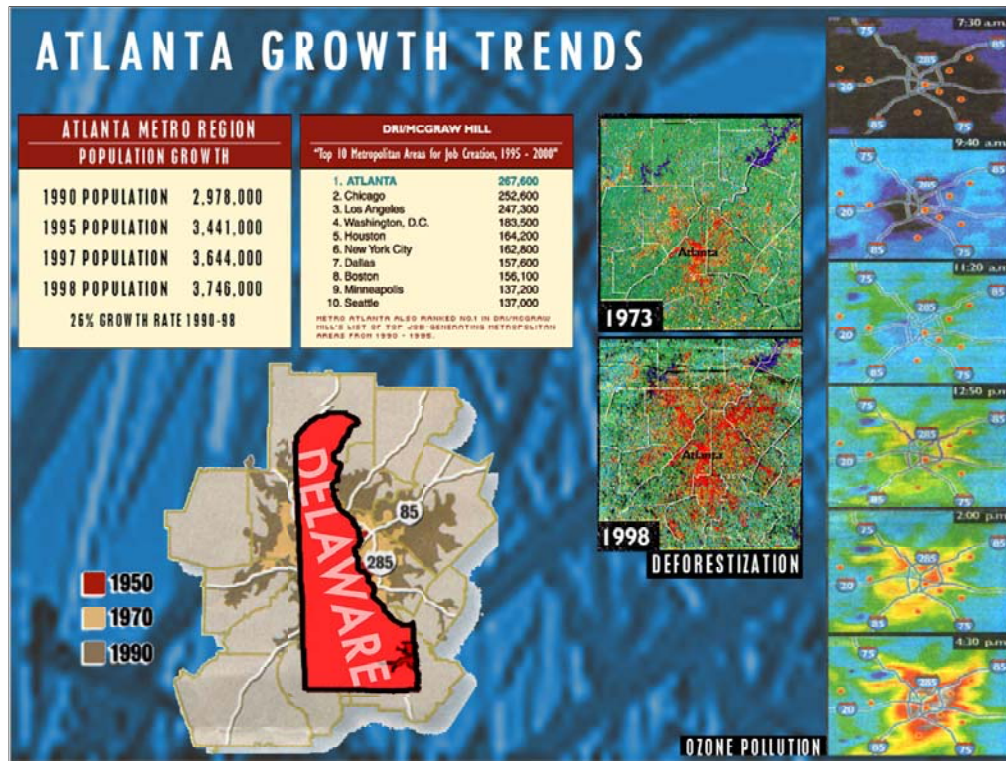
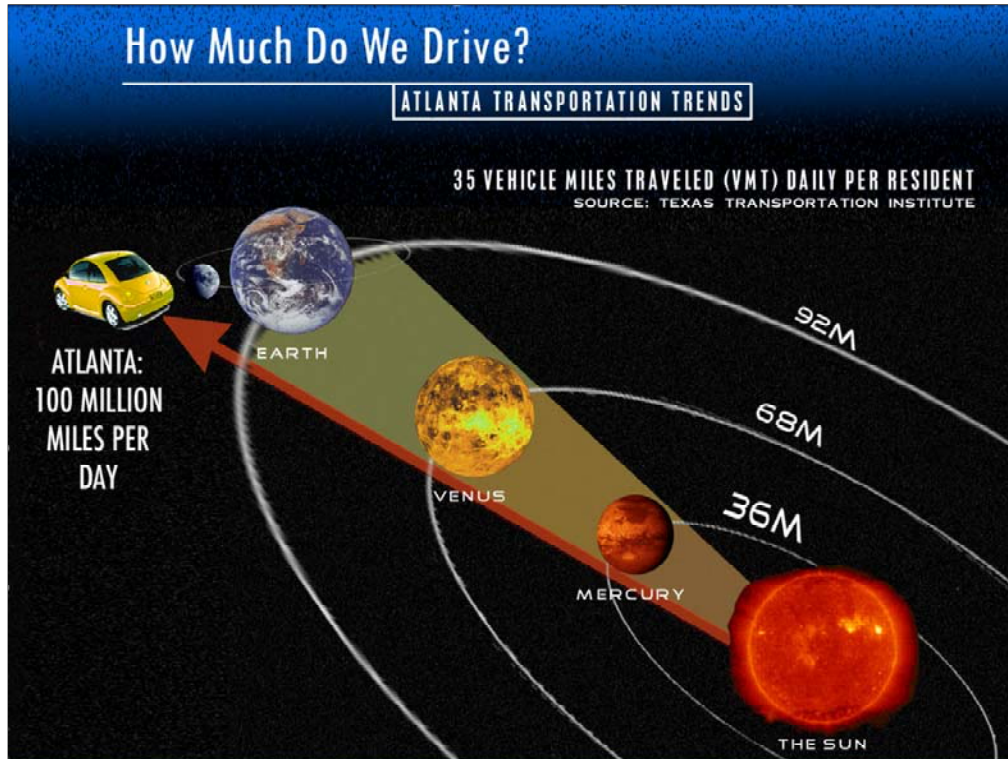


While many argue that the land use – transportation connection is really a debate between the chicken and the egg...which came first. What is not debatable is the established link between land use decisions and transportation investment and the effects these two have on our environment, health and quality of life.



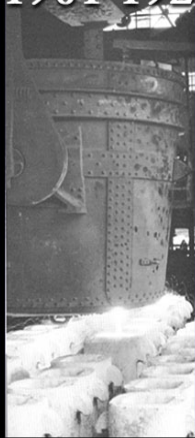
I know I don't need to define SPRAWL for this group but how we have use it in Atlanta is an especially touchy subject. The region is destinctively bi-polar, with the so-called equator being our version of the beltway referred to as the perimeter. The suburban counties of Cobb, Fulton and Gwinnett have held the majority of the region's population, employment and power for the past 20 years.



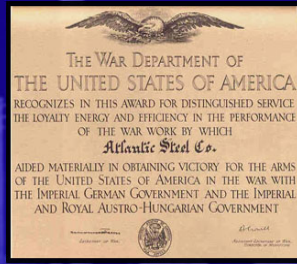
As a region, we now drive more than the distance from earth to the sun...100 million miles daily.



1901-1924 Forging the Foundation



The Ladle



WWI Award for Distinguished Service & Performance



Old Number One

8 Founding Fathers



"The History of Iron & Steel dates back to Antiquity" - C.F. Stone

1925-1949 Dixisteel and the War Effort



1931 Net Earnings: \$-156,000

1933 Net Earnings: \$54,274

1938 Mecalvin St. Closed

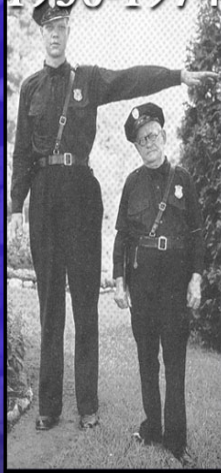


● 1901-1910 ● 1911-1919 ● 1920-1930 ● 1930-1940



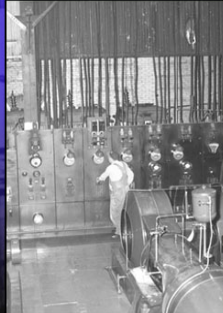
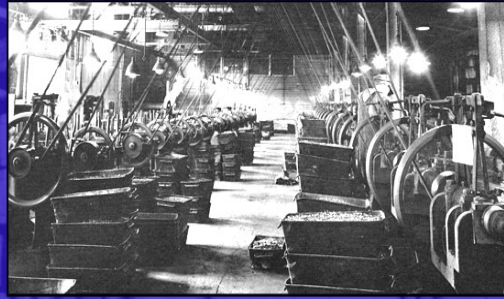
1940 Commercial League Champions!

1950-1974 Expansion & Modernization

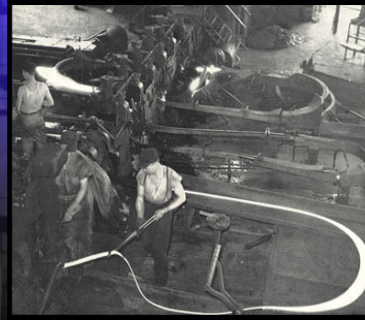


Henry Jenkins 5-6" 76yrs.
Mike Gore 7-0" 22yrs.

2,000+ Employees
700,000+ tons/year
10,000 feet per minute

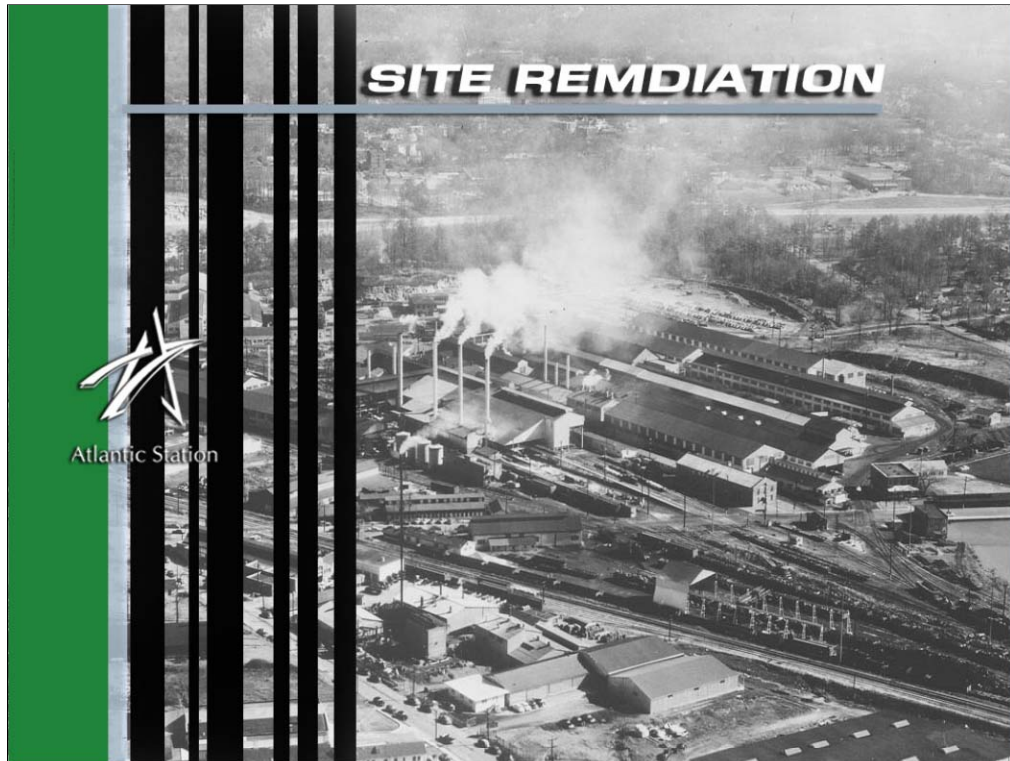


2.3 Million Kilowatts/month = City of 60,000

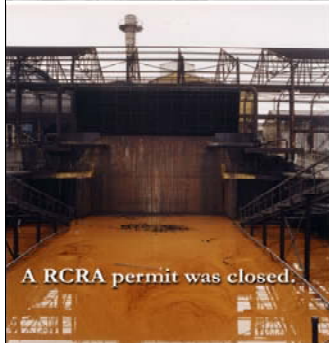


1975 to December 30, 1998 - A New Plan

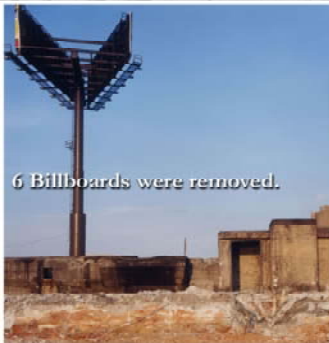




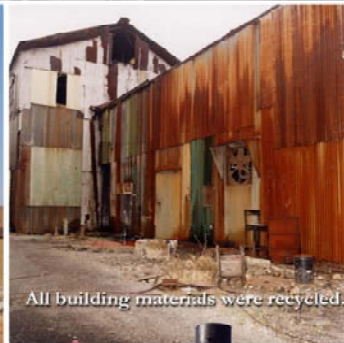
After 100 years of industrial use, the site needed a comprehensive remediation plan to address the contamination of the land and water at the former steel mill. After a \$10 million clean-up that removed 165,000 tons of soil, brought in 1,000 truckloads of clean dirt, installed groundwater monitoring wells and created a perpetual conservation easement, the site was declared "clean" in December of 2001.



A RCRA permit was closed.



6 Billboards were removed.



All building materials were recycled.



Steel presses.

Due to asbestos and subsurface contamination that had occurred prior to the construction of many of the buildings on-site, A complete deconstruction of all buildings was required. A number of artifacts were preserved and have been reused on site.



Original smokestack.





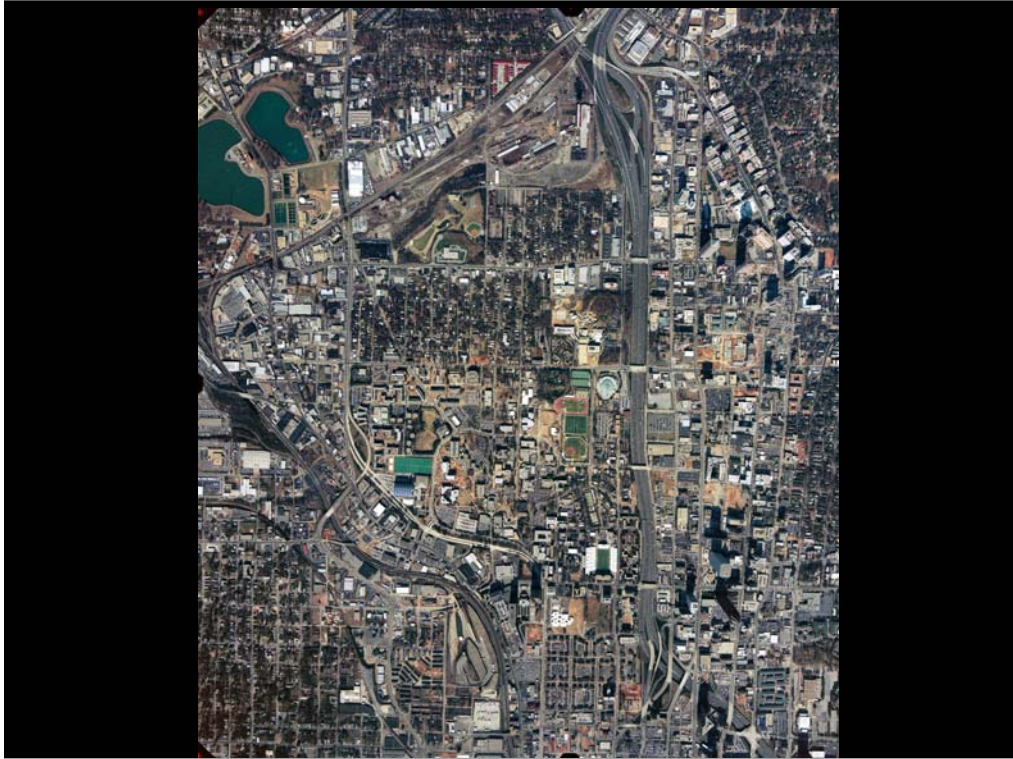


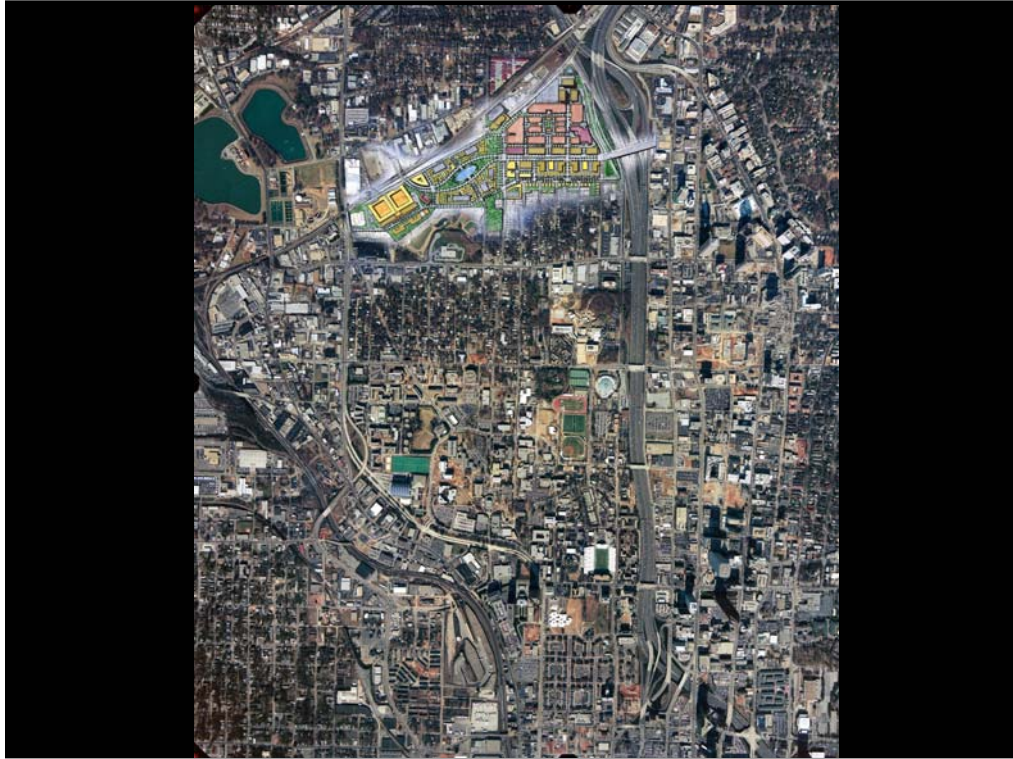


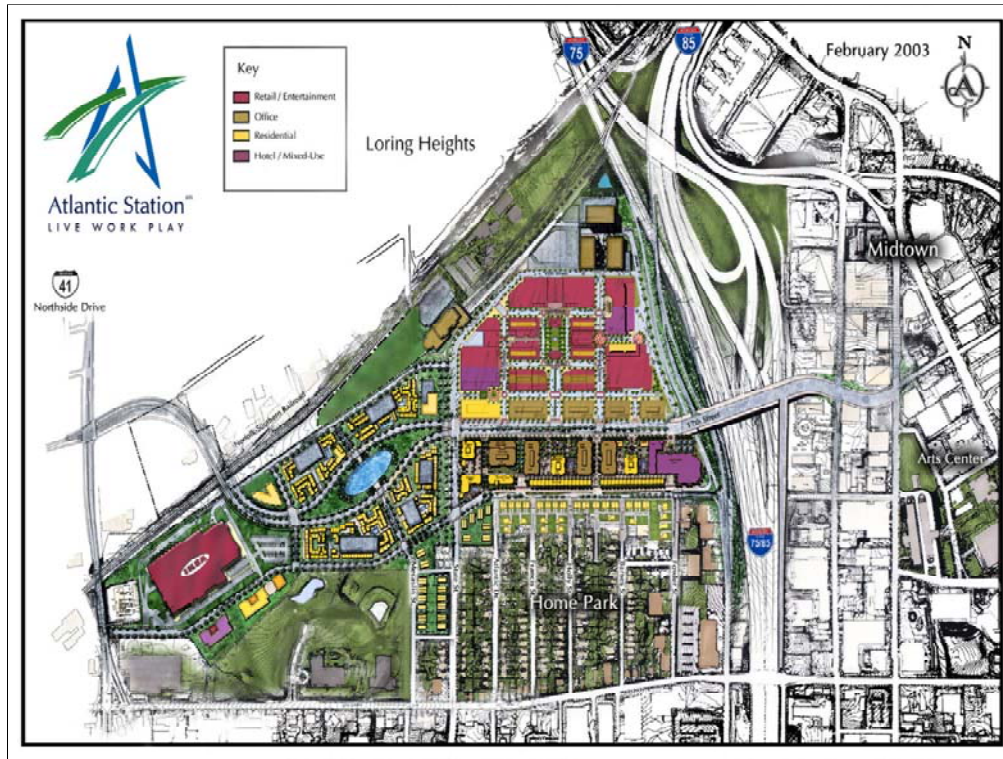


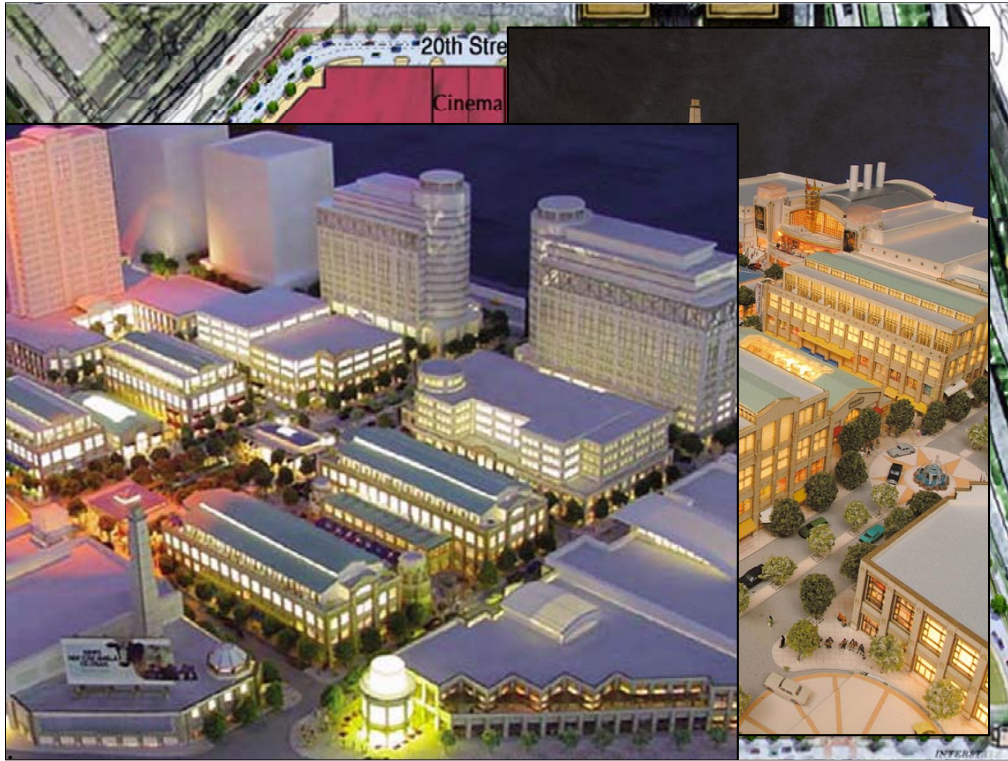
The site's 138 acres encompasses the whole of Atlantic Steel's operations in Atlanta, and as you can see here, has the benefit of location, location, location. To the east is the 14-lane downtown connector which serves as the central artery to central business district. Further east is the historic Peachtree St. corridor and Midtown







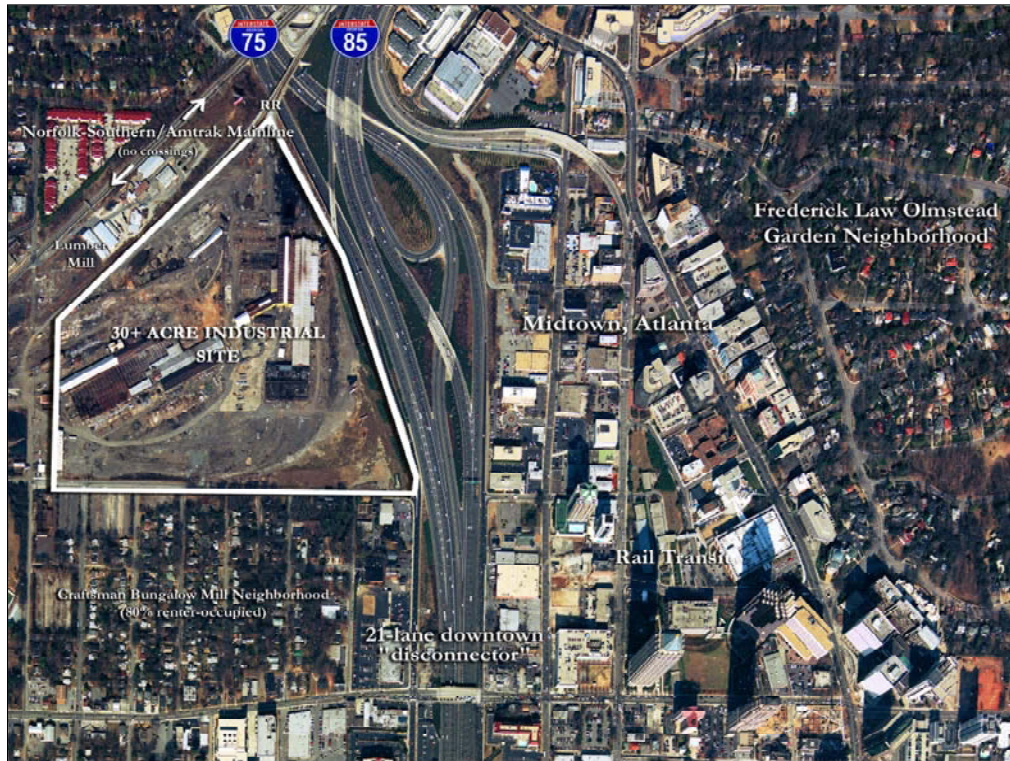


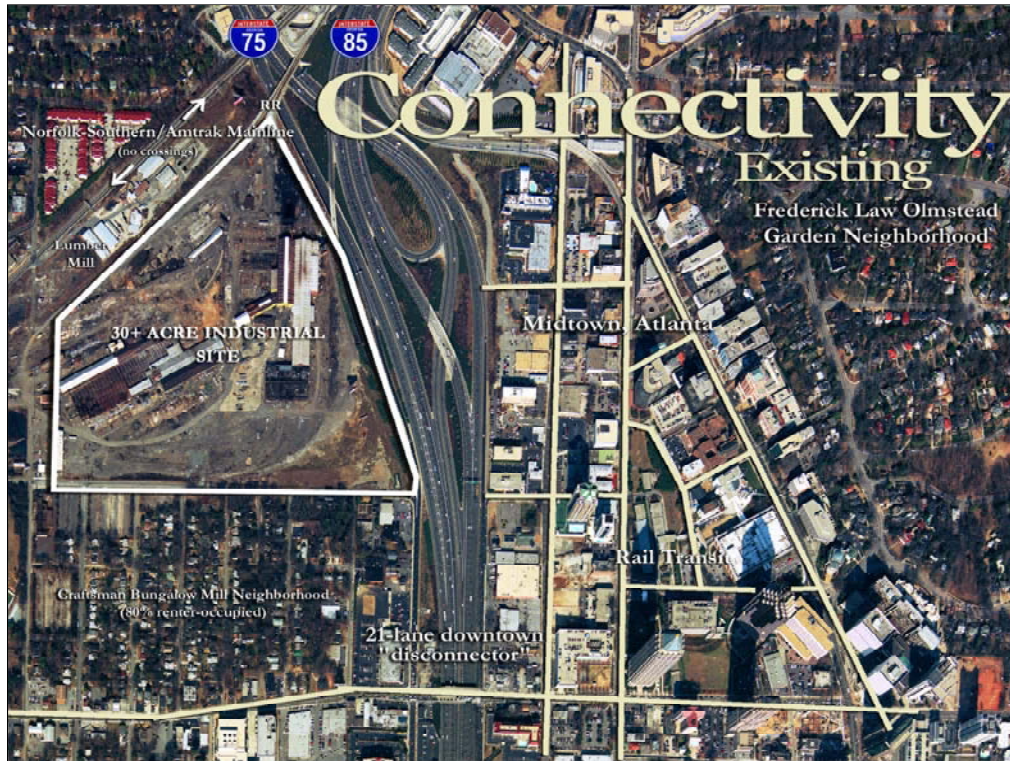


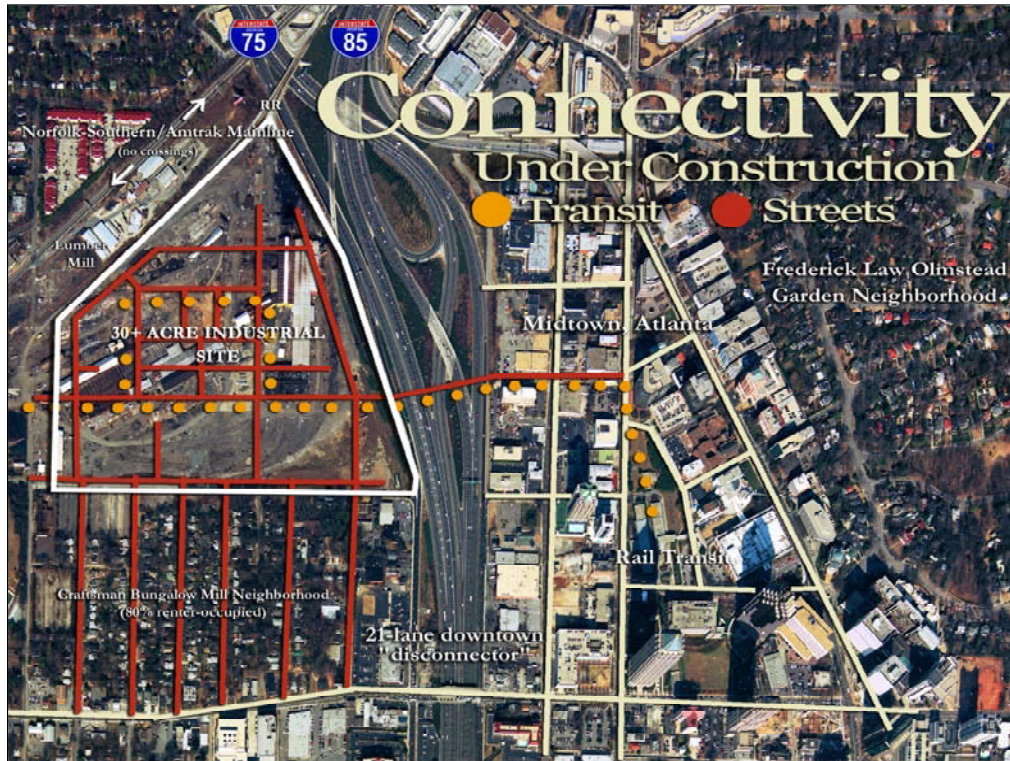










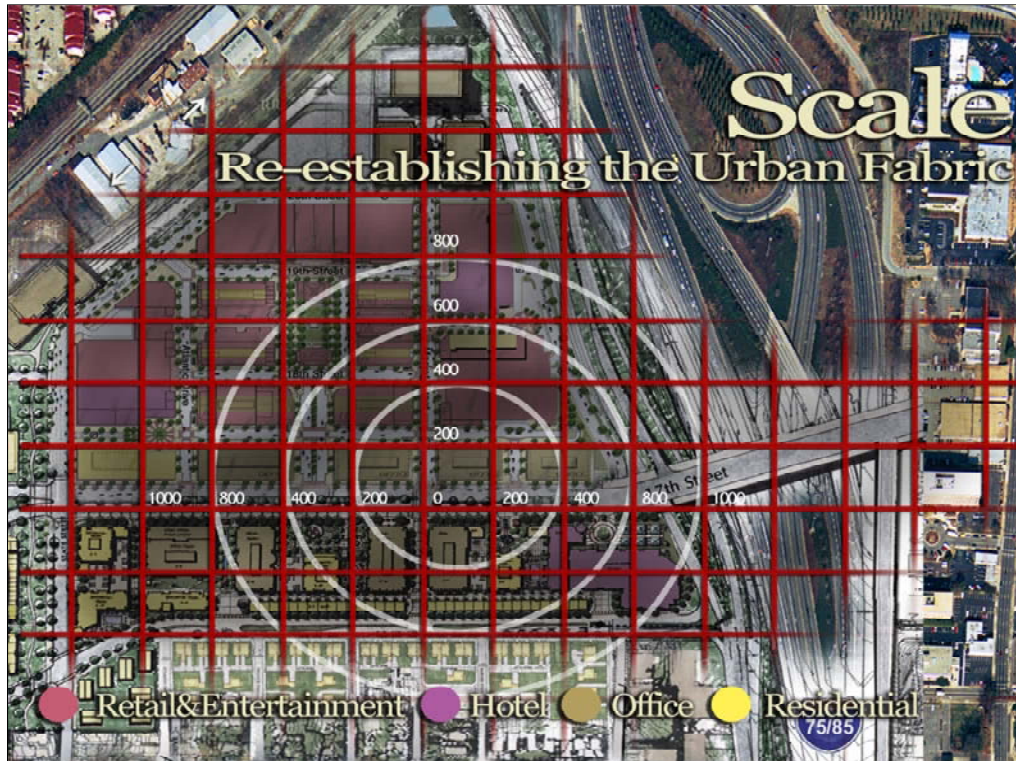


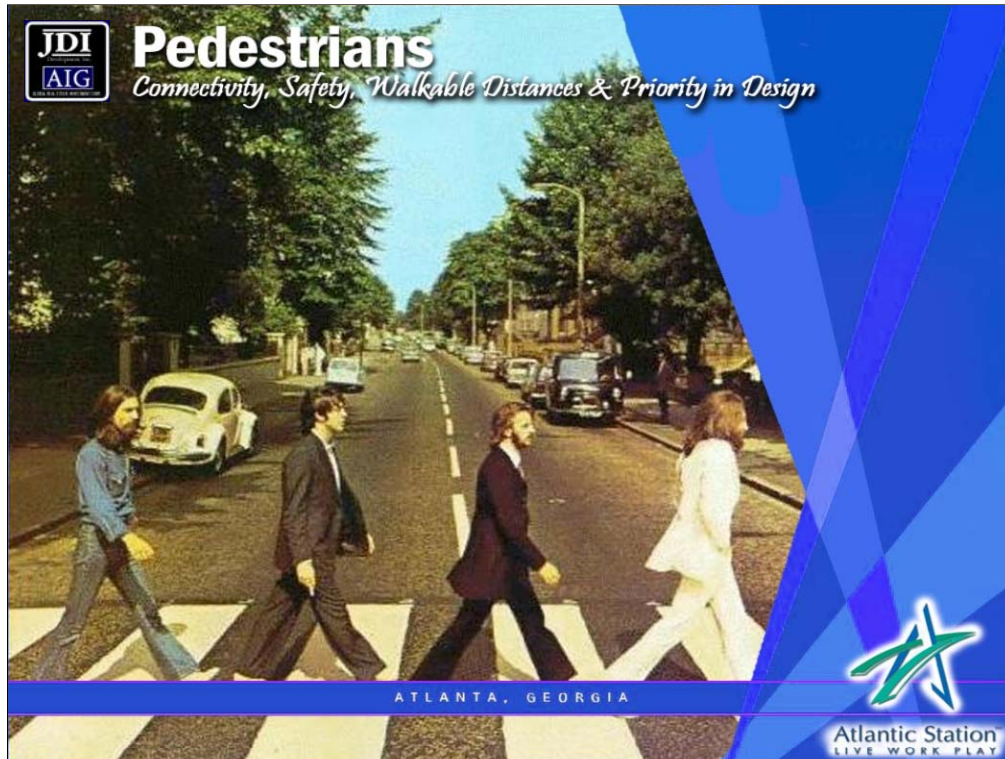














Pedestrians

Connectivity, Safety, Walkable Distances & Priority in Design



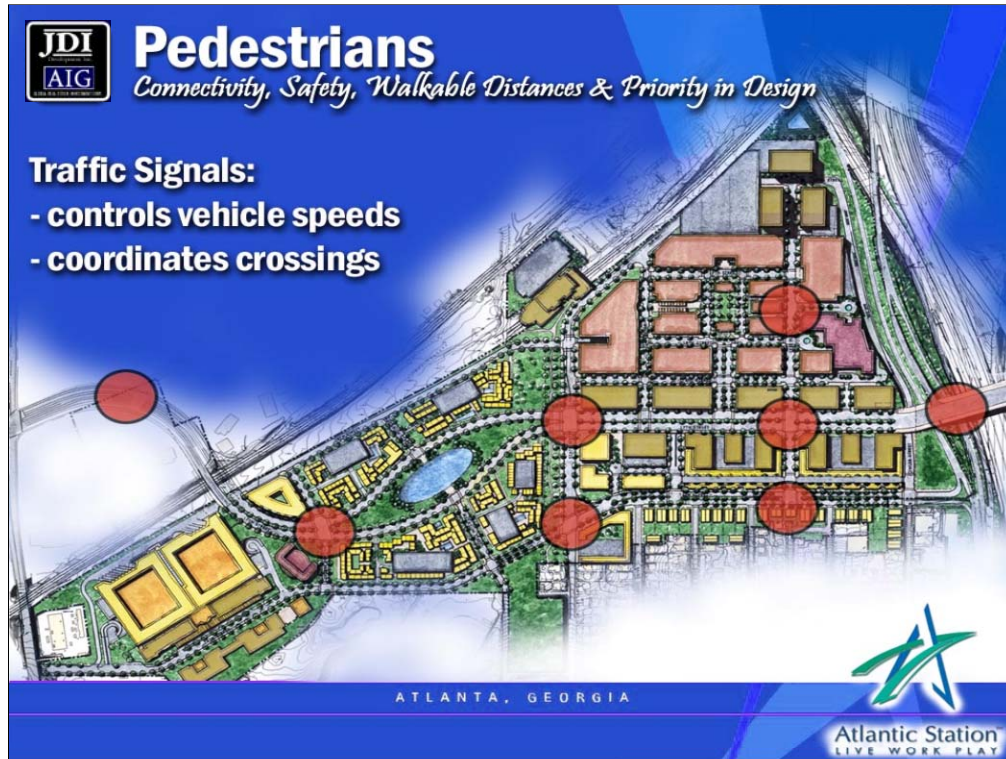
ATLANTA, GEORGIA



Atlantic Station
LIVE WORK PLAY



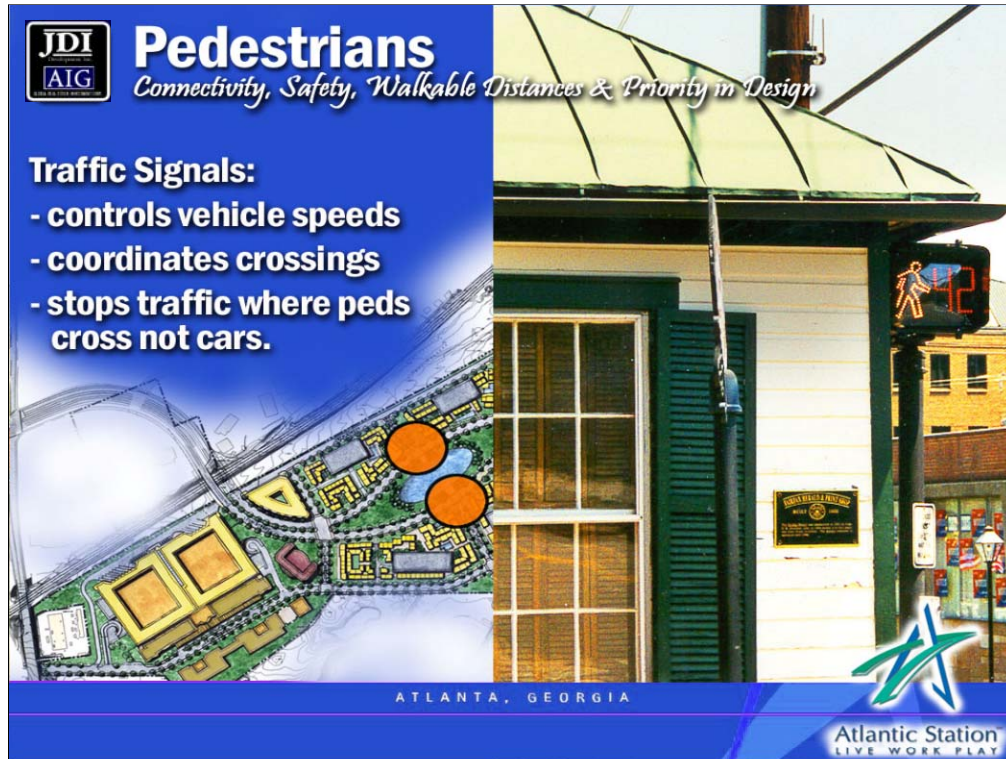
Classic examples of density and a mix of uses are Buckhead and Tysons Corner. All the models will tell you you should have a very large percentage of pedestrian traffic but in reality the area is so disjointed or Unconnected people can not and don't think about crossing the street for something as simple as lunch. It REQUIRES a car.



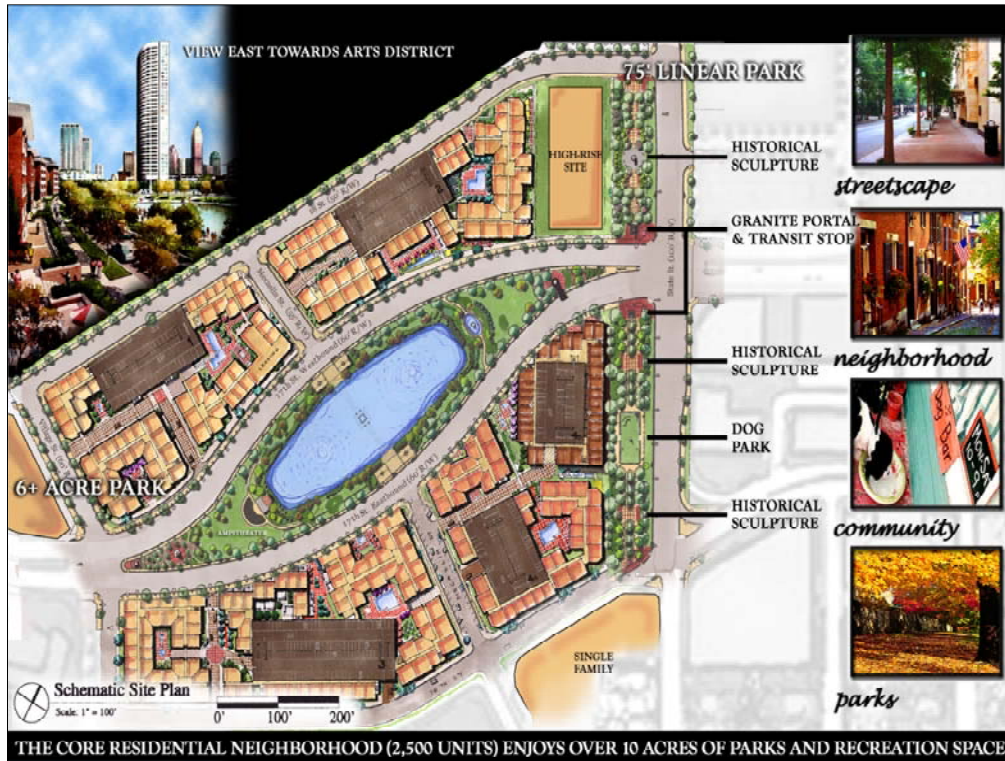
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ALL ACCESS

BY BUS, BY CAR, BY BIKE, BY FOOT

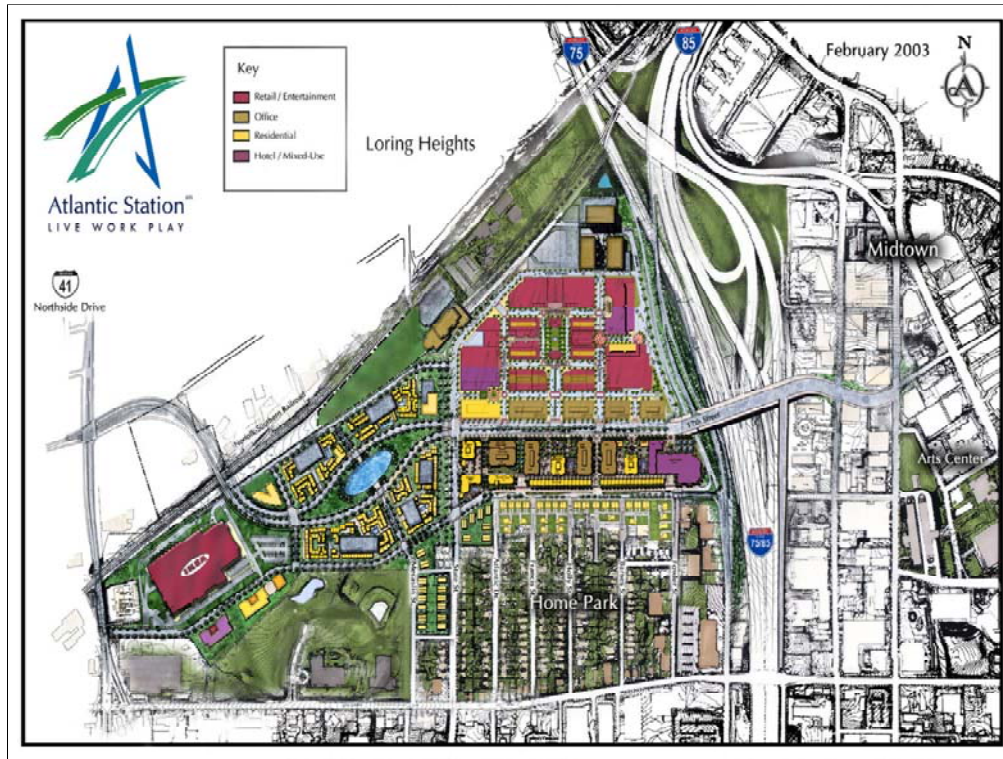
ATLANTIC STATION IS 30 SECONDS AWAY FROM
I-75, I-85, MARTA AND PEACHTREE STREET.



The new \$100 million 17th Street Bridge will serve as
office and retail areas of Midtown, Atlanta.

the main boulevard that connects the residential,















WEB RESOURCE

GREEN STAR



Atlantic Station

ENVIRONMENTAL PLAN

HOME · LIVE · WORK · PLAY · 30363

Atlantic Station



- LAND
- AIR QUALITY
- WATER RESOURCES
- GREEN BUILDINGS
- SMART GROWTH

What Is the Green Star?

Atlantic Station's Green Star Environmental Plan is a comprehensive approach towards creating a sustainable community that addresses land, air & water quality.

Throughout the site look for the green star to learn more about the many innovative things underway at Atlantic Station and see how you can help.

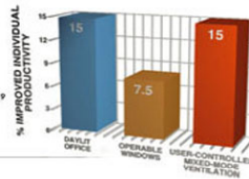


Did You Know?
< back next >



BETTERBRICKS

- FIGUEROA 2002
- HESCHONG / MARONE SCHOOLS B 1999
- WILKINSON BUILDING 2002



productivity boost

THE BENEFITS OF HIGH PERFORMANCE BUILDINGS GO WELL BEYOND ENERGY SAVINGS. MANY ALSO IMPROVE OCCUPANT COMFORT, WHICH CAN LEAD TO INCREASED PRODUCTIVITY.

WEB RESOURCE

"GREEN" BUILDINGS



Atlantic Station

at Atlantic Station...

HOME · LIVE · WORK · PLAY · 30363

Atlantic Station



171 17th Street

Atlantic Station is committed to providing a national model for "Green" building design and construction. Our goal is to build 100% of all commercial buildings at Atlantic Station in conformity to the high standards of the U.S. Green Building Council's LEED rating system.

Proof positive is the completion of 171 17th Street (left), a 500,000 SqFt. Class A office tower, making it the 1st LEED certified high rise office tower in the Southeast.



What is the U.S.G.B.C.?

The U.S. Green Building Council is the nation's foremost coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable and healthy places to live and work.

LEED Green Building Rating System™

[Find Out More >](#)

Partners:



**Southface
Energy Institute**

Southface promotes sustainable homes, workplaces and communities through education, research, advocacy and technical assistance.

Did You Know?



Fact Sheets:

- Indoor Air Quality
- Air Conditioner Tips
- Energy Wise Appliances
- Compact Fluorescents
- Save Water & Energy
- What About Apartments?

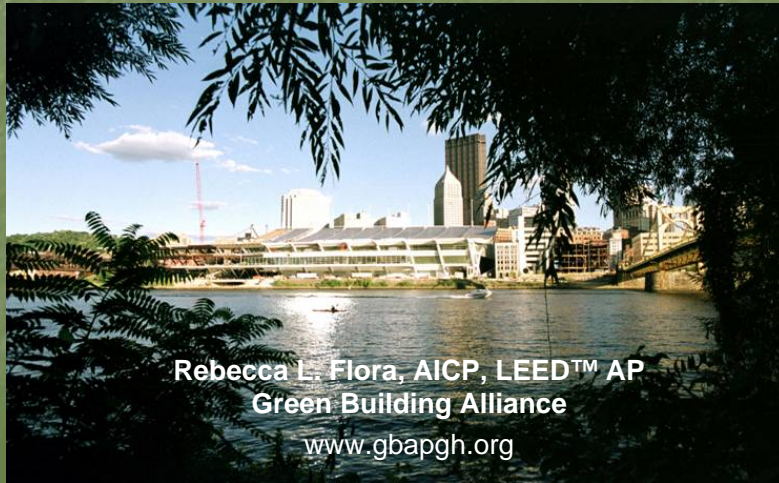
[more >](#)





*Brown is the New Green:
Smart Reuse at all Scales*

Experiences in Greater Pittsburgh, PA



Renaissance I (40's and 50's)

Air and Water Quality

- **Public/Private Partnership**
- **Allegheny Conference on Community Development**
- **Key Actions:**
 - ◆ smoke and flood control
 - ◆ rebuilding of the Golden Triangle
- ***Economic Health connected to Environmental Health***



Renaissance II (1980's) Brownfield Redevelopment

- Soil and water contamination
- Reuse existing infrastructure
- Recycle land
- Revitalize existing communities
 - ◆ Washington's Landing
 - ◆ Pittsburgh Technology Center
 - ◆ South Side Works

www.ura.org



Renaissance III (2000's): Green Building - Sustainable Development

Environmental

- Reduce the impact on natural resources

Economic

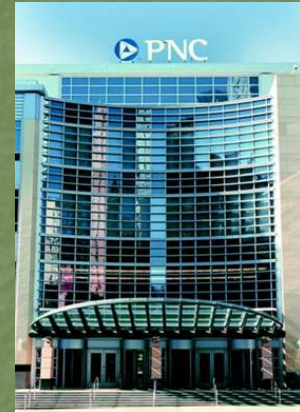
- Improve performance/bottom line

Health and Safety

- Enhance occupant comfort and health

Community

- Minimize strain on local infrastructures and improve quality of life



EPA ranked sick buildings in the top 5 environmental threats to human health

The benefits of green design can be summarized as follows:

- The local and global environment benefits from protecting air quality, water quality, and overall biodiversity and ecosystem health.
- Economic benefits are experienced in building operations, asset value, worker productivity, and the local economy.
- Occupants benefit from health and safety features. This also relates to risk management and its related economics.
- Community and municipal benefits include: lessened demand for large-scale infrastructure such as landfills, water supply, stormwater sewers, and their related development and operational costs; and decreased transportation development and maintenance burden (roads) and increased economic performance of mass transit systems.

GREEN BUILDING

U.S. Green Building Council

Leadership in Energy and Environmental Design (LEED™) Building Rating System



- Administered by the U.S. Green Building Council (USGBC) 5,000+ member organizations
- Quantifiable Measure
- *THE* National Standard
- Becoming an International Standard
- Voluntary Design Tool
- LEED 2.0 Released in Spring, 2000 – 2.1 update released in 2003

www.usgbc.org

Leadership in Environmental and Energy Design (LEED™)

Four levels of building certification

- **LEED Certified** **26 - 32 points**
- **Silver** **33 - 38 points**
- **Gold** **39 - 51 points**
- **Platinum** **52 + points**

69 possible points



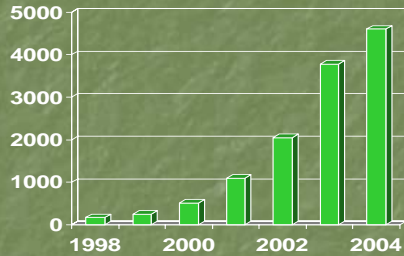
Millvale Rowing Center

Note only 26 of the 69 available points are needed to earn certification. This is less than 40%.

Not every point will be applicable to every project. Brownfield redevelopment for example simply may not be relevant to your site.

GREEN BUILDING

USGBC Membership



- 19,000 workshop attendees
- 20,000 LEED Accredited Professionals



- In only 4 years, LEED building has grown to make up 6% of the construction market with 168 million square feet
- 130 LEED Certified projects
- 1,532 LEED Registered projects
- >188 million s.f.

Corporations with LEED Certified Building:

- | | |
|--|---------------------------------|
| • Nestle Waters North America | • American Honda Motor Company |
| • IBM Tivoli Systems | • Toyota Motor Sales |
| • Ford Motor Land Services Corporation | • Harley-Davidson Motor Company |
| • Ford Motor Company | • Johnson Controls |
| • Herman Miller | • Monsanto Company |
| • PNC Financial Services Group | • Steelcase, Inc. |

www.usgbc.org

Building Type	# Reg. Projects	GSF	Building Type	# Reg. Projects	GSF
Multi-Use	289	35212045	Assembly (conv. center, place of worship, theater)	19	4162711
Commercial Office	200	33515770	Financial & Communications (bank, post office, data center)	15	382135
Higher Education	106	8034541	Transportation (airport, train station, bus station)	11	1852817
K-12 Education	71	9691466	Animal Care (veterinary, kennel)	10	519320
Not Classified	68	7453953	Retail (store, supermarket, art gallery)	10	650958
Public Order & Safety (police, jail, courthouse)	62	6114977	Park (greenway, recreation space, wildlife)	8	278460
Interpretive Center (museum, visitor center, zoo)	58	1960077	Military Base	8	480042
Multi-Unit Residential (apartments, dormitories)	57	6758505	Daycare	6	185050
Industrial (manufacturing, warehouse, pub. works)	48	6069071	Campus (corporate campus, school)	5	2019245
Library	47	2276681	Hotel/Resort	5	325614
Laboratory	41	5526176	Special Needs Housing (assisted living, long-term care)	5	390432
Other	37	6985130	Restaurant	3	31159
Health Care	26	12520119	Community (neighborhood, residential development)	2	38924
Recreation	22	941505	Stadium/Arena	2	355000

Leadership in Environmental and Energy Design (LEED™)

5 Sustainable Categories

- Sustainable Sites
- Water Efficiency
- Materials and Resources
- Energy and Atmosphere
- Indoor Environmental Quality
- PLUS Design Process & Innovation

Rating System Contains:

- 7 prerequisites
- 32 credits with 64 core
- 4 Design process & innovation
- 1 LEED Accredited Professional



David L. Lawrence Convention Center

LEED contains 7 prerequisites that must be met for a building to gain certification.

Prerequisites Include:

- Sediment & Erosion Control
- Minimum Energy Performance
- Fundamental Commissioning
- CFC Reduction in HVAC Equipment
- Storage of Recyclables
- Minimum IAQ Performance
- Environmental Tobacco Smoke Control

Environmental Impacts of Buildings

Commercial, institutional, and residential buildings and operations account for:

- 30 - 40 % of total energy use
- 25 % of water use
- 30% of total green house emissions
- 35 - 40 % of municipal solid waste
- 25 - 30 % of wood & raw materials use



KSBA Architects Office

- Buildings are where Americans spend 90 % of their time. They use 1/3 of our total energy and 2/3 of our electricity.
- Annually, to construct buildings worldwide, consumes 1/4 of all wood harvested and 3 billion tons of raw materials.
- *from Monthly Energy Review , March 2001, Energy Information Administration, U.S. Department of Energy*
- *Source: "Emissions of Greenhouse Gases in the United States 1999," Energy Information Administration, U.S. Department of Energy, October 2000*
- Lenssen and Roodman, 1995, "Worldwatch Paper 124: A Building Revolution: How Ecology and Health Concerns are Transforming Construction," Worldwatch Institute.
- U.S. Department of Energy, Energy Efficiency and Renewable Energy Network (EREN). Center of Excellence for Sustainable Development. 2003.

Health and Safety Benefits

Air Quality

- Ventilation Systems
- Building Materials
- Cleaning Materials

Daylighting

- Children in daylit classrooms had test scores 20% higher than those in rooms with only electric light.
- 40% increase in retail sales for stores with skylights

Access to outdoor views

- Humans need a connection to nature



- Improvements combined with lower operating cost create a key competitive advantage and improve real estate value.
- Green, high performance buildings typically sell or lease faster, and attract and retain tenants better because they combine superior amenity and comfort with lower occupancy costs and more competitive terms.
- Energy efficiency buffers operating budgets from potential short- or long-term increases in energy prices.
- Heschong-Mahone Group, on behalf of the California Board for Energy Efficiency Third Party Program. *Skylighting and Retail Sales: An Investigation into the Relationship Between Daylighting and Human Performance*. Fair Oaks, CA. 1999.

Economic Benefits

Increase building valuation

- Multiply reduction in annual operating costs by 10 to calculate the increase in building value

Decrease vacancy, improve retention

- Marketing advantages
- Employee health and comfort

Optimize life-cycle economic performance

- Most green features have 0-5 year paybacks



Enhance Asset Value & Profits: A high performance environment can yield valuable gains in labor productivity, retail sales, and manufacturing quality and output. These improvements combined with lower operating cost create a key competitive advantage and improve real estate value. Green, high performance buildings typically sell or lease faster, and attract and retain tenants better because they combine superior amenity and comfort with lower occupancy costs and more competitive terms. Energy efficiency buffers operating budgets from potential short- or long-term increases in energy prices.

Economic Benefits

Improve productivity

- Estimated \$29 –168 billion in national productivity losses per year ¹

Reduce absenteeism and turnover

- Providing a healthy workplace improves employee satisfaction

Reduce liability

- Improve risk management
- Can we afford not to go green?

“Absenteeism has decreased, productivity has increased, recruitment is better and turnover is less.”

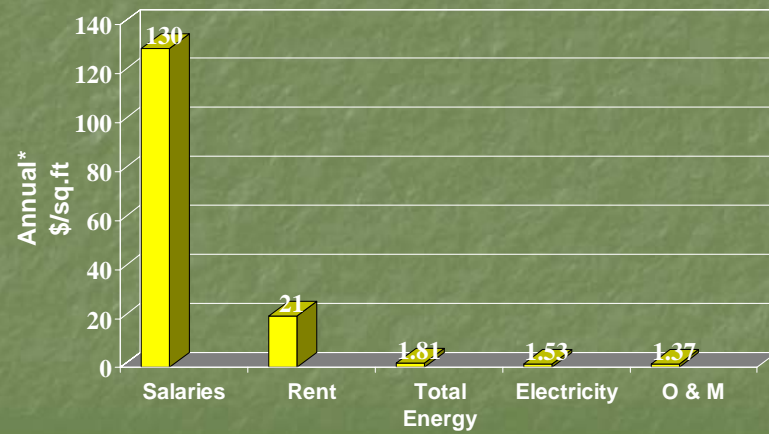
Gary Jay Saulson, Director of Real Estate, PNC Realty Services

- Healthy indoor environments can increase employee productivity according to an increasing number of case studies. Since workers are by far the largest expense for most companies (for offices, salaries are 72 times higher than energy costs, and they account for 92% of the life-cycle cost of a building), this has a tremendous effect on overall costs (See *Green Development* by the Rocky Mountain Institute for more information).
- The Internationale Nederlanden (ING) Bank headquarters in Amsterdam uses only 10% of the energy of its predecessor and has cut worker absenteeism by 15%. The combined savings equal \$3.4 million per year.²
- The average American spends more than 90% of their time indoors, according to the U.S. EPA and the American College of Allergy, Asthma & Immunology. Employees in buildings with healthy interiors have less absenteeism and tend to stay in their jobs. More than 17 million Americans suffer from asthma, and 4.8 million of them are children. Asthma attacks can be triggered by poor IAQ. Ten million school days are missed by children each year because of asthma.
- A healthy indoor environment can reduce the likelihood of lawsuits and insurance claims. In *Bloomquist v. Wapello* (500 N.W.2d 1, Iowa, 1993), plaintiffs successfully sued employers and builders for creating an unsafe work environment due to inadequate ventilation and pesticide applications.
- Insurance companies are using climate change protection activities as a means to manage risk and maintain profitability.

Footnotes:

1. Fisk and Rosenfeld, 1998, “Improved Indoor Environment Could Save Billions of Dollars”
2. Lenssen and Roodman, 1995, “Worldwatch Paper 124”

Green Buildings & Occupants



* 1991 Source: BOMA, EPRI, Statistical Abstract in RMI "Greening the Building and the

Financial Benefits of Green Buildings Summary of Findings (per ft²)

Category	20-year Net Present Value
Energy Savings	\$5.80
Emissions Savings	\$1.20
Water Savings	\$0.50
Operations and Maintenance Savings	\$8.50
Productivity and Health Value	\$36.90 to \$55.30
Subtotal	\$52.90 to \$71.30
Average Extra Cost of Building Green	(-\$3.00 to -\$5.00)
Total 20-year Net Benefit	\$49.90 to \$66.30

Source: Capital E Analysis

www.cap-e.com

Average Green Cost Premiums for 33 Green Buildings, by LEED level

Level of Green Standard	Average Green Cost Premium
Level 1 – Certified (8)	0.66%
Level 2 – Silver (18)	2.11%
Level 3 – Gold (6)	1.82%
Level 4 – Platinum (1)	6.50%
Average of 33 Buildings	1.84%

Source: USGBC Data, Capital E Analysis

www.cap-e.com

LEED: Sustainable Sites

SS Credits/Points:

Prerequisite: Erosion & Sedimentation Control

SS 1: Site Selection

SS 2: Urban Redevelopment

SS 3: Brownfield Redevelopment

SS 4: Alternative Transportation

SS 4.1 Public Transit

SS 4.2 Bicycle Storage & Showers

SS 4.3 Alternative Fuel Vehicles

SS 4.4 Parking Capacity



Greater Pittsburgh Food Bank

Underlying many green design issues is a key question - Is there a need to build at all? In other words, can an existing building be rehabilitated instead of building a new one? This question runs through the entire integrated design process.

There are two major issues related to siting - choosing a location for the project and then protecting that site. LEED addresses both.

First, where do we put the building to reduce environmental impacts, protect habitat and open space, and retain land for productive agricultural uses? LEED suggests approaches including:

Avoid developing natural areas or productive agricultural area. This protects habitat and preserves the land for its most appropriate use.

Instead, locate the project in an area that is already developed. This reduces sprawl, avoids the need for new infrastructure (as well as the environmental effects and costs of that infrastructure), and might even result in the restoration of a degraded site.

Take advantage of public transportation and make the site convenient for bicycle users; this will reduce automobile use and its pollution.

2. How do we protect the site from the negative effects of construction and the new structures that will be placed there? LEED suggests:

- Minimize the footprint of the building.
- Develop a plan for the preservation of the site's plants and topsoil and to limit the construction disturbance to the smallest possible area - and for those areas that are disturbed and degraded, a plan to restore them to a healthy condition.
- Protect the site and surrounding areas from the effects of stormwater runoff and erosion that are created by the construction process and the disturbance of natural water flows.
- Design to reduce heat islands and minimize light pollution.

LEED: Sustainable Sites

SS Credits/Points:

SS 5: Reduced Site Disturbance

SS 5.1 Protect or Restore Open Space

SS 5.2 Development Footprint

SS 6: Stormwater Management

SS 6.1 Rate and Quantity

SS 6.2 Treatment

SS 7: Heat Island Effect

SS 7.1 Non-roof

SS 7.2 Roof

SS 8: Light Pollution Reduction



Penn Center West

Underlying many green design issues is a key question - Is there a need to build at all? In other words, can an existing building be rehabilitated instead of building a new one? This question runs through the entire integrated design process.

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PNC Firstside Center

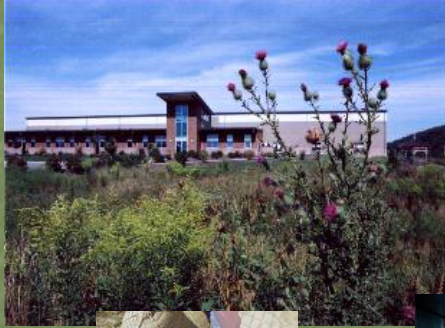


Green Building responds to all EXCEPT Food

McGowan Institute



Greater Pittsburgh Food Bank



Castcon-Stone, Inc.



Siemens Westinghouse Fuel Cell Facility



SIEMENS/ WESTINGHOUSE FUEL CELL FACILITY
Scheme D - Conceptual View 2
November 01, 2001

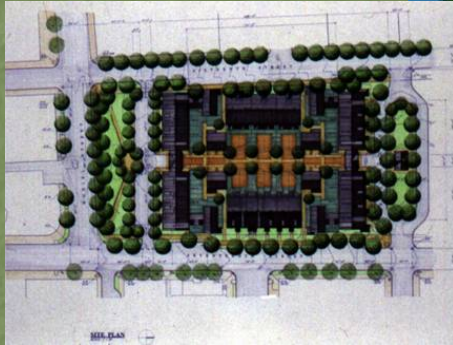


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