

THE URBAN LAND INSTITUTE

GERALD D. HINES STUDENT URBAN DESIGN COMPETITION

About the Competition

The 2009 ULI Gerald D. Hines Student Urban Design Competition is a graduate-level annual competition that is intended to provide an interdisciplinary learning experience for real estate and design students in the United States and Canada. Self-formed student teams are asked to provide an urban design and a financial feasibility strategy for a large-scale real life site that ULI has identified somewhere in the United States. Through the formation of multidisciplinary teams, the program encourages cooperation and teamwork among future real estate professionals and the many allied professions, such as architecture, landscape architecture, urban planning, historic preservation, engineering, real estate development, finance, psychology, law, and others.

Participating Schools: University of Miami School of Architecture and School of Business

Programs: Master of Real Estate Development & Urbanism, Master of Architecture in Suburb & Town Design, Master of Architecture, and the Master of Business Administration

Team 5010: Warren Bane, Benyameen Ghareeb, Jeffrey Hall, Victor Santana, and Jared Sedam

Faculty Advisors: Dr. Charles C. Bohl, Jaime Correa, and Stephen Nostrand

SITE MAP





ALAMEDA – A NEW SUSTAINABLE URBANISM

Site is surrounded by major transportation corridors

- Broadway – connects directly with downtown Denver
- Alameda Avenue – connecting to major urban parks and natural landscapes
- Alameda Station Light Rail – connects Alameda Gardens to downtown Denver and its surrounding communities via one of the most extensive transit systems in the country
- I-25 – links site to Northern and Southern Colorado

Self sustaining lifestyle is paramount in design

- Fourteen acres of public and semi private gardens
- On site water collection, filtration, retention and reuse
- Walkable neighborhood with daily necessities located within a quarter mile radius minimizes need to run errands by car

Providing for the needs of surrounding neighborhoods

- Incorporating current Broadway Market Place retailers into walkable medium density urban environment
- Alameda Farmers Market sells produce grown on site
- Incorporating entertainment, health and educational centers

EXISTING LAND USE



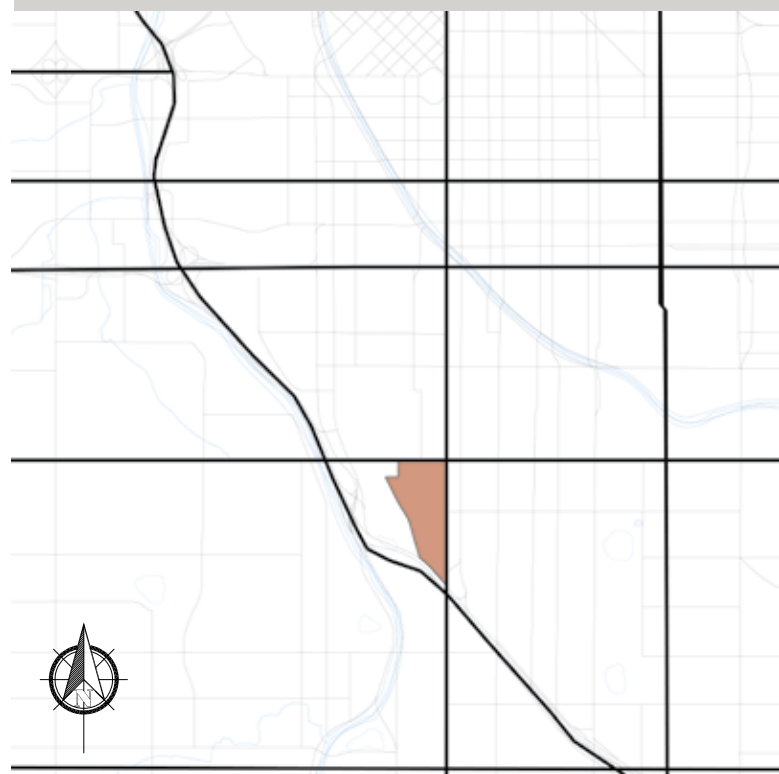
Existing Land Use
95% of site currently designated as retail
5% designated as light industrial

PROPOSED LAND USE

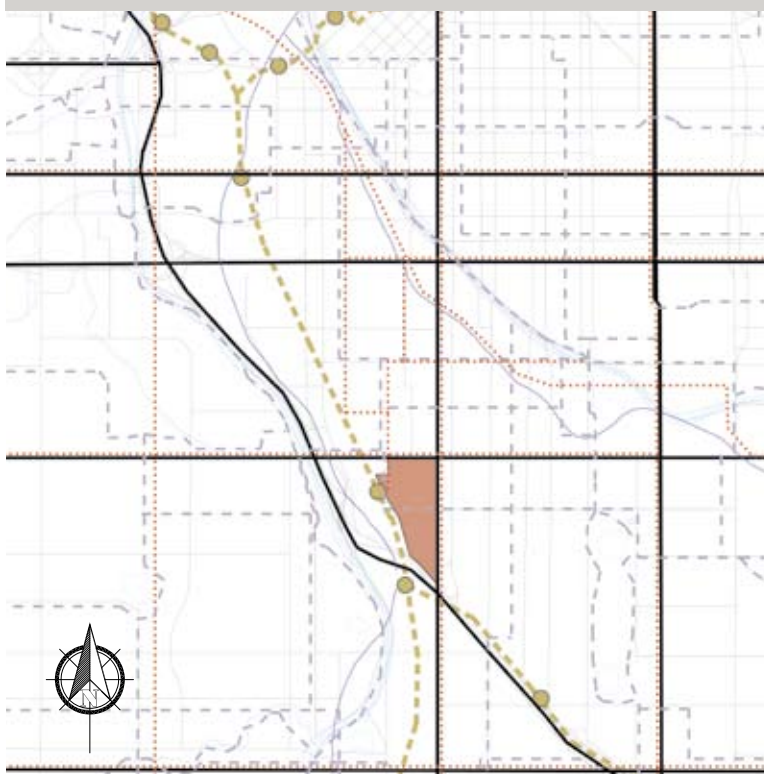


Regional Map
An estimated million people will move to Denver in the next 20 years, underscoring the importance for sustainable housing

REGIONAL MAP

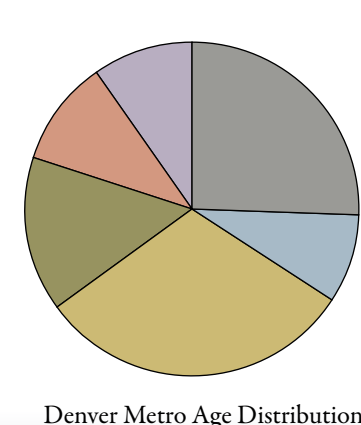


CONNECTIVITY

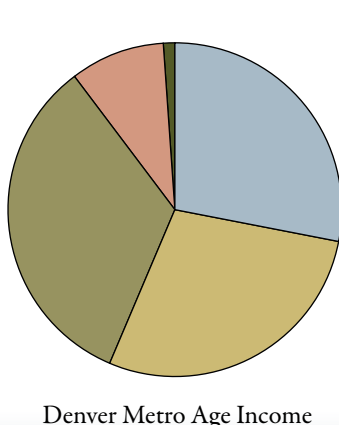


- Government Owned
 - Denver County Owned
 - Other Exempt
 - Vacant
 - Single Family Residential
 - Multi Family Residential
 - Condominium
 - Commercial
 - Industrial
 - Mixed Use Commercial
 - Mixed Use Office
-
- Light Rail
 - Bus Route
 - Bike Path
 - Interstate
 - A Road
 - B Road

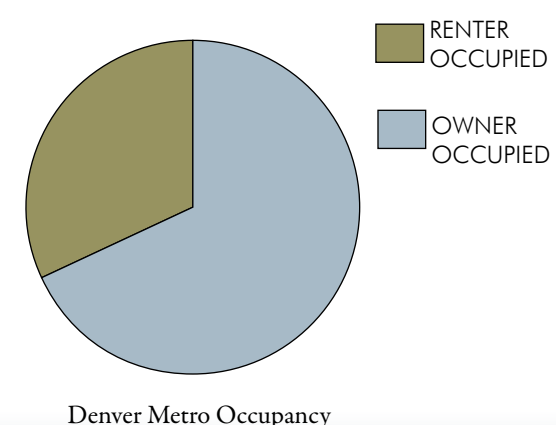
DEMOGRAPHICS



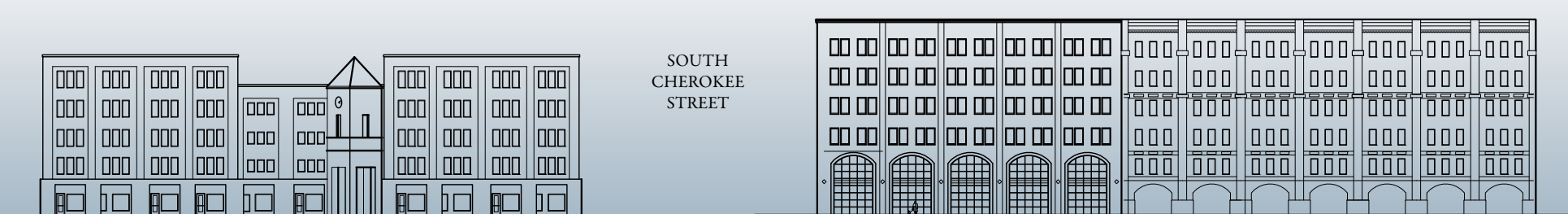
Denver Metro Age Distribution



Denver Metro Age Income

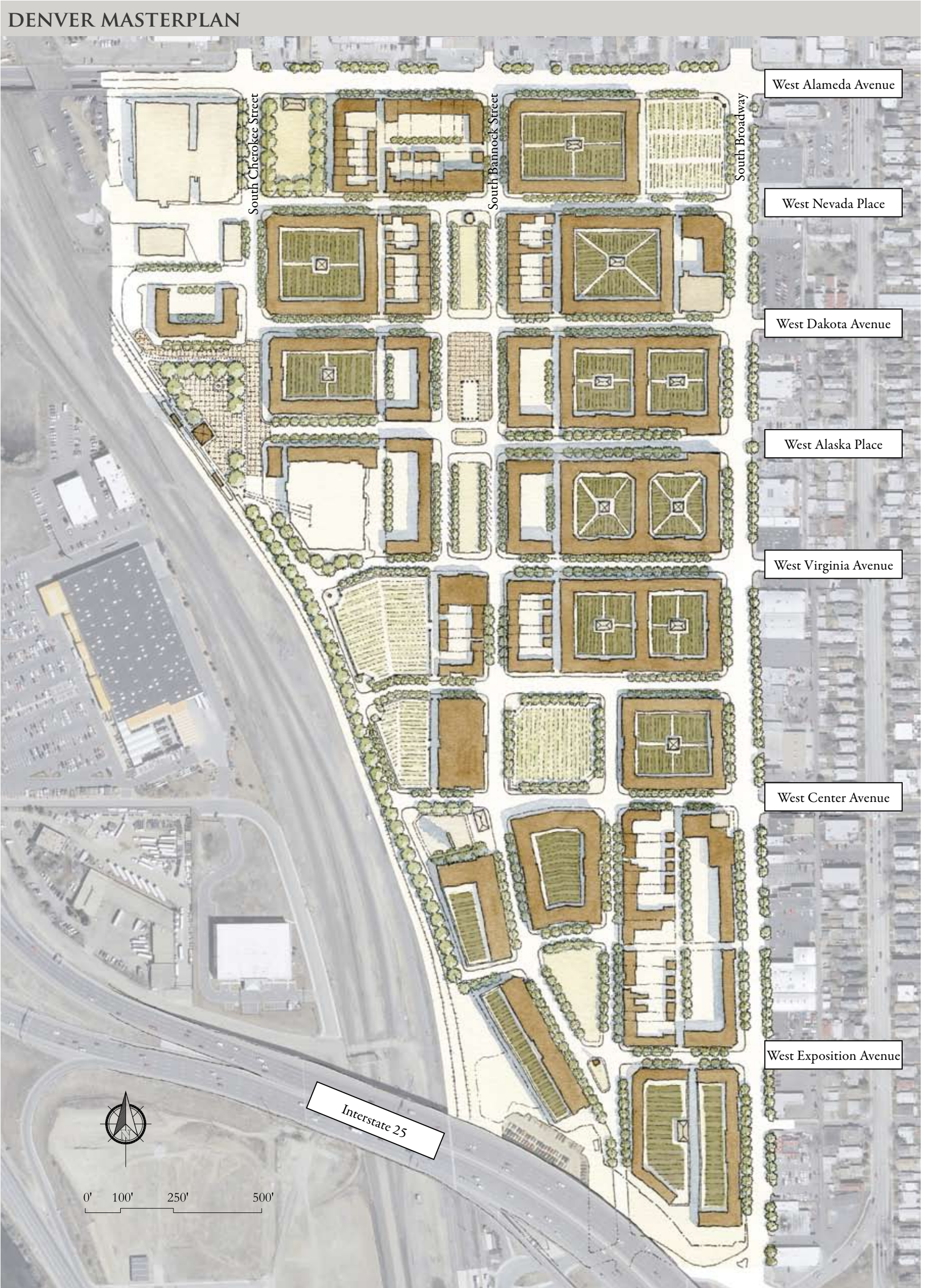


Denver Metro Occupancy





- Building on Existing & Historic Grid
- Balance of Public & Private Realms
- Sustainable Density



SOUTH
BANNOCK
STREET



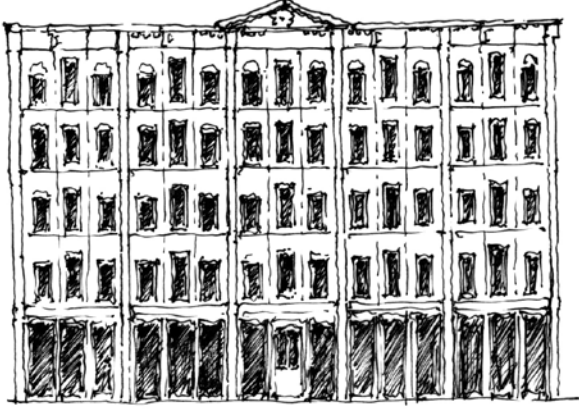


- Flexible Design
- Contextual Design Strategies

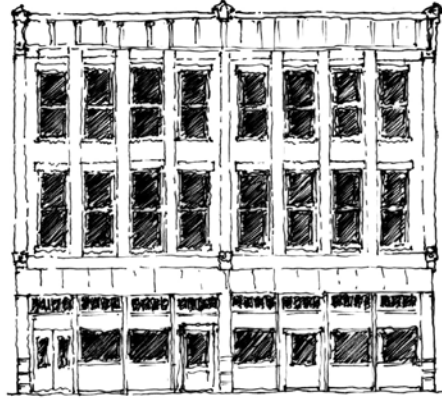
STUDY OF HISTORICAL PRECEDENTS IN DENVER



Live/Work Unit



Mixed Use Building

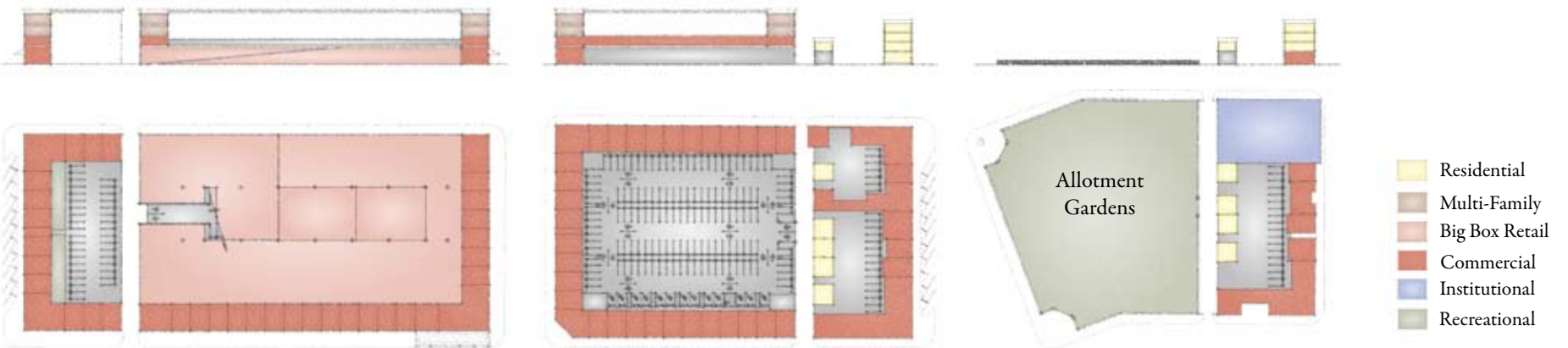


Mixed Use Building



Warehouse Building

BUILDING TYPOLOGY DIAGRAMS



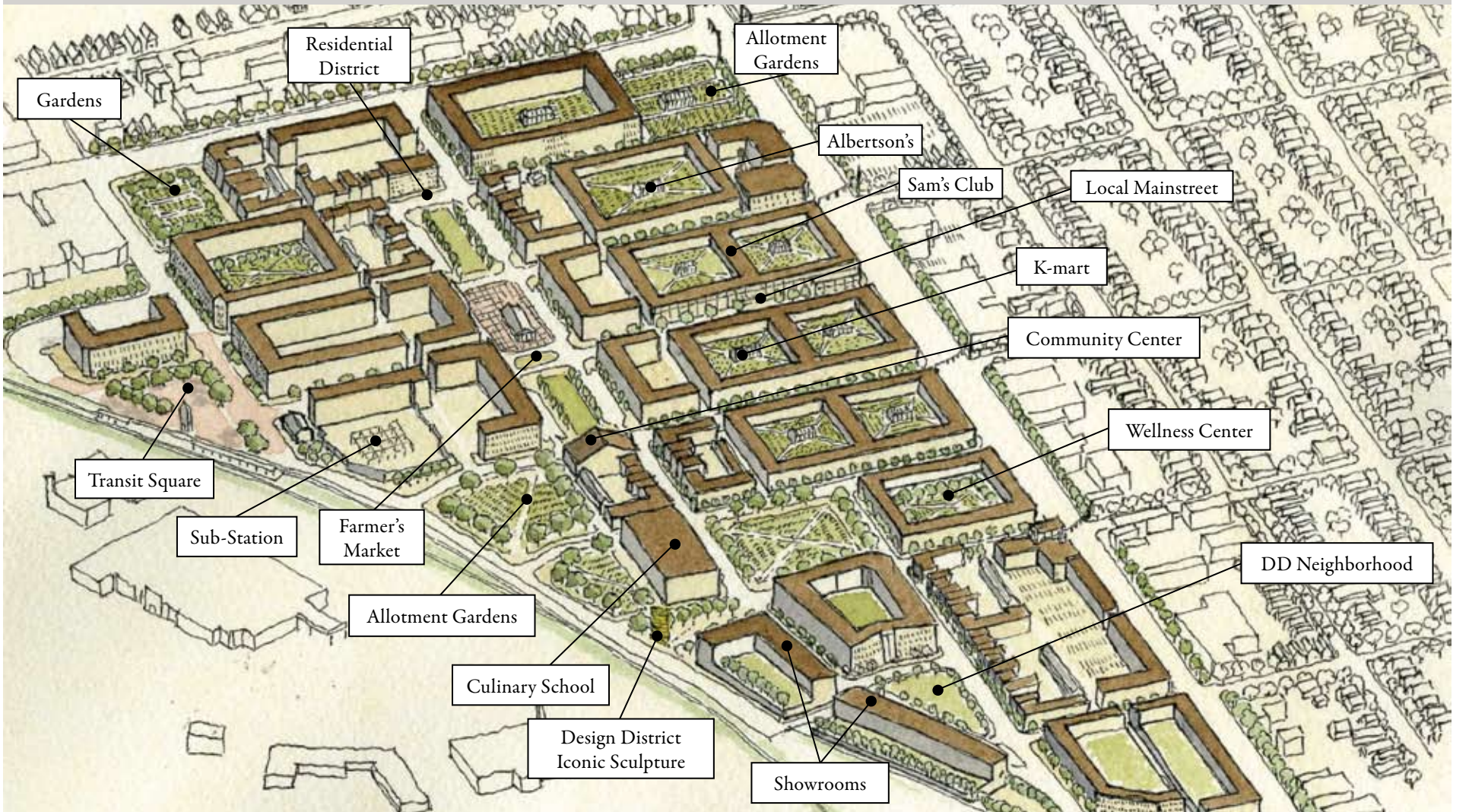
Big Box Type

Mixed-Use Mid-Rise

Townhouse

Live/Work Unit

SITE AXONOMETRIC VIEW



SOUTH BROADWAY



PUBLIC SPACE & PHASING



- Sense of Place
- Flexible Spaces (Agriculture, Street Fairs, Farmer's Market, Outdoor Living)

PHASING DIAGRAMS



OPEN SPACE DIAGRAM, 9.29 ACRES



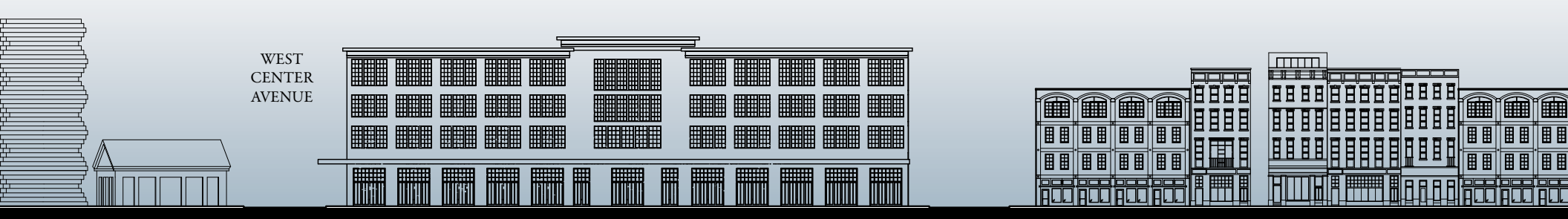
ALAMEDA STATION SQUARE



View Towards Culinary District Plaza



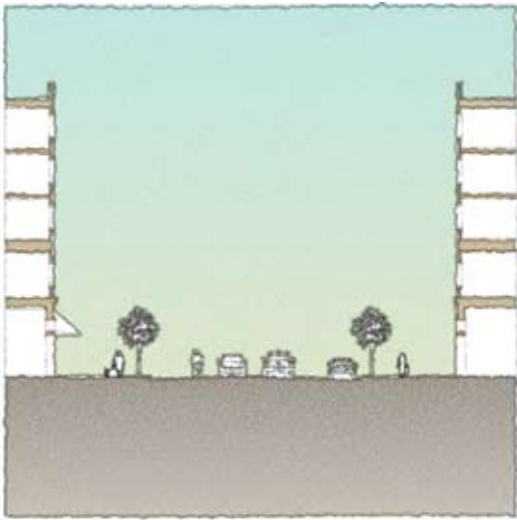
Culinary District Plaza



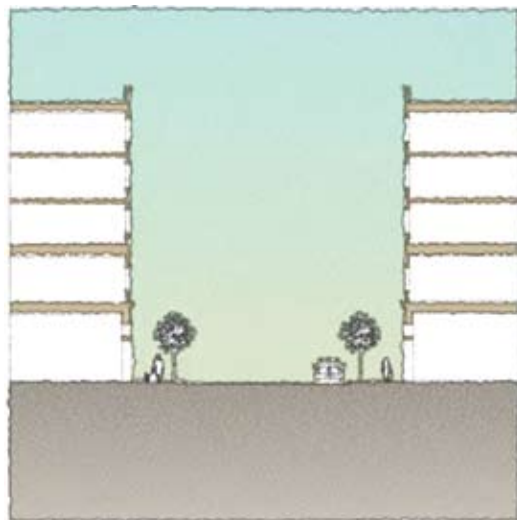


- Mainstreet Element
- Connectivity
- Daily Needs on Site

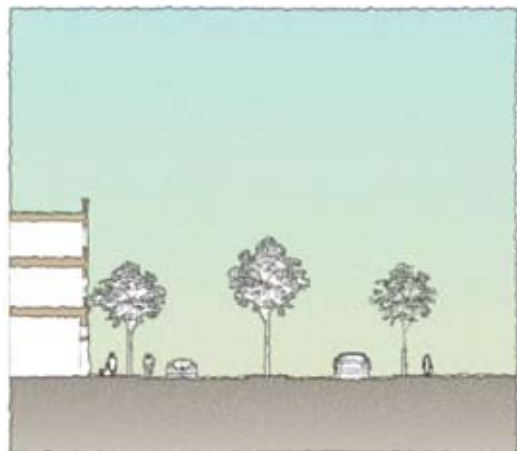
MAIN STREET (ALASKA AVENUE) LEASING PLAN



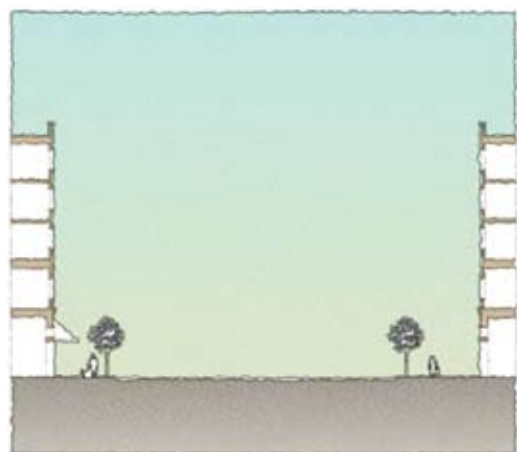
Typical "A" Street Section



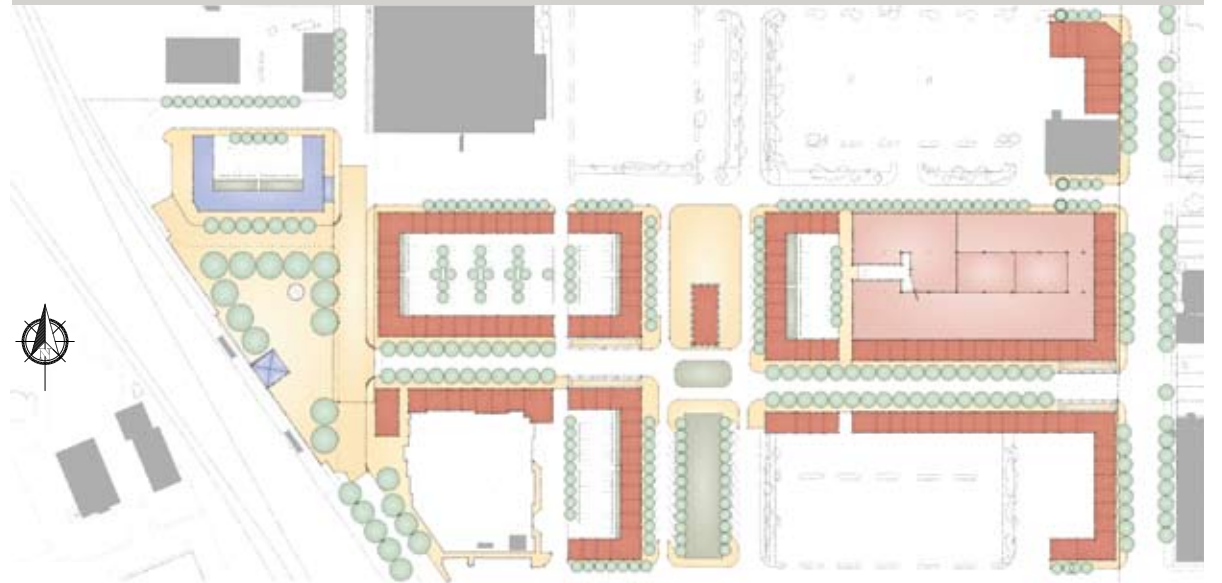
Typical "B" Street Section



Alameda Avenue Section



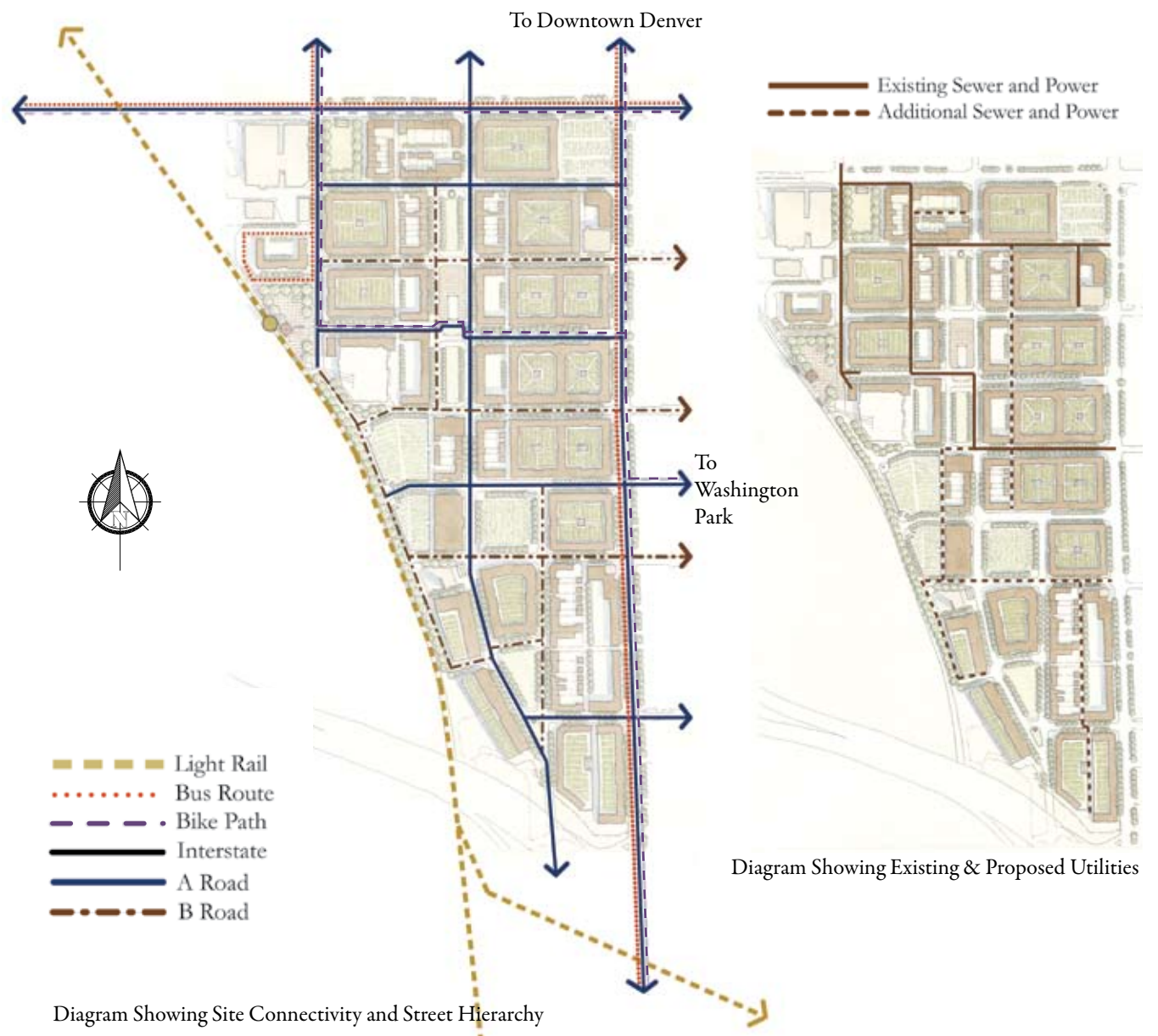
Broadway Street Section



- Residential
- Multi-Family
- Big Box Retail
- Commercial
- Institutional
- Recreational



View Along the Local Main Street (Alaska Avenue)



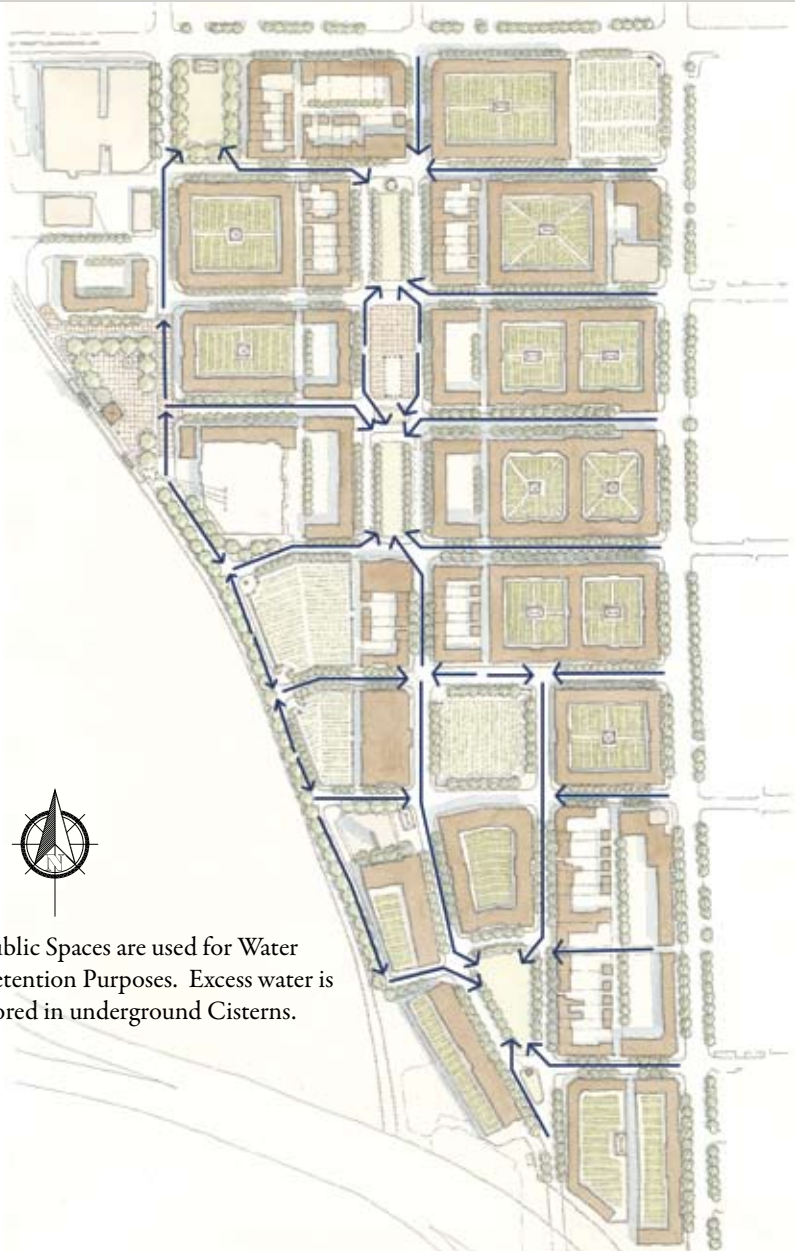
WEST VIRGINIA AVENUE





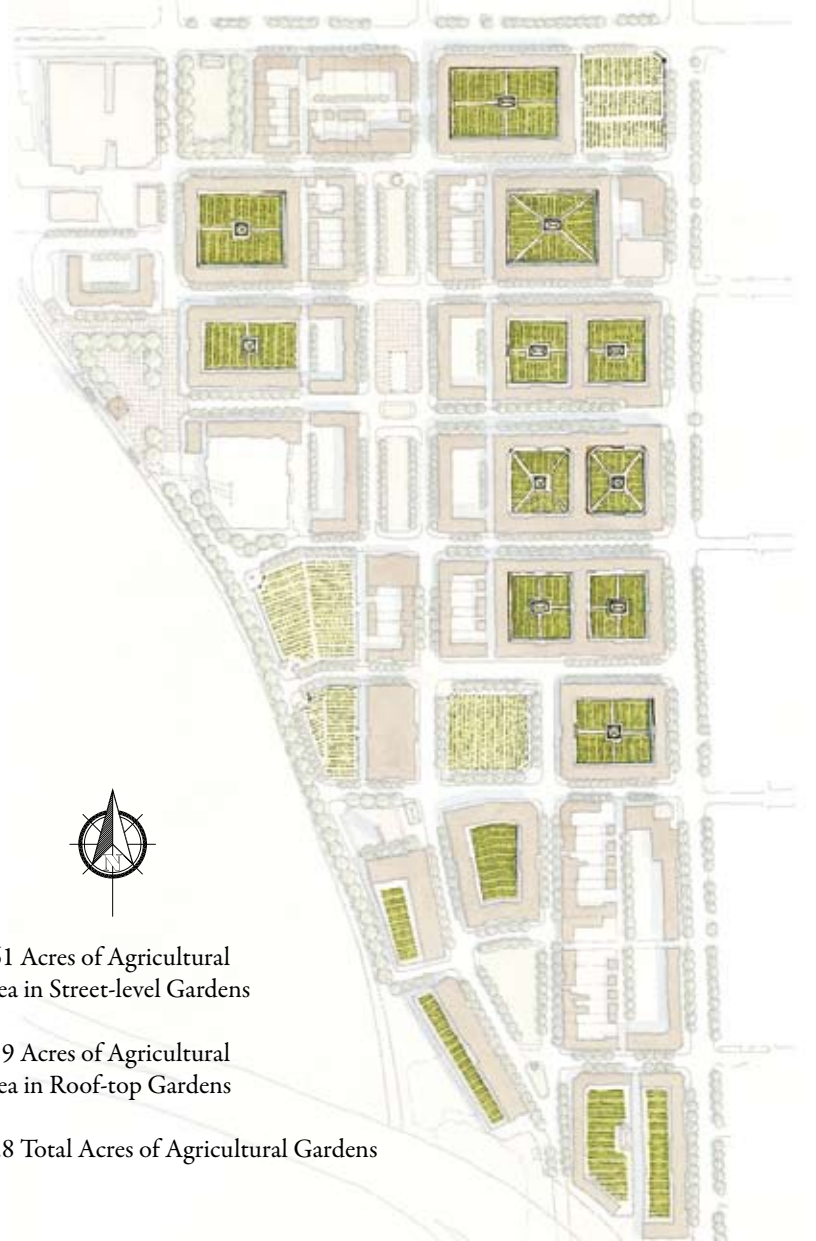
- Strive for Self-Sufficiency
- Sustainable Densities
- Minimize Carbon Footprint

WATER MANAGEMENT



Public Spaces are used for Water Retention Purposes. Excess water is stored in underground Cisterns.

AGRICULTURAL LAND

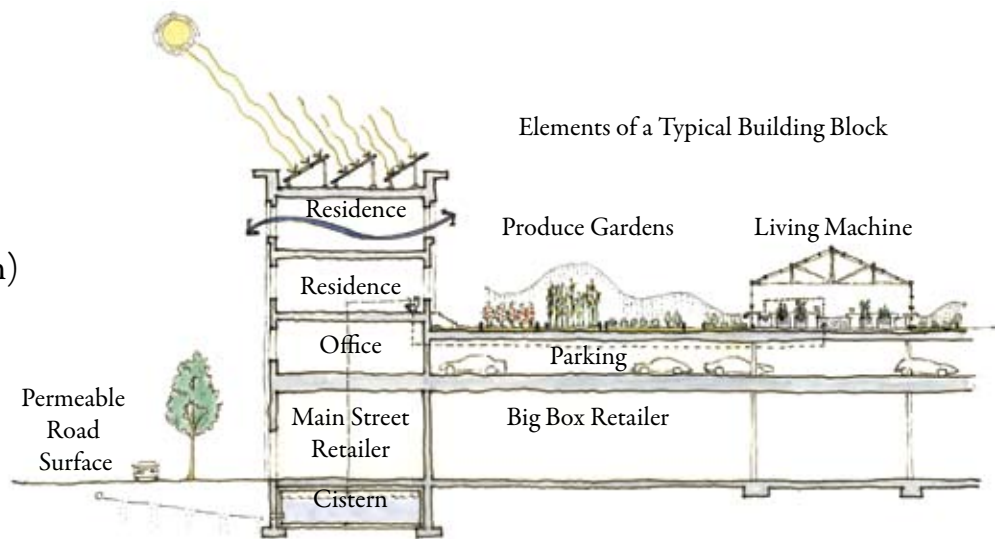


4.61 Acres of Agricultural Area in Street-level Gardens

9.19 Acres of Agricultural Area in Roof-top Gardens

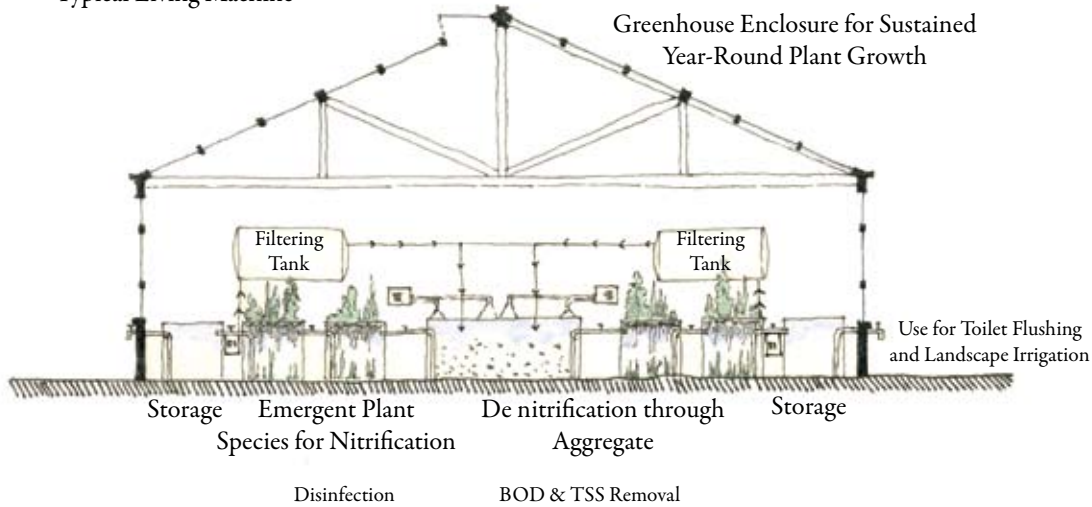
13.8 Total Acres of Agricultural Gardens

- Food Production & Recycling (Composting)
- Energy Production (Photovoltaic Panels)
- Minimize Energy Usage (Natural Light & Cross Ventilation)
- Water Harvesting & Recycling



Elements of a Typical Building Block

Typical Living Machine



Greenhouse Enclosure for Sustained Year-Round Plant Growth

Use for Toilet Flushing and Landscape Irrigation



Harvesting of Fruits on Street Shade-Trees

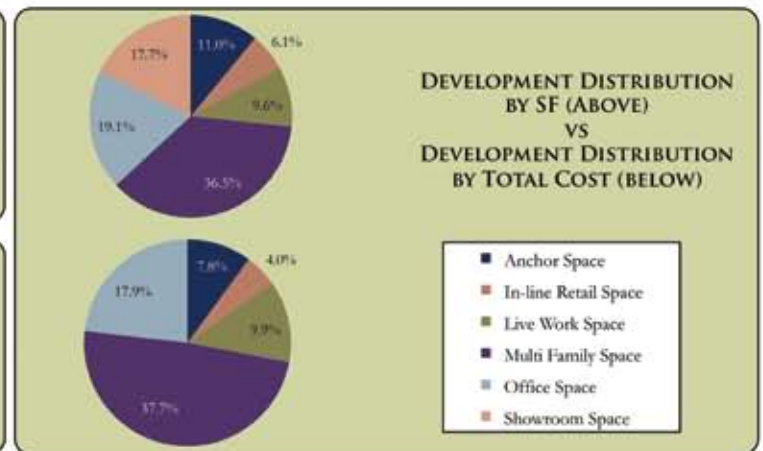
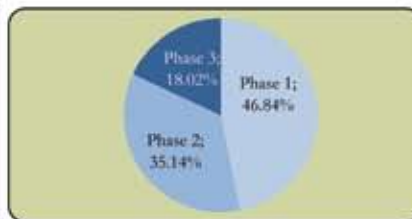
Fruit Street Trees



FINANCIAL

TABLES & CHARTS

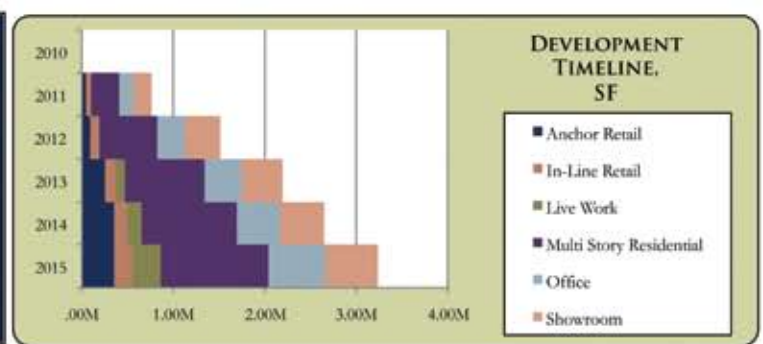
DEVELOPMENT TIMING	Phase 1 2 years	Phase 2 2 years	Phase 3 1 year
Anchor Space	90,637	264,310	0
In-line Retail Space	99,303	42,410	54,750
Live Work Space	0	155,212	154,000
Multi Family Space	631,860	409,500	138,890
Office Space	297,080	174,410	146,750
Showroom Space	395,000	90,000	88,000
Total Rentable Area	1,513,880	1,135,842	582,300



HARD & SOFT COSTS	Hard Costs	Soft Costs	Total Costs
Anchor	\$76.88	\$20.91	\$97.79
In-line Retail	\$70.82	\$19.26	\$90.08
Live Work	\$112.01	\$30.47	\$142.48
Multi Family	\$112.01	\$30.47	\$142.48
Office	\$101.46	\$27.60	\$129.06
Showroom	\$58.28	\$15.85	\$74.13
Parking	\$28.09	\$7.64	\$35.73

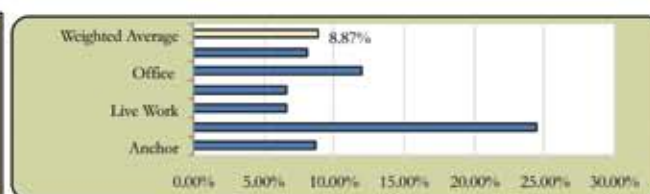


CONSTRUCTION COSTS	PHASE 1		PHASE 2		PHASE 3	TOTAL
	2011	2012	2013	2014	2015	5 years
Anchor Space	\$4,431,758	\$4,431,758	\$15,508,341	\$10,338,894	\$0	\$34,710,750
In-line Retail Space	\$4,472,758	\$4,472,758	\$2,292,253	\$1,528,169	\$4,932,046	\$17,697,984
Live Work Space	\$0	\$0	\$13,268,458	\$8,845,639	\$21,941,415	\$44,055,512
Multi Family Space	\$45,012,670	\$45,012,670	\$35,006,530	\$23,337,687	\$19,775,769	\$168,145,326
Office Space	\$19,170,145	\$19,170,145	\$13,505,311	\$9,003,541	\$18,939,132	\$79,788,274
Showroom Space	\$14,641,102	\$14,641,102	\$4,003,137	\$2,668,758	\$6,523,630	\$42,477,728
Parking Space	\$9,386,201	\$14,006,348	\$14,006,348	\$3,573,048	\$0	\$40,971,945
Green Initiatives	\$3,347,500	\$3,320,617	\$2,480,490	\$2,419,844	\$4,683,467	\$16,251,918
Infrastructure & Landscape	\$298,040	\$306,981	\$317,174	\$325,677	\$449,349	\$1,697,222
Total Development Costs	\$100,760,173	\$105,362,379	\$100,388,043	\$62,041,255	\$77,244,809	\$445,796,658



PRO FORMA	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Potential Gross Income	\$0	\$4,086,000	\$14,727,199	\$25,741,708	\$35,423,874	\$44,118,559	\$56,017,589	\$57,978,204	\$60,007,442	\$62,107,702	\$55,943,051	\$57,901,058
Vacancy & Collection Loss	\$0	\$0	\$2,592,970	\$4,567,842	\$5,263,809	\$5,086,291	\$4,995,161	\$4,300,319	\$4,450,830	\$4,606,609	\$4,350,920	\$4,503,202
Effective Gross Income	\$0	\$4,086,000	\$12,134,229	\$21,173,866	\$30,160,065	\$39,032,268	\$51,022,427	\$53,677,885	\$55,556,611	\$57,501,093	\$51,592,132	\$53,397,856
Operating Expenses	\$0	\$1,789,355	\$5,077,662	\$7,710,098	\$10,297,519	\$12,900,903	\$16,051,254	\$16,554,913	\$17,074,456	\$17,610,386	\$15,481,624	\$16,191,340
Net Operating Income	\$0	\$2,296,645	\$7,056,567	\$13,463,768	\$19,862,546	\$26,131,365	\$34,971,174	\$37,122,973	\$38,482,156	\$39,890,707	\$36,110,508	\$37,206,516
Annual Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,837,809	\$29,837,809	\$29,837,809	\$29,837,809	\$29,837,809
Operating Cash Flow	\$0	\$2,296,645	\$7,056,567	\$13,463,768	\$19,862,546	\$26,131,365	\$34,971,174	\$7,285,163	\$8,644,346	\$10,052,897	\$6,272,699	\$7,368,707
Reversion Cash Flow	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65,234,811	\$0	\$114,533,974
Annual Cash Flow	\$0	\$2,296,645	\$7,056,567	\$13,463,768	\$19,862,546	\$26,131,365	\$34,971,174	\$7,285,163	\$8,644,346	\$78,171,589	\$6,272,699	\$127,869,227

YIELD TO COST	Gross Rent	Expenses	NOI	Cost / Unit	Yield to Cost
Anchor	\$16.50	\$8.00	\$8.50	\$97.79	8.69%
In-line Retail	\$30.00	\$8.00	\$22.00	\$90.08	24.42%
Live Work	\$14.00	\$4.62	\$9.38	\$142.48	6.58%
Multi Family	\$14.00	\$4.62	\$9.38	\$142.48	6.58%
Office	\$24.00	\$8.50	\$15.50	\$129.06	12.01%
Showroom	\$10.00	\$4.00	\$6.00	\$74.13	8.09%
Weighted Average	\$16.45	\$5.83	\$10.62	\$119.70	8.87%



NPV:
\$15.727M
BTIRR:
11.58%

FINANCING	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Global Capped Value	\$0	\$88,207,093	\$168,297,097	\$248,281,822	\$326,642,060	\$437,139,669	\$464,037,159	\$481,026,948	\$498,633,835	\$451,381,349	\$463,081,455	\$484,873,842
Land Value	\$0	\$140,000,000	\$144,200,000	\$148,526,000	\$152,981,780	\$157,571,233	\$162,298,370	\$167,167,322	\$172,182,341	\$177,347,811	\$182,668,246	\$188,148,293
Total Estimated Value	\$0	\$228,207,093	\$312,497,097	\$396,807,822	\$479,623,840	\$594,710,902	\$626,335,529	\$648,194,270	\$670,816,176	\$628,729,160	\$647,749,701	\$673,022,136
Loan to Value	0.00%	4.11%	26.16%	41.27%	41.27%	50.28%	58.69%	59.99%	57.25%	60.26%	57.64%	54.66%

ASSUMPTIONS

VACANCY FACTOR & RENT GROWTH	2010	2011	2012	2013	2014	2015	+2016
Anchor	7.50%	25.00%	19.50%	15.00%	11.50%	9.00%	7.50%
In-line Retail	7.50%	25.00%	19.50%	15.00%	11.50%	9.00%	7.50%
Multi Family/Live Work	6.00%	20.00%	15.00%	11.00%	8.50%	6.50%	5.00%
Office	12.50%	30.00%	24.00%	19.00%	15.00%	11.50%	10.00%
Showroom	6.00%	20.00%	15.00%	11.00%	8.50%	6.50%	5.00%
Market Rent Growth	0.00%	5.50%	4.50%	4.00%	3.75%	3.50%	3.50%

LOAN INFORMATION	
Interest Rate (%)	
Year 1-4	6.00%
Year +5	6.50%
Amortization (years)	
I/O Year 1-5	0
Thereafter	30
Unit Sales Release Rate	100%

MARKET INFORMATION	
80% of AMI during 2008	45950
Housing Ratio	31.00%
Maximum Affordable Rent	\$1,187
Maximum Home Price *	\$178,421
Market Rate Price	\$223,027
Minimum Affordable Units	125
Affordable Units Provided	129
* (0% down)	

Several key assumptions were made during the estimate of expected potential cash flows. These assumptions are outlined below:

- The majority of the NPV and IRR measurements are derived from the sale event. A going out cap rate between 7.5% and 7.75% was used to estimate the sale of the Showroom portion of the portfolio during 2018 and the remaining portfolio during 2020. Sales costs of 2.5% were also included.
- An interest reserve was utilized to fund interest payments during the construction period. A 6 year interest only loan at 6% was used. The maximum loan to value was 60% throughout the construction period. It was assumed the loan would be refinanced at 6.5% with a 30 year amortization scheduled thereafter.
- A 50% reduction in the nominal cost of the Photovoltaic System was assumed. This rebate is currently (2009) provided by Holy Cross Solar.
- Inflation would remain constant during the holding period at 3.00%



THE CITY IN '2050'

- Self Sufficiency
- Energy & Food Production
- Flexibility

ADAPTABLE SPACES

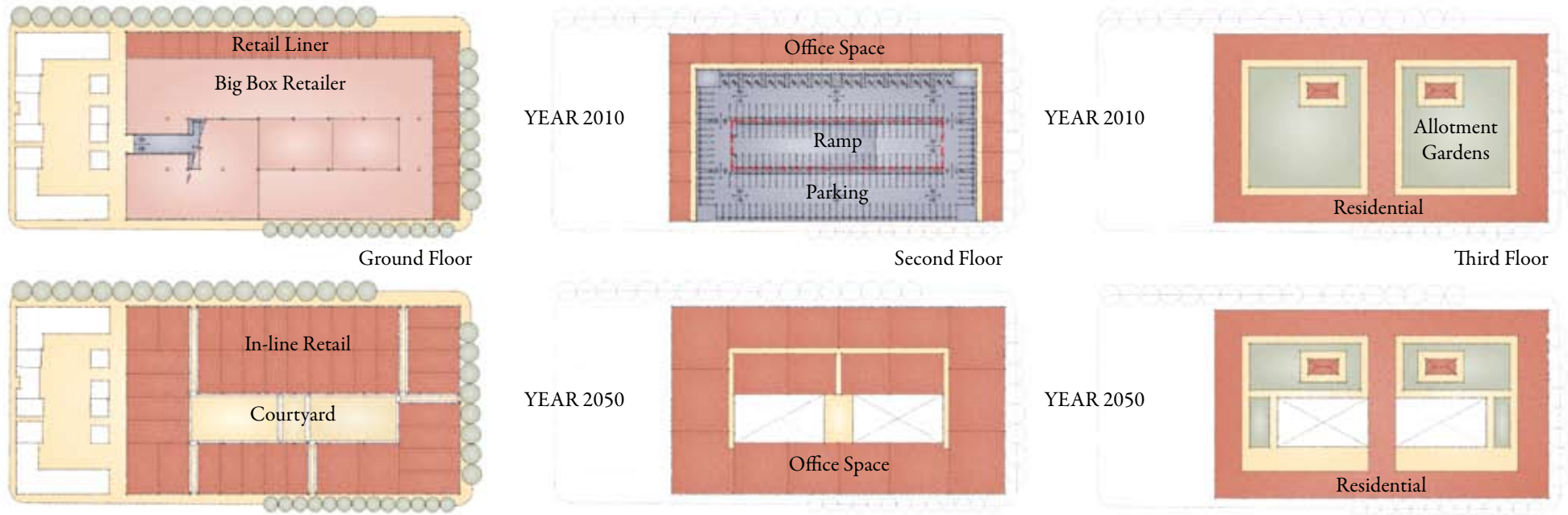
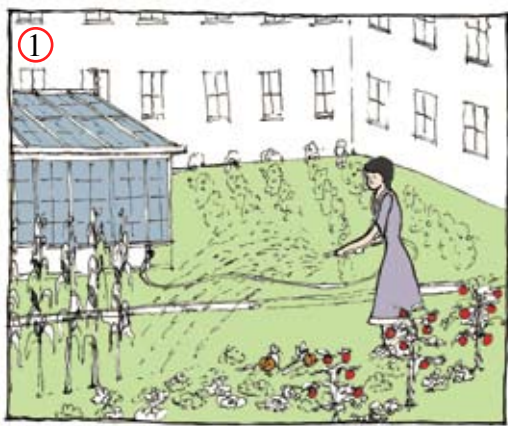


Diagram showing future use of a big box / parking structure converted to a usable courtyard in 2050.

'ONE DAY IN THE YEAR 2050'



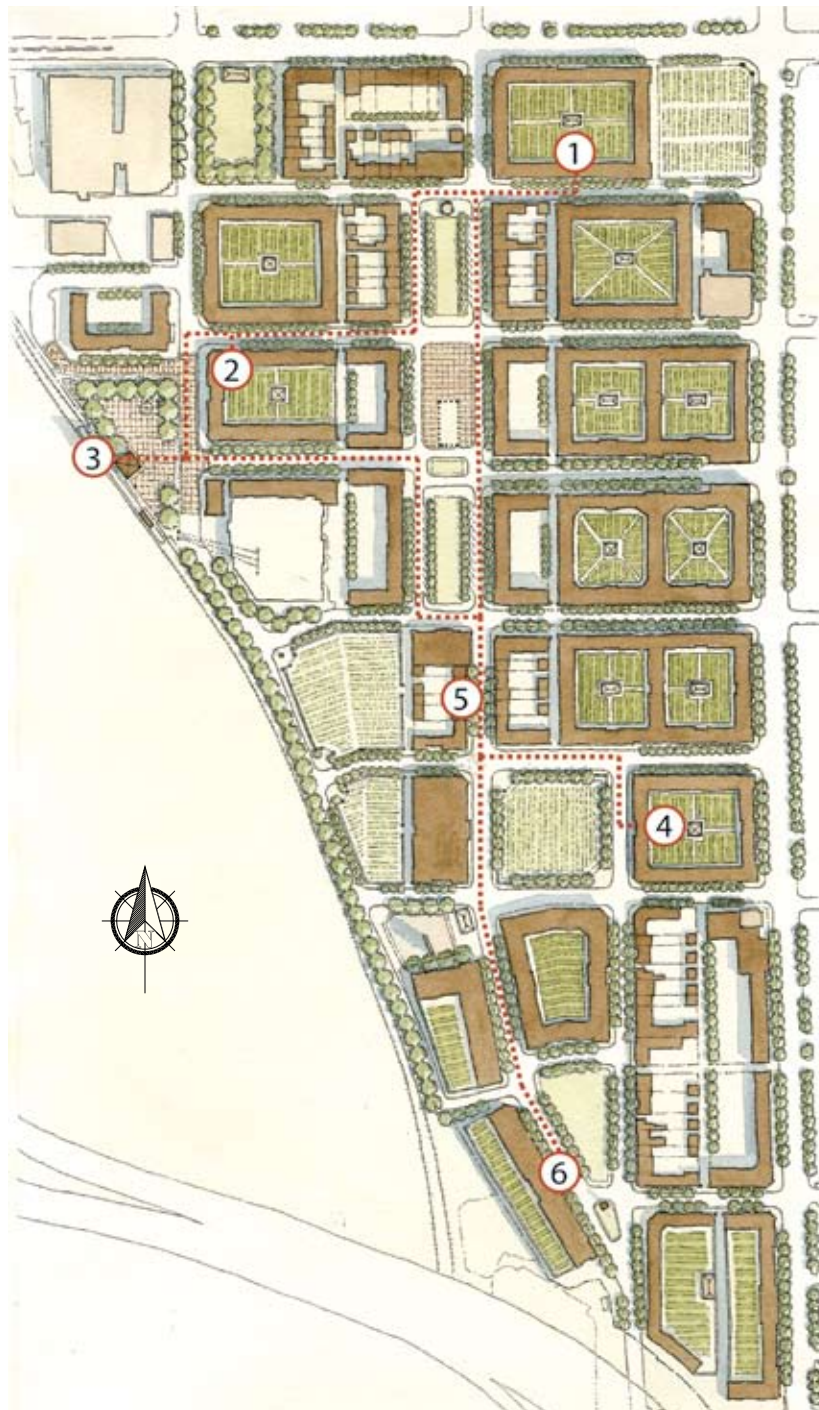
She steps out at 7:30 into the communal allotment to water her vegetable garden, using water that comes from recycled brown water that has been run thru a "Living Machine," which uses specific plant species to filter the contaminants out of the water and prepare it for reuse in irrigation and toilet water.



She steps out into the sun at 7:50 and walks to work, relishing the fact that she has not needed a car for the past twenty years. After a four-minute walk, she arrives early at her office, which is powered by the photovoltaic system on the building's roof.



Her business lunch is scheduled at 12:00. At 11:45 she steps out of her office and within two minutes is waiting for the next light train heading into downtown Denver. The train arrives promptly at 11:50 and deposits her at 11:56 two blocks from the restaurant.



Her annual checkup at her doctor's office in the neighborhood Wellness Center is scheduled for 3:30. The Wellness Center is a five-minute walk from her office and on the way she picks a pear off one of the trees lining the street.



She plans on harvesting some fresh vegetables from her garden and bringing them to her friend's house for dinner at 7:00, after which they will attend a neighborhood art gallery opening just down the street from his house.



The opening at the gallery is a perfect finish to a stress free day, a day without traffic jams, a day powered by the sun not by oil and a day when the food she grows herself sustains her.