bring people together to reuse and recycle?

WHAT IF ... the mantra of Reduce, Reuse, and Recycle was formalized into legislation and recyclers were partially subsidized?

WHAT IF ... the Government dipped into its massive budget surplus and created a series of government-funded comprehensive neighborhood **waste recovery** facilities -- instead of only **collection** facilities -- in order to eliminate the cost and pollution of transporting this waste to distant landfills in the first place?

WHAT IF ... such satellite neighborhood centers had the potential to become self-financing through various forms of sales and rental revenues?

SOLUTIONS ...

CREATE ... new one-stop satellite recycling centers for the collection, disposal and recovery of waste

BOLSTER ... Hong Kong's creative scene through encouraging upcycling

INVIGORATE ... Hong Kong's under-performing recycling industry

EDUCATE ... the public about the benefits of recycling and waste reduction

GROW ... a culture of urban rooftop farming for Hong Kong's thousands of unused rooftops

GENERATE ... power, food, purified water, and compost through the processing of waste

TRANSFORM ... food waste into compost that can be fed back into the immediate surrounding community without excessive transport charges and the resultant pollution

PROMOTE ... the wellbeing of retired persons to carry on their trade and impart knowledge to the younger generation through repairs and refurbishment of discarded items, without the pressure of rent and costly overhead

LOCATE ... a network of centers near MTR stops and other public transport links in underutilized locations, beneath highway overpasses, etc.

CONSTRUCT ... a community center with green and other recycled building materials to serve as a model for green building practices, or through the adaptive reuse of older buildings.

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Provide solar PV collectors, micro-turbines to maximize on-site power generation and harvest rainwater for use in irrigation

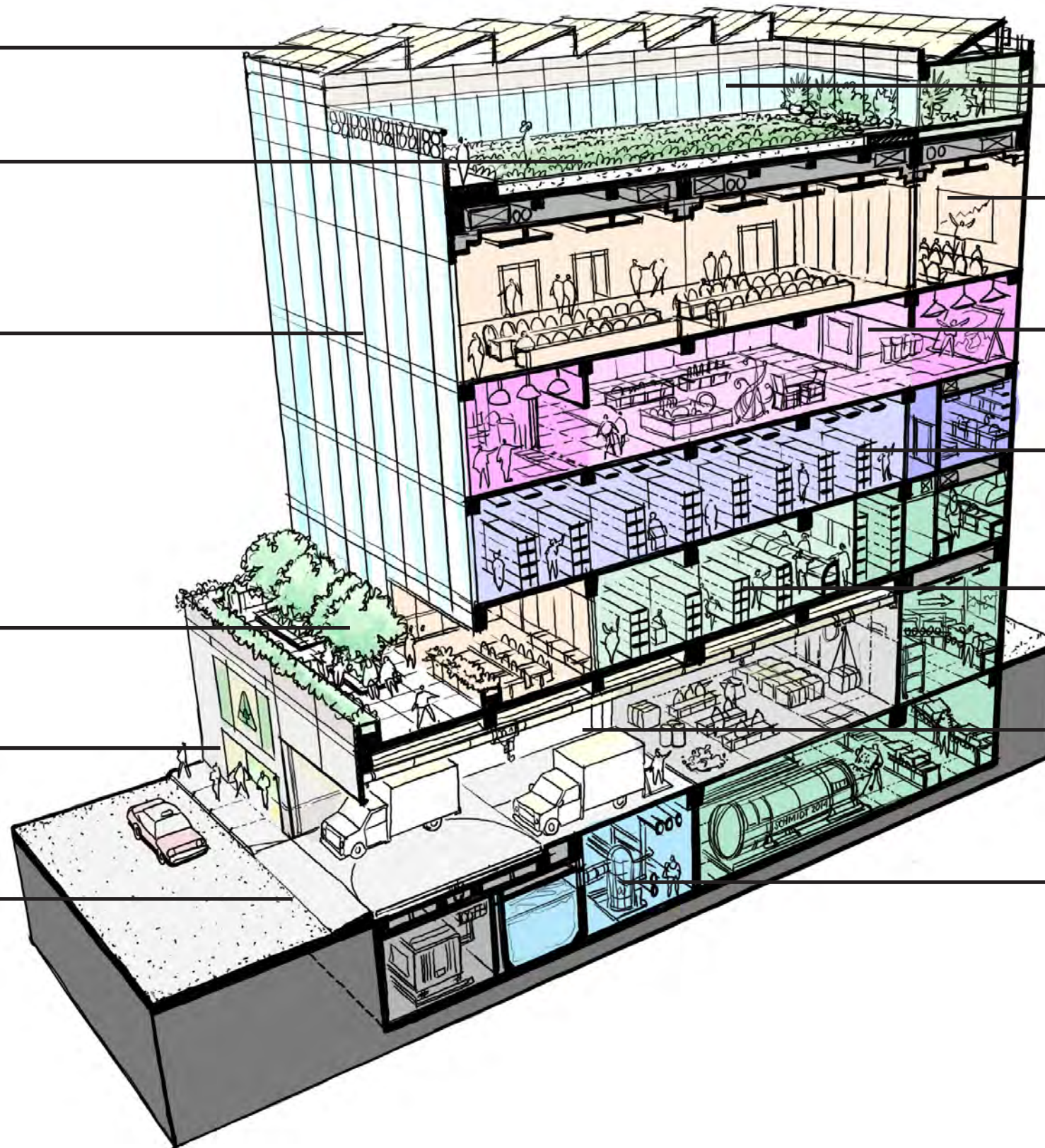
In applicable sites, provide rooftop community gardens to develop a culture of urban farming and reduction of imported foods throughout the city

Building envelope to use green high-performance materials to minimize energy consumption

Provide outdoor public spaces for gathering and eating to encourage visitation

Locate facility close to MTR stations and other public transport for ease of pedestrian access

Minimize width of building frontage to allow for the implementation of this concept in a wider variety of sites through the urban environment; create a vertically arranged facility



WHAT'S INSIDE?

LEVEL 6 (ROOF)

- Gardening Center
- Community Organic Gardens

LEVEL 5

- Community Hall

LEVEL 4

- Upcycling Center
- Artists' Studios
- Retail Gallery

LEVEL 3

- Flea Market
- Electronic / Furniture Repair Shops

LEVEL 2

- Neighborhood Food Market
- Public Sitting Out Area / Terrace
- Food Waste Recovery Center

LEVEL 1 (GROUND)

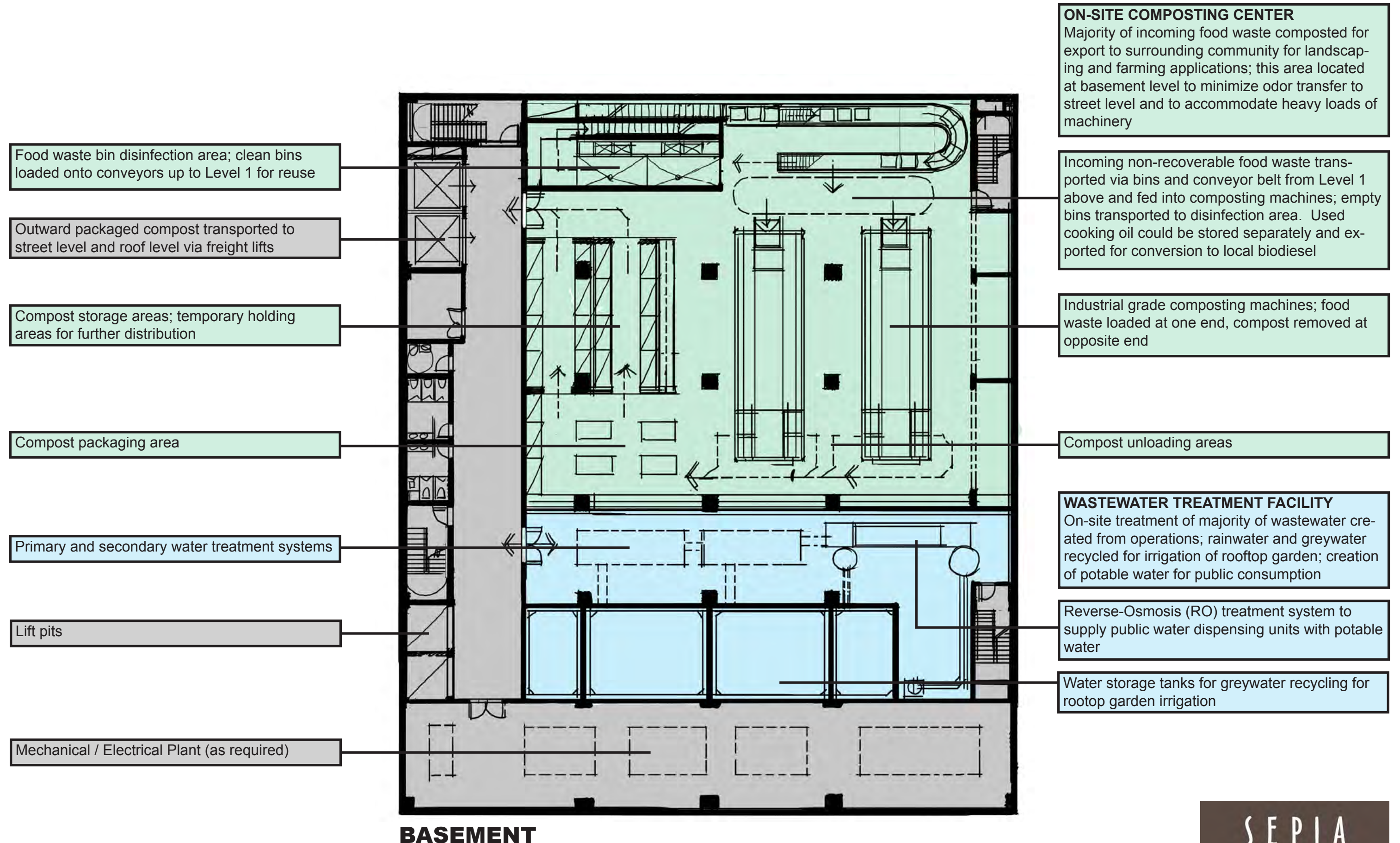
- Public / Service Vehicle Access
- Material Sorting / Holding
- Recyclable Processing

BASEMENT

- On Site Composting Center
- Water Treatment Center
- Mechanical / Electrical Plant

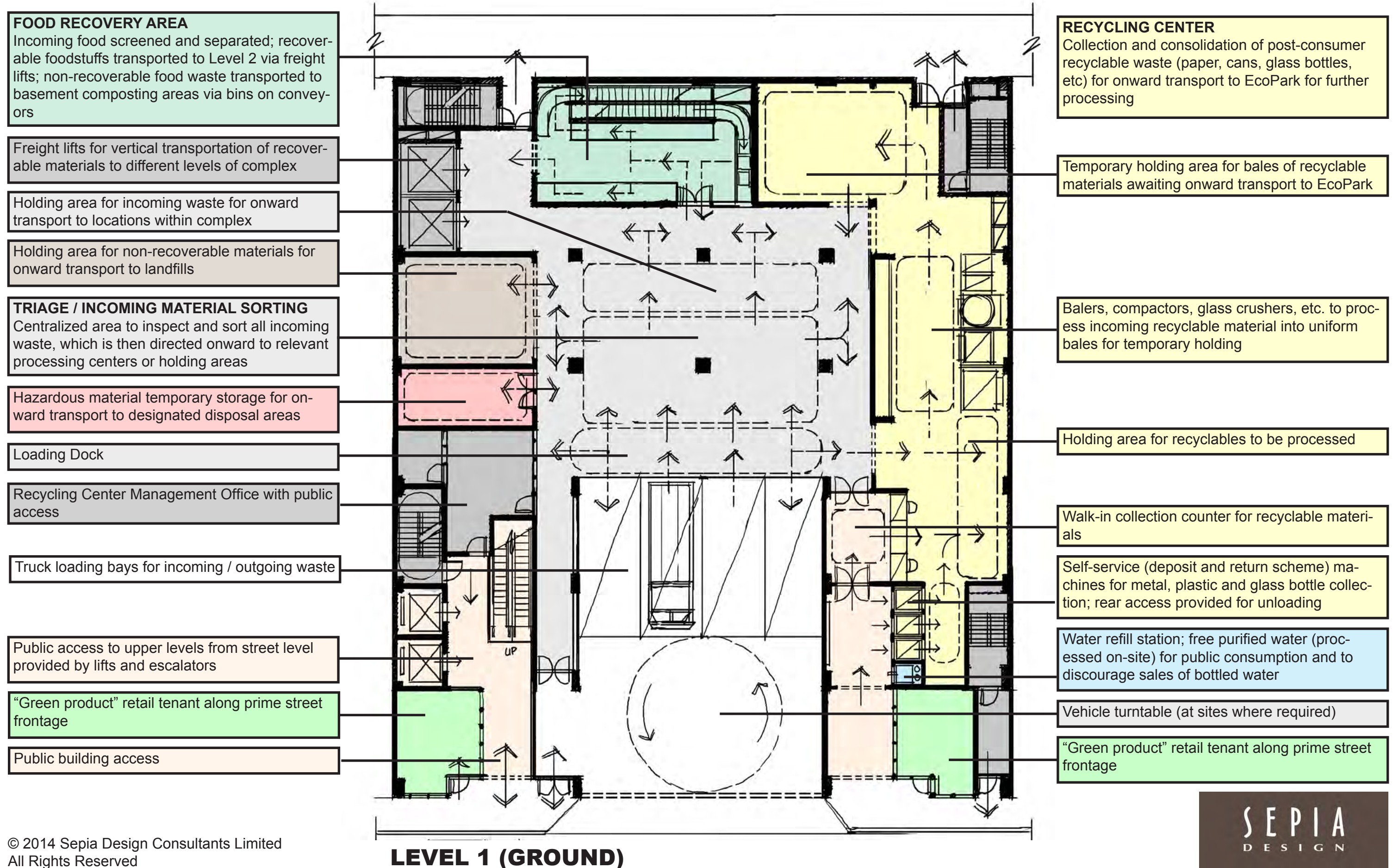
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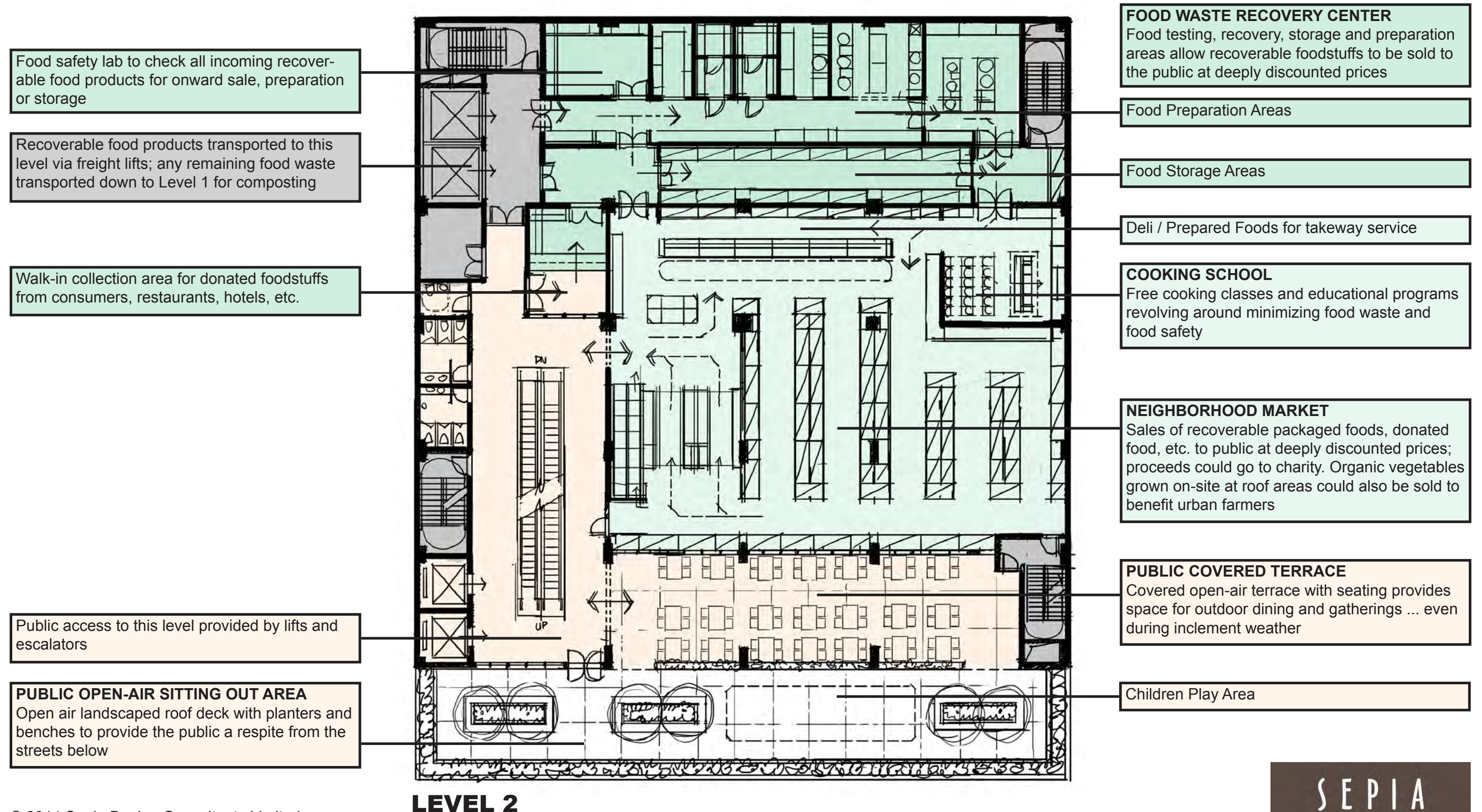
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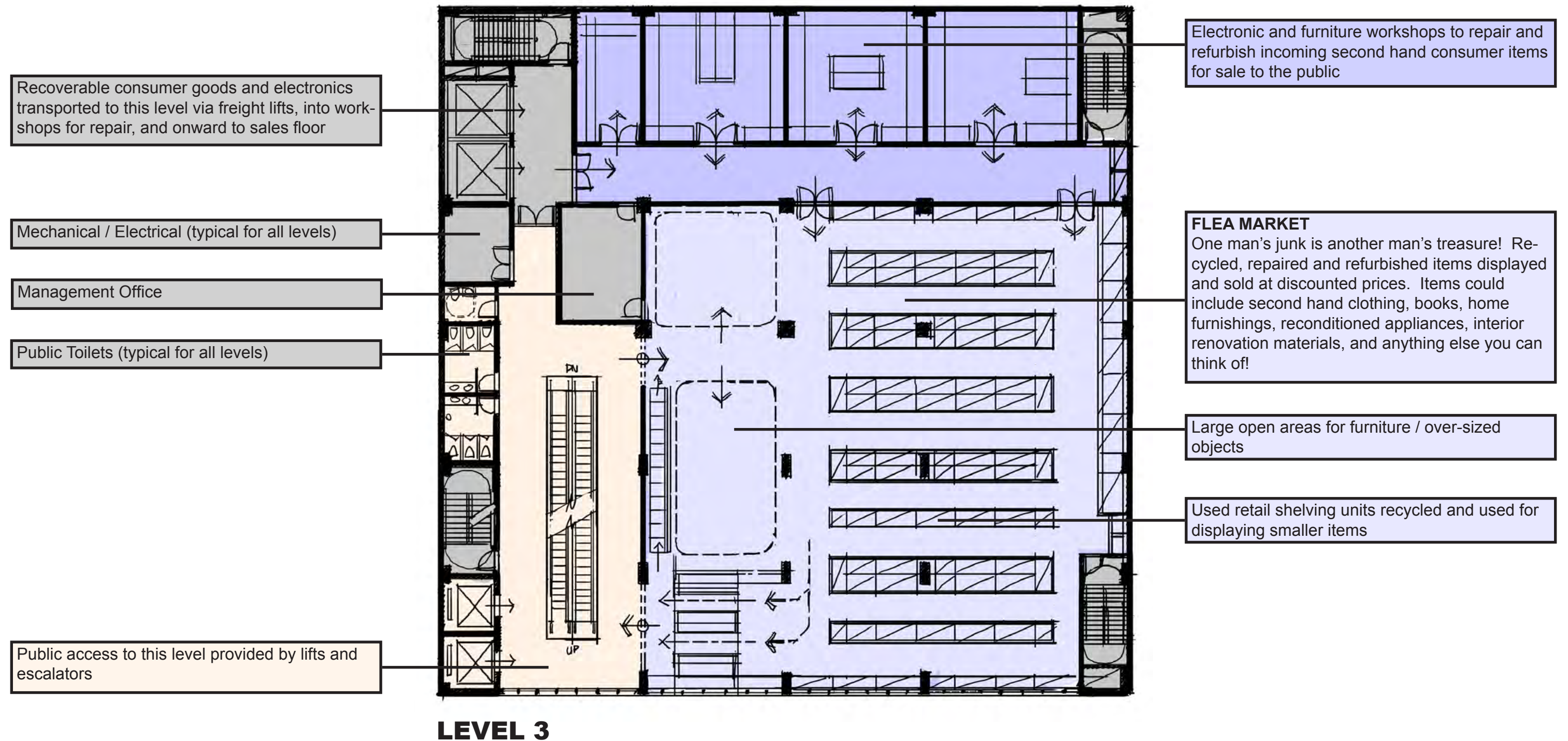
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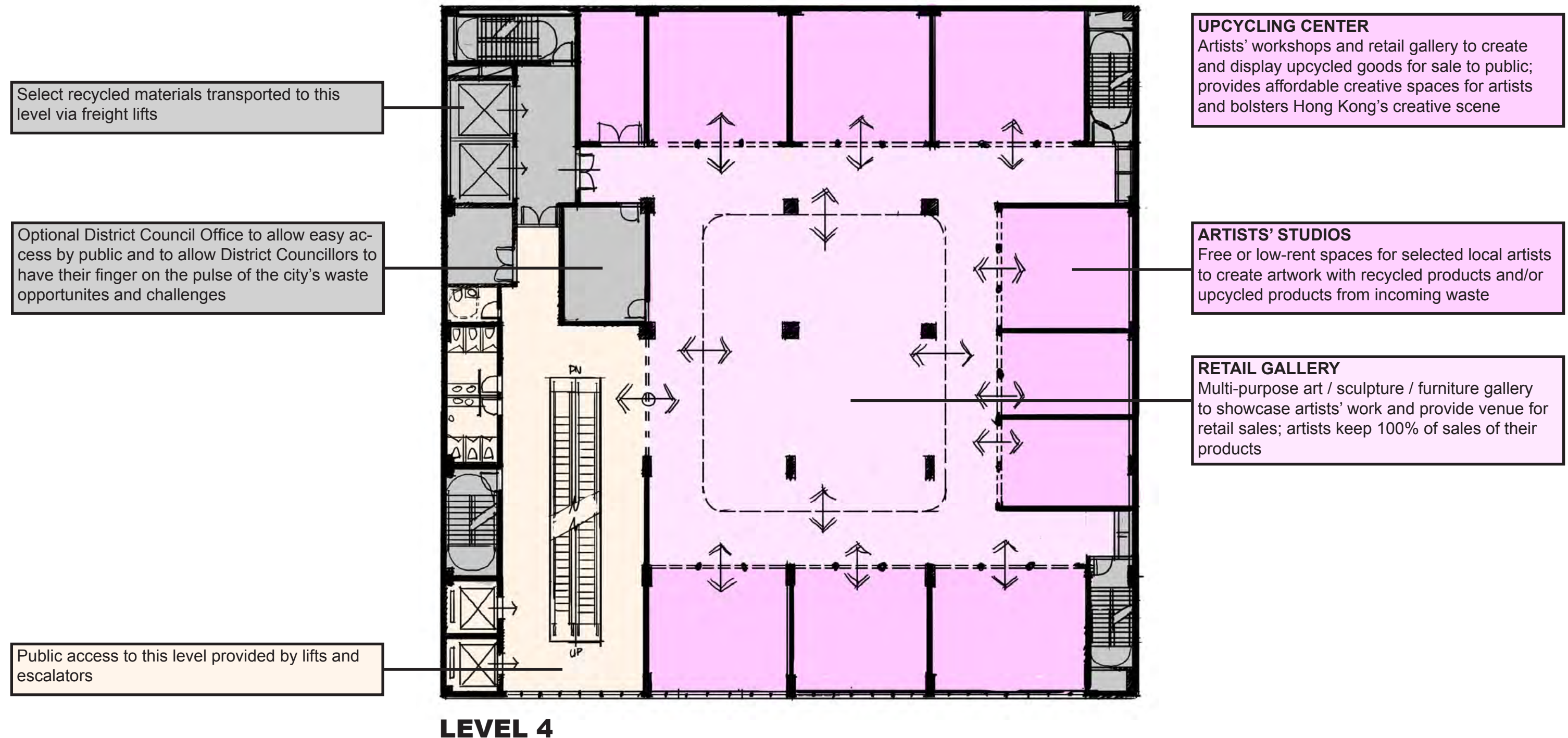
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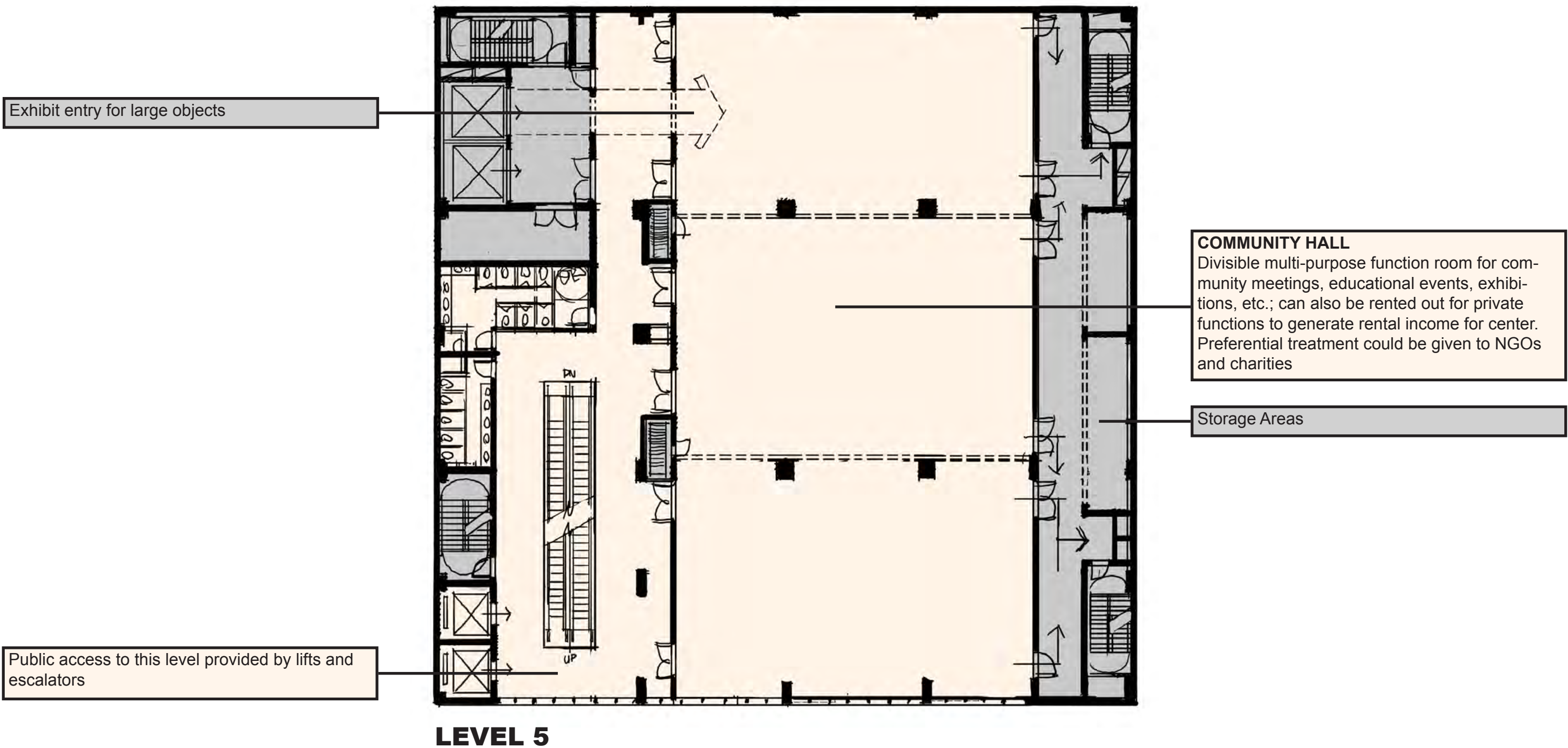
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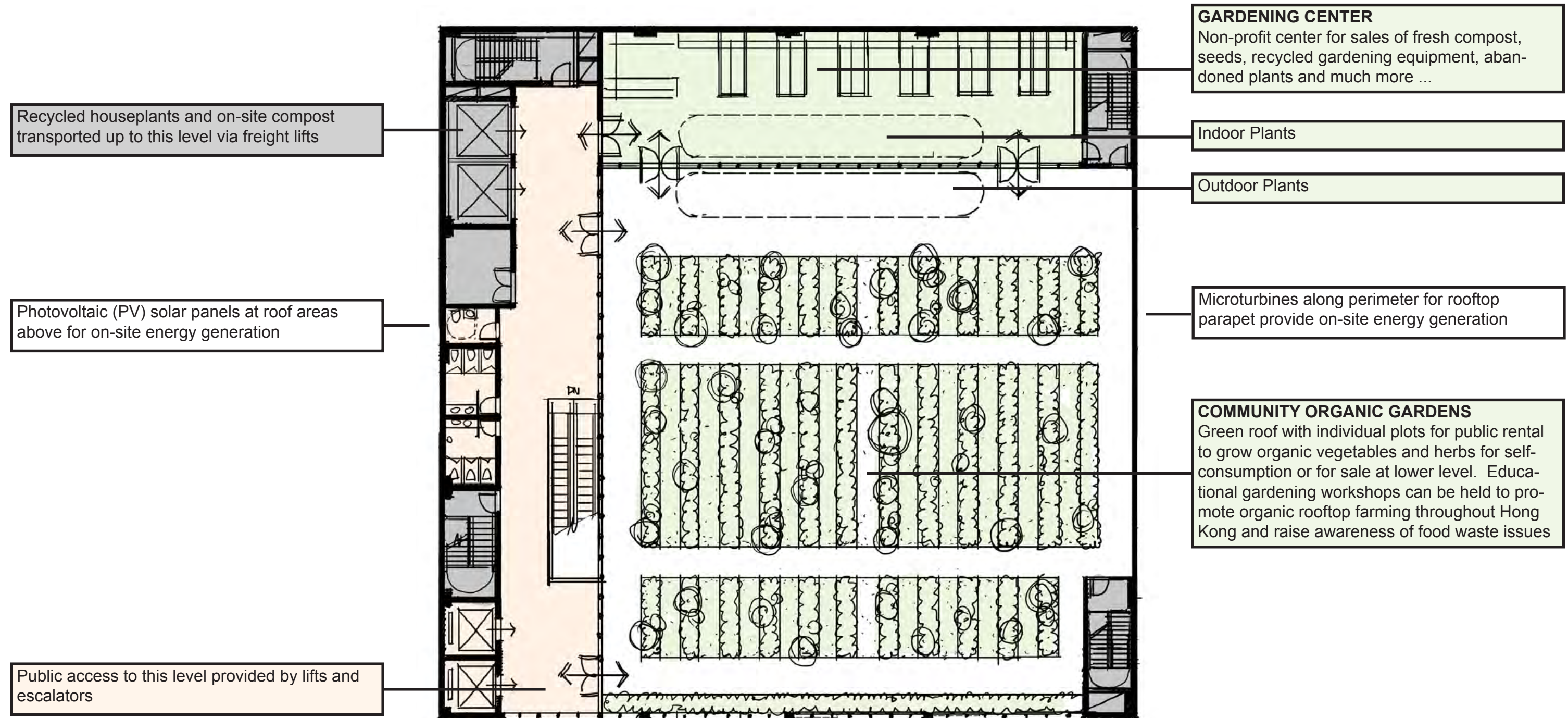
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LEVEL 6 (ROOF)*

* if applicable as per site conditions

Depending upon site conditions and/or if this concept is implemented in adaptively reused high-rise buildings, Levels 6 and above might contain leasable office space or other revenue-generating uses, with a roof garden situated at the top of the building.