

Odds and Beginnings: A Speculative Waste Management Urbanism

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“The point about toilets is that they enable us not only to discern this triad in the most intimate domain, but also to identify its underlying mechanism in the three different attitudes towards excremental excess: an ambiguous contemplative fascination; a wish to get rid of it as fast as possible; a pragmatic decision to treat it as ordinary and dispose of it in an appropriate way.” — Slavoj Žižek, *The Plague of Fantasies*

Abstract

This project, comprising a paper and drawings, broadly examines the formation of urban waste distribution systems as a driving force in urban development in New York, seeking to historicise certain modernist assumptions about the invention of waste. In addition, the project will begin to test a speculative hypothesis about inverting the placement of waste processing/sanitation facilities not at the periphery, but at the center of the city.

Key to this speculation is the identification of “modernist” assumptions about waste management and corresponding alternatives provided by historical and contemporary cities, in particular:

1. An investigation of the “terminal limit” of infrastructure, and more specifically, scavenging and salvaging as a manifestation of the afterlife of neglected infrastructure;
2. The civilian (non-expert) perception of waste as monomaterial, historicised as an invented division of labor in “Western” cities;
3. The notion of waste as obscene, historicised as the regulation of productive scavenging;
a) - Additionally, the subsequent criminalization of non-regulated and un-authorized salvaging for profit;
4. The notion of waste management as an activity deprived of enjoyment, historicised as an incomplete colonial process for which alternatives in Cairo, Taipei, and, ironically, Paris have emerged/continue to exist;
5. The conflation of decentralised waste management systems with individualist non-infrastructure, contrasted with a 21st-century reevaluation of plastic versus food waste;

Though the text of this project shall serve only as a broad review and makes no claims about its comprehensiveness to this ongoing topic, the historicization of these assumptions shall serve as a foundation for a speculative design. Due to the breadth of this discussion, some further assumptions of scope shall be made:

- I. The types of waste produced in this speculative city follow those of New York City in 2025, but the project shall pay special attention to food waste and compost.
- II. The waste disposal facility emerges in the 21st Century under some kind of executive action, meaning that the City in question has not developed for hundreds of years around it. Nonetheless, at the time of the writing and drawings, its existence is already assumed by all residents of the City.
- III. Systems of class and production shall roughly follow those of New York City in 2024, meaning, in particular, there exists a specialised form of municipal labor like the DSNY that manages the waste disposal facility.

Introduction

The categorization of waste as obscene, historicised as the regulation of productive scavenging and the subsequent criminalization of non-regulated and unauthorized salvaging for profit, indicates a regime of standardization that privileges capitalism over collective benefit. Law enforcement and imposed regulations suffocate the mutual aid network of scavenging. Boundaries of legitimacy defined by capital refuse to recognize alternative value systems outside those sanctioned by government regulations, thus rendering the act of dumpster diving a criminalized offense.

Collective acts of scrounging evolve as counter-narratives to imposed waste management systems. Survival within the realm of scavenging is an ongoing negotiation with the meaning and supposed value of the items themselves. Reclamation and extraction of matter indicates the individual's promise to act with intentionality regarding the afterlife of scavenged objects. Through individual and collective acts of scavenging, the consumer and scrounger unearth a "constellation of values and preferences, negotiated quite literally by the give-and-take of the streets; together they orchestrate the empire of scrounge."¹

Part I - "Midtown"

An investigation of the "terminal limit" of infrastructure, and more specifically, scavenging and salvaging as a manifestation of the afterlife of neglected infrastructure

Michelle Ty's wide-reaching "Trash and the Ends of Infrastructure" inspires, among other things, a reflection on "infrastructure as producing nonrelation as much as connectivity." By this, she means that city infrastructure produces the "exterior" of the city, an "outside" that is not simply what is topographically or juridically beyond the drawn borders of the city, but rather a condition of being "other" to an imagined center of the city. If waste management might be seen as a "primordial" or at least intuitive form of urban infrastructure, its role in the city

is not so much found in the cleanliness it produces, but rather in the exteriorisation of waste material. The difference in this emphasis, as Ty reveals, is a shift away from viewing urban development as an operation of a linear contrast between rural and urban conditions and towards an urban-urban dialectic wherein part of the city itself is external to the "city proper" (where citizens live).

The spatial ramifications of this statement are surprisingly direct. While one might be tempted to think of the "outside" of New York City to be some quaint, well-forested town located somewhere upstate, the reality is that such a town is not necessarily "exterior" to the city, quite often sharing infrastructures of water, transportation, and waste. The "outside" of New York City, instead, might be thought of as one of the 25 solid waste landfills found throughout the State, topographically located "within" the city, but legally and operationally exteriorized.

Sometimes I think, every city has its own definition of "growing old". Maybe it's just that wisdom means something different... or mortality does. For us, maybe it's when we stop leaving the laundromat in the middle of our cycle to run errands and start asking the young ones to help us with our second carts. The first time I remember feeling old—it was before the Revolution—was when I bought a sewing machine online. There were 4 of us in that apartment. Denise was out taking care of her abuela in hospice. The Couple™ had just had one of their last fights. In fact, it was their fight that knocked the sewing machine off the table, shattering its white plastic shell and revealing its mutilated innards of proprietary screws and fasteners. No pulgueros carried those screws—or any sewing machines at all.

Within seconds, my phone buzzed. An email: "PEDIDO: Máquina de coser..."

I was no longer a child exploring patterns and drapery. I was a designer with a deadline.

1 - Ferrell, *Empire of Scrounge*, 33

Part II - "The People's Library of Refuse"

Inventing Waste: The Division of Public, Private, and Popular Waste Management

Although few general claims can be (responsibly) made about the physical technologies of waste management across cities, most anglophone cities owe something to the Victorian 1875 Public Health Act of the United Kingdom. Historicising the language of this Act reveals the non-inevitability of the contemporary, anglophone imaginary of waste.

The Act expands on an earlier 1848 Act of the same name, aiming to manage the spread of cholera through greater regulation of the distribution of waste (and bodies). Most of the act follows a recognisable set of strategies: the creation of a specialised managing class, a tradeoff between minimising contact with potential health hazards ("nuisances") and increasing contact with professionalised management, and penalties for acting outside the process. Among the Act's more radical moves is its Article 42 introduces a prohibition on scavenging:

[...]All matters collected by the local authority or contractor in pursuance of this section may be sold or otherwise disposed of, and any profits thus made by an urban authority shall be carried to the account of the fund or rate applicable by them for the general purposes of this Act [...] If any person removes or obstructs the local authority or contractor in removing any matters [...] he shall for each offence be liable to a penalty [...] Provided that the occupier of a house within the district shall not be liable to such penalty in respect of any such matters which are produced on his own premises and are intended to be removed for sale or for his own use, and are in the meantime kept so as not to be a nuisance.²

There are three important details in this Act that prove instrumental to the contemporary invention of waste. The first detail is the recognition of a potential "profit" associated with the waste matter. This introduces a legal means by which waste can be measured as a *fungible*

object of surplus. While preindustrial Londoners may certainly have found use for manure or scrap metal, their exchange would have been relatively difficult to mediate without their symbolic digestion as "profitable" materials; this shifts the dominant, civilian view of waste from a set of particular materialities to a fungible monomaterial. The use of the term "profit" furthermore reveals a potential surplus value. In this case, the stated value of the waste (the removal of its negative value as a carrier of disease) is replaced by an unnamed positive value (funds used for the operations of the Act).

This point about the surplus value of waste gains greater clarity in the Act's second detail, its introduction of three different actors in the management of waste. In particular, the Act defines a public actor (the local authority or contractor), a private actor (the proprietor of the site where the waste is produced), as well as an ill-defined third party who is to be punished for any interference in this apparent binary of ownership. Borrowing from urban theorist Martha Schteingart's language of housing speculation, one might more accurately term these three actors as the "public," "private," and "popular" sectors, respectively.³ But as with the legal function of speculative construction, the function of this document is partially aesthetic; it defends against the fantasy of an intruder on private property who searches through the refuse.⁴ As a clarification to the above claim regarding the monomaterial imaginary of trash, it is not that the material distinctions in waste have been eliminated, but become contested sites of opportunity between the public management expert or the popular scavenger. The Act enforces alienation from production for the majority, while establishing the literal space of refuse as a site of contestation.⁵

The third detail of the Act is a recognition of a State *anxiety* about the "ownership" of waste. Spatially,

3 - Schteingart, *Los productores del espacio habitable*, 117.

4 - Awad et al., *Coup de Dés 5 : Mediterranean Cities*.

5 - Interestingly, in New York City, sewage is not usually subject to the same anxiety except when it fails, and even, when it does, the licensure process of the plumber sets relatively clear boundaries on the management of waste.

2 - "Public Health Act 1875," Legislation.gov.uk, accessed April 18, 2025

this anxiety emerges on “private” property, where rubbish has left the hands of its producer, but has yet to come fully under the City’s management. This site of anxiety is in the private sector. It is not simply that the Act expresses a State distrust of the “lower-class” popular actor, but more radically, a distrust of the private sector’s capability to handle their own waste. So while a persistent drive towards the privatization of waste management can nonetheless be identified,⁶⁶ the Act acknowledges that waste, even temporarily, escapes ownership and therefore escapes the market, thus threatening the totalizing reach of capitalism. The symbolic basis of a postindustrial landfill, therefore, is not a place to consign disease⁷⁷, but quite explicitly a place of real estate speculation, both in terms of the space that it might volumetrically render habitable and in terms of the “debt logic” of the refuse as something that, by some obscene miracle, be it by State experts, scavengers, or plastic eating worms, may once again reenter the “production”.

Waste did not just result from infrastructure, but defined its socio-political boundaries. To criminalize scavenging, then, is not merely to enforce hygiene or order; it is to foreclose the possibility of alternative economies, subjectivities, and futures. To scavenge is to unearth what has been disavowed, to engage with the remains of failed promises, and to imagine life otherwise. In this way, waste management is never neutral. It is a struggle over the right to remake what others discard.

When my daughter was young, I took her every week to Third Avenue Park. It was our local compost/delivery plant, and I thought that it was important for her to go watch the delicate harvest of compostables that could not be loaded on the conveyors to Manhatta.

She’d become mesmerized by the rhythm of their hands working, sorting through potato scraps left behind from dinner the night before, apple cores that had not been sent to the fields, and coffee grounds not yet transformed into cleaning salves. In time she’d learn

how to sort through the more refined materials that the young didn’t know how to compost properly yet. Each week, she’d manage to find another fruit, another object whose names I did not know and tug at my hand for an explanation or a story.

On colder mornings, I relied on her excitement to get me out of bed. For me, it was still a smelly, worm-infested place, but, for her, it was a playground.

But then she grew up, and so did I. Her high school finally gave her the answers she first demanded of me. Composting was no longer a thing to wake up early in anticipation for, but something to stay up late to finish. I stopped pretending to not mind the smell, but my daughter never did. Nor did any of her generation. And that’s not nothing.

Part III - The “Fields”

Why hate the scavenger?

In the preindustrial imagination, scavenging is an undesirable position. It is a chore—smelly, dangerous, and, most importantly, rather boring. But the postindustrial notion of waste profit introduces the possibility of an enjoyment of the surplus of waste. Something, it appears, is being “stolen” by the scavenger. But what is being stolen, and from whom?

“Empire of Scrounge: Inside the Urban Underground of Dumpster Diving, Trash Picking and Street Scavenging” written by Jeff Ferrell involves an “autoethnography” of means and methods of efficient scrounging, and subsequent criminalizations of scrounging as an act of resistance. Throughout the novel, Ferrell takes the reader on a journey through his experimentation within the network of scavenging, salvaging, and scrounging. In these reflections, it is revealed that the lost and discarded objects become small fragments of a larger ever-evolving process of consumption and disposal. In other words, each object discarded exists as a testament to the situation with which it was deemed unnecessary or absent of value. This is clarified in his statement on the empire of scrounge, noting that “the empire of

6 - Ty, “Trash and the Ends of Infrastructure,” 616-617

7 - Cemeteries do the same, though in a more reverent way.

scrounge suggests a sort of labeling theory of objects lost and found, a sense that the process by which they and their meaning move about matters more than the objects themselves.”⁸

The criminalization of individual and collective acts of waste reclamation, repurpose, and extraction is characterized as illegitimate when juxtaposed with the hypothetical of documenting ecosystems of waste; that is, documenting entire networks of the urban fabric relying solely on the accumulation of trash. Political and economic authorities engineer constraints aimed at the prevention of “undesirables” permeating the deceiving vision of a technologically fulfilled society. Indications of disposal and waste, in this case, the dumpster, outline a critical infrastructure typology functioning within informal exchange.

The effort to confine scrounging, or erase it all together, is translated into government aspirations of rendering these practices invisible. The Ghost Trains of Buenos Aires, as set forth in Ferrell’s “Empire of Scrounge” document the perception of waste as an obscenity, banished to the periphery of public view. “Cartoneros” who ride the train into the city in hopes of collecting recyclable waste are, like the practice that they partake in itself, deemed non-existent. These subdued networks of transportation towards the city center and throughout its networks of disposal are referred to as Ghost Trains because, as Hector Tobar claims, “they wish they hadn’t seen it. Or maybe they want to believe it doesn’t exist.”⁹ Thus, the Ghost Train exemplifies the notion of waste as obscene, as though any alternative to sanctioned and oppressive government risk damaging the manufactured portrayal of a well oiled engineered machine of modernity.

In his autobiographical essay “On Dumpster Diving” Lars Eighner explores the notion of dumpster diving as a practical art of survival and international scavenging as opposed to its common misconception as the “obscene.” Eighner outlines his experience as an urban scavenger,

illustrating the stages of accepting the everyday practice of sorting through refuse; “I live from the refuse of others. I am a scavenger. I think it a sound and honorable niche.”¹⁰ Eighner’s essay is relevant because of his acknowledgement of the human instinct to look away, or to look at the scavenger with disgust, permeating into an internal self-loathing of the scavenger himself. However this develops into an inevitable dissipation of dumpster shyness, as the author notes that once the scavenger is lost in the benefits of dumpster diving as a practical art, they will never see landscapes of trash the same.

“On Dumpster Diving” includes a critical distinction between individual garbage cans and the infrastructure of dumpsters that populate the city. Eighner draws this distinction in an effort to appease his identifications of what the public can tolerate, claiming that litter caused from rifling through private garbage cans may influence the public towards the belief that there is no alternative to waste mitigation than that which is imposed by the government. The essay in its entirety operates as a love letter to dumpster diving, unveiling the hidden intimacies of waste reclamation and salvaging.

Early criminalization of waste expressed a sort of political envy directed at the scavenger, who was seen, by the state and by property owners, as “getting away with” some undeserved jouissance found in the profit of salvage. But such enjoyment has long become obsolete, if it ever existed in the first place.¹¹ Even Eighner’s critical defense of food scavenging expresses a form of care, of soft enjoyment only distantly haunted by any kind of surplus enjoyment.

10 - Eighner, “On Dumpster Diving,” 87

11 - This paper takes the position that material evidence for such jouissance (in preindustrial London) exists, and elements of it can be found in the folies of Burning Man or the aesthetics of *Mad Max*. But these perverse expressions stand in strong contrast to the works of Mierle Laderman Ukeles, whose “banal” performances better approximate the thankless chore of contemporary waste management. Even the most joyful or intimate of her works appear unenviable as daily practices.

8 - Ferrell, *Empire of Scrounge*, 100

9 - Ibid, 181

Each stitch unified a patchwork of discarded lives. The folds and seams became a testament to renewal and reclamation, the same that was happening in the multitude of workspaces and factory pods that encapsulated our studio.

Perhaps my infatuation with fabric had become a way of acting out a nostalgia of what was lost, or once was and had disappeared. Alternatively, it could be my way of celebrating what is. Industries of reproduction, churning simultaneously as a well oiled machine.

The frames of the city; the conveyor system, the pre-board sortation, the post-board sortation, the depositing of commuters and waste into the city, represent my life that is as much about ritual and civic dedication as it is "just" about labor.

When I sit in the studio, with the faint hum of machinery, of sortation systems and people working through refuse...

I just realized two hours have passed.

Part IV - "The Mounds"

The existence of waste management as an activity deprived of enjoyment, necessitates practices of reclamation and collective involvement freed from the bounds of legality. Urbanization in the late nineteenth century through the early twentieth century fabricated the notion of trash as a biopolitical and aesthetic concern. "Trash at the Ends of Infrastructure" offers a critique of infrastructural connectivity as a mythic ideal; infrastructures are active producers of non-relation. Michelle Ty argues that "trash, as both substance and concept, is poised at the juncture between thought and material life, object and person, individual and class"¹²

She cites Atget's depictions of elements of the city that would disappear, or "va disparaître" as a preemptive mourning of infrastructure deemed insignificant by the party in power. This citation places the afterlife of commodification as a catalyst for creating a counternarrative that would oppose traditional connotations of value. Within that same thought, waste infrastructures demand "nodes of non-belonging" that

become materially integrated but politically disavowed.¹³ These zones mirror the colonial legacy of incomplete infrastructural integration—where modernity arrives through fracture, dislocation, and abandonment. In places like Cairo or Taipei, where waste management has resisted privatization and preserved cooperative or informal reuse systems, alternative logics of infrastructural relation persist. Similarly, Paris' own early ragpicker economy, once erased, now appears in nostalgic reimaginings of the city's discarded labor histories.

I left work almost as soon as I got the call from the hospital. My mother's condition had worsened. When I arrived, the nurse stopped me before entering the room. "Sorry, you can't get that close... we have to ask you to clean yourself. She's immunocompromised." I had almost forgotten my appearance. I looked back and saw my footprints in mud and iron filings tracing my sprint on the hospital tiles. I could only imagine what the nurse smelled on me.

"Let her in, please! There's no one else in here." I sensed it was the last time my mother would try to raise her voice.

For whatever reason, and I'm thankful for this, the nurse let me in. Maybe it was because they were my age, born after the Revolution that no one calls a "revolution" anymore. My mother never called it that; I just picked up the word in school.

I held her hand, and for an hour, we said nothing. We waited for the others to come, but, after an avalanche earlier today in the Mounds, I thought of my brother and all the primos, stuck somewhere on the other side of that wall of trash, trying to climb it to run downtown. Every once in a while, the door would open and we'd hear the sound of wheels or a surgeon's orders, but, in that room, the machines were turned off.

Tears welled in my eyes, and I fixated my blurry vision on the sleeve mama fixed for me. A thread poked out; I don't know when, but I'm sure it was my work that tore it. I promised her I'd fix it that night.

12 - Ty, "Trash and the Ends of Infrastructure," (page 607)

13 - Ty, "Trash and the Ends of Infrastructure," (627)

Design Proposal

Because we view this waste facility as a developing institution of the city, the naming convention is viewed as an evolving entity. The names become products of how the facility is viewed and accepted by the community, first as a suggested or introduced practice of waste management, then later adopting names that emerge from ritual use and interaction.

Our design proposal will begin to test a speculative hypothesis about inverting the placement of waste processing/sanitation facilities not at the periphery, but at the center of the city. The types of waste produced in this speculative city follow those of New York City in 2025, but the project pays special attention to food waste and compost. The waste disposal facility emerges in the 21st Century under some kind of executive action, meaning that the City in question has not developed for hundreds of years around it. Nonetheless, at the time of the writing and drawings, its existence is already assumed by all residents of the City. Systems of class and production shall roughly follow those of New York City in 2024, meaning, in particular, there exists a specialised form of municipal labor like the DSNY that manages the waste disposal facility.

The nucleus of the waste management facility is located in Midtown, Manhattan, and its appendages extend to the outer boroughs and neighboring cities in New Jersey. A conveyor system unites the outer districts to the central facility. Conveyor belts operate as suspended subways, casting shadows across

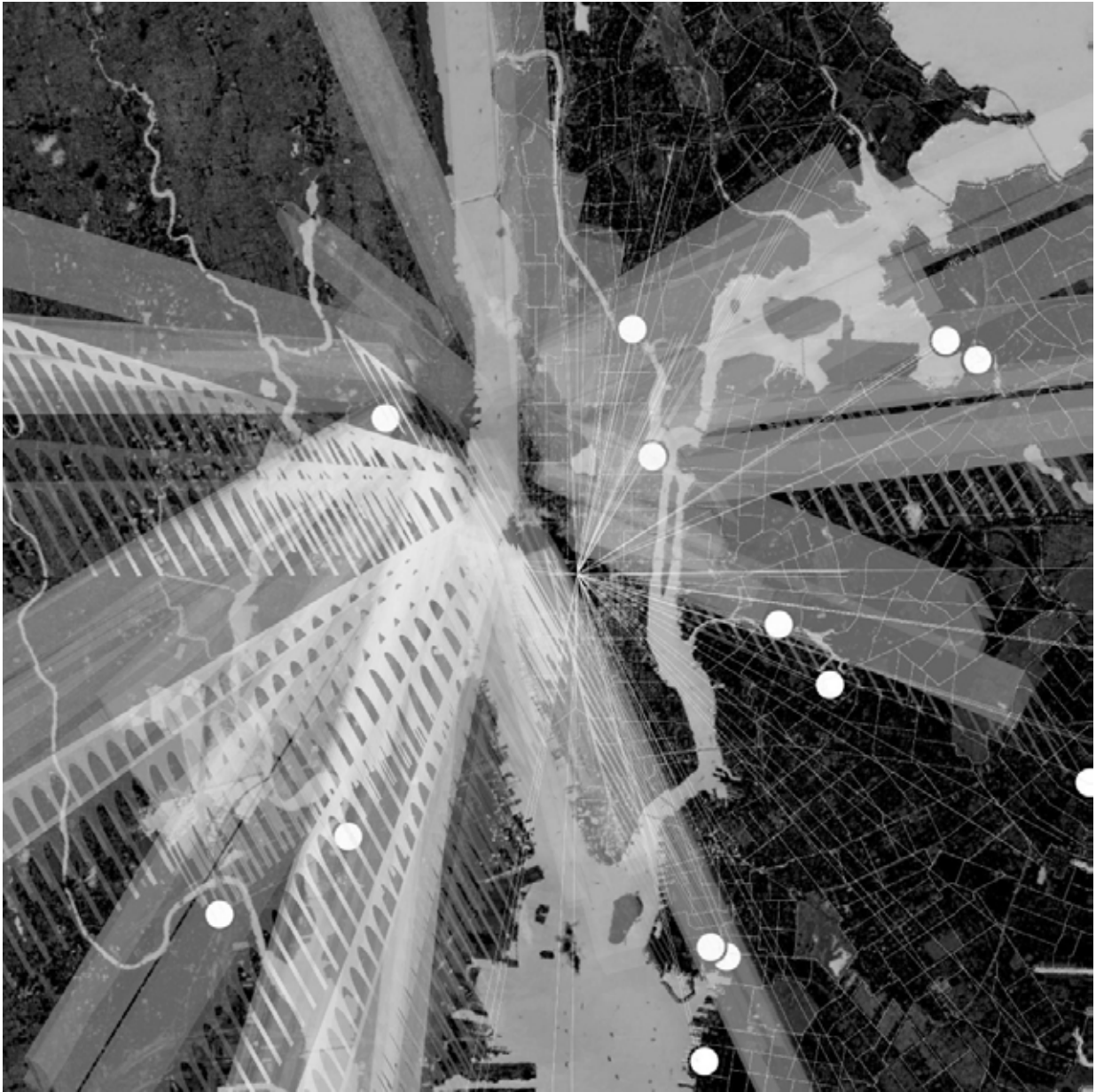
the city beneath, and enable movement of people and their waste. As an incentive to engage with the circular waste economy, the “fare” is paid through the depositing or carrying of waste into the city, with different checkpoints of waste organization. Thus, the network is constructed by frames through which each form of refuse may be addressed, acknowledged, and cared for. Within each subway pod is a series of bins, tubes, and enclosures. These not only store organized waste, but encourage its temporary inhabitants to sort and interact with each item discarded, by them or their community members.

Sortation and trash compression machines are oriented in public view and materiality is intended to render interior activities and operations visible. This is done so through the implementation of glass, mesh, open frames, and reclaimed transparent materials. Noise, smell, and movement is deliberately retained, and only mitigated when safety becomes a risk. This is done so to ensure a confrontation with the sensorial weight of waste labor. Regarding the tectonic architecture of waste mitigation, the structure borrows and “recycles” traditional forms of civic architecture, such as columns, arches, bridges, industrial infrastructure, and reappropriates each element for waste processing.

Potential technologies introduced into the system would be alternative temporal and operational telecommunications. Archive control rooms would feature live streamed collection routes and the collection trajectory of the trash “spine”/conveyor system. Real time maps of trash flows across the five boroughs, displays of ecological footprints, worker injury rates, and threats of waste colonialism would be broadcasted across the city. Broadcasts would occur both at the center itself, and via various media across the conveyor system’s appendages. Temporal technologies could include operating systems that track time based on waste flows. Digital interfaces across the city would provide quantitative data displaying how many tons of waste would be processed per hour. Additional layers could be the amount of workers or inhabitants actively engaged with waste processing.

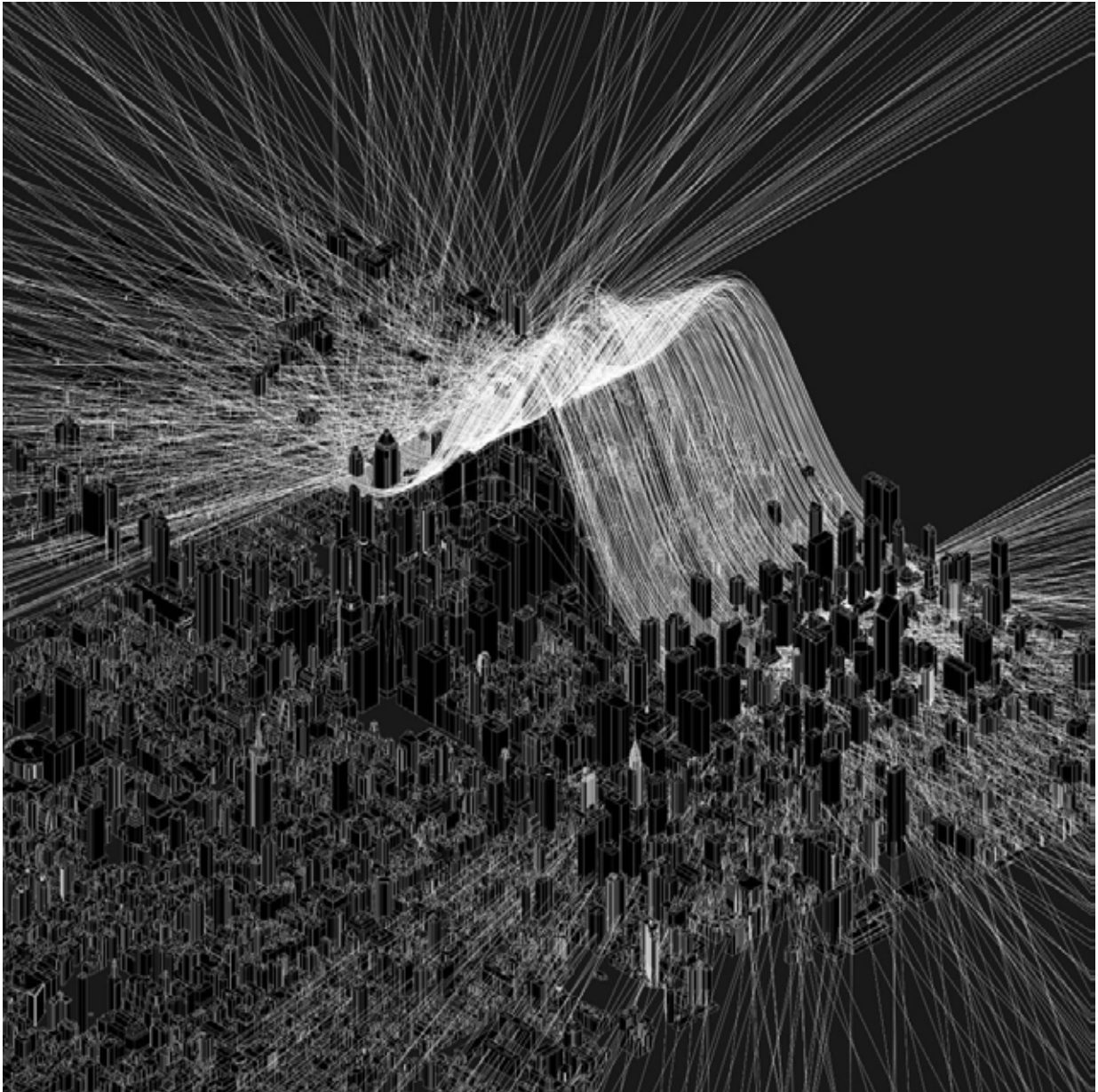
This design does not attempt to solve waste production, but the intention of our proposal is to invert the order of waste management. This system, functioning as an inverted intestine, is informed by the following progression:





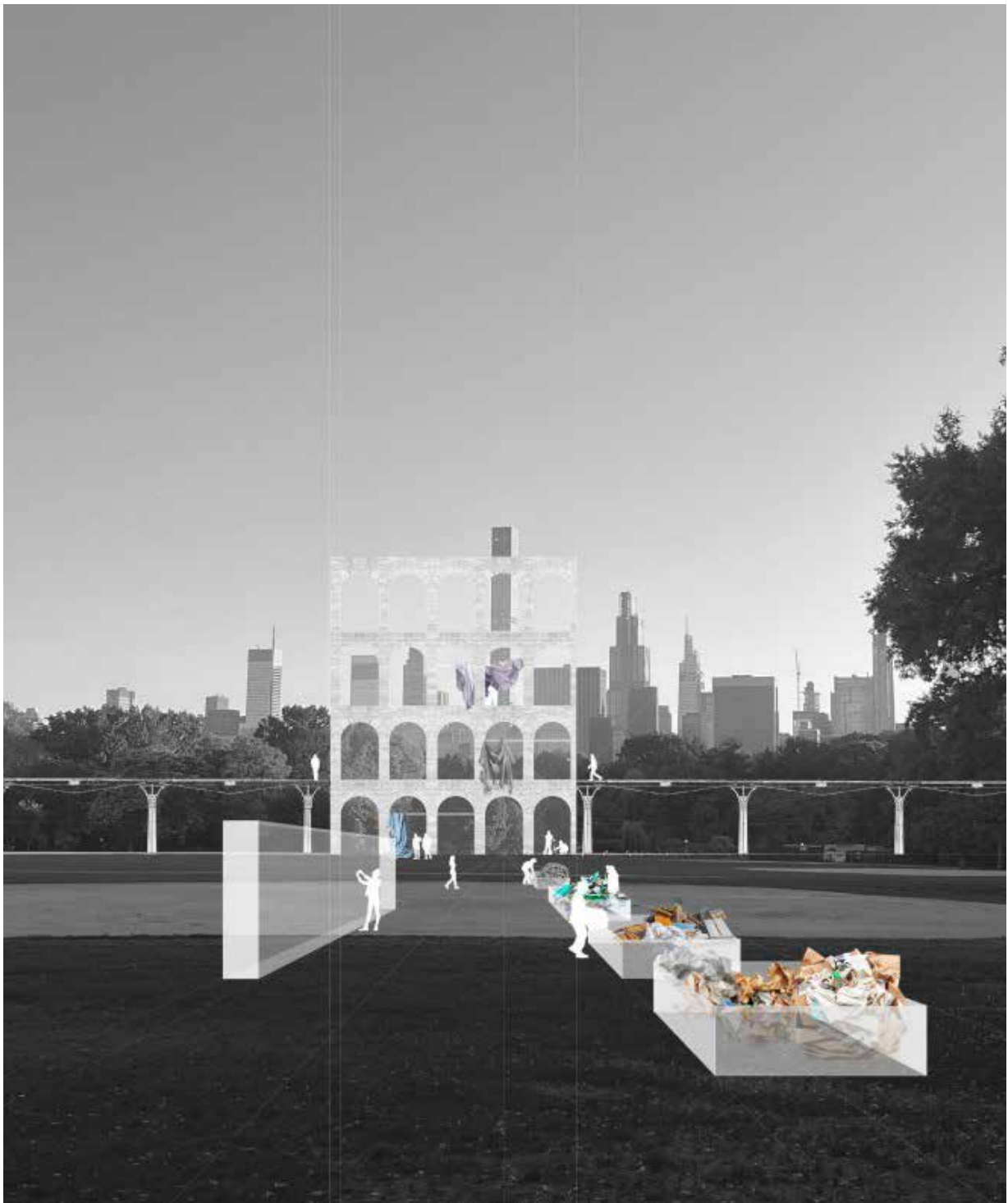
All roads lead to midtown. This map expresses a hierarchy of management. Starting at midtown, where all lines converge, this is the area with the least involvement of the DSNY and most involvement of private and popular actors. The exaggerated, ghosted shadows follow the major conveyor lines, a secondary transportation network that relies primarily on citizen participation in sorting material. Most of these lines

begin at recollection centers (represented as large white dots), which rely heavily on citizen participation, but are partially managed by the DSNY. The faintest lines, tracing both the paths to existing DSNY centers and sanitation zones, represent areas managed, as they are in 2025, by the DSNY. The further one goes from midtown, the more the waste management system resembles contemporary reality.



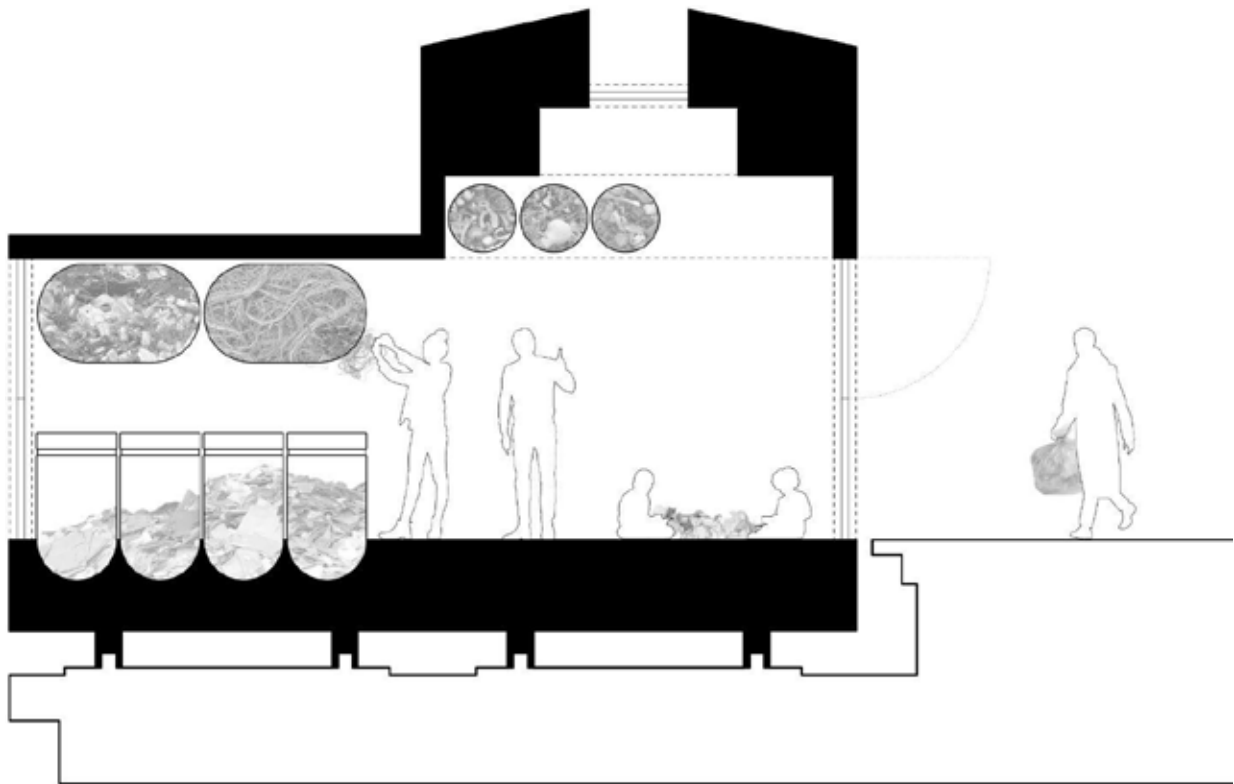
The theoretical size of the Mound. Volume has been calculated as a function of *uncompacted* refuse collected from October 1990 to March 2025 as reported by

the DSNY. This estimate is given by tonnage of all Manhattan refuse reported by DSNY with an estimated uncompacted density of 95 lbs./cubic yard.



Speculative rendering of the Design Proposal as situated in the context of Manhattan. The image displays the array of transparent sortation bins, offering a procession towards the intervention itself. Aligning

with the narrative or reappropriating traditional forms of architecture, the image centers on a series of repetitive arches.



Section of conveyor system that transports people and their organized refuse into the city. Each station through which individuals would access the network becomes a ritual place of depositing and collection.

These subway-like tunnels are intended to function as active sortation spaces, where addressing refuse becomes a ritual en route to and upon arrival at the central facility.

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