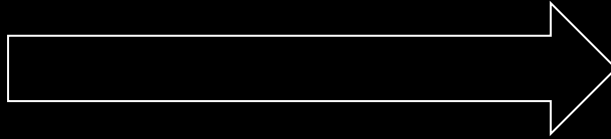


# Lecture Keynotes

Summary and History;

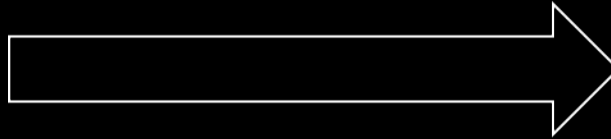
E X C U R S U S



At the beginning of each deck, as brief overview or abstract along with a brief history of its origin date, first presentation or generation

The big idea here is;

E X C U R S U S



Mid deck summaries of the main points for clarity & flow

Explainer

E X C U R S U S



Mid deck enhanced explanation of the details behind the main points for clarity and flow

E X C U R S U S

# Summary and History;

In a first-ever collaboration between the City of Houston, the Architecture Center Houston (ArCH), and the Houston Chapter, American Institute of Architects is proud to announce Houston 2020 Visions, an exhibition celebrating innovative, visionary project proposals that seek to place design and sustainability at the heart of the conversation about planning for a more resilient future.

Cities find themselves at a historic crossroads, with broad consensus that humanity must change the way it plans and builds for the future. Half of the global population already lives in cities, and by 2050 that proportion is expected to balloon to two-thirds. Cities are challenged with growing populations and associated needs for affordable housing, transportation, and food access, in addition to a changing climate, unpredictable weather patterns, and global health crises.

Inspired by Houston's experience during Hurricane Harvey and other national disasters, the Houston 2020 Visions competition is a creative way to address some of these challenges with a focus on urban design and planning.

E X C U R S U S

# The big idea here is;

We used our entry into this competition to look at resiliency through the vehicle of the much proposed and postulated new “vertical warehouse’ building type.

We saw the automation of access of autonomous operated trucks would be the core driver of the future form of warehousing. This technology drastically reduces land footprint size, allows bay doors on multiple levels and various clear heights.

When looked at from a multiple programming point of view we saw opportunities for these types of buildings to become accessible community gathering points during historic floods and disasters which frequent the gulf coast. Food, healthcare and housing could easily and readily transform the “empty vessel” program of this new technology driven building type.

E X C U R S U S

### ***Large...***

Westchase District is a 4.2 square mile territory at the geographic center of Houston's 2.2 million citizens. In 2009 we collaborated with the District in developing a long-range plan promoting sustainable community development and flood mitigation in a city averaging 40 feet above sea level. Our hydrologist calculated all future developments would require detention to avoid massive flooding. Our strategy capitalized on underutilized infrastructure boundaries not under private control given the 180 individual private deed restrictions controlling an unplannable private realm. We captured conveyance ditches feeding into the two water sheds, aerial easements and large setbacks within the right of ways of key boulevards. We envisioned these assets as a network of canals, linear public parks and detention banks organized in a new matrix creating a framework intersecting public-realm opportunities with private-sector development initiatives. Many of these projects have been realized over the last 10 years making the plan a living document.

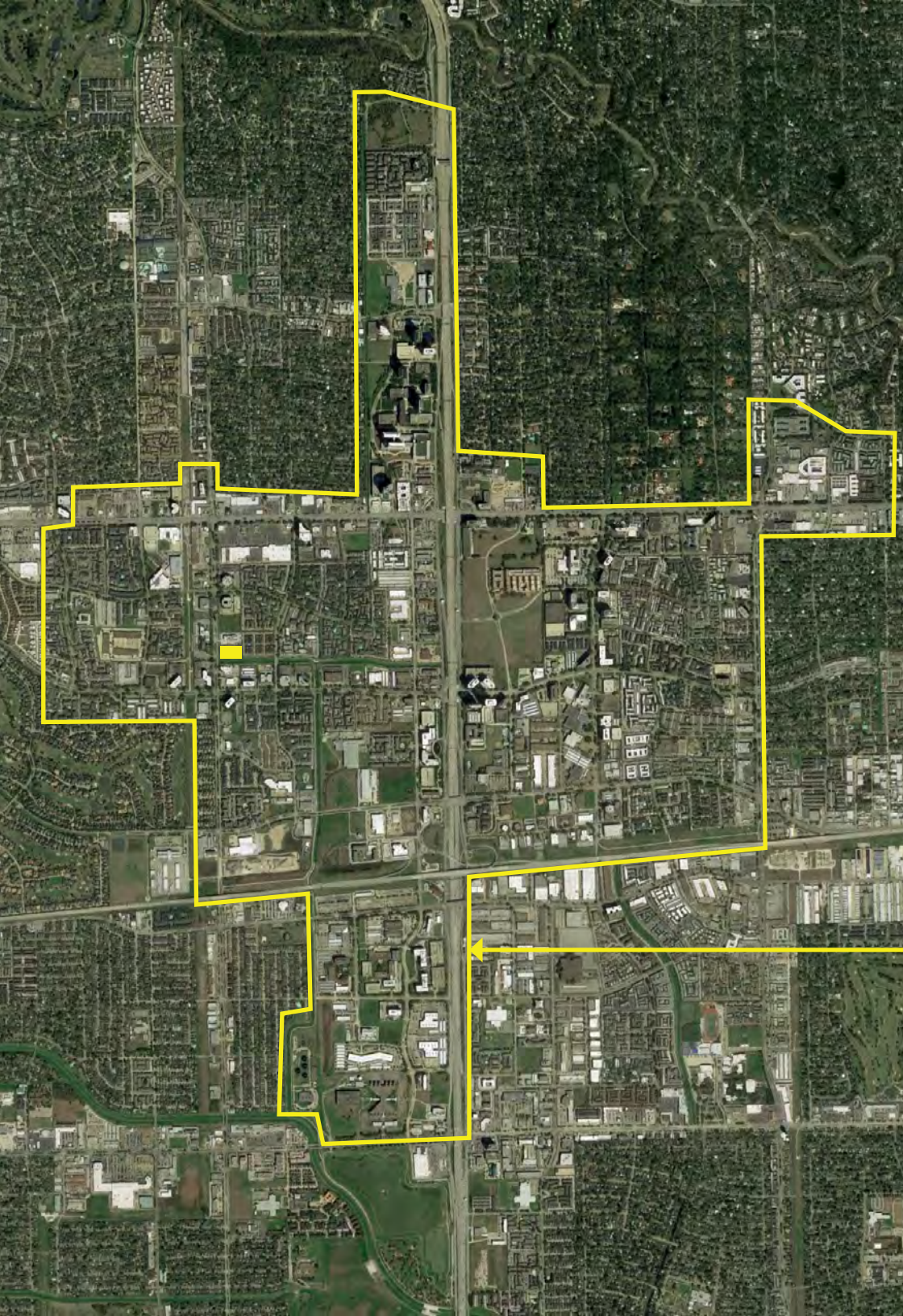
### ***Medium...***

We propose a speculative development on a 3.5 acre tract. Technology and "E" commerce are pressuring industrial development inward in support of last-mile delivery. The market forces this suburban building type towards a vertical strategy maximizing space while minimizing the land current mega-boxes need. Strategically located in highly populated areas with an abundance of flexible square feet, this evolving building type satisfies a market private sector demand while simultaneously acting as a platform to do 'double duty' as a provider of public support, nutrition and shelter in a post Harvey world that our plan could never anticipate.

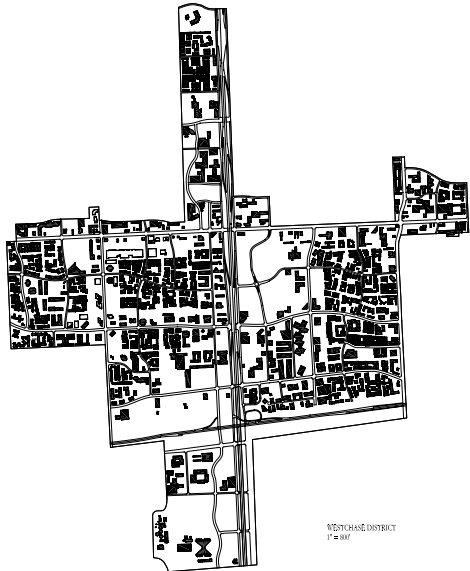


## ***Westchase District***

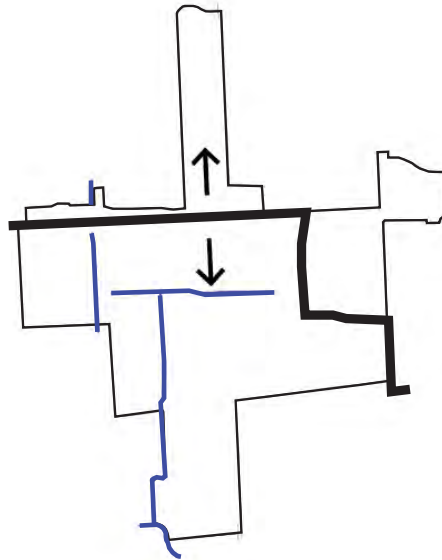
is a 4.2 square mile territory geographically located at the center of the most populated areas of Houston, Texas. In 2009 we re-framed the District with a long-range plan that promotes sustainable community development while mitigating flooding and water quality issues inherent in a city just forty feet on average above sea level.







Office towers, strip centers, surface parking and aging apartment complexes within the District has forced all future development to require on-site detention due to downstream flooding.



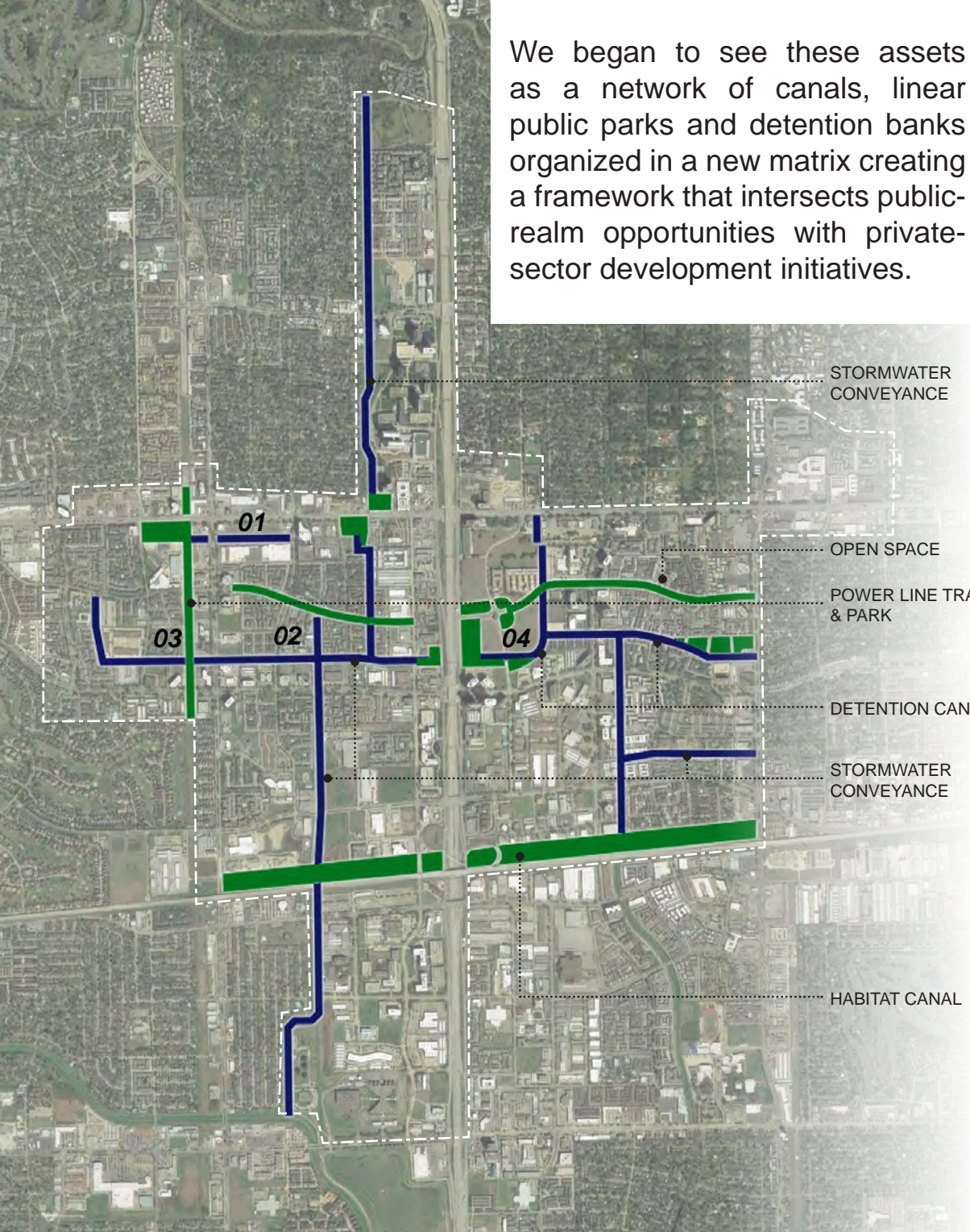
Impervious coverage to date simply drains into a series of ditches feeding into two bayous increasingly overwhelmed by the deferred capacity control.



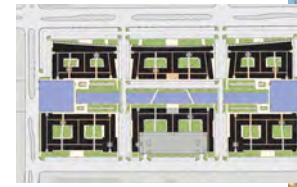
Our analysis revealed an **EXISTING NETWORK OF UNDERUTILIZED INFRASTRUCTURE** composed of ditches feeding into the two water sheds, several aerial easements and large setbacks within the right of ways of key boulevards.



We began to see these assets as a network of canals, linear public parks and detention banks organized in a new matrix creating a framework that intersects public-realm opportunities with private-sector development initiatives.



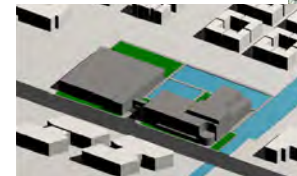
**PUBLIC-REALM OPPORTUNITIES**



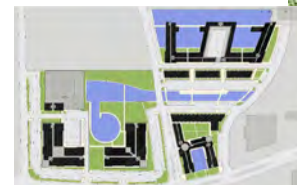
**01 - RETAIL / RESIDENTIAL**



**02 - RESIDENTIAL**



**03 - POWERLINE TRAIL & PARK**



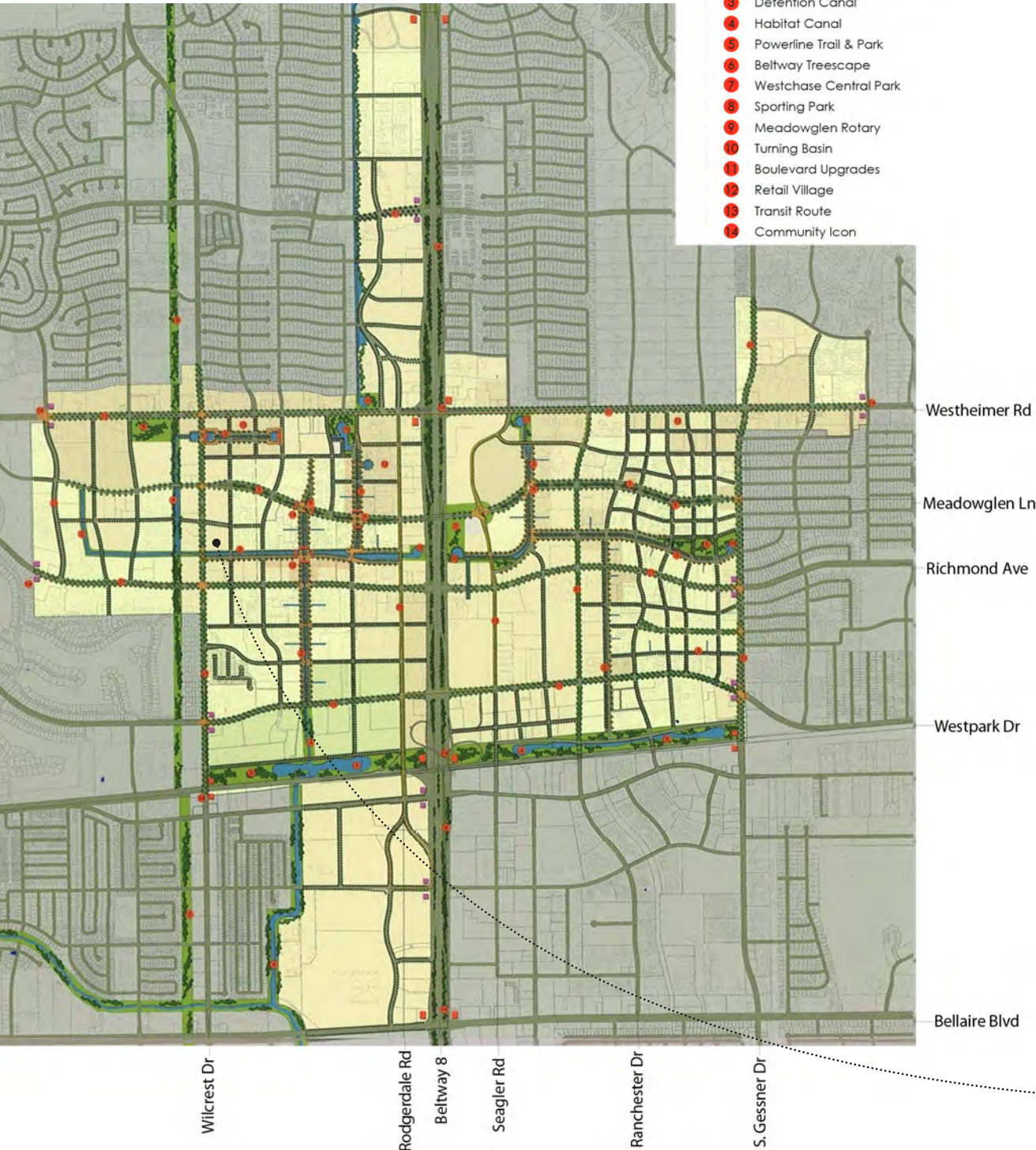
**04 - MIXED-USE**



**PRIVATE-SECTOR DEVELOPMENT INITIATIVES**



- 1 Meadowglen Open Space Avenue
- 2 Stormwater Conveyance Canal
- 3 Detention Canal
- 4 Habitat Canal
- 5 Powerline Trail & Park
- 6 Beltway Treescape
- 7 Westchase Central Park
- 8 Sporting Park
- 9 Meadowglen Rotary
- 10 Turning Basin
- 11 Boulevard Upgrades
- 12 Retail Village
- 13 Transit Route
- 14 Community Icon

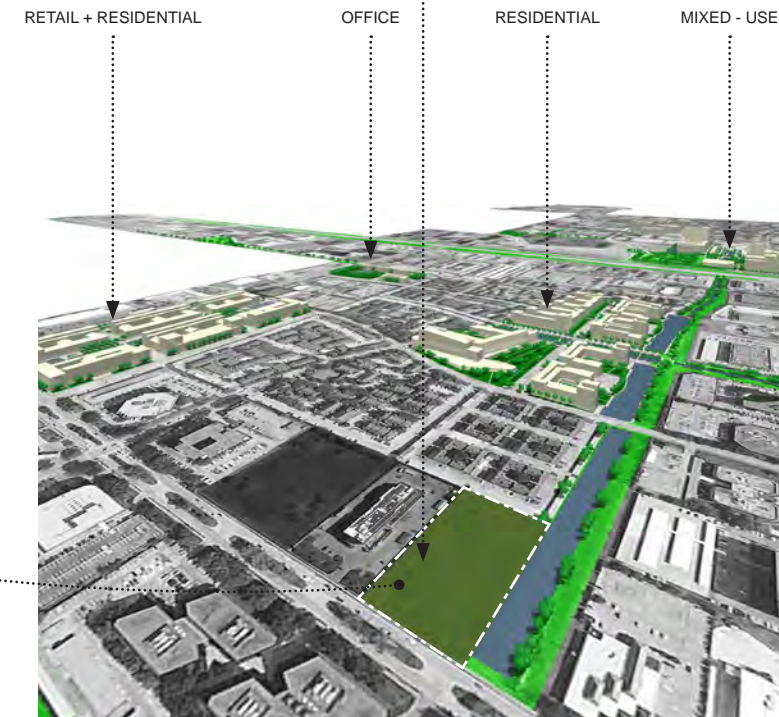


Technology and “E” commerce are pressuring industrial development inward in support of last-mile delivery. The market forces this suburban building type towards a vertical strategy maximizing space while minimizing the land current mega-boxes need.

Our proposal is a speculative **INDUSTRIAL** development on a 3.5 acre tract...

3.5 ACRES VERTICAL STRATEGY

~  
16 ACRES MEGA-BOX INDUSTRIAL



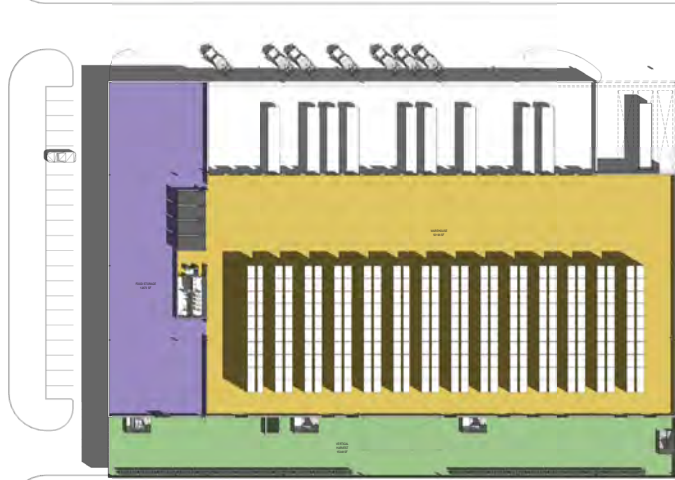


## PRODUCT DELIVERY DIAGRAM

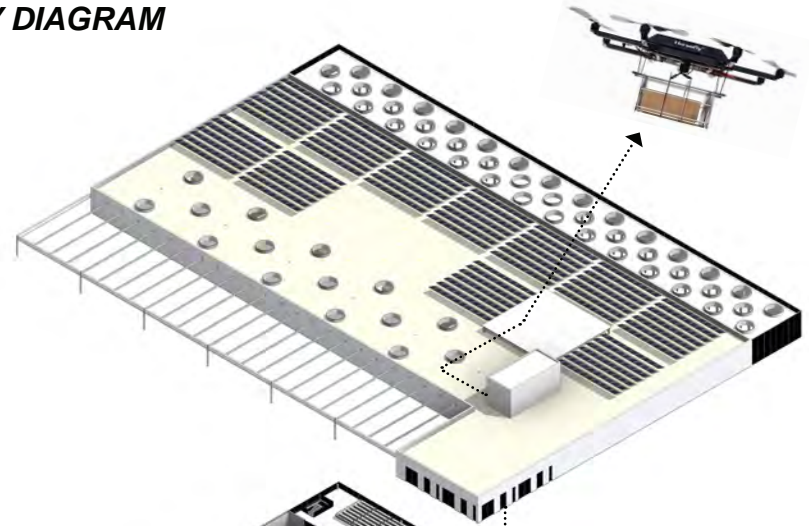
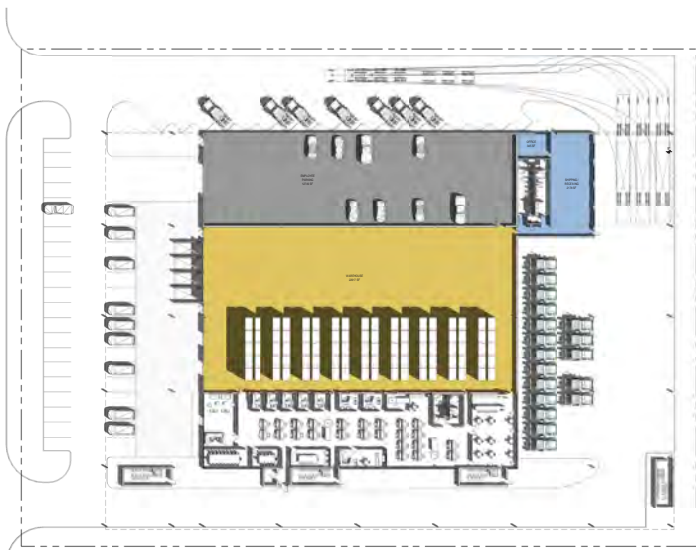
**TYP URBAN FARM FLOOR PLAN**



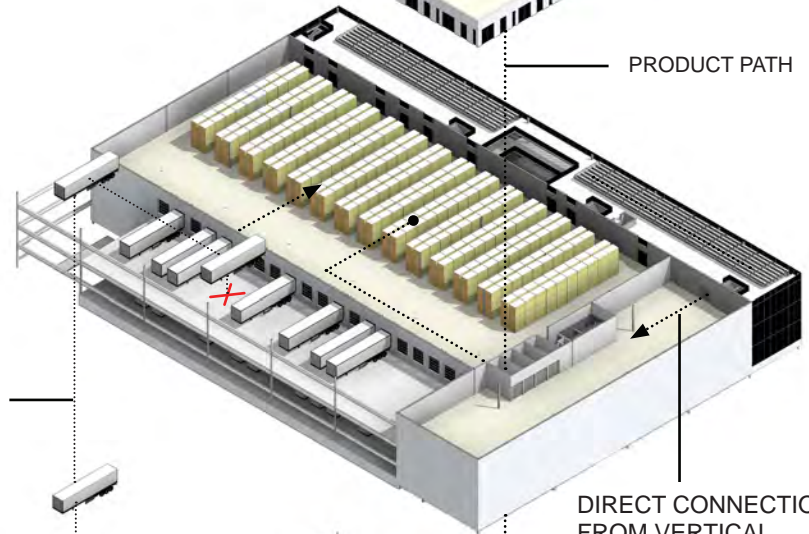
**TYP LEVEL FLOOR PLAN**



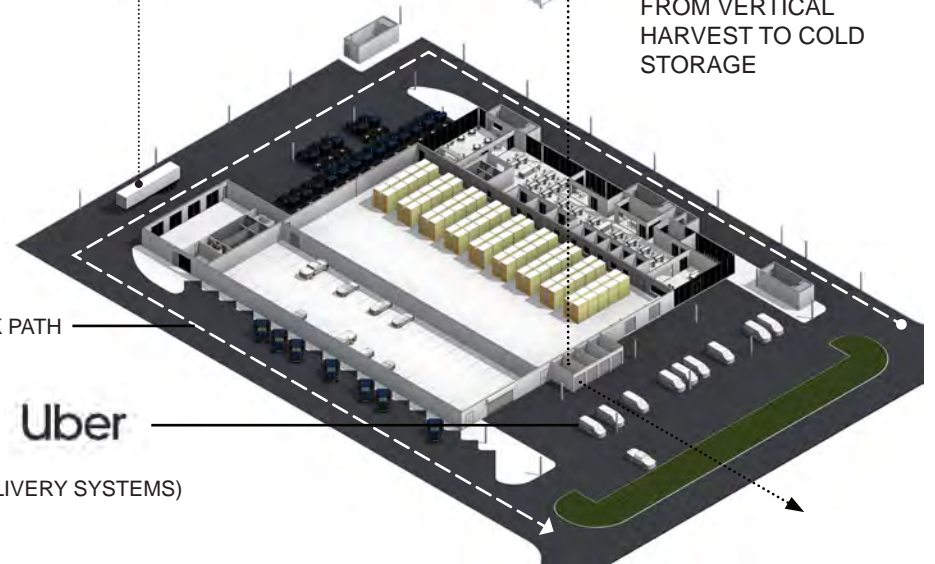
**LEVEL 01 FLOOR PLAN**



PRODUCT PATH



CONTAINER / TRAILER  
PATH TO ELEVATED  
PLATFORM

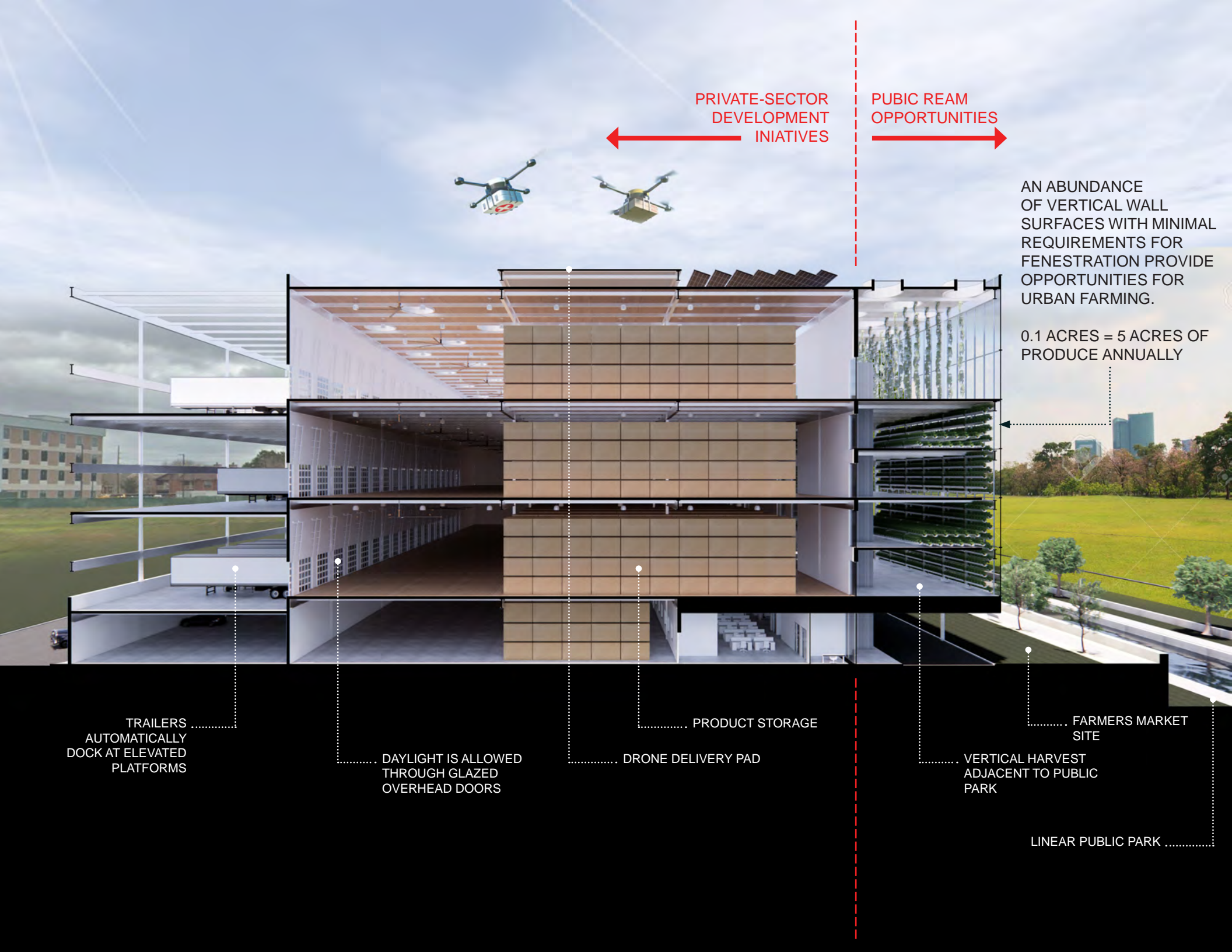


DIRECT CONNECTION  
FROM VERTICAL  
HARVEST TO COLD  
STORAGE

TRUCK PATH



(LAST MILE DELIVERY SYSTEMS)



PRIVATE-SECTOR  
DEVELOPMENT  
INITIATIVES

PUBLIC REALM  
OPPORTUNITIES

AN ABUNDANCE  
OF VERTICAL WALL  
SURFACES WITH MINIMAL  
REQUIREMENTS FOR  
FENESTRATION PROVIDE  
OPPORTUNITIES FOR  
URBAN FARMING.

0.1 ACRES = 5 ACRES OF  
PRODUCE ANNUALLY

TRAILERS  
AUTOMATICALLY  
DOCK AT ELEVATED  
PLATFORMS

DAYLIGHT IS ALLOWED  
THROUGH GLAZED  
OVERHEAD DOORS

PRODUCT STORAGE

DRONE DELIVERY PAD

FARMERS MARKET  
SITE

VERTICAL HARVEST  
ADJACENT TO PUBLIC  
PARK

LINEAR PUBLIC PARK



CONCRETE ROOF & 7" POLYISO (R-42) ROOF

+

4" INSULATED METAL PANEL (R -26) WALL

(COLD STORAGE AREAS CAN REMAIN OPERABLE  
WITH MINIMAL ENERGY REQUIREMENTS  
PROVIDED BY BACK-UP GENERATOR SYSTEM)



CHARGING  
STATIONS

NATURAL  
DAYLIGHTING  
IN WAREHOUSE  
AREAS

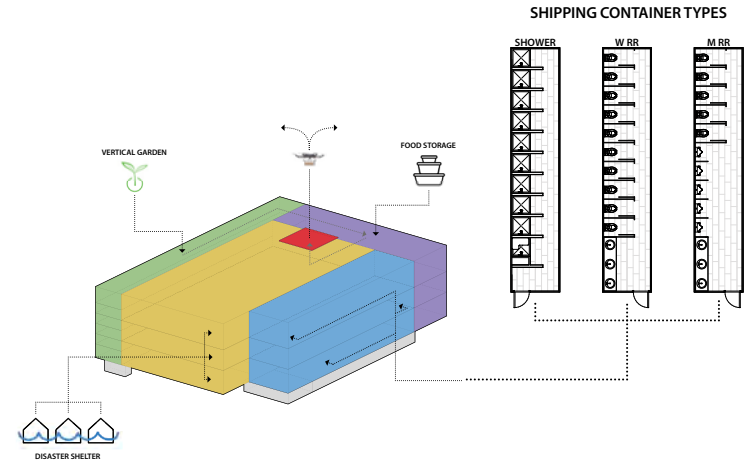
PRODUCT PATH  
THROUGH BUILDING  
TO 'LAST MILE'  
DELIVERY SYSTEMS

COLD STORAGE .....

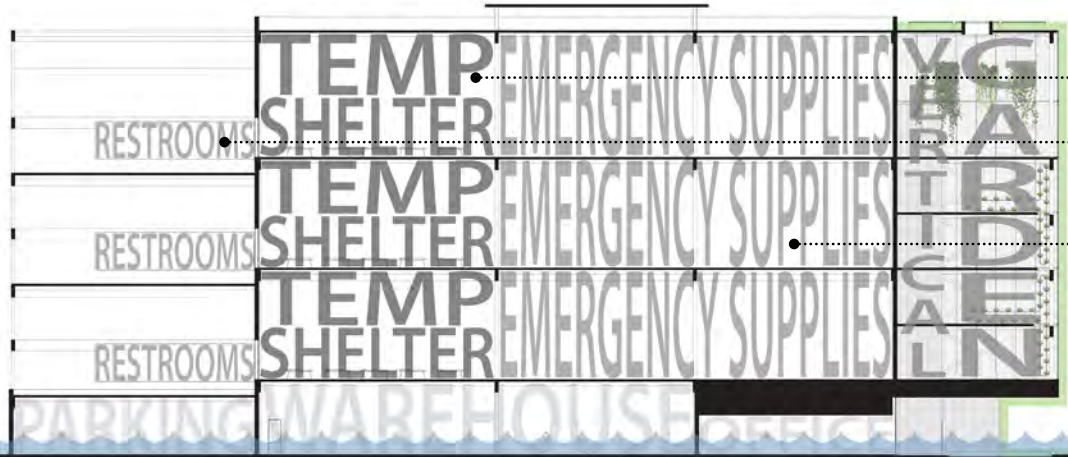


BUILDING USAGE DIAGRAM

Strategically located in highly populated areas with an abundance of flexible square feet, this evolving building type satisfies a **MARKET PRIVATE SECTOR DEMAND...**



PRODUCTS REMAIN DELIVERABLE WHEN RESIDENTS ARE UNABLE TO ACCESS TRADITIONAL GROCERY SITES



BUILDING USAGE DIAGRAM DURING CRISIS

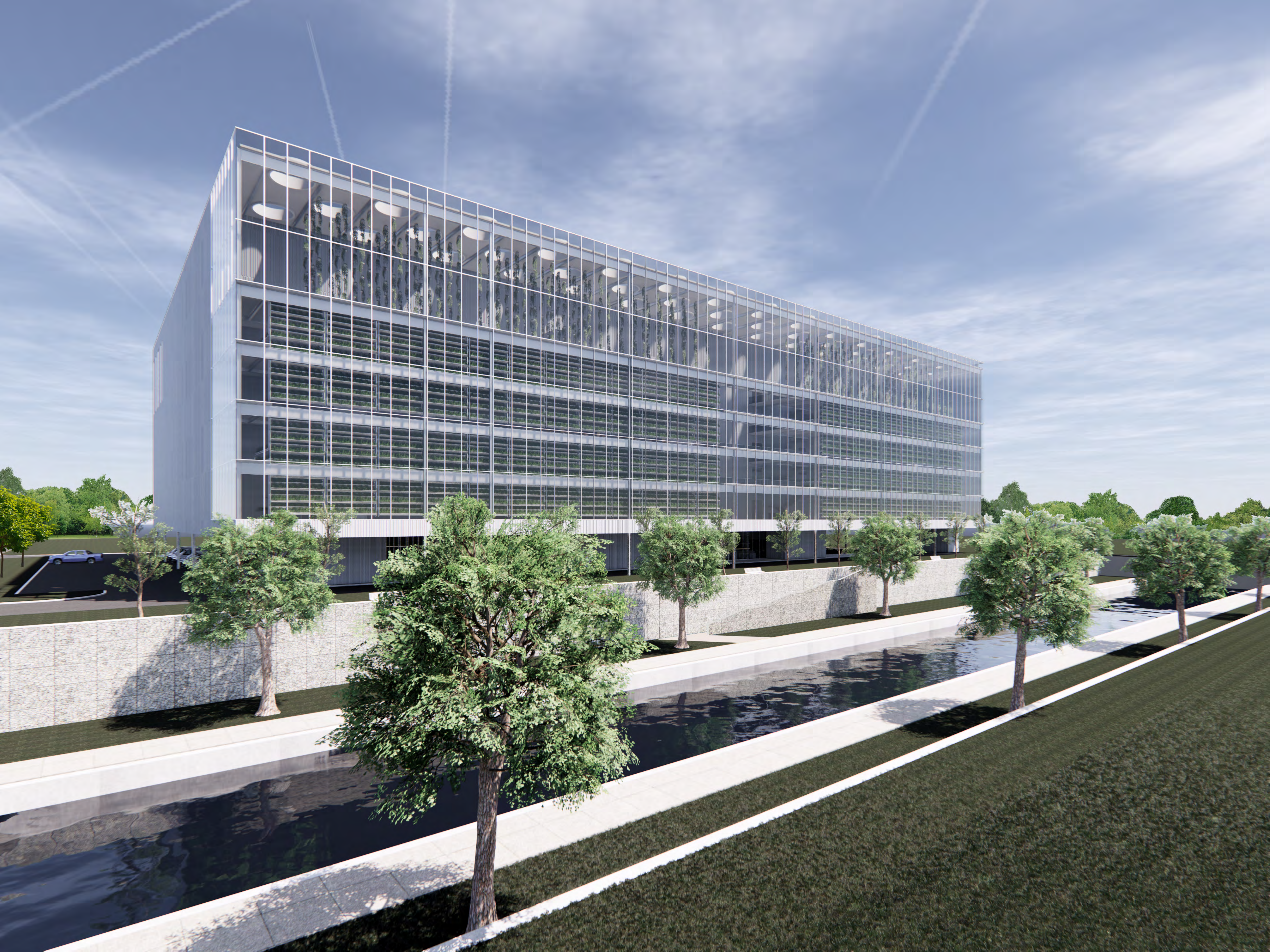
While simultaneously acting as a platform to do 'double duty' as a provider of **PUBLIC SUPPORT, NUTRITION AND SHELTER** in a post Harvey world that our plan could never anticipate.

- ABUNDANCE OF FLEXIBLE AREA PROVIDES SHELTER
- TEMPORARY RESTROOM FACILITIES CAN BE DOCKED AT ELEVATED PLATFORMS
- TYPICAL PRODUCTS REPLACED WITH EMERGENCY SUPPLIES













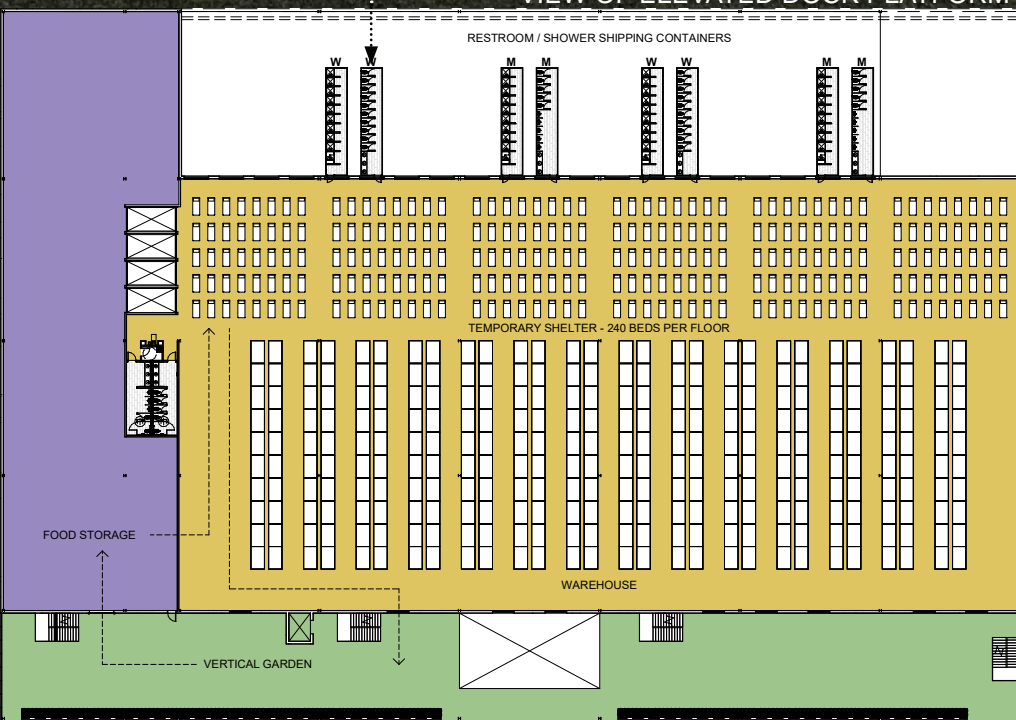




VIEW OF ELEVATED DOCK PLATFORM



VIEW OF VERTICAL HARVEST AND PUBLIC PARK



TYP WAREHOUSE FLOOR DURING CRISIS



VIEW OF VERTICAL HARVEST