

DESIGNING FOR HEALTH

2014 ULI Fall Meeting



Javits Center, NYC | October 21–23

Jack L. Robbins, AIA
Principal

FX FOWLE



We shape our buildings, and
afterwards our buildings shape us.

- Winston Churchill, 1943

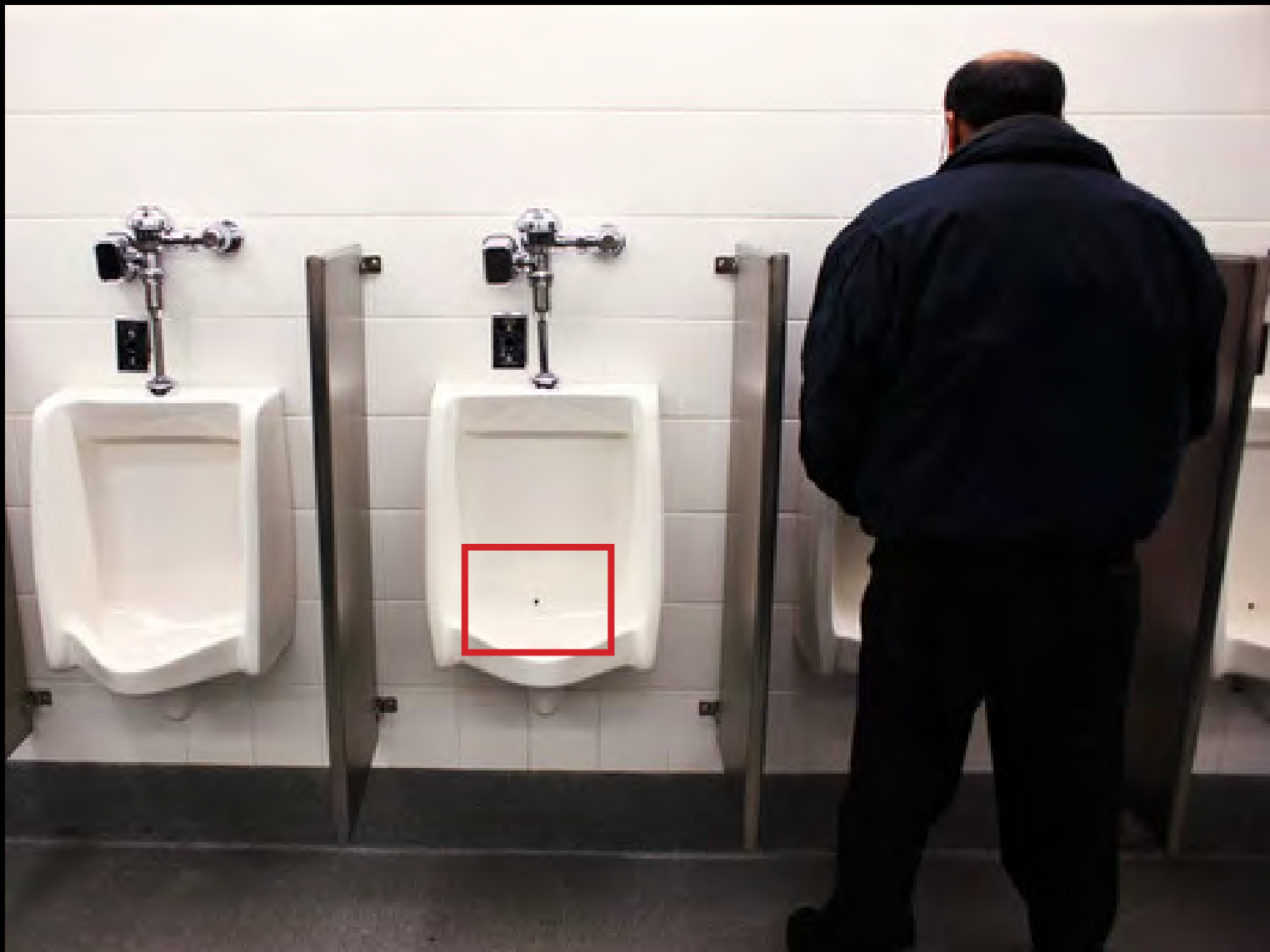
DESIGN ---> HEALTH

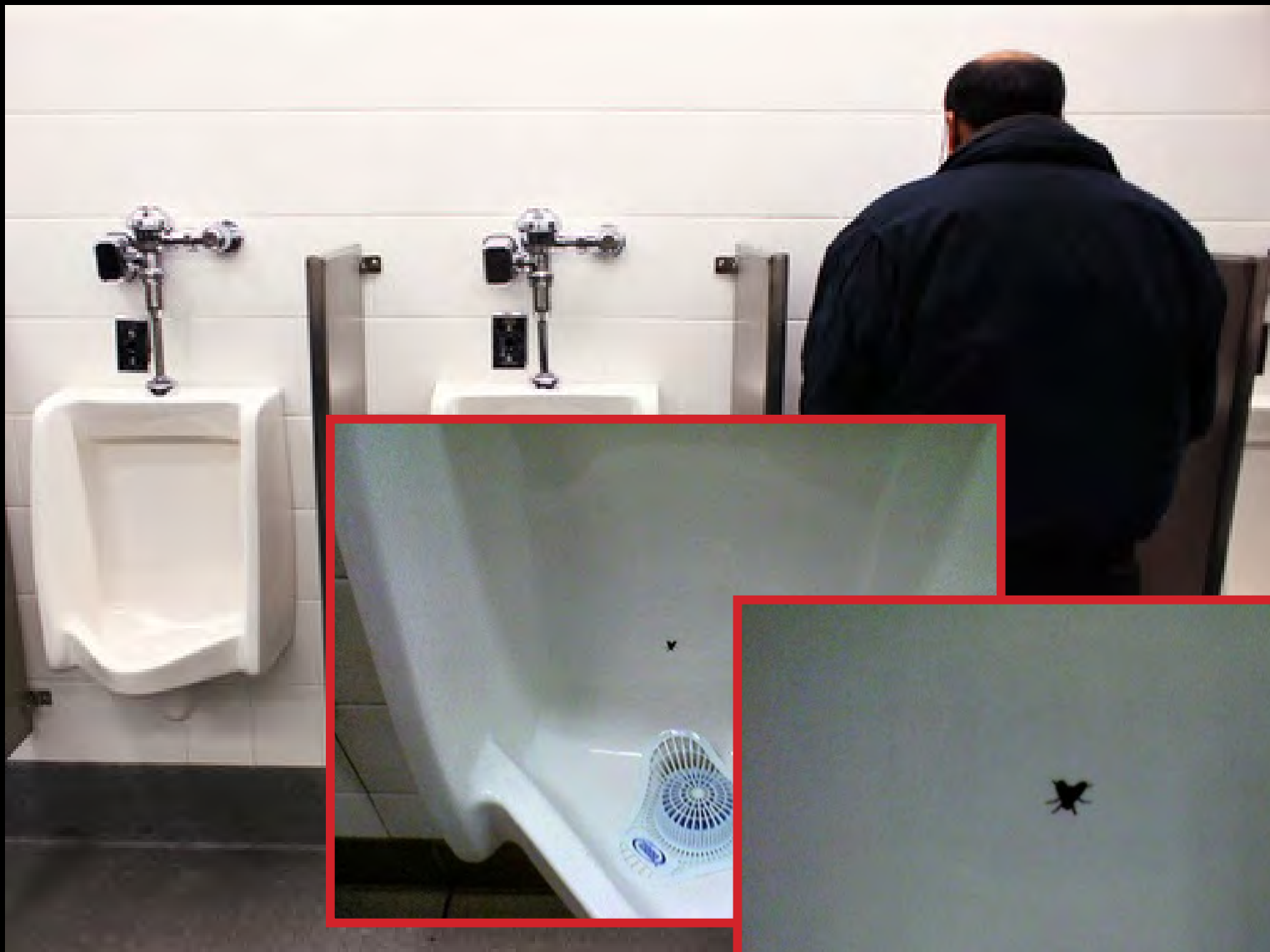
Design can change behavior.

Changed behavior can improve health.

Design can improve health.







“Walking is a man's best medicine.”

- Hippocrates

- Study of 10,269 male Harvard College graduates showed walking at least 9 miles/wk linked to **22% lower death rate**.
- Among 44,452 male health professionals, walking at least 30 min/day linked to **18% lower risk of coronary artery disease**.
- Study of 72,488 female nurses, walking at least 3 hrs/wk linked to **35% lower risk of heart attack** and cardiac death and **34% lower risk of stroke**.
- Compiled data from 18 studies tracking 459,833 people for an average of 11.3 years showed walking reduced risk of cardiovascular events 31%, and **cut risk of dying by 32%**. Protection evident at distances of just 5½ miles/wk and a pace of only 2 mph.

Client:

NYC Department of Housing
Preservation & Development

BRP Development Corporation
&
The Hudson Companies, Inc.

Common Ground

Design Team:

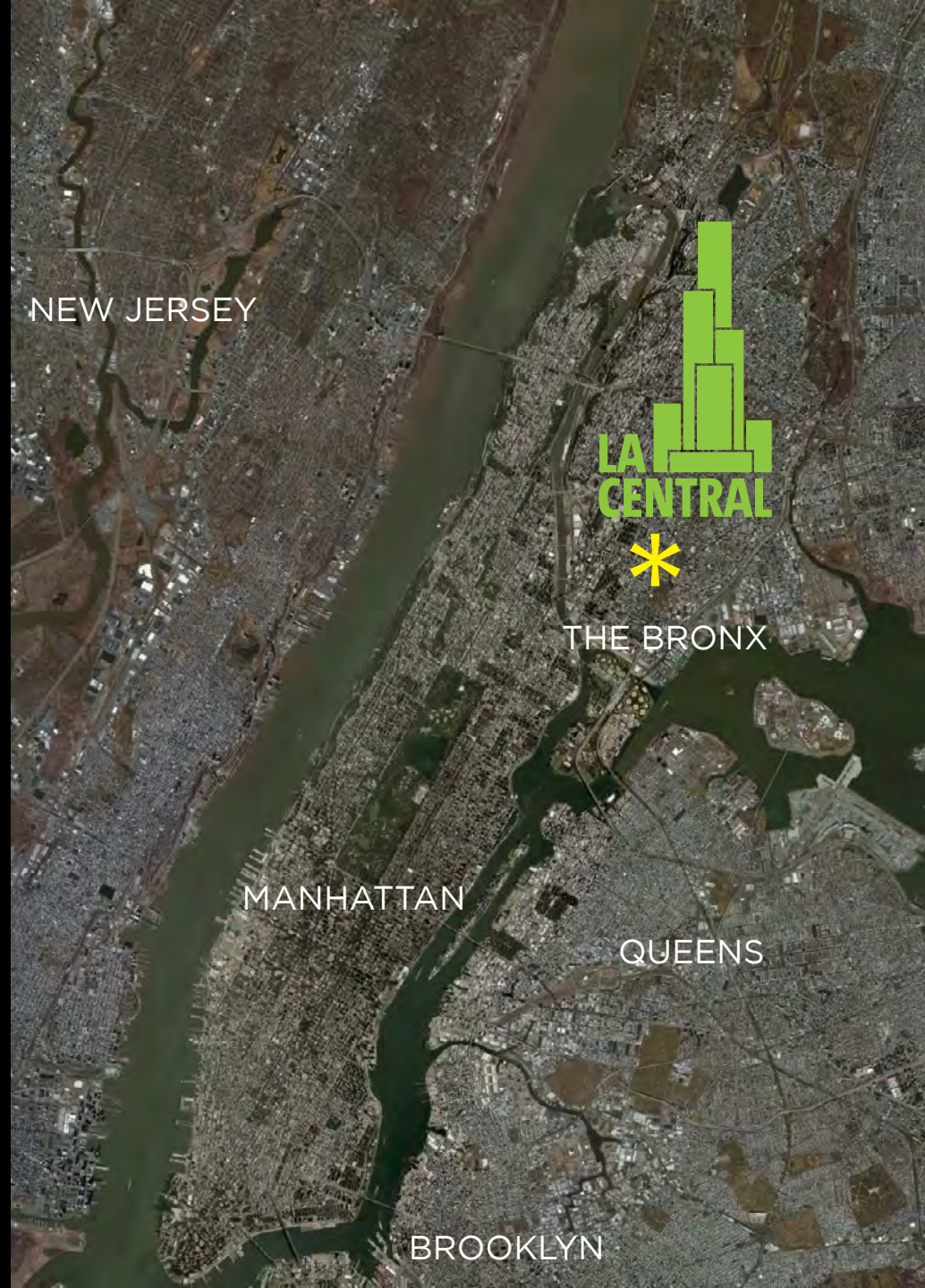
FXFOLWE

MHG Architects

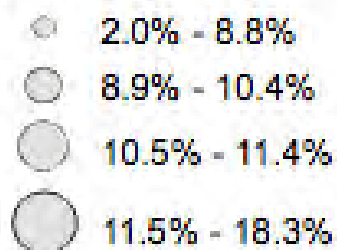
Future Green Studio

1,100,000 GSF

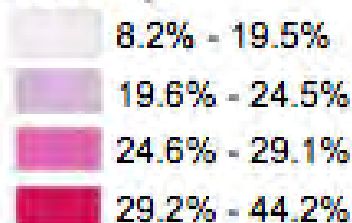
985 units affordable
housing, including 96 units
of supportive housing for
formerly homeless veterans
and New Yorkers living with
HIV/AIDS



Diabetes ever



Obesity

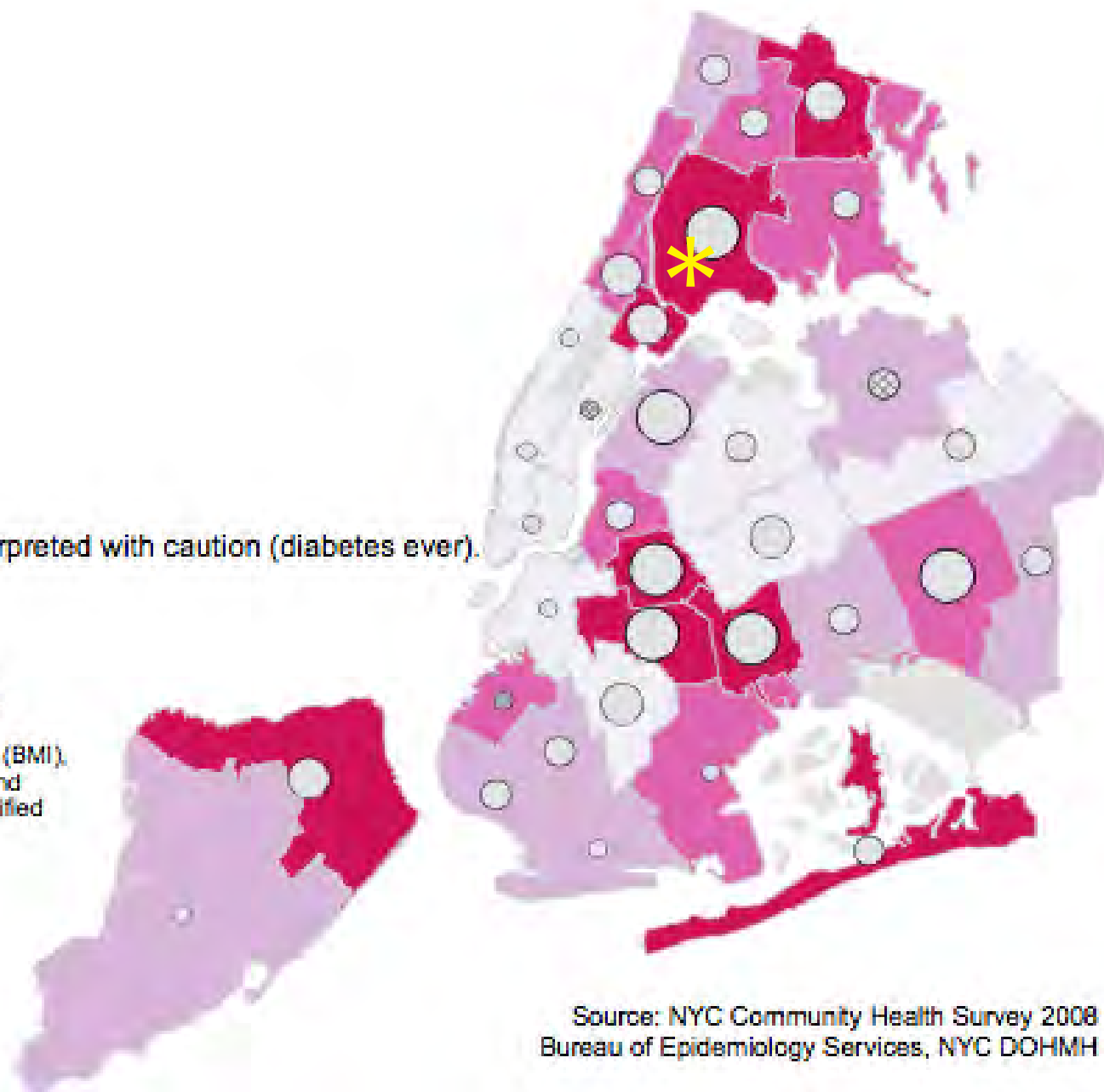


Estimate should be interpreted with caution (diabetes ever).

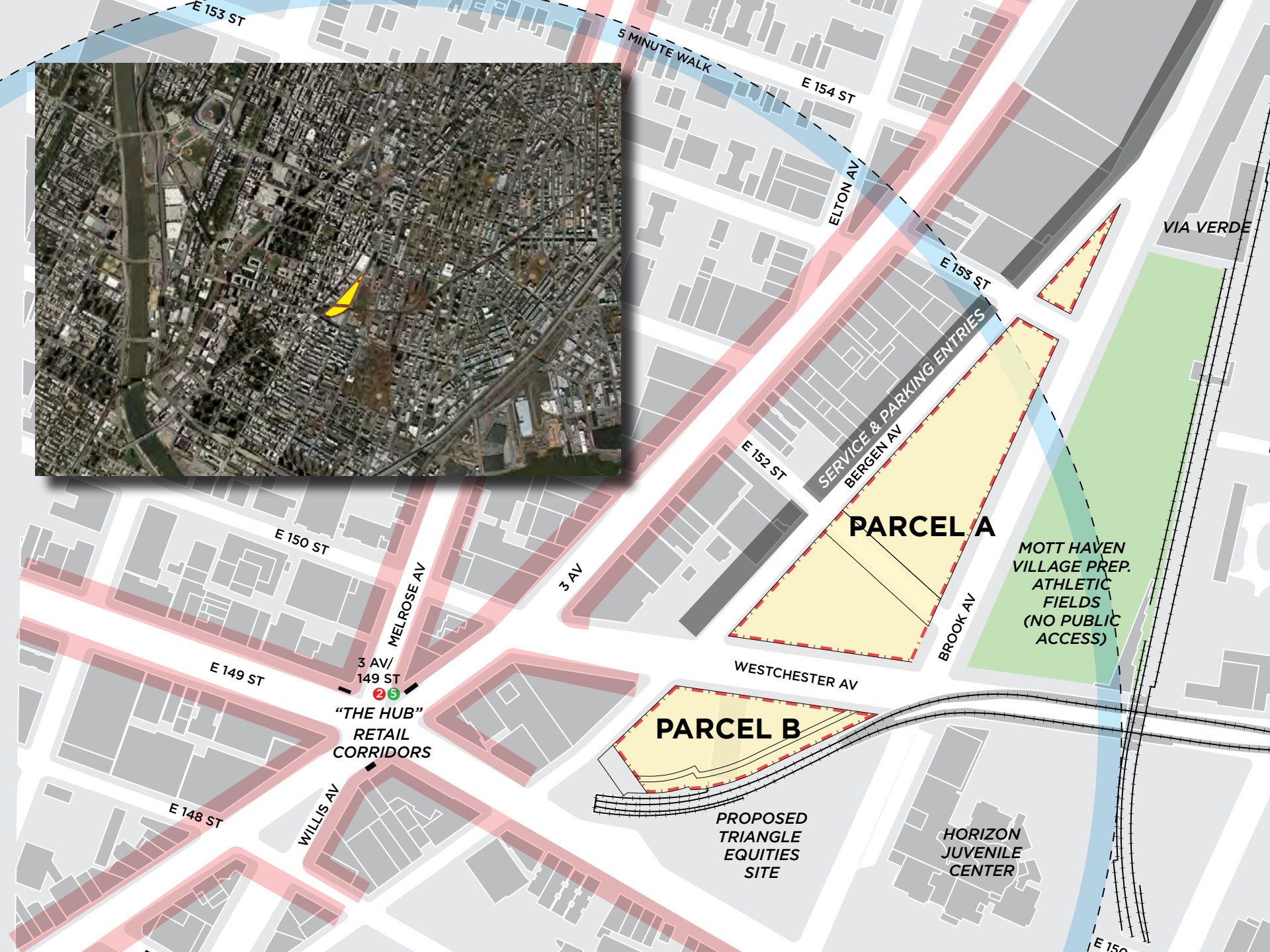
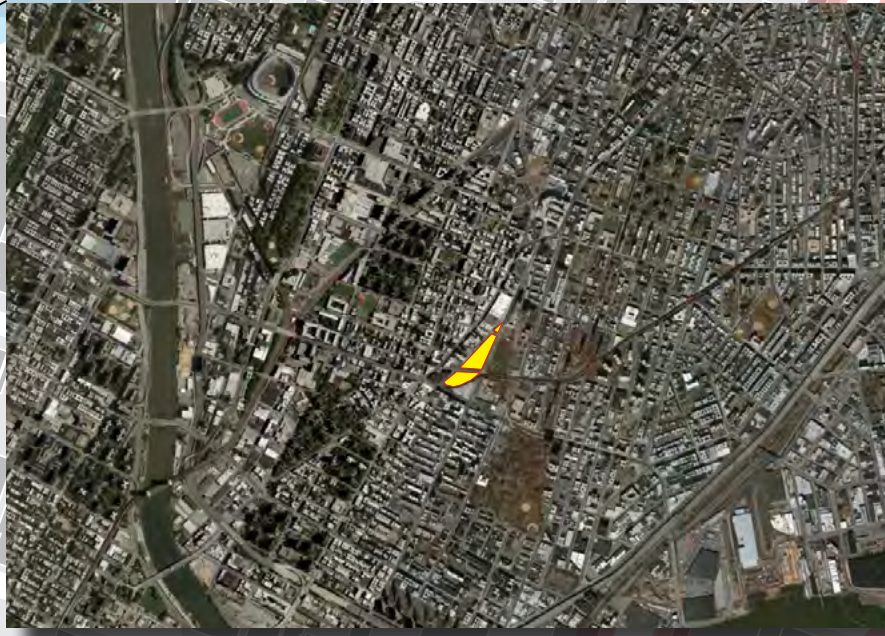
*Percentages are age adjusted.

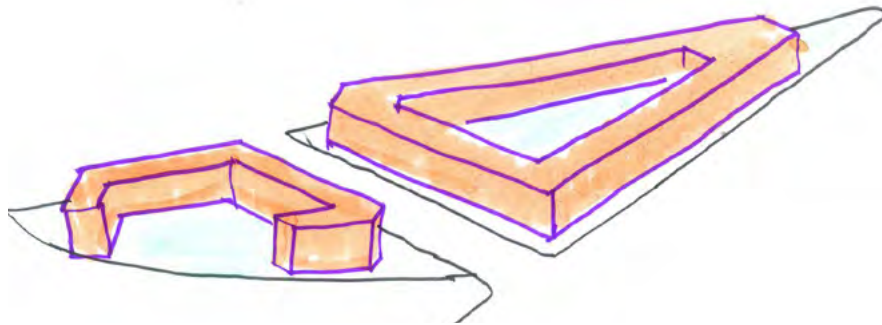
Women who had diabetes only while pregnant are included in 'no' category.

Obesity is based on Body Mass Index (BMI), calculated from self-reported weight and height. A BMI of 30 or greater is classified as obese.

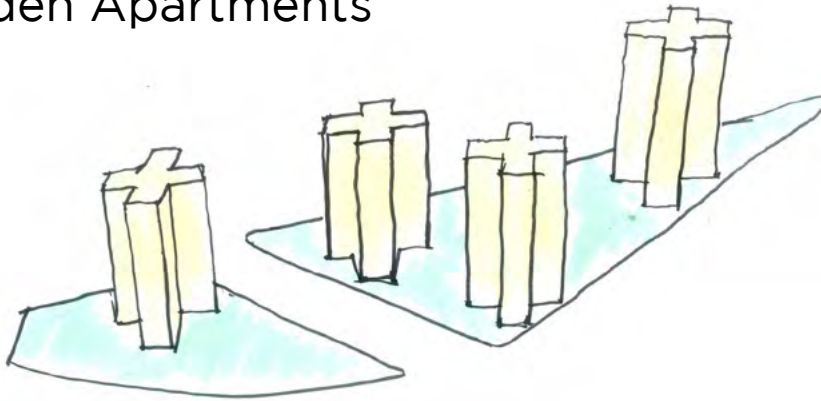


Source: NYC Community Health Survey 2008
Bureau of Epidemiology Services, NYC DOHMH





Garden Apartments



Towers-in-the-Park

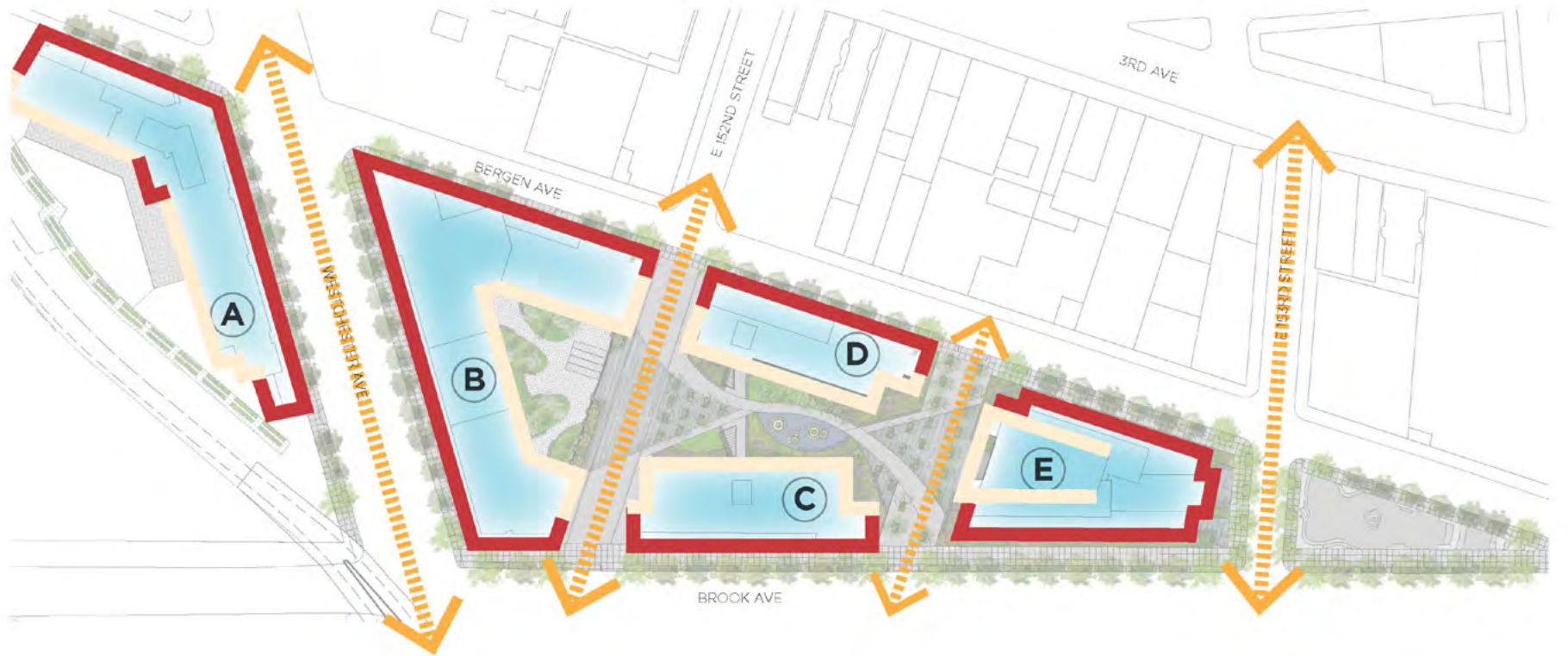


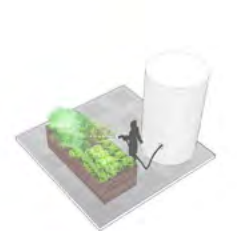
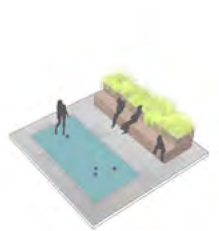
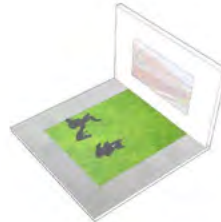
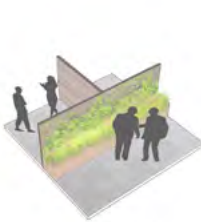
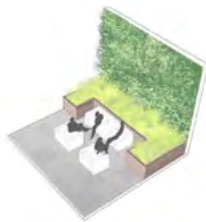
Active Urban Grid

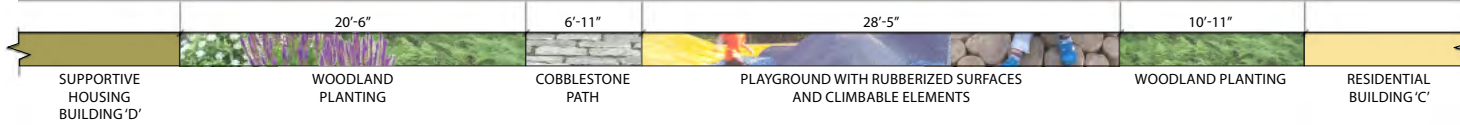


La Central





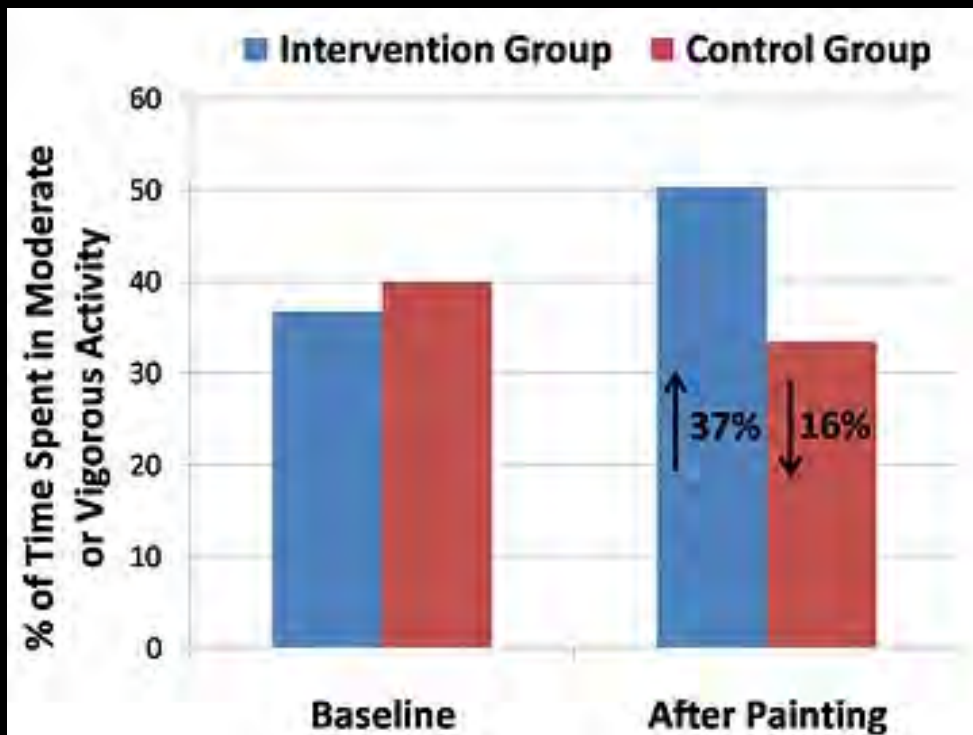




NORTHERN COURTYARD SECTION
LOOKING NORTH
SCALE: 1/8"=1'-0"

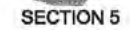


SOUTHERN COURTYARD SECTION
LOOKING SOUTH
SCALE: 1/16"=1'-0"





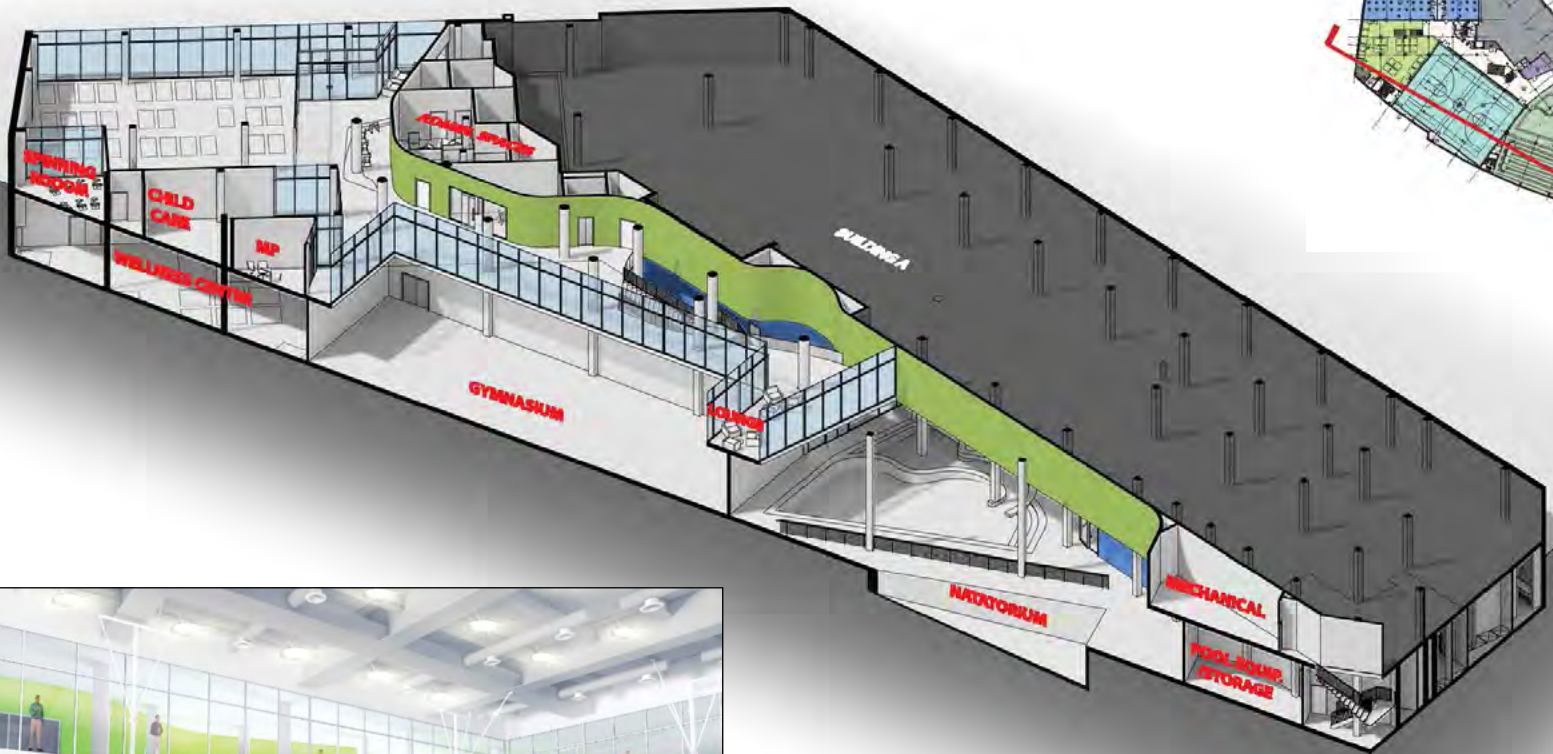




BUILDING B - RETAIL ELEVATION WESTCHESTER AVE.
(NOT TO SCALE)

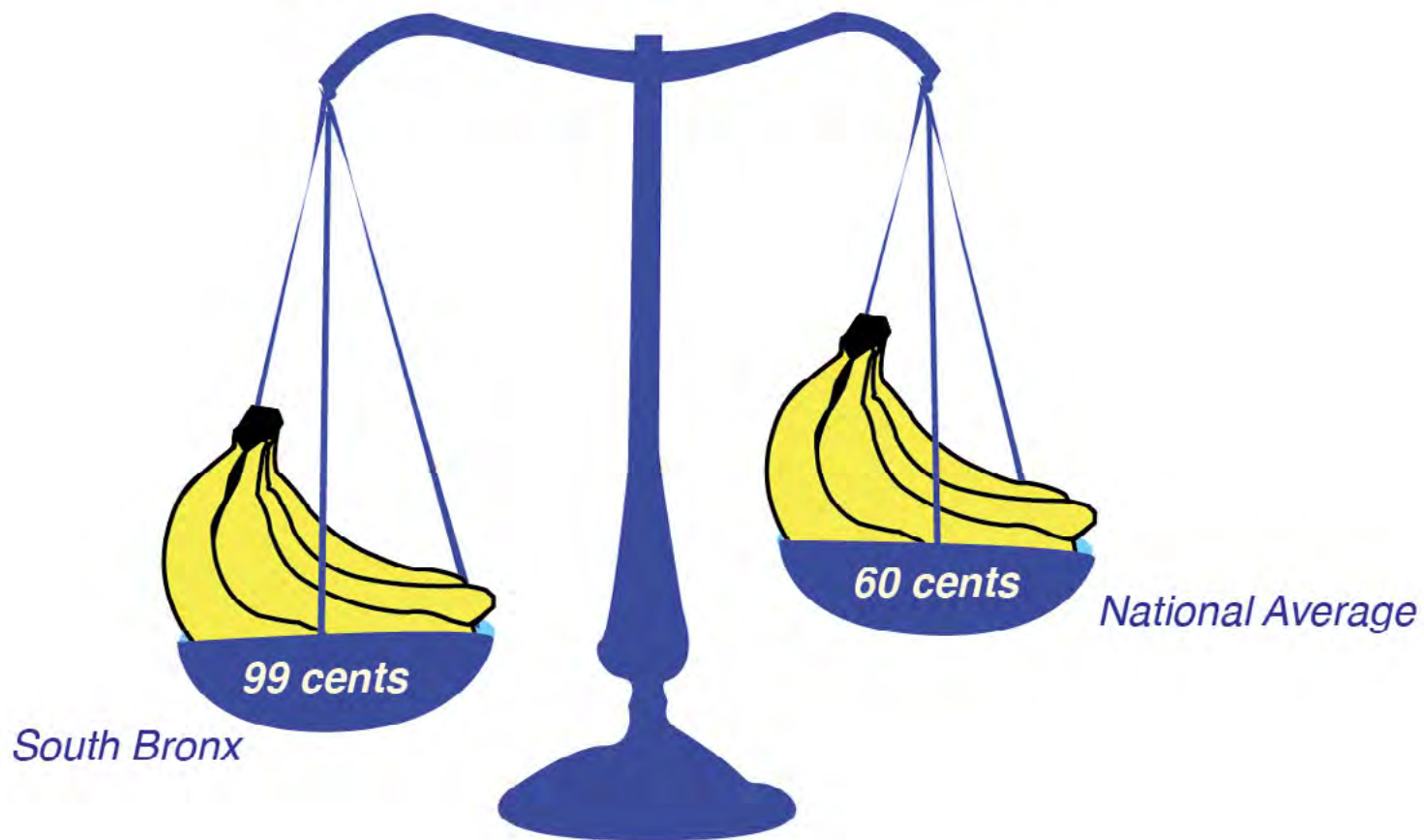








Price of Bananas per pound







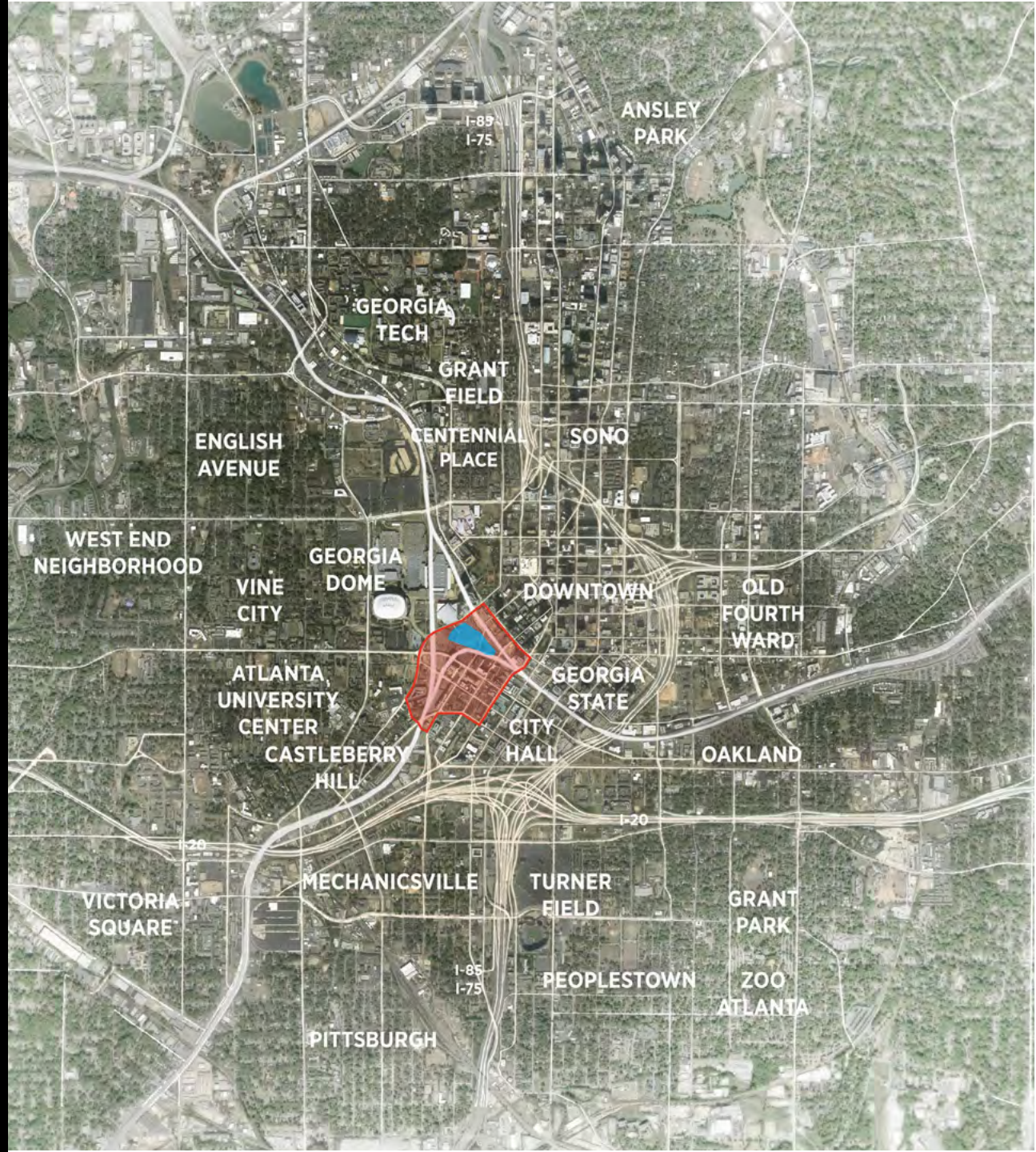
Georgia Multi Modal Passenger Terminal

Client:

Georgia Department
of Transportation
&
F.I.C. (Forest City,
Integral, & Cousins)

Design Team:

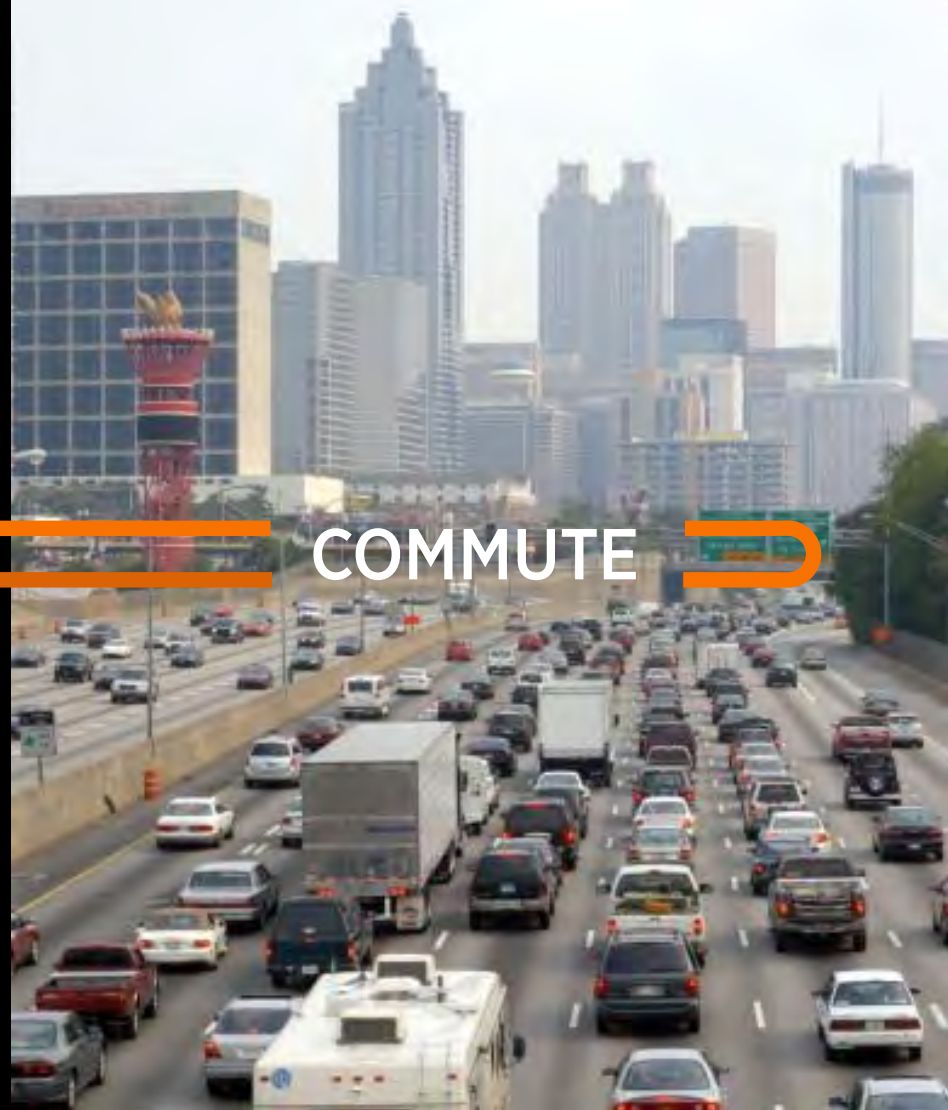
FXFOWLE
Cooper Carry
PB, Engineers
Kimley Horn



WORK
DOWNTOWN ATLANTA



LIVE
SUBURBAN ATLANTA



COMMUTE



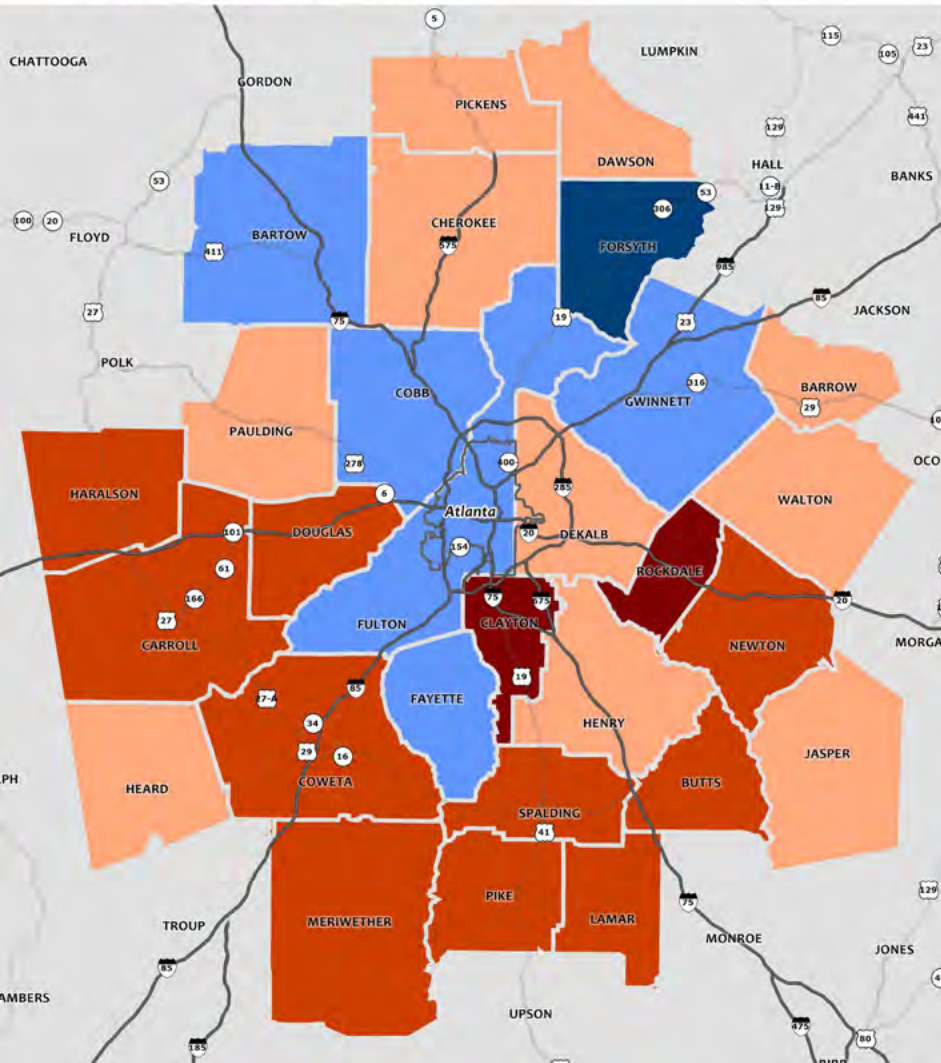
The Metropolitan Atlanta Area (5 million drivers over 8,000 sq miles) spends approximately 16 million dollars on gasoline every day.

Obesity

Age-Adjusted Obese Percent of Population

20 - 23 23 - 26 26 - 29 29 - 32 32 - 35

Atlanta MSA b Count — Source: Georgia Department of Public Health 2011

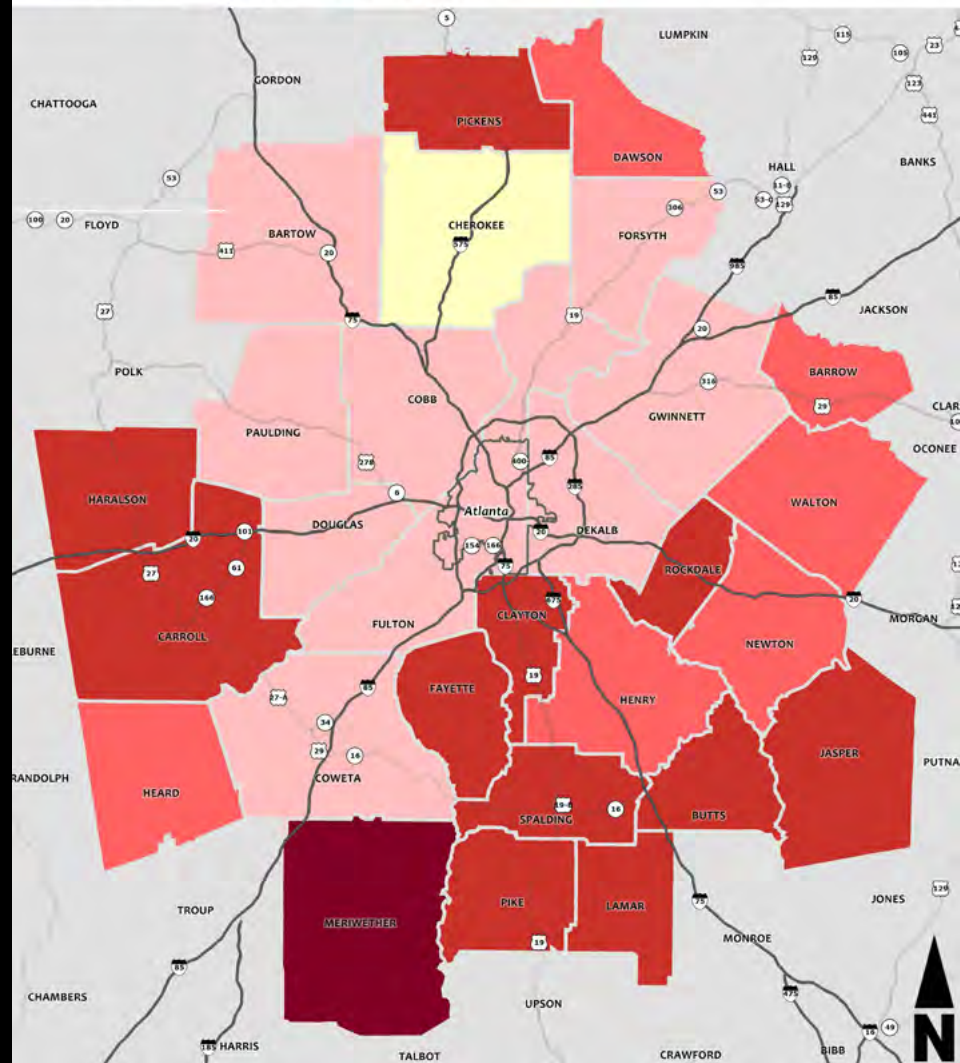


Diabetes Rate

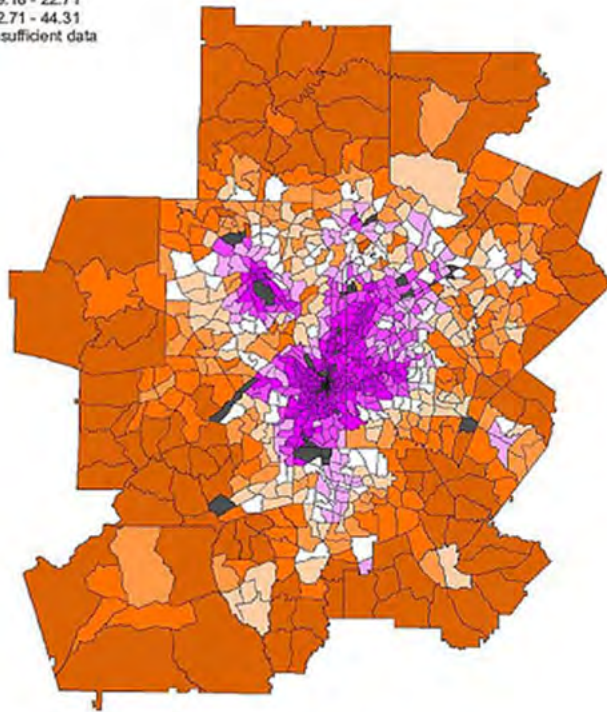
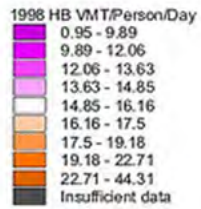
Percent of Adult Population with Diabetes

6 - 8 8 - 10 10 - 11 11 - 13 13 - 15

Atlanta MSA b Count — Source: USDA Food Environment Atlas 200

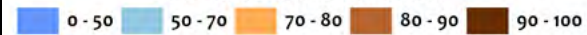


Daily Per Capita
Home-Based VMT
(1998)

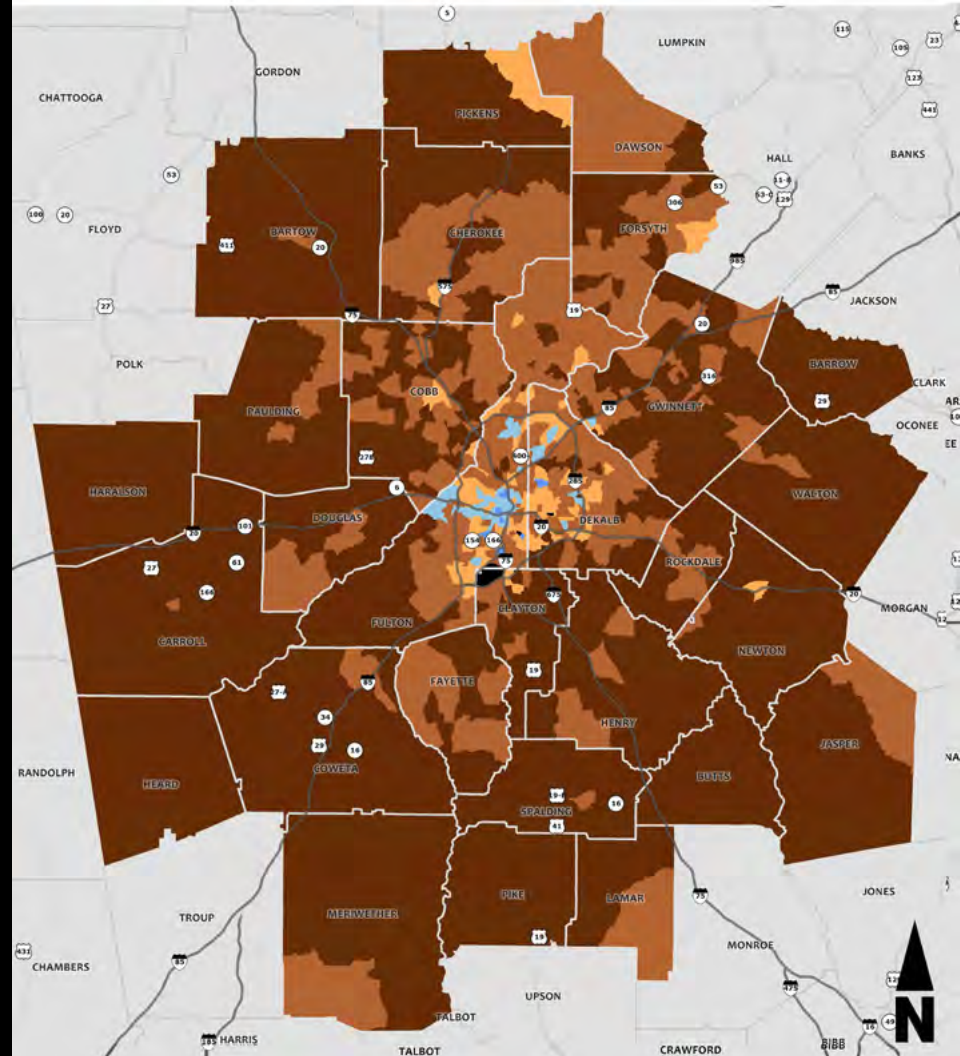


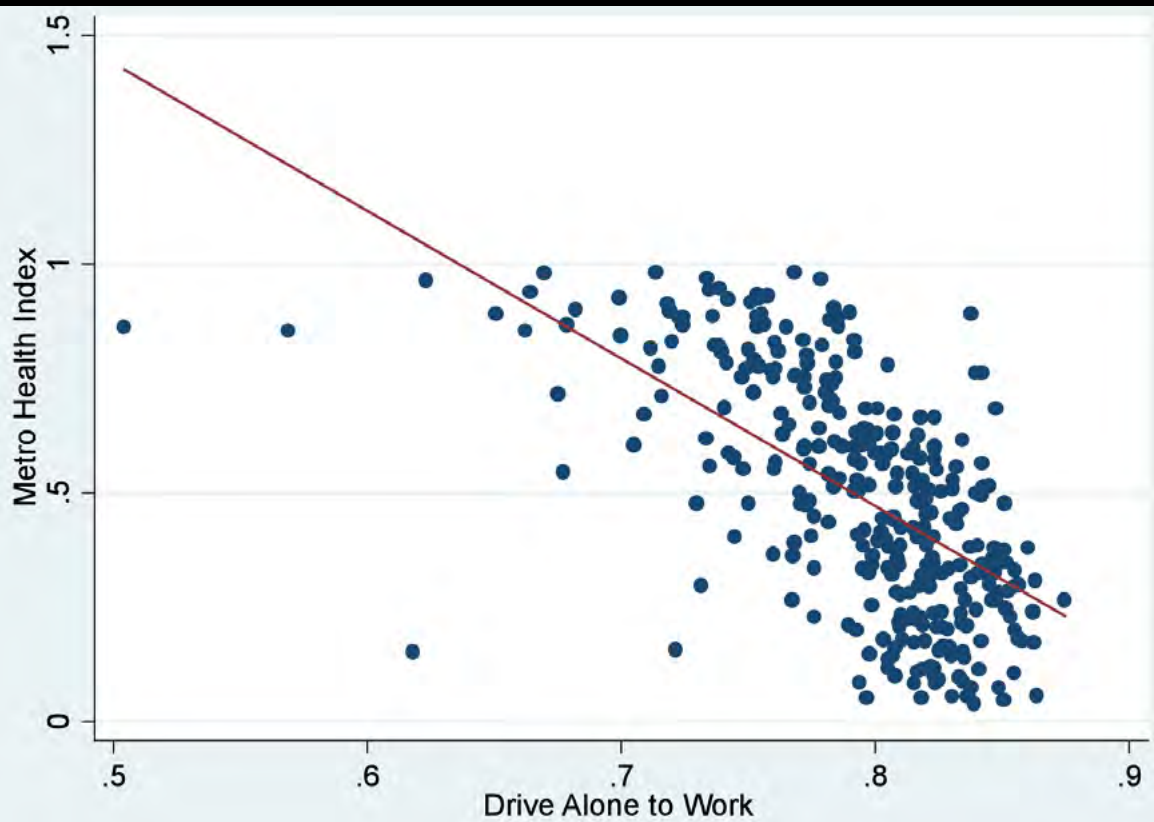
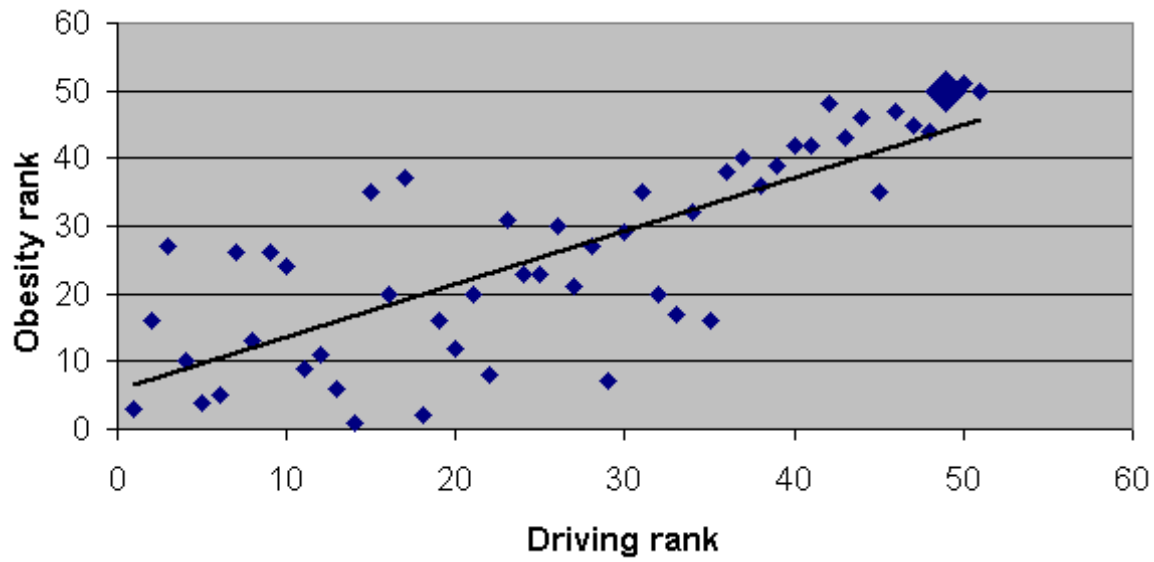
Workforce Traveling in Personal Vehicles

Percent of Total Commuters



Atlanta MSA by Census Tract — Source: ACS 5-year Estimates 2011





Georgia Multi Modal Passenger Terminal

Master Plan

- 120 Acres
- 11,645,425 sf Total Development
- 13 Acres of New Parks
- 6,250 Linear Feet of New Streets

MMPT Station

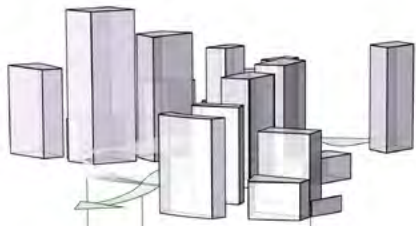
- 1,753,000 sf
- 5 Commuter Rail Platforms
- High Speed Rail Capacity
- 64 Local, Regional, Intercity Bus Stalls
- 663,450 sf Residential
- 231,050 sf Retail
- 1,775,000 sf Office



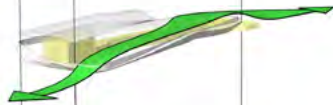




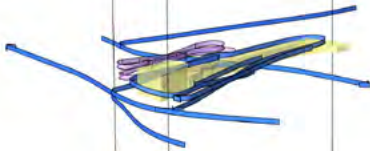




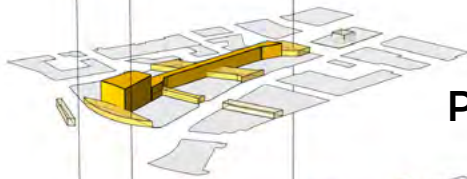
**VERTICAL
DEVELOPMENT**



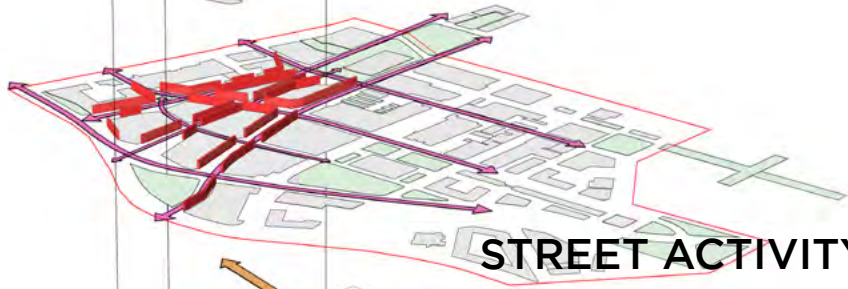
ELEVATED PARK



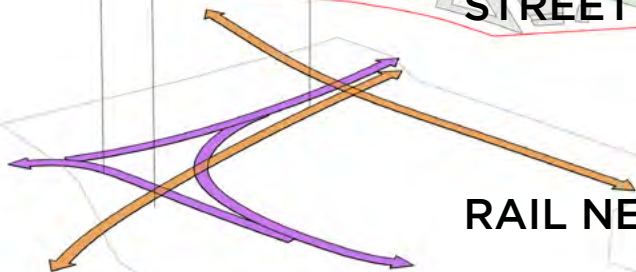
BUS NETWORK



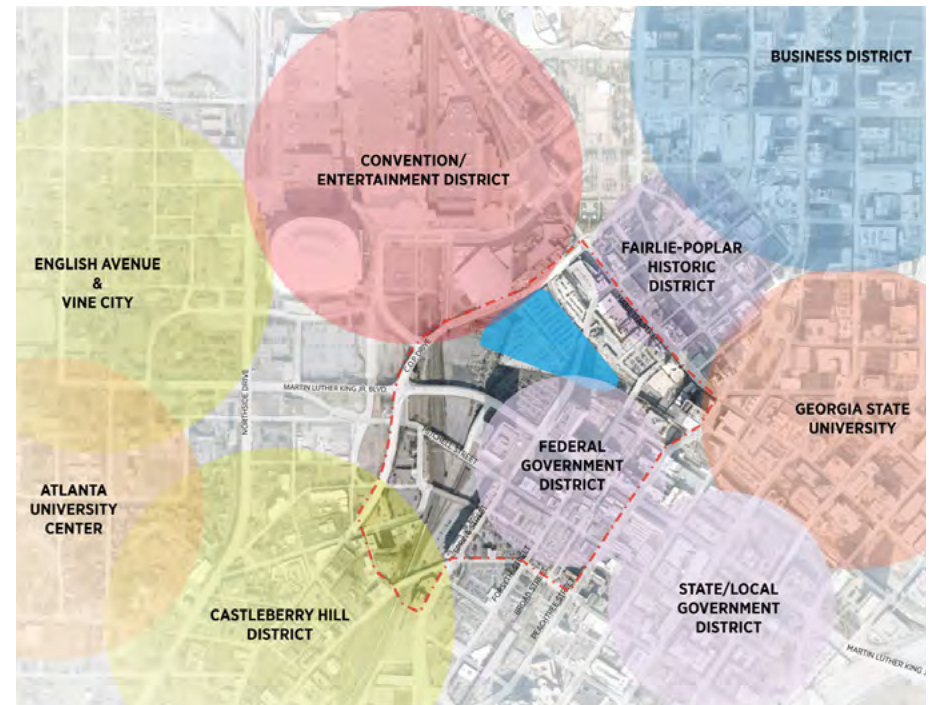
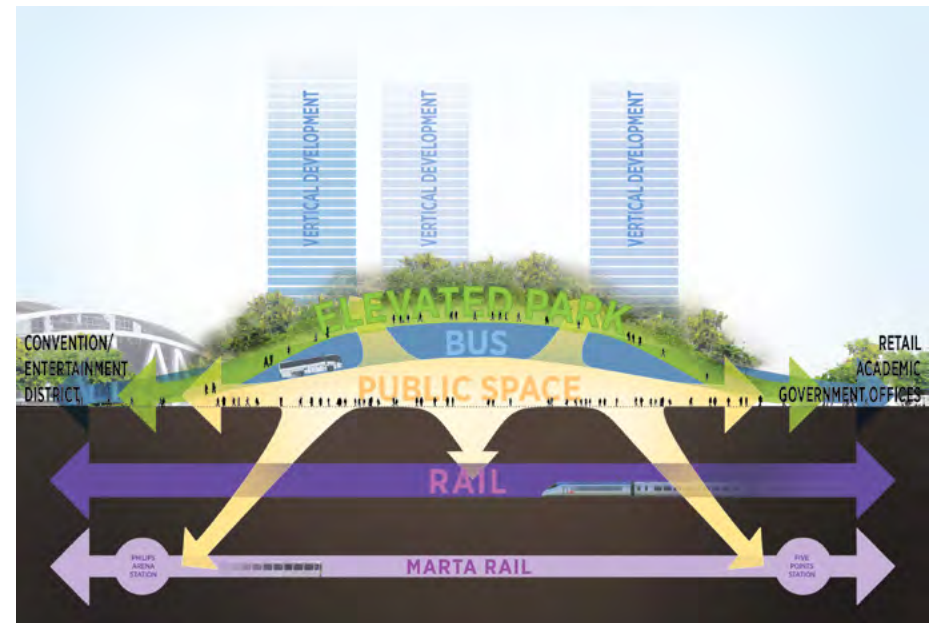
PUBLIC SPACE



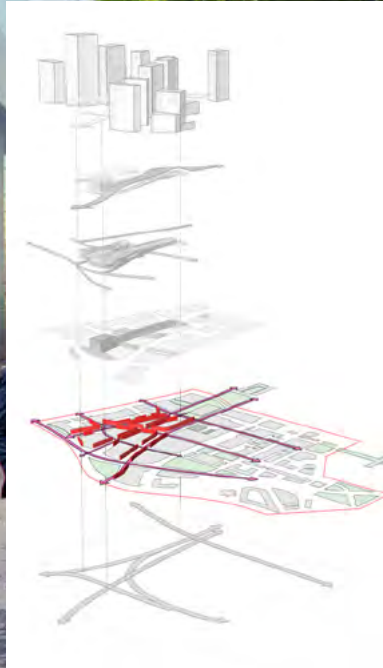
STREET ACTIVITY

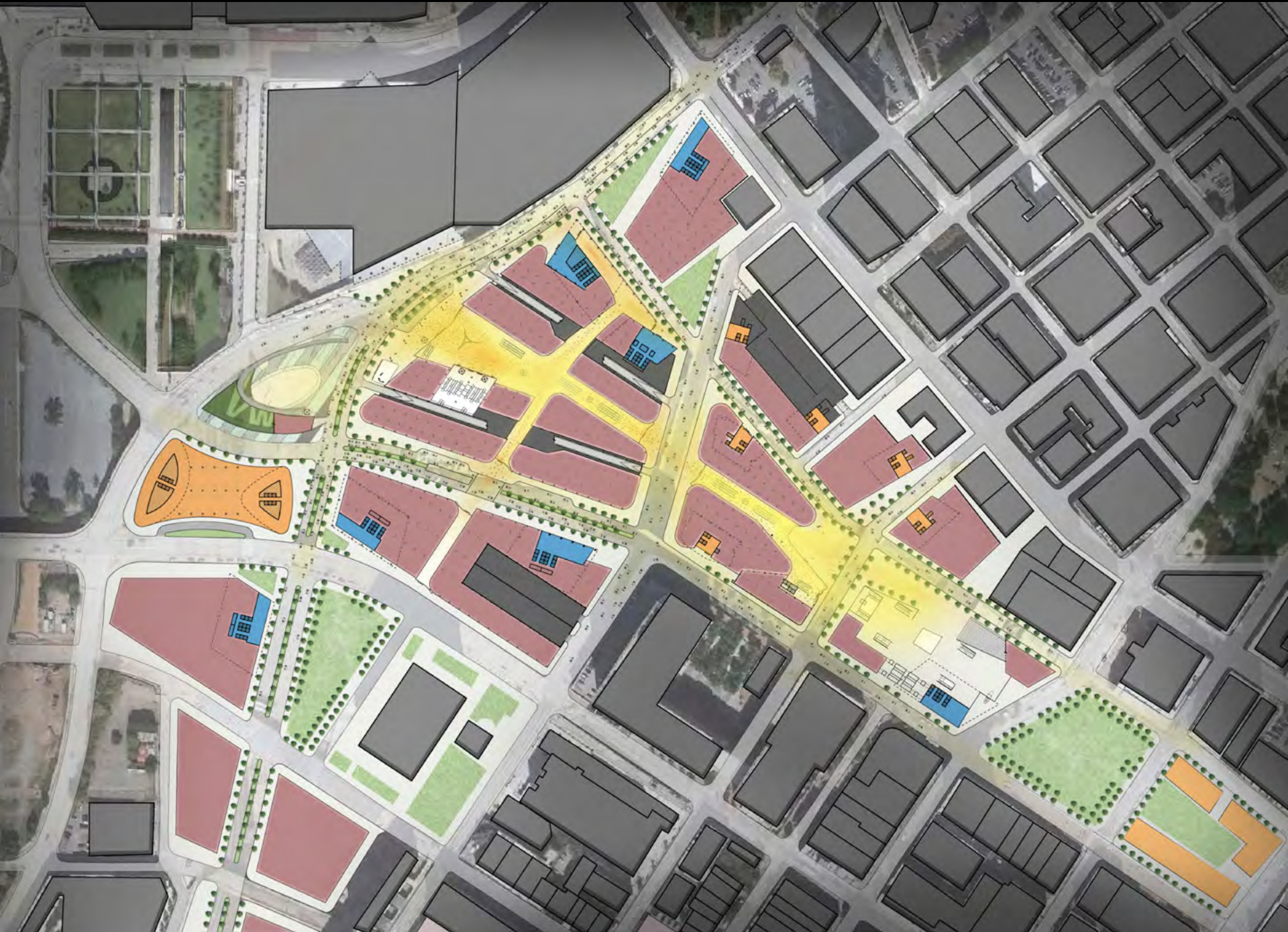


RAIL NETWORKS

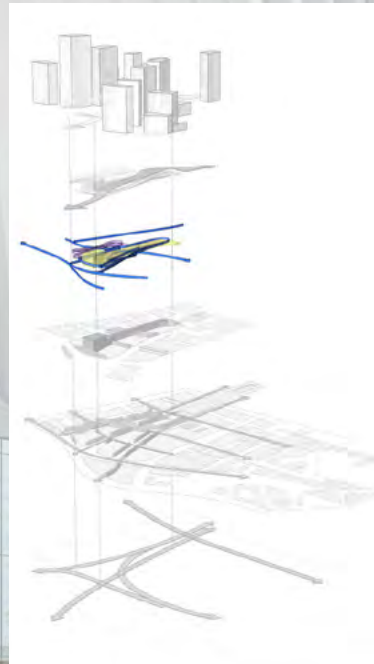


- 6,250 linear feet of new streets
- 8.5 acres of new street-level parks
- Four new streetcar stops
- 220,000 sf new street level retail



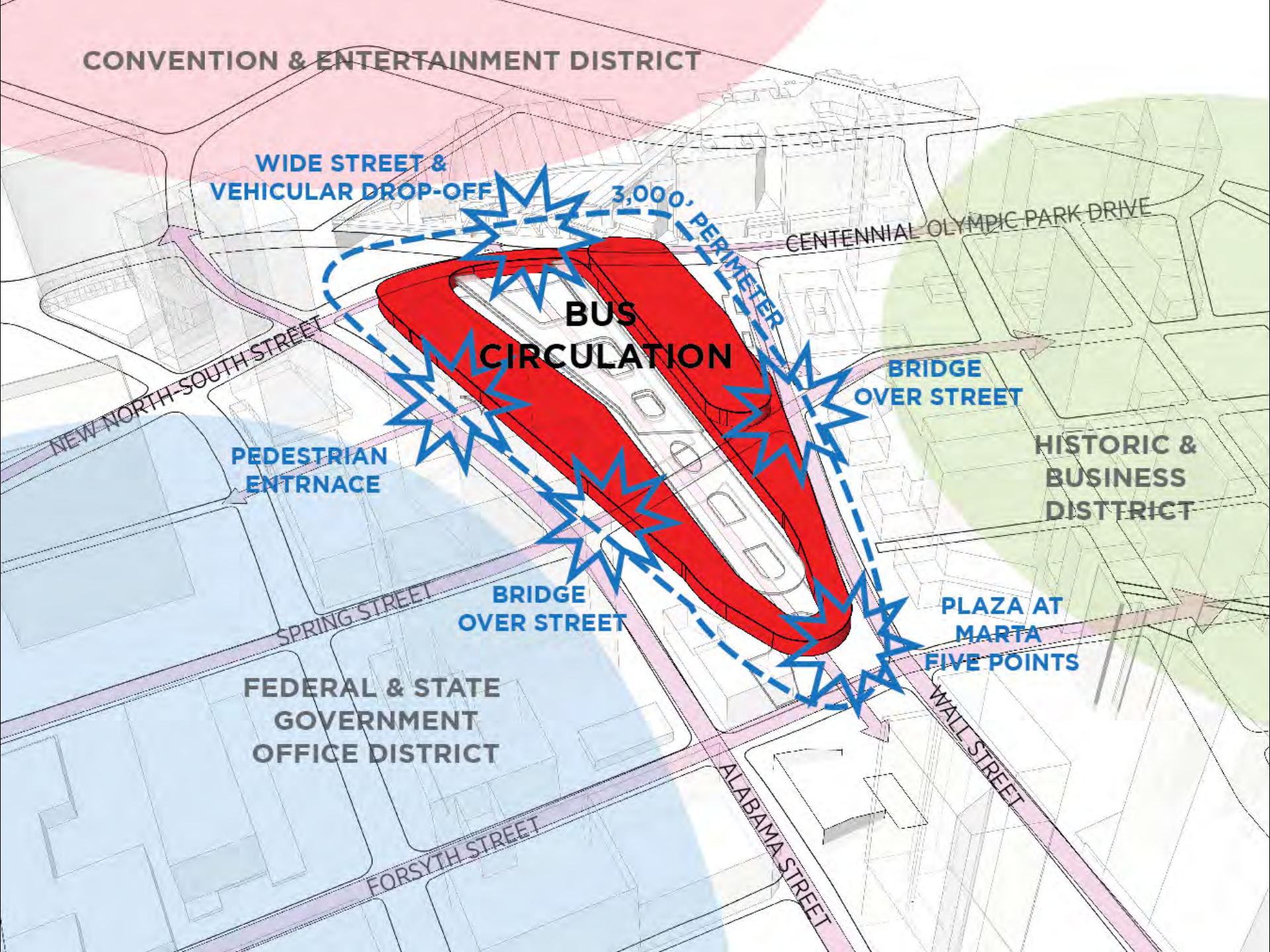


- **48 local bus stalls**
- **16 intercity bus stalls**
- **Climate-controlled, light-filled waiting areas**



Buses Circulate Around Main Hall

CONVENTION & ENTERTAINMENT DISTRICT



WIDE STREET &
VEHICULAR DROP-OFF

3,000'
PERIMETER

BUS
CIRCULATION

CENTENNIAL OLYMPIC PARK DRIVE

BRIDGE
OVER STREET

HISTORIC &
BUSINESS
DISTRICT

PEDESTRIAN
ENTRANCE

BRIDGE
OVER STREET

PLAZA AT
MARTA
FIVE POINTS

FEDERAL & STATE
GOVERNMENT
OFFICE DISTRICT

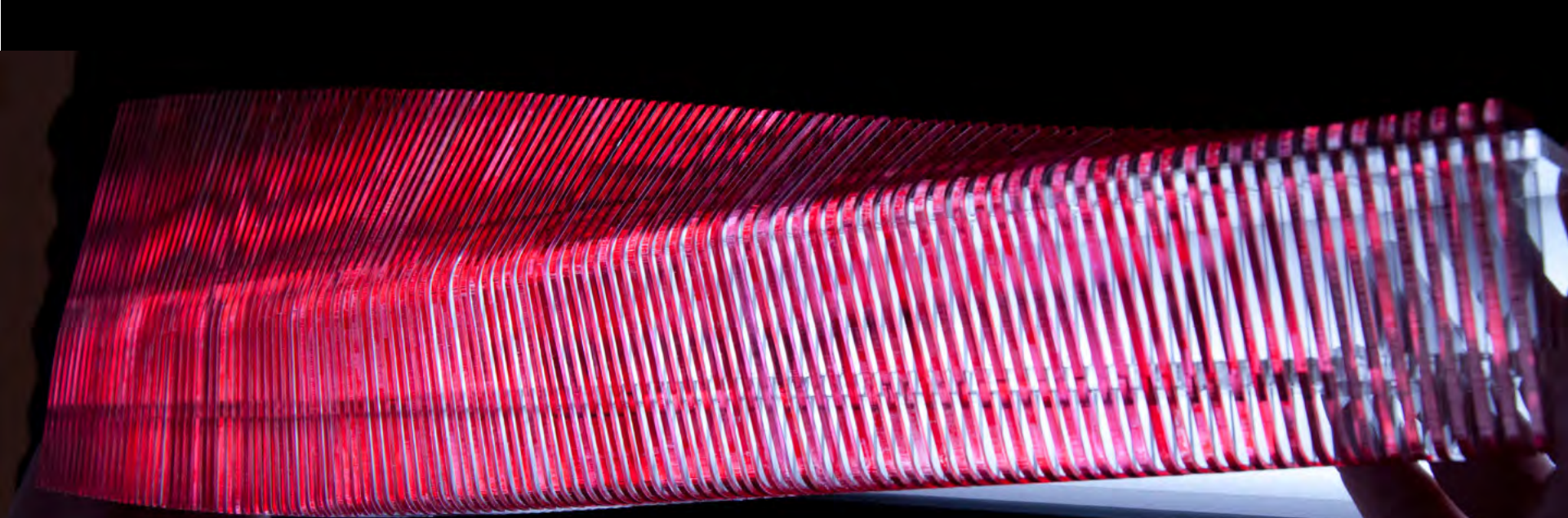
SPRING STREET

FORSYTH STREET

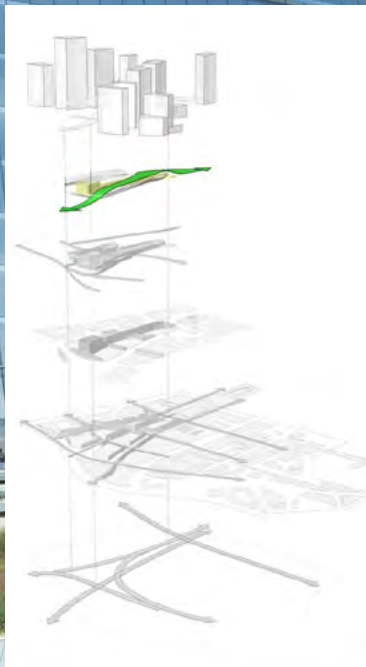
ALABAMA STREET

WALL STREET

NEW NORTH-SOUTH STREET

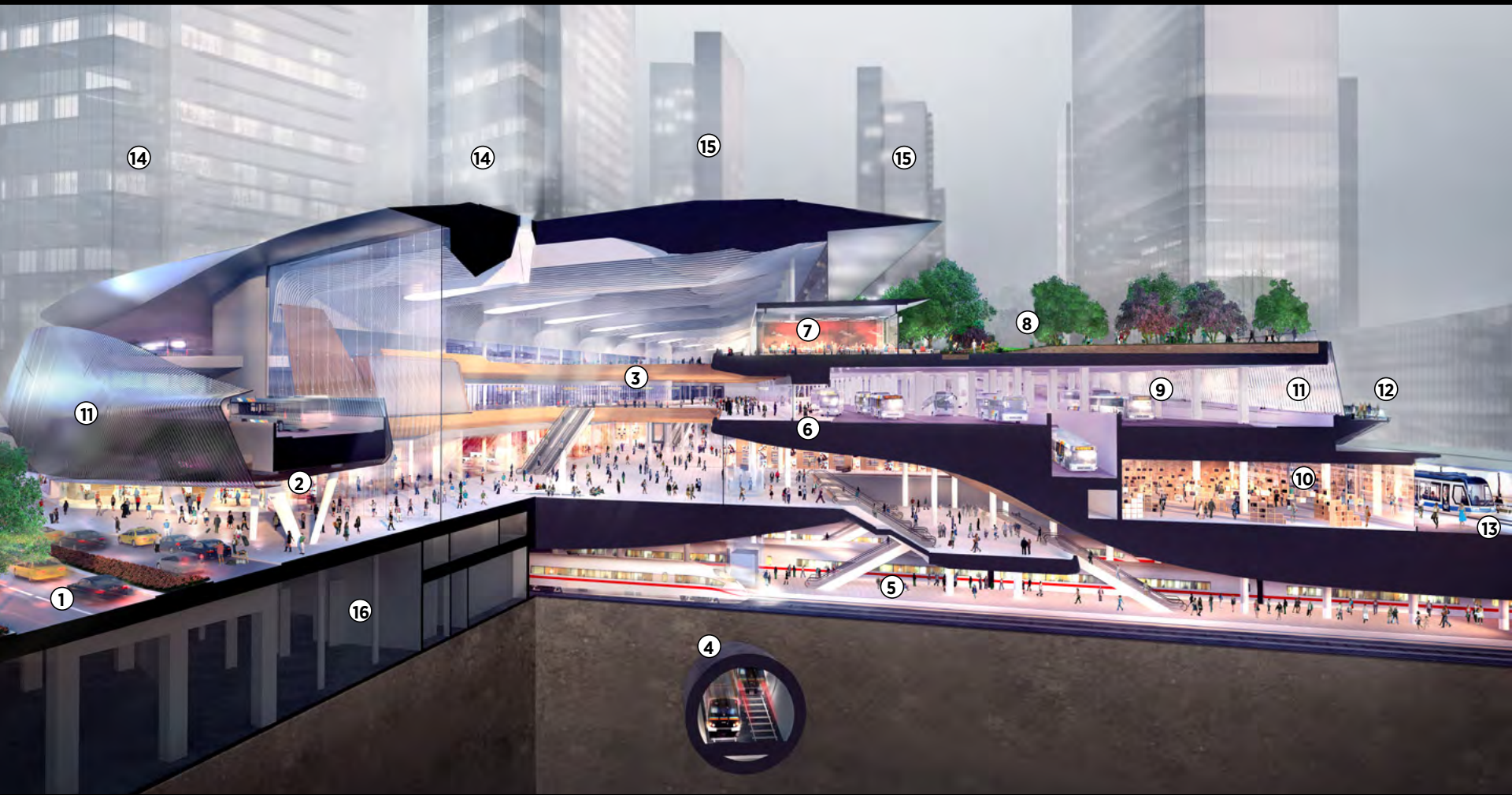






- 4.5 acres intensive green roof
- Native plantings, full-sized trees, and urban agriculture
- Amphitheater, water features, sculpture park, dining terraces, children's play areas
- Stormwater retention, reclamation, and reuse
- ADA accessible connections to surrounding sidewalks





- 1. STREET LEVEL (CENTENNIAL OLYMPIC PARK DRIVE)
- 2. BUS BRIDGE/PORTE COCHERE/DROP OFF
- 3. GREAT HALL
- 4. EXISTING MARTA SUBWAY TUNNEL

- 5. TRACK LEVEL
- 6. BUS LEVEL - BUS BAYS
- 7. PARK LEVEL RESTAURANTS & RETAIL
- 8. ROOFTOP PARK

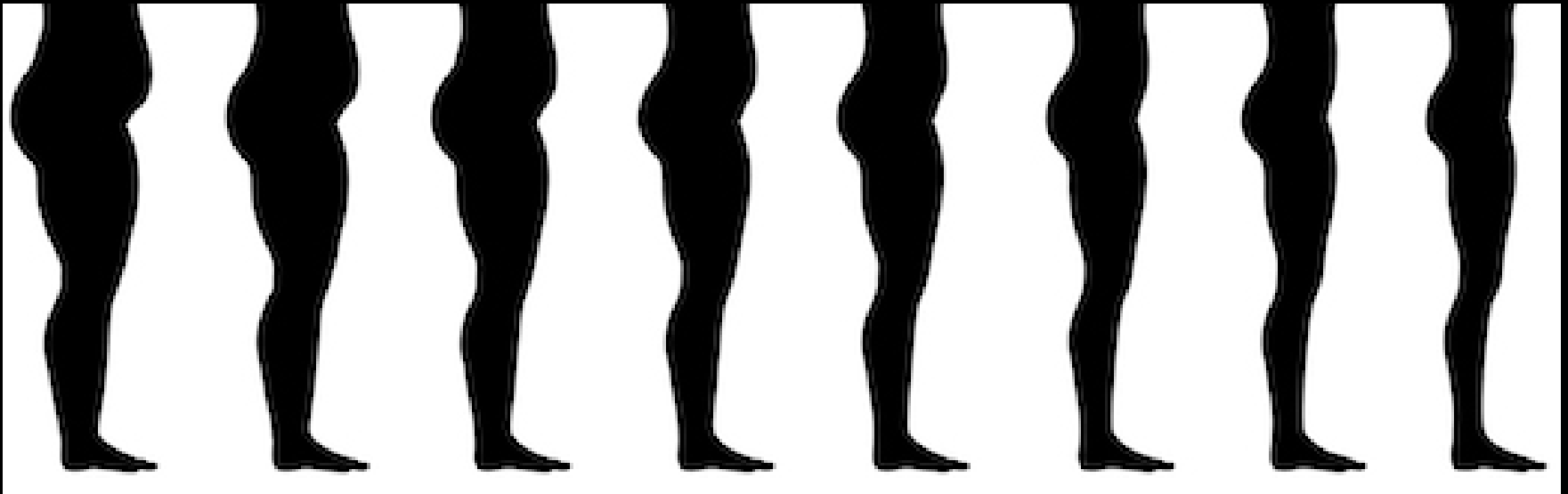
- 9. BUS LEVEL- BUS CIRCULATION & LAYOVER
- 10. STREET RETAIL
- 11. PERMEABLE ENCLOSURE
- 12. ROOF ACCESS PEDESTRIAN RAMP

- 13. STREET LEVEL - STREETCAR STOP
- 14. OVERBUILD DEVELOPMENT - OFFICE
- 15. OVERBUILD DEVELOPMENT - RESIDENTIAL
- 16. SERVICE AND SUPPORT ACCESS AREAS



- ★ 2014 American Institute of Architects Washington, DC, Award of Merit, Urban Design
- ★ 2014 National Society of Registered Architects, National Design Award
- ★ 2014 The Chicago Athenaeum, International Architecture Award
- ★ 2014 International Design Awards, Gold Award, Urban Design
- ★ 2014 American Institute of Architects, New York State, Award of Merit, Urban Design
- ★ 2013 World Architecture News, Transport Award

How does designing for health
affect your bottom line?



Design Elements

- Inviting and Appealing Stairs for Everyday Use
- Attractive Walking Routes
- Mixed Land Use
- Accessible Nearby Transit
- Parks, Open Spaces, and Recreational Facilities
- Children's Play Areas
- Public Plazas
- Street Connectivity
- Engaging Streetscapes
- Exercise Facilities
- Bicycle Infrastructure and Networks

DESIGN ---> HEALTH

Design can change behavior.

Changed behavior can improve health.

Design can improve health.

Improved health = LIVES SAVED

Obesity causes 300,000 deaths/year.

Can designing for health

reduce this by 50%?

Obesity causes 300,000 deaths/year.

Can designing for health

reduce this by 50%?

25%?

Obesity causes 300,000 deaths/year.

Can designing for health

reduce this by 50%?

25%?

5%?

Obesity causes 300,000 deaths/year.

Can designing for health

reduce this by 50%?

25%?

5%?

1%?

Obesity causes 300,000 deaths/year.

Can designing for health

reduce this by 50%?

25%?

5%?

1%?

1% = 3000 Lives Saved

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