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Title

Retrofitting Suburbia: Urban Design Solutions for Redesigning Suburbs

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<https://escholarship.org/uc/item/7wk423dc#supplemental>

ELLEN DUNHAM-JONES AND JUNE WILLIAMSON

RETROFITTING

URBAN DESIGN SOLUTIONS *for* REDESIGNING SUBURBS

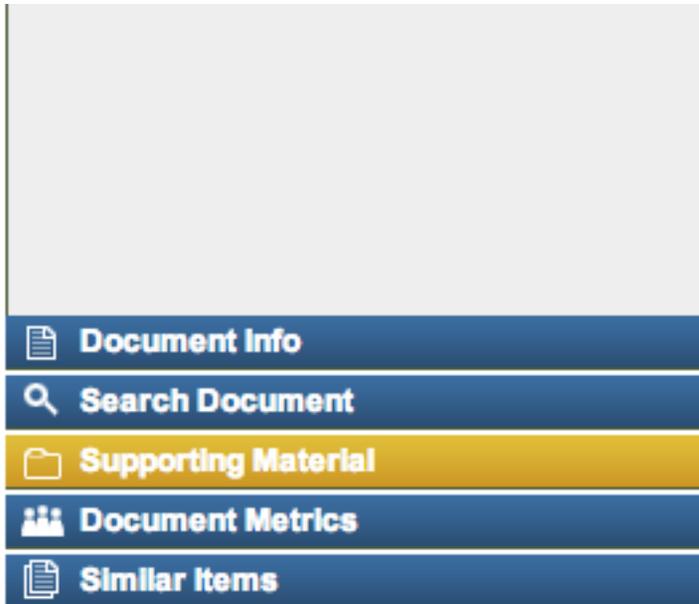
SUBURBIA

UPDATED
EDITION



WITH A NEW UPDATE BY THE AUTHORS AND A FOREWORD BY RICHARD FLORIDA

Click on
Supporting
Material in the
sidebar to the left
to listen to or
download an
audio recording of
the presentation.



imperatives :

•Climate Change

In the US, urbanites have approx. 1/3 the carbon footprint of suburbanites
(interpolation from various studies)

•Dependence on Foreign Oil

VMT and land consumption have doubled, almost 5 times the rate of population growth
(R. Ewing, et al, Growing Cooler, 2007)

•Public Health

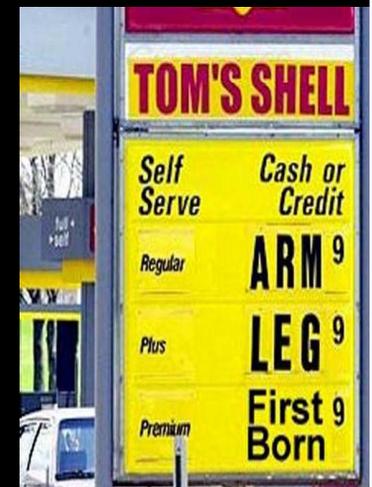
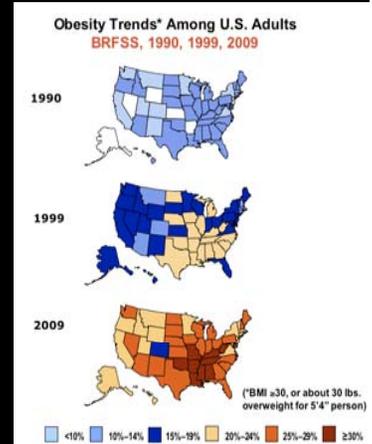
Suburban development patterns have been linked to rising rates of obesity, vehicular fatalities, and mental health issues

•Poverty

Since 2005, more Americans living in poverty live in suburbs than in cities
(E. Kneebone, et al, Brookings, 2010)

•Affordability

The savings of “drive ‘til you qualify” housing are increasingly wiped out by rising transportation costs



Housing + Transportation Affordability Index

Center for Neighborhood Technologies, <http://htaindex.cnt.org>

Average Block Size ▼ Change

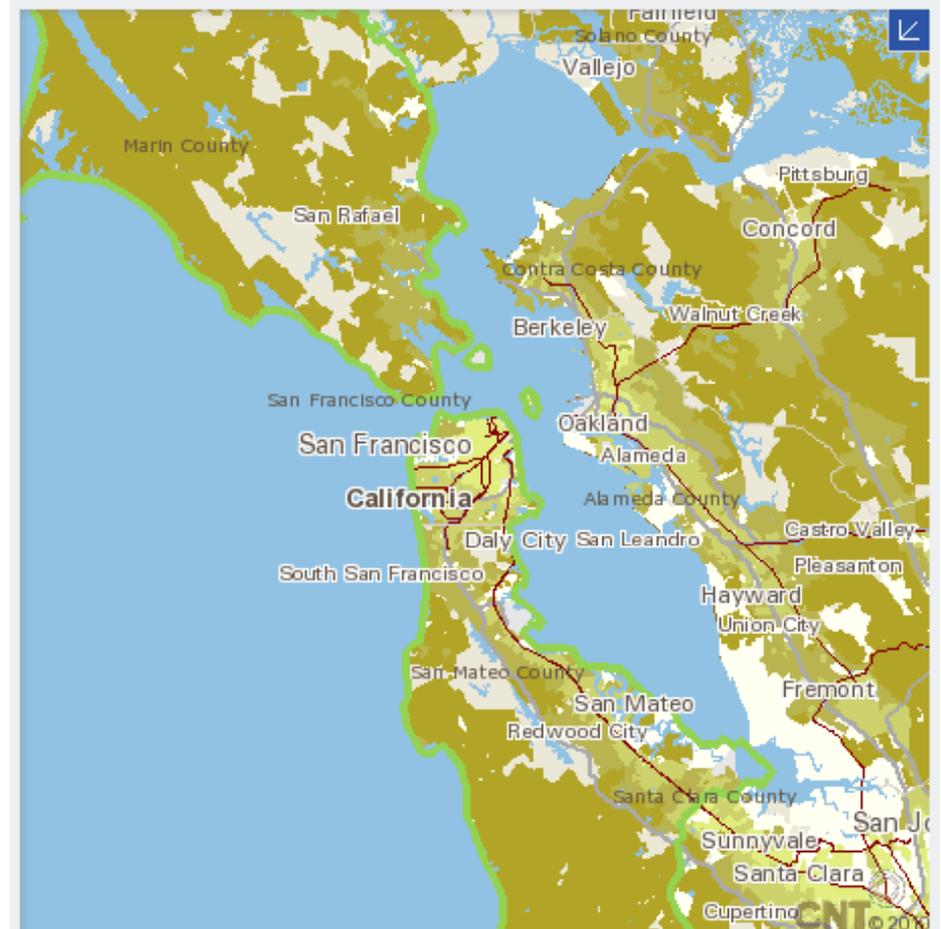
- Data Not Available
- Less than 5 Acres
- 5 to 9 Acres
- 9 to 17 Acres
- 17 to 39 Acres
- 39 Acres and Greater

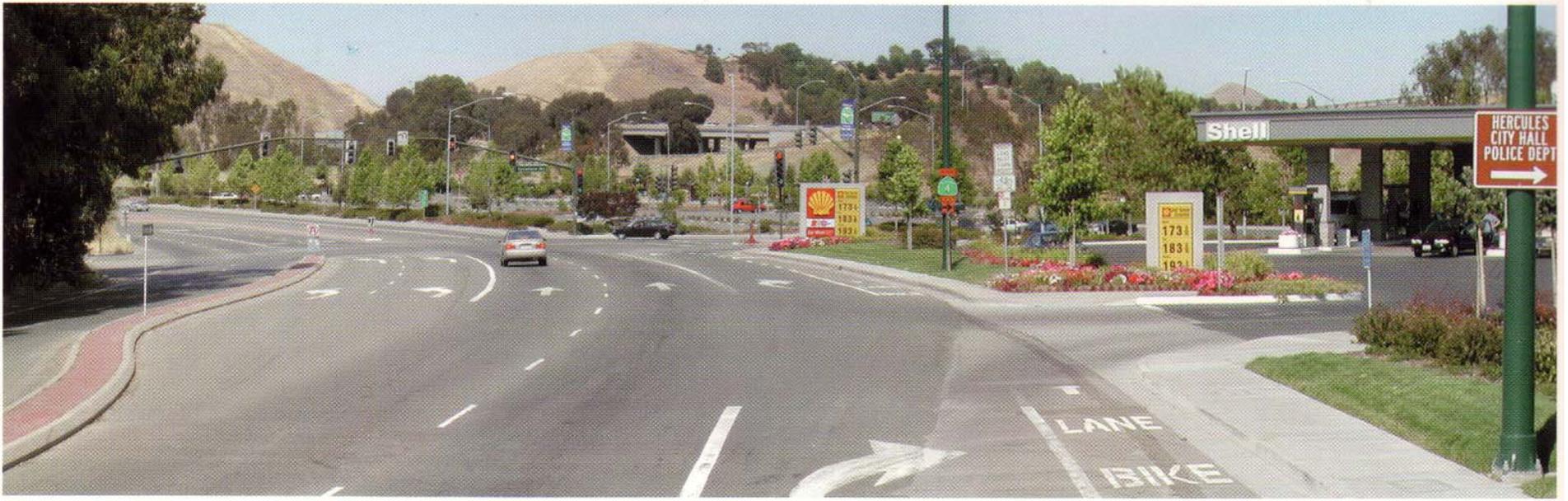
Average Block Size, calculated in acres, is the average size of all the blocks making up a given Block Group. This factor has been included as a potential indicator of walkability in an area, with smaller blocks contributing to a more desirable walking environment.

Annual VMT Cost (\$) ▼ Change

- Data Not Available
- Less than 1,000 \$
- 1,000 to 1,500 \$
- 1,500 to 2,000 \$
- 2,000 to 2,500 \$
- 2,500 \$ and Greater

Annual VMT Costs (Auto Use Costs) are calculated using modeled VMT, per mile cost figures obtained from the American Automobile Association and regional gas prices from the Energy Information Administration. This component of total Transportation Costs factors only the variable costs associated with the amount a vehicle is driven, not the fixed cost of auto ownership.





The big design and development project of the **next** 50 years: retrofitting suburbia



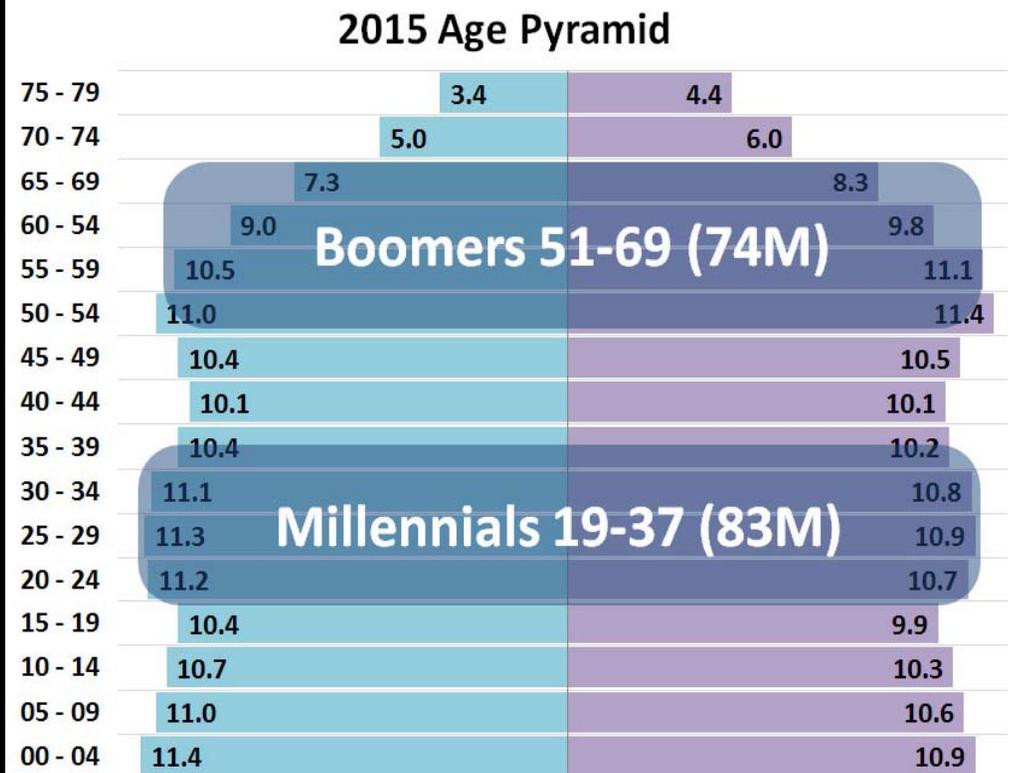
dynamic :

demographic shift

•75-85% of new households through 2025 will not have children in them (various researchers)

•77% of Millennials/Gen Y say they want to live in an urban core (RCLCO 2008 survey)

•75% of retiring boomers say they want mixed-age and mixed-use communities (RCLCO 2009 survey)



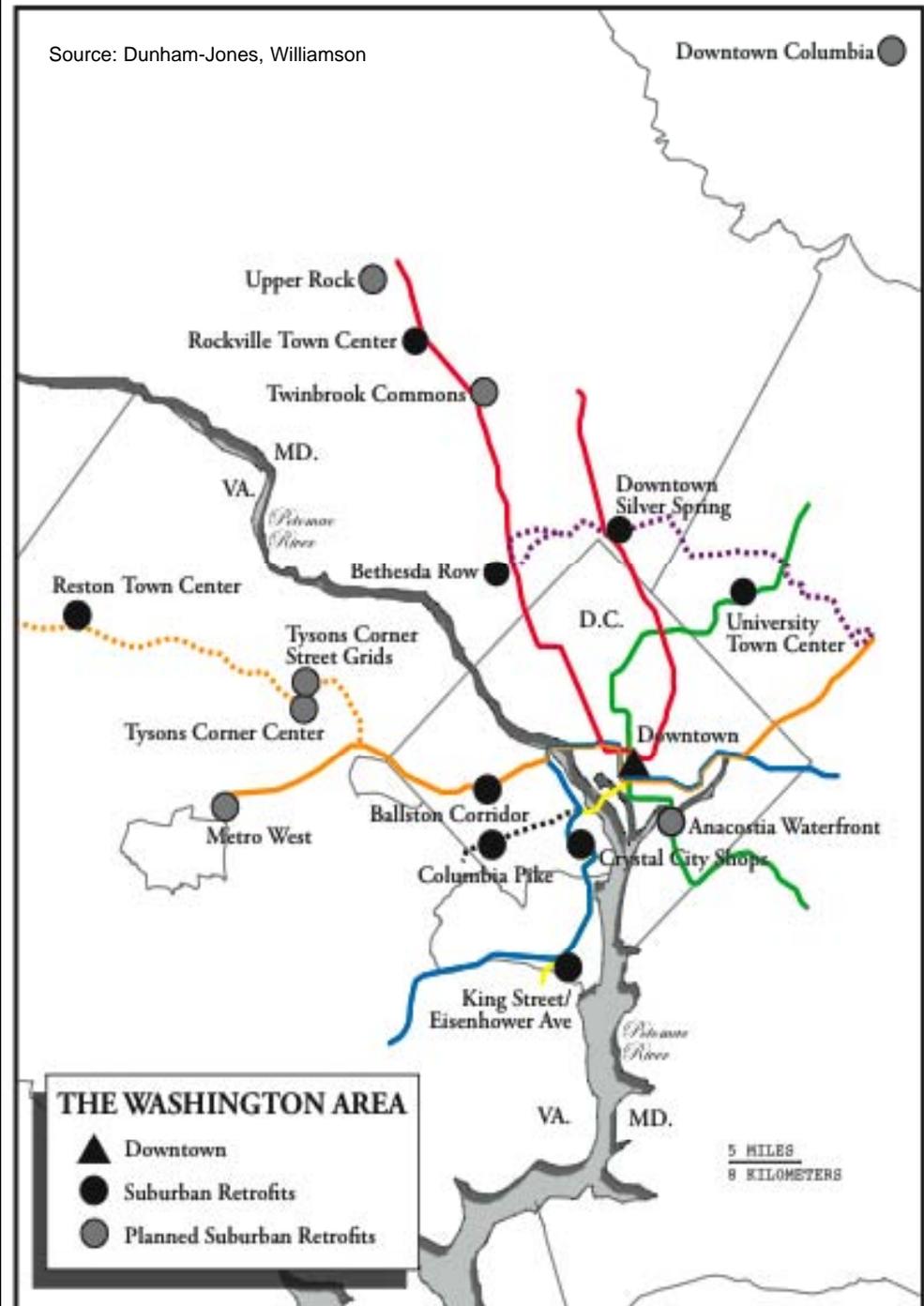
Age	Men	Women
75 - 79	3.4	4.4
70 - 74	5.0	6.0
65 - 69	7.3	8.3
60 - 54	9.0	9.8
55 - 59	10.5	11.1
50 - 54	11.0	11.4
45 - 49	10.4	10.5
40 - 44	10.1	10.1
35 - 39	10.4	10.2
30 - 34	11.1	10.8
25 - 29	11.3	10.9
20 - 24	11.2	10.7
15 - 19	10.4	9.9
10 - 14	10.7	10.3
05 - 09	11.0	10.6
00 - 04	11.4	10.9

Suburban Household (all hh)	1960	2000	2008
With children	48%	35%	24%
Without children	52%	65%	76%
Single person	13%	26%	30%

dynamic:

leapfrogging & recentralization

Early suburbs, formerly on the **edge** of metropolitan development, have been leapfrogged so many times that they now have a **relatively central location** and are prime sites for transit service and retrofitting.



dynamic:

underperforming asphalt (we're not as built-out as we thought)

2.8 million acres of greyfields to be available for redevelopment by 2015. If $\frac{1}{4}$ were redeveloped, we could meet half our housing needs. (A. Chris Nelson, 2006)

130 mil s.f. of vacant retail space has been added to the U.S. this recession. (Cushman & Wakefield, 10-2009) (approx. 7000 acres)

Perimeter Center Mall, Atlanta (right)



strategy:

Re-inhabitation (re-fill vs infill)

space for community-serving
uses that cannot afford new
construction

“third places”

food as a catalyst for
neighborhood revitalization

keep the lights on



New zoning permitting accessory dwelling units

Licton Springs DADU, Seattle, WA

Chad Rollins

Courtesy of Chad Rollins and Jonathan Reich, from *Retrofitting Suburbia* (Wiley, 2009)

From Park-N-Ride to Temporary, Mobile, Market Center

Market Hall, Hercules, CA

The Red Barn Company

Source: Market Hall website



OPEN DAILY
Monday - Wed 6AM - 1:30PM
Thursday - Sat 6AM - 7PM
Sunday 6AM - 6PM

MOSCHETTI COFFEE
Monday - Thur 6AM - 1:30PM
Friday - Sat. 6AM - 7PM
Sunday 6AM - 6PM

MOBILE FOOD VENDORS
Monday - Wed CLOSED
Thursday - Sat 11AM - 7PM
Sunday 12PM - 6PM

RETAIL SHOPS
Monday - Thur CLOSED
Friday - Sat 11AM - 7PM
Sunday 12PM - 6AM

FARMERS MARKET
Saturdays ONLY
(MAY - OCT)
3:30PM - 7PM



Crowdsourced street to become permanent?



If you're looking for a model example of [crowdsourced placemaking](#), check out the [Better Block project](#) in Oak Cliff, near Dallas, Texas.



Build a Better Block,
October 2010
Oak Cliff, TX
Go Oak Cliff
Street Space Collaborative

Source unverified



Peter Sieger

from grocery store to library
North Branch Public Library
Denton, Texas
Meyer, Scherer and Rockcastle
Architects





from strip center to hip “third place”
La Grande Orange Groceria, Phoenix, AZ
Bob Lynn, Kris and Craig DeMarco



Photo by Robyn Lee

From dying mall to revived mall and university medical center
One Hundred Oaks, Nashville, TN



Source unverified



from dying mall to arts complex
ArtSpace at Crestwood Court
Mall, St. Louis, MO

strategy:

Re-greening

reconstruct local ecology, daylight culverted streams, and clean run-off

add parks to increase adjacent property values

food and energy production

carbon sequestration

***Suburban farming: growing organic veggies in the front yard - or inside the mall
– or on foreclosed neighborhoods***

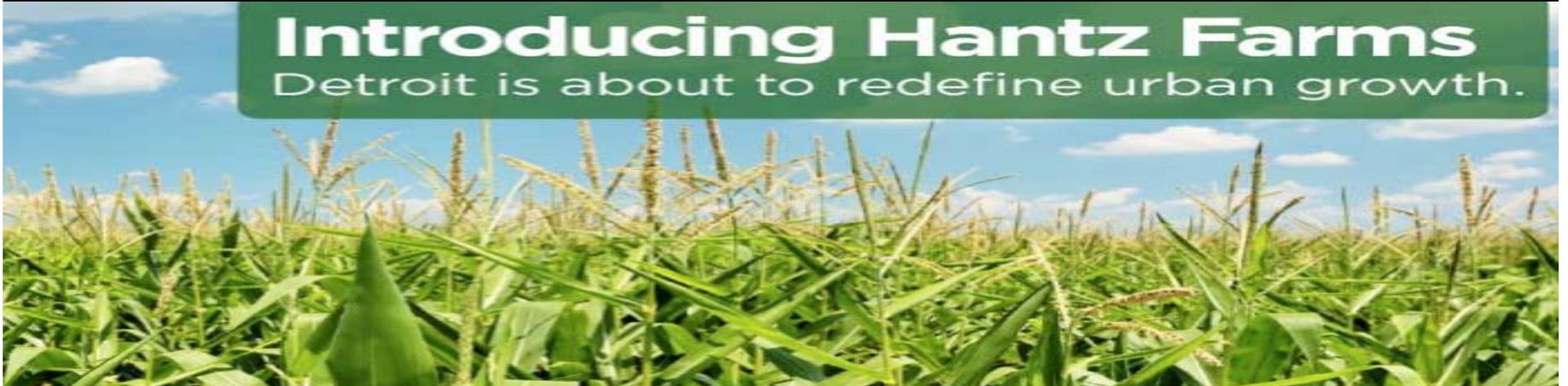


Cleveland's Galleria Mall Turns Lost Retail Space Into Greenhouse Farm Stand

BY ARIEL SCHWARTZ Mon Mar 8, 2010



Introducing Hantz Farms
Detroit is about to redefine urban growth.

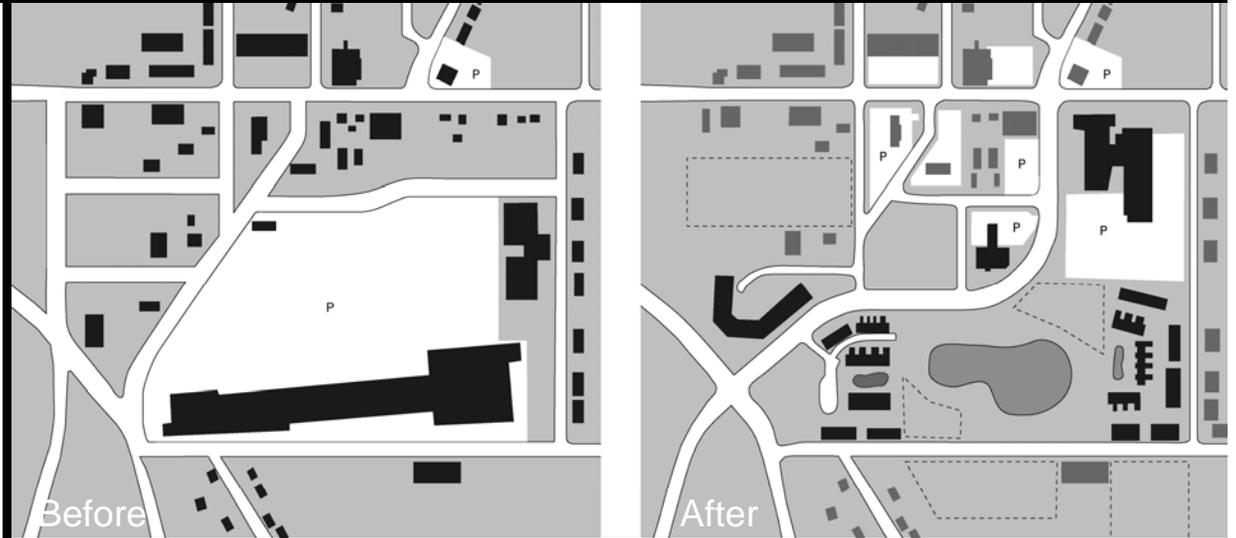


from shopping center to wetland w/ new lakefront property investment

Phalen Village, St Paul, MN, U.Minn CALA (Dowdell, Fraker, Nassauer) and City of St. Paul

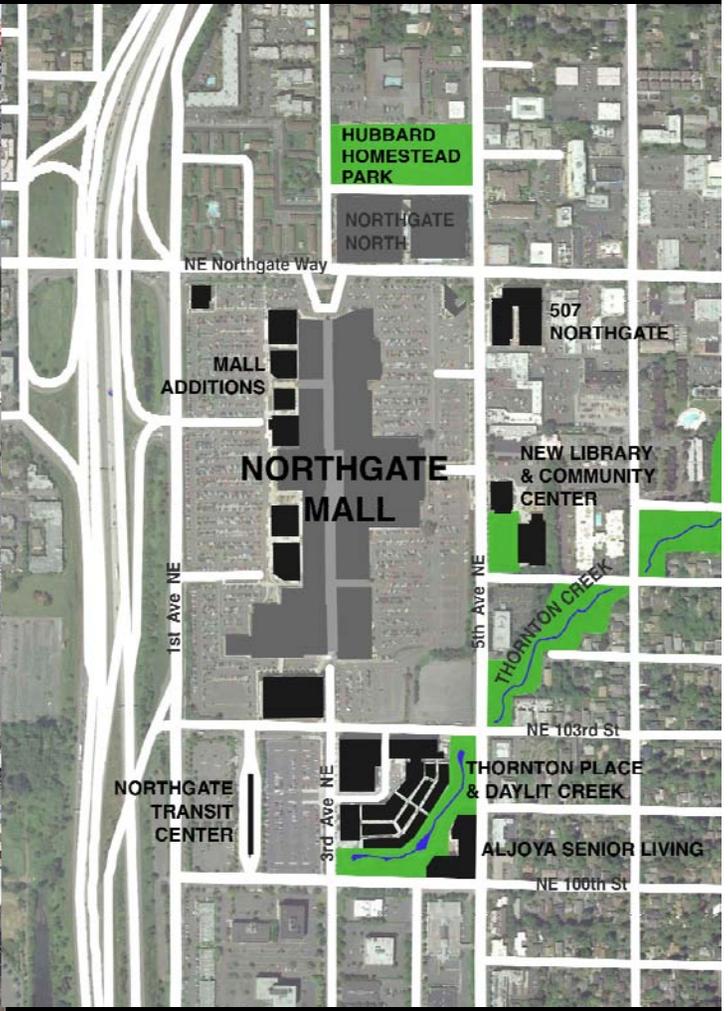


CONTEXT MISSISSIPPI FLYWAY



Source: Dunham-Jones, Williamson, 2009





from mall parking lot to TOD with condos, senior housing, and daylit creek park

Thornton Place, Northgate Mall, North Seattle, WA: LEED-ND pilot program

Mithun Architects for Stellar Holdings & Lorig Associates

Source: Dunham-Jones, Williamson, 2010

Using the bioswale as a park improves both water quality and property values



Thornton Place, North Seattle, WA: Mithun Architects for Stellar Holdings & Lorig Associates

from mall to park

Columbus City Center Park, Columbus OH

-Park to open in Fall 2010

-ring of mixed-use buildings surrounding it planned for future phase



example of the **Red Fields to Green Fields** strategy

-proposed \$200bil landbank to buy up failed commercial properties, get them off banks' books, convert them to "parks" for 10 years, giving remaining commercial properties better chance of survival, then re-develop 70% of the land while 30% becomes dedicated public park space

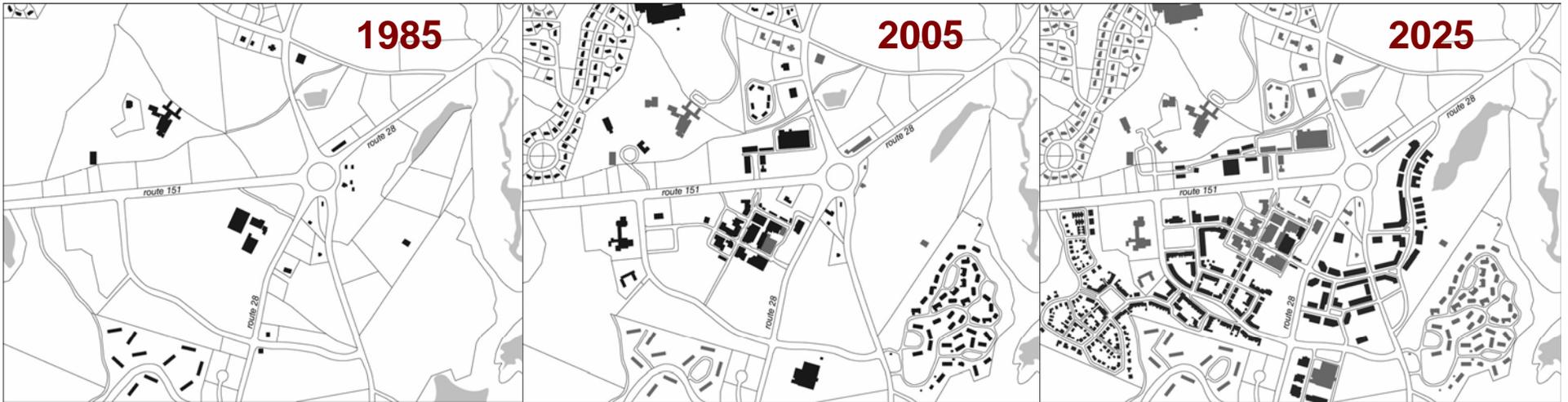
strategy:

Redevelopment

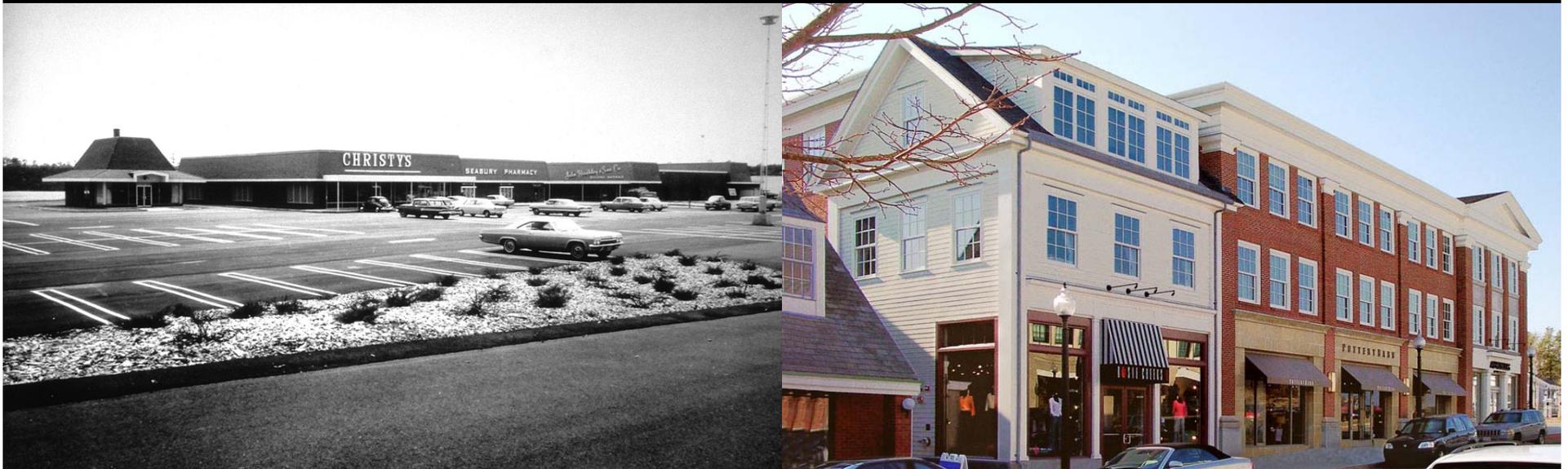
densify

urbanize

green the infrastructure



Source: Dunham-Jones, Williamson 2009



from strip center to "attachable urbanism"

Mashpee Commons, Cape Cod, MA, 1988-present

Cornish Assoc. Ltd

Duany Plater-Zyberk & Co

Imai, Keller Moore



transit triggers infill of an office park

University Town Center, Hyattsville, MD

Prince George's Metro Center, Inc.

Parker Rodriguez

RTKL Associates

WDG Architecture

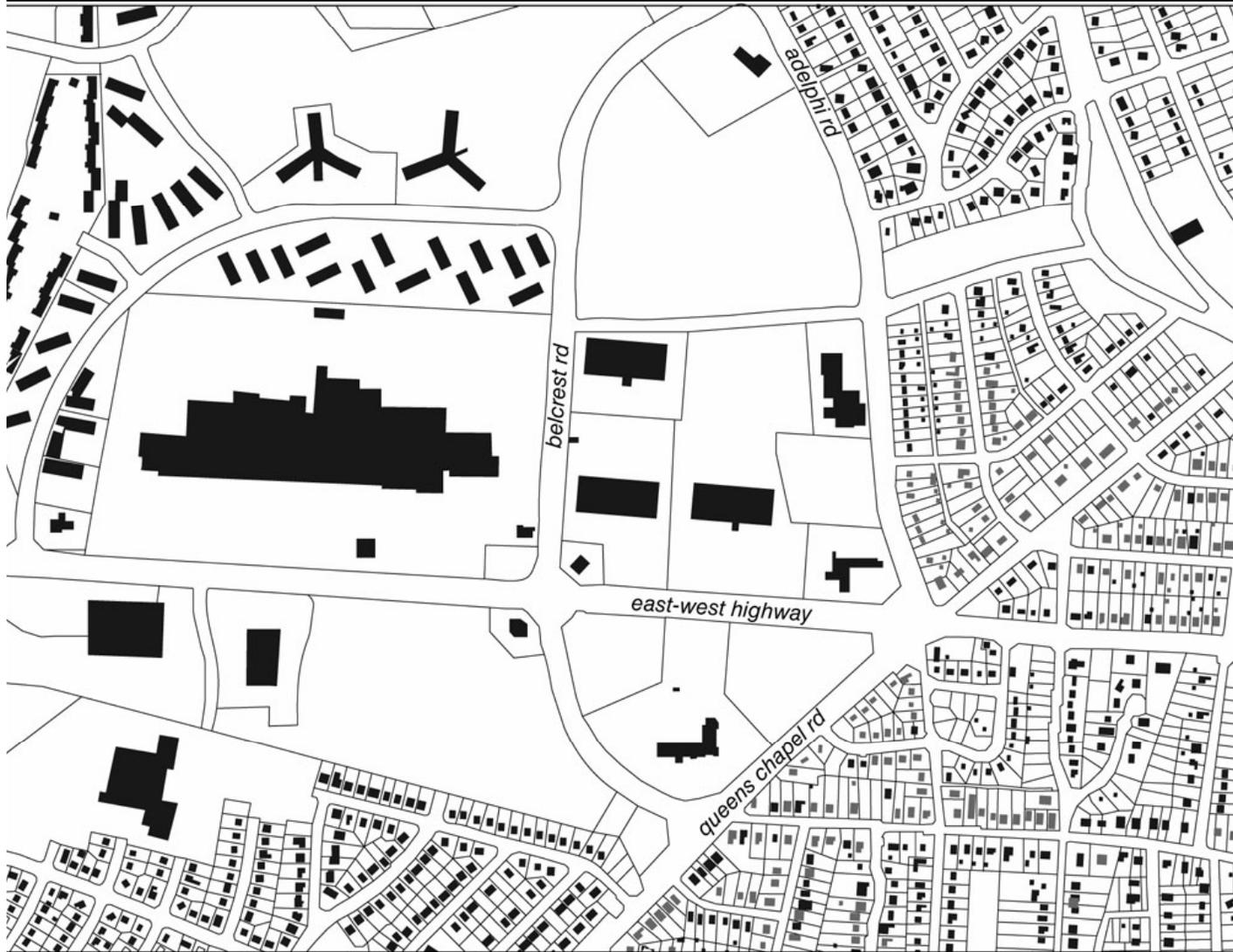
a large farm estate adjacent to the village of Hyattsville



University
Town
Center

1940

Highway triggers a mall, the office park, and buffer buildings



0 500' 1000' 2000'



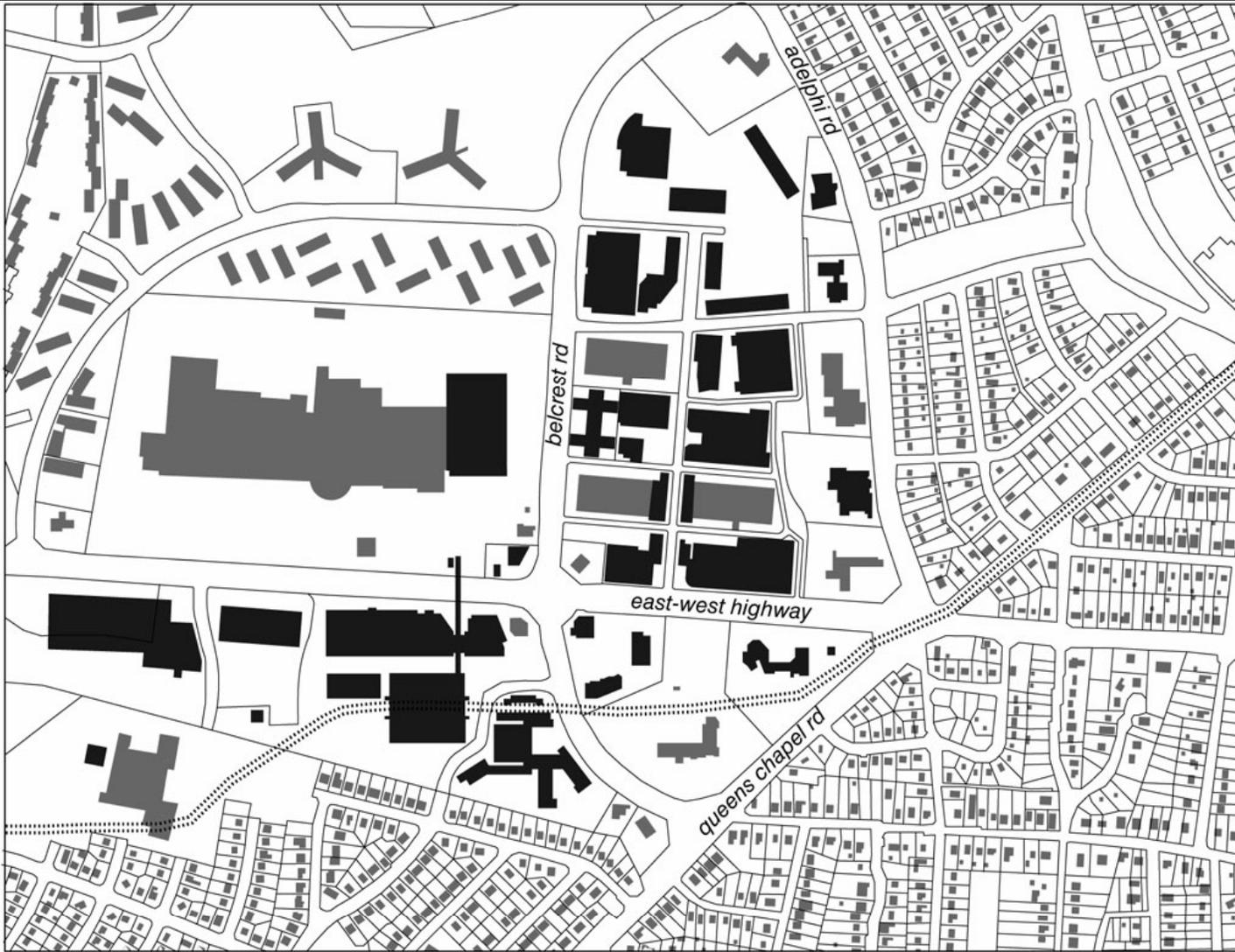
0 1/8 mi 1/4 mi 1/2 mi



University
Town
Center

1980

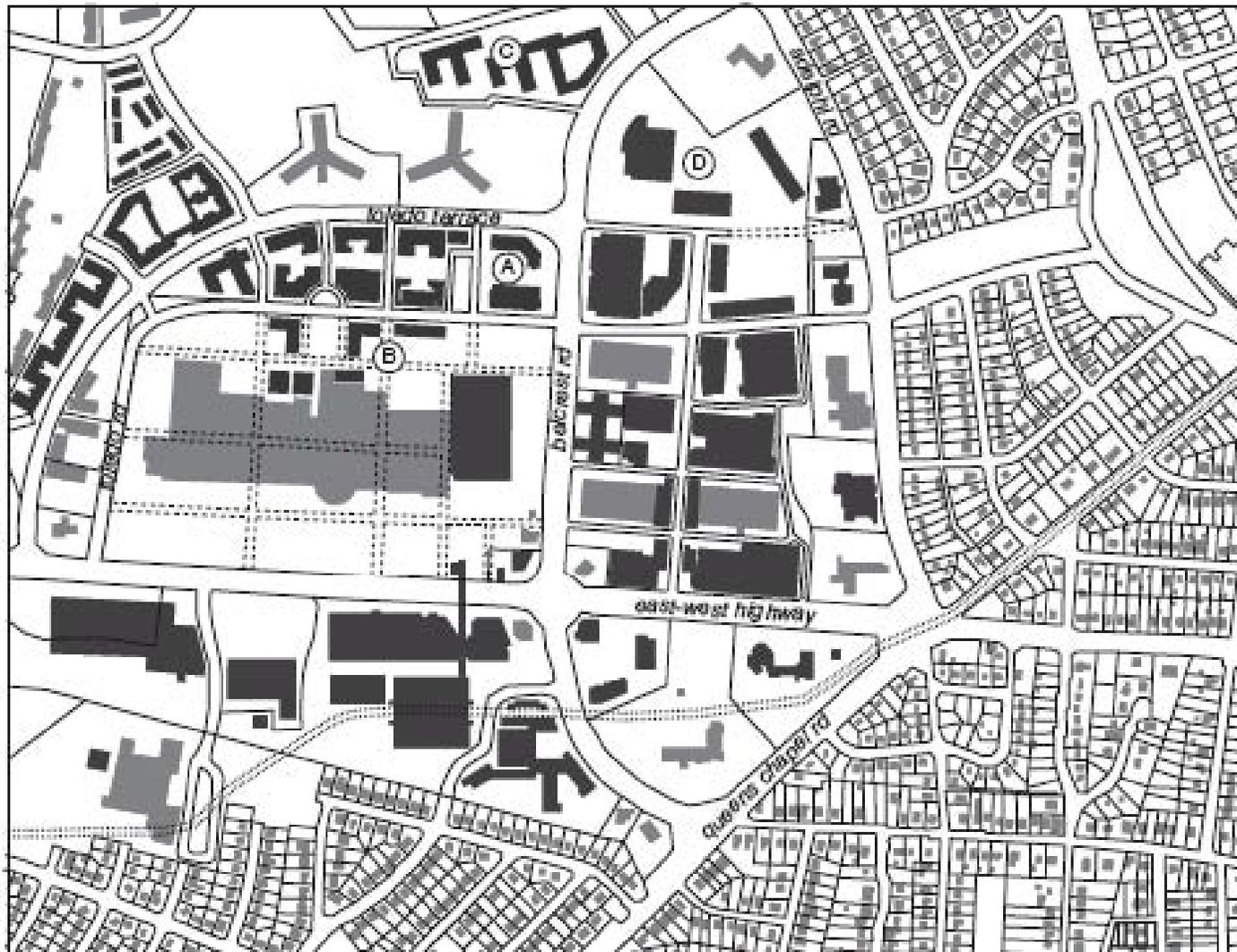
transit triggers infilling with new Main St, plaza and parking deck



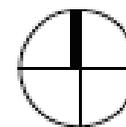
University
Town
Center

2020

First retrofit triggers four more



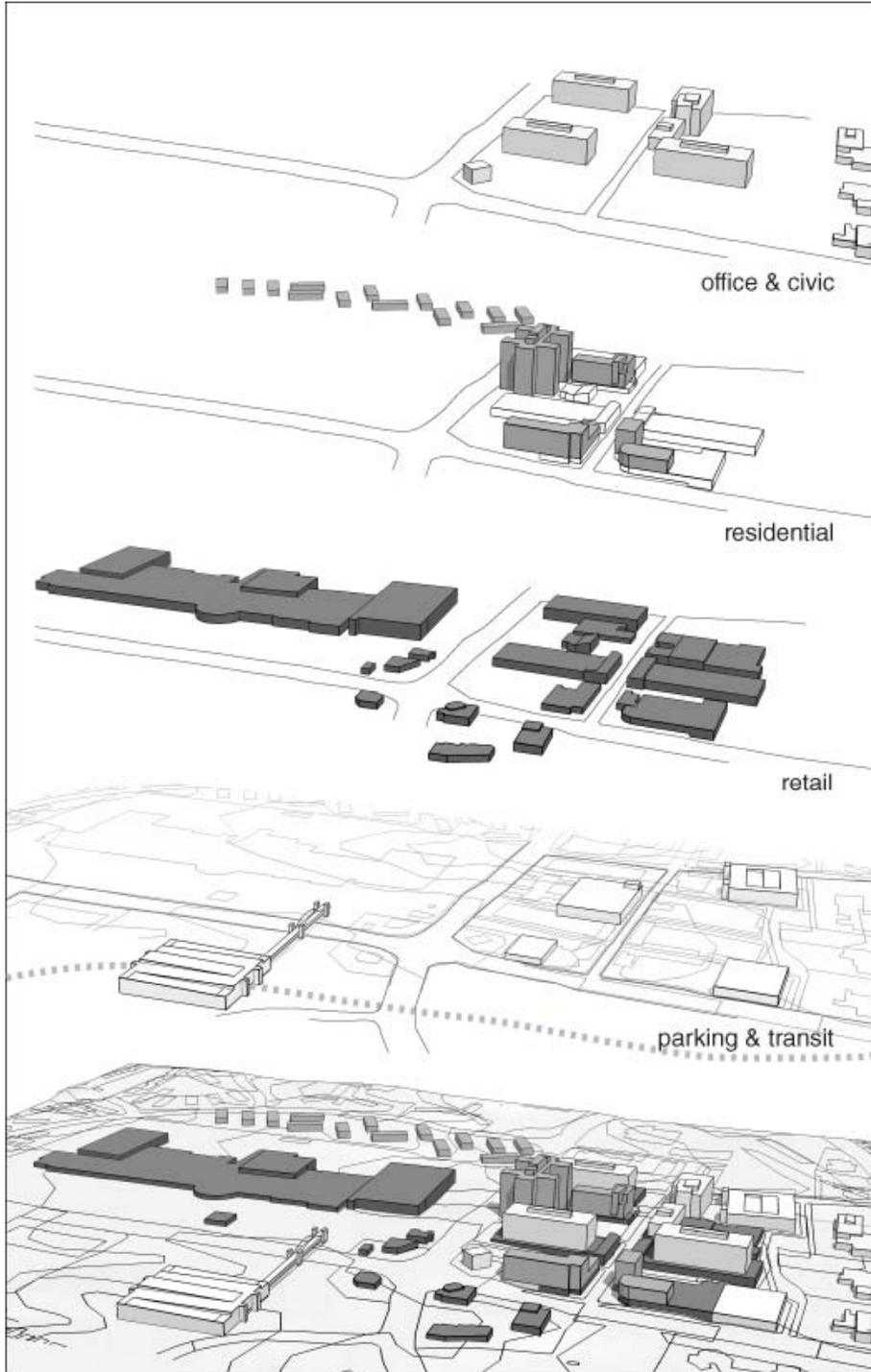
- A Belcrest Plaza
- B Mall at Prince Georges
- C Landy Property (Marvin Blumberg)
- D Phase II of University Town Center



University
Town
Center

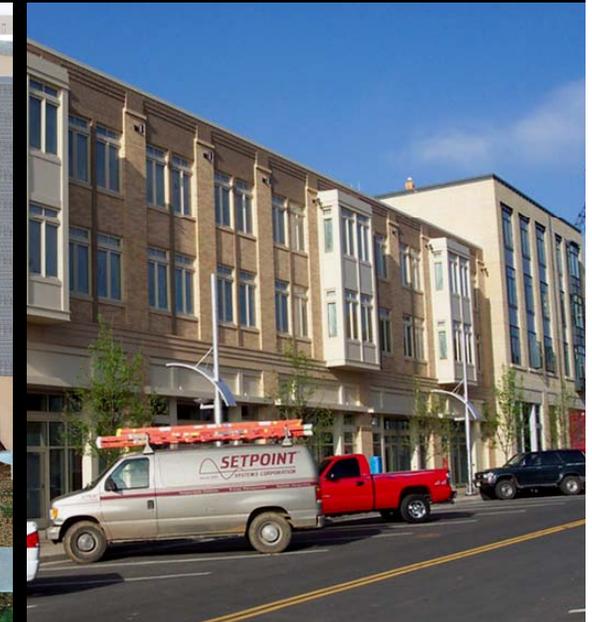
2020

(revised 6/10)





From dead mall to green downtown
Belmar, Lakewood, CO
Continuum Partners
Elkus Manfredi Architects & Civitas Inc.
Van Meter Williams Pollack Architects





before - Villa Italia mall



alameda ave

wadsworth blvd

s. pierce. st.

0 500' 1000' 2000'

0 1/8 mi 1/4 mi 1/2 mi



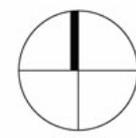
Belmar

1975

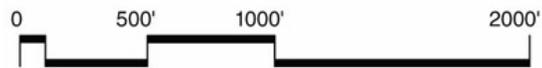
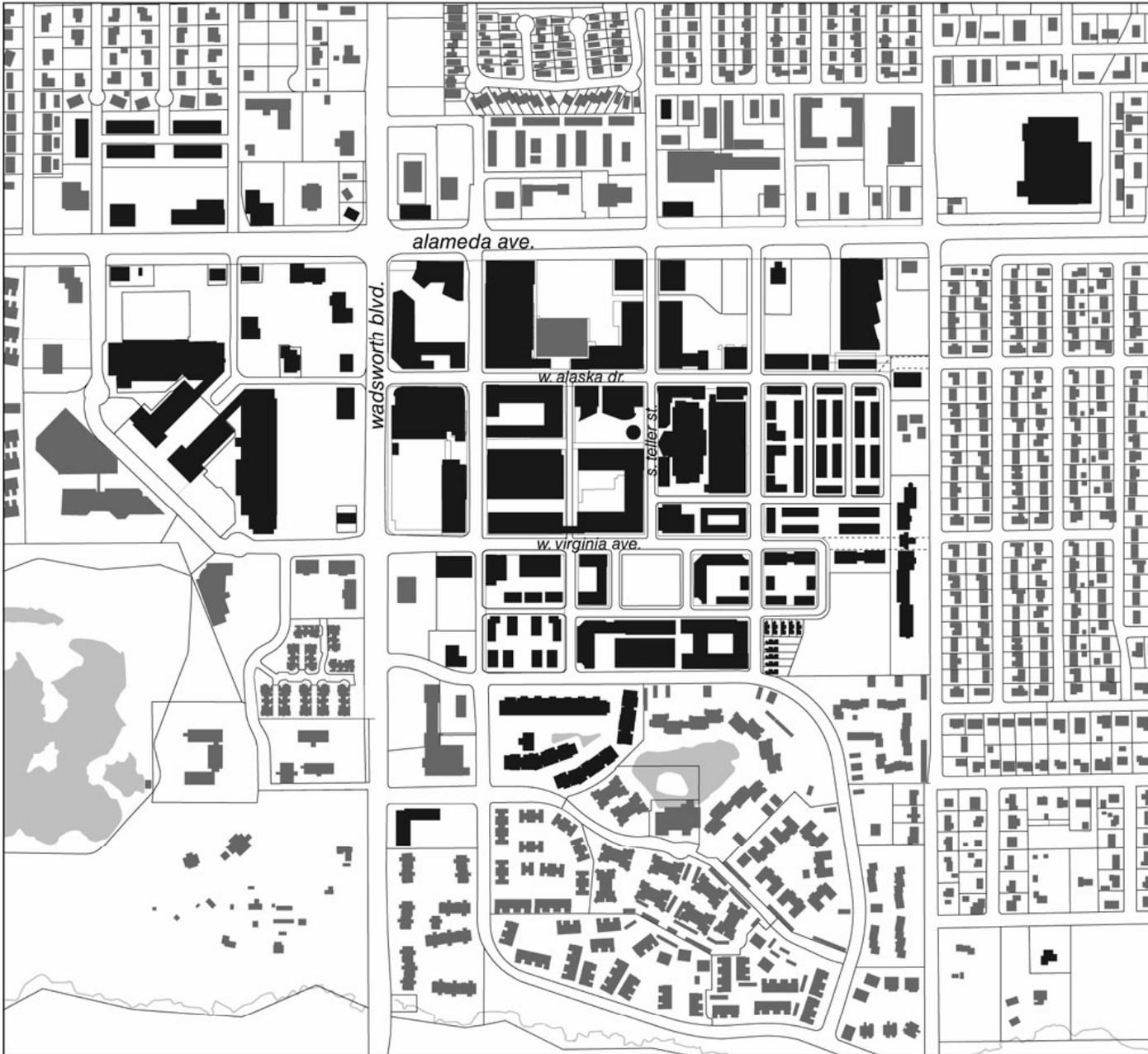


0 500' 1000' 2000'

0 1/8 mi 1/4 mi 1/2 mi



Belmar
1995

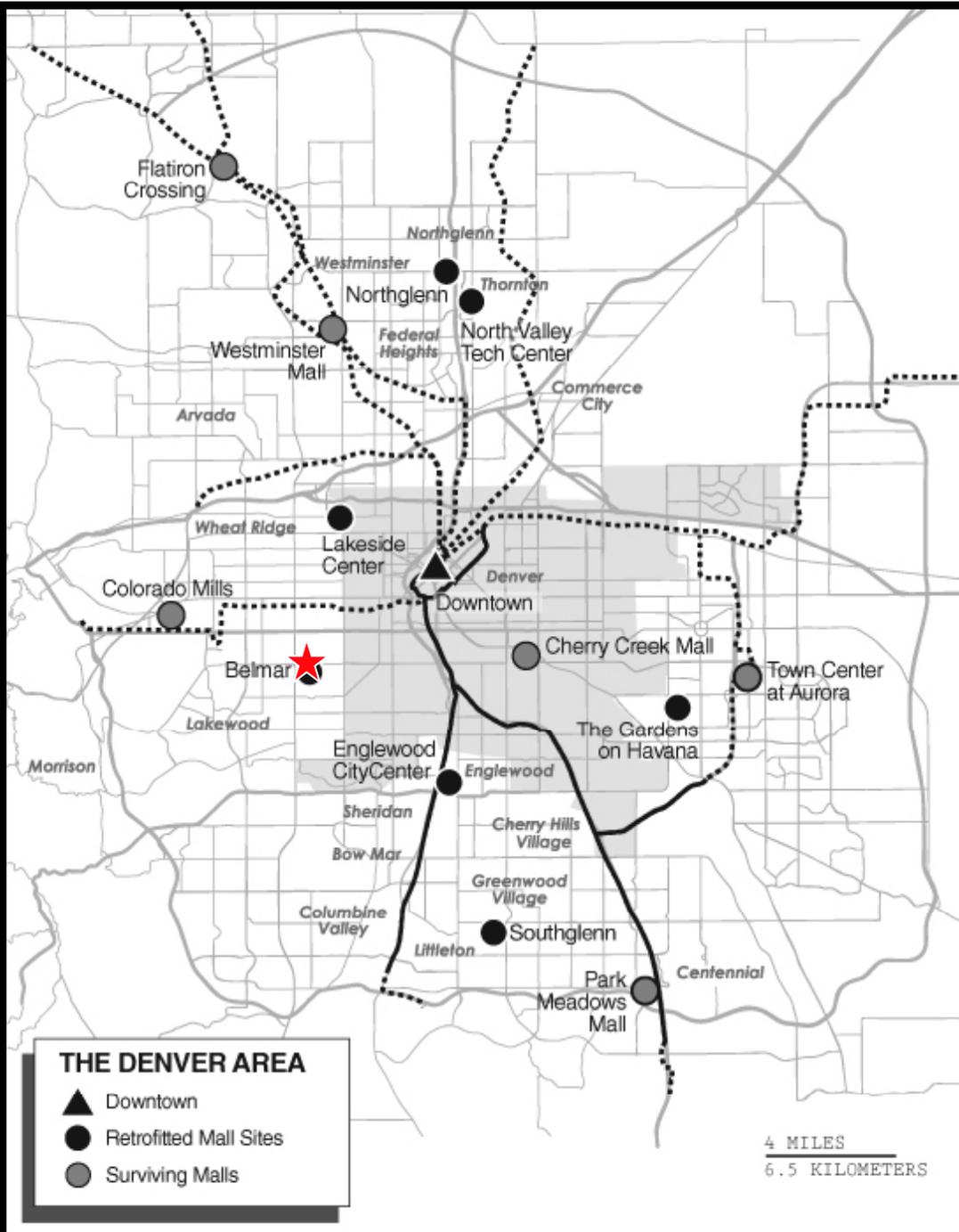


Belmar

2015



after - corner of Teller and Alaska Streets



8 of 13 regional malls in the Denver Metro area have been retrofitted or announced plans to be.

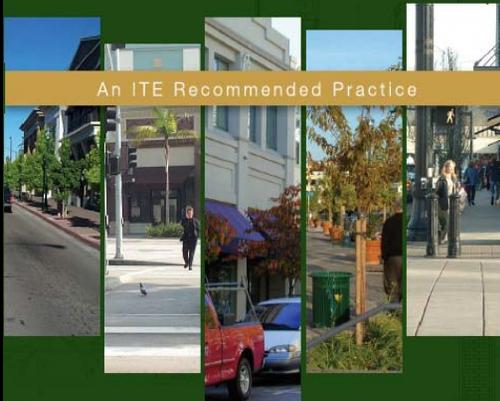
Retrofitting does NOT imply the wholesale redevelopment of existing neighborhoods.

*Rather it provides existing neighborhoods with urban nodes on targeted underperforming sites-raising the question, **how to connect the dots?***

Source: Dunham-Jones, Williamson, 2009

Recapturing traffic islands for redevelopment while making walkable intersections Fort Totten MetroRail stop, Washington DC Planning Department

Source: Washington DC Planning Dept website



An ITE Recommended Practice

Designing Walkable Urban Thoroughfares:
A Context Sensitive Approach

ite
Institute of Transportation Engineers

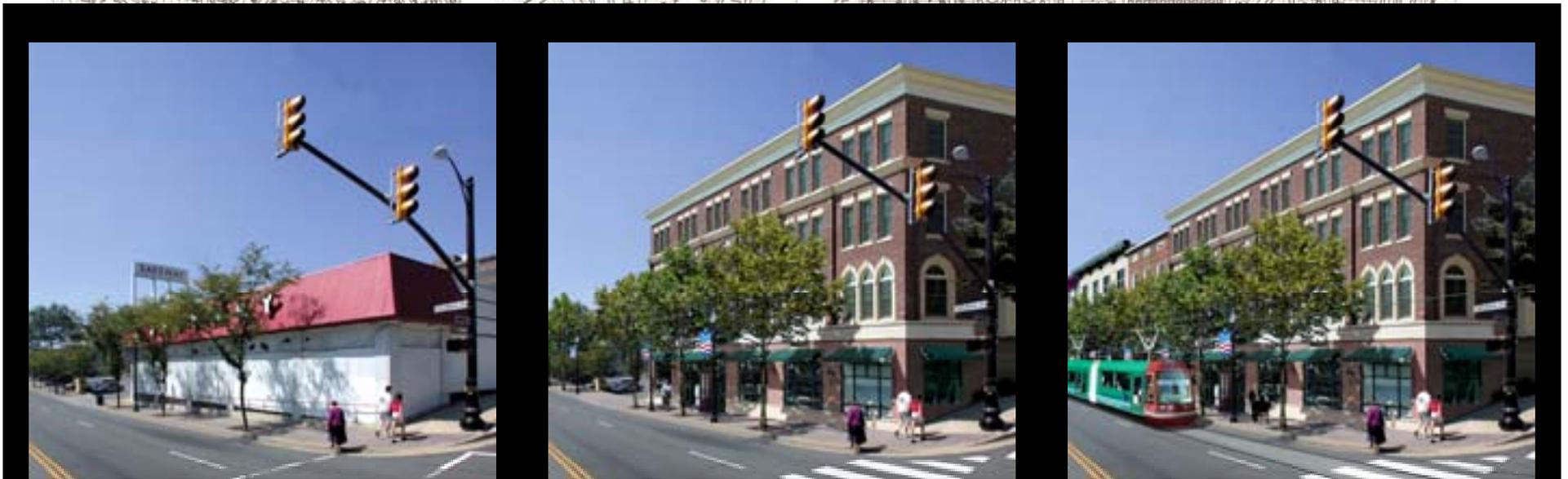
CONGRESS
FOR THE
NEW
URBANISM



from commercial strip to multi-way boulevard and new downtown
Palm Canyon Drive, Cathedral City, CA; Freedman, Tung & Bottomley

source: Dunham-Jones, Williamson, 2009





Using form-based codes to induce densification and transit on a commercial strip
Columbia Pike, Arlington County, VA, Ferrell Madden Associates, Dover Kohl & Partners



from “Woolworths” to Willingboro Public Library
The Croxton Collaborative

Burlington County River Route Corridor, NJ

- 17 miles, 52 sq. miles, linking a dozen older suburban and historic communities through light-rail and bus
- approved for priority investments by the state
- Strategic Plan in 1998. Since 2005: 203 major new businesses, more than 3,000 new jobs



From edge city sprawl to 430-acre TOD w/ BRT circulator in median

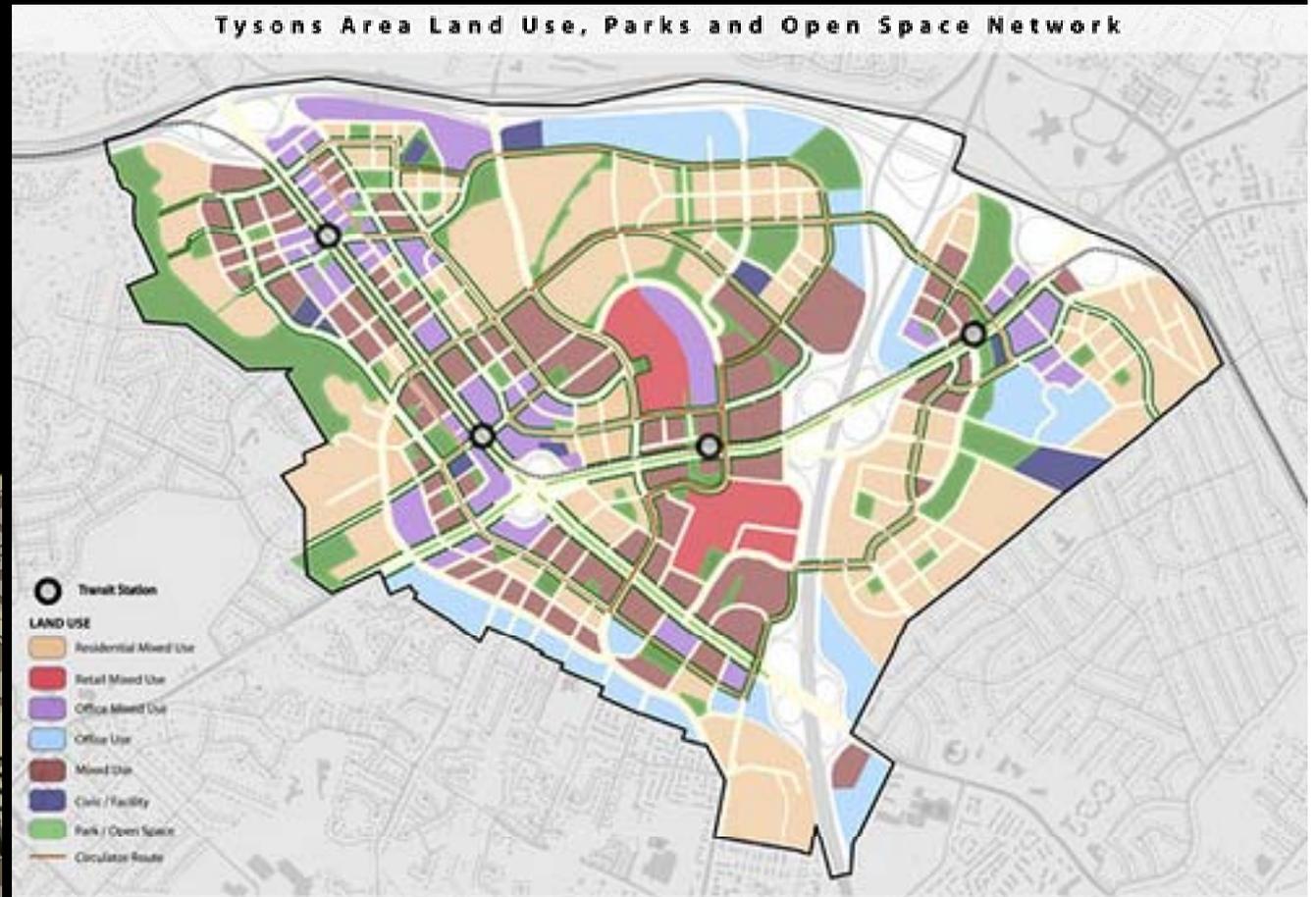
White Flint, MD – 430 acre TOD retrofit on Rockville Pike rezoned on March 23, 2010



1. Permits development of a new downtown over next 20 years
2. Dedicated-lane BRT circulators between Metro Stations
3. 10,000 residential units, 2600 of them “affordable”
4. Commercial space up from 14mil s.f to 20mil
5. Limited parking
6. High-rises up to 30-stories
7. Properties receiving density bonus required to pay farmers at metro edge to remain in agriculture
8. Generate \$6-7bil in revenue for the county
9. Special Tax District to pay for infrastructure
10. Shovels in the ground in 2-3 years



From Edge City to 4 mixed-use TODs ringed by office Tysons Corner VA: PB's PlaceMaking



- insertion of transit lines in arterial r.o.w., 95% of growth will be w/in 3-min walk of transit
- doubling of office space by 2030, to 84 mil sf in LEED silver bldgs over 1,700 acres
- approximate quadrupling of residential population, 20% affordable units
- F.A.R. bonuses for affordable housing, LEED gold/platinum
- pursuing minimum 20-acre parcel consolidation near stations to allow for street grids
- 160 acres of parks, restoration of 2 streams in green network



retrofitting land use, transportation and energy on a commercial corridor
Cambie Corridor, Vancouver, BC, Vancouver City Planning Department



Amateur photographers protesting for the right to public space on the Astroturf green at **Downtown Silver Spring, MD, July 4, 2007**



HYBRID PLACES

“PUBLIC” spaces under PRIVATE management/ownership

URBAN streetscapes with SUBURBAN parking ratios

URBAN qualities at SUBURBAN costs

LOCAL placemaking with NATIONAL retail/design/funding

**Populations that are MORE DIVERSE than typical suburbs,
but LESS DIVERSE than typical cities**

INSTANT URBANISM

INSTANT URBANISM, YES, BUT...

We can't induce more sustainable behavior in suburbia incrementally w/o changing the infrastructure. We **NEED instant urbanism.**

Uses may change and buildings can be remodeled, but retrofitting the morphological structure of streets, blocks, and lots make the long term differences in:

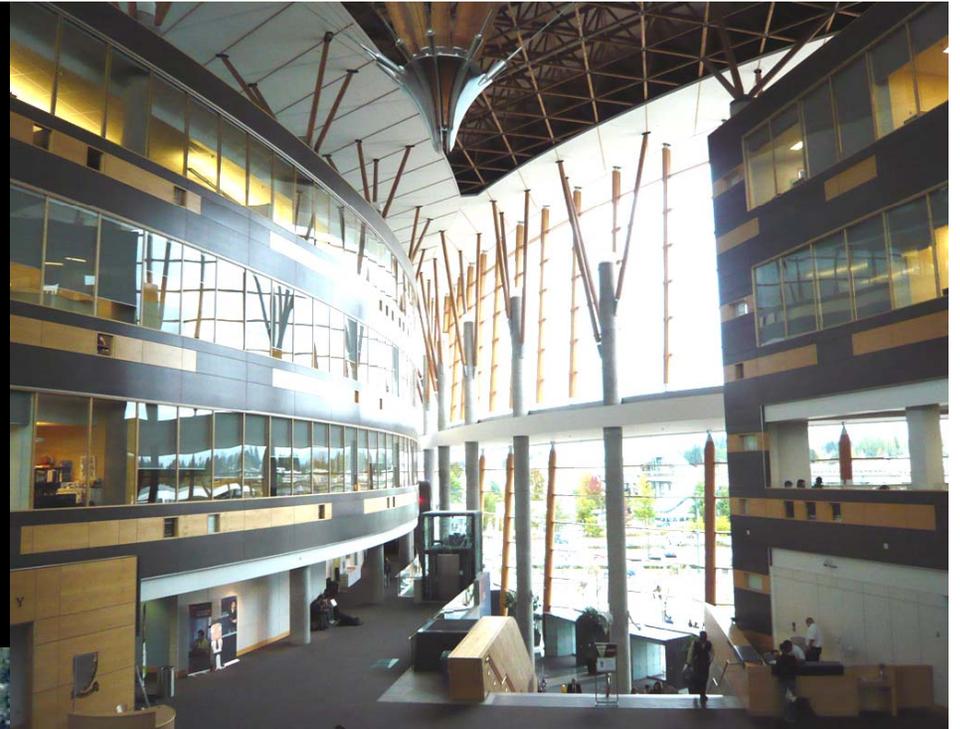
- reduced energy consumption and vmt/capita through densification, mixed-use, and walkability
- improved air and water quality through increased pervious surface and vegetation
- diversification of household types
- community building through the inclusion of public space

Building up: adding a 5-story galleria and 25-story office tower to a dying mall

Surrey Central City, Surrey, British Columbia

Simon Fraser University

Bing Thom Architects, Inc



LIRR LONG ISLAND RADICALLY REZONED - A REGENERATIVE VISION FOR A LIVING ISLAND



Balance of
Nature &
Man-Made



100%
Renewable
Energy



100%
Water
Neutral



100%
Local
Food



0%
Waste
to Landfill

Long Island Radically Rezoned, T. Holler, K. Mulry, S. Peters, A. Serra
Build a Better Burb Peoples Choice winner, 2010

Build a Better Burb

an ideas competition to retrofit Long Island downtowns

From “zombie subdivision” to

Boarding houses? Farms? Tear-downs to avoid taxes/maintenance? Greenbelts?



Source unverified



SHWEEB HOLDINGS LIMITED

Transportation innovations: The Schweeb and the Straddle Bus





Residential subdivisions



static tissues



Shopping malls, office parks or apartment complexes



campus tissues



Arterial strips



elastic tissues

See Brenda Case Scheer, "The Anatomy of Sprawl," *Places* 14:2 (Fall 2001): 28–37.

Retrofittability Index, Arman Tolentino, Georgia Institute of Technology

RETROFITABILITY SCORING RATIONALE

STATIC TISSUE	SCALE OF CHANGE	RETROFITABILITY
<ul style="list-style-type: none"> ● Multiple owners ● Small lots ● Rigid order 	Very small	Very low
<ul style="list-style-type: none"> ● Multiple owners ● Varied-size lots ● No order 	Small	Moderate
<ul style="list-style-type: none"> ● One owner ● Large lot ● Flexible order 	Large	Very high



ANSLEY MALL

SCORE: 4.1

MODERATE RETROFITABILITY



UNION STATION MALL

SCORE: 6.0

HIGH RETROFITABILITY



PERIMETER POINTE SHOPPING CENTER

SCORE: 7.8

VERY HIGH RETROFITABILITY

ADDITIONAL RESOURCES

CNU Sprawl Retrofit Initiative: Active list-serv, website with examples and model legislation. For info go to: <http://www.cnu.org/sprawlretrofit>

Sprawl Repair Manual: Book by Galina Tachieva of DPZ. Prototypical solutions at the regional, neighborhood, and building scale.

Greyfields to Goldfields: 2002 book by Lee Sobel and CNU based on 2001 study of regional mall study by Price Waterhouse Cooper

Malls into Main Streets: 2005 report by CNU to guide local officials and owners/developers through the process.

Suburban Transformations, Paul Lukez, 2007

Big Box Reuse, Julia Christenson, 2008

10 Principles for Reinventing America's Suburban Business Districts, Geoffrey Booth, et al, ULI, 2002

"Retrofitting Suburbia", *Places* 17:2, Summer 2005, theme issue guest-edited by Dunham-Jones and Williamson

Retrofitting Suburbia **Facebook page:**

<http://www.facebook.com/pages/Retrofitting-Suburbia/29939207705?ref=ts>

CNU 19, June 1-4, Madison, WI – entire track on suburban retrofiting